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Glossary/abbreviations

**CIS** Community Innovation Survey. This is a survey conducted by each EU member state that allows the monitoring of Europe’s progress in the area of innovation.

**FAME** Financial Analysis Made Easy. This is a commercial firm level database of financial information for the UK (and Ireland) available from Bureau van Dijk.

**FDI** Foreign Direct Investment

**Growth** Several definitions of growth have been used for the analysis of UKTI surveys (PIMS and the Internationalisation Survey). These are:

- **Sustained**: Their employee numbers have grown over the last 3 years
  - And, they are anticipating substantial growth over the next 5 years

- **Contained**: Their employee numbers have grown over the last 3 years
  - But, they are not anticipating substantial growth over the next 5 years

- **New Growth**: Their employee numbers have not grown over the last 3 years
  - including firms established in the last 3 years
  - But, they are anticipating substantial growth over the next 5 years

- **No Growth**: Their employee numbers have not grown over the last 3 years
  - including firms established in the last 3 years (H2)
  - And, they are not anticipating substantial growth over the next 5 years

- **High growth**: Their employee numbers have grown by more than 75% over the last 3 years
  - except firms established in the last 3 years

- **Gazelles**: Their employee numbers have grown by more than 75% over the last 3 years
  - except firms established in the last 3 years
  - And, they are less than 5 years old

**Innovative** In analysis of UKTI PIMS, PIMS Non-users and the Internationalisation survey, firms are defined as innovative if: they...

1. Have more than one employee engaged either wholly or partly in R&D activity and have more than one employee engaged either wholly or partly in new product or service development

2. Or, have employed someone external to the business to conduct new product or service development activity in the last year

3. Or, derive some of their turnover from products and services introduced in the last 3 years
   - except firms established in the last 2 years
Innovative (tight) In analysis of UKTI PIMS, PIMS Non-users and the Internationalisation survey, firms are defined as innovative (tight) if: they

- Have more than one employee engaged either wholly or partly in R&D activity and have more than one employee engaged either wholly or partly in new product or service development and any R&D employees are involved in the ‘development of scientific or technical knowledge that is not commonly available’
- Or, have employed someone external to the business to conduct new product or service development activity in the last year
- Or, derive some of their turnover from products and services introduced in the last 3 years except firms established in the last 2 years and these products and services are completely new and have not been introduced by anyone else previously

IP Intellectual Property

IP active: These are firms which currently hold patents or trademarks, either in the UK or overseas

OFLIP Oxford Firm Level Intellectual Property Database

PIMS UKTI Performance and Impact Monitoring Survey. A quarterly survey of UKTI clients. Details can be found at URL: www.uktradeinvest.gov.uk/ukti/pims

R&D Research and Development

SME Small and Medium Sized enterprises. These are defined as firms with up to 250 employees.

TFP Total Factor Productivity

UKTI Internationalisation survey. This is a random survey of 900 UK firms which have internationalised or are seriously considering doing so in the 12 months following interview. The first wave was carried out in 2008

User/non-user Within this paper, the term user refers to firms which have used the trade services provided by UKTI. The term non-user refers to firms which have not used these services.
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Foreword

In January this year the Business, Innovation, and Skills Committee published a report on ‘Exporting out of recession’, which highlighted the importance of Government doing all it can to help create an environment supportive of UK businesses’ engagement in international trade. Evidence from recent surveys of UK exporters makes clear that expansion into new export markets will be a key route to growth for many British enterprises, highlighting the importance of exporting as one of the factors which will contribute to returning the UK economy to stronger growth.

New evidence has also highlighted the importance to UK businesses of engagement in international markets as a means of reaping greater rewards from their investment in knowledge and Research and Development, and keeping at the forefront of innovation and technology through greater exposure to knowledge and ideas all across the globe.

Although only a minority of all UK SMEs export, the evidence reviewed in this paper makes clear that among innovative and high growth firms achieving success in exploiting overseas markets takes much more centre stage. Indeed, many high technology firms are now ‘born global’, because the highly specialised nature of their business means their market is global right from the time they begin trading.

Innovative firms which export see success in overseas markets both as key to achieving their growth aims, and as a vital means of gaining exposure to new ideas. Exporting also enables them to strengthen their financial performance and thus fund the additional R&D they need in order to keep innovating and stay ahead of competitors.

This paper is timely, as recent evidence has shown that innovative and high growth Small and Medium Sized Enterprises (SMEs) contribute disproportionately to the economy, both in terms of its growth, and in terms of its ability to respond to a rapidly changing international business environment.

The paper reviews a wealth of new evidence on the international activity of this important group of innovative and high growth SMEs in the UK, and on the barriers they encounter in seeking to expand into new overseas markets. It provides a welcome addition to the evidence base for policy relating to support for this important group of SMEs.

Vicky Pryce
Director-General, Economics, Department for Business, Innovation and Skills
and Joint Head, Government Economic Service
Executive Summary

E.1 The UK has long been a trading nation. Exporting has benefitted the economy through its contribution to productivity growth and innovation. More recently, exporting has been recognised as an important route to growth for many businesses, and hence for the economy as a whole.

E.2 Recent surveys of firms have found that those which export have been weathering the recession better than those that do not. They have been more likely to report growth, both in terms of turnover and employment, driven in part by having benefitted from demand for their products or services in overseas markets.

E.3 There are a number of sources of evidence about the internationalisation of firms including theoretical models, econometric studies, surveys and qualitative interviews form the international business literature and from surveys conducted on behalf of UKTI. This paper brings these together with the aim of improving knowledge of internationalisation, with a particular focus on innovative and high growth SMEs and furthering the understanding of how these firms may be supported in their internationalisation efforts.

Recent trends in SME Internationalisation

E.4 Exporters are in the minority when the whole Small and Medium Sized (SME) population is considered. However, exporting is more prevalent among the population of SMEs which invest in research and development (R&D), are innovative or hold intellectual property.

Why and How do firms Internationalise?

E.5 Economic theory identifies that only the most productive firms will enter overseas markets. Businesses report that their motivations for entering overseas markets include exposure to new ideas as well as expansion and profit.

E.6 Many SMEs follow a traditional model of internationalisation in which they internationalise gradually, having first developed their business in the domestic market. The number of markets into which they sell or operate their business increases with their export experience. Easier markets are entered first before they progress to more challenging markets.

E.7 Born Globals are a sub-group of firms which are mostly innovative SMEs which tend to be in high technology sectors. These firms do not follow the traditional model of internationalisation. Instead, they internationalise rapidly, within two years of establishment. In some cases their first customers are from overseas rather than the domestic market. They tend to enter many markets, including those which are more distant.
Executive Summary

E.8 Most firms export by selling directly or via agents or distributors. However, Born Globals and high growth firms are more likely to use a range of modes of internationalisation such as contractual arrangements with international partners.

E.9 Networks and serendipity influence the choice of overseas market of many firms. However, innovative firms are more likely than other firms also to use independent analysis when selecting an overseas market.

Benefits of Internationalisation

E.10 Studies of firms in the UK have consistently found a productivity benefit of exporting. Most of this difference is due to an increase in productivity prior to beginning to export as firms prepare to export, with the rest arising from firms learning by exporting. Exporting firms contribute more to UK productivity growth than non-exporters. Between 1996 and 2004 60% of UK productivity growth was attributable to exporting firms.

E.11 Exporting is a vital ingredient for achieving productivity (TFP) gains from innovation and research and development (R&D). Although innovation may influence the decision to export, exporting itself promotes innovation and investment in R&D.

E.12 Benefits from exporting reported by firms include enabling a level of growth that otherwise would not be possible, making fuller use of existing capacity and exposure to new ideas. Firms which are innovative are more likely to report benefits than those which are not. Multivariate analysis indicates that benefits of exporting are as strong or stronger for established exporters, which suggests that benefits persist beyond the early stages of international activity.

E.13 Exporting has been found to have a positive impact on firm financial health and to a lower probability of firm closure. These impacts of exporting have been particularly important during the economic downturn.

Barriers to Internationalisation

E.14 SMEs face a number of non-tariff barriers to exporting. Of these, innovative firms are more likely to report having encountered barriers.

E.15 The main barriers to internationalisation include:

- Gaining access to networks and contacts in an overseas market. This includes establishing a dialogue and building a relationship with actors in the market;
- Navigating unfamiliar business environments, including differences in language and culture;
Procedural barriers such as product standards and other aspects of the legal and regulatory framework;

Having the capability to understand the competitive environment and to identify and assess potential opportunities and risks;

Finding the confidence, management time and other resources to investigate and pursue opportunities in overseas markets.

E.16 Of the barriers identified, those relating to culture appear to create the greatest impediment to overseas market entry. The more barriers of this type which a firm reports encountering, the less likely they are to enter the market.

E.17 Barriers are related to export experience but in a non-linear manner. Some barriers rise after the firm has exported for more than two years, but fall after the firm has exported for at least ten years.

E.18 Barriers vary by market with firms generally experiencing more barriers in fast-growing markets. In these markets legal and regulatory barriers and language and cultural barriers are most commonly encountered.

Conclusion

E.19 There is an important role for Government support to assist innovative and high growth SMEs to internationalise, as these firms would not be able to fulfil their potential contribution to the economy without being able to exploit overseas opportunities effectively. Governments can best meet this need by:

Helping businesses to gain access to key contact networks, by serving as a trusted intermediary;

Strengthening the internationalisation capabilities of innovative and high growth businesses, and helping them build the absorptive capacity they need to meet the challenges of overseas expansion;

Providing access to information and advice which the private sector alone would not or could not provide to UK businesses seeking to exploit opportunities overseas;

Helping firms to overcome barriers to overseas market access, including helping individual firms to overcome particular problems with legal or regulatory issues.
1. Introduction

1.1 The role of innovative and high growth SMEs in the economy: overview

1.1 Recent evidence has shown that innovative and high growth\(^1\) Small and Medium Sized Enterprises (SMEs) contribute disproportionately to the economy, both in terms of its growth,\(^2\) and in terms of its ability to respond to a rapidly changing international business environment. Evidence has also highlighted the importance of international business to the growth and development of innovative and high technology SMEs. Evidence has also highlighted the importance of international business to the growth and development of these SMEs, especially among innovative and high technology businesses. Indeed, some high technology firms are now being described as ‘born global’, because the highly specialised nature of their business means their market is global right from the time they begin trading.

1.2 A recent BERR Economics Paper\(^3\) reviewed evidence showing that growing firms, and high growth firms in particular, are likely to have above average productivity levels for the sector in which they operate.\(^4\) Hence as these firms grow and increase their market share, displacing lower productivity competitors, aggregate productivity is driven up.

1.3 The economic importance of high growth SMEs is not only because they drive growth through their positive effect on aggregate productivity\(^5\) and on job creation but also because the high growth firms of today will become the larger firms of tomorrow. Despite representing only around 6% of all UK firms with at least 10 employees, they account for more than a quarter of the net growth in jobs in existing businesses.\(^6\) Of these, high-growth firms with less than 50 employees enjoy a slightly higher rate of job increase than that of firms with at least 100 employees.\(^7\)

1.4 In addition to these direct effects on job creation, high growth firms have been found to have indirect effects on the economy such as a positive impact on private sector employment growth and employment rates. An increase of 5 percentage points in the employment share of high growth firms is associated with a 3.5 percentage point increase in private sector employment growth rates and a 1 percentage point increase in employment rates in a city-region.

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1 The OECD defines a firm to be high-growth firm if it has an average employment growth rate exceeding 20 percent per annum over a three year period and had ten or more employees at the start of the period. As a result of churn, the population of high-growth firms varies year on year.
2 Anyadike-Danes et al., (2009)
3 BERR Economics Paper No. 3 (2008) reviews evidence on the importance of high growth firms to the economy, and the links between high growth and innovation.
4 Acs et al. (2008)
5 Mason et al. (2009)
6 Anyadike-Danes et al. (2009)
7 Ibid.
1.5 In the UK, high growth firms are likely to be exporters, as access to wider international markets is often necessary to achieving their business growth aims. A recent qualitative study of high growth firms in the UK found that the majority of the interviewed firms were engaged in exporting. For these firms, exporting had enabled them to expand, and made an important contribution to their total sales. Similarly, evidence from recent surveys of exporters carried out for UKTI, consistently highlights the importance of exporting as a means of enabling them to achieve a level of growth which otherwise would not be possible. This is particularly so for innovative and IP active SMEs.

Box 1.1 Definition of Innovation used in UKTI surveys (PIMS, PIMS Non-User and the 2008 Internationalisation Survey)
Firms are classified as ‘innovative’ if they...

1. Have more than one employee engaged either wholly or partly in R&D activity and have more than one employee engaged either wholly or partly in new product or service development

2. Or, have employed someone external to the business to conduct new product or service development activity in the last year

3. Or, derive some of their turnover from products and services introduced in the last 3 years except firms established in the last 2 years

Definition of IP active firms used in UKTI surveys
Firms are classified as ‘IP active’ if they...

Currently hold any patents or trademarks, either in the UK or overseas

1.6 Firms that export seem to have higher growth aspirations than those which do not: A 2007 survey of UK SMEs found that 79% of exporters had an objective to grow their business over the next few years, compared to 63% of non-exporters. Among exporters who had used UKTI services, the proportion having an objective to grow over the next five years was consistently found to be higher than for other exporters, at 88% in 2007-08, as compared with 74% for non-UKTI users.

1.7 One of the reasons for the high-growth of these firms is that they are more innovative than other firms in the economy. The effect of innovation is to increase the rate of growth: a high growth firm that increases its share of sales from new products by 10 percentage points has been found to increase its employment growth rate on average by almost 1.5 percentage points. This is consistent with survey evidence showing that SMEs which are innovative and IP active have higher growth aspirations and are more likely to grow their business over the next few years compared to non-exporting firms. However, the extent to which innovation drives the growth of these firms is still not fully understood, and further research is needed to explore this relationship in more depth.
active are more likely to have an objective to grow substantially. Chart 1.1 shows that this has been a consistent pattern over time, especially for younger firms.13

1.8 Further evidence of the relationship between innovation and growth comes from the finding that IP active firms are more likely to be classified as high growth than non-IP active firms. Trademarks in particular seem to be important for high growth.14 Trade-marking is associated with a 12% higher growth rate among UK SMEs15.

1.9 Although only around 4.8% of UK SMEs are IP active, recent research has demonstrated that these firms make a substantial contribution to total IP activity in the UK. This contribution is larger in both absolute and relative terms than the large-firm share of UK IP activity. SMEs are more IP intensive than larger firms, in the sense that they hold more IP publications per million pounds of assets. Within the category of SME firms, the intensity of both patents and trade marks has been found to fall with firm size.16

1.10 As detailed later in this report, innovative and R&D active UK firms of all sizes are also likely to be exporters17, again reflecting the importance of international markets in enabling these firms to achieve their growth aims, and to maximise returns to their investment in intellectual property. Exporting firms account for 86% of UK business R&D spending. UK-owned exporters account for the majority of this spending (73%).18

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13 OMB Research (2009b, 2008a, 2008b, 2007b and unpublished analysis of PIMS data)
14 BERR (2008)
15 Rogers et al. (2007a)
16 Ibid.
17 Harris and Li (2009a; 2009b; 2006)
18 Harris (2008)
1.11 This paper looks at evidence on recent trends in the internationalisation of innovative and high growth SMEs in the UK, and at evidence on the motivations and constraints which appear to be influencing these trends, including a substantial body of new evidence on the benefits of internationalising, both to the firms themselves and to the wider economy. It incorporates new empirical evidence from a number of research projects recently carried out for UK Trade & Investment, including new analysis of data from the UK Community Innovation Survey, data from a new dataset which includes firm level data on intellectual property\textsuperscript{19}, and data from a number of quantitative surveys of UK exporters carried out for UK Trade & Investment.

1.12 The paper is timely, as evidence from recent surveys of UK exporters shows that many innovative SMEs are expecting to try to increase exports, and the share of revenue which they derive from overseas sales, as a response to the fall in the value of sterling\textsuperscript{20}. Many are also expecting to seek to increase exports to high growth markets, despite the greater challenges which these markets present, as a result of experiencing weaker demand in the UK market and in other established markets\textsuperscript{21}.

1.13 The importance of expansion into export markets, as a key route to growth for British enterprises, was also highlighted in a recent document on the factors likely to contribute to returning the UK economy to stronger growth\textsuperscript{22}. The document draws attention to the fact that businesses that diversify, both what they do and to whom they sell, are more likely to be resilient when economic conditions are difficult. It cites evidence that selling successfully into overseas markets benefits firms in terms of: financial performance, including greater probability of survival; innovation, including the ideas and resources to undertake additional Research and Development (R&D); and productivity. New evidence on these benefits of exporting is reviewed in the present paper.

1.2 Outline of paper

1.14 The paper is structured as follows:

- **Chapter 2** reviews evidence on recent trends in internationalisation of innovative and high growth SMEs in the UK, looking both at the incidence of exporting and at the extent and scope of international activity, and how these vary across SME subgroups. It then looks at evidence on the characteristics of exporters, and of an important subgroup of exporters known as ‘born globals’, and shows that these differ in a number of important respects from non-exporters.

\textsuperscript{19} The Oxford Firm Level Intellectual Property (OFLIP) database. This uses data on all UK firms over the period 2001 to 2005 and matches data on UK patents, EPO patents, UK trade marks and Community trade marks to these firms.

\textsuperscript{20} OMB Research (2009b)

\textsuperscript{21} OMB Research (2008a), Accent (forthcoming)

\textsuperscript{22} BIS (2010)
Introduction

- Chapter 3 looks at theory and evidence about why and how SMEs internationalise, including new evidence from recent surveys and qualitative empirical studies relating to the patterns of SME internationalisation. The chapter highlights a distinction between a traditional ‘stages’ model of internationalisation, and the ‘born global’ model which now appears to be more typical of SMEs in some technology intensive sectors, such as biosciences.

- Chapter 4 reviews recent empirical evidence on the benefits of exporting, both to the firms themselves and to the wider economy, looking particularly at evidence for the UK about the effects of exporting on firms’ survival and performance, on productivity, and on innovation and investment in R&D. The chapter reports evidence from both qualitative and quantitative empirical studies, and highlights a high degree of consistency in key findings across studies for the UK, as well as evidence of substantial variation in business experience at firm and sector level.

- Chapter 5 provides a summary of evidence on the barriers and hindrances which constrain SME exporting, and at the ways in which these influence patterns of internationalisation activity, including choice of overseas market. It then considers the firm level evidence on barriers in the wider context of findings from quantitative studies of the geographical patterns of trade, and evidence on recent trends in the growth of UK exports to selected markets, and how these trends are related to growth in the number of UK exporters to these markets. The chapter highlights the role of ‘absorptive capacity’ in the ability of SMEs to internationalise successfully, and the role culture and networks as a significant influence on export market destination.

- Chapter 6 looks at policy implications of the evidence presented in previous chapters, and reviews the main strands of policy support currently offered to SMEs in the UK and in some other developed countries in light of the main findings. The chapter concludes by highlighting the most important areas of support needed to enable this group of firms meet the challenges associated with seeking to exploit overseas markets successfully.
2. Recent Trends in UK SME Internationalisation

2.1 Is exporting ‘rare’ among UK SMEs?

2.1 As the UK Office of National Statistics (ONS) does not collect data on whether UK firms export, and Companies House requires firms to report overseas turnover only after it passes a threshold, there is no comprehensive source of data about the number of UK exporters, either in total or by size. Nevertheless, robust evidence about the extent to which SMEs and larger firms engage in export activity, and other forms of internationalisation, is available for the UK from a number of medium and large scale business surveys, including:

- The UK Community Innovation Survey (CIS)
- The Annual Small Business Survey (ASBS – UK)
- The Observatory of European SMEs
- UKTI’s Internationalisation and Awareness Surveys
- ONS The Annual Business Inquiry (ABI) (identifies exporters of services only)
- ONS Annual Survey of International Trade in Services (ITIS)

2.2 Evidence from surveys carried out for the Observatory of European SMEs suggests that overall only around 8% of European SMEs export, with the UK and Germany at 9%, above France at 6% but below Netherlands at 13%. Although this may appear consistent with the ABI, which indicates that 8.8% of UK firms export services, it is only a partial estimate as the ABI excludes exporters of goods. The ASBS (2007/8) suggests a much higher figure for the UK of some 24% for all SME employers, as does the CIS (2007) 30.6%. For the USA, with a much larger domestic market, the proportion of firms exporting is very much smaller, less than 1%.

2.3 At first glance the figures for the UK seem disparate, although some differences can be explained by the basis on which the percentages are calculated. The Observatory of European SME survey estimate includes all firms, whilst that of the ASBS includes only firms with employees. However, even when non-employer SMEs are included, the ASBS proportion selling outside the UK is still higher, at 20%. However the ASBS and CIS appear more consistent. The CIS sample consists of firms with at least 10 employees at the time that the sample was identified, and the findings appear broadly consistent with the 2007/08 ASBS, which found that 34% of businesses with 10-249 employees

23 The Gallup Organisation, 2007
24 Criscuolo and Breinlich, 2008
26 Harris and Li, 2009a
27 United States of America Trade Promotion Coordinating Committee 2008
Recent Trends in UK SME Internationalisation

export\textsuperscript{28}, even though the time periods being asked about differ (CIS asks about activity over a 3-year period whilst the ASBS asks about current activity).

2.4 The 2008 UKTI Internationalisation survey screening process indicated that around 35\% of firms are engaged in international business, either through exporting, or through other modes such as overseas sites, licensing, franchising, partnerships, etc. However, this figure is not directly comparable to those arising from the other available sources since it is derived from results of the screening process which excluded from interview all those not engaged in some form of international business activity, or not planning to undertake such activity within the 12 months following the interview. It is also likely to be biased upwards to some extent due to exclusion from the sampling frame of sectors with low incidence of exporting as identified by analysis of the CIS.\textsuperscript{29}

2.5 Table 2.1 summarises the evidence from successive CIS waves regarding the incidence of exporting by size band. Although differences between CIS 3, CIS 4 and CIS 5 may reflect differences in sectoral composition of the two waves, evidence from CIS indicates that the incidence of exporting among UK SMEs appears to have increased in recent years. The table also shows that the incidence of exporting increases with firm size, with 46.1\% of firms with at least 250 employees exporting, compared to 32.9\% of those with 10-49 employees. Export activity is much more prevalent in manufacturing than in services sectors\textsuperscript{30}, although the pattern of incidence rising with firm size holds across both. Establishments are also more likely to export if they belong to multi-region multi-plant firms which operate in more than one industry or if they are foreign-owned.\textsuperscript{31}

<table>
<thead>
<tr>
<th>Employment size</th>
<th>Percentage of Firms Exporting</th>
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<tbody>
<tr>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>10-49</td>
<td>22.9%</td>
</tr>
<tr>
<td>50-249</td>
<td>42.6%</td>
</tr>
<tr>
<td>250+</td>
<td>51.5%</td>
</tr>
<tr>
<td>Total</td>
<td>26.1%</td>
</tr>
</tbody>
</table>


\textsuperscript{28} Source: BIS ED internal analysis of ASBS 2007/08 dataset, based on those with 10-249 employees only.

\textsuperscript{29} There were a few other sub-sector exclusions from the sampling frame, such as sub-post offices, identified on the common sense grounds as unlikely to meet the screening criteria for participation in this survey.

\textsuperscript{30} Table 2.2

\textsuperscript{31} Harris and Li, 2009a
2.2 Variations in the incidence of exporting across sectors

2.6 The CIS data provides additional insights into the exporting population through its detail at sectoral level which identifies wide variation in the incidence of exporting across sectors. For example, it shows that while only 5.8% firms in the Real estate sector export, among firms in the chemicals sector exporting is almost universal, at 86.5% (Table 2.3). This indicates that the sectoral composition of a survey sample will influence the overall incidence of exporting identified.

2.7 Sectors with the highest proportion of firms which export include chemicals (86.5%), medical and precision instruments (80.5%), machinery and equipment (71.4%), motor and transport (65%) and R&D (63.5%). Sectors with the lowest proportions of exporting firms include: Real Estate (5.8%), Construction (6.6%), hotels and catering (13.6%), sale and repair of motor vehicles (13.9%), and machine rentals (15.1%).

2.8 When the proportion of firms exporting by sector is split by firm age (firms established in the 5 years prior to the survey, and those established earlier), generally older firms are more likely to export than younger firms. However in some sectors a higher proportion of younger firms export than older firms. Such sectors include computing, R&D, Medical and precision instruments, motor and transport, retail trade, electrical machinery and non-metallic minerals.

Table 2.2: Incidence of Exporting in Manufacturing and Services by Firm Size

<table>
<thead>
<tr>
<th>Employment size</th>
<th>Manufacturing</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-49</td>
<td>36.7</td>
<td>39.4</td>
</tr>
<tr>
<td>50-249</td>
<td>64.2</td>
<td>66.6</td>
</tr>
<tr>
<td>250+</td>
<td>72.5</td>
<td>72.9</td>
</tr>
<tr>
<td>Total</td>
<td>43.9</td>
<td>47.0</td>
</tr>
</tbody>
</table>

2.9 The lower incidence of exporting among services (non-manufacturing) sector firms (Table 2.2) probably reflects the need for services to be co-located with the consumer, which makes trade in services more complex than trade in goods. Despite this lower propensity to export, firms in services sectors comprise some 60% of all firms using UKTI trade services, with production sector firms accounting for 38%. Among exporters who have not used UKTI services and who participated in the 2009 PIMS Non-user survey, services sectors appear less prominent (with 50% in production sectors and only 47% in services), although this pattern may partly reflect sectoral composition of the 2009 PIMS non-user survey sampling frame.32

2.10 Analysis over three waves of CIS shows that the proportion of firms which export has increased over time. Sectors in which the proportion of firms exporting increased most between 2004 and 2006 include paper, clothing and leather, publishing and printing, medical/precision instruments, motor and transport, furniture and other manufacturing, computer software and R&D. The proportion of firms exporting declined in two industries: financial services and other business services. In both cases the fall was small (3.3% and 0.3% respectively).

2.11 The proportion of firms exporting by sector varies over time. While most sectors have shown an upwards trend between 2000 and 2006, in others the proportion exporting fell slightly between 2000 and 2004, rising again between 2004 and 2006. Such sectors include food and drink, textiles, wood products, electrical machinery and R&D (Table 2.3). This may reflect changes within these sectors which could have impacted on the number of firms operating in the sector and conditions within the sectors which may have impacted on the propensity for firms in the sector to export. Chapter 3 contains some discussion of the latter.

32 OMB Research (2009b). The sampling frame for this survey was obtained from Experian, and comprised firms known to export.
Table 2.3: Percentage of Firms Exporting by Sector

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining &amp; quarrying (10-14)</td>
<td>22.0</td>
<td>32.9</td>
<td>38.5</td>
</tr>
<tr>
<td>Food &amp; drink (15)</td>
<td>37.3</td>
<td>35.1</td>
<td>44.4</td>
</tr>
<tr>
<td>Textiles (17)</td>
<td>62.1</td>
<td>56.7</td>
<td>61.3</td>
</tr>
<tr>
<td>Clothing &amp; leather (18)</td>
<td>28.5</td>
<td>46.6</td>
<td>59.7</td>
</tr>
<tr>
<td>Wood products (20)</td>
<td>22.9</td>
<td>19.9</td>
<td>24.0</td>
</tr>
<tr>
<td>Paper (21)</td>
<td>43.6</td>
<td>44.5</td>
<td>67.1</td>
</tr>
<tr>
<td>Publishing &amp; printing (22)</td>
<td>20.4</td>
<td>29.4</td>
<td>40.6</td>
</tr>
<tr>
<td>Chemicals (23-24)</td>
<td>73.7</td>
<td>78.4</td>
<td>86.5</td>
</tr>
<tr>
<td>Rubber &amp; plastics (25)</td>
<td>55.9</td>
<td>50.8</td>
<td>60.2</td>
</tr>
<tr>
<td>Non-metallic minerals (26)</td>
<td>36.1</td>
<td>44.1</td>
<td>46.3</td>
</tr>
<tr>
<td>Basic metals (27)</td>
<td>69.8</td>
<td>73.3</td>
<td>80.6</td>
</tr>
<tr>
<td>Fabricated metals (28)</td>
<td>32.4</td>
<td>39.2</td>
<td>44.8</td>
</tr>
<tr>
<td>Machinery &amp; equipment n.e.s. (29)</td>
<td>57.2</td>
<td>66.7</td>
<td>71.4</td>
</tr>
<tr>
<td>Electrical machinery (20-32)</td>
<td>67.7</td>
<td>58.4</td>
<td>66.4</td>
</tr>
<tr>
<td>Medical etc instruments (33)</td>
<td>63.9</td>
<td>68.0</td>
<td>80.5</td>
</tr>
<tr>
<td>Motor &amp; transport (34-35)</td>
<td>55.3</td>
<td>53.4</td>
<td>65.0</td>
</tr>
<tr>
<td>Furniture &amp; manufacturing n.e.s. (36)</td>
<td>39.7</td>
<td>38.5</td>
<td>50.9</td>
</tr>
<tr>
<td>Construction (45)</td>
<td>3.5</td>
<td>3.7</td>
<td>6.6</td>
</tr>
<tr>
<td>Sale/repair of motor vehicles (50)</td>
<td>n.a.</td>
<td>7.3</td>
<td>13.9</td>
</tr>
<tr>
<td>Wholesale trade (51)</td>
<td>36.3</td>
<td>42.3</td>
<td>48.8</td>
</tr>
<tr>
<td>Retail trade (52)</td>
<td>n.a.</td>
<td>8.3</td>
<td>15.7</td>
</tr>
<tr>
<td>Hotels &amp; catering (55)</td>
<td>n.a.</td>
<td>4.8</td>
<td>13.6</td>
</tr>
<tr>
<td>Transport (60-62)</td>
<td>3.7</td>
<td>18.8</td>
<td>24.1</td>
</tr>
<tr>
<td>Transport support (63)</td>
<td>15.4</td>
<td>37.5</td>
<td>43.3</td>
</tr>
<tr>
<td>Post &amp; telecom (64)</td>
<td>7.1</td>
<td>25.8</td>
<td>29.5</td>
</tr>
<tr>
<td>Financial (65-67)</td>
<td>10.2</td>
<td>29.6</td>
<td>26.3</td>
</tr>
<tr>
<td>Real estate (70)</td>
<td>0.5</td>
<td>5.4</td>
<td>5.8</td>
</tr>
<tr>
<td>Machine rentals (71)</td>
<td>5.5</td>
<td>14.9</td>
<td>15.1</td>
</tr>
<tr>
<td>Computing (72)</td>
<td>35.7</td>
<td>48.2</td>
<td>59.5</td>
</tr>
<tr>
<td>R&amp;D (73)</td>
<td>54.7</td>
<td>50.7</td>
<td>63.5</td>
</tr>
<tr>
<td>Other business (74)</td>
<td>16.0</td>
<td>26.9</td>
<td>26.6</td>
</tr>
<tr>
<td>Motion Picture production (9211)</td>
<td>na</td>
<td>na</td>
<td>43.9</td>
</tr>
<tr>
<td>All sectors</td>
<td>26.1</td>
<td>25.7</td>
<td>30.6</td>
</tr>
</tbody>
</table>

2.3 Exporting is more prevalent among innovative firms

2.12 There is now a substantial body of quantitative evidence for the UK demonstrating that innovative firms are much more likely to export. Of the sub-group of IP active SMEs, 62% were internationalised in 2005, that is, that they reported turnover from overseas activity.33 This is comparable to the proportion of R&D active firms in the manufacturing sector in CIS5 which export (60.1%), although the proportion of R&D active non-manufacturing firms which export is lower (47.6%)34, as shown in Table 2.4.

Table 2.4: Exporting by R&D Activity

<table>
<thead>
<tr>
<th>Year</th>
<th>R&amp;D Activity</th>
<th>Do not export</th>
<th>Export</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 (CIS3): Manufacturing</td>
<td>No R&amp;D</td>
<td>50.7%</td>
<td>30.7%</td>
<td>81.4%</td>
</tr>
<tr>
<td></td>
<td>Undertake R&amp;D</td>
<td>5.1%</td>
<td>13.5%</td>
<td>18.6%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>55.8%</td>
<td>44.2%</td>
<td>2942a</td>
</tr>
<tr>
<td></td>
<td>Non-manufacturing</td>
<td>No R&amp;D</td>
<td>76.9%</td>
<td>12.9%</td>
</tr>
<tr>
<td></td>
<td>Undertake R&amp;D</td>
<td>6.6%</td>
<td>3.6%</td>
<td>10.2%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>83.5%</td>
<td>16.5%</td>
<td>5120a</td>
</tr>
<tr>
<td>2004 (CIS4): Manufacturing</td>
<td>No R&amp;D</td>
<td>39.2%</td>
<td>21.8%</td>
<td>61.1%</td>
</tr>
<tr>
<td></td>
<td>Undertake R&amp;D</td>
<td>13.8%</td>
<td>25.1%</td>
<td>38.9%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>53.0%</td>
<td>47.0%</td>
<td>3428a</td>
</tr>
<tr>
<td></td>
<td>Non-manufacturing</td>
<td>No R&amp;D</td>
<td>64.9%</td>
<td>11.4%</td>
</tr>
<tr>
<td></td>
<td>Undertake R&amp;D</td>
<td>15.2%</td>
<td>8.5%</td>
<td>23.7%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>80.1%</td>
<td>19.9%</td>
<td>12486a</td>
</tr>
<tr>
<td>2006 (CIS5): Manufacturing</td>
<td>No R&amp;D</td>
<td>34.5%</td>
<td>22.0%</td>
<td>56.5%</td>
</tr>
<tr>
<td></td>
<td>Undertake R&amp;D</td>
<td>10.4%</td>
<td>33.1%</td>
<td>43.5%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>44.9%</td>
<td>55.1%</td>
<td>2933a</td>
</tr>
<tr>
<td></td>
<td>Non-manufacturing</td>
<td>No R&amp;D</td>
<td>60.6%</td>
<td>12.9%</td>
</tr>
<tr>
<td></td>
<td>Undertake R&amp;D</td>
<td>14.9%</td>
<td>11.7%</td>
<td>26.6%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>75.5%</td>
<td>24.5%</td>
<td>11758a</td>
</tr>
</tbody>
</table>

* Total number of observations

33 Rogers and Helmers (2008)
34 Harris and Li (2009a)
2.13 The relationship between exporting and innovation is illustrated in Fig 2.1. Where investment in R&D, innovations and patents confer sustainable competitive advantages on the firm, such as first mover advantages, or cost advantages to the firm through changes to the production process or other process innovations in the firm, the firm is more likely to become an exporter. This suggests that competitive advantages arising from innovation, R&D and patents can enable firms to overcome some of the barriers to exporting.35 However, this is conditional on the firm having a sufficient level of absorptive capacity.

2.4 ‘Born Globals’

2.14 An emerging literature has identified a sub-group of internationalised firms which are referred to as ‘Born Globals’. Such firms tend to be innovative, rendering them of particular interest. As discussed in more detail in Chapter 3, these are firms which internationalise widely and rapidly shortly after inception. What further differentiates these firms from other internationalising firms is that they have may have no, or a very small domestic market before they internationalise.36 For some, their first customers are from overseas.

2.15 The original definition of a ‘Born Global’ was a small firm with 25% of turnover from exports within 3 years of inception. However, more stringent definitions have been put forward since then, such as at least 50 per cent of sales to be sold in continents external to that of the country of origin;37 and 50% of sales to be international within 5 years of inception.38 Well known examples

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35 Despite these competitive advantages, survey evidence shows that innovative firms encounter more barriers to exporting than other firms, as explained in Chapter 5.
37 Gabrielsson et al. (2008)
38 Dow (2005)
Recent Trends in UK SME Internationalisation

of Born Global firms include Research in Motion Ltd, the promoter of the Blackberry, and Zara.\textsuperscript{39}

2.16 A recent quantitative study of Born Globals in the UK, which used a loose definition of these firms (that they were aged 5 years or less and had achieved overseas sales within 2 years of incorporation), found that 2.1\% of all firms, 14\% of exporting firms, and 78\% of exporting firms established for up to 5 years were Born Global. However, if this definition is limited to firms which achieved at least 76\% of their sales to be overseas, then Born Globals were found to account for only 0.5\% of all firms in the UK.\textsuperscript{40}

2.17 Using the definition of firms established for up to 5 years which had internationalised since establishment, the 2008 UKTI Internationalisation survey found 10\% of internationalising firms to be Born Global.\textsuperscript{41}

2.18 As for the incidence of all export activity, the prevalence of Born Globals varies greatly across sectors (Table 2.5). They were most likely to operate in technology intensive sectors such as chemicals, medical and precision instruments and computer services/R&D. They were also more prevalent in service sectors in which high levels of technical expertise and know how are important and for which, exporting is otherwise generally less common.\textsuperscript{42}

\textsuperscript{39} Gabrielsson \textit{et al.} (op. cit.)
\textsuperscript{40} Harris and Li (2007b)
\textsuperscript{41} OMB Research (2008a)
\textsuperscript{42} Harris and Li (2007b)
### Table 2.5: Sector Incidence of Born Globals in the UK (2000-2004)

<table>
<thead>
<tr>
<th>Industry (SIC 2003)</th>
<th>‘Born global’ as % of all firms</th>
<th>‘Born global’ as % of all exporters</th>
<th>% of all firms that export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coke/Chemicals (DF/DF)</td>
<td>11.7</td>
<td>13.1</td>
<td>81.2</td>
</tr>
<tr>
<td>Motor Vehicles/Parts (DM pt)</td>
<td>9.4</td>
<td>15.4</td>
<td>56.2</td>
</tr>
<tr>
<td>Rubber/Plastics (DH)</td>
<td>9.2</td>
<td>14.6</td>
<td>57.4</td>
</tr>
<tr>
<td>Machinery/Equipment (DK)</td>
<td>8.5</td>
<td>11.2</td>
<td>66.5</td>
</tr>
<tr>
<td>Medical/PreCision (DI pt)</td>
<td>7.2</td>
<td>9.2</td>
<td>71.9</td>
</tr>
<tr>
<td>Other Transport (DM pt)</td>
<td>7.0</td>
<td>10.2</td>
<td>63.6</td>
</tr>
<tr>
<td>Electrical Machinery (DI pt)</td>
<td>6.4</td>
<td>10.0</td>
<td>59.5</td>
</tr>
<tr>
<td>Office Equip/Radio, TV (DI pt)</td>
<td>6.0</td>
<td>7.2</td>
<td>76.0</td>
</tr>
<tr>
<td>Computer Services/R&amp;S (K pt)</td>
<td>5.7</td>
<td>23.0</td>
<td>19.8</td>
</tr>
<tr>
<td>Textiles/Cloth/Leather (DC/DC)</td>
<td>5.1</td>
<td>8.4</td>
<td>55.1</td>
</tr>
<tr>
<td>Wholesale Trade (G pt)</td>
<td>5.0</td>
<td>11.3</td>
<td>36.5</td>
</tr>
<tr>
<td>Manufacturing Nec (DN)</td>
<td>5.0</td>
<td>11.3</td>
<td>38.7</td>
</tr>
<tr>
<td>Agents Various Products (G pt)</td>
<td>4.8</td>
<td>16.1</td>
<td>24.4</td>
</tr>
<tr>
<td>Base Metals/Fabricated (DJ)</td>
<td>4.5</td>
<td>7.2</td>
<td>58.4</td>
</tr>
<tr>
<td>Other Business Services (K pt)</td>
<td>4.5</td>
<td>21.7</td>
<td>16.4</td>
</tr>
<tr>
<td>Paper/Printing (DE)</td>
<td>3.4</td>
<td>11.8</td>
<td>22.5</td>
</tr>
<tr>
<td>Financial Intermediation (J)</td>
<td>3.1</td>
<td>18.1</td>
<td>14.4</td>
</tr>
<tr>
<td>Fabricated Metals (DJ pt)</td>
<td>2.8</td>
<td>5.2</td>
<td>46.8</td>
</tr>
<tr>
<td>Post/Telecoms (I pt)</td>
<td>2.8</td>
<td>25.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Mining/Quarrying (C)</td>
<td>2.2</td>
<td>12.0</td>
<td>17.5</td>
</tr>
<tr>
<td>Non-metal minerals (DI)</td>
<td>2.0</td>
<td>6.9</td>
<td>22.6</td>
</tr>
<tr>
<td>Renting (K pt)</td>
<td>1.8</td>
<td>32.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Food/Bev/Tobacco (DA)</td>
<td>1.7</td>
<td>4.5</td>
<td>16.2</td>
</tr>
<tr>
<td>Repair/Sale Motors (G pt)</td>
<td>1.6</td>
<td>15.4</td>
<td>8.7</td>
</tr>
<tr>
<td>Support for Transport (I pt)</td>
<td>1.6</td>
<td>9.0</td>
<td>13.8</td>
</tr>
<tr>
<td>Other Services not Member Org (O)</td>
<td>1.4</td>
<td>13.0</td>
<td>8.3</td>
</tr>
<tr>
<td>Wood Products (DD)</td>
<td>1.3</td>
<td>11.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Ag/For/Fish (A/B)</td>
<td>1.3</td>
<td>5.6</td>
<td>18.9</td>
</tr>
<tr>
<td>Transport Services (I pt)</td>
<td>1.1</td>
<td>8.6</td>
<td>10.5</td>
</tr>
<tr>
<td>Retail Trade (G pt)</td>
<td>1.0</td>
<td>13.4</td>
<td>5.6</td>
</tr>
<tr>
<td>Construction (F)</td>
<td>0.8</td>
<td>10.3</td>
<td>5.5</td>
</tr>
<tr>
<td>Elect/Gas/Water (E)</td>
<td>0.3</td>
<td>4.2</td>
<td>6.7</td>
</tr>
<tr>
<td>Real Estate (K pt)</td>
<td>0.2</td>
<td>6.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Hotels/Restaurants (H)</td>
<td>0.1</td>
<td>6.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>2.1</td>
<td>14.0</td>
<td>11.9</td>
</tr>
</tbody>
</table>

2.5 Export intensity

2.19 Having reviewed the evidence on the incidence of export activity, we now turn to look at evidence on ‘export intensity’, measured as the proportion of turnover accounted for by exports. Figure 2.2 shows that for most UK exporters, the proportion of turnover derived from goods and services sold overseas by these firms is low: in the manufacturing sector, fewer than half of exporting establishments sold more than around 9% of their total output abroad; while in non-manufacturing the proportion was even lower, at 3%. By contrast, the top 10% of exporting firms export around 70% of their output.

**Figure 2.2: Export Intensity (% of sales) in UK Exporting Establishments by Deciles, 2006**

![Figure 2.2: Export Intensity (% of sales) in UK Exporting Establishments by Deciles, 2006]


2.20 This pattern is consistent with evidence on UK exporters of services (Table 2.6), which shows that in 2005, among exporters of services, the top 1% of service exporters were responsible for about a half (51%) of total UK services exports (unweighted).43

43 Criscuolo and Breinlich (2008).
Table 2.6: Distribution of Exporters of Services by their Contribution to UK Exports, Employment, Turnover and Value Added

<table>
<thead>
<tr>
<th>Top exporters by export value</th>
<th>Number of Firms</th>
<th>% Firms</th>
<th>Share of Exports</th>
<th>Share of Employment</th>
<th>Share of Turnover</th>
<th>Share of Value Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 1%</td>
<td>34</td>
<td>0.09%</td>
<td>50.8%</td>
<td>3.4%</td>
<td>4.3%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Top 5%</td>
<td>172</td>
<td>0.44%</td>
<td>78.3%</td>
<td>8.1%</td>
<td>9.7%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Top 25%</td>
<td>855</td>
<td>2.22%</td>
<td>97.2%</td>
<td>12.5%</td>
<td>14.8%</td>
<td>20.1%</td>
</tr>
<tr>
<td>Top 50%</td>
<td>1711</td>
<td>4.46%</td>
<td>99.6%</td>
<td>15.6%</td>
<td>18.0%</td>
<td>23.2%</td>
</tr>
<tr>
<td>All Exporters</td>
<td>3393</td>
<td>8.84%</td>
<td>100.0%</td>
<td>18.1%</td>
<td>20.2%</td>
<td>25.7%</td>
</tr>
</tbody>
</table>

Source: Criscuolo and Breinlich (2008). Figures are unweighted and refer to 2005 only and are based on a sample of firms from the Annual Business Inquiry (ABI) with positive export values.

2.21 As with other aspects of export behaviour, export intensity shows considerable variation by industry sector (Table 2.7). The highest median export intensity is observed for medical and precision instruments for which 50 per cent of establishments sold up to 37.1% of their output overseas, other sectors with high median export intensity were chemicals (18.4%), basic metals (18.3%), machinery and equipment (16.2%) and electrical machinery (15.1%). Those with the lowest median export intensities include: transport support (less than 0.1%), transport (0.1%), real estate (0.7%), financial (1.0%).
Table 2.7: Median export intensity in UK establishments that exported, 2006, by industry

<table>
<thead>
<tr>
<th>Industry (1992 2-digit SIC)</th>
<th>Percentage of sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining &amp; quarrying (10-14)</td>
<td>*</td>
</tr>
<tr>
<td>Food &amp; drink (15)</td>
<td>4.0</td>
</tr>
<tr>
<td>Textiles (17)</td>
<td>11.6</td>
</tr>
<tr>
<td>Clothing &amp; leather (18)</td>
<td>9.2</td>
</tr>
<tr>
<td>Wood products (20)</td>
<td>2.4</td>
</tr>
<tr>
<td>Paper (21)</td>
<td>2.1</td>
</tr>
<tr>
<td>Publishing &amp; printing (22)</td>
<td>1.6</td>
</tr>
<tr>
<td>Chemicals (23-24)</td>
<td>18.4</td>
</tr>
<tr>
<td>Rubber &amp; plastics (25)</td>
<td>9.8</td>
</tr>
<tr>
<td>Non-metallic minerals (26)</td>
<td>12.1</td>
</tr>
<tr>
<td>Basic metals (27)</td>
<td>18.3</td>
</tr>
<tr>
<td>Fabricated metals (28)</td>
<td>5.0</td>
</tr>
<tr>
<td>Machinery &amp; equipment n.e.s. (29)</td>
<td>16.2</td>
</tr>
<tr>
<td>Electrical machinery (20-32)</td>
<td>15.1</td>
</tr>
<tr>
<td>Medical etc instruments (33)</td>
<td>37.1</td>
</tr>
<tr>
<td>Motor &amp; transport (34-35)</td>
<td>10.0</td>
</tr>
<tr>
<td>Furniture &amp; manufacturing n.e.s. (36)</td>
<td>5.5</td>
</tr>
<tr>
<td>Construction (45)</td>
<td>3.3</td>
</tr>
<tr>
<td>Sale/repair of motor vehicles (50)</td>
<td>1.2</td>
</tr>
<tr>
<td>Wholesale trade (51)</td>
<td>5.6</td>
</tr>
<tr>
<td>Retail trade (52)</td>
<td>2.0</td>
</tr>
<tr>
<td>Hotels &amp; catering (55)</td>
<td>*</td>
</tr>
<tr>
<td>Transport (60-62)</td>
<td>0.1</td>
</tr>
<tr>
<td>Transport support (63)</td>
<td>0.0</td>
</tr>
<tr>
<td>Post &amp; telecom (64)</td>
<td>5.3</td>
</tr>
<tr>
<td>Financial (65-67)</td>
<td>1.0</td>
</tr>
<tr>
<td>Real estate (70)</td>
<td>0.7</td>
</tr>
<tr>
<td>Machine rentals (71)</td>
<td>4.4</td>
</tr>
<tr>
<td>Computing (72)</td>
<td>6.7</td>
</tr>
<tr>
<td>R&amp;D (73)</td>
<td>6.7</td>
</tr>
<tr>
<td>Other business (74)</td>
<td>1.8</td>
</tr>
<tr>
<td>Film Services, etc. (921)</td>
<td>3.7</td>
</tr>
<tr>
<td>All sectors</td>
<td>4.9</td>
</tr>
</tbody>
</table>

* Suppressed to avoided disclosure
2.22 Evidence from recent surveys of UK exporters for UKTI suggests that most innovative firms established for up to 10 years expect the export proportion of their turnover to increase, and that the proportion expecting such an increase has been fairly stable over the past 2-3 years, despite variations in sterling exchange rates. By contrast, fewer non-innovative exporters expect such an increase, and this proportion has shown marked variation over the same period, rising among firms interviewed during 2008, before falling back again in 2009 to levels not much above those of 2006-07 (Figure 2.3).

**Figure 2.3: Anticipated Growth in Export Turnover Over Time**

![Figure 2.3](image)

*Source: OMB Research (2009c)*

2.6 Export market diversification

2.23 Evidence from recent surveys of UK exporters also sheds some light on patterns of export market diversification, which appears to be linked to export intensity.

2.24 As for export intensity, the pattern of export diversification is highly skewed, with many firms exporting to fewer than 5 markets, even among firms who have been exporting for many years. Surveys of UK exporters carried out for UKTI during 2008-09 found that some 12% of non-users and 20% of UKTI users reported exporting to over 20 overseas markets, with 4% and 5% respectively exporting to 50+ markets (Figure 2.4). Among UKTI users, firms over 10 years old were likely to be exporting to many more markets, while this pattern was much less evident among non-users. This difference is likely to reflect the fact that seeking help with respect to entering a new overseas market is one of the main reasons for using UKTI services. At the time of interview, some 46% of non-user businesses had entered new markets in the last 2 years, compared to 60% of their UKTI user counterparts.44
Recent Trends in UK SME Internationalisation

Figure 2.4: Number Of Overseas Markets by Age and UKTI Use

Base: All respondents (Base, Don’t know/Refused)
Non-Users (PIMS – 2009 only) – In last 5 years (68, 0%) 6-10 years ago (92, 1%), >10 years ago (140, 0%),
Users (PIMS FU 8-11 excluding website) – In last 5 years (116, 0%) 6-10 years ago (60, 2%) >10 years ago (219, 1%)
Don’t know/Refused (2, 50%) 

2.25 Evidence from the same survey shows that amongst non-users there
was little difference in export intensity by age of firm, whereas for UKTI users
overseas sales appear to become more important amongst older firms, as the
number of export markets also increases.45

2.26 Analysis of ITIS data on UK exporters of services provides further
insights into export patterns, and confirms a clear link between export market
diversification and export intensity. Of those UK firms which export services,
only one quarter are in at least 10 markets with a mere 2% in more than 50
markets, while almost a third (29.9%) export to one market only. Even when in
multiple markets, exports tend to be concentrated in a small number of markets:
firms which export to 40 markets sell 26% of their exports to their primary
market, declining to 2.5% to their 10th market (Table 2.8).

45 OMB Research, 2009b
2.27 With regard to export diversity (in terms of the number of service products exported), a similar picture prevails but with even higher concentration: only 22.6% of service exporters export more than one product and less than 1% export more than 7 products (Table 2.9).

Table 2.9: Product diversification of service exporters (2000-2005)

<table>
<thead>
<tr>
<th>Number of Markets</th>
<th>Number of Firms</th>
<th>% Firms</th>
<th>Share of Exports (%)</th>
<th>Share of Employment (%)</th>
<th>Share of Turnover (%)</th>
<th>Share of Value Added (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least 1</td>
<td>11047</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>At least 2</td>
<td>2493</td>
<td>22.6</td>
<td>52.6</td>
<td>38.0</td>
<td>41.7</td>
<td>35.7</td>
</tr>
<tr>
<td>At least 3</td>
<td>866</td>
<td>7.8</td>
<td>31.5</td>
<td>27.1</td>
<td>28.4</td>
<td>23.9</td>
</tr>
<tr>
<td>At least 4</td>
<td>410</td>
<td>3.7</td>
<td>20.8</td>
<td>19.7</td>
<td>20.9</td>
<td>16.5</td>
</tr>
<tr>
<td>At least 7</td>
<td>86</td>
<td>0.8</td>
<td>9.2</td>
<td>10.8</td>
<td>9.4</td>
<td>6.4</td>
</tr>
<tr>
<td>10+</td>
<td>33</td>
<td>0.3</td>
<td>5.5</td>
<td>1.3</td>
<td>3.9</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Source: Criscuolo and Breinlich (2008) using matched Annual Respondents Database (ARD) and the Survey of International Trade in Services (ITIS), 2000-2005

2.28 This evidence suggests that the pattern of export intensity among UK exporters illustrated in Figure 2.2 is likely to be due to many firms exporting a narrow product range (only 1 product in the case of services) to one or two markets, with only a minority of firms exporting many products to many markets.

2.29 Evidence of goods exporters from other countries show similar patterns of concentration. However, as vastly more product types for goods exist than for services, firms exporting goods export a broader product range than indicated by services trade data and dynamics are observed at product level with firms adding and removing products from their product range.

46 Criscuolo and Breinlich (2008)
47 Bernard et al. (2007)
48 Görg et al. (2008)
2.7 Characteristics of UK exporters

2.30 Consistent with evidence for other exporters in other countries, UK exporters differ in a number of important characteristics from other firms. They are more productive, both in terms of total factor productivity and labour productivity, and pay higher wages than non-exporting firms, controlling for other characteristics. They also tend to be more capital intensive, older, and larger than non-exporters, and to have stronger financial performance, and have 11.4% higher probability of survival.

2.31 UK exporters have higher absorptive capacity than establishments which do not export, are significantly more likely to engage in continuous R&D, and have higher R&D spending per employee (R&D intensity). Exporters are more likely to be innovative and to co-operate with others in their innovation activities.

2.32 As noted in the previous chapter, exporters are also more likely to have an objective of growing substantially, which, combined with stronger financial performance and greater probability of survival, is likely to help explain their achievement of larger size.

2.33 The evidence is clear and consistent that exporters differ from non-exporters in a number of important ways, and that they demonstrate markedly stronger performance on a range of indicators. These findings have led many researchers to seek to investigate the extent to which these differences may be cause or consequence of exporting. In Chapter 4 we review evidence on this issue.

2.8 Characteristics of Born Globals

2.34 Born Globals have been found to have higher levels of export intensity, a greater degree of global orientation and to have exported to more markets and to geographically more distant markets and psychically more distant markets. An Australian study found that Born Globals tend to be in high technology sectors, with low technology costs and highly concentrated customers. Younger firms seem to be more likely to internationalise at an early stage of development, suggesting that this pattern may have been becoming more common over time.

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49 Bernard et al. (2007),
50 Greenaway and Kneller (2007b)
51 Harris and Li (2009a; 2009b)
52 Greenaway et al., 2007
53 Harris and Li, 2007a
55 Harris and Li (2009a; 2009b; 2006)
56 Dow (2005)
57 Child and Rodrigues (2007)
2.35 A recent quantitative study for the UK highlights the innovative nature of ‘born globals’. Compared to non-exporters, ‘born globals’ were 178% more likely to have produced a product innovation, 188% more likely to have introduced a process innovation, and were 136% more likely to have spent on R&D between 2002 and 2004.\textsuperscript{58} Their average capacity to internalise external information (absorptive capacity) was over 380% higher than that of non-exporters. ‘Born globals’ on average, generate 31% of turnover from new or innovative products, nearly double the average rate for other exporters.

2.36 The study also found that ‘born globals’ had higher total factor productivity (TFP) than non-exporters and are more likely to have intangible assets. However, Born Globals seem to experience lower rates of return (16% lower than other exporters) and rely more on long-term debt and are more vulnerable to short term liquidity problems.\textsuperscript{59}

2.37 Very few UK ‘born globals’ are large; most (some 70%) have fewer than 30 employees. Thus, born globals generally form a subset of innovative SMEs. Although small in absolute terms, they tend to be relatively large in relation to other-exporting firms and non-exporters.\textsuperscript{60}

2.38 Born Globals contribute disproportionately to the UK economy. Despite accounting for only around 2% of firms in the marketable goods and services sector of in the UK, Born Global firms account for some 6.8% of total employment, 8.1% of total UK turnover, and 14.5% of the value of all exports.\textsuperscript{61}

2.9 Conclusions

2.39 The evidence on the incidence of exporting, and other forms of internationalisation, among UK SMEs can be interpreted from different contrasting perspectives:

- **Exporting is rare and irrelevant to most SMEs**: although exporting increases as the size of enterprise increases. If the focus is on the SME population as a whole, then the evidence is clear that exporters are a minority. However, they are a minority with some special characteristics, which make them very important to the performance of the economy, and in particular to productivity, innovation, and economic growth;

- **Exporting is key to optimising the potential of innovative and high growth SMEs in the UK**: When the focus is on the sub-group of UK SMEs who are innovative and have high growth objectives, the role of international markets becomes much more centre stage. The evidence suggests that for most of these firms, success in exploiting overseas opportunities will play a key role in fulfilling their potential.

\textsuperscript{58} Harris and Li, 2007b.
\textsuperscript{59} Harris and Li (2007b)
\textsuperscript{60} Ibid
\textsuperscript{61} Ibid
Chapter 2: Appendix – Small and Medium Sized Enterprises in the UK

2.40 SMEs are defined as businesses employing fewer than 250 people. At the start of 2008, there were about 4.8m SMEs in the UK. About 74% of private businesses have no employees. Of those with employees, the majority are micro-enterprises with 1-9 employees, accounting for 84% of firms with employees. Small and medium sized enterprises (SMEs) form the backbone of the UK economy.

2.41 Not only are the majority (99.9%) of UK businesses SMEs, but they make an important contribution to the UK economy. SMEs employ 13.7 million (59.4%) of the total private sector workforce and contribute as much to output as large businesses (50.1% of turnover).

2.42 The number of SMEs present in different sectors of the economy varies. As Figure 2A.1 below shows, the greatest number of SMEs tends to be found in the real estate and business services sector as well as construction with only a small number found in financial services.

Figure 2A.1: SMEs by Sector


2.43 The number of SMEs in the UK has grown significantly over the last thirty years (Figure 2A.2). In 1980, there were some 2.4 million enterprises. Today there are estimated to be some 4.8m. The fall in SME numbers around 1990 – 1992/1993 illustrates the overall effect of the previous recession on SME survival and start-ups.

2.44 There are a number of reasons for the increase in SME numbers over this period. In recent years, the increasing pace of globalisation coupled with rapidly falling transportation and communication costs have played an important role in the growth of SMEs.

2.45 With the emergence of global value chains, larger firms have focused on those functions and activities where they have a key comparative advantage with other functions sub-contracted out to smaller firms with specialist skills, knowledge and expertise. This growing trend has helped sustain and grow the SME sector in the UK and will continue to do so in future years.

2.46 Although the greatest numbers of SMEs tend to be found in more labour intensive sectors such as construction, significant numbers can be found specialising in those economic activities which involve high levels of technological innovation and skills. These include pharmaceuticals, aerospace, electronics (e.g. medical instruments) and advanced engineering.

SMEs as a driver of productivity growth

2.47 On average, SMEs tend to have lower levels of productivity than larger firms. This is because large numbers of SMEs tend to be found in more labour intensive sectors such as hotels and restaurants, retail and other services. Only a relatively small proportion are in highly innovative, capital intensive industries such as pharmaceuticals and electronics. Small firms are more productive than large firms in two sectors, namely wholesale, retail and repair; and business services.
2.48 However there is evidence which shows that productivity growth by SMEs has surpassed larger firms in recent years, although the average productivity levels for SMEs still lies below larger firms.\textsuperscript{64} Between 2000 and 2005 SMEs reached higher productivity growth than the industry average by 4.8 percentage points. This result also again masks significant differences across sectors. For example, some manufacturing sectors are well suited to large firms which can raise productivity by exploiting potential economies of scale. Other sectors are more suited to smaller firms perhaps because they serve more niche end-user markets.

2.49 Although the average level of productivity for SMEs is lower than larger firms, there is evidence that high growth SMEs tend to have higher productivity than other firms of similar size and sector.\textsuperscript{65} As discussed above, in the main body of this chapter, high growth is also associated with innovation and exporting, which in turn have been shown to be associated with higher absorptive capacity.

2.50 This sub-set of SMEs plays a vital role in raising productivity growth in the UK economy, contributing to higher levels of productivity in three ways: by spurring innovation, by encouraging the process known as ‘productive churn’, and by stimulating stronger competition:

- They are a major source of innovation, specialising in the development and commercialisation of new niche ideas, technologies and products. These can be used by other firms bringing about further rounds of innovation and other spillover benefits such as higher productivity.

- They promote productivity through the process of ‘productive churn’ whereby the entry and growth of new firms and the increased innovation and productivity of existing firms serve to drive out the least productive and innovative firms, thereby raising the level of productivity at the sectoral and national level.

- They also drive productivity growth by increasing competition. This occurs as the entry of new firms with new ideas creates a stronger incentive for existing firms to engage in new product or service development and to improve their efficiency and quality.

\textsuperscript{64} \url{http://www.berr.gov.uk/aboutus/corporate/performance/annual-spending/page52279.html} – BERR Annual Report and Accounts 2008-09 – Annex A.2

\textsuperscript{65} BERR Economics Paper No 3 (2008)
3. Why and How do firms Internationalise?

3.1 Theoretical models of heterogeneous firms

3.1 Beginning with Melitz (2003), a substantial body of theoretical literature has been developed which seeks to explain firms’ decision to export, or to engage in foreign direct investment, based on heterogeneity of firms’ characteristics, in particular productivity. The literature was inspired by empirical work which demonstrated two significant facts which could not be understood through theoretical models based on homogeneous firms:

- Firms with different productivity levels coexist, even within narrowly defined industries; and
- Not all firms export, even within industries for which exports are large.

3.2 This new international trade theory posits that firms are heterogeneous in their productivity, and that, as exporting incurs fixed economic costs (i.e. not just in monetary terms but also in time, management capability etc.) which cannot be recovered, as well as variable costs, only firms with productivity levels above a certain threshold will export and hence, only a small proportion of firms will export.\(^66\)

3.3 One of the important insights from this analysis was to highlight a benefit from trade that had not been examined theoretically before, by demonstrating that reallocation of market shares across firms, in favour of higher productivity exporters, would contribute to raising aggregate productivity, even in the absence of productivity growth within firms,\(^67\) via what can be described as a ‘batting average’ effect. This insight has since been explored empirically, both for the UK\(^68\) and for other countries and benefits from the resource reallocation effect have been found to be large.\(^69\) Findings for the UK are reviewed in the next chapter.

3.4 The theory of export decisions based on firm heterogeneity was developed further to help explain firms’ choice of export market, again noting an empirical pattern that few firms export to a wide range of overseas markets. The theory posits that as distance to an overseas market increases, so do trade costs, effectively raising the productivity threshold so that less productive exporters do not enter these markets.\(^70\) More productive firms will not only serve more markets but will export a wider range of products.\(^71\)

\(^{66}\) Helpman et al. (2003)

\(^{67}\) Links between this literature and studies investigating the respective contributions of ‘batting average’ effects, entry and exit, and within firm productivity growth, are outlined in DTI Economics Paper 18 (2006), Chapter 3.

\(^{68}\) Harris and Li (2007a)

\(^{69}\) Bernard et al. (2007)

\(^{70}\) Ibid

\(^{71}\) Bernard et al. (2009)
profitability of exporting result in firms needing to export to one market first in order to establish profitability. Having once entered an overseas market and evaluated the profitability of doing so, firms will decide whether to exit exporting or to expand into other markets. The theory thus predicts that firms will start exporting on a small scale, both with regard to the number of markets and the number of products exported, usually assuming that these are products which are already being sold on the domestic market.

3.5 Models have also looked at the role of information asymmetries and search costs in export decisions, focusing on the idea that exporting firms may not have full information with regard to the credibility of a foreign partner, or about the preferences of foreign consumers, prior to exporting. Starting small enables firms to test foreign partners’ credibility before exporting larger quantities of products. It also allows firms to test the market with regard to firm-product-country consumer preferences and enables a foreign partner to determine the reliability and quality of the products that the firm exports.

3.6 These strands of theory have also been used to look at variations in export behaviour at sector and product level. Positing that transport costs will vary by sector as will fixed costs associated with entering an export market (e.g., tariffs, investing in product modifications), the models show that the relative sales of exporters will tend to be lower in sectors which experience higher transport and/or fixed costs. If trade costs fall in a given market and a given sector, the models show that competition will increase, and this can give rise to churn at firm level with regard to the range of products and markets to which they export. Such churn can be driven by firms dropping products and/or adding new products to their range. Increased competition tends to lead firms to focus on their ‘core products’, when expanding their export products. When exports of core products are expanded, firms may reduce or cease exporting fringe products.

3.7 These models have also looked at modes of internationalising beyond exporting to Foreign Direct Investment (FDI). They predict that only the most productive firms engage in FDI, which suggests that even fewer firms would engage in FDI than exporting. This is consistent with empirical evidence, such as estimates that 5% of EU SMEs have subsidiaries or are engaged in joint ventures overseas (compared to 8% of EU SMEs which export). These models develop the relationship between FDI and exporting to identify that where transport costs are relatively high, firms will tend to substitute exports with FDI.

72 Albornoz et al. (2009)
73 Ibid
74 Iacavone and Javorcik (2008)
75 Ibid
76 Bernard et al. (2009)
77 Iacavone and Javorcik (2008)
78 Helpman et al. (2003)
79 Iacavone and Javorcik (2008)
80 Helpman et al. (2003)
81 The Gallup Organisation (2007)
82 Helpman et al. (2003)
3.8 While these trade models serve to explain a number of aspects of the observed international behaviour of firms, the fit with evidence also has some limitations:

- The assumption that all firms trade domestically does not fit with the trading patterns observed for some important groups of firms, in particular the Born Globals, for whom sales are often international from the outset;
- The modelling of FDI decisions as a mode of internationalisation does not fit with the behaviour of the Born Globals who may be engaged in a range of international modes from start up, or from a very early stage. For these firms, productivity differences seem unlikely to explain choice of internationalisation mode. More generally, the models also do not provide a framework for identifying whether firms will use non traditional modes such as franchising, licensing and other contractual arrangements.

3.9 In terms of motivations for internationalisation, the models generally incorporate an assumption that firms’ decisions are driven by profit maximisation. This is broadly supported by survey evidence on firms own perceptions of their motivations for exporting, although exposure to new ideas is also cited as very important by many exporters. This motivation could readily be interpreted as being linked to longer term profit maximisation aims, via the potential effects of access to new ideas on innovation and productivity, but it does not feature directly in the models reviewed above. Table 3.1 summarises recent survey evidence about motivations for exporting, and shows that:

- Expansion is the most frequently cited motive, followed by profit. This highlights the link between exporting and business growth, and is mirrored in survey evidence that enabling the firm to achieve a level of growth otherwise not achievable is the most frequently cited benefit of exporting;
- Exposure to new ideas is seen as an important motive by just over half of large firms and of innovative or R&D active SME exporters. Access to new ideas is the second most frequently cited benefit of exporting, especially valued by innovative firms;
- Innovative and R&D active SMEs are most likely to perceive all three motivations as important, suggesting that exporting is particularly important to this sub-group. This pattern is also true of survey evidence on benefits of exporting, with this sub-group reporting higher benefits from all indicators.

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83 OMB Research (2006a)
84 See Tables 4.3 in the next chapter.
85 See Tables 4A.3 and 4A.4 in the next chapter.
Why and How do firms Internationalise?

Table 3.1: Summary of Motivations for Exporting by SME R&D Activity and Innovation

<table>
<thead>
<tr>
<th>R&amp;D Activity</th>
<th>'Innovative'</th>
<th>Large Firms (250+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Base</td>
<td>992</td>
<td>637</td>
</tr>
<tr>
<td>Expansion</td>
<td>74%</td>
<td>63%</td>
</tr>
<tr>
<td>Profit</td>
<td>67%</td>
<td>53%</td>
</tr>
<tr>
<td>Exposure to new ideas</td>
<td>53%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Source: OMB Research (2006a)

3.2 Internationalisation models from the international business literature

3.10 International Businesses literature complements the international economic literature, drawing on evidence gathered through qualitative and quantitative surveys of internationalising firms. Until relatively recently, such research had tended to suggest an incremental process of internationalisation, similar in some respects to the predictions of the heterogeneous firm theory in that it pictured firms increasing their export activity in stages.

3.11 A popular model to describe this incremental process is known as the Uppsala model.86 This suggests a stepwise, deliberate and fairly slow process as the firm adapts its international activity incrementally. After a period of selling solely in the domestic market, the model posits that firms begin their international activity in markets which are similar to the home country, and over time enter markets which are psychically more distant. Throughout this process the firm gains knowledge, both objective and experiential. Essentially, as a firm enters a market and gains understanding of the market, the perceived risk will become lower, and the commitment to the market will increase. Markets which are easier to understand, and therefore psychically closer will be entered first.87 As a firm progresses through various stages of internationalisation, it will eventually reach a point of having overseas production via FDI.88

3.12 Figure 3.1 provides a diagrammatic example of a firm internationalising in this way. The diagram is similar to a dendrogram with the inner most ‘ring’ representing the firm’s first year and each subsequent ring represents each subsequent year. The numbers 15 and 25 denote the rings representing 15 years and 25 years post establishment. The outward marketing segment shows two market entries, the first around 15 years post-establishment and the second several years later, around the time that outward production is observed.

86 Harris and Li (2005)
87 Johanson and Vahlne, 1977
88 Johanson and Wiedersheim-Paul, 1975
3.13 The evidence presented in the previous chapter, that export intensity and export market diversification both tend to be greater for older firms, would seem to provide some support for the Uppsala model, although it also seems to suggest that many UK exporters do not progress beyond an early stage of the model. A recent study for UKTI which used econometric modelling techniques to try to identify characteristics of firms most likely to seek UKTI help with respect to high growth emerging markets, also provides some support for the Uppsala model: it found that UKTI clients who were seeking to enter high growth markets were likely to be larger, older, and to derive a higher percentage of turnover from overseas sales, suggesting that many firms enter developed markets before entering HGMs.89

3.14 However, the evidence also shows that the behaviour of many UK exporters does not fit this model well, with a significant minority of firms exporting to remote destinations and a large number of markets, before they have been trading for 5 years.90 Table 3.2 shows the size, export experience, and export intensity profile of UKTI clients by whether they were seeking help to enter high growth markets, or other markets.91 It shows that some 13% of UKTI clients who were not yet exporting were nevertheless seeking help in entering one of the high growth markets, as were a further 14% who had been exporting for less than 2 years.

89 London Economics (2009)
90 OMB Research (2009b).
91 OMB Research (2009a)
Why and How do firms Internationalise?

Table 3.2: Size of Business and Export Experience by whether Received Support from UKTI from High Growth or Established Markets

<table>
<thead>
<tr>
<th>Size Of Business – By Markets To Which UKTI Support Referred</th>
<th>High Growth</th>
<th>Established</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>1411</td>
<td>1815</td>
</tr>
<tr>
<td>250+</td>
<td>15%</td>
<td>7%</td>
</tr>
<tr>
<td>100-249</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>50-99</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>20-49</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>10-19</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>0-9</td>
<td>35%</td>
<td>46%</td>
</tr>
<tr>
<td>Not yet trading</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>When Started Conducting Business Overseas – By Markets</th>
<th>High Growth</th>
<th>Established</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 20 years ago</td>
<td>27%</td>
<td>18%</td>
</tr>
<tr>
<td>10-20 years</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>15%</td>
<td>17%</td>
</tr>
<tr>
<td>2-5 years</td>
<td>15%</td>
<td>19%</td>
</tr>
<tr>
<td>Less than 2 years ago</td>
<td>14%</td>
<td>19%</td>
</tr>
<tr>
<td>Not exporting</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proportion Of Turnover Accounted For By Overseas Sales – By Markets</th>
<th>High Growth</th>
<th>Established</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 75%</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>51-75%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>26-50%</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>16-25%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>11-15%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>Up to 10%</td>
<td>25%</td>
<td>32%</td>
</tr>
<tr>
<td>Not exporting</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>9%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: OMB Research (2009a)

3.15 Models of incremental internationalisation, such as the Uppsala model have come under scrutiny following the rise of evidence about Born Globals over the past 15 years.92 As indicated previously, contrary to the model of slow stepwise internationalisation, Born Globals exhibit rapid internationalisation

92 Harris and Li (2005)
shortly after inception and may use multiple modes of entry.\textsuperscript{93} One explanation for this behaviour is that of monopolistic advantage linked to investment in intellectual property. That is, that such firms have a unique advantage which is likely to derive from intangible, knowledge based competitive advantage (e.g. patented or proprietary technology, or process technology) over other firms which it may exploit. This idea is linked to the ‘resource-based view’ of the firm\textsuperscript{94}, with competitive advantage being derived from the resources of the firm.\textsuperscript{95} According to this view, the firm chooses to expand internationally in order to maximise benefit from its competitive advantage at low marginal cost.\textsuperscript{96}

3.16 Evidence from qualitative empirical studies suggests that one of the drivers of rapid internationalisation is in order to make rapid sales of a new technology before it is copied by competitors i.e. to maximise the benefits of a first-mover advantage. This is particularly important where a product is niche and has a limited global market. This is illustrated by the following quote from an early internationalising high-technology firm:

"there was just not enough business to keep us going here (the UK). In this game it’s a matter of getting to the market before you’re copied and undercut."\textsuperscript{97}

3.17 A simple explanation for rapid early internationalisation is based on the size of investment in new product development, relative to the size of the market for that product in any one market. If these are niche products which are to be exploited, the potential demand in any one country is likely to be small so that many markets need to be entered in order to break even on investment in their development.\textsuperscript{98} These niches may be global with customers, competitors and technological product standards being defined globally and independently of national environments.\textsuperscript{99} The development of such niches has been described as a ‘focus and grow’ strategy in which the firm develops and focuses on a market niche which it then attempts to dominate.\textsuperscript{100} The need to achieve rapid sales internationally can also drive a decision to export via agents or distributors in some overseas markets.\textsuperscript{101}

3.18 These ideas are consistent with the empirical evidence, presented in the previous chapter, that Born Globals are more prevalent amongst high technology sectors.

3.19 Factors which appear to have contributed to the rise of Born Globals include developments in telecommunications, declining transportation costs,

\begin{itemize}
  \item \textsuperscript{93} Knight \textit{et al.}, 2004
  \item \textsuperscript{94} Literature on the resource based view of the firm, and its application to international business development is reviewed in Harris and Li (2005).
  \item \textsuperscript{95} Spence and Crick (2006).
  \item \textsuperscript{96} Dow (2005)
  \item \textsuperscript{97} Crick and Jones, 2000, p63
  \item \textsuperscript{98} Dow (2005)
  \item \textsuperscript{99} Morgan-Thomas and Jones (2009)
  \item \textsuperscript{100} Chetty and Campbell-Hunt (2004)
  \item \textsuperscript{101} Jones and Crick, 2004
\end{itemize}
and falls in tariff and non-tariff barriers. International communications technologies (ICTs) can assist firms in stimulating global demand through their potential to assist in international advertising, promotions, managing orders and communicating with potential clients, agents, distributors etc. For example a company website can enable a firm to reach potential clients quickly and cheaply and independently of distance and temporal differences. Thus, it can enable virtual entry into global markets without the need for resources to be expended overseas.

3.20 ICTs also aid firms in gaining information about markets or potential clients, agents etc, they can also play in a role in knowledge generation and learning. Enabling a direct link with clients can reduce transaction costs. Email and other internet mediums which enable communication may be particularly useful when designing products specifically for certain customers since it can enable sharing of information between the firm and the customer, including inputs from the customer. Although rapidly internationalising firms do not seem to have used the medium longer than other internationalising firms, they do seem to generate higher returns through the medium.

3.21 Figure 3.2 provides a diagrammatic example of a Born-Global firm internationalising. The diagram is similar to a dendrogram with the inner most ‘ring’ representing the firm’s first year and each subsequent ring represents each subsequent year. The numbers 15 and 25 denote the rings representing 15 years and 25 years post establishment. This looks starkly different from Figure 3.1, with not only more activity having occurred but all activity being concentrated in the first few years post establishment of the firm. While the firm in Figure 3.1 is not engaged in either inward or outward R&D, this firm is engaged in both.

102 Dow (2005)
103 Morgan-Thomas and Jones (2009)
105 Morgan-Thomas and Jones, 2009)
3.22 Another strand of the International Business literature identifies two distinct strategies for internationalising firms, one is to concentrate on a small number of key markets and the other is to spread over more markets. Although rapid internationalisers or Born Globals appear to enter many markets and might be thought to follow spreading strategies, there is evidence that some pursue a hybrid course with a heavy reliance in a key export market (37% of sales in one study). This suggests that the key market enables rapid internationalisation into subsequent markets.  

3.3 Drivers of overseas market choice

3.23 There is a substantial body of evidence showing that serendipity and networks play an important role in many firms’ choices of overseas market. At a theoretical level, Rauch (1999) provides one explanation for this: social networks act as a means of reducing search barriers to trade, thus enabling buyers and sellers to achieve a better match with lower search costs. He argues that the search process is strongly conditioned by social networks associated with proximity, common language and colonial ties. These lines of thought lead him to stress the importance of personal contacts and relationship building in determining the geographic patterns of bilateral trade, especially for trade in differentiated goods and services. Using a gravity model, he finds evidence of the role of cultural ties and common language (a proxy for networks) in determining patterns of bilateral trade at a detailed sectoral level.

106 Morgan-Thomas and Jones (2009).
107 Rauch (1999)
3.24 Qualitative studies of internationalisation behaviour highlight some of the ways in which serendipity and networks play a role in the development of some firms’ internationalisation strategies, and consequently also in the markets which they enter. A commonly cited external stimulus which leads domestic focused firms to enter international markets is unsolicited orders from potential foreign customers, as illustrated in the following quotation:

“One day an order arrived from America and things took off from there. It was luck to some extent as the customer had been let down by a local supplier…it has led to better things (such as) repeat orders and links to other customers”

3.25 As with this example, some firms may receive orders as a result of recommendations from existing clients to a third party, or clients in one market may also provide leads into subsequent markets entered. For some, businesses networks and past experience influence the choice of overseas market, for example managers’ past experience in operating in international markets and contacts that they have developed. For other firms, serendipity may combine with receiving an approach from an overseas market before action is taken. In the following example, the serendipitous presence of a consultant who spoke Portuguese being in the office combined with the enquiry from Brazil before the firm decided to look at opportunities in this market:

A UK firm had been receiving faxes from Brazil, but as the faxes were in Portuguese, they had been ignoring them. A consultant, who spoke Portuguese, and was in the office doing work for this firm in relation to the domestic side of its business, noticed that faxes in Portuguese were arriving, recognised that they were serious business enquiries from Brazil, and drew the firm’s attention to this fact. This led to the firm contacting UKTI to seek information and advice about the Brazilian market, and ultimately led the firm to begin exporting to Brazil.

3.26 Some researchers have suggested that such reactive international activity seems to be more prevalent amongst ‘traditional’ exporters, but may also play a role in the internationalisation of firms in knowledge-intensive sectors. However, the latter types of firm tend to be more proactive and to select markets in a systematic way, using a set of agreed decision-making criteria.

3.27 When selecting a market in a more pro-active manner, market choice can be influenced by psychic distance as well as recognition of opportunities for the firm’s product or service in that market and the size of the potential market.

109 Dow (2005)
110 Crick and Jones (2000)
111 Bell et al. (2004)
112 Crick and Jones (2000)
113 OMB Research (2006b)
114 Bell et al. (2004)
115 Burgel and Murray (2000)
Managers may also consider global industry trends or may be encouraged into certain markets by clients.\footnote{Bell et al. (2004)}

3.28 The influence of ‘psychic distance’ on market choice is illustrated by colonial ties which have had a lasting impact on trade patterns. As well as maintaining cultural and linguistic ties, colonies may have retained other important features of the business environment derived from the colonial era, such as the same legal system as the metropole, potentially making them more attractive markets to enter. These factors are likely to combine to help explain the observation that trade patterns tend to show colonial and linguistic influences, with trade being higher with countries with such links.

3.29 This is illustrated by Figure 3.3 which compares trade between Ghana and the UK and the Ivory Coast and France. The two African countries are neighbours so that the distance to the respective metropoles is very similar, the main difference being that Ghana was previously a UK colony, and the Ivory Coast, a French colony. In the absence of colonial ties one would expect that the ratio of exports to France to exports to the UK (light blue and grey solid lines) to be approximately equal to the relative size of their markets, proxied here as the ratio of UK to French GDP (dotted grey line). Likewise the ratio of imports from the UK and France (solid dark blue and black lines) should be similar to that of their respective GDP. If these ratios were identical for both countries, the solid lines in Figure 3.3 would coincide with the dotted grey line.

3.30 However, for both, countries the import and export ratios remain some distance from that of GDP. This demonstrates that trade flows are somewhat different than would be expected in the absence of colonial ties: Ghana engaged in more trade with the UK and the Ivory Coast with France. Over time the ratio of French to UK exports (and imports) to Ghana has converged towards the France to UK GDP ratio while the ratio of French to UK exports (and imports) to the Ivory Coast remains some distance from the GDP ratio line. This indicates that there has been greater erosion of colonial ties between Ghana and the UK than France and the Ivory Coast.\footnote{Mayer et al. (2008)}
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3.31 Evidence from quantitative surveys of UK exporters carried out for UKTI has consistently found that serendipity and networks are important influences for most firms when selecting a market.\textsuperscript{118} Table 3.3 summarises findings from surveys carried out in 2006-7 and 2008, of both users and non-users of UKTI services.\textsuperscript{119} In the 2008 survey of 900 internationalising firms, some 81\% of respondents reported that a market had been selected at least in part because they had received an approach, and/or the market had been suggested by someone external to the company and/or it was selected because someone within the company had experience of that market. Independent analysis was a less common factor (53\%). The PIMS data show a similar picture, although there is a greater tendency for UKTI users to make use of independent analysis. Firms were identified as making use of independent analysis if they indicated that they had identified internally that a market offered an opportunity and/or several markets were being considered before choosing one on which to focus.

3.32 The survey results indicate that for many firms, even where independent analysis influenced the choice of market, serendipity and networks also played a role. A small proportion of the firms (15\%) in the 2008 Internationalisation survey were identified as being solely reactive, as the only factor which appeared to drive their choice of market was having been approached by someone in that market.

3.33 Other studies have suggested a range of criteria against which a market may be selected, including consideration of: what product would be sold in the market; who the competition would be; the likely price that could be obtained; the size of the market; and who could be approached in the market.\textsuperscript{120}

\textsuperscript{118} OMB Research (2008a; 2007b)
\textsuperscript{119} OMB Research (2008a; 2007b)
\textsuperscript{120} Williams and Chaston (2004).
Table 3.3 Summary of Drivers of Market Choice

<table>
<thead>
<tr>
<th></th>
<th>2008 Internationalisation survey</th>
<th>PIMS non-user survey 2007</th>
<th>PIMS user survey (waves 4-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>900</td>
<td>148</td>
<td>127</td>
</tr>
<tr>
<td>n/a</td>
<td>0-5 years old</td>
<td>6-10 years old</td>
<td>0-5 years old</td>
</tr>
<tr>
<td>Networks &amp; serendipity</td>
<td>81%</td>
<td>78%</td>
<td>72%</td>
</tr>
<tr>
<td>Independent analysis</td>
<td>53%</td>
<td>39%</td>
<td>39%</td>
</tr>
<tr>
<td>Solely reactive</td>
<td>15%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

3.34 The 2008 Internationalisation survey investigated a number of the factors which might influence market choice. However, rather than asking firms whether specific market characteristics drove them to select a market, respondents were asked to indicate their perception of the market they selected with regard to specific market characteristics. Since some of these characteristics were only relevant for certain modes of internationalisation, these questions were only put to respondents which engaged in the relevant mode. Influence on market choice could then be inferred by observing the extent to which difficulties appear to have deterred firms from entering the market.

3.35 Results are reported in Table 3.4, in the form of the percentages of respondents who indicated that they perceived the market to be easy, fairly easy or average for a given characteristic. Thus, for instance, ‘ease of product modification’ shows the highest score (94%), suggesting that few firms choose to enter markets which are difficult in this respect. By contrast, ‘Ease of logistics of doing business’, receives a lower score of 74%, suggesting that difficulties in this area are a less significant influence on market choice. Perhaps curiously, few respondents (35%) reported high demand for their product in the market which they had chosen to enter, although most (82%) did report ease in finding customers.

3.36 The results suggest that all the factors listed may influence the choice of market to some extent, with the overall level of demand seeming to be much less important than ease of finding customers. More generally, the small differences in the proportion of respondents indicating ease with respect to each of the other factors suggest that the process side of market entry (such as negotiating the framework, and overcoming logistical difficulties) may be slightly less important when selecting a market than networking and cultural factors such as finding customers or partners, negotiating the language and culture and modifying products and protecting Intellectual Property. Finally, although the overall level of demand appears to be the least important factor, this should be interpreted

121 ‘Networks & serendipity’ includes all respondents who said their decision had been influenced by: ‘Received enquiries from potential customers, partners, or contacts’; Or, ‘Were advised by an external source of an opportunity in that country’; Or, ‘Someone in the company already had connections in that country’.

122 Independent analysis refers to respondents who said they: ‘Had been considering a number of countries and decided to focus on this one’; Or that they had, ‘Identified internally that the country offered a potential opportunity for the business’.
with caution as it was measured slightly differently, with the proportion shown in the table being those who indicated ‘high demand’ or ‘fairly high demand’.

**Table 3.4 Perceptions of a Market**

<table>
<thead>
<tr>
<th>The table shows the % respondents rating 1-3 on a 1-5 scale, where 1 = easy, 2 = fairly easy, 3 = average, and 5 = very difficult</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>900</td>
</tr>
<tr>
<td>Ease of finding customers</td>
<td>82%</td>
</tr>
<tr>
<td>Ease of finding suitable partner</td>
<td>80%</td>
</tr>
<tr>
<td>Ease of negotiating the legal and regulatory framework or standards in the market</td>
<td>75%</td>
</tr>
<tr>
<td>Ease of logistics of doing business</td>
<td>74%</td>
</tr>
<tr>
<td>Ease of product modification</td>
<td>94%</td>
</tr>
<tr>
<td>Ease of negotiation language/culture</td>
<td>84%</td>
</tr>
<tr>
<td>Ease of IP protection</td>
<td>85%</td>
</tr>
<tr>
<td>Risk: getting paid</td>
<td>81%</td>
</tr>
<tr>
<td>Risk: guaranteeing quality</td>
<td>79%</td>
</tr>
<tr>
<td>Risk: return on investment</td>
<td>73%</td>
</tr>
<tr>
<td>Ease of staff recruitment/retention</td>
<td>78%</td>
</tr>
<tr>
<td>Cost of resources</td>
<td>80%</td>
</tr>
<tr>
<td>Level of demand*</td>
<td>35%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Figures shown are for % scoring 4 or 5 (i.e. high demand)*

3.37 Table 3.5 combines the results for the two approaches to investigating influences on market choice which were used in the 2008 Internationalisation survey, and looks at differences in responses by market, and by indicators of innovation. The indicators of market ease or difficulty are grouped as follows:

- **Contacts**: Ease of finding customers; or Ease of finding a suitable partner;
- **Practicalities**: Ease of negotiating the business framework; or Ease of logistics of doing business; or Ease of product modification;
- **Language & culture**: Ease of negotiation language/culture;
- **Risk & IP**: Ease of IP protection; or Risk: getting paid; or Risk: guaranteeing quality; or Risk: return on investment;
- **Resources**: Ease of staff recruitment/retention; or Cost of resources; (Note that the cost of resources only applied to the minority of respondents who had overseas sites; the results are thus an indicator of the extent to which the choice of market for locating a site overseas had been influenced by the opportunity to do so at low cost.
- **Demand**: Level of demand
3.38 When results are compared between those for fast growing markets and for other markets, serendipity and networks are less likely to have influenced market choice when entering a fast growth market, while independent analysis is used slightly more frequently. A higher proportion of firms entering other markets are also solely reactive than those entering high growth markets. Demand and resources appear to be perceived more favourably in high growth markets than other markets. Other factors seem to be less easy in high growth markets than other markets. This suggests that the decision to enter a high growth market may be more likely to be influenced by the cost of resources (for those investing in a site), and the level of demand, and that in these markets firms have been less deterred by difficulties with other factors such as practicalities and contacts.

3.39 When drivers of market choice are analysed by innovative firms, the results suggest that innovative and IP active firms are more likely to engage in independent analysis than non-innovative firms, although both groups are strongly influenced by networks and serendipity. The stronger influence of analysis among innovative firms may be linked to higher ‘absorptive capacity’ in these firms, associated with greater capacity to utilise knowledge.

3.40 Interestingly, innovative and IP active firms seem to be less likely to have found the various factors to be easy, than non-innovative firms. However, the level of demand seems to be more important for innovative and IP active firms since a higher proportion of these indicated high or fairly high demand than non-innovative firms (40% and 45% vs 26%).
Why and How do firms Internationalise?

Table 3.5: Summary of Drivers of Market Choice by Fast Growing and Other markets, and by Innovation Indicators

| The table shows the % respondents indicating influence by each of the criteria | By market | By Innovation activity |
|---|---|---|---|---|---|---|---|
| | Fast growing markets | Other markets | Innovative (alt) | Innovative | Non-innovative | IP Active | Young innovative or IP active |
| Base | 253 | 647 | 418 | 659 | 241 | 267 | 210 |
| Networks & serendipity | 78% | 83% | 82% | 83% | 78% | 82% | 84% |
| Independent analysis | 58% | 51% | 57% | 56% | 45% | 61% | 58% |
| Solely reactive | 11% | 17% | 15% | 15% | 16% | 14% | 14% |
| Contacts | 80% | 82% | 77% | 79% | 87% | 79% | 80% |
| Practicalities | 54% | 65% | 51% | 57% | 74% | 51% | 56% |
| Language & culture | 77% | 86% | 80% | 82% | 89% | 79% | 83% |
| Risk & IP | 53% | 67% | 58% | 61% | 70% | 59% | 64% |
| Resources | 67% | 63% | 54% | 58% | 93% | 78% | 75% |
| Demand | 44% | 31% | 40% | 38% | 26% | 45% | 43% |
| All respondents | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

(Base) – Total: Fast growing (253), Other (647); (Base) – Total: Innovative (alternative) (418), Innovative (659), Non-innovative (241), IP active (267), Young & innovative or IP active (210); NB: For resources criteria, only respondents who reported overseas sites were asked the questions, so bases are much lower.

3.41 Table 3.6 looks at these results from the perspective of export experience, measured in terms of the number of markets in which a firm is active. This suggests that a slightly higher proportion of firms in at least 10 markets (84%) are influenced by serendipity and networks than among firms in up to 5 markets (78%). This may reflect firms widening their networks as they enter more international markets. For example, firms have reported being able to enter new markets via contacts developed through existing agents and distributors in other markets, eg entering China via distributors in Hong Kong, or South America via agents in Miami.123 The role of serendipity and networks is illustrated in Box 3.1 through the example of a Finnish firm.

3.42 The use of independent analysis appears to become more common as firms enter more markets and become more experienced (48% of firms in up to 5 markets vs 59% in more than 10 markets).

In terms of market perceptions, the results suggest that markets are perceived to be less easy as experience increases, particularly with respect to ‘Practicalities’, ‘Risk and IP’, and ‘Resources’. This appears consistent with the stages model of internationalisation, described above, which posits that the easiest markets are entered first, and those that are more difficult entered later. On this basis, firms in at least 10 markets would be entering somewhat more psychically distant and harder markets than firms in up to 5 markets, although the table shows little or no difference by number of markets for either ‘Contacts’ or ‘Language and Culture.’ The exception to this pattern is for demand. More experienced exporters seem to perceive demand to be higher in the most challenging or most recent market that they had entered, suggesting that where demand is sufficiently high firms are more willing to tolerate other difficulties (Table 3.6).

**Table 3.6: Drivers of Geographical Focus (Including Market Perceptions) – By Number of Markets**

<table>
<thead>
<tr>
<th>% scoring</th>
<th>By number of overseas markets in which the respondent is active</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to 5</td>
</tr>
<tr>
<td>Base</td>
<td>434</td>
</tr>
<tr>
<td>Networks &amp; serendipity</td>
<td>78%</td>
</tr>
<tr>
<td>Independent analysis</td>
<td>48%</td>
</tr>
<tr>
<td>Solely reactive</td>
<td>20%</td>
</tr>
<tr>
<td>Contacts</td>
<td>83%</td>
</tr>
<tr>
<td>Practicalities</td>
<td>68%</td>
</tr>
<tr>
<td>Language &amp; culture</td>
<td>87%</td>
</tr>
<tr>
<td>Risk &amp; IP</td>
<td>68%</td>
</tr>
<tr>
<td>Resources</td>
<td>71%</td>
</tr>
<tr>
<td>Demand</td>
<td>27%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: OMB Research (2008a)
Why and How do firms Internationalise?

Box 3.1: Case Study of a Finnish High Technology Company
An example of the role of serendipity and networks in internationalisation comes from a case study of a Finnish high-technology company called Teknovisiot whose main product is an ‘Automatic Visit Logging System’. The firm had been established around 14 years before internationalising. One of the firm’s first customers was Metsähallitus, the Finnish National Board of Forestry. Over time co-operation between the two firms increased extending to joint R&D projects. In 2002, the two firms presented a poster together at an international conference in Vienna. Partnering with Metsähallitus at the conference increased the credibility of Teknovisiot with other delegates since the firm was small and not known internationally. This proved to be an important step since Teknovisiot developed two new relationships at the conference. One was with English Nature, to whom they subsequently exported and the other with a professor from Middle Tennessee State University (MTSU). Through this latter contact the firm has begun to export to the USA and has received interest from several firms in South Korea.

Figure 3.4: A Diagrammatic Example of the Role of Networks in Internationalisation

3.4 Choice of Internationalisation Mode

3.44 When internationalising, a firm not only has to select a market to enter but also to decide how it will enter that market. As when choosing a market, when a firm is entering a market in reaction to an external event, there may be...
no explicit decision taken about mode, in that it seems evident to the firm that it should use a particular mode due to the external stimulus received. For example, if approached by an agent or distributor to start selling in a market, a firm is more likely to use this method in the market than to take a different path and find customers in the market to whom they will sell directly. A further example comes from a case study firm which found that its largest customer had started to manufacture in Brazil and wanted the supplier to locate there in order to maintain its supplies.

3.45 One of the main aims of the 2008 Internationalisation survey reported above was to gather quantitative evidence about the incidence of business use of different modes, as data on this are not available for the UK from other sources. As the survey sample was stratified by firm age, it was possible to identify use of different modes also by age of firm. Figure 3.5 summarises the findings, showing that selling directly to customers is by far the most common mode, reported by 86%, followed by selling through agents or distributors (30%), with some firms doing both. The percentage of firms reporting other modes is small, showing that the multi-mode pattern of internationalisation typical of many ‘Born Globals’, as illustrated above, is very much the exception when considering exporters as a whole. Nevertheless, there was clear evidence that more complex modes, such as direct investment in an overseas site, are not limited to older or larger firms.

3.46 Turning to the number of modes used by each firm, the majority of the sample, 70% use only one mode. Almost a quarter (22%) use two modes, only 6% three modes and just 1% use 4 or more modes.

3.47 Qualitative studies provide some insights as to the factors behind these results. Internationalising firms which follow a traditional pathway tend to limit their modes to selling direct and via agents and distributors. In contrast, rapid internationalisers which produce knowledge-intensive products or services, may use these two methods at the outset but are more likely to use or consider other modes as their business develops. For some rapid internationalisers, agency agreements are attractive since these allow the rapid exploitation of technology. Where the drive to internationalise quickly is to maximise returns to a first-mover advantage, as may be the case for Born Globals, then agents and distributors may be the mode of choice. However, other evidence suggests that if a high-technology start-up is resource constrained (as suggested by analysis of UK Born-Globals), internationalising using collaborative arrangements with overseas partners may allow it to tap into the resources, assets and capabilities of the partner, making this the mode of choice or even of necessity. Using agents and distributors has been reported to carry benefits such as their ability to: identify potential customers in the market; assist firms to access people who

124 Child and Rodrigues (2007)
125 Ibid
126 Bell et al. (2004)
127 Crick and Jones, 2000)
128 Harris and Li (2007b)
129 Burgel and Murray (2000)
understand the market; and enable them to cope with the practicalities of the language and culture\textsuperscript{130} (Table 3.10).

3.48 Quantitative and qualitative studies of internationalising firms also suggest a range of factors which may influence the choice of mode. Risk appears to be a common influence, with firms using the choice of mode as a way to reduce risk. Firms entering markets which they perceive to be riskier will tend to select a mode which requires less commitment and is considered to be low risk and vice-versa. Essentially, they will select a mode in a risky market with lower sunk-costs and which would enable them to withdraw from the market should it prove to be unprofitable or too risky. For some firms the choice of mode is a trade off between the managerial risk of using an agent over whom they have no direct control and the greater financial risk of engaging in FDI.\textsuperscript{131} The lack of managerial control over an agent can enable the agent to pirate products and become a competitor or to neglect to develop the market for the product, thereby lowering the potential returns in that market.\textsuperscript{132}

3.49 As set out in the discussion of internationalisation models, above, internationalising firms, including Born Globals, often have core markets within their geographic portfolio. Qualitative studies suggest that these tend to be served using modes which require more commitment such as overseas subsidiaries.\textsuperscript{133} However, the theoretical international trade literature finds that on average only the most productive internationalising firms will engage in FDI,\textsuperscript{134} suggesting that such an approach will not necessarily suit all internationally engaged firms.

3.50 Other studies relate decisions on internationalisation mode to the characteristics of the firm, or its products, and its decision makers. Direct selling is more likely amongst firms which make products which are tailored to their customers.\textsuperscript{135} This mode enables them to be in closer contact with their customers, and therefore better able to meet their requirements. This is corroborated by evidence from the 2008 UKTI Internationalisation Survey, in which firms which sold direct indicated that they did so because they perceived it to be the best way to develop strong working relationships with overseas customers and to ensure quality or customer service\textsuperscript{136} (Table 3.9). If a decision maker in the firm has experience of living in the target market, the firm is also more likely to sell direct.\textsuperscript{137} Presumably this is due to their having greater understanding of the culture and language, which enables the firm to navigate the market without the assistance of the local knowledge that an agent, distributor or partner could provide.

\textsuperscript{130} OMB Research (2008a).
\textsuperscript{131} Child and Rodrigues (2007).
\textsuperscript{132} Chetty and Campbell-Hunt (2003)
\textsuperscript{133} Crick and Jones (2000).
\textsuperscript{134} Helpman et al. (2003)
\textsuperscript{135} Burgel and Murray (op.cit)
\textsuperscript{136} OMB Research (op.cit)
\textsuperscript{137} Burgel and Murray (op.cit)
Internationalisation of Innovative and High Growth SMEs

3.52 If a firm uses a distributor in its home market it is more likely to also use distributors in an overseas market.\footnote{Burgel and Murray (2000).} Sector appears to have some influence on mode with firms in the biotechnology or medical technology sectors more likely to use intermediaries such as agents and distributors to sell their products overseas than firms in other high-technology sectors.\footnote{Ibid}

3.53 The relationship that a firm has with its customers and whether it sells into a supply chain can also influence mode. Specific customers may request firms to locate close to them, particularly if they are moving into a new market themselves. For example, if a firm provides components to the customer it may be requested to set up a subsidiary in the same country in order to maintain supplies.\footnote{Crick and Jones (2000)}

3.54 The market itself may have some influence over the choice of mode, with firms appearing more likely to use distributors, the larger the size of the market.\footnote{Burgel and Murray (op.cit.)} Firms may be more likely to set up subsidiaries in markets to which transport costs are higher and those which have higher tariffs or non-tariff barriers. In this case, the firm substitutes exports for FDI.\footnote{Helpman et al. (2003)}

3.55 Apart from the 2008 UKTI Internationalisation survey, there appear to be few sources of data which provide an indication of the frequencies with which different modes are used. Those that are available are consistent with this survey, suggesting that selling directly or via agents and distributors are the most prevalent modes while contractual arrangements and overseas sites are in the minority. For example:

- A study of Irish Finnish and Norwegian software firms found that 70% of all overseas sales transactions took place either through direct sales or via agents and distributors. The few firms used overseas sites tended to use these as marketing or sales offices.\footnote{Bell (1995)}
- A study of UK high-technology internationalising firms found the mode of choice to be selling via distributors (42%), followed by direct exporting (36%) and the use of sales agents (11%). Only 5% were engaged in joint ventures and just 3% through wholly owned subsidiaries, while only 2% used licensing.\footnote{Burgel and Murray (op.cit.)}

3.56 Compared with the 2008 UKTI Internationalisation survey, these two studies of high technology firms suggest higher proportions using the less frequent modes. This is likely to reflect the narrower sampling frames used for these studies, which focused on high technology sectors, whereas the 2008 UKTI Internationalisation survey covered most sectors of the economy.

\begin{itemize}
\item \footnote{138}{Burgel and Murray (2000).}
\item \footnote{139}{Ibid}
\item \footnote{140}{Crick and Jones (2000)}
\item \footnote{141}{Burgel and Murray (op.cit.)}
\item \footnote{142}{Helpman et al. (2003)}
\item \footnote{143}{Bell (1995)}
\item \footnote{144}{Burgel and Murray (op.cit.)}
\item \footnote{145}{OMB Research (2008a)}
\end{itemize}
The findings are consistent with the evidence on Born Globals, presented above, which demonstrated that these firms are more prevalent among high technology sectors, and also that they are more likely to engage in a wider range of internationalisation modes.

**Figure 3.5: Summary of Modes of Internationalisation Used**

3.57 When the data from the 2008 UKTI Internationalisation survey are analysed by innovation, a higher proportion of innovative (IP active) firms than non innovative (non-IP active) firms were found to engage in modes other than selling direct. They are more likely to sell via agents and distributors than firms which are not classified as innovative (41% vs 17%). They are also more likely to be engaged in contractual arrangements (12% IP active firms vs 4% non IP active) and more likely to have overseas sites (15% IP active vs 8% non-IP active) (Table 3.7). This is consistent with the idea that firms in high technology sectors are more likely to engage in less common modes.
Table 3.7: Modes Of Internationalisation Used In Last 5 Years (Or Considering In Next Year For ‘Considerers’) – By Innovation & IP

<table>
<thead>
<tr>
<th></th>
<th>Innovative?</th>
<th>IP Active?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (alternative Definition)</td>
<td>Yes</td>
</tr>
<tr>
<td>Base</td>
<td>418</td>
<td>659</td>
</tr>
<tr>
<td>Selling</td>
<td>98%</td>
<td>98%</td>
</tr>
<tr>
<td>Selling direct</td>
<td>90%</td>
<td>89%</td>
</tr>
<tr>
<td>Selling through agents/distributors</td>
<td>41%</td>
<td>37%</td>
</tr>
<tr>
<td>Contractual arrangements</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Licensing</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Franchising</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Other partnerships or JVs</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Overseas site</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Own site – production</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Own site – call centre</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Own site – sales</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Own site – R&amp;D</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.58 When the data are analysed by firm growth, a higher proportion of firms enjoying sustained growth are engaged in modes other than selling direct than those with no growth. A higher proportion of gazelles and high growth firms engage in contractual arrangements or have overseas sites than firms displaying no growth (Table 3.8). As this pattern is similar to that shown for IP active firms, shown above, it may reflect the links between high growth and IP activity, which were highlighted earlier in this paper.

3.5 Conclusions

3.59 The evidence reviewed in this chapter about why and how SMEs internationalise has shown that:

- Theory highlights the role of productivity in the decision to internationalise, as selling overseas enables high productivity firms to expand market share and maximise profit;
- Expansion and profit are the motivations for selling overseas most frequently cited by businesses, but exposure to new ideas is also perceived as important, especially among innovative and R&D active SMEs;
The pattern of internationalisation for many UK SMEs is consistent with a traditional ‘stages’ model, with firms increasing the number of markets, and entering more difficult markets, as they gain export experience. However, many UK firms export only to a few markets, and most derive a relatively small proportion of their turnover from overseas sales;

The ‘born global’ model of early and rapid internationalisation is more typical of some SMEs, especially innovative firms in technology intensive sectors, such as biosciences;

Selling directly or through agents or distributors is by far the most frequent mode of internationalisation for most SMEs. However, the born globals, and high growth firms, show a much more varied pattern, including investment in overseas sites as well as a range of contractual arrangements with international partners;

Networks and serendipity factors play an important role in guiding firms’ choice of overseas market for most firms, although innovative firms are more likely also to be guided by independent analysis.

Table 3.8: Modes Of Internationalisation Used In Last 5 Years (Or Considering In Next Year For ‘Considerers’) – By Growth

<table>
<thead>
<tr>
<th></th>
<th>Growth (ASBS Definition)</th>
<th>Growth (OECD Definition)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sustained</td>
<td>Contained</td>
</tr>
<tr>
<td>% scoring 4 or 5/Base</td>
<td>148</td>
<td>148</td>
</tr>
<tr>
<td>Selling</td>
<td>98%</td>
<td>98%</td>
</tr>
<tr>
<td>Selling direct</td>
<td>93%</td>
<td>85%</td>
</tr>
<tr>
<td>Selling through agents/</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>distributors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contractual arrangements</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Licensing</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>Franchising</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other partnerships or JVs</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Overseas site</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>Own site – production</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Own site – call centre</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Own site – sales</td>
<td>13%</td>
<td>6%</td>
</tr>
<tr>
<td>Own site – R&amp;D</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Importing</td>
<td>58%</td>
<td>59%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Base: All respondents (Base) – Growth (ASBS): Sustained (148), Contained (148), New (165), No growth (439) – Growth (OECD): High-growth (143), Gazelles (46)
Table 3.9: Drivers Of Mode for Firms Selling Direct

<table>
<thead>
<tr>
<th>Verbatim responses (% scoring 4 or 5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Meeting needs’ – it was the best way to build up strong working relationships with our overseas customers</td>
<td>73%</td>
</tr>
<tr>
<td>‘ROI/Risk’ – we didn’t want to reduce our profit margins by paying a ‘middle man’</td>
<td>44%</td>
</tr>
<tr>
<td>‘Level of demand’ – it was the best approach given the level of demand in &lt;market&gt;</td>
<td>53%</td>
</tr>
<tr>
<td>‘IP’ – it was the best way to protect our intellectual property</td>
<td>29%</td>
</tr>
<tr>
<td>‘Quality’ – it was the best way to ensure quality or customer service</td>
<td>66%</td>
</tr>
<tr>
<td>‘Habit’ – we always approach overseas markets by selling direct to customers</td>
<td>44%</td>
</tr>
<tr>
<td>‘Advice’ – we were advised to approach &lt;market&gt; by selling direct to customers</td>
<td>18%</td>
</tr>
<tr>
<td>Solely reactive</td>
<td>18%</td>
</tr>
<tr>
<td>None</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Base: All answering about... (Base) – Selling direct (681)

Table 3.10: Drivers Of Mode for Firms Selling via Agents or Distributors

<table>
<thead>
<tr>
<th>Verbatim responses (% scoring 4 or 5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Customers’ – our customers in &gt;market&gt; require a local presence</td>
<td>49%</td>
</tr>
<tr>
<td>‘ROI/Risk’ – it reduced the financial risk of doing business in &lt;market&gt;</td>
<td>51%</td>
</tr>
<tr>
<td>‘Level of demand’ – it was the best approach given the level of demand in &lt;market&gt;</td>
<td>64%</td>
</tr>
<tr>
<td>‘Finding Buyers’ – our overseas partner was better placed than we were to identify potential customers in &lt;market&gt;</td>
<td>73%</td>
</tr>
<tr>
<td>‘Human resources (Capabilities)’ – it was the best way to access people who understand the market in &lt;market&gt;</td>
<td>66%</td>
</tr>
<tr>
<td>‘Language &amp; culture’ – it was the easiest way for us to cope with the practicalities of the language/culture in &lt;market&gt;</td>
<td>53%</td>
</tr>
<tr>
<td>‘Business framework (Capabilities)’ – it was the easiest way for us to cope with the practicalities of doing business in &lt;market&gt; in terms of regulations, transport, logistics, getting paid etc.</td>
<td>64%</td>
</tr>
<tr>
<td>‘IP’ – it was the best way to protect our intellectual property</td>
<td>20%</td>
</tr>
<tr>
<td>‘Habit’ – we always approach overseas markets in this way</td>
<td>40%</td>
</tr>
<tr>
<td>‘Advice’ – we were advised to approach &lt;market&gt; in this way</td>
<td>30%</td>
</tr>
<tr>
<td>Solely reactive</td>
<td>9%</td>
</tr>
<tr>
<td>None</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Base: All answering about... (Base) – Agents/distributors (146)
4. Benefits of Internationalisation

4.1 Internationalisation is associated with a variety of firm-level benefits. Empirical studies for the UK have identified impacts on productivity, financial performance, firm survival, and innovation, while surveys provide indications of the mechanisms driving these changes and how firms may learn through the process of internationalisation. These effects ultimately feed through to the whole economy, contributing to aggregate productivity, productivity growth and R&D expenditure.

4.2 Studies of the firm-level benefits from exporting consistently identify that exporters have higher productivity than firms which are not engaged in exporting. For the UK, this holds for the economy as a whole, and for 16 industry sub-groups.146 This is consistent with the theory that firms with higher productivity enter export markets, as it is these firms which are able to absorb the sunk costs associated with overseas market entry. However, the observed higher productivity of exporters does not provide any indication as to whether this is simply due to:

- A self-selection effect, i.e. that they entered export markets as a result of being more productive; or,
- If these firms increased their productivity in preparation for export market entry (learning-to-export); or,
- If productivity increased as a consequence of activity in overseas markets (learning-by-exporting).

4.3 Identifying these effects is of interest since if exporting does increase firm productivity either through learning to export or learning by exporting; this would suggest that there could be benefits to government assisting more firms to export.

4.4 Analysis of the impact of exporting on the productivity of UK firms indicates that the difference in productivity between exporters and non-exporters is mostly due to ‘learning to export’ effects. Firms which are entering export markets for the first time experience a 34% long-run increase in productivity (total factor productivity) in the year in which they enter, and an increase of 5% in the year following entry.147 This indicates that the ‘learning to export’ effect is greater than the ‘learning by exporting’ effect on productivity. In each case, exporting is the driver of this productivity growth. As a result, exporting firms contribute more to productivity growth than non-exporting firms. Over the period 1996 to 2004, the effect was substantial, with 60% of UK productivity growth being attributable to exporting firms.148

146 Harris and Li, 2007a
147 Ibid.
148 Ibid.
4.5  A number of studies which test for evidence of learning-by-exporting have been carried out, across a range of countries. The extant literature provides inconclusive international evidence as to productivity effects following entry into exporting. Bernard and Jensen (1999) found no evidence that exporting raises plant productivity growth in the US manufacturing sector, nor did Aw and Hwang for Taiwanese firms149, or Clerides et al. (1998), for Colombia and Mexico, although they found some evidence for Morocco. Evidence of learning by exporting has been found for Italy,150 China,151 and Canada.152 For the UK, however, there is consistent evidence of learning by exporting with four studies having been carried out, all of which find evidence of learning by exporting despite using different methods and data sources (Table 4.1).

4.6  Differences in results from studies in different countries may arise from disparities between the characteristics of domestic markets. Insights into how these may interact come from a Canadian study which found a link between export participation and an increase in the use of foreign technologies (Baldwin and Gu, 2004),153 the latter potentially acting as a driver of the productivity changes observed post-export market entry. In contrast, for the US, domestic technologies are more important than those from overseas, i.e. they lie closer to the technology frontier, so that this mechanism for productivity growth is unlikely to be relevant for US firms.154 The small market size in Canada limits the extent to which plants face competition in the domestic market. Entering overseas markets is therefore associated with facing increased competition, creating an incentive to increase productivity and competitiveness. However, domestic competition in the US is considered to be more intense than that in overseas markets, so that exporters from the US do not face this driver of productivity growth.155 Finally, another factor related to the difference in market size between Canada and the US are the shorter product runs and wider range of product lines in Canadian firms focused on the domestic market. For these, expansion into overseas markets allows longer product runs and increased specialization in product lines. This does not hold for US firms which have access to a large domestic market.156

149  Aw and Hwang (1995)
150  Castellani (2002)
151  Kraay (1999)
153  Ibid.
154  Ibid.
155  Ibid.
156  Ibid.
Table 4.1: Summary of UK Studies of the Post-entry Effect of Exporting on Productivity.

<table>
<thead>
<tr>
<th>Data source</th>
<th>Method</th>
<th>Evidence of learning by exporting?</th>
</tr>
</thead>
</table>

4.7 Evidence from the UK indicates that UK firms benefit through similar mechanisms to Canadian firms when they enter export markets. Analysis of post-entry effects across UK industries in the manufacturing sector found that the productivity effect was lower in industries with:

- Higher R&D intensity;
- Higher levels of trade and intra-industry trade;
- Higher levels of FDI, i.e. with more foreign-owned firms in the industry.\(^{157}\)

4.8 These findings are indicative that for UK firms, learning by exporting effects are influenced by competition in domestic markets and distance from the technology frontier. Analysis of the Community Innovation Survey for the UK suggests that the learning by exporting effect is driven by learning from buyers. Firms which reported learning from this source were more likely to subsequently enjoy productivity growth.\(^{158}\)

4.9 As suggested from this research finding, innovation and research and development (R&D) activity contribute to observed productivity gains for some exporters. Exporting can also facilitate productivity gains from innovation or R&D activity. For the UK, a recent evaluation study suggests that exporting activity is required in order for productivity gains from innovation support to be realised.\(^{159}\) Innovation support on its own was not sufficient to generate these

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157 Greenaway and Kneller (2007a)
158 Crespi \textit{et al}., 2006
159 Driffield \textit{et al}. (Forthcoming)
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gains. This finding is supported by analysis of the Community Innovation Survey (CIS4) for the UK, which found that establishments which both spent on R&D and exported had higher productivity (TFP) than those that did not. No significant separate effects of spending either on R&D or engaging in exporting were found in this model. A similar result has been found for Taiwanese manufacturers in the electronics sector. This indicates a synergistic relationship between exporting, R&D and productivity.

4.10 Firms which engage in exporting are more likely to be innovative or to invest in R&D. Recent research for the UK found that UK-owned exporters account for the majority of business R&D spending. The proportion which they contribute is substantially larger than their share in UK output, indicating that they contribute disproportionately to R&D spending (Table 4.2). The most important contributors within this group of firms are those with the highest growth rates with respect to turnover (growth above 20% per year).

Table 4.2: Share of total turnover and R&D Spending by Ownership and Export status

<table>
<thead>
<tr>
<th></th>
<th>(real) Turnover</th>
<th></th>
<th>(real) R&amp;D Spending</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UK-owned Non-exporter</td>
<td>40.0 (64.5)</td>
<td>37.0 (44.1)</td>
<td>2.6 (27.4)</td>
<td>9.5 (32.3)</td>
</tr>
<tr>
<td>UK-owned Exporter</td>
<td>44.0 (25.3)</td>
<td>43.0 (26.5)</td>
<td>87.9 (44.2)</td>
<td>72.8 (43.2)</td>
</tr>
<tr>
<td>Foreign Owned Non-exporter</td>
<td>4.0 (3.7)</td>
<td>6.0 (11.1)</td>
<td>0.2 (11.3)</td>
<td>4.3 (4.2)</td>
</tr>
<tr>
<td>Foreign-owned Exporter</td>
<td>12.0 (6.5)</td>
<td>14.0 (18.3)</td>
<td>9.3 (17.1)</td>
<td>13.3 (20.3)</td>
</tr>
<tr>
<td>Total</td>
<td>100 (100)</td>
<td>100 (100)</td>
<td>100 (100)</td>
<td>100 (100)</td>
</tr>
</tbody>
</table>


4.1 Exporting, R&D, and innovation

4.11 As with productivity, innovation or R&D activity can aid firms to overcome the sunk costs of overseas market entry and, once they have entered, to maintain their competitiveness and improve their export performance. This implies that causation runs from innovation or R&D to exporting, as identified by Lachenmaier and Wößmann (2006). Firms may invest in physical assets and, or acquire technology in preparation for exporting. This has been observed as an increase in the domestic value of a product two years before starting to export, with the trend tending to be more applicable to new exporters than existing exporters expanding their export activities. An increase in domestic value is interpreted in this case as an improvement in product quality.

160 Harris and Li (2006)
161 Aw et al. (2007)
162 Bleaney and Wakelin (2002)
163 Harris (2008)
164 Harris and Li (2006)
165 Harris and Li (2009b)
166 Iacavone and Javorcik (2008)
4.12 R&D and innovation can also be driven by exporting as firms improve products and processes in order to remain competitive and, or, learn by exporting, eg through the effect of learning from buyers.\footnote{Crespi et al. (2006)} Thus, causality can run in both directions. This subsection will explore these issues, beginning with the relationship between exporting and engagement in R&D or innovation.

4.13 Spending on R&D by UK manufacturing establishments has been found to increase the probability that they also export (15.5% higher); earlier studies have found the probability to be slightly higher, between 17% and 22%.\footnote{Harris and Li (2009a)} However, when causality in both directions is assumed by treating R&D as endogenous (i.e. assuming exporting will influence R&D), the impact of R&D on exporting falls by about one-third to 9.7%, and between 7% and 11% in the earlier studies. These effects are weaker for the non-manufacturing sector.\footnote{Ibid.}

4.14 Higher export intensity has been found to be associated with lower R&D intensity. However, this result was driven by younger firms in the sample (those established for up to 10 years). It is thought that the relationship between export intensity and R&D intensity is driven by the following process:

1. Firms develop new products or services which initially drive higher levels of R&D spending as a proportion of sales.
2. In order to achieve a sufficient return on the investment in developing new products or services, firms export the new product or service which drives up sales revenue and increases export intensity.
3. In focusing on exporting, they place less effort on R&D, leading to a fall in R&D intensity.
4. When the product starts to become obsolete, exports may decline and the firm may place more effort on developing new products or services, leading to an increase in R&D intensity.\footnote{Harris (2008)}

4.15 The stronger relationship found for younger exporting firms is likely to be due to younger exporters tending to be smaller and to have higher export intensity. It is probable that they have a higher need in the short-term to generate revenue from products and services which have been developed through investment in R&D.\footnote{Ibid.} This is indicated by analysis of Born Global firms in the UK (firms established for up to 5 years which had internationalised within 2 years of founding) which have been found to have a higher dependence on sales of innovative products than other exporting firms, and to be more vulnerable to short-term liquidity problems than other exporter or non-exporting firms.\footnote{Harris and Li (2007b)} This suggests that Born Global firms may be more reliant on returns from exporting to fund R&D investments.

\footnote{Crespi et al. (2006)} \footnote{Harris and Li (2009a)} \footnote{Ibid.} \footnote{Harris (2008)} \footnote{Ibid.} \footnote{Harris and Li (2007b)}
4.16 Firms which start exporting tend to have low liquidity and high leverage, probably due to entry into export markets incurring a sunk cost.\textsuperscript{173} Thus, younger firms, which are more likely to have been recent entrants into export markets than older firms, may face more financial constraints and therefore be more reliant on export revenue to fund R&D. Older firms are likely to have exported for longer and therefore have been able to benefit from improved financial performance as a consequence of continuous exporting. Therefore, they are less likely to have a trade off between export intensity and R&D intensity.\textsuperscript{174}

4.17 Qualitative interviews with young innovative firms provide further support to the hypothesis explaining the relationship between export intensity and R&D intensity. For 11 of the 20 firms that were interviewed, exporting generated additional revenue which was invested in R&D or new product development. For 6 of these firms, exporting had eased financial pressure on their business which had relaxed constraints to investing in R&D. For a further 6 firms, such constraints on R&D had not been eased. This is mainly a consequence of the small size of these businesses which means that R&D has to compete with other areas of the businesses for resources. However, some of these firms felt that over time, exporting would reduce these constraints.\textsuperscript{175}

4.18 The impact of innovation or R&D on exporting, i.e. causality running from innovation or R&D to exporting may arise for different reasons. For example, the products or services which the firm produces may be sufficiently niche (due to their innovative nature), that internationalisation is the only way to reach a sufficient number of customers for the business to survive, as is postulated to be the case for some Born Global firms. Equally, the innovative nature of a product or service may provide the impetus to internationalise as a means of maximising returns to product development through making optimal use of the first-mover advantage or competitive advantage generated by the innovation.

4.19 Firms may also innovate or invest in R&D in order to prepare themselves for internationalisation or because modifications to a product or service are required in order to be able to enter a particular market. Once they are internationalising, firms may continue to innovate or invest in R&D due to learning by exporting effects, in order to remain competitive in overseas markets, or because they have gained ideas about new products or services or modifications to existing products and services as a result of exposure to international markets.

4.20 A study of Spanish firms indicates that exporting has a positive effect on innovation as measured by patent applications, and also highlights the role of absorptive capacity in this effect. The study found that firms with greater technological capabilities seemed to learn more from exporting than other firms.\textsuperscript{176} This suggests that the ability to learn from exporting may be related to absorptive capacity.

\textsuperscript{173} Greenaway \textit{et al.} (2007)
\textsuperscript{174} Harris (op.cit.)
\textsuperscript{175} OMB Research (2007a)
\textsuperscript{176} Salomon and Jin (2006)
4.21 Absorptive capacity associated with scientific knowledge has also been found to have a positive impact on the export intensity of UK firms and on the probability of entering export markets.\textsuperscript{177} Similarly, R&D and knowledge intensity have been found to be important determinants of export performance among Canadian SMEs.\textsuperscript{178} Absorptive capacity therefore seems to be important not only in enabling export market entry, but in influencing the ability of the firm to learn from exporting.

4.2 Survey evidence

4.22 Recent surveys of exporting firms based in the UK provide further insights into the mechanisms through which productivity and R&D or innovation may increase before and after entry into export markets. One survey consisted of firms which had not used UKTI services (UKTI non-users),\textsuperscript{179} the other, firms that had received UKTI services during the year prior to interview (users).\textsuperscript{180} In both cases, firms were read a list of 5 possible benefits to exporting which they may have experienced, using a Likert scale between 1 and 5. Respondents were asked to indicate to what extent each had been a benefit where 1 meant to no extent and 5 meant to a critical extent.

4.23 For both groups, the most frequently cited benefit is achieving a level of growth otherwise not possible. However, amongst the sub-set of Intellectual Property (IP) active firms of both users and non-users, exposure to new ideas was the second most frequently recognised benefit. Amongst Non-users the difference between IP active and Non-IP active firms in recognising exporting providing a benefit through exposure to new ideas is quite large (33% vs 16%). Similar patterns are found between innovative and non-innovative firms but with a smaller difference between the two groups. This suggests that innovative and IP active firms are more likely to recognise this benefit of exporting which adds support to the idea that exporting can increase R&D and innovation within firms.\textsuperscript{181}

4.24 While this survey evidence supports research findings which indicate a relationship between exporting and innovation, it does not provide details of the precise mechanism through which this occurs. However, qualitative work suggests that this may arise through exposure to more competitors, which enables ideas to be gained from their offerings. For example, one respondent in a recent qualitative study intimated that they would cherry pick ideas from several competitors’ products and try to combine these in their own products.\textsuperscript{182} The study highlighted three main mechanisms through which exporting led to increased R&D:

\begin{itemize}
\item \textsuperscript{177} Harris and Li (2009b)
\item \textsuperscript{178} Lefebvre and Lefebvre (2001)
\item \textsuperscript{179} OMB Research (2009b)
\item \textsuperscript{180} OMB Research (2009a)
\item \textsuperscript{181} Harris and Li (2009b)
\item \textsuperscript{182} OMB Research (2007a)
\end{itemize}
they gained new ideas for innovation and R&D by being exposed to new competitors and more demanding customers in export markets;

- exporting provided additional funds for R&D;
- exporting provided the incentive of a wider market over which to earn the potential returns to investment in R&D.

4.25 As indicated by Baldwin and Gu (2004), where domestic markets are relatively small, exporting enables firms to make fuller use of their existing capacity (i.e. increasing output from existing factors of production) and to increase the commercial lifespan of existing products or services. This will increase the returns on such products or services. Over 40% of users report benefitting from exporting through these mechanisms (Table 4.3). Both of these factors would be expected to feed through into productivity improvements due to their impact on output relative to factors of production. These results also indicate that firms do not necessarily operate at full capacity, so that exporting may help firms to reach this point.

4.26 The lower proportions of non-users reporting benefits may be partly due to these firms generally being less engaged in exporting: 44% of non-users indicated that overseas sales accounted for no more than 10% of their turnover, compared to 30% of Users. For both users and non-users the proportion indicating that they have benefitted in a particular manner broadly increases with exports as a percentage of turnover (Tables 4A.1 and 4A.2). Non-users also tend to be doing business in fewer overseas markets. A further factor influencing these results may be the lower proportion of non-users which are classified as being innovative (Table 4A.4).

- Among the sample of users, 81% of innovative firms reported having benefitted from exporting in at least one way, compared to 74% of non-innovative firms (Table 4A.3);
- Among the sample of non-Users, innovation appears to be a greater discriminator with 51% of innovative firms reporting at least one benefit compared to 39% of non-innovative firms (Table 4A.4), a 12 percentage point difference between the two groups as compared with a 7 percentage point difference amongst users (Table 4A.3).

4.27 Absorptive capacity may also be playing a role since firms with lower levels of absorptive capacity may be less able to identify that they have benefitted from exposure to new ideas. Engagement in innovation or IP activity provides some indication of absorptive capacity as does the education level of owners/directors within the establishment. Establishments with any owners or directors with degree level qualifications are more likely to report benefits of exporting (Tables 4A.5 and 4A.6) than those in which no owners or directors have a degree level qualification. This is most notable among non-users for which 53% of those with any owners or directors with degree level qualifications report benefitting significantly in at least one way from exporting, compared to 38% of firms in
which no owners or directors hold a degree level qualification (Table 4A.6). The proportion of firms benefitting from exporting tends to increase with the number of owners or directors which hold a degree level qualification (Table 4A.5). This suggests that absorptive capacity may be influencing the difference in results between users and non-users, and whether, and how, firms benefit from exporting.

4.28 Interestingly, the proportion of firms indicating that they have benefitted from exporting increases with the number of years that they have exported:

- In terms of the proportions of respondents which had benefited in at least one of the ways listed, 71% of Users which had exported for less than 2 years indicated that they had benefitted, rising to 82% of firms which had exported for more than 10 years (Table 4A.7).

- For users, a 16 percentage point difference was observed between firms which had exported for under 2 years and those which had exported for more than 10 years with regard to the proportions indicating that exporting had allowed them to achieve a level of growth that otherwise would not have been possible (46% for firms exporting for under 2 years, rising to 62% for those exporting for at least 10 years) (Table 4A.7),

- With regard to exporting enabling improved utilisation of existing capacity, 39% for user firms exporting for under 2 years indicated that they had benefitted compared to 53% of Users who had exported for at least 10 years (Table 4A.7);

- 33% of user firms which had exported for under 2 years indicated that they had benefited from an increase in the commercial lifespan of products or services, rising to 47% of user firms which had exported for more than 10 years (Table 4A.7).

4.29 This effect of export experience is less noticeable for non-users but this is likely to be influenced by small base sizes, particularly for the group exporting for up to 2 years (Table 4A.7). This descriptive analysis suggests that productivity benefits persist beyond the initial entry into an export market. This finding is supported by multivariate analysis of similar data which found that benefits of exporting appear to be as strong or stronger for established exporters. The same analysis found that this effect was at least partly attributable to higher export intensities associated with exporting for a longer period.\textsuperscript{183}

\textsuperscript{183} Kneller and Pisu (Forthcoming)
Internationalisation of Innovative and High Growth SMEs

### Table 4.3: Summary of benefits from exporting

<table>
<thead>
<tr>
<th>Proportion benefiting to a significant extent (4 or 5 out of 5, where 1 = not at all and 5 = benefited to a critical extent)</th>
<th>Non-Users (combined 2008 and 2009)</th>
<th>Users (PIMS 14-17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>585</td>
<td>3565</td>
</tr>
<tr>
<td>Level of growth otherwise not possible</td>
<td>31%</td>
<td>58%</td>
</tr>
<tr>
<td>Improved utilisation of existing capacity</td>
<td>23%</td>
<td>50%</td>
</tr>
<tr>
<td>Increased commercial lifespan of products or services</td>
<td>19%</td>
<td>44%</td>
</tr>
<tr>
<td>Reduced dependence on single/small number of markets</td>
<td>24%</td>
<td>47%</td>
</tr>
<tr>
<td>Exposure to new ideas</td>
<td>20%</td>
<td>52%</td>
</tr>
<tr>
<td>% benefiting from any (4 or 5 out of 5)</td>
<td>48%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Source: Analysis of PIMS 2008 and 2009 Non-User data and PIMS 14-17 data carried out for UKTI by OMB Research.

4.30 Survey evidence from users of UKTI services provides additional insights into how either learning to export or learning by exporting productivity improvements may be generated. During the survey, respondents indicate how the service which they received had impacted on their business. As assistance may be provided at different stages of the exporting process, data from these survey questions provide indications of changes taking place within the business either in the process of preparing to export for the first time, or in planning to enter additional markets or to expand activities within a market.

4.31 The descriptive analysis suggests that firms may make improvements at different levels of the organisation from improvements to products or services or new product or service development to processes or management practices within the business. In addition, they may improve their marketing strategy for overseas activities and their way of doing business overseas (Table 4.4). If these improvements are successful it might reasonably be expected that as a result, these firms would increase their sales and, or, their efficiency. Some of these changes may be initiated by gaining knowledge of the competitive environment in an overseas market.

4.32 Qualitative interviews suggest that for some firms becoming more aware of the competition in an overseas market is sufficient to motivate them to improve their products or services or the way in which their business is run. Likewise, gaining ideas about products, services techniques or technologies may encourage firms to improve their products or services and to innovate. It also suggests that entering overseas markets fosters the transfer of technologies or techniques from the overseas market to exporters to that market, as suggested by Bernard and Gu (2004).

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184 OMB Research (2009a)
185 OMB Research (2007a)
Table 4.4: Summary of Benefits to Exporting

<table>
<thead>
<tr>
<th>Benefit Description</th>
<th>% Benefiting to a Significant Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved knowledge of the competitive environment in an overseas market</td>
<td>35%</td>
</tr>
<tr>
<td>Gained new ideas about products, services, techniques or technologies</td>
<td>19%</td>
</tr>
<tr>
<td>Improved overseas marketing strategy</td>
<td>30%</td>
</tr>
<tr>
<td>Made improvements to products or services</td>
<td>17%</td>
</tr>
<tr>
<td>Made improvements to processes or management practices</td>
<td>12%</td>
</tr>
<tr>
<td>Improvements to new product or service development</td>
<td>19%</td>
</tr>
<tr>
<td>Improved way of doing business overseas</td>
<td>29%</td>
</tr>
<tr>
<td>Gained confidence to explore new market or to expand in an existing one</td>
<td>35%</td>
</tr>
<tr>
<td>Increased the amount spent on scientific or technical research activities and new</td>
<td>11%</td>
</tr>
<tr>
<td>product or service development</td>
<td></td>
</tr>
<tr>
<td>Increased the number of people engaged in, or the total time spent on, scientific</td>
<td>11%</td>
</tr>
<tr>
<td>or technical research activities and new product or service development</td>
<td></td>
</tr>
<tr>
<td>Any changed behaviour</td>
<td>51%</td>
</tr>
</tbody>
</table>


4.33 One of the channels through which exporting can influence innovation is through the need to make modifications to products or services for customers in an overseas market. In a survey of internationalising UK-based firms, 31% reported that they had needed to make modifications of products or services for customers in an overseas market. Surveys of UKTI users and non-users have found that a higher proportion of users than non-users have made modifications: 25% of non-users reported having made significant changes to their products or services as a result of doing business overseas, compared to 43% of users. Changes were made for overseas customers in the case of 13% of users and 7% of non-users while 29% of users made the changes for both overseas and UK customers, compared to 17% of non-users. Such changes tend to be viewed in a positive light: 24% of users, i.e. around half of the 43% who made modifications indicated that the changes had been beneficial to their business, giving a 4 or 5 on a 5 point scale where 5 was to a critical extent and 1 to no extent.

4.34 Evidence from surveys of UKTI clients indicates that firms seem to benefit more from overseas activities through impacts on innovation than they initially anticipate. UKTI runs a quarterly survey of its trade clients (PIMS) which examines the benefits which clients have received or anticipate to receive. A sub-sample of these firms are re-surveyed around 10 months after the initial interview, referred to as the Follow-Up (FU) sample. This provides an opportunity to explore the actual benefits realised at that point in time. Measures of innovation show that the proportion of firms reporting benefits in the Follow-Up (45%) is higher
than that which the same firms anticipated in the initial survey (37%) (Table 4.5). The increase occurred across all measures of innovation: improvements to products or services, improvements to process or management practices and improvements to new product development.\textsuperscript{189} The pattern of increased innovation effects being reported in the Follow-Up interview has been consistent across successive waves of the survey.

**Table 4.5 Percentage of Firms Reporting Increased Innovation as a Result of Assistance from UKTI**

<table>
<thead>
<tr>
<th>Proportion scoring 4 or 5 out of 5</th>
<th>PIMS 8-11 Follow-Up (All respondents)</th>
<th>PIMS 8-11 Follow-Up respondents only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base (exc. Web and Special Reports)</td>
<td>386</td>
<td>3287</td>
</tr>
<tr>
<td>Increased Innovation (A04R, A04)</td>
<td>45%</td>
<td>34%</td>
</tr>
<tr>
<td>– Improvements to products or services</td>
<td>31%</td>
<td>22%</td>
</tr>
<tr>
<td>– Improvements to processes or management practices</td>
<td>23%</td>
<td>14%</td>
</tr>
<tr>
<td>– Improvements to new product development strategy</td>
<td>28%</td>
<td>22%</td>
</tr>
</tbody>
</table>

*Source: OMB Research (2009d)*

### 4.3 Financial performance and firm survival

4.35 In addition to its impacts on productivity and innovation and R&D, exporting has been found to benefit firms through its impact on reducing the risk of firm closure. UK firms which exported continuously during the period 1997 to 2003 have been found to have a lower probability of closure than those which did not export. Firms which began exporting or entered or left export markets during the same period had even lower hazard rates of closure.\textsuperscript{190} Studies for other countries have also found that exporting reduces the risk of firm closure.\textsuperscript{191}

4.36 This effect of exporting on firm closure seems to act via the impact of exporting on firm financial health. Research has shown that exporting significantly increases firm financial health with no significant difference observed in financial health between non-exporting firms and firms which are starting to export.\textsuperscript{192} This demonstrates that firm financial health improves as a consequence of exporting rather than firms with better financial health being those which enter export markets.

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\textsuperscript{189} Ibid.
\textsuperscript{190} Harris and Li (2007a)
\textsuperscript{191} Ibid.
\textsuperscript{192} Greenaway et al. (2007)
For firms serving only the domestic market, lower collateral and higher leverage lead to a higher probability of firm closure. Financial variables do not significantly impact on the probability of closure of firms which are globally engaged. This may be because exporting signals that a firm is likely to be more productive than one which does not export. As such, it may be expected to generate enough profit to cover the sunk costs associated with market entry.\textsuperscript{193}

Evidence from surveys of firms which use UKTI services, and those which do not, indicate that during the economic downturn, exporting has benefited firms through sustaining demand or providing a source of growing demand for their products or services. Users of UKTI services were more likely to report this benefit, with 56\% of respondents indicating that they had benefited in this way compared to 28\% of non-Users. This difference may be driven by the higher export intensities observed among firms in the user sample.\textsuperscript{194}

The BIS SME Business Barometer of December 2009 indicated that exporters were weathering the economic downturn better than SMEs which were not exporting. When asked about how their turnover had changed over the 12 months preceding the survey, 31\% of exporters reported having increased their turnover, compared to only 21\% of non-exporters. With regard to employee growth, 39\% of exporters reported growth in employees, compared to 37\% of non-exporters.\textsuperscript{195} However, the gap between exporters and non-exporters has reduced since the BIS SME Business Barometer of February 2009 in which: 51\% of exporters reported having increased their turnover, compared to only 22\% of non-exporters; and 20\% of exporters reported growth in employees, compared to only 10\% of non-exporters.\textsuperscript{196}

These findings from the SME Business barometer illustrate the association between exporting and firm growth with exporters being more likely to grow than non-exporters both in terms of turnover and employee numbers. This is consistent with firms reporting that exporting enables them to achieve a level of growth that would otherwise not be possible (Table 4.3).

**Spill-overs**

Although there have been a number of studies examining the learning by exporting effect both in terms of productivity and the relationship between exporting and innovation, there is a dearth of work examining how these positive impacts of exporting spill over to the wider economy.

Greenaway and Kneller found a positive relationship between exporting and industry concentration. They postulate that this effect occurs as potential exporters share knowledge and information with others in the same industry.

\textsuperscript{193} Bridges and Guariglia, 2008
\textsuperscript{194} OMB Research (2009b).
\textsuperscript{195} BIS (2009)
\textsuperscript{196} IFF Research (2009)
and region, which in turn, raises their probability of market entry.\textsuperscript{197} This, therefore, provides an indication that spillovers may occur within an industry through sharing of information.

4.43 A survey of exporting firms which consisted of users of UKTI services and non-users provides some indication of the channels through which spillovers may occur from exporters to other firms in the economy.\textsuperscript{198}

4.44 Firms were classified as indicating spillovers in terms of total trade spillovers if they felt that they:

- Had made improvements to their products, services or process efficiency as a result of their export activity and felt that this had an effect on the operations of the UK based suppliers or competitors
- Or, had shared their export experience with other UK organisations
- Or, had improved their marketing strategy as a result of their export activity and had either introduced or increased training in marketing or had taken other actions to improve their marketing skills or capability

4.45 Users were more likely to be associated with spillovers than non-users with higher proportions amongst firms with exports accounting for over 15\% of turnover. This suggests that spillovers are more likely to be generated by firms with more export experience (Table 4.6). This may be related to the finding that benefits from exporting are more likely to be recognised by firms with more export experience.

4.46 The least common spillover effect appears to be generated via an actual impact on suppliers or competitors but it is still reported by almost 1in 5 (18\%) exporters for whom exports account for more than 15\% of turnover.

4.47 Knowledge sharing was more common with around half of users with more export experience having shared knowledge. The incidence of spillovers increases with firm size, with larger firms being more likely to have been involved in spillover effects (Table 4.7).

\textsuperscript{197} Greenaway and Kneller (2007a)
\textsuperscript{198} OMB Research (2005)
Table 4.6: Total Trade Spillovers by Export Intensity

<table>
<thead>
<tr>
<th>% scoring 4 or 5 out of 5</th>
<th>Users</th>
<th>Non-Users</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exports less than 15% of turnover</td>
<td>Exports more than 15% of turnover</td>
</tr>
<tr>
<td>Base</td>
<td>122</td>
<td>189</td>
</tr>
<tr>
<td>Evidence of actual impact on suppliers or competitors</td>
<td>11%</td>
<td>18%</td>
</tr>
<tr>
<td>Evidence of knowledge sharing</td>
<td>35%</td>
<td>54%</td>
</tr>
<tr>
<td>Total trade spillovers</td>
<td>64%</td>
<td>71%</td>
</tr>
</tbody>
</table>

Source: OMB Research (2005)

Table 4.7: Total Trade Spillovers By Business Size

<table>
<thead>
<tr>
<th>% scoring 4 or 5 out of 5</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 10</td>
</tr>
<tr>
<td>Base</td>
<td>157</td>
</tr>
<tr>
<td>Evidence of actual impact on suppliers or competitors</td>
<td>10%</td>
</tr>
<tr>
<td>Evidence of knowledge sharing</td>
<td>39%</td>
</tr>
<tr>
<td>Total trade spillovers</td>
<td>59%</td>
</tr>
</tbody>
</table>

Source: OMB Research (2005)

4.5 Conclusions

4.48 The evidence reviewed in this chapter has shown that:

- **Exporting firms make a large contribution to UK productivity growth**: For the UK, exporting firms contribute more to productivity growth than non-exporters. Recent research found that 60% of aggregate productivity growth was attributable to exporting firms;

- **Exporting stimulates firm level productivity growth**: Econometric and qualitative studies of UK firms show consistent evidence of learning by exporting effects. i.e. entering export markets is associated with an increase in productivity post-entry;

- **Exporting stimulates increased R&D**: Exporting stimulates R&D both through exposure to new ideas and competitors, and through increasing the returns to investment in R&D, and revenues available for such investment;
- **Productivity effects of innovation are enhanced by exporting**: In order for productivity benefits of innovation and R&D to be fully realised, firms in engaged in these activities need to be active in overseas markets;

- **Exporting tends to improve financial performance**: Exporters have stronger financial performance than non-exporters. Stronger financial performance is a consequence of exporting, but is not an indicator of firms’ decision to export;

- **Exporting increases the probability of survival**: Firms engaged in overseas markets have a lower probability of failure than those which are not. Exporting firms seem to be weathering the economic downturn better than those which are not internationally engaged;

- **Innovative firms benefit more from exporting**: Survey evidence supports evidence from econometric studies, showing that a higher proportion of innovative and R&D active firms indicating that they have benefitted from exporting than non-innovative firms. This suggests that export assistance should be targeted towards innovative and R&D active firms.

**Chapter 4: Appendix Summary Tables of Benefits of Exporting**

**Table 4A.1: Summary of Benefits of Exporting Experienced by UKTI Users by Percentage of Turnover Accounted for by Exports**

<table>
<thead>
<tr>
<th>PIMS Users 14-17</th>
<th>Percentage of turnover accounted for by exports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to 10%</td>
</tr>
<tr>
<td>Base: All exporters</td>
<td>1068</td>
</tr>
<tr>
<td>Level of growth otherwise not possible</td>
<td>32%</td>
</tr>
<tr>
<td>Improved utilisation of existing capacity</td>
<td>31%</td>
</tr>
<tr>
<td>Reduced dependence on single/small number of markets</td>
<td>26%</td>
</tr>
<tr>
<td>Exposure to new ideas</td>
<td>41%</td>
</tr>
<tr>
<td>Increased commercial lifespan of products/services</td>
<td>29%</td>
</tr>
<tr>
<td>Scoring 4 or 5 for any</td>
<td>63%</td>
</tr>
</tbody>
</table>
Table 4A.2: Summary of Benefits of Exporting Experienced by UKTI Non-Users by Percentage of Turnover Accounted for by Exports

<table>
<thead>
<tr>
<th>PIMS Non-Users 2008/09 Combined</th>
<th>Percentage of turnover accounted for by exports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to 10%</td>
</tr>
<tr>
<td>Base: All exporters</td>
<td>258</td>
</tr>
<tr>
<td>Level of growth otherwise not possible</td>
<td>16%</td>
</tr>
<tr>
<td>Improved utilisation of existing capacity</td>
<td>14%</td>
</tr>
<tr>
<td>Reduced dependence on single/ small number of markets</td>
<td>10%</td>
</tr>
<tr>
<td>Exposure to new ideas</td>
<td>14%</td>
</tr>
<tr>
<td>Increased commercial lifespan of products/services (2009 only)</td>
<td>10%</td>
</tr>
<tr>
<td>Scoring 4 or 5 for any</td>
<td>30%</td>
</tr>
</tbody>
</table>

Table 4A.3: Summary of Benefits of Exporting Experienced by UKTI Users by Innovation

<table>
<thead>
<tr>
<th>PIMS Users 14-17</th>
<th>Total</th>
<th>Innovative Yes</th>
<th>Innovative Yes (Alternative)</th>
<th>IP Active Yes</th>
<th>IP Active No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base: All exporters</td>
<td>3565</td>
<td>3087</td>
<td>478</td>
<td>2365</td>
<td>1200</td>
</tr>
<tr>
<td>Level of growth otherwise not possible</td>
<td>58%</td>
<td>60%</td>
<td>48%</td>
<td>62%</td>
<td>51%</td>
</tr>
<tr>
<td>Improved utilisation of existing capacity</td>
<td>50%</td>
<td>51%</td>
<td>45%</td>
<td>53%</td>
<td>44%</td>
</tr>
<tr>
<td>Reduced dependence on single/ small number of markets</td>
<td>47%</td>
<td>48%</td>
<td>39%</td>
<td>50%</td>
<td>41%</td>
</tr>
<tr>
<td>Exposure to new ideas</td>
<td>52%</td>
<td>53%</td>
<td>44%</td>
<td>53%</td>
<td>50%</td>
</tr>
<tr>
<td>Increased commercial lifespan of products/services</td>
<td>44%</td>
<td>45%</td>
<td>37%</td>
<td>47%</td>
<td>39%</td>
</tr>
<tr>
<td>Scoring 4 or 5 for any</td>
<td>80%</td>
<td>81%</td>
<td>74%</td>
<td>82%</td>
<td>77%</td>
</tr>
</tbody>
</table>
Table 4A.4: Summary of Benefits of Exporting Experienced by UKTI Non-Users by Innovation

<table>
<thead>
<tr>
<th>PIMS Non-Users 2008/09 Combined</th>
<th>Total</th>
<th>Innovative</th>
<th>Innovative (Alternative)</th>
<th>IP Active</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Base: All exporters</td>
<td>585</td>
<td>442</td>
<td>143</td>
<td>249</td>
</tr>
<tr>
<td>Level of growth otherwise not possible</td>
<td>31%</td>
<td>33%</td>
<td>27%</td>
<td>38%</td>
</tr>
<tr>
<td>Improved utilisation of existing capacity</td>
<td>23%</td>
<td>25%</td>
<td>15%</td>
<td>27%</td>
</tr>
<tr>
<td>Reduced dependence on single/ small number of markets</td>
<td>24%</td>
<td>26%</td>
<td>18%</td>
<td>28%</td>
</tr>
<tr>
<td>Exposure to new ideas</td>
<td>20%</td>
<td>23%</td>
<td>10%</td>
<td>28%</td>
</tr>
<tr>
<td>Increased commercial lifespan of products/services (2009 only)</td>
<td>19%</td>
<td>21%</td>
<td>14%</td>
<td>23%</td>
</tr>
<tr>
<td>Scoring 4 or 5 for any</td>
<td>48%</td>
<td>51%</td>
<td>39%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Table 4A.5: Summary of Benefits of Exporting Experienced by UKTI Users by Education of Owners/Directors

<table>
<thead>
<tr>
<th>PIMS Users 14-17</th>
<th>Any owners/directors with degree level qualifications</th>
<th>Number of owners/directors with degree level qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Base: All exporters</td>
<td>2650</td>
<td>503</td>
</tr>
<tr>
<td>Level of growth otherwise not possible</td>
<td>59%</td>
<td>56%</td>
</tr>
<tr>
<td>Improved utilisation of existing capacity</td>
<td>50%</td>
<td>49%</td>
</tr>
<tr>
<td>Reduced dependence on single/ small number of markets</td>
<td>48%</td>
<td>42%</td>
</tr>
<tr>
<td>Exposure to new ideas</td>
<td>52%</td>
<td>53%</td>
</tr>
<tr>
<td>Increased commercial lifespan of products/services</td>
<td>44%</td>
<td>44%</td>
</tr>
<tr>
<td>Scoring 4 or 5 for any</td>
<td>81%</td>
<td>77%</td>
</tr>
</tbody>
</table>
Table 4A.6: Summary of Benefits of Exporting Experienced by UKTI Non-Users by Education of Owners/Directors

<table>
<thead>
<tr>
<th>Benefits</th>
<th>PIMS Non-Users 2008/09 Combined</th>
<th>Any owners/directors with degree level qualifications</th>
<th>Number of owners/directors with degree level qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base: All exporters</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Level of growth otherwise not possible</td>
<td></td>
<td>35%</td>
<td>24%</td>
</tr>
<tr>
<td>Improved utilisation of existing capacity</td>
<td></td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>Reduced dependence on single/ small number of markets</td>
<td></td>
<td>29%</td>
<td>18%</td>
</tr>
<tr>
<td>Exposure to new ideas</td>
<td></td>
<td>22%</td>
<td>14%</td>
</tr>
<tr>
<td>Increased commercial lifespan of products/services (2009 only)</td>
<td></td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>Scoring 4 or 5 for any</td>
<td></td>
<td>53%</td>
<td>38%</td>
</tr>
</tbody>
</table>

Table 4A.7: Summary of the Benefits of Exporting by Export Experience (Years Exporting)

<table>
<thead>
<tr>
<th>Benefits</th>
<th>UKTI Users (PIMS 12-15)</th>
<th>Non-Users (2009 survey)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Exp. &lt;2 yrs</td>
</tr>
<tr>
<td>Base: All except not yet exporting</td>
<td>3504</td>
<td>676</td>
</tr>
<tr>
<td>Enabled level of growth otherwise not possible</td>
<td>57%</td>
<td>46%</td>
</tr>
<tr>
<td>Allowed you to fully utilise existing capacity</td>
<td>48%</td>
<td>39%</td>
</tr>
<tr>
<td>Reduced dependence on single or small number of markets</td>
<td>46%</td>
<td>37%</td>
</tr>
<tr>
<td>Exposed you to new ideas</td>
<td>50%</td>
<td>48%</td>
</tr>
<tr>
<td>Increased commercial lifespan of products or services</td>
<td>43%</td>
<td>33%</td>
</tr>
<tr>
<td>Scoring 4-5 for any of the benefits</td>
<td>79%</td>
<td>71%</td>
</tr>
<tr>
<td>Scoring 4-5 for 3 or more of the benefits</td>
<td>51%</td>
<td>40%</td>
</tr>
</tbody>
</table>
5. Barriers to Innovative SME Internationalisation

5.1 Empirical models of heterogeneous firms in international trade identify that firms face ‘sunk costs’ to entering overseas markets. In a sense, these acknowledge the existence of barriers to trade which give rise to these sunk costs. These sunk costs act as a selection mechanism for firms entering into international activity since only those which can generate sufficient profit in an overseas market to compensate for these costs will begin to export. These models therefore explain why exporters tend to be the most productive firms.

5.2 However, this is not to say that all firms which export have higher productivity than those which do not: low sunk costs may occur if a firm is approached by someone in an overseas market, which would enable the firm to export despite having lower productivity than firms which expend resource in identifying customers in overseas markets. Such models do not provide details of the composition of these costs although a body of empirical studies examining trade costs and patterns of trade provide some indicators.

5.3 Typically gravity models point towards distance influencing trade. Distance will influence the cost of shipping a good or service to the destination country, and may also reflect barriers related to psychic distance, such as culture, colonial ties and language. Evidence points towards firms entering markets which are closest in these senses first, and then gradually entering more distant markets. This is indicative of firms entering markets with lower barriers of this nature first. Trade data also indicates such patterns with higher trade flows being observed between countries which share language and, or, cultural links such as colonial ties.

5.4 Some studies put forward the concept that exporting is experiential: in order to know the profitability of exporting in a given market, a firm must first enter the market. This is because a firm will not have full information prior to exporting with regard to:

- The demand for its goods and services in the market;
- The price that might be obtained for them and;
- The costs of market entry in terms of the resources of the firm that will be used.

5.5 Although research in the market will aid a firm to make an estimate of these measures they will remain uncertain until the firm has overcome the sunk costs of entry into the market. Firms that enter a market and do not generate sufficient returns will exit the market, potentially losing capital. This incomplete information can create a barrier to internationalisation with some firms not entering a market due to the uncertainty surrounding market entry. SMEs, and micro-firms in particular, may be disproportionately affected in this regard.
since sunk costs of market entry, and thus, the potential loss in the market, will account for a higher proportion of their turnover than in the case of larger firms.

5.6 While the theoretical international trade literature indicates that barriers to trade exist, they shed limited light on the nature of these barriers. However, there have been several studies within the international business literature which have examined the barriers to internationalisation faced by firms. In addition to these sources, this chapter will draw on evidence from recent surveys of UK exporters carried out for UKTI.

5.7 One way to identify barriers is to refer to the firm characteristics associated with exporting. Firms which do not have these characteristics may face difficulties entering overseas markets. For example, firms with low absorptive capacity may not have the necessary capabilities to identify or utilise relevant external sources of knowledge and expertise, and may have more difficulty identifying market opportunities.

5.8 Similarly, factors which influence the choice of market for some firms may act as barriers for others. For example, as indicated in Chapter 3, the choice of market entry is often influenced by serendipity and networks. Firms which do not have the ‘right’ sort of networks may struggle to find the same sort of market openings or opportunities, hence for them, networks act as a barrier. This occurs for some high-technology firms which have networks which are academic, rather than business orientated. This can create difficulties when internationalising since their networks are not geared towards selling a product or service in an overseas market.

5.9 Existing research and surveys on exporting identify several types of barrier faced by firms which seek to export. These can be broadly categorised as: resource barriers, information and network barriers, cultural barriers, and legal and procedural barriers. The following sections examine each of these in turn.

5.1 Resource Barriers

5.10 Resource barriers include those which relate to finance, management time and other resources available to the firm. When questioned in relation to the barriers to internationalisation which they face, firms will tend to indicate that finance represents an important barrier, for example, a lack of working capital, or a lack of capital. In addition to financial constraints, firms report resource barriers such as a lack of management resources, exchange rates and foreign currency, and the marketing costs associated with doing business in overseas markets. These latter types of barrier contribute to the sunk costs associated with international activity.

199 Jones et al. (2008)
200 Fleiss (2007)
201 The Gallup Organisation, 2007
202 Ibid
203 Kneller and Pisu (2006)
5.11 However, the financial status of firms prior to exporting has not been found to determine whether a firm will export.\textsuperscript{204} This suggests that the barriers may not actually be of a financial nature despite being perceived as such by the firm itself.

5.12 Providers of support services to internationalising firms give a different perspective on resource barriers encountered by firms. They suggest that a lack of human capital and absorptive capacity hinder internationalisation efforts.\textsuperscript{205} This is because, in order to be able to enter new markets in which they have little or no previous experience, firms must have sufficient human resources and capabilities to be able to absorb and assimilate the new knowledge which is required to overcome the barriers to market entry, and to compete successfully in the new market.

5.13 This is reinforced by exporters being found to have higher absorptive capacity\textsuperscript{206} than non-exporters in the manufacturing sector.\textsuperscript{207} The same study of UK establishments found that the elements of absorptive capacity which represent the acquisition of external knowledge and national co-operation with innovation activities are important drivers of research and development (R&D) within a firm, which in turn influences the propensity to export. Internal absorptive capacity (measured by organizational and human resource management characteristics) is associated with an ability to overcome barriers to exporting (an increase of one standard deviation was found to increase the propensity of exporting by over 2%).

5.14 The ability to internalise external knowledge gained from international co-operation has been found (based on an increase of one standard deviation) to increase the likelihood of exporting by 4.4%, compared to the increased likelihood of around 6% associated with absorbing scientific knowledge from research organisations. This suggests that the latter component of absorptive capacity is associated with a greater ability to overcome barriers to exporting. This reflects the higher level of absorptive capacity generally required to assimilate scientific knowledge originating from research institutes and the impact of this type of knowledge on the internal capabilities of an establishment.\textsuperscript{208}

5.15 Absorptive capacity influences the ability to use information and networks to enable internationalisation. This is because in order to identify opportunities a firm needs:

1. To recognise the value of information,
2. To internalise this information,
3. To assimilate the information and,
4. To apply the information

\textsuperscript{204} Greenaway et al. (2007)
\textsuperscript{205} Zucchella (2009)
\textsuperscript{206} Absorptive capacity was captured by information on key elements of organizational learning and networking processes such as external sources of information or knowledge used in technological innovation activities and the introduction of changes in organizational structure and human resource management
\textsuperscript{207} Harris and Li, 2009a; 2009b; 2006
\textsuperscript{208} Harris and Li, 2009b.
Furthermore, firms with lower absorptive capacity may be unable to distinguish between relevant information from reliable sources and that from less useful sources. In essence, they fail to ‘filter and transfer information inside the firm.’\textsuperscript{209} Such difficulties may be perceived and reported as information barriers by firms or as difficulties in identifying markets which present opportunities,\textsuperscript{210} when in practice, the fundamental problem may be that of insufficient absorptive capacity.

Another aspect of resource barriers related to capabilities applies to firms which follow a stages, or Uppsala-type model of internationalisation. In order to internationalise, these may need to unlearn practices which are strongly domestic focused and not applicable to international activity. Some of the practices may have become embedded within the firm creating difficulties in successful internationalisation\textsuperscript{211} due to the difficulties in changing these behaviours and a lack of flexibility and adaptability within the firm.

SMEs tend to be considered to be more likely to face resource barriers than larger firms due to their more limited supply of human and financial resources.\textsuperscript{212} Indications that some SMEs which consider themselves to be resource constrained view internationalisation as a strategy to access such resources\textsuperscript{213} suggests that absorptive capacity or other factors may play a role in the perception of resource constraints as a barrier to internationalisation.

The transaction cost approach to internationalisation posits that a market or mode of internationalisation will be selected that minimises transaction costs: such costs would include searching for information and contacts in possible markets. These costs may be reduced if the information can be obtained via informal networks.\textsuperscript{214} Thus, there are links between resource barriers, absorptive capacity, and the role of information and networks in the internationalisation process.

When seeking to internationalise, firms require information about potential markets, buyers, sellers, products, prices, demand etc. The types and sources of information used vary between firms. Informal networks provide a useful channel through which firms obtain information,\textsuperscript{215} essentially allowing them to access resources of other firms.\textsuperscript{216} This may extend to providing introductions to potential business partners overseas.\textsuperscript{217}

\textsuperscript{209} Zucchella (2009)
\textsuperscript{210} Suarez-Ortega (2003)
\textsuperscript{211} Knight \textit{et al.} (2004)
\textsuperscript{212} Corviello and McAuley (1999)
\textsuperscript{213} Hessels (2008)
\textsuperscript{214} Osarenkhoe (2008)
\textsuperscript{215} Jones and Crick (2004)
\textsuperscript{216} Osarenkhoe \textit{(op. cit.)}
\textsuperscript{217} Komulainen \textit{et al.} (2004)
5.21 Thus, there is interlinkage between information and networks, and hence between information and contacts barriers which are reported by firms. What is more, firms which operate in international networks may find it easier to extend their overseas activity through these channels than firms whose networks are more domestic in orientation. 218

5.22 The existence of network barriers is evidenced through econometric work which highlights that these barriers are higher for differentiated goods than for homogenous products.219 This suggests that technology intensive, and, thus, innovative, firms are more likely to face network barriers than firms that trade in lower technology, less differentiated goods. Both social and business networks have been found to affect the strength of the border effect on trade.220 This is further evidenced by bilateral trade patterns being influenced by historical ties and language.221

5.23 The types of information and network barriers which have been identified through surveys include:

- lack of knowledge of foreign markets;222
- limited information to locate/analyse markets;223
- inability to contact potential overseas customers;224
- identifying foreign business opportunities;225
- obtaining basic information about an export market;226
- identifying who to make contact with in the first instance;227
- building relationships with key decision makers;228 and
- establishing an initial dialogue with prospective customers.229

5.24 An illustration of the role of networks comes from a study of French colonial trade and its development post-independence which found that on average, after 30 years of independence, trade between a colony, the metropole and its siblings declined by more than 60%. This erosion in trade has been gradual and cumulative and it is believed that one of the factors driving this change has been a fall in the number of French living in former colonies, which has resulted in a disintegration of these networks.230

218 Osarenkhoe (2008)
219 Rauch (1999)
220 Combes et al., (2002)
221 Amador and Opramolla (2008)
222 The Gallup Organisation (2007)
223 Fleiss (2007)
224 Ibid.
225 Ibid.
226 Kneller and Pisu (2006)
227 Ibid.
228 Ibid.
229 Ibid.
230 Mayer et al. (2008)
5.25 Other research has identified that 60% of the observed ‘border effect’ between administrative regions in France can be explained by business and social networks. These networks reduce the informational barriers to trade which occur across borders. Such barriers make it difficult for consumers to learn about products produced outside the border, while producers have difficulty learning about consumer tastes, and finding consumers in other countries.\(^{231}\)

5.26 Networking can enable awareness of business opportunities particularly in markets where contracts are not generally put out to tender so awareness tends to be generated via contacts.\(^{232}\) Small firms in particular tend to access business information such as forthcoming projects and potential buyers via their networks.\(^{233}\)

5.27 Qualitative evidence of firms which have failed to establish in Brazil, emphasises the role of networks since this was the main cause of their problems. In some cases this was due to an inability to find a reliable local employee or agent through whom they could create or access a network. In another case, the CEO admitted that the problems arose from not having appointed a Brazilian manager sooner who could make headway through the local bureaucracy.\(^{234}\) This also points to cultural and bureaucratic barriers and their interrelationship with networks.

5.28 When entering an overseas market mutual trust is important particularly for smaller companies. This is because seeking legal redress is likely to be too costly for them so they have little leverage should problems arise. Securing payment can be a particular problem since small firms have insufficient weight to insist on payment before delivery but have limited cash flows so that they face disproportionate risks.\(^{235}\)

5.29 Networks can assist firms in finding partners overseas by reducing search costs, partners found in this way may be perceived to be less risky since they have been located via known social connections, and therefore may be considered to be more trustworthy.\(^{236}\) This is because networks can act as a means of enforcing ‘moral’ behaviour, members of the network who fail to pay or who deliver sub-standard goods or services may be penalised by other members of the network who cease to trade with them. This provides an incentive for those within the network to adhere to a moral code of conduct. While this can make trading across borders less risky for those already within the network, it can be difficult for potential new members to join the network since existing members would wish to be sure that they meet such ‘moral’ requirements and would require a deep knowledge of the potential entrant. Such networks can therefore

\(^{231}\) Combes et al., 2002
\(^{232}\) Child and Rodrigues (2007)
\(^{233}\) Komulainen et al. (2004)
\(^{234}\) Child and Rodrigues (op.cit.)
\(^{235}\) Ibid.
\(^{236}\) Komulainen et al. (op.cit.)
\(^{237}\) Combes et al. (op.cit.)
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act as a barrier to trade for those outside a network. Such barriers seem to be influenced by psychic distance such as colonial and linguistic ties.

5.30 Agents can act as a broker of networks, if they are trusted by those within a network to introduce the ‘right’ sort of new member or if they act as an intermediary through which those outside the network can trade with those within. Government services can also influence networking activities through the organisation of events such as trade missions with an objective to facilitate networks between domestic and overseas managers. Most of the entrepreneurs interviewed for a recent qualitative study of high technology SMEs in the UK and Canada cited support agencies such as government advisers as sources of assistance in overcoming barriers associated with culture and business practices in overseas markets.

5.31 Barriers to trade are greater for differentiated goods and services than for homogenous goods. This is partly because the latter tend to have a reference price, enabling prospective exporters to estimate the value of their goods in the destination market. In addition, potential consumers in the market are likely to be familiar with the good, rendering it easier to find buyers.

5.32 This suggests that innovative firms may be disproportionately affected by network barriers. Recent survey evidence, presented in Table 5.1, supports this idea, with innovative and IP active firms markedly more likely than non-innovative firms to report significant barriers associated with access to contacts, as well as barriers of other kinds.

5.33 On the other hand, Chaney postulated that it may be easier to sell innovative products or services overseas since consumers wish to have the variety that this provides, and may be unable to identify a substitute good or service. This would make them less price sensitive, enabling the producer to sell their product at a price which compensates for the trade costs associated with bringing the product or service to that market.

5.34 Higher levels of perceived uncertainty about a market may lead to greater information searches prior to entry, particularly the use of personal information sources. Qualitative studies have suggested that compared to firms which spread themselves across many markets, firms which concentrate on a few markets tend to gather and make more use of information, perceive it as more useful, make more use of it and make more use of personal sources and contacts as a source of information. This is because they have developed a stronger link with key markets, leading to greater social ties overseas. One of the drivers of this behaviour is risk: when operating in only a few markets the risk associated

238 Rauch (2001)
239 Spence and Crick (2006)
240 Rauch (op.cit.).
241 Chaney (2008)
with each market is proportionally greater as there is less potential to diversify risk than when a spreading strategy is used.  

5.35 Qualitative studies have also suggested that the types of information required vary with level of export experience; inexperienced exporters tend to require basic procedural information while more experienced exporters require more in depth information such as that relating costs and competition. In terms of sources of information, firms tend to find internal sources of most useful eg from their sales teams. Small firms (i.e. those with fewer than 50 employees) may be limited as to the extent to which they can obtain information internally since they will be constrained by the number of people within their organisation. This may limit the total knowledge and information held within the firm and the size and resource of their sales teams.

5.36 However, evidence from the 900 internationalising firms based in the UK interviewed for the 2008 UKTI Internationalisation survey found that use of independent analysis was more frequent among firms exporting to more than 10 markets than for those exporting to 5 or fewer (59% and 48% respectively). This suggests that firms with spreading strategies may analyse more information when selecting a market than those concentrating on a smaller number of markets.

5.37 Cultural barriers link to network and information barriers since the ability to develop networks in an overseas market and develop business relationships is influenced by the local culture. Lack of awareness and knowledge of local cultural norms can impede the development of a business relationship. For example, in Japan how you give your business card can have an impact, doing this in the wrong way can make it difficult to develop business ties. Cultural barriers can also include language, general cultural differences, home bias and not having an office or site in the overseas market.

5.38 Of the three groups of barriers to exporting identified in a study (networks and marketing; procedural and exchange rates; and cultural barriers), those identified as cultural barriers were found to be the only reported barrier group to have a negative impact on the probability of export market entry. The predicted probability of successful market entry for firms not facing cultural barriers was 0.77, facing one cultural barrier caused this to fall to 0.67 but four cultural barriers led this to fall to a 0.18 probability of starting to export. This suggests that cultural barriers may be the most influential in impeding overseas market entry.

242 Jones and Crick (2004)
243 Jones and Crick (2004)
244 OMB Research (2008a)
245 OMB Research (2008c)
246 Kneller, and Pisu (2007)
247 Ibid
5.4 Legal, regulatory, and procedural barriers

5.39 Barriers of this variety which are reported by exporters include: dealing with legal, financial and tax regulations and standards, and regulations in other EU and non-EU countries. These regulations include product standards, compliance procedures, patent and trademark issues. Transaction cost theory posits that in response to differences in legal system internationally, firms will seek markets in which the legal system is based on one similar to their domestic market in order to minimise barriers to entering overseas markets.

5.5 Barriers and Innovative firms

5.40 When barriers to internationalisation are examined, using the 2008 UKTI Internationalisation survey, innovative, IP active and young and innovative firms are found to be more likely to report barriers to internationalisation than non-innovative firms (Table 5.1). Indeed, 42% of non-innovative firms reported no barriers compared to 22% for the innovative, IP active and young, innovative firms. A higher percentage of young innovative (39%) experienced at least four barriers than any of the other groups. Overall, the most frequently reported type of barrier was fixed costs barriers while bias barriers seemed to affect fewer firms.

248 Ibid
249 The Gallup Organisation (2007)
250 Fleiss (2007)
251 Coeurderoy and Murray (2005)
252 OMB Research (2008a)
253 Young and innovative firms were those which had been established for up to 5 years and were classified either as being innovative or IP active.
### Table 5.1: Summary of Barriers by Innovation and Mode

<table>
<thead>
<tr>
<th>% scoring</th>
<th>Total</th>
<th>Mode/Innovation &amp; IP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Innovative (alt)</td>
<td>Innovative</td>
</tr>
<tr>
<td>At least one barrier 'to a significant extent'</td>
<td>87%</td>
<td>84%</td>
</tr>
<tr>
<td>– Legal and regulatory barriers</td>
<td>48%</td>
<td>45%</td>
</tr>
<tr>
<td>– Contacts barriers</td>
<td>55%</td>
<td>52%</td>
</tr>
<tr>
<td>– Information barriers</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>– Fixed costs barriers</td>
<td>71%</td>
<td>67%</td>
</tr>
<tr>
<td>– Language and cultural barriers</td>
<td>31%</td>
<td>30%</td>
</tr>
<tr>
<td>– Bias barriers</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>No significant barriers</td>
<td>13%</td>
<td>16%</td>
</tr>
</tbody>
</table>

**Types of Barriers (includes market perceptions)**

<table>
<thead>
<tr>
<th>Types of Barriers</th>
<th>Total %</th>
<th>Mode/Innovation &amp; IP %</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least one barrier 'to a significant extent'</td>
<td>82%</td>
<td>78%</td>
</tr>
<tr>
<td>– One</td>
<td>19%</td>
<td>17%</td>
</tr>
<tr>
<td>– Two</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>– Three</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>– Four or more</td>
<td>40%</td>
<td>36%</td>
</tr>
<tr>
<td>No significant barriers</td>
<td>18%</td>
<td>22%</td>
</tr>
</tbody>
</table>

**Base:** All answering about… (Base) – Total: Innovative (alternative) (418), Innovative (659), Non-innovative (241), IP active (267), Young & innovative or IP active (210), Selling direct: Innovative (alternative) (289), Innovative (475), Non-innovative (206), IP active (188), Young & innovative or IP active (153)
Table 5.2: Summary of Barriers by Innovation and Mode

<table>
<thead>
<tr>
<th>% scoring</th>
<th>Mode/Innovation &amp; IP</th>
<th>Contractual Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agents/Distributors</td>
<td>Young innovative</td>
</tr>
<tr>
<td></td>
<td>Innovative</td>
<td>Non-innovative</td>
</tr>
<tr>
<td></td>
<td>IP Active</td>
<td>Young innovative</td>
</tr>
<tr>
<td></td>
<td>Innovative</td>
<td>Non-innovative</td>
</tr>
<tr>
<td></td>
<td>IP Active</td>
<td>Young innovative</td>
</tr>
</tbody>
</table>

Types of Barriers (both direct and projected questions)

At least one barrier ‘to a significant extent’

- Legal and regulatory barriers
  - Innovative: 45% 40% 43% 19% 31% 21% 26% 10%
  - Non-innovative: 21% 45% 72% 52% 48% 0% 37% 40%

- Contacts barriers
  - Innovative: 51% 57% 69% 48% 41% 0% 37% 40%
  - Non-innovative: 35% 57% 69% 48% 0% 0% 0% 0%

- Information barriers
  - Innovative: 26% 29% 43% 19% 31% 21% 29% 40%
  - Non-innovative: 19% 29% 43% 19% 0% 0% 0% 0%

- Fixed costs barriers
  - Innovative: 72% 85% 83% 50% 60% 0% 52% 30%
  - Non-innovative: 48% 85% 83% 50% 100% 0% 52% 30%

- Language and cultural barriers
  - Innovative: 31% 13% 44% 14% 31% 21% 29% 40%
  - Non-innovative: 13% 13% 44% 14% 31% 21% 29% 40%

- Bias barriers
  - Innovative: 34% 8% 44% 37% 26% 0% 30% 10%
  - Non-innovative: 8% 8% 44% 37% 26% 0% 30% 10%

No significant barriers

Number of Barriers (excludes direct questions)

At least one barrier ‘to a significant extent’

- One
  - Innovative: 22% 26% 17% 9% 17% 21% 19% 30%
  - Non-innovative: 14% 11% 13% 9% 0% 58% 0% 0%

- Two
  - Innovative: 6% 6% 12% 9% 23% 0% 22% 0%
  - Non-innovative: 6% 6% 12% 9% 0% 0% 0% 0%

- Three
  - Innovative: 0% 0% 0% 0% 0% 0% 0% 0%
  - Non-innovative: 0% 0% 0% 0% 0% 0% 0% 0%

- Four or more
  - Innovative: 0% 0% 0% 0% 0% 0% 0% 0%
  - Non-innovative: 0% 0% 0% 0% 0% 0% 0% 0%

No significant barriers

5.41 Barriers by mode should be interpreted with care due to the small base sizes for some modes (Table 5.2). Firms which sell directly had a very similar pattern of barriers to those experienced by the sample as a whole. When those selling via agents and distributors are considered, the percentage of young, innovative firms experiencing at least 4 barriers was higher (60%), than for all firms in the sample (39%) (Table 5.1).

5.42 Factor analysis of the barriers faced by innovative or IP active firms established for up to 5 years revealed differences between those respondents which sold directly to overseas customers, and those which used other modes of internationalization.

5.43 For those which sold directly to overseas customers, a three factor solution was found which accounted for 58% of the variance. When the factor loadings
were interpreted, using a cut-off point of 0.5, the first factor was weighted on obtaining basic information, not having their own office or site in the market, the costs of doing business, finding the necessary management time and exchange rates and currency. This factor was called Resources, since these barriers are concerned with resources whether financial or time related. The second factor was called Relationships since the barriers which were weighted on it included identifying who to make contact with, developing an initial dialogue and building relationships. Thus, it seemed to be concerned with the process of initiating, developing and sustaining a relationship with customers. The final factor was referred to as Culture since it was weighted on cultural differences other than language and home bias (Table 5.3).

Table 5.3: Summary of Factor Analysis of the barriers to internationalisation faced by Young High Technology SMEs selling direct to overseas customers

<table>
<thead>
<tr>
<th>Factor 1 Resources</th>
<th>Factor 2 Relationships</th>
<th>Factor 3 Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtaining basic info</td>
<td>0.5924</td>
<td>0.4398</td>
</tr>
<tr>
<td>Identifying who to make contact with</td>
<td>0.3093</td>
<td><strong>0.7259</strong></td>
</tr>
<tr>
<td>Initial dialogue</td>
<td>-0.0182</td>
<td><strong>0.8466</strong></td>
</tr>
<tr>
<td>Building relationships</td>
<td>0.0989</td>
<td><strong>0.7354</strong></td>
</tr>
<tr>
<td>Cultural differences</td>
<td>0.0254</td>
<td>0.2195</td>
</tr>
<tr>
<td>Not having own office, site in the overseas market</td>
<td><strong>0.5491</strong></td>
<td>0.1926</td>
</tr>
<tr>
<td>Home bias</td>
<td>0.2553</td>
<td>0.1984</td>
</tr>
<tr>
<td>Costs doing business</td>
<td><strong>0.7415</strong></td>
<td>0.0499</td>
</tr>
<tr>
<td>Finding management time</td>
<td>0.6423</td>
<td>0.3085</td>
</tr>
<tr>
<td>Exchange rates/currency</td>
<td>0.6870</td>
<td>-0.0753</td>
</tr>
</tbody>
</table>

Number of observations = 159
Variance = 58.36%
LR test: chi2(45) = 376.29 Prob>chi2 = 0.0000

5.44 When factor analysis was carried out for young innovative SMEs which internationalised using other modes, only two factors resulted which explained 54% of the variance (Table 5.4). The first factor was called Resources since it was weighted on the same variables as those in the first factor extracted for firms internationalising by selling direct, with the addition of the variables identifying who to make contact with in the first instance and home bias. The second factor was called Relationships since it was weighted on developing an initial dialogue, building relationships and cultural differences.
Table 5.4: Summary of Factor Analysis of the barriers to internationalisation faced by Young High Technology SMEs internationalising by modes other than selling direct to overseas customers

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>Relationships</td>
</tr>
<tr>
<td>Obtaining basic info</td>
<td>0.5600</td>
</tr>
<tr>
<td>Identifying who to make contact with</td>
<td>0.5259</td>
</tr>
<tr>
<td>Initial dialogue</td>
<td>0.1619</td>
</tr>
<tr>
<td>Building relationships</td>
<td>0.1228</td>
</tr>
<tr>
<td>Cultural differences</td>
<td>0.1784</td>
</tr>
<tr>
<td>Home bias</td>
<td>0.5274</td>
</tr>
<tr>
<td>Costs doing business</td>
<td>0.7446</td>
</tr>
<tr>
<td>Finding management time</td>
<td>0.6312</td>
</tr>
<tr>
<td>Exchange rates/currency</td>
<td>0.7614</td>
</tr>
</tbody>
</table>

Number of observations = 72
KMO = 0.7678
Variance = 53.98%
LR test: chi2(36) = 206.76 Prob>chi2 = 0.0000

5.45 These findings suggest that young innovative firms which sell direct in overseas markets perceive identifying who to make contact with in the first instance as part of the process of building relationships. When identifying contacts these firms may be considering how they may develop the relationship. Alternatively, they may use existing networks and relationships to assist them in identifying contacts.

5.46 In contrast, those which internationalise using other modes perceive identifying contacts to be more related to resources than developing relationships. Identifying with whom to make contact would utilise resources in searching and then identifying potential contacts in the overseas market. The grouping of cultural differences with relationship related variables is indicative that cultural differences can influence the ease with which relationships are built. This may also be influenced by other modes of internationalisation sometimes being used in more difficult markets which may be culturally more distant. In this case, cultural differences may be more of an issue than for firms entering markets closer to home.

5.47 A further area of difference between the two groups with regard to their perception of barriers is that those firms which sold direct perceived home bias and cultural differences to be related. This is consistent with the idea that a preference on the part of overseas customers to purchase domestically produced items or services over those produced or supplied by firms from the UK has a cultural basis. This association maybe made by those selling directly due to their closer link to the buyer and thus, potentially a greater awareness of the effect of culture on home bias. For those firms which internationalise by other modes,
home bias is perceived to be related to resources. This may be because home bias is perceived by these firms to impact on revenues, and as such, to impact on resources. It may be that in response to home bias they modify their products or services to better suit the destination market. In this case, this would impose a cost to entering the market and would therefore act as a resource barrier.

5.6 Barriers and Market

5.48 When barriers to internationalisation by market are examined using the 2008 UKTI Internationalisation survey, it appears that firms are more likely to report barriers when referring to entering fast growing markets (Table 5.5). Across all firms in the sample, 37% of firms entering fast growth markets reported experiencing at least four barriers compared to 28% of those entering other markets.

5.49 The greatest disparities across market types were for legal and regulatory barriers and language and cultural barriers. In both cases there was a 15 percentage point difference between the proportion of firms entering high growth markets which reported experiencing these types of barrier and those entering other markets.

254 OMB Research (2008a)
Table 5.5: Summary of Barriers by Market

<table>
<thead>
<tr>
<th>Types of Barriers (includes market perceptions)</th>
<th>Total % scoring</th>
<th>Mode/Market</th>
<th>Agents/Distributors</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least one barrier ‘to a significant extent’</td>
<td>81%</td>
<td>79%</td>
<td>89%</td>
</tr>
<tr>
<td>-- Legal and regulatory barriers</td>
<td>52%</td>
<td>52%</td>
<td>45%</td>
</tr>
<tr>
<td>-- Contacts barriers</td>
<td>50%</td>
<td>50%</td>
<td>54%</td>
</tr>
<tr>
<td>-- Information barriers</td>
<td>25%</td>
<td>23%</td>
<td>20%</td>
</tr>
<tr>
<td>-- Fixed costs barriers</td>
<td>66%</td>
<td>66%</td>
<td>63%</td>
</tr>
<tr>
<td>-- Language and cultural barriers</td>
<td>37%</td>
<td>36%</td>
<td>34%</td>
</tr>
<tr>
<td>-- Bias barriers</td>
<td>22%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>No significant barriers</td>
<td>19%</td>
<td>21%</td>
<td>11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Barriers (excludes market perceptions)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>At least one barrier ‘to a significant extent’</td>
<td>74%</td>
<td>72%</td>
<td>80%</td>
</tr>
<tr>
<td>-- One</td>
<td>18%</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td>-- Two</td>
<td>11%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>-- Three</td>
<td>8%</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>-- Four or more</td>
<td>37%</td>
<td>37%</td>
<td>40%</td>
</tr>
<tr>
<td>No significant barriers</td>
<td>26%</td>
<td>28%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Base: All answering about... (Base) – Total: Fast growing (253), Other (647), Selling direct: Fast growing (184), Other(497), Agents/distributors : Fast growing (40), Other (108),

5.7 Barriers and Export Experience

5.50 Multivariate analysis reveals that the effect of export experience on the incidence of barriers is non-linear, and differs by type of barrier. The longer firms have been in export markets, the lower the number of barriers which they report facing and the probability of reporting barriers. This is particularly the case for networks and marketing, and, cultural types of barriers. However, firms which have been exporting for 2–10 years have a higher probability of reporting cultural or procedural barriers than firms which are new to exporting. The importance of these barriers falls once the firm has been exporting for 10 years. 255 This illustrates that it is not just new to export firms which face barriers; rather, barriers to entering foreign markets persist for some time. This may be due to the tendency for firms to enter easier markets first, and then progressing to culturally more distant markets. However, this would be unlikely to hold for ‘Born Globals’.

255 Kneller and Pisu (2007)
5.8 Conclusions

5.51 The evidence reviewed in this chapter has shown that SMEs seeking to internationalise encounter significant non-policy barriers to new market entry, and that innovative SMEs encounter more barriers than non-innovative firms. Given the importance of exporting to these firms as a means of meeting growth aims, barriers to exporting are likely to be barriers to success in achieving these aims.

5.52 The main barriers relate to:

- gaining access to networks and contacts, including identifying potentially useful contacts and establishing a dialogue once they have identified the right people;
- navigating unfamiliar business environments, including and language and cultural differences;
- procedural barriers, including issues relating to product standards and other aspects of the legal and regulatory framework;
- finding the confidence, management time and other resources to investigate and pursue overseas opportunities;
- knowing how to deploy efforts effectively, including understanding of the competitive environment and how to assess potential benefits and risks.

5.53 Barriers to exporting vary by market, and can increase as SMEs seek to enter culturally more remote markets. In emerging markets, the incidence of legal and regulatory barriers is even greater than barriers relating to access to contacts, and barriers relating to language and culture also loom larger.

5.54 Barriers are linked to export experience, but in a non-linear manner, with some barriers rising after firms have been exporting for more than 2 years, and the incidence of barriers then tending to fall after 10 years export experience.
6. Conclusions and Policy Implications

6.1 This chapter looks at policy implications of the new evidence presented in previous chapters. It begins by reviewing the main points arising from the new findings, and then looks at the main strands of policy support currently offered to SMEs in the UK, and in some other developed countries, in light of these findings. It highlights the role of trade services in enabling firms to overcome network barriers, and in helping them to build the absorptive capacity they need in order to navigate the challenges associated with seeking to exploit overseas markets as a route to growth. The chapter concludes by looking at some of the policy objectives which are often attributed to trade promotion organisations, and draws attention to the risks of encouraging SMEs to export when they lack the right capabilities for success.

6.2 A previous paper\textsuperscript{256} reviewed theory and evidence underpinning the rationale for government support for international trade and investment in general, focusing on three criteria:

- Evidence of potential benefits to UK prosperity from increased international trade and investment;
- Evidence of market failures which create barriers to trade and investment, and which would otherwise prevent the business community from fully realising these potential benefits;
- Evidence that there are cost-effective actions which government can take to address these failures, enabling business to generate sufficient additional benefit to justify the cost of the intervention and increase national prosperity.

6.3 The analysis concluded that the three criteria were met, and that there was a strong economic case for government action to address the barriers and market failures identified.

6.4 The evidence reviewed so far in this paper has reinforced the conclusions of the previous paper with respect both to benefits of exporting, and barriers to doing so, with particular reference to innovative and high growth SMEs in the UK. It has identified a substantial body of new evidence with respect to:

- The incidence and patterns of UK SME internationalisation, highlighting its importance to innovative and growing firms, and the importance of the ‘born globals’ in technology intensive sectors;
- The importance of internationalisation for born global type firms which are international in outlook, serve and a niche market and for whom the domestic market is of insufficient size to sustain the business;

\textsuperscript{256} DTI Economics Paper 18 (2006)
Conclusions and Policy Implications

- The productivity effects of exporting, and on learning by exporting. Econometric and qualitative studies are consistent in finding these effects for the UK, and also show that innovative and high productivity firms are most likely to benefit from exporting;

- The links between innovation, exporting, and R&D, which has highlighted the importance of exporting in maximising the economic benefits of innovation, as well as its role in stimulating innovation and investment in UK R&D;

- The role of high growth SMEs in the UK economy, and the links between innovation and high growth. New evidence has also highlighted the importance of SMEs to innovation in the UK, both in terms of absolute numbers of patents and trade markets, and in terms of IP intensity;

- The incidence and nature of barriers to internationalisation, showing that these tend to be greater for innovative firms, and that they do not diminish rapidly with export experience, but vary across markets, and increase as firms seek to enter high growth markets, which are also culturally more remote. Of particular note is the finding that cultural barriers seem to present the most important impediment to internationalisation;

- The new evidence has reinforced previous evidence as to the nature of barriers to entering new overseas markets, highlighting the importance of networks and cultural factors, as well as differences in legal and regulatory aspects of the business environment.

6.5 These findings reinforce the importance of Government support for internationalisation of innovative and high growth SMEs, for several reasons:

- This sub-group of SMEs plays a disproportionately important role in the UK economy, in terms of productivity, innovation, growth, and job creation;

- They are likely to need successful access to overseas markets in order to achieve their growth aims, and thus also to fulfil their potential contribution to UK growth;

- They are more likely to have higher absorptive capacity, making them more likely to be able to internationalise successfully and thus to benefit more from internationalisation; and

- They are more likely to encounter significant barriers to new market entry.

6.6 Monitoring and evaluation evidence for UKTI reinforces this conclusion, as it shows that innovative firms also derive greater benefit from the support offered through UKTI trade services (see Appendix 2). In the next section, we look at the main strands of policy support currently offered to SMEs in the UK and some other developed countries, and consider how they relate to the barriers identified in the previous chapter.
6.1 Policies to support SME internationalisation

6.7 Policies to support SME internationalisation in the UK and in other developed countries can broadly be grouped under two headings, linked to the main types of barriers which were identified in the previous chapter:

- **Policies to help individual firms overcome barriers to entering new markets:** In the UK, as well as in other developed countries, officers in a network of offices in consulates and embassies overseas provide a range of tailored commercial services. Services typically include identification and facilitation of access to specific potential business partners and other important contacts in the market, as well as tailored information and advice;

- **Policies to help firms build internationalisation capabilities:** In the UK and other developed countries these are likely to focus specifically on capabilities related to international business, including know how about what knowledge and information are likely to be needed to evaluate and exploit potential opportunities, and to identify what changes may be required to product offer or marketing strategy in order to succeed overseas. Services typically involve providing advice to individual firms – including advising firms not to export where appropriate – as well as providing information or training to groups of firms who are exporting or interested in doing so.

6.8 In the UK, these two strands of policy are delivered by services offered through two business support products: “Getting into New Overseas Markets”, and “Developing Your Trade Potential”. The former relates to services provided mainly through the UKTI overseas network, and the latter to services provided, under contract to UKTI, through the network of teams of International Trade Advisers in the 9 English regions. In addition, two elements of this latter product, the Export Marketing Research Scheme, and the Export Communications Review, are delivered on behalf of UKTI by the British Chamber of Commerce in Coventry. Most UKTI trade services are open to firms of all sizes, but 90% of users are SMEs.

6.9 These policies address the main types of barriers identified in the previous chapter:

- **Network and contact barriers:** UKTI and its counterparts in other developed countries help to overcome network and contacts barriers by serving as a trusted intermediary and enabling businesses to gain access to new contacts and networks not otherwise accessible, most commonly through a network of offices in consulates and embassies in target overseas markets. Support for trade missions, and for participation in overseas tradeshows, also supports this aim;

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258 The exception is that eligibility for financial support, where available, is limited to SMEs.
Conclusions and Policy Implications

- **Cultural and language barriers**: Teams in the UKTI overseas network bridge cultural barriers by imparting to UK clients a better understanding of the nature of cultural differences, and how to navigate them, in both general and in specific business contexts. Counterparts in other developed countries fulfil similar functions. In the UK, a specific Export Communications Review programme addresses language barriers by providing subsidised review of export communications needs. Evaluation evidence shows that identifying knowledge needs, of which the client had been unaware, can be a source of important benefits;

- **Legal and regulatory barriers** are addressed both by the overseas network, and in the UK by advice and access to expertise which are provided by the English regional network;

- **Knowhow**: UKTI teams in the English regions help clients to gain the confidence and knowhow to explore new markets, and improve their approach to overseas business. Domestically based advisory services appear to fulfil a similar function in other developed countries. Tailored information and advice relating to specific overseas markets is provided by the overseas network;

- **Financial resources**: Focused financial support is offered to SMEs in some cases, for example in the UK through services such as the Tradeshow Access Programme (TAP), Market Visit Support, the Export Marketing Research Scheme, and Passport to Export. This helps firms find the resources needed for exploring new markets and to invest in developing the capabilities required to exploit them successfully.

6.10 In some developed countries, such as Finland and New Zealand, the domestic strand of export support may include broader elements of capability building, which may also be linked explicitly to support for innovation, as illustrated in Box 6A.1.

6.2 Building absorptive capacity

6.11 Both of these policies include an element of building ‘absorptive capacity’, in that they help firms to increase their ability to identify, and benefit from, external sources of useful knowledge, including through building links with the right networks of contacts. The importance of absorptive capacity as a key factor in firms’ ability to internationalise successfully was repeatedly highlighted in the literature reviewed in the previous chapters.

6.12 A recent review of literature on business needs for external sources of advice and help at different stages of business growth also highlighted the importance of absorptive capacity, and the need to build increased absorptive capacity in order to navigate difficulties associated with growth successfully. It found:

259 Bessant *et al.* (2005)
Internationalisation of Innovative and High Growth SMEs

- There is no set pattern of stages of growth. However, companies go through a number of typical transitions, or ‘tipping points’, at different times, when they are facing significant challenges and potential for change, and are receptive to new knowledge, ideas, and behavioural change. Seeking to enter a new market was identified as one such transition;

- The key to growth was seen as ‘the absorption of knowledge and solutions to successfully traverse the tipping points. In dealing with these tipping points the firm needs to grow its absorptive capacity. It needs to become aware of key issues it is facing and it needs new knowledge inputs to provide solutions to the crises and challenges generated at tipping points’;260

- The impact of external advice can be most potent during these transition points, and can lead to a ‘tipping point’, enabling a small amount of well focused advice or information to have very large business benefits.

6.13 Evidence from monitoring and evaluation studies for UKTI indicates that advisory services provided through the two trade services products fulfil just this function, and that innovative firms, whose level of absorptive capacity is already likely to be higher than that of other firms, are likely to benefit most. Indicators of this impact frequently reported as significant business benefits resulting from the support by clients include:

- Gained access to information otherwise unable to come by;
- Improved marketing research skills;
- Improved their knowledge of the competitive environment;
- Improved your overseas marketing strategy;
- Improved the way you do business in an overseas market;
- Gained new ideas about products, services, techniques, or technologies;
- Made improvements to your new product development strategy;
- Gained the confidence to either explore a new market or expand in an existing one.

6.14 All of these reflect acquisition, assimilation, and application of new knowledge, and imply a process of learning which is likely to leave the firm better placed to know how to address the next phase of challenges. Building new networks of contacts, and building knowledge about who to contact for knowledge about what, when, and how, are also key to this process. This is reflected in the fact that one of the most frequently cited business benefits is ‘gained access to prospective customers or business partners, networks, or other people that you would otherwise have been unable to meet’.261

260 Ibid
6.15 Analysis of UKTI monitoring and evaluation data shows that these qualitative indicators of business benefit and increased absorptive capacity are strongly correlated with impact on business performance and profit.

6.16 Survey evidence on the growth experience and intentions of UKTI users and non-users, reported in previous chapters, shows that users are more likely to be growing, and more likely to expect substantial growth over the next few years. Since users are all firms who have sought help in entering new markets, this supports the idea that firms who are seeking to grow, and at a ‘tipping point’ associated with attempting new market entry, are more likely to be seeking the new knowledge and advice which UKTI services can provide.262

6.17 Evidence from UKTI surveys of users and non-users has also consistently shown that innovative firms are more likely to use the services (Table 6.1). This is likely to be for a number of reasons, in addition to their being a focus of policy: as reported in previous chapters, these firms are both more likely to have high growth objectives which make exporting important to them, and more likely to encounter barriers to exporting giving rise to need for support. However, it seems likely that innovative firms are also more likely to seek out support, due to their stronger absorptive capacity, as they are better able to identify and make effective use of external sources of knowledge.

6.18 Table 6.1 shows that at all levels of export experience users of UKTI trade services are more likely to be innovative, IP active, and growing firms. In terms of growth, the difference is especially marked among firms with more than 10 years export experience, with only 15% non-users classified as growing, as compared with 37% of users. Among non-users there is also a clear pattern of declining proportions of growing firms as export experience increases, whereas among users there is an increase from 38% to 47% for firms have been exporting 2-10 years, falling back only to 37% among those exporting for more than 10 years. This suggests greater incidence of sustained growth among users.

6.19 Evidence for the UK also shows that there are consistent differences between the role of the overseas network and that of domestic advisory services, with respect to the specific ways in which support benefits firms, and leads to improved business performance. These differences reflect the complementarities between the two main strands of policy which were outlined above:

- For the overseas network, the most frequently cited qualitative benefits are: ‘gaining access to [contacts] not otherwise accessible’; ‘access to information not otherwise able to come by’; and ‘increasing profile or credibility overseas’. ‘Overcame a legal or regulatory difficulty’ is cited by fewer firms, but is nevertheless a source of substantial benefit;

262 However, the picture is clouded by the fact that many non-users are not aware of the availability of UKTI services. Lack of awareness means that some non-users who are at similar tipping points nevertheless do not use the services.
Internationalisation of Innovative and High Growth SMEs

- For domestic advisory services, clients more frequently cite benefits directly linked to learning: ‘upgrading your overseas marketing strategy’, ‘increasing your understanding of the competitive environment’, and ‘gaining the confidence to enter a new market or expand in an existing one’, and ‘access to information not otherwise able to come by’.

6.20 These differences point to the overseas network as having a particular role in overcoming barriers related to access to contacts, culture, and legal and regulatory issues. By comparison, the domestic advisory services have a particularly important role in building absorptive capacity and overcoming resource barriers which are linked to knowledge and knowhow.

6.21 However, the evidence indicates that both strands of policy support the link between exporting and innovation, with firms receiving both types of support reporting increased R&D, improvements to products and processes and other innovation effects. A recent study of the R&D impact of UKTI trade services found clear evidence of complementarity across services, with firms who had received more than one form of support likely to show stronger increases in R&D investment.\(^\text{263}\)

6.22 Evidence from this R&D impact study also supports the idea that firms are likely to benefit most from external support when they are in a transition phase associated with growth, and reinforces the link between absorptive capacity, innovation, and successful growth:

- The strongest positive impact of trade services on R&D was found among firms who were growing and innovative;
- Gaining exposure to new ideas through exporting was identified as a key element in the mechanism through which trade support led to increased R&D.\(^\text{264}\)

6.3 Pro-active targeting vs client self-selection

6.23 The evidence on how and when businesses can benefit most from external sources of advice and help also has important implications for policy with respect to methods of recruiting or selecting businesses for support. Options include:

- **Pro-active targeting**: If firms have the right characteristics for successful internationalisation, but are deterred from doing so by lack of awareness of the opportunities or of the potential business benefits, there may be a case for policy action to reach out to such firms. However, pro-active targeting can be costly, and it can be difficult to identify or reach firms with the right characteristics;

263 Driffield et al. (Forthcoming)
264 The other two elements of this mechanism were improved financial performance, making funds available to implement ideas, and the increased incentives for R&D associated with the higher returns to such investment due to selling into a wider market than would be available domestically.
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- **Client self-selection**: Alternatively, if firms which are most likely to benefit from exporting, due to higher productivity and stronger absorptive capacity, are also better able to identify and make effective use of external sources of knowledge, there may be a case for relying more on client self-selection. This could have the benefit of being a low cost means of attracting clients with the right profile.

6.24 The findings reported above point to caution against pro-actively pushing support on businesses at times when they are not receptive. Since the ‘tipping points’ at which external knowledge is most likely to make an impact are not generally visible to an outsider, successful pro-active targeting of firms can be difficult. By contrast, outreach events on topics likely to be of interest to firms seeking to enter new markets can assist such targeting. By attracting firms when they are at this type of tipping point, firms can be identified when they are most likely to be receptive to new ideas, and hence to benefit most from support.

6.25 Evidence from a recent review of UKTI support for firms seeking to enter high growth markets bears out these findings.\(^{265}\) An initiative which had originally been expected to use pro-active targeting of firms who could potentially benefit from high growth markets, quickly found in practice that investment in approaching firms was costly and difficult to achieve successfully. A far more effective means of identifying companies responsive to exploiting opportunities in these markets proved to be to focus on companies who had chosen to attend events about the markets. The fact of their attendance at these events was a clear signal of this interest, and of receptiveness to learning more about these markets.

<table>
<thead>
<tr>
<th>Table 6.1: Summary of Innovation and Growth by Usage of UKTI</th>
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<tbody>
<tr>
<td>The table shows the % respondents in each category by number of years of export experience</td>
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<tr>
<td></td>
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<tr>
<td>Base: All respondents</td>
</tr>
<tr>
<td>Innovative</td>
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<tr>
<td>Innovative (alternative)</td>
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<tr>
<td>IP Active</td>
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<tr>
<td>Growing</td>
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6.4 Policy objectives

6.26 High level policy objectives assigned to trade promotion organisations vary, as illustrated below in Boxes 6A.3 and 6A.4, which summarise recommendations from a recent World Bank study and from recent research for CEPR. The World Bank study makes explicit that its recommendations are based on the assumption

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265 London Economics (2010)
that the policy objective is to increase the value of exports. By contrast, the CEPR report implies a wider range of objectives, including productivity, although these are not made explicit.

6.27 The US National Export Strategy, outlined at Box 6A.2, has cited the CEPR report as evidence underpinning its objective of increasing the number of US SMEs that export. The discussion in this US Strategy document suggests an implicit policy objective relating to increasing US exports to target high growth markets as well as policy objectives relating to strengthening SME performance.

6.28 National level policy aims have implications for firm level aims:

- **Productivity policy aims**: These imply firm level aims relating to one or both of the following: increasing productivity at firm level, through ‘learning by exporting’ or ‘learning to export’ effects; or enabling relatively high productivity firms to grow and expand their market share, thus drive up aggregate productivity through ‘batting average’ effects;

- **Policy aims relating to increasing export values**: Since research has shown that the value of a nation’s exports is driven by the number of exporters – the ‘extensive margin’ – as well as by the average value of exports per exporter, and trade promotion services is mainly on the extensive margin, these policy aims imply a firm level aim of increasing the number of exporters, either in total, or to target destination markets.

6.29 Although these policy aims can be complementary, at firm level they can also conflict. For example, the evidence reviewed earlier in this paper shows that encouraging SMEs to export is not always beneficial:

- Since there are significant fixed costs associated with beginning to sell into overseas markets, individual firms will only benefit from doing so when they have sufficient strengths for the overall benefits to outweigh these costs;

- The evidence reviewed in the discussion of the drivers of export activity found that strengths in productivity, innovation, and absorptive capacity are all important, and noted that the benefits of exporting perceived by businesses themselves are consistently lower for non-innovative firms.

6.30 Where the right strengths are lacking, there is evidence not only that firms are less likely to succeed in exporting, but also that they may lose productivity and actually be worse off as a result of trying and failing.266

6.31 Innovative firms, of all sizes, have been a focus of UKTI policy since the 2006 UKTI strategy, based on evidence that internationalisation is likely to be particularly important for this sub-group. As noted above, more recent evidence has reinforced this conclusion.

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266 Harris and Li (2007c)
6.5 Conclusions

6.32 There is a strong economic case for Government support to help innovative and high growth SMEs to internationalise, on the basis of evidence that:

- This sub-group of SMEs plays a disproportionately important role in the UK economy, in terms of productivity, innovation, growth, and job creation benefits;
- These firms are likely to need successful access to overseas markets in order to achieve their growth aims, and thus also to fulfil their potential contribution to UK growth;
- They are more likely to have higher absorptive capacity, making them more likely to be able to internationalise successfully and thus to benefit more from internationalisation;
- They are more likely to encounter significant barriers to new market entry; and
- Evaluation evidence shows that government support to this sub-group can be highly effective, and generate excellent tax payer value for money.

6.33 The evidence indicates a need for caution against encouraging SMEs to export where they lack the capabilities to do so successfully.

6.34 It also highlights the importance of designing policy to ensure that support reaches firms at ‘tipping points’ in their development, when they are seeking to enter new markets, and likely to benefit most from external sources of knowledge and advice.

6.35 Reviewing the match between trade support policies and the new evidence on barriers to internationalisation reinforces the case for support to these SMEs focused in the following four areas:

- Helping businesses to gain access to key contact networks, by serving as a trusted intermediary;
- Strengthening the internationalisation capabilities of innovative and high growth businesses, and helping them build the absorptive capacity they need to meet the challenges of overseas expansion;
- Providing access to information and advice which the private sector alone would not or could not provide to UK businesses seeking to exploit opportunities overseas;
- Helping firms to overcome barriers to overseas market access, including helping individual firms to overcome particular problems with legal or regulatory issues.
Export Promotion in Finland

Export promotion services in Finland are provided through The Ministry for Foreign Affairs and the Finnish diplomatic and consular missions abroad, and through a separate organisation at home, Finpro. The range of services broadly covers the two policy areas outlined above, with the overseas network focusing on overcoming barriers to new markets, and Finpro focusing on the capability building elements, but taking a wider approach to this role.

Finpro: A summary on the Finpro website describes the broad nature of Finpro’s role:

“Export promotion is now only one aspect of Finpro’s activities. The sphere of tasks is broadly defined: to speed up the internationalization of Finnish companies while minimizing the risks involved, using the resources of its own organization and co-operating with other service organizations working the same goals – including the National Technology Agency, Tekes, Finnvera plc, the Employment and Economic Development Centers and Sitra, the Finnish National Fund for Research and Development Finpro promotes Finnish Business Solutions Worldwide.”


The Finnish overseas network: The website describes the network, “consisting of about 100 service points with Finnish staff in different parts of the world”, as follows: “The geographically wide network of diplomatic and consular missions abroad, in cooperation with other EPI actors, provides companies with public services related to export promotion and internationalisation... Depending on the resources and local conditions, services in different countries vary in terms of the availability and range of services.”

The services are generally provided free of charge, although direct expenses, such as in relation to the costs of arranging a promotional event, would be wholly or partly charged.266

New Zealand Trade and Enterprise

NZTE advertises services under the following five headings, of which two relate to capability building, two to entering new markets, and the fifth to funding:

● Get Ready to Export: Find how-to guides, support and references to other government resources to help you get ready to export, or to help you start a new business.

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- **Develop Knowledge and Expertise**: Access our training and mentoring programmes, read practical exporter guides, and learn about our targeted services to help your business boost productivity.

- **Access International Networks**: Discover our services designed to connect you with opportunities in overseas markets, and provide assistance for your business to operate internationally.

- **Explore Export Markets**: Find detailed market research and resources for doing business in key markets around the world, including industry reports and export intelligence news reports.

- **Find Funding Assistance**: Access funding programmes and other capital-oriented advice and assistance to help your business expand, gain new skills and enter new overseas markets.

Under ‘Access International Networks’, NZTE advises that customised research and related services may be provided directly by NZTE or by external providers, and that many of the services carry a partial fee that reflects the variable costs of doing business in different markets.

Under ‘Find Funding Assistance’, there is information about a substantial expenditure programme, described as follows:

“The New Zealand Trade and Enterprise (NZTE) International Growth Fund is targeted at businesses is working closely with on a plan to help them develop and grow. These are businesses that NZTE has assessed as being most likely to succeed internationally in the short to medium term and contribute to New Zealand’s long-term growth. The total budget for the International Growth Fund is about $9.6 million in the year to 30 June 2010, and will rise to about $30 million in the following 12 months.

“NZTE works closely with these businesses to develop an appropriate package of services to help them grow. This plan also outlines the expected economic benefits for New Zealand that will result from our support for each business. An investment from the International Growth Fund would form one part of this tailored package of programmes and services.

“Businesses that receive funding need to at least match the level of investment that NZTE makes through the fund...Investments may only be made if the funded activity is additional to business-as-usual activities and has the potential to deliver benefits for New Zealand’s economy as well as the business. The fund may be able to support activities that help businesses improve their:

- knowledge and development of new markets
- business and management capability
● ability to innovate and manage the commercialisation of research and development

● ability to access finance to fund international opportunities.

The potential to deliver benefits to New Zealand’s economy is an important criterion for assessment – without this, an activity will not be eligible for funding. To gauge the benefits to New Zealand’s economy, we look at the activity’s potential to increase:

● revenue or profits returned to New Zealand

● spend on staff and wages

● spend with New Zealand suppliers

● indirect benefits to New Zealand (for example, introducing new technology, research and development activities, or management expertise into the economy).”

http://www.nzte.govt.nz/Pages/default.aspx

Box 6A.2: The USA’s 2008 National Export Strategy

1. The Trade Promotion Coordinating Committee published a 2008 National Export Strategy for the USA last October. The strategy begins with a discussion of the “State of Trade” for the USA, highlighting the following:

   “…we [the USA] are experiencing a [sic] historic set of favourable conditions for US exports. Rising foreign incomes represent strong foreign demand. Changes in exchange rates make American goods more price-competitive in many markets. And foreign tariffs and communications costs have fallen.”

2. The strategy then focuses on four elements:

   ● Broadening and Deepening the Base of Exporters: This is described as the ‘centrepiece of our National Export Strategy’, and responds to the observation that “thousands of US companies are not aware of export opportunities or the programs available to help them. The challenge is reaching these companies amidst a US business community of 27 million firms…” The strategy document cites research by European academics in support of this policy aim. (A summary of the recommendations of this research is at Box 1.) The discussion makes clear that the Strategy includes helping exporters broaden their export base by entering new markets, as well as helping new to export firms.
Conclusions and Policy Implications

- **Free Trade Agreements:** The Strategy observes that ‘our economic well-being is rooted in our openness to the rest of the world. Openness plays to the strengths of American industry—its innovation and productivity. It improves consumer choice and living standards at home, while giving our firms the opportunity to compete for business abroad.’ It commits TPCC agencies to continuing to promote the benefits of these agreements and create opportunities for US companies to enter these markets.

- **Priority Markets:** The Strategy targets four markets as priorities – China, India, Brazil, and Russia – based on their commercial potential as well as the difficulties U.S. companies experience in entering these markets.

- **Next Generation Markets:** As well as the four priority markets, the strategy identifies the Middle East and Africa as ‘two regions that continue to experience rapid economic growth... [and] enormous spending on infrastructure projects, as well as new import demand driven by reforms and expanded credit.’ The role of TPCC agencies is seen as ‘helping U.S. exporters navigate these markets while mitigating their risks.’

3. Although the number of markets highlighted as priorities in the Strategy is small, the US Commercial Service maintains offices in some 80 countries overseas, and partner posts in many other smaller markets. The services of the US Commercial Service are charged, and a new charging regime has recently been introduced. This provides for full cost pricing to large firms, with fees at a subsidised rate for SMEs, and further additional incentive to SMEs new to export who have not used the service before. The new charging policy replaces a previous regime with four price bands.


1. This World Bank report is based on statistical analysis of cross country data on exports’, spending on trade promotion, and the main features of trade promotion activities in each of the countries. It covered 104 countries, both developed and developing. Information about the trade promotion activities for each country was obtained via a survey of the agencies, carried out prior to 2006, when the paper was first published. UKTI appears to have responded to this survey, which included questions about the proportion of spend focused on support for different categories of companies.
2. The purpose of the analysis was to assess the effectiveness of trade promotion against the policy aim of increasing a country’s exports. It did not seek to address effects on other policy aims such as productivity or national prosperity. Recommendations of the report are summarised below, together with some caveats highlighted by the authors. Two other caveats should be noted:

- The reliability of EPA data about the balance of spend across client groups may be doubtful. For UKTI, for instance, robust information about client profile across different types of trade services was not available at the time of this survey;

- The recommendation relating to support for large firms who do not export depends on the EPAs having provided data about the % support allocated to this group, as opposed to support allocated to large firms who are experienced exporters. This seems odd, and may be a misunderstanding of the data provided by some EPAs, as in general larger firms who use EPAs tend to be experienced exporters. Large firms who do not export would be a difficult target audience to identify in countries and sectors where large firms who have export potential are usually already exporting.

3. In summary, the report provides useful evidence that there is a significant positive link between a country’s exports and its expenditure on trade promotion. This finding appears robust and is consistent with other similar studies, which have looked at the correlation between exports and the presence of Embassies and Consulates in the destination markets. However, the recommendations on institutional arrangements, objectives, and activities rest on weaker data. The findings cannot be generalised to apply to policy aims other than that of increasing exports.

4. The main recommendations of the report in terms of institutional arrangements, objectives and activities are:

- EPAs [Export Promotion Agencies] should have a large share of the executive board in the hands of the private sector, but a large share of their budget should be publicly funded.

- The proliferation of small agencies within a country leads to an overall less effective program.

- EPAs are more effective when focusing on non-traditional exports, or have some broad sector focus (e.g., agriculture, manufacturing, tourism, high-tech, etc...).

- They should also focus their activities on large firms (which can take advantage of EPAs services), but which are not yet exporters.

- The use of office representation abroad has a positive impact on exports in the full sample, but a negative impact in a sub-sample of developing countries, suggesting that in poorer countries EPAs efforts should focus on on-shore activities.”
5. The authors have highlighted that they are based on the assumption that the policy aim of the EPAs is to *increase exports*. They stress two main caveats about the recommendations relating to large firms:

- That ‘*the result should be interpreted with caution, as it is nothing more than the average partial correlation across countries, and it is possible that in some cases targeting SMEs might yield better results than targeting large firms (that are not yet exporting)*’;

- That the policy aim which is the focus of this study is to increase a country’s overall exports, rather than other policy aims such as to improve the performance of firms, or drive up national productivity and prosperity. They point out that a different type of analysis would be required to assess the effectiveness of export promotion against these other policy aims.

The full report is available at: http://ideas.repec.org/p/wbk/wbrwps/4044.html

**Box 6A.4: Policy recommendations of the CEPR report:**

The CEPR Report: *‘The Happy Few: New Facts About the Internationalisation of European Firms’*

1. This report draws together key findings from recent academic research about the characteristics of exporters, the proportion of firms that export, and the effect that the number of exporters has on a country’s overall exports to individual export markets. The evidence reviewed focuses on European firms, including the UK, although its coverage of the UK is limited by UK data gaps. The recommendations are based on the researchers’ thoughts about the policy implications of the main findings, which include:

- Exporters differ from non-exporters in important ways, including higher productivity;

- A small number of exporters account for the majority of a nation’s exports (data not available for the UK);

- Changes in the value of a nation’s exports to particular overseas markets are driven almost entirely by changes in the number of exporters to that market (data not available for the UK).

2. Recommendations of the CEPR report are set out below. Although the high level policy aims to which the recommendations relate are not explicitly set out in the report, there is mention of benefits to productivity, GDP, and wage levels, as well as increased trade.
3. The CEPR report is cited in the USA’s 2008 National Export Strategy, specifically to underpin its aim of broadening and deepening the exporter base. The discussion in the Strategy suggests that the high level policy aims relate to increasing exports and helping the US balance of payments, as well as seeking to raise productivity and prosperity. The policy recommendations are:

1. **Promote intra-industry competition:**
   Trade and FDI opening triggers a selection process whereby the most productive firms substitute the least productive ones within sectors. This is good for productivity, GDP and wages even when it does not lead to sectoral specialisation.

2. **Increase the number of exporters and multinationals:**
   What matters most for a country’s trade and FDI performance is first of all how many of its firms engage in export and FDI. So governments should focus on policies that broaden the export base.

3. **Forget the incumbent superstars:**
   To broaden the export base the exiting superstar exporters and multinational are less important. Instead of travelling to far-off places with superstars, heads of government should rather work on lowering barriers to export and FDI. Trade missions do not generate much trade.

4. **Nurture the superstars of the futures:**
   Governments should not only try to have more exporters and multinationals but should also try to make small exporters and multinationals grow.

5. **Keep up the fight against small trade costs:**
   Small (fixed) costs of internationalisation matter because they reduce the number of exporters and multinationals.

6. **Assess the export and FDI potential of your industries**
   Some industries are more likely than others to react to shocks through adjustments in the numbers of exporters and FDI makers. Hence, they feature larger unexploited export and FDI potentials.

Shortcut to the full report:
http://www.cepr.org/pubs/PolicyInsights/PolicyInsight15.pdf
Chapter 6 Appendix 2: Monitoring and Evaluation Evidence

6.36 Monitoring and evaluation evidence relating to UKTI trade services derives from four main sources:

- UKTI’s Performance and Impact Monitoring Survey (PIMS) of users and non-users. This is carried out for UKTI by a specialist market research company, and mainly based on telephone interviews carried out through a Computer Aided Telephone Interview (CATI) system. The CATI interview programmes are supplemented by a small annual programme of qualitative studies, involving longer and less formally structured telephone interviews. Evidence from the qualitative studies informs on-going refinement of the main PIMS research, as well as enriching analysis of the quantitative results.268

- A programme of in depth evaluations of specific UKTI services, or groups of services, carried out by independent research teams. The purpose of these evaluations is to assess the economic rationale for the service, as well as to assess their effectiveness, economic impact, and value for money. The research typically involves a combination of quantitative and qualitative research, including econometric testing for impact using a suitable comparison group where feasible. In most cases a literature review is also undertaken to underpin evaluation of the economic rationale for the service, to identify issues on which further evidence may be needed, and to help inform development of the research methodology;

- Econometric impact studies: More limited in scope than a full evaluation, these are based on desk research, using data on users of services linked to existing larger data sets which provide data on the wider population of firms. Using a range of econometric techniques, these studies test for impact of support on various aspects of firm performance, seeking to control for selection effects;

- National Audit Office value for money studies: The 2009 NAO VFM study of UKTI was a cross-cutting assessment of trade services, involving both qualitative and quantitative analysis, and provides a valuable supplement to evidence gathered through UKTI’s own monitoring and evaluation programme.

6.37 The main findings from recent studies are summarised in turn below.

CROSS-CUTTING STUDIES OF THE EFFECTIVENESS OF UKTI TRADE SERVICES

6.38 A 2009 cross-cutting evaluation of the impact of UKTI trade services on R&D (Aston 2009) found that:

268 All results are published at: https://www.uktradeinvest.gov.uk/ukti/appmanager/ukti/aboutus?_rpf=true&genericSummary_143_actionOverride=%2Fpub%2Fportlets%2FgenericSummary%2FshowContentItem&genericSummary_143navigationPageId=%2Faims_and_objectives&genericSummary_143navigationOrigPortlet=Further_Information&genericSummary_143navigationContentPath=%2FBEA+Repository%2F38669-BIS-Economics Paper 5.indd 103 23/03/2010 17:24
Trade support generates additional R&D of around £65k per firm, with TAP (Group), EMRS, website business opportunities alerts, and Passport the services which tended to generate the strongest R&D impact. Models confirm that innovative and growing firms were most likely to show positive R&D impact. There was clear evidence of UKTI service complementarity, with the impact on R&D stronger with multiple service use.

Relationships between innovation, exporting and productivity prove complex but suggest that innovation itself is not sufficient to generate productivity improvements. Only when innovation is combined with increased export activity are productivity gains evident, and Love et al conclude that regional innovation policy should be oriented towards helping firms to innovate only where it also helps firms to enter export markets or to expand their existing export market presence.

6.39 The 2009 NAO Value for Money Report on UKTI trade services found that:

- Benefits for businesses from UKTI support include: access to information; access to customers and business partners not otherwise available; and, gaining the confidence to explore or expand overseas;
- UKTI trade services support businesses in addressing barriers to exporting;
- Inexperienced businesses benefit most from the general support that UKTI provides; larger more experienced businesses value the support from senior diplomats more.

6.40 UKTI’s Performance and Impact Monitoring Survey (PIMS) trade services user survey: Covers all UKTI trade services. Provides consistent and comparable evidence across services on qualitative and quantitative impacts on business performance, and on the profile of service users, thus allowing analysis of which clients benefit most, and understanding of the different ways in which particular services impact on business behaviour and performance. Results show that:

- Overall value for money has risen across trade services, from an average of £15:£1 benefit to cost ratio in f/y 2008-09 to £16:£1 in f/y 2009-10, mainly as a result of helping more businesses at a lower cost per business.269
- Innovative SMEs and firms who have been exporting for fewer than 10 years are most likely to improve their overall business performance as a result of the support, but there is no significant difference by size band in terms of the mean financial benefit derived from the support.
- Just over 50% of UKTI trade clients report improved business performance in terms of increased productivity and profit, most frequently attributed by the client either to overcoming barriers to new markets or to learning benefits leading to changes in behaviour.

269 Quantified benefits are measured in terms of additional profit attributed to UKTI support, net of non-additionality. Costs are all inclusive, including an allocation of all overhead costs.
Conclusions and Policy Implications

- There are consistent differences between the two international trade support products in the specific qualitative benefits most often cited as critical to achieving the improved business performance. For ‘Accessing new markets’ these are: gaining access to contacts or information not otherwise accessible, or increasing profile or credibility overseas. For ‘Developing your trade potential’, the most frequently cited benefits are to do with learning and confidence, and include ‘upgrading their overseas marketing strategy’, ‘increasing their understanding of the competitive environment’, and ‘gaining the confidence to enter a new market or expand in an existing one.’ Around 9% of all UKTI trade clients report increased R&D as a result, with the proportion much higher for EMRS, Passport, TAP, and outward missions. Around 28% report innovation benefits in terms of new or improved products or services or processes, with this figure typically rising during the period between the first PIMS interview and the follow up a year later270.

6.41 **PIMS Non-user exporter survey** provides evidence on alternative service providers and their effectiveness. The evidence confirms that government services fulfil a unique role, with few non-users reporting use of alternative service providers, and those who do so less likely to report significant business benefit. The Non-user survey also provides evidence on barriers to exporting, and on the profile of non-users. This shows that non-users are less likely to take an active, strategic approach to overseas business, and were less likely to have benefited from sustained overseas demand during the down turn. However, awareness of UKTI services remains low, and there is a significant proportion of non-users who match the innovation and management capability profile of UKTI target users and would be likely to benefit from the services, but remain unaware of them.

6.42 **UKTI’s Performance and Impact Monitoring Survey (PIMS) User and Non-user surveys** also provide insights into the ways in which exporting can act on financial performance271, and allows comparison of users and non-users. Over half (56%) of UKTI trade clients interviewed272 said that their business had benefited from sustained economic growth or increasing demand in overseas countries, as compared with only 28% of non-user exporters.

6.43 **2006 Study of the Relative Economic Benefits of UKTI Support for Trade and Investment**: This research covered four main trade services – EMRS, Passport, TAP, and outward missions – and reported an average benefit cost ratio of £17:£1, measured in terms of additional profit attributable to the support, net of non-additionality.

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270 PIMS follow up interviews are conducted with around 10% of respondents. Comparisons are reported on a like for like basis – i.e. the same respondents – to avoid any distortion which might otherwise result from response bias.

271 A client interview based survey that provides evidence about the quality of service and about the difference that UKTI makes to business. PIMS is carried out by an independent market research company specialising in business surveys. The survey is based on independent telephone interviews with a sample of users of UKTI’s principal services.

272 PIMS waves 12-15, referring to clients who had used trade services delivered during f/y 2008-09.
Impact evaluations of specific services:

6.44 (2009) Tradeshow Access Programme (TAP) (London Economics): An innovative study, triangulating a number of research methodologies including data linking, propensity score matching, surveys and qualitative case studies, and underpinned by a separate literature review on the role of tradeshows in international business. The study found support for the rationale based on market failure, and evidence of impact on innovation and productivity, and an estimated overall benefit cost ratio of £5:£1, measured in terms of additional profit, net of non-additionality.

6.45 (2007) Intellectual Property and UKTI Passport Firms: (Mark Rogers* and Christian Helmers. Oxford). This was an econometric impact study of Passport, using data from FAME linked to IP data and UKTI data on Passport participants. Since IP activity is a proxy for innovative activity and management ability, the use of IP data can control for previously unobserved variables. The results indicate that Passport has a positive impact on asset and turnover growth.

6.46 (2006) SQW Evaluation of the International Trade Teams in the English Regions: The study covered Passport and other advisory services provided by the International Trade Advisers on behalf of UKTI. It found evidence to support the rationale for support for both experienced and inexperienced exporters, and estimated that the overall benefit cost ratio achieved by these services was £25:£1, measured in terms of additional profit, net of non-additionality.

6.47 Sector Group Trade Development Activities (Reading Business Group): The evaluation found evidence supporting the economic rationale for a sector based approach, in particular highlighting the role for government in supporting activity is that it is expected to generate impact at a collective sector level, rather than simply to achieve benefits for the firms directly involved. The findings found qualitative evidence of benefits in terms of: effects on the reputation of UK sectors in overseas markets; effects on the social networks which underpin international business, including levels of trust and flows of information; and effects on mechanisms for co-operation for collective sector benefit, for example to commission research on potential new opportunities, or to showcase UK capability.
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