# **Evaluation of UK Trade & Investment's Global Entrepreneur Programme**

Final Report to UK Trade & Investment

Prepared by



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#### **About London Economics**

London Economics is one of Europe's leading specialist economics and policy consultancies and has its head office in London. We also have offices in Brussels, Dublin, Cardiff and Budapest, and associated offices in Paris and Valletta.

We advise clients in both the public and private sectors on economic and financial analysis, policy development and evaluation, business strategy, and regulatory and competition policy. Our consultants are highly-qualified economists with experience in applying a wide variety of analytical techniques to assist our work, including cost-benefit analysis, multi-criteria analysis, policy simulation, scenario building, statistical analysis and mathematical modelling. We are also experienced in using a wide range of data collection techniques including literature reviews, survey questionnaires, interviews and focus groups.

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Contents			Page
Ex	ecutiv	ve summary	V
1	Intro	duction	1
2	Overview of the Global Entrepreneur Programme		2
	2.1 2.2 2.3 2.4	Programme overview The GEP Dealmakers Forms of GEP assistance Completed GEP assists	2 3 3 5
3	Appr	oach and methodology	8
	3.1 3.2	Overview of approach Detailed methodology	8 10
4	The e	economic rationale for the GEP	17
	4.1 4.2 4.3	Introduction The GEP and entrepreneurship Economic rationale for the GEP	17 17 21
5	Results of quantitative analysis		25
	5.1 5.2 5.3 5.4	Introduction Evaluation survey sample Impact of the GEP on assisted firms Wider impact of GEP support on UK economy	25 25 41 48
6	Results of the qualitative surveys		51
	6.1 6.2	Case studies with GEP-assisted firms Interviews with firms involved in incomplete GEP deals	51 57
7	Dealı	63	
	7.1 7.2 7.3 7.4	The GEP team The role of Dealmakers The impacts of the GEP The effectiveness of the GEP	63 63 68 70
8			74
0	8.1 8.2 8.3	Economic rationale for the GEP Effectiveness of the GEP in meeting its key objectives Recommendations	74 77 79
Re	References		82
Aı	nnex 1	Literature review	91
Ar	nnex 2	Case studies with assisted firms	116
Αı	nnex 3	Annex 3 Existing government funding interventions	

Conte	nts	Page
Annex 4	Summary of studies on gazelles as job contributors	148
Annex 5	Dealmaker consultation interview topic guide	151
Annex 6	Evaluation survey	156
Annex 7	Interview topic guides	176

Table 1: Data availability and summary statistics, selected variables  12 Table 2: Evaluation survey participation rate  26 Table 3: Comparison of sample and population characteristics  28 Table 4: Survival of newly born UK enterprises  31 Table 5: Development of GEP-assisted firms since receiving support  32 Table 6: Nature of support offered to firms through the GEP  36 Table 7: Dealmakers' views on entrepreneurial concerns with relocation to the UK  37 Table 8: Typology of definitions for the entrepreneur  39 Table 9: Entrepreneurial attitudes and perceptions (% of respondents)  48 Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals)  58 Table 11: UK entrepreneurial characteristics, by migration status  59 Table 12: Rates of entrepreneurial aspiration  59 Table 13: Summary of Company A's involvement in the GEP  119
Table 2: Evaluation survey participation rate 26 Table 3: Comparison of sample and population characteristics 28 Table 4: Survival of newly born UK enterprises 31 Table 5: Development of GEP-assisted firms since receiving support 32 Table 6: Nature of support offered to firms through the GEP 66 Table 7: Dealmakers' views on entrepreneurial concerns with relocation to the UK 67 Table 8: Typology of definitions for the entrepreneur 91 Table 9: Entrepreneurial attitudes and perceptions (% of respondents) 94 Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals) 96 Table 11: UK entrepreneurial characteristics, by migration status 97 Table 12: Rates of entrepreneurial aspiration 98 Table 13: Summary of Company A's involvement in the GEP 116
Table 3: Comparison of sample and population characteristics  Table 4: Survival of newly born UK enterprises  Table 5: Development of GEP-assisted firms since receiving support  Table 6: Nature of support offered to firms through the GEP  Table 7: Dealmakers' views on entrepreneurial concerns with relocation to the UK  Table 8: Typology of definitions for the entrepreneur  Table 9: Entrepreneurial attitudes and perceptions (% of respondents)  Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals)  Table 11: UK entrepreneurial characteristics, by migration status  Table 12: Rates of entrepreneurial aspiration  98  Table 13: Summary of Company A's involvement in the GEP
Table 4: Survival of newly born UK enterprises  Table 5: Development of GEP-assisted firms since receiving support  32 Table 6: Nature of support offered to firms through the GEP  66 Table 7: Dealmakers' views on entrepreneurial concerns with relocation to the UK  67 Table 8: Typology of definitions for the entrepreneur  71 Table 9: Entrepreneurial attitudes and perceptions (% of respondents)  71 Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals)  72 Table 11: UK entrepreneurial characteristics, by migration status  73 Table 12: Rates of entrepreneurial aspiration  73 73 74 75 75 76 76 77 78 78 78 78 78 78 78 78 78 78 78 78
Table 5: Development of GEP-assisted firms since receiving support  Table 6: Nature of support offered to firms through the GEP  66  Table 7: Dealmakers' views on entrepreneurial concerns with relocation to the UK  67  Table 8: Typology of definitions for the entrepreneur  91  Table 9: Entrepreneurial attitudes and perceptions (% of respondents)  7able 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals)  96  Table 11: UK entrepreneurial characteristics, by migration status  97  Table 12: Rates of entrepreneurial aspiration  98  Table 13: Summary of Company A's involvement in the GEP  116
Table 6: Nature of support offered to firms through the GEP 66 Table 7: Dealmakers' views on entrepreneurial concerns with relocation to the UK 67 Table 8: Typology of definitions for the entrepreneur 91 Table 9: Entrepreneurial attitudes and perceptions (% of respondents) 94 Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals) 96 Table 11: UK entrepreneurial characteristics, by migration status 97 Table 12: Rates of entrepreneurial aspiration 98 Table 13: Summary of Company A's involvement in the GEP 116
Table 7: Dealmakers' views on entrepreneurial concerns with relocation to the UK  Table 8: Typology of definitions for the entrepreneur  91  Table 9: Entrepreneurial attitudes and perceptions (% of respondents)  94  Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals)  96  Table 11: UK entrepreneurial characteristics, by migration status  97  Table 12: Rates of entrepreneurial aspiration  98  Table 13: Summary of Company A's involvement in the GEP  116
Table 8:Typology of definitions for the entrepreneur91Table 9:Entrepreneurial attitudes and perceptions (% of respondents)94Table 10:Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals)96Table 11:UK entrepreneurial characteristics, by migration status97Table 12:Rates of entrepreneurial aspiration98Table 13:Summary of Company A's involvement in the GEP116
Table 9: Entrepreneurial attitudes and perceptions (% of respondents)  Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals)  96  Table 11: UK entrepreneurial characteristics, by migration status  97  Table 12: Rates of entrepreneurial aspiration  98  Table 13: Summary of Company A's involvement in the GEP  116
Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals) 96  Table 11: UK entrepreneurial characteristics, by migration status 97  Table 12: Rates of entrepreneurial aspiration 98  Table 13: Summary of Company A's involvement in the GEP 116
(% individuals)96Table 11:UK entrepreneurial characteristics, by migration status97Table 12:Rates of entrepreneurial aspiration98Table 13:Summary of Company A's involvement in the GEP116
Table 12:Rates of entrepreneurial aspiration98Table 13:Summary of Company A's involvement in the GEP116
Table 13: Summary of Company A's involvement in the GEP 116
, , ,
Table 14: Summary of Company B's involvement in the GFP
113
Table 15: Summary of Company C's involvement in the GEP 122
Table 16: Summary of Company D's involvement in the GEP 124
Table 17: Summary of Company E's involvement in the GEP 126
Table 18: Summary of Company F's involvement in the GEP 129
Table 19: Summary of Company G's involvement in the GEP 132
Table 20: Summary of Company H's involvement in the GEP 135
Table 21: Summary of Company I's involvement in the GEP 138
Table 22: Summary of Company J's involvement in the GEP 140
Table 23: Summary of Company K's involvement in the GEP 143
Table 24: Summary of studies on Gazelles as job contributors (Henrekson and Johansson, 2008) 148
Figure 1: Number of completed GEP deals over time 5
Figure 2: Geographical origin 6
Figure 3: Enterpreneurial framework conditions in the GEM model 18
Figure 4: GEP-assisted firms' UK operations 29
Figure 5: Year of incorporation and dissolution 31
Figure 6: Growth in company assets over time 34
Figure 7: Expected sources of growth for GEP-assisted firms 35
Figure 8: Proportion of GEP-assisted firms engaged in innovative activities 36
Figure 9: Patent offices to which GEP-assisted firms have applied or intend to apply 37
Figure 10: Amount of external finance raised 38
Figure 11: Reasons firms were first attracted to the UK 39
Figure 12: Factors influencing decision to relocate to the UK 40
Figure 13: Difficulties in establishing business in the UK 41
Figure 14: Benefits of GEP support to assisted companies 42
Figure 15: Extent to which GEP assisted firms with (1="to no extent"; 5="to a critical extent") 43

Tables, Figures & boxes			
Figure 16:	Extent to which GEP assisted firms with (1="to no extent"; 5="to a critical extent")	44	
Figure 17:	Expected performance in the absence of GEP support	45	
Figure 18:	How would you rate the quality and relevance of (1="very poor"; 5="very good")	46	
Figure 19:	How would you rate the quality and relevance of (1="very poor"; 5="very good")	47	
Figure 20:	Agreements with UK organisations	48	
Figure 21:	Location of suppliers for GEP-assisted firms	49	
Figure 22:	Would companies have relocated same operations in the absence of support?	50	
Figure 23:	The entrepreneurial process	95	
Figure 24:	Which regions have some of the most business-friendly regulations?	111	
Figure 25:	Current HMG risk capital interventions	113	

#### **Executive summary**

#### Introduction

London Economics were commissioned in July 2009 by UK Trade & Investment (UKTI) to undertake an evaluation of UKTI's Global Entrepreneur Programme (GEP). The key research aims of the evaluation were to:

- assess the economic rationale for attracting global entrepreneurs and early stage businesses to the UK; and
- evaluate the impact and cost effectiveness of UKTI's GEP, including an assessment of the impact on the performance of supported businesses, and of the value for money which it achieves for the UK taxpayer.

#### Overview of the GEP

The GEP was launched by UKTI in 2003 in response to the challenges outlined in the 2001 White Paper *Opportunities for All in a World of Change*. The programme is underpinned by the view that entrepreneurs look beyond national borders for the most attractive sources of capital, talent, guidance and access to markets. The key objectives of the programme include:

- attracting entrepreneur-led, early-stage high growth potential, technology businesses and overseas-based entrepreneurs, to pursue new opportunities in the UK; enhancing the UK's entrepreneurial gene pool; and
- enhancing and maintaining perceptions of the UK as an entrepreneurial economy and location of choice for global entrepreneurs looking to internationalise their businesses at an early stage from a UK base.

The GEP is based around a network of 12 experienced entrepreneurs ("Dealmakers"), based in the UK, North America, India, Israel and Australia. Each of the Dealmakers is an experienced entrepreneur operating in hi-tech sectors, with experience of start-ups, fundraising and with access to global networks. The Dealmakers identify and assess foreign entrepreneurs, highlight the benefits of moving to the UK, and (for those companies deciding to relocate) provide the benefit of their experience and access to networks to assist during the relocation process. In line with the six priority sectors currently set by UKTI, the GEP focuses on high value industries, such as ICT (wireless applications, software and technology for 3G, nanotechnology, optoelectronics, microelectronic design, etc.), cleantech (e.g. renewables and environmental technologies) and healthcare and life sciences (e.g. pharmaceuticals, bioinformatics).

The GEP provides support through three major channels:

- Relocation assistance: encouraging successful overseas-based technology entrepreneurs to relocate their company's headquarters to the UK, or to set up highly innovative startups in the UK.
- **Talent assistance:** targeting global entrepreneurs and inviting them to the UK to work as advisors, or as non-executive or executive directors for UK companies in order to enhance

- the company's managerial capabilities and to provide introductions to key networks such as funding sources or business partners.
- Funding assistance: helping clients attract investment from non-UK and UK sources in the form of venture capital, angel funding, loans and grants from Government agencies, and assisting other UK companies in raising funds from non-UK sources of entrepreneurial capital.

From March 2005 to January 2010 the programme completed 124 interventions, including 71 relocations, 30 talent assists and 23 funding assists; for entrepreneurs originating from the US and Canada, India, China, Israel and Australia among other countries.

In recent years, the programme has focused increasingly on relocation assistance, with fewer than five "funding" and no "talent" successes registered in 2009. In order to attract overseas-based entrepreneurs to the UK, the programme has developed a business model focused on helping entrepreneur-led, intellectual property rich, early stage technology firms from all over the world to globalise their businesses from a UK hub. As well as helping firms relocate their global headquarters to the UK, over the past 2-3 years the GEP has extended its model to include relocating strategic headquarters in the UK, where the entrepreneur/founder/key decision maker is involved in carrying out significant value-add operations yielding technological and economic benefits for the UK.

The GEP bears many similarities to Foreign Direct Investment (FDI) programmes, which seek to encourage foreign companies to invest in and/or relocate operations to the UK. Despite this, the motivation for the GEP is conceptually different to the rationale for traditional FDI programmes, due to the programme's emphasis on entrepreneurship.

#### Methodology

The evaluation of the GEP centred on two major research questions. First, what is the economic rationale for the GEP? Second, what has the impact of the GEP on the UK economy been to date? Both questions are extremely complex, and the evaluation employed a range of research approaches in order to develop a robust evidence base:



- Review of academic and policy literature: including the evidence relating to the potential benefits of attracting entrepreneurs to the UK, and the determinants of entrepreneur relocation.
- **Stakeholder consultation:** Discussions were undertaken with the GEP's Dealmakers and other relevant stakeholders at UKTI in order to better understand how the GEP works in practice, and explore the benefits perceived by those administering the scheme.
- **Collection of financial and patent data for GEP-assisted firms:** information on GEP-assisted firms was gathered from the FAME<sup>1</sup> financial database, and from the Intellectual Property Office and European Patent Office registers. The collected data was then used to analyse the characteristics of GEP-assisted firms, and assess their growth over time. The majority (90%) of GEP-assisted firms were matched in FAME; however a large number of observations contained missing information for a number of variables, limiting the extent of the analysis that could be carried out on the resulting dataset.
- Quantitative survey: A key part of the evaluation included a survey of recipients of GEP support. The survey was administered to 70 companies that had received GEP support and included questions on firm characteristics, relocation to the UK, fund raising activities and the impact of support provided.
- Case-studies with GEP-assisted companies: a series of 11 case studies were undertaken with GEP-assisted firms, in order to explore issues raised in the quantitative survey in greater depth.
- Interviews with companies involved in incomplete GEP deals: Qualitative interviews were also conducted with entrepreneurs that had been targeted and (in some cases) supported by the Dealmakers, but where deals to relocate to the UK were not eventually completed. While this set of companies did not constitute a robust counterfactual group, this exercise provided useful indications as to the types of activities undertaken in the absence of full GEP support.

#### The economic rationale for the GEP

#### **Benefits of the GEP**

The evidence collected through the literature review indicated that the potential benefits associated with the GEP can be usefully split into two elements:

1) Attracting entrepreneurs to the UK can be directly beneficial through entrepreneurs' activities. Entrepreneurs are key drivers of innovation and the development of new products and they provide important contributions to productivity improvements, job creation and economic growth.

<sup>&</sup>lt;sup>1</sup> FAME is supplied by Bureau van Dijk, and contains financial and operational information on more than three million companies in the UK and Ireland.



These benefits can be achieved both through new firms and through new ventures in existing companies – activities which are both targeted by the GEP's relocation assistance. Talent assistance, on the other hand, aims to achieve these benefits as a result of the advice and guidance that experienced entrepreneurs offer to less experienced business owners. In the longer-term, it is hoped that by attracting "serial" entrepreneurs to the UK, the above processes can be repeated many times over as serial entrepreneurs establish multiple new ventures in the UK over time.

2) Overseas-based entrepreneurs can stimulate further entrepreneurial activity, through creating additional business opportunities and by acting as role models and mentors to British entrepreneurs. These benefits are only likely to be realised over a longer time period. The fact that the GEP operates in knowledge-based sectors where there are potential spillovers to other firms makes these benefits potentially more sizeable.

#### Market failures in entrepreneur relocation

To establish an economic rationale there must be some evidence of market failure such that entrepreneurs would make different and (from a UK perspective) socially inefficient decisions over whether to relocate to the UK in the absence of intervention. Unfortunately, the literature review was unable to identify any studies directly addressing the factors that underpin entrepreneurs' choices over where to operate. However, useful conclusions can be drawn based on a number of studies discussing choices over firm location and firm relocation. This strand of the literature is particularly relevant given that the GEP (through relocation assistance) seeks to attract entrepreneurs to the UK through highlighting how relocating can be of benefit to the entrepreneurs' early-stage businesses.

The evaluation identified three potential sources of market failure that may be of relevance to the GEP. First, entrepreneurs may be **unaware of the benefits** that their business could achieve through relocating to the UK. Given time constraints, firms may not be able to thoroughly research all potential destinations for relocation and may focus only on the best known (for instance, technology firms may focus on Silicon Valley). By providing information about the benefits of the UK for their business, the GEP may assist entrepreneurs with making better decisions for their business.

Second, entrepreneurs may face important **informational barriers** to relocation. It may be extremely difficult (i.e. costly) for overseas-based entrepreneurs to identify contacts within UK networks and to overcome reputational barriers to entry into those networks. The GEP may be able to play a role as an intermediary offering overseas-based entrepreneurs access to UK networks, and "matching" overseas firms with appropriate business partners in the UK.

Third, the presence of **knowledge spillovers** means that entrepreneurs may fail to account for the wider societal benefits from their decision to relocate. If the entrepreneur fails to account for these broader economic benefits in their decision to relocate, there is a rationale for cost-effective government intervention to provide incentives to encourage entrepreneurs to relocate to the UK.

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<sup>&</sup>lt;sup>2</sup> Intervention could in theory also be justified on distributional grounds, however the evaluation did not suggest that this was an important consideration for the GEP.

#### Main results

#### **Quantitative analysis**

#### Introduction

The quantitative analysis drew predominantly on the results of the evaluation survey. However, where possible this was complemented with information gathered from FAME. Despite a relatively high response rate of 57%, the small scale of the GEP meant that only a total of 40 responses were received. This limited the potential for meaningful disaggregations of the survey results. In addition, caution should be applied when generalising the results of the analysis, as certain groups may not be well represented in the survey sample. In particular, few responses were received from companies that were assisted in the earlier years of the programme, or those that had not received relocation assistance.

#### Characteristics of GEP-assisted firms

The results indicated that GEP-assisted companies remain at an early stage of development, with nearly two thirds of respondents not having begun trading at the time of receiving support. However, a number of companies have grown in recent years, and three quarters of firms anticipated that they will grow substantially in the next five years. As a group, GEP-assisted firms' perceived growth over the past five years was similar to other UKTI users with fewer than 10 employees.

GEP companies held a range of different operations in the UK, with the most common including their global headquarters, marketing operations, and sales operations. A high proportion of companies reported involvement in innovative activities, and 50% of firms reported holding granted or pending patent rights. The firms reported a high level of international orientation, and nearly all companies expected to export within the next two years.

#### Experience of relocating to the UK

The most important reason for firms having been attracted to the UK was that it offered a "good base for international expansion". The support provided by the GEP or UK Government was also an important source of support. Around 60% of respondents had considered relocating to other countries at the same time as the UK.

The most significant difficulty firms had experienced in establishing a business after relocation related to accessing external finance. Other problems were a major concern to relatively few companies.

#### Impact of the GEP

The survey indicated that Dealmakers provide a wide range of assistance. The most common, however, related to identifying or obtaining key contacts and more general business support (such as assistance in establishing the firm). Major impacts of support included helping firms in raising their profile, and assisting in attracting funding. Most companies felt that the GEP had either improved their results or (the most common response) helped them to achieve results more

quickly. In addition, companies were very positive about the quality of the support that they had achieved across a number of dimensions.

Around 45% of respondents reported that they "definitely" or "probably" would not have relocated to the UK in the absence of support. Further, these companies reported that they would not have formed the same linkages (e.g. use of suppliers) if they had not relocated. This result suggests that the GEP does play an important role in encouraging some firms to relocate to the UK. However, the programme also has an element of deadweight loss, with around 40% of respondents stating that they "definitely" or "probably" would have relocated to the UK in any case. These firms also reported that they would have relocated at a similar time in the absence of support.

#### Wider economic impact

Given the short lifespan of the GEP to date, with the majority of firms assisted only in the past 2-3 years, it is not possible at present to assess the wider economic impacts associated with GEP-assisted firms. However, the survey indicated that these firms are forming links with UK organisations, suggesting that there is potential for future knowledge-based spillovers. Around 60% of respondents stated that they use UK suppliers, while a similar proportion held collaboration agreements with UK organisations. Further, most agreements with UK organisations are at least three years in length, indicating some commitment to operations within the UK.

#### Results of the qualitative analysis

#### Case studies with GEP-assisted firms

The case studies emphasised the variety of different experiences and types of assistance that firms receive through the GEP. However, a common theme was the support offered by the GEP in providing contacts to a wide range of organisations, including to business support services (lawyers, accountants etc), potential customers, and potential funding sources. The business knowledge and quality of assistance provided by the Dealmakers were generally highlighted as an important part of the support. Some firms did, however, feel that the GEP could go further in connecting companies to networks within the UK.

The interviews indicated that, at present, GEP-assisted firms have not had a major impact on the UK economy. At present, firms are yet to "take off" and most have only recently begun commercialising their technologies. Despite this, firms have established links to the UK economy. Examples of the types of arrangement that have been reached included an agreement to produce products in collaboration with academic institutions, or the exclusive use of UK-based suppliers. In addition, the types of technology in which firms are involved suggest that there may be benefits to the UK through the relocation of firm-specific technologies *if* those technologies become widely adopted. However, firms identified that at present the prospects for their businesses remain uncertain, and will depend on whether their technologies become widely accepted.

#### Interviews with firms involved in incomplete GEP deals

Eight interviews were undertaken with firms that had not decided to relocate to the UK after discussions with the GEP. Generally, these indicated that firms' decisions not to relocate were a result of external problems (particularly difficulties in raising funding) rather than a reflection of



the support offered by the GEP. One firm, however, felt that the GEP could have provided more detailed advice on developing a business in the UK, while another believed a subsidy to assist with transaction costs would have been beneficial.

The interviews also reported that companies maintained a positive perception of the UK, particularly as a hub for international expansion, due to having a skilled labour force and in terms of the legal and tax environment. Companies maintained an interest in relocating to the UK, and some had future plans for collaboration or partnership agreements with UK organisations.

#### **Dealmaker consultation**

The results of the Dealmaker consultation highlighted the important role of networks in the Dealmakers' activity, with two key contributions emphasised. First, at the selection stage, Dealmakers rely on their networks to select companies that would be most likely to benefit from assistance provided through the programme. Second, networks form the basis for the support offered to companies, including introductions to potential investors, partners or suppliers.

The Dealmakers felt that the programme had the largest impact on firms in terms of business acceleration. Crucially, it was felt that the fast pace of business development achieved by GEP-assisted firms affected their real business performance, i.e., in the absence of support from the programme, not only would assisted firms have grown less quickly they would also not have performed as well. The Dealmakers also felt that relocating companies contributed to the UK economy by "enhancing the entrepreneurial gene pool", that is, the higher level of entrepreneurial activity generated by the GEP in the UK is associated with economic benefits in terms of technological innovation and productivity growth.

Operationally, the Dealmakers felt that the programme has been and should continue to be responsive to economic factors and strategic opportunities as they arise. For instance, as a response to poor venture funding conditions during the economic crisis, the programme requires firms to have secured funding prior to the provision of relocation assistance. In the future, the Dealmakers felt that the UK government brand should be used to assist entrepreneurs in accessing government clients.

#### **Conclusions**

#### **Economic rationale for the GEP**

The evaluation indicated that there is an economic rationale for the GEP based primarily on an *intermediation failure*. In order to establish a business, entrepreneurs need to be able to find business partners, investors, customers and other contacts. Overseas-based entrepreneurs may, however, find it difficult to identify appropriate contacts in the UK due to the constraints of geographic distance and other factors. As such, they will face both higher barriers to relocation and insufficient incentives to relocate.

The GEP is able to overcome these barriers through offering access to the Dealmakers' extensive networks. The evaluation emphasised both the range of the contacts that the Dealmakers are able to offer, and also the value which assisted companies place on the contacts they are provided. Further, it is not likely that a similar service could be provided through the private sector, given the

cost of developing relevant networks, and the difficulty that firms interested in support have in assessing the quality of service providers.

The evaluation also suggested that the firms targeted by the GEP are those for which the economic rationale is strongest. By focusing on firms which are already considering relocating, or which are predisposed towards relocating due to factors such as limited market size in their own countries, the programme offers an intervention at the point at which it is most likely to be successful. The likelihood of intermediation failure is also likely to be larger amongst small early-stage firms in comparison to larger firms with access to greater resources. Further, firms operating in new, knowledge-based sectors both have greater growth potential than firms operating in mature industries, and also may be more likely to provide knowledge-based spillovers to UK firms.

#### Effectiveness of the GEP

The GEP is by nature a long-term programme and, given the short period over which it has operated, the evaluation was necessarily limited in the scope of the benefits that it has been able to measure. The impacts that have been measured to date relate to the firms that have relocated to the UK following support, or those firms that have been assisted in finding entrepreneurial talent or in raising funding. It is not possible to assess the extent of any wider benefits due to entrepreneurs engaging in further business activity, or stimulating other entrepreneurial activity at this stage. Further, as only a small number of interventions have been completed to date and as the form of support offered has developed over time, some caution is required in drawing strong conclusions from the research results. This is particularly the case if the programme looks to expand in the future, either in terms of entering new geographical areas, or targeting firms operating in other technology areas.

The evidence that has been collected has indicated that the GEP appears to be achieving its goals in terms of attracting overseas-based entrepreneurs to the UK. Around 45% of respondents to the evaluation survey stated that they would definitely or probably not have relocated to the UK in the absence of assistance. There is, however, a significant element of deadweight loss associated with the programme. Around 40% of respondents stated that their company definitely or probably would have relocated to the UK in the absence of the programme. This may, however, be a necessary drawback of the scheme given the difficulty in identifying ex ante whether companies would relocate without assistance.

Further, although the impact on the UK to date has been limited due to companies' early stage of development, the evidence indicated that most firms supported operate in knowledge-based industries with the potential for significant spillover effects. Around half of respondents stated that they held granted or pending patent rights within the UK and 80% of firms reported involvement in research and development activity. While not conclusive, this at least suggests that the GEP is supporting activities with the potential to have significant impacts on the UK economy in the future. Further, it appears that firms are becoming involved in UK networks and most companies are using UK suppliers, offering the potential for spillovers to UK companies.

The evaluation also suggested that the GEP is able to achieve interventions at a low cost compared to the potential benefits. Further, the cost per intervention appears to have fallen over time, from



approximately £83,000 per intervention between 2005/06 and 2007/08 to around £55,000 between April 2008 and December 2009.<sup>3</sup> The companies assisted are relatively small at present compared to those targeted by inward investment programmes, and the size of the potential benefits is extremely uncertain. However, if the programme is able to achieve its ambition of helping a client to build a very large company, the benefits to the UK are likely to considerably exceed this value.

#### Recommendations

#### The GEP has a sound economic rationale and should be continued

The GEP is able to encourage overseas-based entrepreneurs to relocate to the UK through overcoming intermediation failures. Dealmakers are able to provide firms with contacts and access to networks that may be difficult to achieve in the absence of support. This not only attracts high value business activity to the UK, but also has the potential to contribute to the development of new networks within the UK and hence promote entrepreneurial behaviour in the future. While the potential benefits of the GEP are long-term in nature, and so cannot be quantified at this stage, the evaluation has found that there is a strong economic rationale for the continuation of the programme.

#### Innovation and flexibility are key components of the GEP's successes and should be retained

The evaluation evidence indicated that the GEP has developed an innovative approach towards attracting entrepreneurs to the UK. Many of the activities undertaken as part of the programme reflect concepts that have only recently been recognised in the academic and policy literature, and we are not aware of similar programmes in other countries. The evaluation indicated that the programme has been successful in using the talent and private sector experience of the team of Dealmakers to both assist companies and also achieve benefits for the UK economy as a whole.

In particular, it is notable that the GEP has been willing to undertake a broad range of activities in order to achieve its programme objectives. Many of these, such as network building, are hard to measure and may only achieve benefits over a medium to long-term period. However, these types of activities may be particularly beneficial in the long-run through encouraging the development of a self-supporting entrepreneurial culture in the UK. Further, given the changing nature of the business environment, it may be that the type of assistance that entrepreneurs require changes rapidly. As such, it is important that the GEP team is able to retain the flexibility to engage in new activities both to adapt to the changing needs of entrepreneurs and also in order to ensure the longer term success of the programme.

#### The criteria for receiving relocation assistance should be clarified

The criteria on which relocation assistance is offered are not currently clear. Some of the highest profile successes involve early-stage firms relocating their global headquarters to the UK.

<sup>&</sup>lt;sup>3</sup> Cost per intervention is estimated based on the total cost of the programme (including both programme and administration costs), and including interventions where companies were assisted for the first time. Given the difficulty in assigning interventions to a particular date, these figures are necessarily approximate. Further, as this measure accounts for only one "intervention" per company, and as each company may receive multiple assists, the cost per assist will be lower than the figures reported here.



However, many interventions involve co-locations whereby GEP client firms establish a UK-based strategic or regional headquarters or some other business function. Although justified by the programme goals, at present there is no clear elucidation of the ways in which assisting these firms is expected to be of benefit to the UK economy, or the requirements that must be met to be eligible for support. Clearly, a "check list" of criteria would be inappropriate, but a general outline of the types of entrepreneurial behaviour that are anticipated to occur following assistance would both provide guidance for future interventions and also act as a useful basis for ongoing evaluation of the programme's success.

## Cautious and gradual steps should be taken to expand the GEP, taking care to maintain the quality of the support

Given the success of the GEP in successfully attracting firms and entrepreneurs to the UK to date, there is a sound economic case for seeking to enlarge the scope of the programme. Although it is not possible to estimate accurately, it seems likely that there is a sizeable pool of entrepreneurial talent that could be at least considered as potentially eligible for GEP support. However, any moves to expand the size of the programme must be undertaken with caution in order to ensure that the GEP's reputation is not undermined.

The evaluation has shown that the programme's strength lies in the quality of support offered by the Dealmakers due to their enthusiasm, business knowledge and access to private networks. Reducing the time Dealmakers spend with each client may reduce the level of support and hence be counter-productive. Finding additional individuals that hold these characteristics and that are willing to engage with the GEP may be difficult or costly. Further the evaluation has indicated that much of the success of the programme has been due to the Dealmakers' ability to selectively match high quality firms with relevant networks in the UK. This process is in itself limiting, as networks are likely to have a limited capacity to accept new members each year. Expansion of the programme may also weaken the strong signal that selection into the GEP can send to investors about the quality of a firm.

#### The balance between relocation and other forms of assistance should be reconsidered

The evaluation suggested that there is a rationale for GEP support to be offered through all three channels, including talent and funding support as well as relocation. In recent years, the programme has focussed increasingly on providing relocation assistance. However while this is likely to be the highest impact form of support, other forms of assistance may still be beneficial. The economic rationale outlined above suggests that the intermediation service that the GEP provides has the potential to provide early-stage firms originating in the UK with access to entrepreneurial talent that may help them grow. It may also be the case that by undertaking a range of forms of assistance, the GEP is able to reach a broader pool of overseas-based entrepreneurs (e.g. very experienced entrepreneurs may be less likely to be in the early-stage companies targeted by the GEP).

#### The GEP should continue to build entrepreneurial networks within the UK

The GEP should continue to encourage assisted entrepreneurs to engage with UK networks, both to develop their businesses and also to help with the knowledge spillovers that are a key part of the rationale for the programme. As emphasised throughout the evaluation, networks are a crucial part of business growth through their role in finding appropriate business partners and



overcoming informational problems. Continuing to stimulate and grow networking activity within the UK thus seems a key part of the GEP's goal to promote the UK as a location of choice for entrepreneurs.

1

#### 1 Introduction

London Economics were commissioned in July 2009 by UK Trade & Investment (UKTI) to undertake an evaluation of its Global Entrepreneur Programme (GEP). The GEP is based around a network of experienced entrepreneurs who work with companies to enable them to develop and globalise their business from a UK hub. The programme has the objectives of:

- attracting entrepreneur-led, early-stage high growth potential, technology businesses and overseas-based entrepreneurs, to pursue new opportunities in the UK; enhancing the UK's entrepreneurial gene pool; and
- enhancing and maintaining perceptions of the UK as an entrepreneurial economy and location of choice for global entrepreneurs looking to internationalise their businesses at an early stage from a UK base.

This report outlines the methodology and approach adopted during the evaluation research, summarises the findings of the evaluation exercise, and provides some key policy conclusions for UKTI. In addition, the document identifies some of the remaining evidence gaps in assessing the effectiveness of the GEP.

The key aims of the evaluation are to:

- assess the economic rationale for attracting global entrepreneurs and early stage businesses to the UK; and
- evaluate the impact and cost effectiveness of UKTI's GEP, including an assessment of the impact on the performance of supported businesses, and of the value for money which it achieves for the UK taxpayer.

The remainder of the report is structured as follows. Section 2 provides a brief overview of the GEP, including the nature of the interventions undertaken with firms, and the characteristics of companies that have received support to date. Section 3 outlines the methodology used during the evaluation. Section 4 discusses potential economic rationales for the programme and in Section 5 we present the results of the quantitative survey, and of company financial information collected through FAME. Section 6 summarises evidence gathered through qualitative interviews with GEP-assisted firms, companies for whom GEP deals did not complete and an investor in the GEP. Section 7 then includes the summary of a consultation with GEP Dealmakers. Finally, in Section 8, we bring the various evidence strands together to discuss the economic rationale for the GEP, and develop appropriate policy recommendations.

### 2 Overview of the Global Entrepreneur Programme

#### 2.1 Programme overview

The Global Entrepreneur Programme (GEP) was launched as a pilot programme by UKTI in 2003 in response to the challenges outlined in the 2001 White Paper *Opportunities for All in a World of Change*. The programme's original objectives were "to attract entrepreneurs, entrepreneurial talent and wealth to the UK, as well as to raise the global profile of entrepreneurial Britain", and these aims remain at the core of the GEP today.

The GEP is underpinned by the view that entrepreneurship has transformed from a regional to a global phenomenon over the past decade, with entrepreneurs now looking beyond national borders for the most attractive sources of capital, talent, guidance and access to markets. In this environment, the programme seeks to encourage overseas-based entrepreneurs within high technology sectors to relocate to the UK through the provision of insight, access to networks and expertise of a team of experienced entrepreneurs (known as "Dealmakers").

In order to attract overseas-based entrepreneurs to the UK, the programme has developed a business model focused on helping entrepreneur-led, intellectual property rich, early stage technology firms from all over the world to globalise their businesses from a UK hub. Essentially, the goal is to find the next Google or Genzyme at an early stage of development and attract their global headquarters to the UK.

The GEP's key aim is to help client companies relocate their global HQs to the UK. However, experience over the last 2-3 years has indicated that some fast-growth technology companies prefer to divide up their operational hubs regionally and establish autonomous HQs away from their home base. The programme has therefore extended its model to include relocating strategic HQs in the UK, where the entrepreneur/founder/key decision maker is involved in carrying out significant value-add operations such as R&D or business development that yield technological and economic benefits for the UK.

The GEP value proposition involves highlighting the business opportunities for international growth available for companies based/headquartered within the UK. It achieves this by harnessing the insight, networks and expertise of the team of Dealmakers who identify and accelerate client companies' development and help with all aspects of relocating their global HQ to the UK. This includes assisting with business planning and the provision of introductions to key networks to facilitate access to funding and management talent as well as channels to markets.

The GEP, in line with the six priority sectors currently set by UKTI<sup>4</sup>, targets companies operating in high value industries, such as ICT (wireless applications, software and technology for 3G, nanotechnology, optoelectronics, microelectronic design, etc.), cleantech and healthcare and life sciences (e.g. pharmaceuticals, bioinformatics).

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<sup>&</sup>lt;sup>4</sup> Financial Services, Creative Industries, Life Sciences, ICT, Energy and Advanced Engineering.

While the majority of the GEP's client development activity has focussed on helping entrepreneurs relocate their businesses to the UK, given the importance of management talent and funding to the development of early stage businesses, the GEP continues to target global networks to identify entrepreneurial talent and investors as well.

#### 2.2 The GEP Dealmakers

The programme identifies potentially successful entrepreneurs through a network of twelve Dealmakers, based in the UK, North America, India, Israel and Australia, with Europe covered via the UK. Each of the Dealmakers is an experienced entrepreneur with significant technology expertise, with experience of start-ups, fundraising and access to global networks. All the dealmakers work part-time for the GEP (usually 10 days a month) and continue to be involved in other business activities while working in the GEP in order to maintain their reputation as entrepreneurs. The Dealmakers identify and assess overseas-based entrepreneurs, highlight the benefits of moving to the UK, and (for those companies deciding to relocate) provide strategic advice, assistance during the relocation process, introductions to UK networks and in some circumstances facilitate fundraising.

During the initial pilot stage of the programme in 2003/04 there were only three Dealmakers who covered only North America (with one based in California and the others in the UK). Over time, as the programme has grown, coverage has expanded, moving into India in 2005, Australia and New Zealand in 2006, and more recently the European Union, and the United Arab Emirates. However, the GEP maintains a borderless perspective and has also successfully worked on deals from South Africa, Russia, China, Japan, Rumania and South Korea.

#### 2.3 Forms of GEP assistance

As outlined above, the overarching goal of the GEP is to attract overseas-based entrepreneurs to the UK and consequently to promote entrepreneurial activity. This occurs through three major channels:

- Relocation: encouraging successful overseas-based entrepreneurs to relocate their company's headquarters to the UK, or to set up highly innovative start-ups in the UK. GEP support involves facilitating the process of relocation, including (amongst other areas) information on company formation/incorporation, directors' appointments and corporate organisation, business development, identification of suitable locations for headquarters, introductions to potential customers and national and local networks and, in a few cases, establishment of manufacturing plants, banking and accountancy information and client search.
- Talent: targeting global entrepreneurs and inviting them to the UK to take up positions as advisors, or as non-executive or executive directors for UK companies in order to enhance the company's managerial capabilities and access to key networks (e.g. funders or investors). The GEP facilitates this process through identifying and contacting appropriate entrepreneurs and through assisting in the process of moving to the UK (for instance through help with obtaining visas). As the programme has matured, this form of assistance has become less prominent and a greater emphasis has been placed on relocation support.

Funding: helping clients attract investment from non-UK and UK sources in the form of venture capital, angel funding, loans and grants from Government agencies, and assisting other UK companies in raising funds from non-UK sources of entrepreneurial capital. Investors have included both foreign and UK-based investment funds and financial institutions.

#### 2.3.1 Assisting entrepreneurs versus assisting firms

The GEP's objectives focus on supporting attracting entrepreneurs to the UK. However, in practice much of the support provided through the programme is discussed in terms of assisting *firms*. This is particularly true of relocation assistance, which encourages companies to establish their global headquarters in the UK. Much of the support provided by Dealmakers takes the form of assisting individual firms through, for instance, introductions to customers and investors. As a result, the GEP bears many similarities to Foreign Direct Investment (FDI) programmes, which seek to encourage foreign companies to invest in and/or relocate operations to the UK. Despite this, the motivation for the GEP is conceptually different to the rationale for traditional FDI programmes. Understanding this is important in correctly identifying the programme's rationale and hence to assess its effectiveness.

Under the OECD's benchmark definition, investments in a UK enterprise are classified as FDI if they are made by an investor resident outside of the UK and if the investor has a "significant degree of influence on the management of the enterprise" (OECD, 2008). The relocation of companies to the UK through the GEP may therefore qualify as FDI if significant investors in the firm remain resident outside the UK. Similarly, the establishment of subsidiaries (e.g. a strategic headquarters) or branches in the UK by overseas-based companies may also be classified as FDI. Some (although not all) GEP interventions may therefore be classified as FDI successes.

However, GEP interventions are distinguished from FDI interventions more generally by their emphasis on entrepreneurship. Under the GEP's business model, the relocation of a start-up firm is seen as a channel through which an overseas-based entrepreneur can be encouraged to relocate to the UK. If an entrepreneur establishes their start-up in the UK they are also likely to relocate to the UK themselves. As a result they may engage in entrepreneurial activity within the UK and may also act as an entrepreneurial role model to British entrepreneurs.

This distinction between entrepreneurs and start-ups is an important element of the evaluation. In practice, it is difficult to monitor activities associated with individual entrepreneurs and the GEP has recorded interventions associated with particular firms rather than the entrepreneurs that run them. As such the information presented below is discussed in terms of the companies assisted (referred to as "GEP-assisted" firms in the remainder of the report).

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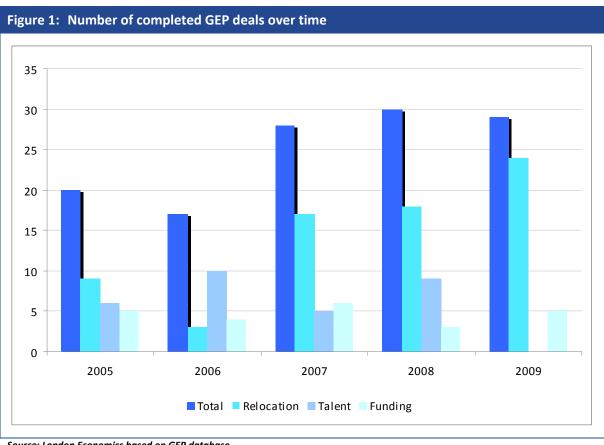
<sup>&</sup>lt;sup>5</sup> Under the OECD definition, direct or indirect ownership of 10% or more of the voting power of an enterprise is evidence of a significant degree of influence over the management of the enterprise.

<sup>&</sup>lt;sup>6</sup> In particular, if a firm's owners relocate to the UK at the same time as their business this would not qualify as FDI.

#### 2.4 Completed GEP assists

The GEP completed 124 interventions up to August 2009. Nine of these referred to potential investors or sources of entrepreneurial talent, while a further intervention related to a network organisation. The remainder referred to companies receiving talent, funding or relocation assistance – with several firms assisted multiple times. Thirty companies have been assisted through the provision of "talent", while 71 have relocated to the UK as a result of the support. The GEP has facilitated 23 companies in raising funds. Overall, the amount of funding raised for these companies since 2005 is around £140 million, ranging from a minimum of £50,000 to a maximum of £75 million.<sup>7</sup>

Figure 1 shows the number of GEP deals completed each year since 2005, split according to the form of assistance received.



Source: London Economics based on GEP database

As shown in the chart, the relative proportion of Relocation and Talent deals concluded has varied substantially from year to year. As noted above, in the last two years the programme has focused on relocation assistance, and as a result no Talent deals were completed in 2009.

<sup>&</sup>lt;sup>7</sup> Information based on UKTI data supplied to London Economics by the GEP team.

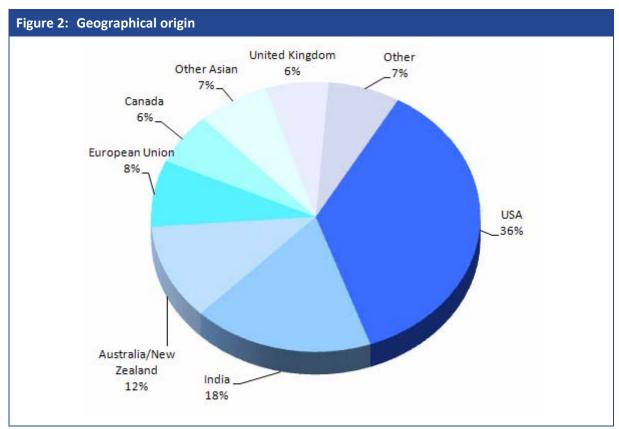


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#### 2.4.1 Types of companies assisted

#### Geographical origin

Figure 2 summarises the geographical origin of the companies that have been assisted through the GEP. Just over one-third of the deals completed have concerned North American entrepreneurs or companies, followed by India and other Asian economies (25%), Australia and New Zealand (12%) and Europe (8%). The seven interventions recorded as originally UK-based include two companies receiving assistance through the appointment of a foreign advisor or director, one company receiving funding only, and two companies involved in both talent and funding Deals.



Note: "Other Asian" identifies entrepreneurs from China, Japan, South Korea and Taiwan. "Other" identifies entrepreneurs from Russia, the UAE, South Africa, India/UK and India/UAE.

Source: London Economics based on GEP database.

#### **Industry sectors**

The GEP targets entrepreneurs and early-stage companies in particular knowledge based sectors, including:

- ICT: particularly wireless applications/content, software and technology for 3G, nanotechnology, optoelectronics, microelectronic design;
- **Life sciences:** particularly pharmaceuticals, HGP, Proteomics, environmental cleaning, bioinformatics; and
- Renewables and sustainable technologies.



The majority of the companies assisted through the GEP operate across a number of hi-tech and healthcare industries, including nanotechnologies, software, renewable energy sources, and biotechnology. However, some companies operated in more traditional sectors, including financial services, manufacturing and construction.

### 3 Approach and methodology

#### 3.1 Overview of approach

The evaluation of the GEP centred on two major research questions. First, what is the economic rationale for the GEP? And second, what has the impact of the GEP on the UK economy been to date? Both questions are extremely complex; as discussed in more detail later in the report it is difficult to precisely define "entrepreneurship" or to accurately measure its benefits. As such, the evaluation employed a range of research approaches, in order to develop a robust evidence base through which to meet the evaluation objectives.

We provide a brief overview of the approach taken and the key issues involved in each of these strands below. In the following sub-section, we then provide more detail on each stage of the methodology.

#### 3.1.1 Clarifying the rationale for attracting entrepreneurs to the UK

In order to robustly assess the impact of any government programme, it is important to clearly understand both the reasons that intervention is required and the ways in which the intervention is expected to be beneficial. As set out in the *Green Book*, rationales for government intervention are generally founded either in market failure or on the basis of distributional concerns. Clearly only the former is relevant in the case of the GEP. As such, the starting point of the evaluation was to identify the particular market failures that the GEP seeks to address, and the channels through which the programme is able to overcome these failures.

The research sought to develop the economic rationale through two major approaches. First, discussions were undertaken with relevant stakeholders at UKTI including a consultation exercise with the GEP's Dealmakers. These discussions sought to understand how the programme works in practice, and identify the ways through which the programme's stakeholders seek to affect entrepreneurs' decisions. Secondly, as part of a wider review of academic and policy literature, we examined the potential benefits of attracting entrepreneurs to the UK, and the determinants of entrepreneur relocation.

#### 3.1.2 Assessing the impact of the GEP

Identifying the impact of the GEP involves two major issues. The first relates to whether the programme achieves benefits for the UK economy. Secondly, it is necessary to understand whether these benefits are *additional* – that is whether they would have happened in the absence of the programme.

#### Impact of attracting entrepreneurs versus the impact of attracting early-stage start-ups

In recent years GEP support has primarily taken the form of attracting entrepreneur-led early-stage businesses to the UK. Assessing the impact associated with these interventions is not straightforward, as the impacts associated with the relocation of the firm (e.g. in terms of profit and employment) may not be identical to those associated with the relocation of the entrepreneur. Even if the start-up fails initially, an entrepreneur may go on to undertake other beneficial activities (such as establishing further businesses) within the UK. On the other hand a



firm may operate in the UK without any entrepreneurial activity such as innovation or risk-taking being undertaken here (a sales office could be an example of this).

In the evaluation methodology we focus primarily on the benefits associated with the *companies* assisted by the GEP, rather than directly on the benefits associated with the entrepreneurs leading those companies. This is for a number of reasons. First, the main benefits that are anticipated to result from the GEP are achieved through firms. Potential benefits include employment creation, generation of tax revenue and spillovers to suppliers and to UK firms. Second, given the short lifetime of the GEP, the main benefits to date are likely to be encapsulated within the initial startups that have been attracted to the UK. Entrepreneurs have had limited time in which to move beyond those start-ups to establish further businesses. Third, there is much more information available relating to firms than regarding their founders or owners. It is companies that publish annual accounts, establish websites and release press releases. Similarly, the information kept by UKTI was organised according to the companies that have been assisted rather the entrepreneurs involved with those companies.

These impacts were analysed directly both quantitatively and qualitatively through the responses of GEP-assisted firms to the evaluation survey and the follow-up case studies. In addition, quantitative data for GEP-assisted firms was collected from FAME and patent registers. Where data is available, this provides an additional objective measure through which to assess the impact of the programme.

Ideally the Evaluation Survey would have been able to address the impact associated with GEP-assisted companies, while also investigating some of the characteristics of the entrepreneurs involved in those businesses. However in practice this was not possible due to the constrained length of the Evaluation Survey.

#### Assessing the benefits to the UK economy

Assessing the impact of the GEP is complicated by the need to separate between the benefits to the entrepreneurs assisted and the benefits to the UK economy. As the firms targeted by the company are, at the time of assistance, not based in the UK, it may be that some of the benefits received by companies participating in the programme are not benefits to the UK economy. This could be the case, for instance, if a firm receives business development support, but does not use this to expand their UK operations. In general, if a start-up firm relocates to the UK and continues to develop their operations we might expect there to be some benefit to the UK. However, it is important to be clear about the channels through which these benefits are obtained.

#### 3.1.3 Establishing the counterfactual to the GEP

In addition to identifying the benefits GEP-assisted firms bring to the economy, it is also crucial to consider the counterfactual – i.e. what would have occurred in the absence of the support. In the case of the GEP, there are two important elements of the counterfactual: i) what the firms would have done in the absence of the support (i.e. would they have relocated to the UK without the GEP) and ii) whether investors in those companies would have invested the same funds in the UK in any case. These two points are discussed in turn below.

The company counterfactual

The first element of the counterfactual includes the actions that the companies supported by the programme would have taken in the absence of receiving assistance from the dealmakers. In particular, we can consider three different possibilities for company action in the absence of support:

- GEP-assisted firms would have undertaken the same actions (e.g. relocated to the UK). In other words, programme additionality is 0%.
- They would not have operated in the UK at all in the absence of support. In other words, the programme additionality is 100%.
- They would have operated in the UK in any event, but in a different form (for instance, they may have set up a marketing office here, but not relocated their headquarters). In this case, it is necessary to understand the extent to which the decision to relocate to UK provides greater benefits in comparison to alternative forms of inward investment.

It is of course, not possible to observe the actions that firms would have taken in the absence of support. However, the evaluation sought to shed light on the likely counterfactual in a number of ways. First, supported firms were asked directly what actions they believed they would have undertaken in the absence of GEP support. This has the advantage of relating directly to the firms that received support. However, it is necessarily hypothetical and so may not correctly indicate the actions that would have been undertaken in reality. In particular firms may not correctly understand the constraints that they would have faced in the absence of support.

#### The investor counterfactual

The second element of the counterfactual relates to the investment in the GEP-supported firms. In understanding the *additionality* of the programme, it is important to understand whether the £140 million of angel, seed or venture capital investment that has occurred through the programme (based on UKTI information) would have been invested in UK companies in the absence of the GEP. If this were the case, then the important measure of the benefits of the programme are whether the investment in the GEP companies is more productive (e.g. because the firms have a higher level of productivity or gross value added) than would have occurred in the absence of the programme.

It is not possible to identify the alternative investment projects that would have occurred in the absence of the GEP. However, part of the evaluation involved exploring the types of investment (and investors) that have been involved in the programme.

#### 3.2 Detailed methodology

#### 3.2.1 Stage 1: Literature review

The first stage of the evaluation involved a review of the academic and policy related evidence relating to entrepreneurial activity and location. This formed the basis of the development of the economic rationale, and also fed into the development of the survey instruments used later in the evaluation. Articles and reports were collected through database searching; and the initial search



was supplemented with additional information suggested by the UKTI Steering Group. The full findings of the review are presented in Annex 1.

The evidence review included three main strands. The first element considered the potential benefits associated with entrepreneurs and entrepreneurial activity. This assisted in developing a clear understanding of the types of entrepreneurs targeted by the GEP, and the benefits which might be expected from the programme. Second, the review included an analysis of trends in entrepreneurial activity in the UK and comparator countries. This provides useful background information for the evaluation. Third, the review identified the existing evidence relating to the factors that determine entrepreneurial location and relocation, with the aim of identifying which market failures (if any) might act as a barrier to relocation to the UK.

#### 3.2.2 Stage 2: Dealmaker consultation

A stakeholder consultation was undertaken at the beginning of the evaluation, to understand how the programme is implemented in practice, and to understand the benefits perceived by those administering the scheme. Between 1<sup>st</sup> September and 18<sup>th</sup> September 2009, 45-minute to one-hour long telephone interviews were conducted with each of the eleven Dealmakers based on an interview tool agreed upon between UKTI and London Economics. This contained 40, primarily open-ended questions to guide Dealmakers through their responses regarding: (i) the role that they play in the Programme; (ii) the impacts the Programme has had on participating firms and the UK economy; and (iii) the effectiveness of the Programme to date.

#### 3.2.3 Stage 3: Collection of financial and patent data for GEP-assisted firms

As part of the evaluation, information on GEP-assisted firms was gathered from three sources:

- UKTI administrative data: information on each of the assists provided by the GEP between the March 2005 until the beginning of January 2010;
- **FAME financial data:** reported financial data for each of the companies assisted through the GEP, obtained through the FAME database; and
- patent information: information on the granted patents and patent applications made by each company, obtained from Intellectual Property Office and European Patent Office registers.

#### **Linking UKTI information with FAME**

The first stage of this element of the analysis involved attempting to identify each of the companies assisted by the GEP in Companies House. In total, the information obtained from UKTI identified a total of 100 companies that were assisted, with some firms receiving more than one type of intervention. Several interventions related to networking organisations or investment firms, highlighting the breadth of assistance offered by the GEP. However, as these interventions are not comparable to the main activities of the programme, they are not included in the results of the matching exercise reported below.

<sup>&</sup>lt;sup>8</sup> The interview tool is presented in the Annex.



Matching was carried out primarily on company name, adjusted for differences in punctuation and spelling and also using extra information where available (e.g. address, name of the relevant contact). Given the limited number of companies involved in the programme, the linking exercise was carried out manually in its entirety: all company names were reviewed individually against the list of companies registered at Companies House. This allowed adjustment for small spelling mistakes, and any company name changes. Where companies could not be identified immediately, attempts were made to find additional information through, for instance, the company's website.

In total, of the 90 companies that had received assistance, 81 were successfully matched in Companies House (90%). Of the nine companies that we were unable to match, three had only recently moved to the UK, and so it is likely they are not registered at Companies House; one firm reported that they had not relocated; one had been acquired; while the remaining four did not have identifiable UK business locations.

Having identified the companies in Companies House, the FAME database was used to obtain financial and other information for each firm. As some of the companies in the list are newly established or recently dissolved, information from FAME was complemented with relevant information available on Companies House (relating to, for instance, incorporation date).

#### Summary of collected data

Although companies were generally identified in FAME, in general a large number of observations contained missing values for most variables, as shown in Table 1. This reflects the fact that the companies assisted through the programme are generally small, and also tend to be newly established in the UK. As a consequence it was only possible to undertake a limited analysis based on the FAMF dataset.

Table 1: Data availability and summary statistics, selected variables						
Variable	Obs	% of total	Mean	Min	Median	Max
Total assets (£m)	33	41%	3.1	0.0	0.1	73.5
Shareholders' funds (£m)*	33	41%	0.2	-3.6	0.0	5.7
Employees	6	8%	32	1	6	128
Total turnover (£m)	7	9%	5.9	0.1	0.6	19.8
Profitability *	7	9%	-30%	-160%	0%	11%
Return on shareholders' funds*	10	13%	5%	-304%	13%	182%
Return on capital employed*	11	14%	-16%	-304%	1%	182%

Note: All data refer to the financial year 2007 (the year for which most information is available).

Source: London Economics, based on FAME database



<sup>\*</sup> Shareholders' funds is defined as the sum of issued capital and total reserves. Profitability is defined as the ratio of profit or loss before tax divided by total turnover. Return on shareholders' funds is defined as the ratio of profit or loss before tax divided by shareholders' funds. The return on capital employed is defined as the ratio of profit or loss before tax divided by total assets less current liabilities.

#### Collecting data on patenting activity

As the GEP has explicitly targeted companies in highly innovative sectors, it is interesting to see whether any of the companies involved in the programme have filed, published or were granted applications for patents both in the UK and in other countries worldwide. For this purpose we carried out research using the online services of both the European Patent Office (EPO) database (which contains information on applications published and granted in the UK and other countries worldwide) and the UK Intellectual Property Office Searchable Patents Journal (to account for possible applications filed in the UK but not published in the last three years)<sup>9</sup>.

This research found very few patent applications that were registered to GEP-assisted firms, with only 1% having one UK published patent / outstanding application and another 2% having more than one UK published patent or patent application. Taking into account the overall number of applications published worldwide (i.e. considering applications published in at least one country, including the UK) the proportion of companies having published one or more applications rises to 6% and 18% respectively. However, these results included only patents registered under the company name reported in the UKTI administrative information. If patents have been registered separately – e.g. under the name of the inventor alone – they will not be included.

To address this issue, the survey document contained questions relating to whether any intellectual property rights were held in the UK. The survey also allowed us to specifically consider whether firms held exclusive UK commercialisation rights or patent rights (either granted or pending). As discussed in Section 5, the responses to these questions suggested that, in fact, a much higher proportion of firms hold patent rights than indicated by the collected data. As such, the survey responses appear to be more reliable, and we rely on them in the later analysis.

#### 3.2.4 Stage 3: Quantitative survey

A key part of the evaluation included a survey of GE-assisted firms, incorporating a total of 70 companies over the lifetime of the programme. (Details of the firms included in the sample are presented in Section 5.)

#### Survey design

The survey instrument was developed in consultation with UKTI, and covered a number of different research areas. The survey questionnaire consisted mainly of closed questions in order to minimise the burden on respondents and provide comparable answers. However, some open questions were also included so that respondents were able to provide any additional detail or emphasis that they felt was important.

A full copy of the survey is presented in the Annex. The questions can be grouped into four main areas as outlined below.

#### 1) Firm characteristics / operations in the UK

<sup>&</sup>lt;sup>9</sup> The databases are available at <a href="http://gb.espacenet.com/search97cgi/s97">http://gb.espacenet.com/search97cgi/s97</a> cgi.exe?Action=FormGen&Template=/gb/en/home.hts and http://www.ipo.gov.uk/types/patent/p-os/p-journal/p-pj.

The survey included several questions relating to company characteristics to complement the information obtained through FAME. This included questions relating to company size (turnover and employment), R&D activities, export behaviour, growth since receiving GEP support, anticipated growth in the next five years and intellectual property holdings.

An important part of the rationale for the GEP involves the potential spillovers from GEP-assisted firms to other UK companies. As such, the survey also incorporated questions relating to firms' presence in the UK and their linkages with UK companies.

#### 2) Relocation to the UK

For companies that had received relocation assistance, the survey investigated the reasons companies had decided to move to the UK and whether they had considered relocating to other countries at the time of support. The survey also investigated any difficulties that firms had faced in establishing their business in the UK.

#### 3) Impact of the support

The survey asked firms to rate the impact of the GEP support on various measures (such as making more contacts, or overcoming regulatory issues), and also whether the firm benefitted as a result of GEP assistance. Companies were also asked to rate different aspects of the quality of the support provided and to identify how the business had performed since receiving GEP support.

#### 4) Fund raising

The final group of questions related to companies' fund-raising activities. Companies were asked how much external finance they had raised and, where funding assistance had been provided by the GEP, the sources of any finance raised and how they had been affected by the receipt of GEP funding assistance. In addition, all companies were asked to identify whether GEP support had assisted them in raising their profile or credibility with investors.

#### Survey administration

The survey was administered via an online survey application, LimeSurvey<sup>10</sup>, with fieldwork taking place during February and March 2010 (over a total of 6 weeks). Firms were contacted initially via email, containing a link to the relevant survey and a firm-specific code allowing them access to the survey. Following the end of the survey period, companies were then followed up extensively, via both email and telephone, resulting in an eventual response rate of 57%. This is discussed further in section 5.

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LimeSurvey (<a href="http://www.limesurvey.org">http://www.limesurvey.org</a>) is a state-of-the-art, open-source online survey application published under the GNU General Public License.

#### 3.2.5 Stage 4: Case studies and qualitative interviews

#### Case studies

Many of the issues relevant to the GEP are extremely complex, and are likely to be difficult to assess effectively through quantitative measures (it is difficult, for instance, to accurately measure innovative behaviour). Further the small scale of the GEP's activities means that any survey sample is necessarily relatively small, precluding a robust break-down of survey results. As a result, the methodology incorporated a series of qualitative case studies.

Case studies were completed with eleven recipients of GEP support, with willingness to participate identified through the Evaluation Survey. Participants were selected to provide a range of views on the programme. In addition, attempts were made to contact the investors in case studies firms (based on information provided by the GEP team). Unfortunately, however, the majority of investors declined to participate and we were able to complete only one investor interview.

#### Qualitative interviews with companies involved in incomplete GEP deals

Qualitative interviews were conducted with entrepreneurs that had been targeted and (in some cases) supported by the Dealmakers, but where deals were not eventually completed. This sought to investigate the barriers to relocation, and also shed some light on possible counterfactuals for GEP-assisted firms, through understanding the types of activities firms had undertaken in the absence of support.

Ideally, this element of the analysis would have sought to address the counterfactual through observing the actions undertaken by similar firms that did not receive support in the same time period. However, in practice this was not possible, due to difficulties in selecting an appropriate control group. This would have involved identifying a group of firms with similar characteristics to GEP-assisted companies, and comparing their actions over time to the GEP-assisted companies. In this case, the relevant control group would be start-up companies operating within the relevant technology areas, which are also attractive to venture capitalists operating in the UK. Further, as the Dealmakers act as facilitators to companies already interested in relocating to the UK, the relevant control group would only include companies that may have already considered relocation to the UK.

As we were unable to identify a list of the companies directly comparable to GEP firms, we instead focused the survey on firms targeted for GEP support, but where the deal was not completed (for a variety of reasons). This list of companies was identified by the GEP, with a total of 53 companies identified in total. As these companies had, in some way, not completed their deals they are likely to have some important differences in characteristics with GEP companies. As such, it is not appropriate to consider this element of the analysis as a counterfactual for the GEP-assisted firms. Despite this, in combination with other elements of the methodology, the survey may be able to provide information that assists in understanding the actions GEP-assisted firms may have taken in the absence of support.

Given the small sample available, combined with the fact that these companies had not received any UKTI support and may be difficult to contact, we believed it may be difficult to obtain a sufficient number of responses to allow a meaningful quantitative analysis. Instead we undertook

more in-depth interviews with firms that were willing to participate, incorporating a mixture of closed and open survey questions.

All companies for whom contact details were available were invited to participate (a total of 53), with eight interviews completed in total (a response rate of 15%). The interviews were relatively unstructured, but companies were sent a topic guide in advance of the interview. A copy of the topic guide is presented in the Annex.

#### 4 The economic rationale for the GEP

#### 4.1 Introduction

In this section we explore the existence of an economic rationale for the GEP, based primarily on the results of the literature review carried out at the initiation of the research.<sup>11</sup> We first discuss what is meant by an "entrepreneur", and then outline the factors that lead to individuals choosing to become entrepreneurs. This allows us to assess the potential benefits that the GEP is able to achieve. Following on from this we discuss the potential market failures that may exist in entrepreneurs' choices over location and outline potential economic rationales for the GEP.

#### 4.2 The GEP and entrepreneurship

#### 4.2.1 Definitions of the entrepreneur

The GEP's objectives explicitly refer to "entrepreneurs" and "entrepreneurial talent". However, despite being commonly used these terms are difficult to define. Despite an extensive economic literature on the subject, there is no agreed definition of either "the entrepreneur" or "entrepreneurship". Many of the activities most commonly associated with entrepreneurs, such as innovation, risk-taking and decision-making overlap with other business activities (e.g. management). As a result it is difficult to isolate the key attributes that define "an entrepreneur".

Six major dimensions of entrepreneurship are reflected in the literature (as outlined by Godin et al., 2008):

- **Enterprise:** The first dimension captures the drive to pursue profit through effort. Importantly, this distinguishes entrepreneurship from innovation for its own sake.
- Innovation: Entrepreneurs innovate through creative decision-making that leads to the realisation of a profitable opportunity.
- Process: The entrepreneurial process is inherently temporary, covering the period leading up to a product being brought to market.
- **Risk-taking**: Entrepreneurial decisions necessarily involve acting in the presence of uncertainty (e.g. over the outcomes of the process).
- The spectrum of entrepreneurial action: entrepreneurial innovations can vary considerably in scope, including both ground-breaking innovation and incremental changes.
- **Economic change:** Entrepreneurs are a key driver of economic change, through their role in bringing innovations to markets, increasing competition and effectively allocating capital.

 $<sup>^{\</sup>rm 11}$  The full results of the literature review are presented in Annex 1.

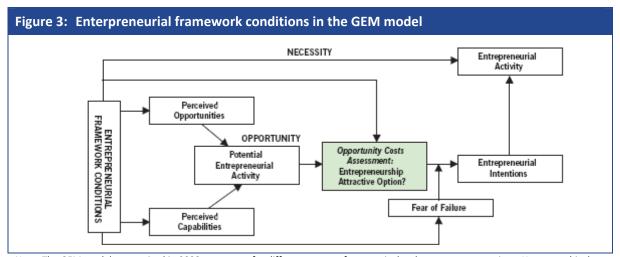


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It is clear that entrepreneurs operate across a wide range of contexts. Although most commonly associated with small and new firms in high-growth industries, entrepreneurs can equally operate within large companies and in established industrial sectors. Indeed, data from the Global Entrepreneurship Monitor (discussed in more detail below) shows that in innovation-driven countries such as the UK, entrepreneurship arises more often within the context of corporate venturing rather than through the establishment of new firms (Hessels, Hartog and Wennekers, 2009).

#### 4.2.2 Drivers of entrepreneurship

A useful framework for the factors affecting national rates of entrepreneurship is provided by the conceptual model developed as part of the Global Entrepreneurship Monitor (GEM). Under this model, individuals become entrepreneurs either through "necessity" (e.g. because they are unemployed) or through "opportunity" (i.e. they see the potential to gain greater income or independence). Opportunity-driven entrepreneurship is in turn dependent on two factors: the level of perceived opportunities in the economy, and the extent to which individuals perceive themselves to capable of becoming a successful entrepreneur. Given these factors, individuals are able to assess the risks and rewards associated with becoming an entrepreneur.



Note: The GEM model was revised in 2008 to account for different stages of economic development across nations. However, this does not affect the general discussion presented here.

Source: GEM 2007

The entrepreneurial decision-making process is affected by a number of factors related to a country's economic development, characteristics, and entrepreneurial culture. The extent to which opportunities are perceived to exist will depend on economic conditions within a country, as well as the support provided by national entrepreneurship policies. Perceived capability to start a business will be affected in part by an individual's actual capability (and hence by education). However it will also be affected by their *perceptions* of their own ability, which may be altered by factors such as knowing another entrepreneur, or seeing successful entrepreneurs that are similar to themselves in the media. Perceptions may also be driven by demographic factors (e.g. women may see themselves as less capable of becoming entrepreneurs than men). Cultural and social norms may also affect the decision over whether to become an entrepreneur. If entrepreneurship is seen as a "high status" occupation, for example, then the associated rewards are greater and individuals are more likely to choose to become an entrepreneur (all else being equal).

A number of policy initiatives both in the UK and elsewhere have focused on promoting entrepreneurial behaviour. However, this discussion highlights the problems associated with policies encouraging entrepreneurship. The factors underlying decisions to become an entrepreneur concern demographic and cultural trends as well as economic performance and, as a result, are likely to be difficult to manipulate, particularly in the short-term. Further, many of the aspects cited as preventing individuals becoming entrepreneurs are themselves a reflection of a lack of an entrepreneurial culture. If individuals do not know entrepreneurs, they may be less willing to become entrepreneurs themselves. Such an effect may be particularly relevant in the UK where fewer than 26% of individuals report knowing someone that had started a business in the past two years compared to 30.4% across the G-7 and 37.2% of individuals in the US (Levie and Hart, 2008).

# 4.2.3 Rates of entrepreneurship in the UK

Evidence collected through the Global Entrepreneurship Monitor (GEM) has suggested that rates of entrepreneurship in the UK are only moderate in comparison to other G-7 countries, implying that there is scope for entrepreneurial behaviour to become more common. In particular the rate of "total early-stage entrepreneurial activity" (TEA), measuring the proportion of people who are involved in setting up a business or owners-managers of new businesses is 5.5% in the UK, in comparison to an average of 6.0% across G7 countries and 10.8% in the United States. The moderate position of the UK regarding entrepreneurship is also reflected in other measures, including rates of established business ownership, business churn, early-stage business survival rate, and growth expectations.

# 4.2.4 Factors affecting entrepreneur choice of location

Given the GEP's focus on attracting entrepreneurs to the UK, it is important to understand the factors that underpin entrepreneurs' choices over where to operate. Unfortunately, the literature review was unable to identify any studies directly addressing this issue. However, useful conclusions can be drawn based on a number of studies discussing choices over *firm* location and *firm* relocation. This strand of the literature is particularly relevant given that the GEP (through relocation assistance) seeks to attract entrepreneurs to the UK through highlighting how relocating can be of benefit to the entrepreneurs' early-stage businesses.

In the absence of any barriers to relocation, firms would be expected to locate to the country (or region) that presents them with the greatest expected profit from their business operations in the future. Relevant factors affecting profitability are likely to include the size of the market for their product(s), their ability to grow, the availability of supporting infrastructure, government policy and regulation and the ease with which they are able to find sufficiently skilled employees.

In reality, a number of barriers to relocation do exist. Relocating incurs costs both in terms of transportation and also the requirement to establish relationships with suppliers, customers and other organisations. Relocating may also necessitate a sunk cost at any existing operational sites. Decisions over whether to relocate abroad are likely to be subject to a number of informational problems. Given the geographic separation, and a lack of knowledge of the target market it may be difficult to establish contact with business partners, customers, R&D networks or business advisers. Establishing a profile abroad may also be difficult, potentially leading to difficulty in generating business or gaining access to sources of funding. These costs may prevent entrepreneurs from finding the appropriate business partners for their firm, and hence prevent

them from relocating even though relocation would be optimal for their business in the absence of any informational barriers.

# 4.3 Economic rationale for the GEP

# 4.3.1 Entrepreneurs supported by the GEP

The range of interventions undertaken by the GEP reflects the broad range of concepts of entrepreneurship discussed above. The most common form of support, involving assisting early-stage firms with relocating their global headquarters to the UK, is focused on the establishment and subsequent development of new and innovative businesses. However other assists have included helping companies set up strategic interventions in the UK, or (in one case) helping an established firm in relation to its venture capital activities.

The GEP also recognises that entrepreneurs are, in some way, separate from the firms in which they set up. Talent interventions, for example, are based on a belief that experienced entrepreneurs hold useful knowledge or skills which can be passed to less-experienced individuals. In the case of relocation assists, the programme's stipulation that an element of business development should occur from the firm's newly established UK premises reflects an understanding that the presence of the individual entrepreneur, as well as the firm, is important.

#### 4.3.2 Potential benefits from the GEP

The potential benefits associated with the GEP can be usefully split into two elements:

- 3) Attracting entrepreneurs to the UK can be directly beneficial through entrepreneurs' activities.
- 4) Overseas-based entrepreneurs can stimulate further entrepreneurial activity, through creating additional business opportunities and by acting as role models and mentors to British entrepreneurs and potential entrepreneurs.

The first category of benefit is a direct reflection of the activities that entrepreneurs engage in, as outlined above. Entrepreneurs are key drivers of innovation and the development of new products and they provide important contributions to productivity improvements, job creation and economic growth. By driving innovative processes, entrepreneurs are able to bring about productivity improvements as well as improvements in resource allocation. As a result, entrepreneurs can be seen as a key component in driving economic growth. Further, by bringing new products to market entrepreneurs benefit consumers and achieve improvements in living standards. The creation of new companies underpins the competitive process, and can lead to substantial job creation.

These benefits can be achieved both through new firms and through new ventures in existing companies — activities which are both targeted by the GEP's relocation assistance. Talent assistance, on the other hand, aims to achieve these benefits as a result of the advice and guidance that experienced entrepreneurs offer to less experienced business owners.

The second area of benefits relates to the longer term impact of relocating entrepreneurs to the UK. As discussed above, decisions to undertake entrepreneurial behaviour are driven by the opportunities that individuals perceive, and also by their perceived capability. The GEP has the potential to positively impact both of these factors.

First, further entrepreneurial opportunities may be generated by the innovative activities undertaken initially by GEP-assisted companies. Clearly, new companies can create business opportunities for potential suppliers. Further, the economic and business literature has shown that shared knowledge pools can benefit all firms within a geographic area of one firm, and so innovation by one firm may inspire innovation elsewhere. Co-location can overcome difficulties in transferring knowledge through allowing face-to-face contact, hands-on training and the development of relationships to establish mutual trust. This may occur through collaboration agreements, through interactions with suppliers, or through engagement in common networks. As such, the establishment of an innovative firm in the UK may create opportunities for complementary businesses to set up nearby.

Secondly, attracting entrepreneurs to the UK may lead to an increase in individuals' perceived capability to take advantage of entrepreneurial opportunities. Entrepreneurs can act as positive examples or role models and hence change perceptions of "what it takes" to be an entrepreneur. Alternatively, they may act as mentors or provide direct training to potential entrepreneurs. By creating employment opportunities in high growth industries they may give employees access to the experience they need to start businesses themselves in the future. As a result, the GEP may be able to contribute to the development of an entrepreneurial culture.

# 4.3.3 Market failures in entrepreneur relocation

While the above discussion has indicated the potential benefits associated with GEP interventions, to establish an economic rationale there must also be some evidence of market failure such that entrepreneurs would make different and (from a UK perspective) socially inefficient decisions over whether to relocate to the UK in the absence of intervention.<sup>12</sup>

The discussion above has suggested three potential sources of market failure that may be of relevance to the GEP.

- 1) Entrepreneurs may be **unaware of the benefits** that their business may achieve through relocating to the UK.
- 2) Entrepreneurs may face important **informational barriers** to relocation.
- 3) The presence of **knowledge spillovers** means that entrepreneurs may fail to account for the wider societal benefits from their decision to relocate.

We discuss each of these in more detail below.

# Entrepreneurs may be unaware of the benefits of relocating to the UK

Given time constraints, firms may not be able to thoroughly research all potential destinations for relocation and may focus only on the best known (for instance, technology firms may focus on Silicon Valley). By providing information about the benefits of the UK for their business, the GEP may assist entrepreneurs with making better decisions for their business.

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<sup>&</sup>lt;sup>12</sup> Intervention could in theory also be justified on distributional grounds if it was felt that the programme was of particular benefit to a group of individuals that are of relevance to government distributional objectives. In this case, for instance, it might be felt that entrepreneurial behaviour benefits the unemployed through job creation. However, we do not believe that in practice the programme emphasises distributional concerns, and so we focus on rationales based on the presence of market failure in the remainder of this report.

This rationale is similar to that laid out by Reading Business Group (2005) in relation to UKTI's inward investment activities. Firms (or entrepreneurs) may be considering where best to locate their business, and so countries are in a sense competing to attract them. Because there are costs in investigating the costs and benefits of different locations, entrepreneurs will only consider a limited number of potential options. According to theory, it is rational for them to consider what they believe is the most attractive option first, and many less attractive options may not be investigated at all.

Given this, there may be a rationale for the GEP based on promoting entrepreneurs' awareness of the benefits of the UK as a choice of location. In fact, this is reflected in the GEP's second goal of maintaining perceptions of the UK as a "location of choice for global entrepreneurs". The rationale for this intervention is clearest if entrepreneurs would not have considered the UK at all in the absence of support. However, there may also be a rationale for making the UK a higher priority option (for instance, moving it from being the second-ranked location, to the first-ranked). In particular, Reading Business Group (2005) note that more highly ranked countries have the opportunity to match subsequent offers (made by other countries), can shape an entrepreneur's search strategy, and can also make the firm feel a need to reciprocate in return for the support offered.

In considering this rationale, it is important to note that it is only relevant if at least some entrepreneurs would decide to relocate their business to the UK once they have considered its characteristics in detail. While intervention may lead to entrepreneurs considering the UK ahead of potential competitors, their final decision will be based on whether the country offers them the potential for future growth. As such, this rationale would not justify intervention to target entrepreneurs that are unlikely to find it profitable to establish their business in the UK in any event.

# Informational barriers may make relocation to the UK overly costly

The discussion above has indicated that entrepreneurs are likely to choose between a set of different possible locations when considering relocating their business. Clearly this will depend in large part on the long-term business prospects that they foresee in different countries. However, it will also depend on the costs of relocating and, in particular, the difficultly in becoming established after relocation. As noted above, it may be extremely difficult (i.e. costly) for overseas-based entrepreneurs to identify contacts within UK networks and to overcome reputational barriers to entry into those networks.

Given this, there may be a rationale for intervention based on overcoming an intermediation failure between overseas-based entrepreneurs and UK networks. The GEP may able to overcome this through offering overseas-based entrepreneurs access to UK networks, and "matching" overseas firms with appropriate business partners in the UK. In addition, the reputation of the GEP (and its Dealmakers) could be critical in assisting clients with gaining access to lenders and other organisations. By doing so, the GEP would reduce the costs and uncertainty associated with relocation, and hence increase the incentives for entrepreneurs to relocate their businesses to the UK. In the case of talent support, the GEP directly matches entrepreneurs with business opportunities in the UK, thereby providing an incentive for them to relocate.

In the absence of intervention, the market may not provide adequate investment in similar intermediary services. Clients are unable to judge the quality of any "match" made by an



intermediary (as they do not, by definition, hold the relevant knowledge) and so any such service is inherently un-contractable, preventing intermediaries from making a profit (Rauch, 2001). Furthermore, in general, networks grow in particular regions or where there are strong bilateral trade flows: where these are not present there may be little incentive for firms to invest in developing networks (Department for Trade and Industry, 2006). This may be a particular issue when considering networks relating to firm relocation, given the relatively limited number of companies that are liable to relocate each year.

# Entrepreneurs may fail to take knowledge spillovers into account

The two sources of market failure discussed above have focused on imperfections in the information available to overseas-based entrepreneurs. However, a further form of market failure may exist even if entrepreneurs are perfectly informed. When making decisions over whether to relocate, entrepreneurs will account for the costs and benefits to their business; however, they will have no incentive to account for the wider spillover impacts of their decision. In particular, relocation may have wider benefits through directly stimulating economic activity, or through transfer of technical knowledge or entrepreneurial "know-how". If the entrepreneur fails to account for these broader economic benefits in their decision to relocate, there is a rationale for cost-effective government intervention to provide incentives for overseas-based entrepreneurs to relocate to the UK.

#### 5 Results of quantitative analysis

#### 5.1 Introduction

In this section we present the quantitative data collected through the GEP. Two data sources are drawn on: the results of the Evaluation Survey administered by London Economics, and the data collected from FAME following the data-linking exercise.

#### 5.2 **Evaluation survey sample**

# 5.2.1 Overview and response rate

As outlined in the previous section, in the short term the benefits associated with the GEP relate largely to the firms that relocate to the UK and the UK firms receiving either talent or funding assistance ("GEP-assisted"). While there may be wider benefits in the longer-term through entrepreneurs setting up further companies or acting as mentors, these are unlikely to be apparent at present given the short lifespan of the programme. As such, the evaluation survey focused on understanding the characteristics of the GEP-assisted companies.

The GEP database identified that a total of 100 companies had received GEP assistance since its inception in 2003. However, this included nine investment institutions and one networking organisation, to whom the survey was not applicable. In addition, it was not possible to survey a further twenty firms because the contact details available were the same as for existing companies 13 (seven firms), no contact details were available (five firms), or because they had been dissolved (eight firms). As a result, 70 assisted firms were invited to participate in the survey research. There was no reason to believe that the inability to survey firms would bias the results, with the possible exception that dissolved companies might have had different experiences of the programme or be subject to some difference in their observable characteristics.

After an intensive follow-up exercise, a total of 40 companies completed the questionnaire, representing a response rate of 57%. This exceeded the target of 50% established at the beginning of the evaluation research. However, efforts were made to obtain as large a sample as possible in order to assist with the later analysis, and all respondents were contacted on multiple occasions. Table 2 presents further information on the survey response, based on our contact with participants. Given the relatively small size of the sample, caution is required when considering the implications of any disaggregation of the results.

<sup>&</sup>lt;sup>13</sup> In some cases these firms appeared to represent different operations performed by the same underlying entity.



Table 2: Evaluation survey participation rate					
	N	%			
Participants	40	57			
Non-participants					
No response received	22	31			
No GEP assistance received	5	7			
Unwilling to participate	3	4			
TOTAL	70	100			

Source: London Economics Evaluation Survey

# 5.2.2 Sample representativeness

In order to hold some confidence in the analysis of the results of the quantitative survey, it is important to address the issue of potential response bias, i.e., whether the sample of participants in the quantitative survey provide views that are representative of the broader population of GEP firms. Where possible this has been undertaken by comparing the population of GEP firms and participants in the quantitative survey on observable firm-characteristics based on the administrative information provided by UKTI. Although this analysis does not provide conclusive findings on response bias – i.e., the number of observable characteristics is limited and there could be systematic differences in the unobservable characteristics of the sample in comparison to the wider population, it does provide some indication of representativeness of the sample.

The results of this comparison, in terms of the type of assistance received, the first year of assistance, region of origin and technology area<sup>14</sup> are shown in the first two columns of Table 3. Where possible, the final column then displays the self-reported responses to these questions from the evaluation survey results.

The results of the analysis indicate that the response rate was higher among companies receiving assistance in the period 2007-2009 compared to those assisted first in 2005-6. To some extent this is expected as, for instance, due to staff turnover, some individuals contacted in firms that received assistance in the earlier period were not aware of the programme. Further, in general recall and response rates are higher amongst more recent recipients of support. This suggests, however, that the evaluation results are likely to be more representative of the experiences of firms that received assistance in more recent years than in the initial period of the GEP, and those that received relocation assistance rather than only talent or funding support.

The response rate was also higher amongst firms receiving relocation support compared to those receiving only other forms of assistance, reflecting the fact that relocation assistance has been more prominent in recent years. <sup>15</sup> This may also reflect the fact that relocation is a more major event for a company, leading to a greater willingness to respond to a survey evaluating the support received.

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<sup>&</sup>lt;sup>14</sup> The UKTI dataset included detailed information on the activities of the companies, which were grouped into major technology areas for the purpose of analysis. This grouping is necessarily crude, especially as firms often operate in multiple technology areas, and hence the results should be treated as indicative only.

<sup>&</sup>lt;sup>15</sup> As discussed in the methodology, where firms received multiple types of assistance, the survey focused on the relocation element of the support.

Large differences in response rates were observed according to different regions of origin and according to technology group. Given the very small number of observations in several categories this is not surprising and as such this does not necessarily reflect a bias in response. However, it may necessitate caution when considering the implications of the survey results to particular types of recipients of GEP support, and in generalising the results across different types of firm, if it is felt that the impact of GEP is likely to vary according to these characteristics.

	Data	from GEP data	base	Survey responses
	Population	Survey sample	Response rate	
Type of support received				
Relocation only	44	23	52%	NA
Relocation and other support	20	14	70%	NA
Talent only	12	2	17%	NA
Talent and funding	3	1	33%	NA
Funding only	4	0	0%	NA
Year of first assistance				
2005	17	4	24%	NA
2006	11	2	18%	NA
2007	17	8	47%	NA
2008	20	11	55%	NA
2009	18	15	83%	NA
Country / region of origin				
United Kingdom	4	1	25%	9
Europe (excl. UK)	6	4	67%	3
Russia or Central Asia	1	1	100%	1
North America	37	15	41%	12
Middle East	1	0	0%	1
Indian sub-continent	18	7	39%	5
China	2	1	50%	0
Japan and South-East Asia	2	1	50%	2
Australia and the Pacific	10	8	80%	6
Africa	2	2	100%	1
Technology area**				
Nanotechnology	2	2	100%	5
Optoelectronics	3	1	33%	0
Software	26	15	58%	13
Other ICT	9	2	22%	4
Life sciences	15	4	27%	8
Renewables/sustainable tech	11	8	73%	10
Wireless applications	3	0	0%	5
Other technology areas	14	8	57%	13
Total	83	40	48%	NA

Note: Population includes all firms for which the survey was applicable. Response rate reported in the table does not reflect the survey response rate reported at the beginning of the chapter, as it was not possible to administer the survey to a number of companies as discussed above.

Source: London Economics based on GEP database

The self-reported results from the survey were reasonably similar to those identified based on the GEP analysis. The major difference related to the country of origin, with a high proportion of firms report originating in the UK. This may be explained by the fact that firms only saw themselves as having been established after relocation - and so their country of origin may differ from that of the entrepreneur (as reported by the GEP).

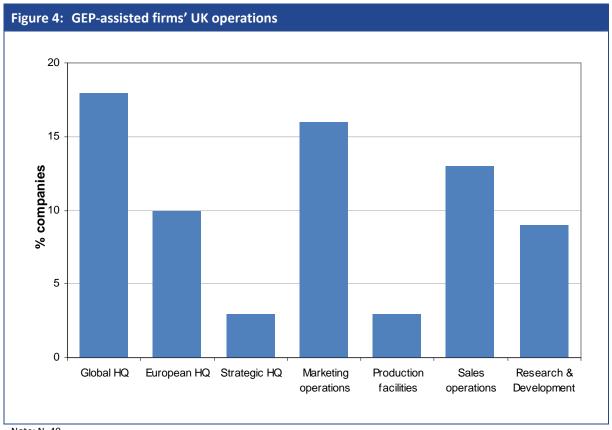


<sup>\*\*</sup> The survey allowed companies to report operating in multiple technology areas; as such the number of responses sums to more than

# 5.2.3 Operations in the UK

The GEP-assisted firms reported having a variety of different operations in the UK, as shown in Figure 4. In total, 26 respondents (65%) identified that they held their Global, Strategic or European headquarters in the UK.<sup>16</sup> Other relatively common operations included marketing operations (40%) and sales operations (33%). In addition to the major categories displayed in the chart, other operations in the UK included management office, contract manufacturers, and an early-stage joint venture.

Four companies, or 10% of respondents, did not appear to have any physical presence in the UK market. Two of these reported that they used to have their global HQ in the UK; however had since entered bankruptcy or liquidation proceedings. A further company reported having a UK website only.



Note: N=40.

Source: London Economics Evaluation Survey

The GEP team anticipated substantial heterogeneity in the organisational structures adopted by companies participating in the programme. As such, no formal definition for "global", "European" or "strategic" headquarters was provided and firms were asked to self-identify which operations they had established in the UK. The benefit of this approach is that under-reporting is unlikely. However, firms may provide similar definitions for different operational terms (e.g. strategic HQ and global HQ), creating some difficulties in interpreting responses. This issue was resolved, to some extent, through case study evidence that provided richer details regarding the nature of firms' UK operations.



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Generally, GEP-assisted companies did not appear to have significant physical assets in the UK. No respondents identified possessing any property or land, while only five firms mentioned that they owned machinery or equipment.<sup>17</sup> However, twenty-two firms stated that they held intellectual property rights in the UK. (Patent rights are discussed in more detail below).

# 5.2.4 Development of GEP-assisted companies

### Company status based on FAME data

The FAME and Companies House databases provide information on incorporation date, company status, and, if the company has dissolved, the date of dissolution. We can therefore see when the companies were effectively established in the UK, if they are still operative and, if not, when they were dissolved. Overall, of the 81 companies analysed, 63 (78%) are live and trading, a further company is live but not trading, 15 companies (19%) have dissolved over time and two firms are in liquidation.

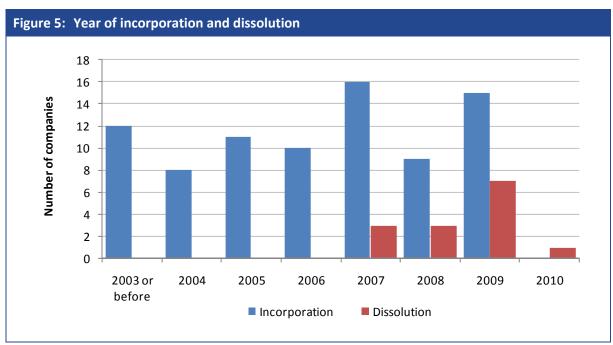
Figure 5 gives details of the year in which the companies involved in the GEP were incorporated/dissolved. Most of the companies founded in or before 2003 were involved in talent deals, rather than relocation assistance (although not all these firms are British in origin). The peak in the number of companies establishing their activities in the UK was in 2007 (16 companies), followed by 2009 (15 companies). As noted previously, however, some companies that received assistance in 2009 may not yet be registered in Companies House.

Of the companies recorded to have dissolved, the average life duration was approximately four years and seven months. However, this was strongly influenced by a single firm, established in 1992, that had received only funding assistance. Excluding this firm, average life duration was around three and a half years. Four of the dissolved firms were founded in 2004, four in 2005 and three in 2007.

Interestingly, all of the companies that have dissolved did so after August 2007. This seems likely to reflect partly the timing that the programme came into existence. However, it may also reflect the general deterioration in access to funding and economic conditions during this period.



 $<sup>^{17}</sup>$  In each case one firm stated that they "didn't know" whether their firm held these assets in the UK.



Source: London Economics based on FAME and Companies House databases

To provide a comparison to the group of GEP-assisted firms, in Table 4 we present data on the survival rates of newly born enterprises in the UK. The number of firms surviving any given year of operation is broadly similar across the period of study (2003-7), with between 92.6% and 96.5% of firms surviving in year one of operation, for example. The figure shows that it becomes increasingly difficult for firms to survive over subsequent years of operation. While 92.6% of firms survived year one of operation in 2003, for example, only 78% of firms survived year two, while only 63.6% survived year three, etc.

Compared to the population of firms in the UK as a whole, the GEP sample of firms has a higher survival rate. Just over 50% of the 31 firms founded before 2006 are reported to be currently active. The survival rate for firms founded in 2006 is 100% and around 75% for firms founded in 2007. No companies founded in the past two years have dissolved or are in liquidation. Overall this suggests that companies assisted by the GEP tend to have greater longevity in comparison to an average newly born UK company. This may be explained by the fact that many companies had actually been operational before becoming established in the UK, and hence may not be entirely comparable to UK start-ups.

Table 4: Survival of newly born UK enterprises						
Year	Births	1 year survival (%)	2 year survival (%)	3 year survival (%)	4 year survival (%)	5 year survival (%)
2003	267,000	92.6	78.0	63.6	54.3	46.6
2004	280,080	94.2	78.7	65.3	54.7	-
2005	274,855	94.3	79.8	64.7	-	-
2006	255,530	96.5	80.7	-	-	-
2007	280,725	95.5	-	-	-	-

Source: ONS (2009)



### **Evaluation survey results**

As part of the survey, firms relocating to the UK were asked how long their firm had been operating prior to relocation. This indicated that firms had, in general been operating for a relatively short period before deciding to relocate. In particular, around two thirds of firms had been operating for less than three years, with 19% of companies in business for less than a year before relocating.

As expected, given the focus of the GEP on start-up firms, the majority of the companies surveyed were small, with a majority (65%) of respondents having not begun trading at the time of receiving support (eleven firms chose not to respond). More than three quarters of respondents employed fewer than 5 employees at the time of support, with 37% having no employees.

Table 5: Development of GEP-assisted firms since receiving support				
	At time of support	Currently		
Turnover				
No turnover / not yet trading	19	15		
<£100,000	8	10		
£100,001 - £500,000	1	2		
£500,001 - £2 million	1	2		
£2 million - £10 million	0	1		
Number of employees				
No employees	13	6		
1-4	14	22		
5-9	4	3		
10-19	4	2		
20-49	0	2		
Stage of development				
Developing our product prior to market entry	28	14		
We have recently begun to sell our product	10	18		
We have an established customer base / market share	2	5		
Bankrupt	0	1		
Other	0	1		

Note: Financial variables relate to firms' latest financial year.

Source: London Economics Evaluation Survey

A number of the GEP-assisted firms reported having grown since receiving support. Eleven firms reported that they had moved from developing their product prior to market entry to beginning to sell their product. Three firms reported having developed an established customer base since receiving support, one of which had not begun to sell their product prior to receiving GEP assistance.

A majority of firms also reported that they had increased their number of employees over the period. Of the thirty-five companies providing responses, 21 (60%) reported growth in staff numbers. Fewer companies (25% of respondents) reported an increase in turnover, with two



thirds of firms indicating that their turnover had remained the same. However, as most firms chose to report turnover in ranges, this classification may disguise relatively small changes in turnover.

Although the survey suggested that the majority of companies had grown since receiving GEP support, a few companies had become smaller. Three companies reported a decline in turnover and four a decline in employee numbers (one company had experienced both). In addition, one firm stated that they had become bankrupt since receiving support.

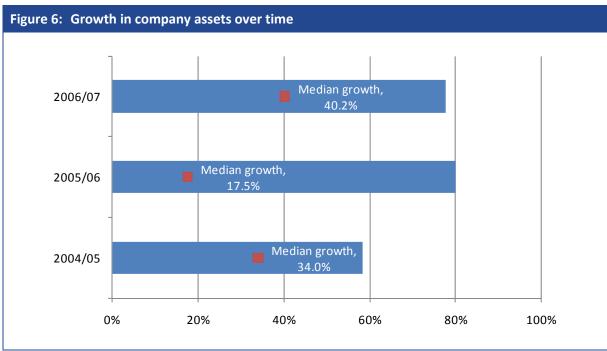
The evidence provided by past and historic financial data was supported also by a survey question directly asking firms how they had grown since receiving support. Again, this indicated that most firms had grown over the period, with 41% stating that they had "grown moderately" and 18% that they had "grown substantially". This compares with 48% and 17% for UKTI users with fewer than 10 employees (and 47% and 28% for all UKTI users). Around a quarter (29%) of companies stated that they had remained the same size, and 12% of firms reported that they had become smaller.

### Growth in assets (FAME data)

The data obtained from FAME allowed us to assess company growth based on total assets for a small number of GEP firms. The evidence that is available (for less than twenty firms in each year) provides some evidence that GEP firms have grown significantly after receiving support. Further, while the size of the growth rates is exaggerated due to the effect of small base figures, it is also notable that a majority of companies experienced asset growth in each of the three financial years.

<sup>&</sup>lt;sup>18</sup> Based on UKTI Performance and Impact Monitoring Survey (PIMS) information.





Note: Results based on 19 firms in 2006/07, sixteen firms in 2005/06 and thirteen firms in 2004/05.

Source: London Economics, based on FAME database

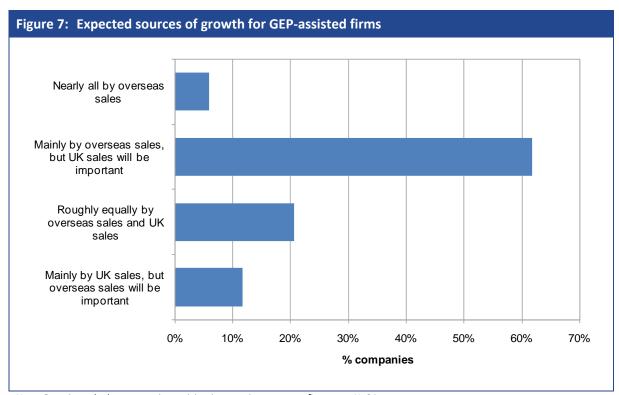
#### **Future prospects**

The majority of GEP-assisted companies expect that they will become larger in the future. 75% of companies believe that they will "grow substantially" over the next five years, while a further 13% believe that they will grow moderately. Of the remaining firms, 8% expected to remain the same size, while one firm predicted that they would become smaller in this time period.

### 5.2.5 Export behaviour

The survey indicated that the majority of GEP firms were involved in export activities. More than half of respondents (58%) reported that they had sold goods abroad in the past two years. Further, nearly all firms (92%) expected to sell goods or services abroad in the next two years, with only one company explicitly saying that they did not expect this to occur (two responded "don't know").

To understand firms' attitudes towards international markets in more detail, the survey also asked firms whether they expected domestic or international sales to drive their future performance. As shown in Figure 7, most companies anticipated that overseas sales would be very important to their business. 12% of firms felt that overseas sales would drive "nearly all" growth, while a further 62% felt that overseas sales would be the main driver of growth although UK sales would also be important. No firms felt that sales would be driven "nearly all" by UK sales, although 12% indicated that UK sales would be the main driver of growth. Around a fifth of firms reported that UK and overseas sales would drive growth equally.



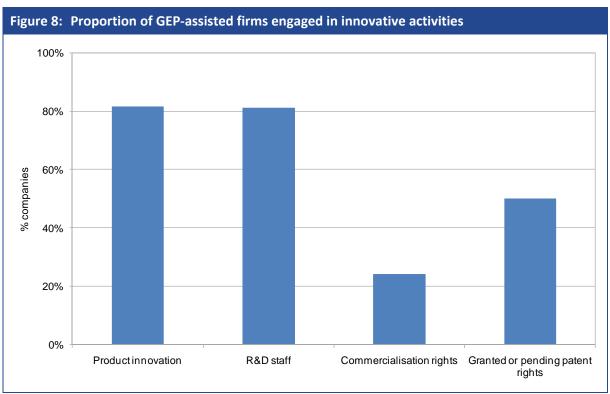
Note: Question asked to companies anticipating growing over next five years. N=34.

Source: London Economics Evaluation Survey

Interestingly, the survey suggested that even firms originating in the UK saw overseas sales as the main driver of growth. However, it should be noted that this is based on a small sample of only six firms.

# 5.2.6 Innovative activities

The survey investigated firms' innovative activities in a number of ways, as shown in Figure 8. A large proportion of firms stated that they are engaged in at least one form of innovative activity. 82% of companies stated that they were selling, or developing, products or services that are not otherwise available in the UK market. A similar proportion (81%) of firms had staff engaged in research or development activity, or had commissioned scientific or technical research in the past three years. In total, 35 of the 40 companies surveyed reported that they undertook at least one of these activities.

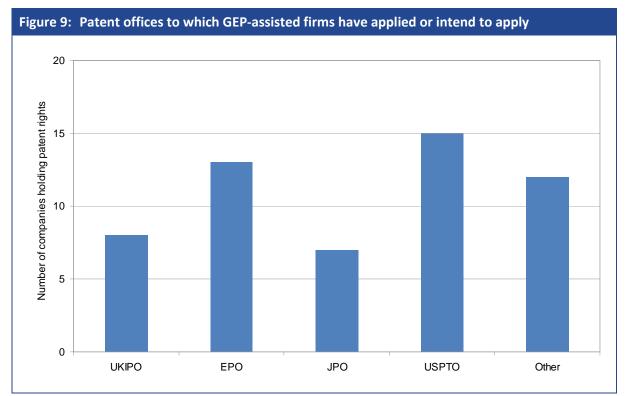


Note: N=38.

Source: London Economics Evaluation Survey

A significant proportion of firms also reported that they possessed intellectual property rights. Half of the companies reported that they held either granted or pending patent rights (50%), while 24% reported holding exclusive UK commercialisation rights where the patent rights were not owned. In total, 21 respondents reported owning at least one of these forms of intellectual property right with six firms reporting holding both. All companies holding these forms of IPR also reported undertaking one of the two forms of innovative activity discussed above.

The survey also investigated where firms possessing patent rights had or intended to apply to. This provides an indication of firms' expectations regarding future international expansion. As shown in Figure 9, GEP-assisted firms expect to seek patent protection in all major patent offices around the world. Interestingly, fewer than half the companies intend to submit their application at the UK Intellectual Property Office, which is fewer than through the European Patent Office (72%), the US Patent and Trademark Office (83%) or other patent offices (67%). The actual figure is similar to the proportion planning to submit at the Japanese Patent Office (39%). Although some caution is necessary, given that the sample for this question consists of only 18 companies, this suggests that GEP companies do not feel it is necessary to register their patent rights within the UK.



Note: UK Intellectual Patent Office (UKIPO), European Patent Office (EPO), Japan Patent Office (JPO) and US Patent and Trademark Office (USPTO). A total of eighteen companies reported holding granted or pending patent rights.

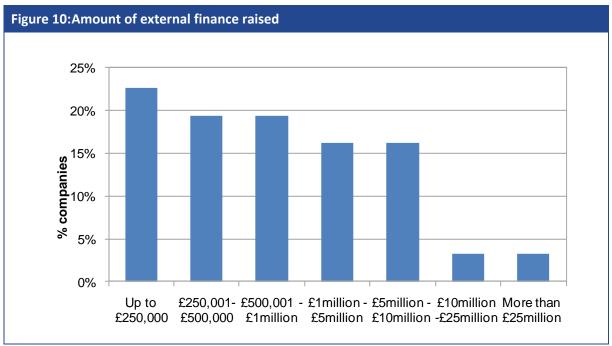
Source: London Economics Evaluation Survey

The survey responses indicated that generally companies intend to apply to multiple patent offices. Of the eighteen companies with patent rights, fifteen indicated that they expect to apply to more than one of the categories above. Further, none of the companies intended to *only* apply to the UKIPO. As such, this evidence suggests that the GEP is successful in its aim of assisting companies whose intention is to internationalise from the UK.

# 5.2.7 Funding sources

The GEP companies reported having raised funding from a variety of sources. The most common source of finance, reported by twenty companies (50% of respondents), was angel funding (i.e. provided by individuals). Eleven firms had raised funding through venture capital, while seven had raised funding through Government grants and seven had obtained bank finance. Three firms commented that they had not raised any external finance, while a further two commented that they were in the process of raising finance.

The amount of funding that had been raised varied considerably across companies, as shown in Figure 10. The largest categories relate to having raised less than £250,000 (23% of respondents) and between £250,000 and £500,000 (19% of respondents). However, some companies reported that they had raised much more funding, with one firm having raised between £10 million and £25 million and one firm having raised more than £25 million in external finance. Interestingly, both these companies reported that they were still in the stage of developing their product.



Note: Includes three companies currently planning to raise funding, two of which are planning to raise between £250,000 and £500,000 and one of which is planning to raise up to £250,000. N=31.

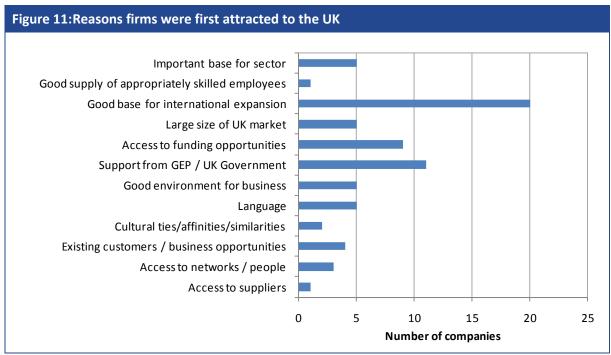
Source: London Economics Evaluation Survey

# 5.2.8 Factors influencing the decision to relocate

A major part of the Evaluation Survey sought to investigate the factors driving companies' decisions to relocate to the UK. Companies were asked to identify the features that had "originally attracted them to the UK", before then being asked to rate the importance of a closed list of responses on their decision to move.

As shown in Figure 11, the most common reason mentioned by firms as driving their initial attraction to the UK was that it offered a good base for international expansion (mentioned by around two thirds of respondents to the question). Expansion to Europe and to the US was mentioned explicitly by firms in this respect, as well as the fact that the UK was an English speaking country.

Notably, the support offered by the GEP or by the UK Government more generally was mentioned as a key first attraction by around one third of companies. Some companies explicitly mentioned the fact that they had been encouraged by the business case put forward by the Dealmakers, while others referenced the potential for Government support for their operations more generally.



Source: London Economics Evaluation Survey

Similar results were reflected in responses to the list of closed questions, as shown in Figure 12. At least two companies identified each of thirteen questions examined through the survey as "very important", showing that GEP firms had identified a wide range of attractive features of the UK before relocating.

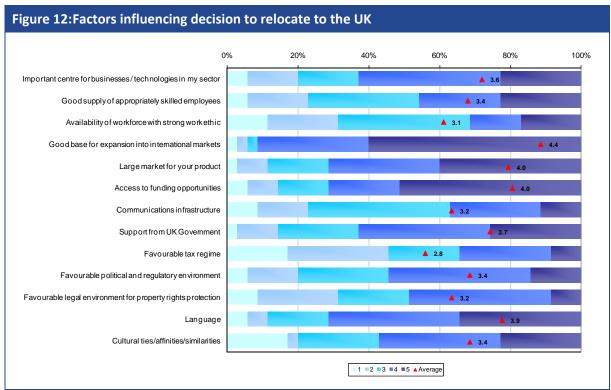
Again, the single factor rated as the most important on average was that the UK acts as a good base for expansion into international markets. More than 90% of respondents identified this as an important factor<sup>19</sup>, with an average rating of 4.4 (on a scale of 1 to 5). Other important influences on the decision to move included the fact that the UK offered firms opportunities for funding and that the UK offered a large product market (both with an average rating of 4.0). Language and cultural considerations were rated as important by 71% and 56% of respondents respectively.

Support from UK Government was again reasonably highly rated, with 63% of respondents rating it as an important factor, and an average rating of 3.7. Interestingly however, compared to other factors, it was ranked lower than in the responses to the open question. This suggests, as one might expect, that Dealmaker plays an important role in encouraging companies to consider relocating to the UK after which substantive business considerations drive the final decision (although It may be, of course, that it is the Dealmaker that makes companies aware of these business factors).

<sup>&</sup>lt;sup>19</sup> This includes responses of either "4" or "5".



-



N=35.

Source: London Economics Evaluation Survey

Firms were also asked whether they had considered relocating to other countries at the time that they had considered relocating to the UK. 21 firms (60% of respondents) said that they had considered other locations. Other countries considered included the United States (mentioned 10 times), Germany (7), Ireland (5), Netherlands (5), France (4), Australia (2), Singapore (2), Canada (1) as well as other countries in Europe (4) and Asia (4)<sup>20</sup>.

# 5.2.9 Difficulties in establishing business operations after relocation

Figure 13 displays firms' responses regarding the difficulties that they had encountered in establishing their business in the UK. As this shows, most difficulties were experienced to a significant extent by relatively few firms. The one exception to this related to the ability to access external finance, with more than 50% of firms reporting that this had been a significant impediment in establishing their business (with an average rating of 3.6). Other relatively highly rated factors included relocation costs and problems obtaining work permits or visas; however these had only been experienced by 35% and 23% of respondents respectively.

Interestingly, the survey responses suggested that discovering appropriate information or contacts had not been a major concern of GEP-assisted companies after relocation. Fewer than 20% of companies reported that identifying contacts had been a significant difficulty in either respect while the equivalent figure for obtaining information about doing business in the UK was 5%. This

as e

<sup>&</sup>lt;sup>20</sup> Specifically, the countries mentioned included Denmark, Switzerland, Italy, Spain, Taiwan, UAE, India and Korea.

Figure 13:Difficulties in establishing business in the UK 0% 20% 40% 60% 80% 100% Relocation costs (e.g. travel, company set-up costs) <u>2.1</u> Problems obtaining work permits or visas Understanding the legal system <u>^</u> 2.1 Obtaining basic information about doing business in the UK Accessing external finance 2.1 Hiring employees with appropriate skills Identifying appropriate contacts **▲** 2.3 Cultural and language differences **1.6** Personal considerations (e.g. distance from home) **A** 2.1 ■NA ■1 ■2 ■3 ■4 ■5 ▲Average

could suggest that the GEP is generally successful in helping companies overcoming these problems. However it could, alternatively, reflect that these are not major concerns to firms.

Note: Averages refer only to companies that experienced difficulty. i.e. those responding "NA" are not included in the calculation. N=35. *Source: London Economics Evaluation Survey* 

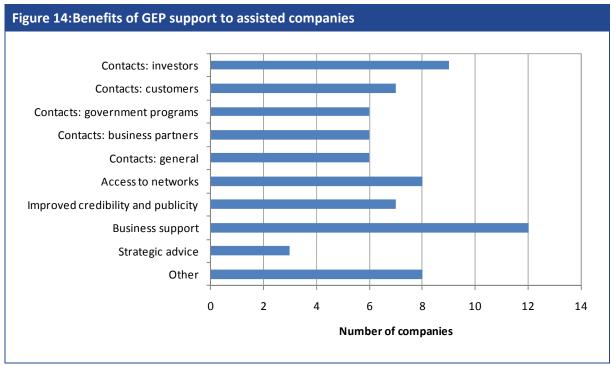
# 5.3 Impact of the GEP on assisted firms

### 5.3.1 Areas where the GEP assisted firms

Firms were asked to identify the benefits of the GEP, both through an open question, and also through a list of closed responses. As shown in Figure 14, the benefits highlighted by companies focused on two major areas: the provision of contacts, and more general business support. Assisted firms mentioned that Dealmakers provided contacts to a number of different types of bodies, including investors, potential customers, business partners and government programs. More generally, they also referred to the fact that the GEP had given them access to business networks, including the Alumni network.

The category "business support" refers to the general role Dealmakers have played in mentoring businesses, and in helping them become established in the UK market. Specific areas mentioned by respondents included recruiting personnel, organising the legal establishment of the firm and support in finding particular services (e.g. audit).

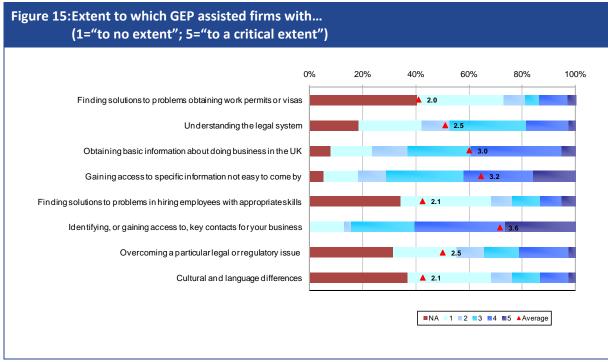
In addition to these areas, several companies also mentioned the role that the GEP support had played in helping their companies' credibility both with investors and other corporate bodies. In the words of one firm, the GEP gave them "enhanced legitimacy" in the eyes of potential business partners.



N=35. Source: London Economics Evaluation Survey

The importance of the GEP in generating contacts was also reflected in the responses to the closed questions, as displayed in Figure 15. Assistance had been most commonly received in relation to "identifying or obtaining key contacts". Over 60% of respondents reported having benefited to a significant extent in this regard, with an average rating of 3.6. Further, no companies reported that they had not received any assistance in finding appropriate contacts. This suggests that firms recognise the intermediary role played by Dealmakers.

Other areas of support where a large proportion of companies had received significant assistance included obtaining basic information (40%) and gaining access to specific information not easy to come by (42%). More specific areas of information, such as overcoming legal or regulatory issues or solving problems finding skilled labour had been experienced by a relatively small proportion of firms (21% and 13% of companies respectively).



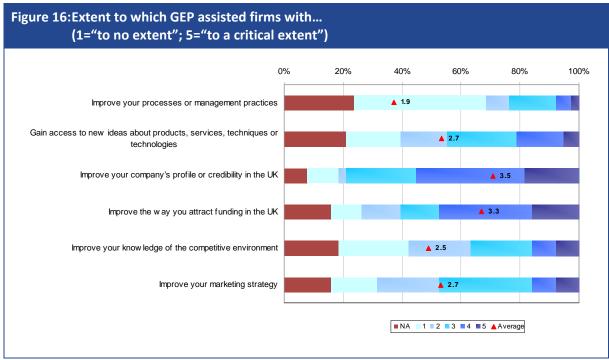
Note: Averages refer only to companies that experienced difficulty. I.e. those responding "NA" are not included in the calculation. N=38

Source: London Economics Evaluation Survey

The answers to these questions also reflect the *range* of areas in which Dealmakers provide firms with assistance. As Figure 15 illustrates, at least one firm identified having received each type of issue. Further, in their open responses a number of other areas were mentioned (and are contained in the "other category" in the figure above). These included help with sales, support in developing export markets, public relations and marketing support, and dealing with foreign governments and regulatory representatives.

# 5.3.2 Benefits of support received

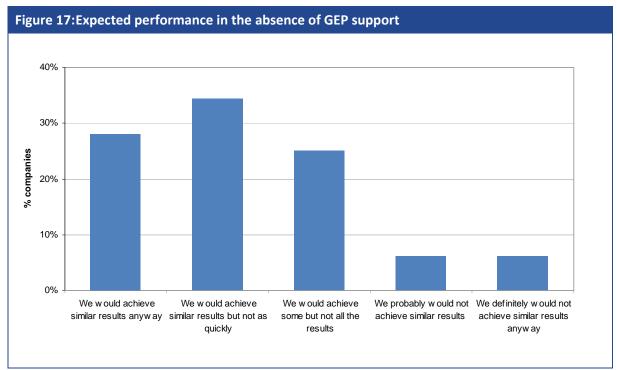
As well as the types of support offered, the survey investigated the outcomes of receiving GEP support. As shown in Figure 16, the survey suggested that the most common ways in which the GEP benefits companies are through improving their profile (a significant benefit for 55% of companies) and improving the way in which they attract funding (a significant benefit for 47% of firms). Other areas, including improvements to management processes, firm marketing strategy, gaining access to ideas about products and improving knowledge of the competitive environment were less important, although they were experienced significantly by some respondents.



Note: Averages refer only to companies that experienced difficulty. i.e. those responding "NA" are not included in the calculation. N=38. **Source: London Economics Evaluation Survey** 

# 5.3.3 Impact on business performance

Assisted firms were asked how they felt their performance would have compared if they had not received GEP support, as shown in Figure 17. As this shows, the majority of firms felt that GEP support had affected their performance in some way, with only 28% of respondents stating that they would have achieved similar results. The most common response, given by 35% of firms, indicated that firms believed they would have achieved some of the same results but not as quickly. 25% of respondents felt that they would achieve, but not all of their results, while around 12% felt that they either "probably" or "definitely" would not have achieved similar results in the absence of GEP support.

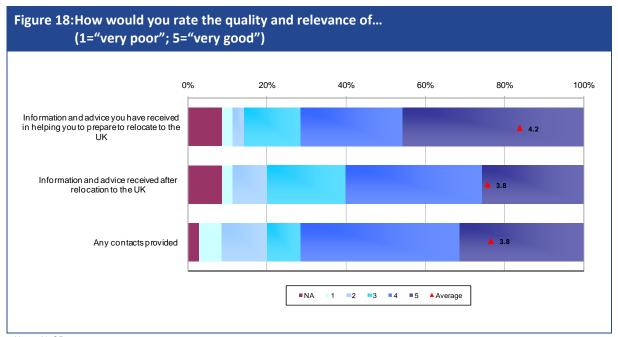


Note: For firms receiving relocation assistance, the question related to how the firm would have performed in the absence of GEP support. For non-relocation firms, the question asked how performance would have compared generally. N=32.

Source: London Economics Evaluation Survey

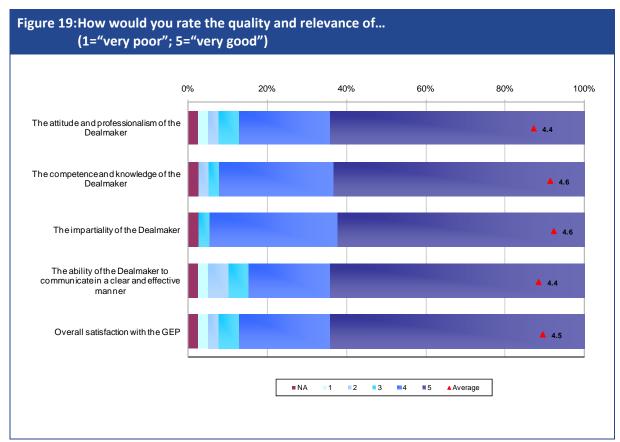
# 5.3.4 Quality of support

The surveyed firms were very positive about the quality of the support that they had received. Ratings of the quality of support were positive across all dimensions. As shown in Figure 18, 71% of companies rated the quality of the information they received pre-relocation as a "4" or "5" (where "5" represented "very happy"). Similar scores were reported in terms of the contacts provided. The ratings were slightly lower for information received *post*-relocation; however, scores were still high (rated highly by 60% of firms), particularly considering post-relocation assistance is not a primary element of GEP support.



Note: N=35. Source: London Economics Evaluation Survey

Figure 19 displays firms' quality ratings for individual aspects of Dealmakers' performance, as well as overall satisfaction with the programme. As this indicates, Dealmakers were highly rated on all aspects of performance, with over 85% of firms rating them 4 or 5 in each category. Companies also reported that they were happy with the support they had received, with 89% of respondents stating that they were "Very satisfied" or "Fairly satisfied" with the support. This was also reflected in the qualitative responses to the survey, where several companies commented that they were extremely impressed with the individual Dealmakers that had assisted them.



Note: Excluding responses of "don't know". Based on between 36 and 39 responses for each attribute.

Source: London Economics Evaluation Survey

# 5.3.5 Benefits of funding assistance

Most companies surveyed indicated that the GEP had helped raise their profile or credibility with potential investors, even if they did not receive funding assistance. Overall, 71% of companies felt that this was the case, with only 21% stating that support had not helped them, and 8% replying "don't know". Amongst the eleven companies that had received funding support, eight felt that assistance had helped them raise their funding profile while two stated that they had not benefited in this way (one firm replied "don't know").

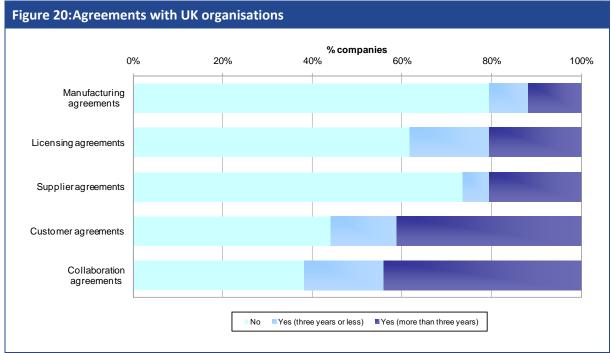
Companies that had received funding assistance from the GEP were also asked how much external finance they had raised as a result of the support. Of nine companies that responded, one stated that they had raised no funding, four identified that they had raised up to £250,000, two identified that they had raised between £250,000 and £500,000, and one had raised between £500,000 and £1,000,000 as a result of support. Typically, these figures were significantly lower than the total amount of external finance that firms had raised.

# 5.4 Wider impact of GEP support on UK economy

# 5.4.1 Linkages with UK organisations

#### Agreements with UK organisations

GEP-assisted companies identified that they held (or were currently negotiating) a variety of different agreements with UK organisations. As shown in Figure 20, the most common type of agreements were collaboration agreements, held by more than 60% of respondents. A similar proportion (55%) of firms held customer agreements with UK organisations, while 38% of companies reported licensing agreements. Manufacturing and supplier agreements were less common, and were held by 27% and 21% of firms respectively.



Note: Percentages based on responses from 34 companies (four companies responded that they did not know whether they had any agreements).

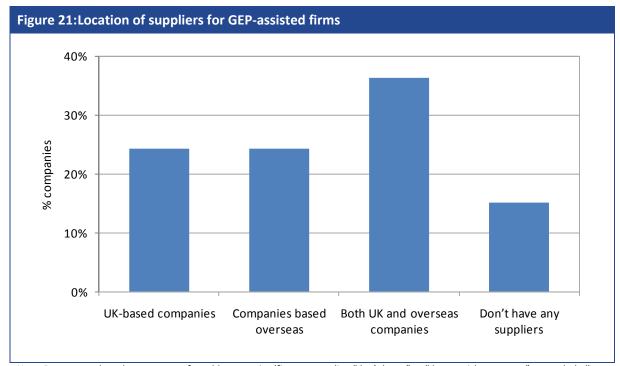
Source: London Economics Evaluation Survey

Interestingly, most agreements tended to be fairly long-term (defined as more than three years) in nature. This suggests that GEP firms are committed to their relationships with UK organisations, although it should be noted that this does not account for the strength of any agreements.

# **Suppliers**

Approximately 60% of respondents stated that they used UK suppliers, as shown in Figure 21. Around a quarter of firms stated that their suppliers were only UK-based, while around 35% stated that they had both UK and overseas suppliers. Around 25% of firms had suppliers based overseas, while around 15% of companies did not have any suppliers.





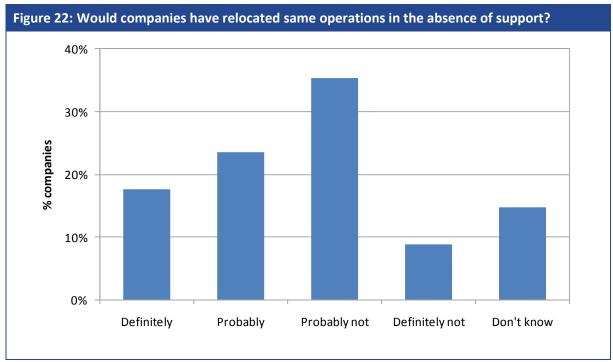
Note: Percentages based on responses from 33 companies (firms responding "don't know" or "do not wish to answer" are excluded). **Source: London Economics Evaluation Survey** 

# 5.4.2 Additionality

#### Relocation

The survey indicated that around 40% of GEP firms believed that they would "definitely" or "probably" have relocated the same operations to the UK if they had not received support from the GEP. This is displayed in Figure 22. 35% of firms felt that they would "probably not" have relocated the same operations, while 9% felt they would "definitely not" have done so. The levels of additionality reported appeared to be lower amongst more recent recipients of support (none of the companies supported in 2005 or 2006 felt that they would have relocated the same operations). However, given the very small sample sizes, it is not possible to draw strong conclusions from this finding.

Those companies that did feel they were likely to have relocated to the UK in the absence of support believed that relocation would have occurred at a similar point in time. Of 14 companies, 11 stated that relocation would have occurred "at around the same time" while 3 felt relocation would have occurred "less than a year later". These firms were also more likely to feel that they would have achieved the same results in the absence of support (50% stated that they would have achieved the same results anyway).



Note: Percentages based on responses from 34 companies.

Source: London Economics Evaluation Survey

The survey also investigated which activities firms that would not have relocated in the absence of support believed they would have undertaken in the UK anyway. This indicated that many of the linkages that companies had formed in the UK only resulted from firms relocating to the UK. In particular, only 3 firms felt that they would have collaborated with UK organisations in the absence of relocation, while no firms would have used UK suppliers. Nine companies stated that they would have sold to UK customers even if they had not relocated to the UK.

# **Funding**

The survey also sought to understand the extent to which the provision of funding assistance helped companies in raising finance that they would not otherwise have been able to achieve. In particular, firms that had received funding assistance were also asked how they believed their funding performance would have compared in the absence of GEP support. Generally, firms believed that the main role of assistance had been to accelerate their ability to receive funding, rather than allowed them to raise additional finance. Five companies answered that they would have "raised similar funding but not as quickly", while three firms stated purely that they "would have raised similar funding anyway". One company stated that they would have raised some "similar funding", while one company believed that they "probably would not have raised similar funding".

Overall, this evidence suggests that the additionality of funding assistance is relatively low, as firms feel they would have been able to raise similar funds, however, it is important to recognise the small sample on which this evidence is based. Furthermore, even if the additionality of this form of assistance is low, funding support may still be justified if it plays an important role in attracting firms to the UK.



# 6 Results of the qualitative surveys

# 6.1 Case studies with GEP-assisted firms

This section presents evidence from a series of case studies on GEP-assisted firms. In total, the views of 11 companies that participated in the quantitative survey and indicated a willingness to contribute to this part of the evaluation work were collected through telephone interviews lasting approximately 1-hour in duration. The telephone interviews were semi-structured, covering topics similar to those presented to GEP-assisted firms in the quantitative survey. In particular, participants were prompted to elaborate on their experiences of relocation, fundraising and the impact of assistance provided through the GEP. To complement evidence collected on fundraising assistance from assisted firms, the views of an investor that helped to finance a GEP-assisted firm were also collected. Full details of the case study topic guide are presented in the Annex. It is important to note that while the case study topic guide formed the basis on which interviews were conducted, they were not entirely prescriptive; and participants were provided with the opportunity to direct interviews toward discussing issues that they felt were of greatest relevance to their experiences of the GEP.

# 6.1.1 Company profiles

GEP-assisted firms providing case study evidence represented a range of company profiles. Geographically, the majority of the 11 firms were initially incorporated outside of the UK (8) with the remainder involving entrepreneurs relocating to the UK before incorporating their businesses (3). Regionally, three firms originated from the Australasia and the Pacific, two from Russia or Central and Eastern Europe, one from India and one from Western Europe. This sample accords with the broader sample of firms from which evidence was collected via the quantitative survey, with the exception of firms originating from North America, which are not represented.

Sectorally, all firms that provided case study evidence are or were involved in producing high-tech goods or services in healthcare (2), consumer goods (2), advertising or recruitment (2), renewable/sustainable energy (1) and manufacturing (2).

Firms that provided case study evidence are similar in size to the sample of GEP-assisted firms that participated in the quantitative survey. Nearly all companies employed between 1 and 3 staff (8 companies) and were achieving either less than £100,000 in revenues per year or no revenues (11). Interestingly, firms are currently generating the same level of revenues as they did when they first relocated to the UK. This is because most companies have only recently begun to commercialise their products.

Despite most companies having only recently begun commercialising their products, some firms are in the order of 3 to 5 years old rather than being less than 2 years old (which is the case for the majority of firms). This is due to differences in technology lifecycles. For some companies, the R&D phase of their technology lifecycle is relatively short and therefore they have incorporated relatively recently (e.g. Company D). For other companies, the R&D phase has been extensive and despite only recently initiating the commercialisation of their products, they have been operating for a relatively long time (e.g. Company B).

Inevitably external factors such as economic conditions and GEP assistance have also played a role in the economic performance of these companies and disentangling these factors is central to the evaluation of the GEP. In this vein, aspects of relocation and funding assistance, firms' detailed views of the GEP and their perceptions of the impacts of the programme will be discussed in depth below.

#### 6.1.2 Relocation assistance

### Perceptions of the UK as a place to do business

Firms' initial perceptions of the UK as a place to do business are important to consider in determining the impact of relocation assistance provided by the GEP. This is because the views provided help to characterise a counterfactual scenario in regard to whether or not firms would have chosen to relocate in the absence of assistance provided by the programme.<sup>21</sup>

In general, firms were highly positive about the UK as a place to do business. A number of firms viewed the English language as a strong motivator for establishing their businesses in the UK as well as cultural ties.

From a business perspective, there were several reasons consistently cited for choosing the UK for relocation. For many firms, the UK represented a large potential market for their products. In addition, many firms commented on the suitability of the UK as a base for expansion into other markets. One firm described the UK as a "springboard to the global marketplace". More specifically, it was felt that "there are more decision makers in London than any other global city", implying that firms have easier access to purchasers of their products. In the case of a recruitment company, it was felt that the UK, and London in particular, possessed a thriving labour market to which it could provide its services.

Other aspects of the UK business environment were also highlighted to be beneficial. Company A, which provides software to the public sector, felt that the UK's public sector IT systems were sufficiently advanced for it to benefit from its product. Company I observed that the UK patent system was superior to its home region's system, making relocation critical for protecting its intellectual property. Company J commented on the stability of the business environment relative to its home region. Company G felt that the UK was less bureaucratic than other countries. Additionally, several firms commented on the benefits of extensive capital markets in the UK.

### Impact of relocation assistance

Reflecting these views, it appears that a majority of firms interviewed would have chosen to relocate to the UK in the absence of assistance from the GEP. Company A, for instance, described how they "never gave serious consideration on starting business development elsewhere".

That being said, several respondents acknowledged the difficulty associated with disentangling the importance of the various factors that led up to their relocation decisions. The evidence appears to indicate firms made their relocation decisions independently but that the GEP helped companies

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<sup>&</sup>lt;sup>21</sup> It must be noted that self-reported and backward-looking views will naturally contain some bias. In other words, firms' initial perceptions of the UK may be exceedingly positive (or negative), depending on their experiences since relocation.

to resolve uncertainties about establishing a business in the UK. Company K summarised this by stating that "There are so many drivers going on that there is no one cause, but the GEP was highly instrumental. The company made the right strategic decision based on the facts available. He [the Dealmaker] pointed out the benefits [of relocating] to the company, which did help us." In this context, many firms providing evidence indicated that setting-up in the UK was significantly less time-consuming and costly as a result of support provided from the programme. Moreover, in some cases, e.g. Company I, it was felt that the GEP helped to swing entrepreneurs' decision from either remaining in their home country or relocating to another country.

# 6.1.3 Funding assistance

# Views of GEP-assisted firms

Close to half of the companies (5) with which case study interviews were conducted received funding assistance. This was provided in a variety of forms: Companies were introduced by the GEP to potential investors, e.g. venture capital funds that specialised in the particular technologies or sectors in which the GEP-assisted company operated in; Dealmakers also helped companies in their preparations for presenting their business models to investors, usually attending some investor presentations alongside assisted companies.

Firms considered this type of assistance to be beneficial insofar as the credibility of the Dealmaker improved their profile with potential investors. In terms of economic impact, company H felt that they may well have been able to raise the same volume of funding in the absence of the programme but that this would have taken longer and been more costly without the GEP. Company F, while raising funds independently of the GEP, felt that the programme was fundamental to this success insofar as it helped the firm to access a small bank loan that paid for running expenses while the entrepreneurs were engaging in their fundraising efforts. In general, the programme, and the Dealmakers particularly, were viewed upon positively in regard to their ability to match GEP-assisted firms with appropriate sources of external finance.

# Views of investors in GEP-assisted firm

A UK-based network of angel investors, which had invested in a company assisted by the GEP was interviewed in order to complement the perspectives provided by firms that received funding assistance. In particular, this interview was conducted with the objective of understanding the process that led to investors' investment and counterfactual questions regarding its investment in the absence of the GEP.

The focus of the investor network is early-stage high-growth companies that require £0.2 and £2m in external finance. On the basis of the relationship between the Dealmaker and the investor network, one of the GEP companies was introduced to a set of investors by a Dealmaker that subsequently made an investment of £0.215m in December 2009.

The factors on which the investors made their financing decision included company specific factors such as gaining a positive impression of the company's management team and their potential for creating growth through their venture. However, the role of the GEP was highlighted as fundamental in the realisation of this transaction. The investors acknowledged that in the absence of the programme they would not have funded the company. The relationship between the investors and the programme was key to the transaction taking place because it enabled them to

gain a better understanding of the company than they would have otherwise (i.e. if the company itself was the only point of contact).

The investors also highlighted that they would have been reluctant to invest in the company if it had not relocated to the UK. In part, this is because of risk considerations associated with making investments in companies based abroad – in countries which UK investors are relatively uncertain about. In addition to this, the investors favoured UK investments due to tax relief they receive under the Enterprise Investment Scheme.

Interestingly, investors have not grown risk averse due to economic conditions. On the contrary, many investors in the network have a *greater* preference to invest in small companies with growth prospects due to the low rates of return currently being offered by banks.

# Impact of funding assistance

The impact of funding assistance appears to be substantial. Dealmakers provide useful introductions to investors that would be difficult to identify otherwise. Additionally, being associated with the programme provides companies with a level of credibility with investors that are beneficial to their fundraising initiatives. Finally, as highlighted by the network of investors, relocation assistance plays a complementary role to funding assistance by relieving firms of some risks that investors perceive to be associated with being located overseas.

# 6.1.4 Detailed views on GEP support

In addition to discussing relocation and funding assistance in general terms, firms providing case study evidence gave specific details regarding aspects of GEP support. The evidence suggests that the level of support that different firms had access to varied substantially provides some interesting insights into aspects of the programme that might be improved upon.

Firms that received relocation assistance were provided introductions to support services such as legal and accounting firms. Some companies, e.g. Company D, were provided with a subsidy such that they were able to access these services for free. Other companies, that were in possession of intellectual property, e.g. Company I, were assisted in making their patent applications to the UK Intellectual Property Office.

Interestingly, it appears that companies that have recently relocated to the UK appear to be more satisfied with support services provided through relocation assistance than companies that had relocated to the UK a longer time ago. For instance, Company A describes how "start[ing]-up can be a lonely road to do. If I needed someone to sound out [an idea] it was them [the GEP] that I could go to. It sounds informal but is very valuable to a start-up."

In contrast, companies that have been operating in the UK market for a longer period of time, such as Company E, F and H are less enthusiastic about this support and provide suggestions regarding how the programme might be improved. Company F believed that the programme should not be focused solely on relocation and funding assistance and that the GEP network should be used more effectively to connect businesses together. Additionally, while some companies (e.g. Company A) have been offered assistance in terms of Dealmakers communicating to regulators on their behalf, other companies have felt that support in terms of accessing public sector organisations has been lacking. Assisted firms also made some comments on how the programme



might be better integrated with other UKTI services (and UK government more generally) so there is continuity in support provided. As one participant put it "for the things that they do I cannot praise them highly enough. But it's all the other things – you feel a little left hanging in the breeze. Some people [other entrepreneurs] are able to do all of that other stuff [relating to growing a business] on their own – others can't and this has a real effect on the overall success rate of businesses that have relocated."

To some extent, there appears to be a discord between companies that perceive these issues with the programme and others. Companies C and E for instance, have received significant business support throughout the development of their companies. Company C stated that in addition to introductions to potential investors, it was provided with contacts to potential customers, partners and other networks. In regard to establishing its business, the Dealmaker helped to devise its 'goto-market' strategy and its plan regarding the corporate structure of the business. Company E felt that without the support of the Dealmaker they would not have decided to enter certain markets export markets, which suggests a deep relationship with the programme and this particular firm.

In part, these firms' views are not substantially different to those provided by others. As well as the differences highlighted, there are substantial similarities in the experiences different firms have had with the programme. Further, as highlighted above, perceptions are conditional on external factors relating to firms' experiences.

That being said, differences in firms' experiences of interventions may be due to an observation made by some entrepreneurs. These respondents felt that Dealmakers are too orientated towards relocation, feeling that the impact of the programme could be larger if they received greater levels of support. Firms that felt satisfied in the level of support received tended to have participated in the programme in its earlier years, implying that the emphasis of the programme may have shifted over time.

Despite these issues, when questions about the merits of the programme and the quality of assistance provided, firms were unanimous in their high praise for the innovative nature of the GEP and the commercial awareness of the Dealmakers. Further, the GEP has recently introduced an aftercare programme through which firms are provided with post-relocation support formally via a Dealmaker concentrating a proportion of his time on these activities.

## 6.1.5 Impacts of the GEP

Measuring the impacts of the GEP is a difficult exercise. Measures of interest derived from the economic literature on early-stage high-tech companies suggest that the key outcomes of interest relate to growth effects and job creation. Additionally, the benefits that these companies bring to their host economy include spillovers, measured indirectly through innovative activity and links to other organisations.

However, as these companies have not been operating for an extended period of time, the impacts of the GEP reported below may under-emphasise the true benefits that these companies may bring to the UK economy over a longer time-horizon. Explicitly, the results below show that most companies have not had a significant impact on the UK economy – they are yet to "take off" – because most of them have just begun commercialising their technologies. The main indication provided as to the potential effects of these companies on the economy (e.g. in terms of driving economic growth) is what results entrepreneurs *expect* to achieve in the future.



#### **Innovativeness**

Many of the companies are considered to be innovative in terms of commonly used measures of innovation such as the manufacture of unique products, engagement in patenting activity and employment of R&D staff.

In some cases, this involves some form of collaboration with other organisations. For instance, Company D collaborates with a number of partners who help to develop its web-content. Another example, Company H, is developing its products in collaboration with academic institutions, which reflects the classic picture of innovation spillover highlighted in the economic literature.

As some firms' model of innovation requires engaging with other organisations, it was felt that the GEP could help to spur this on by leveraging its network of business contacts. Company H, for example, felt that the GEP is currently lacking in this regard and could be improved upon.

"Being a stranger in a new country it is the networks that are important – someone who has the time to build the relationship with you so that when they find an opportunity that they can make a referral. That is one thing that they [the GEP] don't have is the networks and contacts and introductions."

#### Links to the UK

Links to the UK were assessed through a set of questions regarding assisted companies' agreements with other UK-based organisations, to complement similar information collected through the quantitative survey. These findings provide some interesting insights into the spillover effects that firms generate in the UK in addition to those discussed elsewhere in this section of the report.

From an empirical perspective, it is challenging to determine the magnitude of spillover effects on economic outcomes such as firm growth and job creation; however, the evidence presented here provides some indication as to the nature of agreements GEP-assisted firms have with other companies (e.g. whether agreements are long-term). This provides some insight into the economic importance of the spillover effects that have been created.

As high-tech companies, a number of assisted firms have links to the UK through licenses that provide UK-based companies the permission to produce goods and services based on the technologies of assisted firms. Company G, a vehicle manufacturer, is a case in point as UK suppliers are used exclusively for manufacturing. Similarly, Company K outsources the manufacturing of its products to other companies, some of which are UK-based.

A larger proportion of agreements that assisted companies have struck with other UK-based organisations are sales-oriented. In the case of Company F, for instance, it collaborates with other companies over projects that complement the services it provides or sells its products to organisations that re-sell to final consumers.

#### Growth effects and job creation

As has been highlighted above, assisted firms are at the early stages of their development and therefore growth effects and job creation is limited at present; most firms are beginning to grow



after having recently developed their products and employ between 1 and 3 people in the UK. However, companies shared their growth expectations through the case studies, which provided a sense for firms' future growth paths.

Most firms had high expectations regarding their future growth path. Company K expressed a fairly common view, insofar as they strongly believed that they would grow through a mix of UK-based and European sales and that over a slightly longer time-horizon, they see themselves expanding into the United States as well. Interestingly, in describing their ambitions to expand into the US, Company G described trade tariffs as a barrier to selling in that region (and that succeeding in the US would require relocating part of their operations there).

Three companies indicated their potential to create jobs in the future. Company G's vehicle manufacturing activities currently employed 7 to 9 people for the small number of transactions they complete. However, due to the labour intensity of production, they project that if their business grows, it would be associated with sizeable job creation. Company J's estimates are of a similar nature in relation to job creation while Company C expects to be employing 10 to 15 people in three years' time (it currently employs 2.5 people).

However, firms also identified significant risks with their plans, largely relating to whether or not there is widespread acceptance of their technologies. Company J summarised this uncertainty by noting that they would either be employing no people in the coming years or 500 depending on the success (or lack thereof) of their UK venture. Other companies (e.g. Company H) were more positive in their outlook as they believe that they have gained a first-mover advantage over competitors through their innovation. Some companies (e.g. Company C) highlighted the importance of timing, feeling that the speed at which they lock-in customers in the coming months would strongly determine their likelihood of future success.

## 6.2 Interviews with firms involved in incomplete GEP deals

Qualitative interviews were conducted with entrepreneurs that had been targeted and supported by the Dealmakers, but where deals were not eventually completed in spite of the GEP team providing strategic support and introductions to possible key networks. The objective of this part of the evaluation research was to investigate: (i) entrepreneurs' perceptions of the UK as a place to do business; (ii) their engagement with the GEP; (iii) reasons for their eventual non-participation in the programme; and (iv) any links to the UK developed without GEP support. A total of 53 firms were contacted as part of the exercise, with eight interviews eventually completed. While this response rate is relatively low, this was not unexpected, given that firms had not received support from UKTI and that participation required committing to a 20-25 minute interview.

While this set of companies does not constitute a robust counterfactual group (as discussed in the methodology section), this exercise provides indicative answers to a number of key evaluation questions, complementing other parts of the evaluation research. It provides an indication of whether the GEP has an impact on entrepreneurs' relocation decisions by influencing their awareness and perceptions of the UK business environment. Secondly, it explores how the various measures that the Dealmakers took to engage companies with the programme influenced firms' final decisions over where to locate their business.

## 6.2.1 Company profiles

Geographically, the firms originated in Australia (3), India (3), Germany (1) and Spain (1); and in terms of their stage of development, there was a close split between being at the advanced stages of commercialisation and the product development stage. This partly reflects the fact that some companies engaged with the GEP a number of years ago and others have been in contact with the programme only more recently. Since engaging with the GEP, some companies had relocated part of their operations to the UK independently, while others have relocated their headquarters to the US or Switzerland and a third group are currently considering the UK as part of their internationalisation strategy.

Close to half of the companies employed between 5 and 10 people while the other half employed over 100 people. The range of annual turnover represented in the sample was also large: one company had an annual turnover around the £20m mark, while another company had sales of approximately £2m. A third company had operating revenue of £250,000 per year with the remainder of respondents being at the product development stage.

Sectorally, several companies (4) were involved in developing ICT products and software while the remaining firms operate in the areas of environmental management (1), semi-conductors (1), aircraft manufacture (1) and corporate governance research (1).

## 6.2.2 Perceptions of the UK as a place to do business

Perceptions of the UK were generally positive. The main rationale for considering relocating to the UK was the belief that it serves as a good hub for international expansion (as with GEP assisted firms). Views were positive on the whole but somewhat mixed in regard to the labour market, legal, political and tax issues. However, the impression provided by entrepreneurs was that these latter considerations are generally secondary to the decision to relocate.

## A hub for international expansion

The most positive observations of the UK as a place to do business were made in relation to it being a hub for international expansion. Many firms commented on its proximity to European, African and Middle Eastern markets as being a distinct bonus. While firms did not necessarily wish to do significant business in the UK, they tended to believe that it was a suitable location for branching out into other markets.

#### The labour market

Firms generally had a positive impression of the skill level of the UK labour force. However, most firms also felt that they could access a skilled workforce in other countries and so this did not particularly affect their decisions over where to relocate.

However, in discussing the innovation process, some firms did highlight that accessing a sufficiently skilled workforce could act as a barrier to relocation. While they believed that they could (eventually) hire skilled workers to engage in R&D through UK labour markets, they felt that search costs would be too high relative to home labour markets to justify relocation. In addition to this, some companies commented on labour costs being comparatively high in the UK relative to other European countries. One interesting example provided was from an entrepreneur operating



a corporate governance research business headquartered in Germany, who stated that a government subsidy of labour costs for firms in response to economic conditions dramatically affected his relocation decision. In this regard, there may be a role for the GEP to highlight complementary government programmes that might influence entrepreneurs' relocation decisions.

## The legal, political and tax system

In regard to detailed considerations such as the legal, political and tax systems of the UK, entrepreneurs that seriously considered relocating were in a stronger position to comment than those that only gave passing consideration to the UK for their global headquarters. The Australian-and Indian-based firms tended to have positive impressions of the legal system due to its similarities to their home countries. However, one Australian firm felt that patent law in the UK provided less protection against theft of intellectual property in comparison to the US.

In terms of taxation it was felt that the UK was "moderate". However, one of the Indian firms that has now relocated part of its operations in the UK felt that the bureaucracy surrounding tax filing was too onerous. Another firm, which was considering relocating to the UK when changes to capital gains tax were being brought into force, changed its relocation decision due to the magnitude of the change.

Some firms, having relocated some part of their operations to the UK without the support of the GEP, provided firsthand accounts of aspects of business administration. One firm, recounting their experience of setting up in the UK described the ease with which a firm can be incorporated compared to other countries. However, other aspects of business administration were not perceived as favourably, for instance, applying for permits and opening bank accounts.

The views provided above suggested that entrepreneurs are primarily positive about the UK from a strategic perspective – as a hub for international expansion – while other factors such as labour market conditions are secondary. This, in turn, may imply that the GEP's role in influencing perceptions of the UK as a strategically important business location may not be as significant as its ability to support companies regarding practical matters such as taxation, legal issues and other aspects of establishing their business in the UK.

## 6.2.3 Engagement with the GEP

The majority of the interviewed firms became aware of the GEP through their network of contacts. Some firms then went on to work closely with the GEP while others only had superficial interactions with a Dealmaker. As discussed above, entrepreneurs already possessed a desire to relocate to the UK and valued the GEP in terms of practical information relating to establishing their businesses in the UK.

Most entrepreneurs initiated their engagement with the GEP following references from other sources. Two were introduced to a Dealmaker after accessing other UKTI services. One was utilising legal services provided by UKTI and the other had been engaging with a UKTI representative at a UK Embassy abroad before being referred to the GEP. Four of the entrepreneurs were referred to the GEP via financiers – either venture capitalists or, in one case, a high net worth individual investor that was familiar with the programme. In two cases, Dealmakers made pro-active approaches to companies after being made aware of them through the press.

The nature and depth of engagement that entrepreneurs had with the GEP varied substantially. However, all entrepreneurs commented positively on the support provided and the inventiveness of the programme. Four entrepreneurs visited the UK on intense, 2-week road shows in which they met a number of UK-based investors and customers; and the other four attended presentations or only had superficial discussions in which they were made aware of the GEP offering and its benefits if they should consider the UK as a strategic headquarters and hub for international expansion in the future. In addition to offering assistance to firms in terms of introductions to potential investors, customers and other parties, Dealmakers offered a variety of contacts in key support services — e.g. accounting and law — that companies found beneficial in terms of easing the uncertainty associated with relocating abroad. Moreover, the entrepreneurs held positive views of the Dealmakers in terms of the assistance they had provided both in terms of developing the firms' business model and also their ability to present their company effectively to potential investors.

Entrepreneurs were asked whether through these interactions their views of the UK as a place to do business had changed. The general sentiment was that (generally positive) perceptions of the UK were long held and the GEP influenced these in only a minor way. Some firms' perceptions, however, seemed to have built-up a positive view of the UK as a result of their interactions with a Dealmaker or use of other UKTI services. One Spanish firm that is currently commercialising a mobile technology had drawn on UKTI support from its incorporation through the UKTI team in the UK Embassy in Barcelona. As a result of this close relationship with UKTI generally and its interactions with the GEP, it developed a positive view of the UK as a place to do business and felt that while relocating abroad was a significant challenge, moving to the UK would be less daunting than other places. That being said, the company eventually moved to the US as it represented a larger market for them (which will be discussed further below). In a similar way, UKTI and the GEP nurtured a positive view of the UK as a place to do business with an India-based ICT firm.

## 6.2.4 Reasons for non-participation in the GEP

The majority of firms viewed their reason for non-participation in the GEP as a matter of circumstance that the programme could not help to overcome. However, two firms elaborated aspects of the programme that might be improved upon.

Four firms accredited their decision to remain in their home market as the result of funding issues. Despite this, they remained positive about the funding assistance provided by the GEP. They observed that the GEP contribution was highly valuable insofar as it gave them the opportunity to present to a number of investors that they would not have otherwise have been able to reach. Further, they speculated that market conditions were the cause for their eventual failure to secure the funding they required to relocate. For instance, one firm met six to eight potential investors but did not receive an offer of investment while another firm received an offer of investment that was too small to finance its relocation.

Interestingly, the firm operating in the corporate governance sector was strongly considering an offer of investment from a UK-based venture capital firm, before they were "pipped to the post" by a foreign high-net worth individual investor that required relocation in his home country as a condition for investment. In describing these events, the entrepreneur emphasised his preference for the individual investor over the venture capital firm due to the latter's very formal investment procedures. He felt that the relationship with the VC firm as investor would not have been responsive enough to help in the development of his firm. For instance, he highlighted strict



criteria that needed to be met before future tranches of funding would be released as the primary obstacle with respect to the terms and conditions they were negotiating.

The firm operating in the aircraft sector described problems in contracting with customers in the UK as the reason for its non-participation in the GEP. Essentially, despite the sizeable costs associated with developing aircraft technologies, the UK customers the company was introduced to through the GEP insisted on only contracting with firms that had already developed their technologies (taking a "wait and see" approach with others). This was not economically viable for the firm and it is currently transacting with a US customer that offers more favourable terms to upstream suppliers. Related to this, one criticism that this entrepreneur made about the programme was its requirement that his firm have a production order before it received funding assistance (when it required funding assistance in order to get to the production stage). The Spanish firm operating a mobile technologies business also referred to its customer base as its reasons to relocate to the US over the UK. Essentially, the majority (32%) of its market is based in the US while only a small proportion of its revenues is generated in the UK (10%). Furthermore, they believed that the US market offers a higher growth potential than the United Kingdom making it a more natural location for the company's business development activities.

In general, it appears that wider business considerations drove firms' relocation decisions more than the offer of assistance from the GEP among this sample of firms (as one might expect).

However, two respondents provided insights into how the GEP might be more effective in encouraging firms to relocate to the UK. One Australian firm highlighted the fact that attempting to interact with UK-based investors and customers is a costly process and to continue with it over an extended period of time with no guarantee of success is a discouraging prospect. This entrepreneur therefore suggested that the GEP provide a small subsidy to firms to overcome some of these transaction costs. Some of the firms corroborated this view by stating that they would feel more committed to the process of relocating to the UK via the GEP if they had been offered some development financing as part of their offer of assistance. Considering the current assistance offered through the GEP, one respondent stated that the programme is "minimising its risk" by passing on all of the financial implications of its recommendations on to potential investors when it might take on some level of financial cost given the UK economy could benefit as a result.

Another suggested improvement to the GEP was put forward by one of the Indian entrepreneurs interviewed. He felt that the GEP was not targeted effectively at firms trying to commercialise their technologies abroad and focused too heavily on providing basic information about the UK and support services that were relatively easily accessible. He felt the programme fell short in terms of providing relevant information relating to developing a business in the UK.

#### 6.2.5 Links to the UK

While the set of firms considered in this part of the evaluation research do not constitute a robust counterfactual, it is still instructive to consider evidence on firm performance and links that these firms have established to the UK to complement evidence elaborated through the quantitative survey and case studies on assisted firms. In line with firms' perceptions of the UK, i.e., that they already had considered the UK as a potential base, many firms are transacting with individuals or organisations in the UK in some form or another even in the absence of support from the GEP.

An Australian video technology firm described that it is established in its home market and was contemplating expansion to the UK through two channels. Firstly, it is considering a collaboration agreement with a UK-based firm to develop a new video content delivery system; and secondly, it is negotiating an agreement for investment from a UK-based investor.

The firm involved in research on corporate governance has a small UK-based operation. Additionally, it works with the Association of British Insurers to produce research, which, while contributing a small fraction to annual turnover (1%), serves as an effective marketing tool to win new business.

The Spanish firm operating a mobile technologies business is aiming to use the UK as a hub for its expansion into Europe in one year's time if it is successful in expanding in its main market (the United States). This is in line with the views the entrepreneur provided throughout the interview regarding her positive impressions of the UK as a place to do business.

Meanwhile, an entrepreneur in-charge of an India-based computing services firm is expanding rapidly worldwide and is currently in talks with several telecoms operators, including BT, about establishing partnership agreements, which it projects will create forty to fifty jobs in the UK.

Some firms are not as positive about their expansion plans or have experienced poor performance over the recent period. An Indian computing services firm has experienced a 45% fall in turnover due to economic conditions and does not expect to expand its presence abroad (e.g. in the UK) in the foreseeable future. The Australia-based environmental management firm, for entirely different reasons, has curtailed its ambitions for moving abroad after a turbulent period of changes to senior management.

#### 6.2.6 Conclusion

Fundamentally, it appears that firms' aspirations to expand their business abroad drive their *motivations* to locate/relocate abroad. In particular, positive perceptions of the UK (section 6.2.2) appear to manifest themselves in terms of companies pursuing their links with the UK (6.2.5) even in the face of setbacks they may face along their growth path (section 6.2.4). In this context, the support that entrepreneurs interviewed appear to value is the provision of practical information on how to set-up and grow their businesses from the UK (section 6.2.3).

# 7 Dealmaker consultation

A consultation exercise was carried out with the Dealmakers on the GEP team in order to gain a deeper understanding of the Programme and to complement the findings of other parts of the evaluation research.

## 7.1 The GEP team

The GEP team consists of eleven Dealmakers (at the time of writing) as well as a three-person team at UKTI Headquarters. Each of the Dealmakers has enjoyed success as entrepreneurs in an international context in their own careers – a fact that they felt is of particular importance to the entrepreneurs that they assist. In addition to this, the Dealmakers each have backgrounds in technology industries, with some possessing deep experience in particular subsectors such as online publishing, security, mobile telecommunications and healthcare. This experience helps the entrepreneurs on the Programme who each own technology-driven businesses. As well as this, some of the Dealmakers possess useful expertise in particular business functions, including corporate strategy and corporate finance.

The Dealmakers reported that they were motivated to join the GEP team for several distinct reasons, but most members were interested in "giving something back" to the UK. This is particularly the case for Dealmakers based abroad who were looking to re-establish their links with their former home country. One of the Dealmakers, who has been involved with UK government policy circles in the past felt that the GEP was a good opportunity to realise his hope for bringing the UK and India closer together commercially. Others joined the Programme particularly because the contacts they could make through the Programme would be beneficial to their private business activities.

The Dealmakers have been a part of the GEP programme anywhere from a relatively short period (eight weeks in one case) to more than six years in the longest instance. The team has seen some turnover and expansion since it began, with five new additions joining within the last year. However, five of the Dealmakers hold relatively long tenures, having been with the programme for between three and five years.

The Dealmakers all work for the GEP part-time, committing, on average, ten days a month to the Programme. However, a number of Dealmakers commented that in reality, they commit significantly more time to the Programme than this due to the demands of the work involved.

## 7.2 The role of Dealmakers

The role of the Dealmakers is to facilitate "deals" — principally the relocation of entrepreneurs/young firms to the UK, but also the investment of capital into these firms and the placement of directors on to their boards. In practice, this involves a two-step process consisting of:

- 1) the selection of entrepreneurs to participate in the Programme; and
- 2) the provision of support.

Regardless of their specific backgrounds, the key resource that each of the Dealmakers drew upon in carrying out their duties is an extensive network of investors, partners, suppliers and customers. Contacts are regularly used to find entrepreneurs for the Programme (described in Section 7.2.1). Additionally, they are drawn upon to identify suitable investors, partners, suppliers and customers for entrepreneurs to utilise once they establish their businesses in the UK (described in Section 7.2.2).

Indeed, each of the Dealmakers placed special emphasis on the importance of these networks. The combined network of the Dealmakers was commented on throughout the interviews, and commended for its global reach and for the variety of transaction experience that contacts within the network possessed. Dealmakers particularly emphasised the quality of prior relationships that other members of the team had with their contacts and the efforts that they each made to leverage these for one another.

These views are echoed in some of the information Dealmakers provided regarding the use of their time and their track record of screening companies. In general, their personal networks were highly valued as a source of entrepreneurial talent compared to other channels such as industry events where entrepreneurs/young firms might be found. One Dealmaker, for example, stated that he committed 80% of his time to sourcing entrepreneurs through networks. Two other Dealmakers stated that they used networks exclusively when seeking out new entrepreneurs for the Programme.

In short, the key message that Dealmakers stressed in describing their roles was how valuable their networks were.

## 7.2.1 Seeking out entrepreneurial talent

#### Overview

The first stage of Dealmakers' duties involves seeking out entrepreneurial talent for the Programme. In essence, Dealmakers use personal contacts involved with start-up businesses, for example, people involved in venture capital funding to gain access to entrepreneurs with interesting start-up companies.

After initiating contact and establishing that an entrepreneur is interested in the GEP, Dealmakers go through personal and team-based processes for selecting the best entrepreneurs for the Programme. Some of the Dealmakers described themselves as being quite methodical in their approach to selecting participants, involving the analysis of technologies, strategic issues and financial questions. Others use more ad hoc processes that they describe as "drawing on their experience", which is less easily described but includes the use of heuristics and recommendations from trusted individuals within networks. At the end of these personal processes, Dealmakers present their suggestions for participants for the Programme to one another, deciding on which entrepreneurs to take on to the Programme and how precisely to support them.

As emphasised above, networks play a crucial role for Dealmakers in carrying out their duties. In seeking out entrepreneurial talent it serves two functions. At a basic level, networks help Dealmakers to quickly assimilate information on a large number of entrepreneurs that they can consider for the Programme. People that Dealmakers know can synthesise the experiences of entrepreneurs they have been involved with for a long time and quickly describe the businesses



they are operating/technologies they have developed. More subtly, people that Dealmakers know play the role of a "quality filter" by only recommending high calibre entrepreneurs/technologies for possible inclusion in the Programme.

Dealmakers identified two channels through which they source entrepreneurial talent: informal networks and events. Disaggregating these channels, they described how competitions for start-up companies run by the likes of technical colleges and universities and technology conferences are among the events at which entrepreneurs may be found; and university and technology parks, angel groups, venture capital firms and government agencies are among the informal networks used to source entrepreneurial talent.

Four of the Dealmakers characterised networks that establish some form of quality filter as a better source for entrepreneurial talent than those that do not. Two Dealmakers for example, spoke about investors such as venture capital firms setting strict criteria that effectively screen out entrepreneurs that would be unsuitable for funding. These criteria, in-turn, serve to screen out entrepreneurs that would be unlikely to gain funding under the Programme. In a similar way, the winners of technology competitions surpass a form of quality threshold, relating to the quality of their product/service.

In contrast, some events set a less refined quality filter as any entrepreneur can gain entry for a fee. One Dealmaker for instance claimed that the only events worth going to are the ones that can only be attended by invitation because they consist of a select group of quality participants. In describing networks that bring forward lower quality entrepreneurs and technologies, Dealmakers also mentioned firms that approach the Programme independently. Two Dealmakers noted that these firms tend to have lower quality technologies.

It was pointed out by one Dealmaker, however, that a trade-off exists between using networks with a high quality threshold and networks with a low quality threshold. For example, sourcing entrepreneurs through contacts within venture capital firms (i.e., contacts with a high quality threshold) implies that entrepreneurs are likely to be at a later stage of development, more entrenched in their home markets and therefore less likely to relocate than firms sourced through other channels. In sourcing entrepreneurial talent therefore, Dealmakers have to "catch" young firms at a stage in their development when they are still willing to relocate to the UK, which involves carefully balancing the trade-offs between different channels for sourcing entrepreneurial talent.

## Selection criteria

Once Dealmakers have finished sourcing entrepreneurs they are tasked with selecting participants for the Programme on the basis of those that might bring the greatest benefits to the UK through innovation, employment creation and income-generating activities.

Some Dealmakers identified heuristics that they use to refine a long-list of entrepreneurs being considered for the Programme down to a short-list of candidates. Typically, young firms are excluded from the Programme if a first-time entrepreneur is involved (due to a lack of experience), the entrepreneur does not have a business plan or if no external funding has been raised. Other Dealmakers commented on how they combine these firm-specific criteria with criteria relating to the economy more generally, such as the ease with which an entrepreneur can access credit from capital markets. At the latter stages of the selection process, Dealmakers present their chosen entrepreneurs to one another in order to gather the insights of other members of the team.

## 7.2.2 Support provided to firms

The eleven Dealmakers were asked to rank a list of options describing how important they felt different types of support given to firms by the Programme were. The aggregate ranking is given in Table 6 and includes the top five responses provided. As can be seen, introductions via networks are seen as the key contributions made by Dealmakers to firms on the Programme. This is followed by financial and strategic advice.

These results are reflected in Table 6 below which shows equally that entrepreneurs are most interested in the introductions that Dealmakers can provide and are also highly concerned about financing their firms.

Table 6: Nature of support offered to firms through the GEP	
Type of support	Rank
Introductions to potential investors/partners/suppliers/etc.	1
Financial advice (e.g. capital structure and valuation)	2
Strategic advice	3
Management/governance	4
Operational advice	5

Note: Only those options in the interview tool that were ranked by three or more Dealmakers are included. Options were ordered from high to low on the basis of the average ranking given by respondents.

Source: London Economics based on Dealmaker interviews.

In addition to ranking options on a list, Dealmakers were given the opportunity to provide an open-ended response to ensure that any significant types of support not covered were also taken into account. One Dealmaker pointed out that it is important for entrepreneurs to receive support on mapping out their "exit strategy", i.e., the plan the entrepreneur intends to use to sell the company that he or she will have built.

Most other Dealmakers used this open-ended question as an opportunity to elaborate on the need for entrepreneurs to have meeting set-up with funders, customers and suppliers (i.e. introductions) as well as financial and strategic advice so that entrepreneurs feel comfortable about setting-up in a new country.

At a high level, several Dealmakers stressed that the key objective is allowing entrepreneurs to make significant progress towards their business goals within weeks of operating within the UK. By setting up introductions with key investors, partners, suppliers and customers and by providing entrepreneurs with support through this process, the likelihood of achieving a successful deal rises dramatically, as entrepreneurs will become less inclined to return to their home markets.

To achieve this objective, one of the key attractions of the GEP to entrepreneurs is the personal experience of the Dealmakers. In describing the offering of the GEP, Dealmakers are able to speak about the difficulties that they had in setting up businesses abroad. They can empathise with entrepreneurs by describing their "war stories" about the slow pace at which they developed their businesses or the difficulty they had in accessing funding without a programme such as the GEP. In



a sense, these personal experiences are one of the key factors that draw entrepreneurs to the Programme.

Entrepreneurs within the GEP do not consistently receive ongoing support (or "aftercare") once they are established in the UK. Some Dealmakers believed this was an important shortcoming of the Programme because of the possibility that, without ongoing support, potentially high value technologies may not be successfully commercialised to the detriment of firms within the Programme and the UK economy more generally. The GEP team are, however, currently developing a formal aftercare strategy in order to help "landed companies" grow and prosper.

However, other Dealmakers believed that the key contributions made by the Programme, especially to the UK economy, were company relocations and funding deals, implying that aftercare would only provide a marginal amount of economic value to the UK economy. In essence therefore, the aftercare of companies already on the Programme was argued to be too costly and time-consuming to prioritise over allocating Dealmakers' resources to attracting new companies to the Programme.

#### **Entrepreneurial concerns**

Table 7 presents more detailed information on entrepreneurs' top concerns from the viewpoint of Dealmakers. Dealmakers ranked the ability to raise funds first, followed by location choice and market size, while several respondents commented on the interrelationships between the three. The ability to raise funds was seen as a key concern partly because of the difficulty posed by the current economic climate but also because the UK is generally perceived to possess significantly less angel and venture funding than other markets such as the US. Location in the UK was seen as a beneficial in regard to particular technologies such as clean technologies and wireless technologies. In addition, the UK market was viewed as a good base from which to access European markets.

Table 7: Dealmakers' views on entrepreneurial concerns with relocation to the UK		
Entrepreneurial concerns	Rank	
Ability to raise funds	1	
Location (e.g. UK versus US)	2	
Market size made available by relocating in the UK	3	

Note: Only those options in the interview tool that were ranked by three or more Dealmakers are included.

Source: London Economics based on Dealmaker interviews.

Dealmakers gave mixed views on a variety of secondary concerns that entrepreneurs have, including the tax system (some felt the level of taxes is too high while others did not) and the legal system (some felt this was a concern for entrepreneurs while others felt it was not a consideration).

#### 7.2.3 Targets

The performance of Dealmakers is currently assessed on the basis of the number of "wins" achieved each year. Originally, wins were based on all deals, including: (i) successfully encouraging an entrepreneur to set-up its global headquarters within the UK; (ii) attracting equity investment into early-stage firms that are a part of the GEP; or (iii) placing a successful foreign entrepreneur on to the executive or non-executive board of a firm that is part of the GEP.

Over time, the programme has focused less on placing senior industry figures on to the boards of GEP firms, with increasing emphasis placed on relocation wins. On average, Dealmakers sourcing entrepreneurs for the programme are expected to achieve 5 to 7 wins per year. Some of the Dealmakers supporting companies within the UK do not have such an explicit target but are judged collectively alongside Dealmakers originating young firms and entrepreneurs for the Programme from abroad.

"Wins" help to ensure a given level of output is achieved by each Dealmaker each year. The benefit of this is that it helps with diversification of risk. As one Dealmaker described: it may be tempting for a Dealmaker to provide a lot of input into particular firms with interesting ideas (and these firms might generate significant economic value); however the risk associated with this is that said firms could fold and therefore the Dealmaker will have achieved very little. The objective of "wins" helps Dealmakers to allocate their resources appropriately between supporting a given firm indepth and supporting many firms.

However, nearly all of the Dealmakers argued that measuring performance solely on the basis of wins leads to an unduly narrow focus for the Programme. This, for example, restricts the amount of time Dealmakers have to contribute to the strategic direction of the Programme, which arguably serves to keep the GEP relevant to entrepreneurs (see Section 1.3.3 for strategic ideas suggested by Dealmakers).

# 7.3 The impacts of the GEP

Dealmakers discussed the benefits of the GEP at two levels: for participating firms and for the UK economy. The interview tool guided respondents to consider the true economic value added by the Programme, without conflating the actions that entrepreneurs may have undertaken to relocate to the UK and grow their businesses in the absence of the Programme. In particular, Dealmakers were asked to provide information on factors that they felt led to some entrepreneurs succeeding within the Programme, while leading others to do less well; and whether successful entrepreneurs would have achieved similar results without the support of the Programme (in terms of the nature of the results achieved, the speed, etc.).

## 7.3.1 Benefits to firms

#### Relocation

Dealmakers were confident that many of the firms participating in the Programme would not have relocated to the UK without the Programme.

#### **Funding**

In addition, Dealmakers were confident that particular funding deals would not have taken place without their intermediation because entrepreneurs would not have been able to gain access to decision-makers within funding organisations (only "gatekeepers" that do not have decision-making power)<sup>22</sup>. More specifically, one Dealmaker highlighted that the GEP fills a niche in the

<sup>&</sup>lt;sup>22</sup> Dealmakers argued that investors, particularly venture capital firms, tend not to engage with entrepreneurs unless the relationship is intermediated by a trusted third party.



funding market because there are very few funds that conduct cross-border transactions, particular involving the relocation of firms.

#### **Business acceleration**

Thirdly, Dealmakers were confident that the amount of time it would have taken for firms to develop their businesses would be far higher in the absence of the Programme. By setting-up meetings with key investors, partners, suppliers and customers and having advice on commercial issues to hand (e.g. on the legal environment), the GEP provides a set of services to entrepreneurs in a matter of days that entrepreneurs would only be able to access in a matter of months if not longer.

Importantly, several Dealmakers highlighted that this "business acceleration" is fundamental to the success of early stage companies because there is a tendency for ideas to fall through if they are not progressed quickly enough. The Dealmakers estimated that around half of the young firms in the Programme would not be operating today without the support of the GEP and that the other half would have taken substantially longer to achieve the results that they have to date.

## 7.3.2 Benefits to the UK economy

Dealmakers strongly believed that in the absence of the Programme, participating firms would not have relocated to the UK. Once firms have established a foothold in the UK economy through the support of the GEP, the Dealmakers described how a proportion of firms within the GEP portfolio go on to thrive. Dealmakers observed that the reason for this rate of success is, in part, due to the selection processes described in Section 7.2.1.

Several of the Dealmakers argued that due to a lack of awareness, many of the entrepreneurs that are now a part of the Programme would not have even begun to consider relocating to the UK without the Dealmakers' support. In other cases, Dealmakers commented that entrepreneurs did not possess the support to be able to relocate to the UK independently, for example, they were unaware of good UK-based consultants to help them navigate the tax and legal environment.

The Dealmakers emphasised that through constant interaction with entrepreneurs they encouraged them to seriously consider the GEP proposition. For example, through one short visit to the UK, entrepreneurs may have successful meetings with several key investors and customers. This establishes the UK as a credible alternative to other markets in the minds of entrepreneurs, which would not have happened without the Programme.

The benefits that the Programme brings to the UK were only described in general terms as an increase in inward investment, employment creation and the tax base. That being said, two of the Dealmakers also identified the possibility that as GEP firms grow they will support a growing set of firms and employees through channels such as supply contracts.

Two of the Dealmakers claimed that "enhancing the entrepreneurial gene pool" was the key benefit of the GEP to the UK. In their view, entrepreneurs experience a form of increasing returns to scale by locating close to one another. That is, the productivity of several entrepreneurs working loosely within the same network in the same city is likely to be higher than the productivity of these same entrepreneurs working in isolation. Putting himself back in the position of a first time entrepreneur, one Dealmaker remarked that observing other entrepreneurs'

successes drove his productivity. He also commented on how he has observed this effect more widely in various centres of technology around North America.

With regard to capital flows, Dealmakers distinguished the GEP from other UKTI programmes. Helping firms to relocate to the UK implies that revenues earned abroad return to the UK as capital inflows, while programmes that encourage inward investment, e.g. through the establishment of a UK subsidiary by a foreign-based firm, involve remittances flowing out of the UK as well as inward investment.

More generally, as Dealmakers work with young firms, they were keen to emphasise that they are a key driver of economic output. One Dealmaker, for example, stated that a large proportion of US GDP is accounted for by firms established after 1980.

## 7.4 The effectiveness of the GEP

Dealmakers provided comments on a number of areas relating to the assessment of the effectiveness of the Programme and future directions for the Programme. The interview tool contained questions about the costs of the Programme and the quality of the Programme relative to private alternatives. In discussing future direction for the Programme, Dealmakers provided ideas on the effects of the recession, the value of the UK government brand, how to scale the Programme up and how to access new sources of entrepreneurial talent.

## 7.4.1 Running costs of the GEP

Many of the Dealmakers emphasised the low costs of the Programme, particularly the fact that Dealmakers were drawing a fee far below the rate that they could command in the private sector.

Three of the Dealmakers also provided in-depth responses on the importance of the Programme being free from the point of view of the entrepreneur. Given that it is generally difficult to assess the quality of third-party advisors prior to paying for a service from them, they tend not to be utilised as much as they might be through formal markets. As the GEP is free it can overcome this problem. In addition, as the sole interest of the Programme is relocating young firms to the UK, Dealmakers believed that entrepreneurs are more willing to trust the Programme with information on their technologies and business ideas compared with third-party advisors that may have an interest to steal this knowledge. Despite this, many, at least partial, alternatives to the GEP exist in the marketplace.

#### 7.4.2 Alternatives to the GEP

Eight of the Dealmakers provided information on their understanding of public and private sector alternatives to the GEP. Firstly, each emphasised how members of the entrepreneurial community see the GEP as a unique, innovative and intriguing Programme. The GEP is viewed in this way because, despite being a government programme, it is able to draw on private sector entrepreneurial expertise through the Dealmakers. One Dealmaker, commenting on the presence of other government programmes in Silicon Valley, described their focus as being squarely on marketing the benefits of their particular countries in order to attract inward investment, which is disconnected from commercial knowledge of how precisely a particular country serves the business needs of young firms and entrepreneurs. The GEP does not suffer from this problem due to the tailored support they provide to participants.



Some government programmes, such as those involved with helping young firms to export have played a complementary role to the GEP. For example, one Dealmaker has cultivated a relationship with representatives of "Austrade" that involves the exchange of prospects for one another's programmes.

In relation to the private sector, Dealmakers described the existence of partial services such as consultants and research houses, as well as some companies that provide a full service analogous to the GEP. However, due to issues surrounding the cost of these services (described in Section 7.4.1), the Dealmakers believed that there is limited demand for them. The closest alternative to the GEP was seen to be venture capital funds that help young companies develop, although the GEP was seen as playing more of a complementary than competitive role to these funds because it conducts cross-border transactions, which most funds do not engage in and are likely to benefit from through funding opportunities.

## 7.4.3 Future directions for the Programme

## Adapting to changing economic conditions

Seven Dealmakers responded in detail about how the Programme has been affected by changing economic conditions. The perception among entrepreneurs is that the UK has been hardest hit by the recession and therefore funding opportunities are highly restricted. The feeling among the Dealmakers was that it is more likely that start-up companies could fail to grow due to a lack of capital despite possessing good quality technologies, than has been the case in recent years. The GEP has taken this insight on board by requiring some firms to have funding in place before the GEP assists them (e.g. this is a requirement for firms relocating from Israel). In contrast, one Dealmaker commented that historically 75% of young firms have joined the Programme without funding.

One Dealmaker commented that the recession may lead to increased interest in the Programme. Firstly, this is because in a more competitive environment for funding any assistance is utilised more intensively. Secondly, foreign firms may see support from foreign government programmes withdrawn due to budget constraints and attempt to substitute this support by applying for assistance from the GEP. This is a fair possibility due to the relatively strong relationship some of the Dealmakers have with officers of foreign government export programmes.

One Dealmaker commented that in response to funding difficulties the Programme should actively develop networks of investors to support the Programme such as high net worth individuals/family offices looking to invest in businesses in their home markets that have an aspiration to move to the UK. This strategy could be particularly useful as: (i) investors are focused on diversification of risk; and (ii) entrepreneurs are finding it difficult to access funding.

Some Dealmakers highlighted that this second issue warrants the ongoing support for companies through an aftercare programme. A high quality young firm relocating to the UK for example, may

<sup>&</sup>lt;sup>23</sup> Austrade assists Australian businesses contribute to national prosperity by succeeding in trade and investment, internationally, and promoting and supporting productive foreign investment into Australia. See http://www.austrade.gov.au/About-Austrade/default.aspx.



fail to grow because of market conditions limiting their access to funding rather than any internal problems, unnecessarily undercutting the impact of the Programme.

#### The UK government brand

Several Dealmakers provided positive remarks about the value of the UK government brand behind the GEP. Two Dealmakers described how they were readily identifiable at conferences as the key contact for establishing any type of presence in the UK. This has allowed Dealmakers to insert themselves within new networks to build up contacts for the benefit of the Programme. As described in relation to Austrade, by exchanging prospects Dealmakers can tap new sources of deal flow.

While over half of the Dealmakers elaborated how entrepreneurs were initially sceptical about the idea of a government-backed programme relating to entrepreneurship, they also commented that preconceptions were quickly dispelled when entrepreneurs realised that Dealmakers, successful entrepreneurs in their own right, were involved. Two Dealmakers pointed out that some companies were particularly attracted by the possibility of using the GEP as a conduit to government clients, which are known to be difficult and time-consuming to procure. That being said, Dealmakers did not emphasise that the Programme was particularly good at facilitating deals between entrepreneurs and government clients, although there have been examples of this (e.g. deals with the Ministry of Defence, the London Organising Committee of the Olympic Games and the National Health Service).

With the overall positive reception that the Programme appears to receive in the marketplace, Dealmakers believed that additional marketing strategies could be used to expand the programme. These are discussed in the sections below.

#### Developing new networks

Three Dealmakers provided a strategic view on how to develop new sources of entrepreneurial talent.

The first insight made regarded the disparity between the young firms that Dealmakers actively seek out through their networks and the young firms that independently seek out the Programme. As mentioned previously, one Dealmaker commented on how entrepreneurs that approach the Programme might not even meet the basic criteria of the Programme (e.g. they are already UKbased). A simple solution to this problem would be to more clearly advertise who is eligible for the Programme.

Another Dealmaker discussed how entirely new networks could be developed around the Programme to attract entrepreneurial talent. As an example, he described how he set-up a mentoring programme for entrepreneurs that provided a ready flow of young firms for the Programme.

A third Dealmaker suggested that establishing the GEP more firmly within business schools could be a fruitful source of entrepreneurs.



#### Scaling the Programme

Several Dealmakers commented on how the GEP is not particularly suited to being scaled up. Generally, they commented that scale tends to require more rigid processes that do not suit the nature of the Programme. More specifically, one Dealmaker noted that the efforts that Dealmakers make to leverage their networks for one another cannot be scaled up easily due to the time commitment required.

One solution to this problem that was suggested was to scale up in "pods". Rather than having one large GEP team the Programme could involve smaller subgroups, organised by technology area or some other criteria. This set-up would ensure that Dealmakers that regularly use a given set of contacts can leverage their combined network effectively while remaining small enough to maintain this combined network. Occasionally, Dealmakers may need to leverage request advice from contacts outside of their subgroup, which they can, of course, still do.

#### 8 **Conclusions**

#### 8.1 **Economic rationale for the GEP**

#### 8.1.1 The benefits of the GEP

The evaluation indicated that the GEP may benefit the UK economy through two major channels. First, attracting entrepreneurs to the UK can have direct benefits through engaging in entrepreneurial activity both through the firms they own (in the case of relocation assistance) and the firms they advise (in the case of talent assistance). Entrepreneurs are key drivers of innovation and the development of new products and, as a result, they provide important contributions to productivity improvements, job creation and economic growth. Given the GEP's focus on knowledge-based industries, these companies may also provide benefits for other firms, through knowledge spillovers. These effects may be magnified if, as is hoped, the entrepreneurs remain in the UK for an extended period, going on to establish multiple businesses.

Second, the GEP may also be able to achieve longer-term benefits through stimulating entrepreneurial activity in the UK more broadly. The activities undertaken by GEP-assisted entrepreneurs are likely to create entrepreneurial opportunities for UK companies. As their firms grow, they are likely to utilise UK-based suppliers. Further, innovation by GEP-assisted firms may stimulate further innovation and could contribute to the growth of industrial clusters, whereby firms operating in a particular technology co-locate to take advantage of knowledge spillovers.

In addition, the presence of GEP-assisted entrepreneurs in the UK has the potential to motivate individuals to become entrepreneurs. Successful entrepreneurs can act as role models or mentors, and hence help nascent entrepreneurs taking the first step to starting a business. Further, as GEPassisted entrepreneurs establish businesses, they are likely to hire UK employees, giving them exposure to high technology sectors and hence the experience they require to start their own firms in the future.

Many of the benefits associated with the GEP are similar to those achieved through inward investment programmes. However, the GEP is distinguished by its stipulation that the entrepreneurs or founders of a business should undertake a significant degree of activity from the UK premises of the firm. This is crucial to many of the longer-term benefits associated with the programme as it ensures that high value activities, such as innovation and research and development are undertaken in the UK, and as such that there are substantial spillover benefits to UK firms. The benefits associated with entrepreneurs acting as role models or mentors are only likely to occur if the entrepreneur is present in the UK. Further, by promoting the relocation of the entrepreneur or founder to the UK it is more likely that any profits achieved by the firm remain within the UK rather than being repatriated to overseas-based owners.

## 8.1.2 The existence of market failure in entrepreneurial location

The evaluation suggested that there is an economic rationale for the GEP based on the existence of an intermediation failure affecting entrepreneurs looking to relocate to the UK. In order to establish a business, entrepreneurs need to be able to find business partners, investors, customers and other contacts. Overseas-based entrepreneurs may, however, find it difficult to identify appropriate contacts in the UK, due to the constraints of geographic distance and (in some cases)



cultural differences. As such, they will face both higher barriers to relocation and reduced incentives to relocate.

Given these difficulties, intermediary services that are able to connect entrepreneurs with networks in the UK are particularly important. It is likely to be difficult to find such services in the private sector, due to the difficulty of assessing the quality of service providers prior to receiving support. Private sector providers may also find it costly to build up sufficiently deep and extensive networks, given the relatively small number of firms that relocate each year.

The GEP is able to fill this gap by providing access to networks of established entrepreneurs through the team of Dealmakers. The evaluation highlighted the range of contacts that Dealmakers are able to provide, including suppliers, customers, regulatory bodies and investors. Although the impact of these contacts is difficult to measure directly, the importance that firms place on them is evidenced by the fact that more than 60% of respondents to the Evaluation Survey identified this as a significant benefit of GEP support. Further, more than 70% of firms commented that support had helped their credibility with investors.

The evaluation also explored a rationale based on a lack of awareness of the benefits of the UK economy as a business location. The literature review highlighted the importance of environmental factors (such as business culture and regulatory conditions) in determining a firm's choices over location and also indicated that the UK offers many advantages in terms of doing business including a stable regulatory and political framework, close links with European and American markets, and use of the English language. If entrepreneurs incorrectly assess the positive aspects of the UK economy (i.e. there is some form of information failure), then this could justify Government intervention. However, the evidence collected did not support this as a rationale. Our discussions both with Dealmakers and with firms indicated that companies are generally interested in relocating their company to the UK before receiving support. Further, the case studies indicated that the Dealmaker had not been required to "sell" the benefits of the UK to assisted firms. While it is possible that the GEP assistance played a role in leading firms to consider the UK as a more credible option for relocation, the evaluation did not suggest that the GEP fundamentally altered firms' opinions of the UK economy as a place to do business.

An alternative rationale for the GEP relates to the spillovers that entrepreneurs bring when relocating to the UK. Entrepreneurs can act as role models that may encourage their staff, and other UK residents to engage in entrepreneurial activity. Through relocating their firms to the UK, GEP entrepreneurs may provide other UK residents with new ideas or new opportunities to innovate. This may occur through employment contracts, collaboration agreements, through interactions with suppliers, or through engagement in common networks. Alternatively, overseas-based entrepreneurs may act as mentors to nascent UK entrepreneurs, providing guidance in management and business skills either through direct training or by example. Where these spillovers exist, the benefits are not fully reflected in the sales or profits of the relocating company. As such, these companies will fail to take spillover benefits into account when deciding whether to relocate, which justifies Government intervention (if cost-effective).

However, while spillover effects are an important part of the benefits of entrepreneur relocation, in the case of the GEP such an argument seems unlikely to be sufficient to justify Government assistance. Given the early stage of development of many of the GEP-assisted firms, the private benefits firms receive through relocation (i.e. the knowledge transfer they obtain through

interaction with other firms) may be significant. As such, in the absence of other market failures, firms would have an incentive to relocate even in the absence of Government assistance.

## 8.1.3 Firms targeted by the GEP

The objectives of the GEP are broad in scope, including attracting overseas-based entrepreneurs, talent and investment as well as promoting the UK as a location of choice for entrepreneurial activity. However, in recent years the focus has been primarily on targeting early-stage companies and offering them assistance to locate to the UK. By relocating an existing company many of the benefits discussed above, such as encouraging innovative activity, are achieved directly.

This raises the question of whether a broader focus on attracting "high impact" firms would be justified. Previous studies have suggested that the firms with the highest impact on job creation are generally relatively old, rather than start-up companies. Further, they are not restricted to high technology sectors. This suggests that there could be considerable benefits from relocating larger firms in more traditional sectors, in addition to the knowledge-based start-up firms targeted by the GEP. Further, evidence suggests that a wide range of entrepreneurial activity occurs within larger and more established firms, suggesting that this approach would be appropriate given the GEP's objectives.

However, while successfully relocating larger firms might be beneficial to the UK economy, we believe the rationale for Government support is weaker in relation to these companies for three reasons. First, the GEP appears to effectively target entrepreneurs with companies that are most likely to be seeking to relocate internationally. The smaller and younger firms focused on by the GEP face relatively small relocation costs, due to lower sunk costs and a lower level of 'embeddedness' in local networks. The GEP's focus on high-growth internationally-oriented firms is also supported by the evaluation evidence, as these firms are particularly likely to feel they need to relocate in order to take advantage of broader investment opportunities, and to ensure they can sell their product on sufficient scale. Hence convincing entrepreneurs of the benefits of relocating these firms is likely to be easier.

The programme's focus on companies that are most likely to be looking to and able to relocate is particularly important given the recent findings of a report by Bessant, Phelps and Adams (2005). This indicated that firms grow through a series of "tipping points". Further, where direct intervention is required, it will be most effective at such tipping points, where firms are more aware of the need for external knowledge. The GEP takes such an approach by providing support at the point at which a start-up is looking to relocate. Further, Dealmakers generally focus their attention on companies already interested in relocating to the UK – i.e. those clearly aware of their need for assistance. A wider scope for the programme, involving targeting entrepreneurs in larger firms, would be less likely to offer intervention at an appropriate point and, as a result, would be less likely to be successful. On the other hand, if entrepreneurs signal a willingness to relocate larger companies to the UK, then there is no reason not to provide assistance.

Second, it is also likely that the extent of the market failure is greatest for entrepreneurs operating within smaller firms. Larger companies are more likely to have access to global networks which would allow them to relocate even in the absence of Government support.

Third, by focusing on entrepreneurs with businesses in high technology sectors, the programme is targeting activities that are most likely to have a beneficial impact on the UK economy. Compared



to firms in more mature markets, firms operating in "new industries" have the potential to grow to be market leaders. Further, these companies also have the ability to benefit other UK businesses with several studies showing that co-location of firms in research-intensive sectors can lead to knowledge transfers between companies, more rapid innovation and hence broader economic benefits.

#### 8.2 Effectiveness of the GEP in meeting its key objectives

#### 8.2.1 Results of the evaluation research

The GEP is by nature a long-term programme and, given the short period over which it has operated, the evaluation was necessarily limited in the scope of the benefits that it has been able to measure. The impacts that have been measured to date relate to the firms that have relocated to the UK following support, or those firms that have been assisted in finding entrepreneurial talent or in raising funding. It is not possible at this stage to assess the extent of any wider benefits due to entrepreneurs engaging in further business activity, or stimulating other entrepreneurial activity. Further, as only a small number of interventions have been completed to date and as the form of support offered has developed over time, some caution is required in drawing strong conclusions from the research results. This is particularly the case if the programme looks to expand in the future, either in terms of entering new geographical areas, or targeting firms operating in other technology areas.

The evidence that has been collected has indicated that the GEP appears to be achieving its goals in terms of attracting overseas-based entrepreneurs and their companies to the UK. Around 45% of respondents to the evaluation survey stated that they would definitely or probably not have relocated to the UK in the absence of assistance. There is, however, a significant element of deadweight loss associated with the programme. Around 40% of respondents stated that their company definitely or probably would have relocated to the UK in the absence of the programme. This may, however, be a necessary drawback of the scheme, given the difficulty in identifying ex ante whether companies would relocate without assistance.

The survey also suggested that the companies targeted meet the characteristics identified in the programme's goals. The companies that have been assisted appear innovative, with over 80% of firms engaging in product innovation and a similar proportion undertaking research and development activities. Just over 50% of respondents stated that they held granted or pending patents, with almost a quarter of firms possessing exclusive commercialisation rights within the UK. Further, it appears that these companies are embedded in the UK, becoming involved in UK networks and most companies using UK suppliers.

Although the evaluation indicated that the majority of firms remain at an early stage of development, this evidence suggests that the firms supported operate in knowledge-based industries with the potential for significant spillover effects, and that they envision themselves as firms with the potential to reach a worldwide market. While these indicators are clearly not conclusive, they at least suggest that the GEP is supporting activities that have the potential to have significant impacts on the UK economy.

The evaluation also suggested that the GEP is able to achieve interventions at a low cost compared to the potential benefits. Further, the cost per intervention appears to have fallen over time, from approximately £83,000 per intervention between 2005/06 and 2007/08 to around £55,000 between April 2008 and December 2009.<sup>24</sup> The companies assisted are relatively small at present compared to those targeted by inward investment programmes, and the size of the potential benefits is extremely uncertain. However, if the programme is able to achieve its ambition of helping a client to build a very large company, the benefits to the UK are likely to considerably exceed this value.

## 8.2.2 Considerations for future evaluation research

Although the short lifespan of the GEP limited the range of impacts that could be measured in this evaluation, the research identified five major areas which are likely to be important considerations for future studies. Given the complexity and firm-specific nature of many of these impacts, a longitudinal research design which follows GEP-assisted firms and entrepreneurs over time may be required.

First, the benefits associated with the programme will clearly be affected by the growth of the initial businesses that have relocated to the UK (or received other firms of assistance). Over time, firms' growth will determine both effects on employment and also the size of knowledge spillovers onto other UK firms. In addition, it will be interesting to observe whether GEP-assisted companies continue to innovate over time, or whether they focus on consolidation after an initial product development phase. If even one firm successfully grows to become "the next Google", then the returns to the UK could be very significant.

Second, over a longer time period the extent to which GEP-assisted firms have truly become "embedded" in the UK economy will become more observable. The types of firms assisted through the GEP often have firm-specific technologies which may benefit other UK firms in the same sector, even if the initial company fails to succeed. The size of the spillover benefits that accrue to the UK will depend on whether and how they continue to engage with UK networks, use UK suppliers, and hire UK employees.

Third, unlike traditional FDI projects GEP-assisted firms are predominantly UK-based. Consequently, it may be that GEP firms do not repatriate their profits abroad as would commonly be expected of foreign companies investing in the UK. It will also be important to understand whether the UK remains the focal point of their business over time or whether key operations move abroad. The evidence from the literature review suggested that it is likely to be difficult for companies to relocate as they become larger. However, it remains possible that key functions (such as R&D activities) could more elsewhere.

Fourth, the wider activities of the entrepreneurs attracted to the UK through the GEP should also be considered. If these opportunities would not otherwise have been taken up (i.e. there is no displacement effect) then there are potential benefits to the UK economy.

Finally, the GEP may also have a wider economic impact through stimulating other individuals to engage in entrepreneurial activity. If the programme is successful in contributing to an

<sup>&</sup>lt;sup>24</sup> Cost per intervention is estimated based on the total cost of the programme (including both programme and administration costs), and including interventions where companies were assisted for the first time. Given the difficulty in assigning interventions to a particular date, these figures are necessarily approximate. Further, as this measure accounts for only one "intervention" per company, and as each company may receive multiple assists, the cost per assist will be lower than the figures reported here.

entrepreneurial culture, then UK citizens should become more willing and able to take up entrepreneurial activities. Such an effect is, of course, hard to measure. One potential route through which to address this in future studies might be to consider any employees of GEP-assisted firms that go on to become entrepreneurs in their own right.

#### 8.3 Recommendations

## The GEP has a sound economic rationale and should be continued

The GEP is able to encourage overseas-based entrepreneurs to relocate to the UK through overcoming intermediation failures. Dealmakers are able to provide firms with contacts and access to networks that may be difficult to achieve in the absence of support. This not only attracts high value business activity to the UK, but also has the potential to contribute to the development of new networks within the UK and hence promote entrepreneurial behaviour in the future. While the potential benefits of the GEP are long-term in nature, and so cannot be quantified at this stage, the evaluation has found that there is a strong economic rationale for the continuation of the programme.

## Innovation and flexibility are key components of the GEP's successes and should be retained

The evaluation evidence indicated that the GEP has developed an innovative approach towards attracting entrepreneurs to the UK. Many of the activities undertaken as part of the programme reflect concepts that have only recently been recognised in the academic and policy literature, and we are not aware of similar programmes in other countries. The evaluation indicated that the programme has been successful in using the talent and private sector experience of the team of Dealmakers to both assist companies and also achieve benefits for the UK economy as a whole.

In particular, it is notable that the GEP has been willing to undertake a broad range of activities in order to achieve its programme objectives. Many of these, such as network building, are hard to measure and may only achieve benefits over a medium to long-term period. However, these types of activities may be particularly beneficial in the long-run through encouraging the development of a self-supporting entrepreneurial culture in the UK. Further, given the changing nature of the business environment, it may be that the type of assistance that entrepreneurs require changes rapidly. As such, it is important that the GEP team is able to retain the flexibility to engage in new activities both to adapt to the changing needs of entrepreneurs and also in order to ensure the longer term success of the programme.

#### The criteria for receiving relocation assistance should be clarified

The criteria on which relocation assistance is offered are not currently clear. Some of the highest profile successes involve early-stage firms relocating their global headquarters to the UK. However, many interventions involve co-locations whereby the UK firm involves a strategic or regional headquarters or another form of facility.

Such interventions may be justified by the broad scope of the GEP goals and by the fact that entrepreneurship can incorporate corporate venturing as well as the establishment of new firms. GEP interventions require that an element of the firm's strategic development is undertaken from the UK premises post-relocation. However, the basis on which this is assessed is not laid out at present. There is no clear elucidation of the ways in which assisting these firms is expected to be of

benefit to the UK economy. Clearly, a "check list" of criteria would be inappropriate, but a general outline of the types of entrepreneurial behaviour that are anticipated to occur following assistance would both provide guidance for future interventions and also act as a useful basis for ongoing evaluation of the programme's success.

This is particularly important as the economic rationale for this form of support appears weaker than when relocating a firm's global headquarters to the UK. Where the UK operation is only a branch of a foreign company, it is not clear that the entrepreneur will engage within the UK to the same extent. The firm may be less likely to become embedded within UK networks, and be less reliant on UK suppliers. As such, spillover effects will be smaller and future company profits are more likely to be repatriated to the company's host country.

# Cautious and gradual steps should be taken to expand the GEP, taking care to maintain the quality of the support

Given the success of the GEP in successfully attracting firms and entrepreneurs to the UK to date, there is a sound economic case for seeking to enlarge the scope of the programme. Although it is not possible to estimate accurately, it seems likely that there is a sizeable pool of entrepreneurial talent that could be at least considered as potentially eligible for GEP support. The Global Entrepreneurship Monitor has shown, for instance, that more than 1% of the adult population in many developed countries (including those where Dealmakers operate such as the United States, Canada, Israel and Australia) are entrepreneurs that expect to employ at least 20 people within five years of operation. Even if only a very small proportion of these entrepreneurs meet other eligibility criteria (such as operating in relevant technologies, and being interested in moving to the UK) the potential demand for the GEP would considerably outweigh the current number of assists that occur annually (less than 30 per year). Similarly, there are a very large number of seed-stage start-up accelerator programmes<sup>25</sup> (some of which the GEP has networks of contacts in), which suggests that there are a large number of early-stage companies that are potential clients of the GEP.

However, any moves to expand the size of the programme must be undertaken with caution in order to ensure that the GEP's reputation is not undermined. The evaluation has shown that the programme's strength lies in the quality of support offered by the Dealmakers due to their enthusiasm, business knowledge and access to private networks. Finding additional individuals that hold these characteristics and are willing to engage with the GEP may be difficult or costly.

Alternatively, expansion could take the form of expecting the current Dealmaker team to achieve a greater number of assists each year. However, if this leads to a reduction in the level of support offered to each client, the reputation of the programme, and the extent to which it is able to attract firms to the UK, may suffer. In addition, the evaluation indicated that much of the success of the programme has been due to the Dealmakers' ability to selectively match high quality firms with relevant networks in the UK. This process is in itself limiting, as networks are likely to have a limited capacity to accept new members each year. Expansion of the programme may also weaken the strong signal that selection into the GEP can send to investors about the quality of a firm.

Robert Shedd, for example, lists over 60 seed stage start-up accelerator programmes in operation worldwide: http://blog.shedd.us/321987608/

#### The balance between relocation and other forms of assistance should be reconsidered

The evaluation suggested that there is a rationale for GEP support to be offered through all three channels, including talent and funding support as well as relocation. In recent years, the programme has focussed increasingly on providing relocation assistance. However while this is likely to be the highest impact form of support, other forms of assistance may still be beneficial. The economic rationale outlined above suggests that the intermediation service that the GEP provides has the potential to provide early-stage firms originating in the UK with access to entrepreneurial talent that may help them grow. It may also be the case that by undertaking a range of forms of assistance, the GEP is able to reach a broader pool of overseas-based entrepreneurs (e.g. very experienced entrepreneurs may be less likely to be in the early-stage companies targeted by the GEP).

#### The GEP should continue to build entrepreneurial networks within the UK

The GEP should continue to encourage assisted entrepreneurs to engage with UK networks, both to develop their businesses and also to help with the knowledge spillovers that are a key part of the rationale for the programme. As emphasised throughout the evaluation, networks are a crucial part of business growth through their role in finding appropriate business partners and overcoming informational problems. Continuing to stimulate and grow networking activity within the UK thus seems a key part of the GEP's goal to promote the UK as a location of choice for entrepreneurs.

The GEP's role provides it with a unique position to oversee the development of entrepreneurial networks. As the number of GEP-assisted firms continues to grow, the GEP team will have contacts with a large body of both nascent and experienced entrepreneurs. As such, the GEP should continue to consider innovative ways through which to promote networking activity, reflected in existing initiatives such as the "the Alumni Connect Group". If opportunities arise, expanding these networks further, particularly to incorporate relevant UK firms and organisations, could be extremely valuable.

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# Annex 1 Literature review

# A1.1 Concepts of entrepreneurship

Despite an extensive economic literature on the subject, there is no agreed definition of either "the entrepreneur" or "entrepreneurship". It is clear that entrepreneurship is multi-faceted, and can include a wide range of tasks and activities, including innovation, risk-taking and decision-making. However, many of these activities overlap with other business activities (e.g. management) and as a result it is difficult to isolate the key attributes that define "an entrepreneur".

Different schools of thought have viewed the process of entrepreneurship in different ways. <sup>26</sup> For example, Cantillion (1931) and Knight (1921) viewed entrepreneurs as unique in their ability to grasp economic opportunity on the basis of predicting future events, thereby emphasising the uncertainty surrounding entrepreneurial activity. Schumpeter (1934), in contrast, considered entrepreneurship more in terms of the creation of breakthrough innovations and how this can lead to economic progress, e.g., through new processes that improve the use of existing resources or the development and commercialisation of new products. On the other hand, Say (1803) and Marshall (1890) placed greater focus on the specialist knowledge and skills possessed by an entrepreneur in running an enterprise. Reflecting this diversity of opinions, Hébert and Link (1982) produce a typology of definitions for the entrepreneur used by classical through to modern economists, as shown in Table 8 below.

Table 8: Typology of definitions for the entrepreneur				
The entrepreneur is				
The person who assumes the risk associated with uncertainty				
The person who supplies financial capital				
An innovator				
A decision-maker				
An industrial leader				
A manager				
An organiser and co-ordinator of economic resources				
An owner of an enterprise				
An employer of factors of production				
A contractor				
An "arbitrageur"				
An allocator of resources among alternative uses				

Source: Hebert and Link (1982)

While there are important differences, there are several areas which are common to all concepts of entrepreneurship. Godin et al. (2008) have summarised these into six points:

 $<sup>^{26}</sup>$  For a more detailed discussion of the conceptual frameworks underlying entrepreneurship, see Godin et al. (2008).



- **Enterprise:** The first dimension captures the drive to pursue profit through effort. Importantly, this distinguishes entrepreneurship from innovation for its own sake.
- Innovation: Entrepreneurs innovate through creative decision-making that leads to the realisation of a profitable opportunity.
- Process: The entrepreneurial process is inherently temporary, covering the period leading up to a product being brought to market.
- **Risk-taking**: Entrepreneurial decisions necessarily involve acting in the presence of uncertainty (e.g. over the outcomes of the process).
- The spectrum of entrepreneurial action: entrepreneurial innovations can vary considerably in scope, including both ground-breaking innovation and incremental changes.
- **Economic change:** Entrepreneurs are a key driver of economic change, through their role in bringing innovations to markets, increasing competition and effectively allocating capital.

In light of this range of definitions, it is clear that entrepreneurs operate across a wide range of contexts. Although most commonly associated with small and new firms in high-growth industries, entrepreneurs can equally operate within large companies and in established industrial sectors. Indeed, data from the Global Entrepreneur Monitor (discussed in more detail below) shows that in innovation-driven countries such as the UK, entrepreneurship arises more often within the context of corporate venturing rather than through the establishment of new firms (Hessels, Hartog and Wennekers, 2009). Further, it is clear that entrepreneurs have effects at a macroeconomic, as well as a microeconomic level, through both employment and economic growth (this is discussed in more detail below).

Given the significance of entrepreneurs, policymakers have attempted to take them into account in designing economic policy. However, due to the large number of definitions for entrepreneurs and related to this, the large number of impacts they have on the economy, it has been difficult to determine which aspects of entrepreneurship to promote and which policies will have the largest, most beneficial impact on economic outcomes.

Indeed, substantial differences arise when definitions of entrepreneurs or entrepreneurship are incorporated into macroeconomic models. One of the key conceptual differences arises in whether economies are viewed as generally in "equilibrium" or "disequilibrium". In equilibrium models, economic progress is a steady process and the discovery of entrepreneurial opportunities tends to be incremental in nature. Moreover, entrepreneurial ability is assumed to be equally distributed across different economies, implying that empirical differences in entrepreneurial activity primarily reflect economic conditions. This implies that policy should focus on improving business conditions – and market failure in particular – in order to spur on entrepreneurial activity. This approach is reflected to some extent in the monitoring of business conditions by supranational institutions such as the World Bank through their "ease of doing business" index and aspects of the Lisbon agenda relating to the promotion of entrepreneurship through the reduction in "red tape".



In contrast to this, disequilibrium models emphasise large, step-wise change in economic progress that can be achieved through the discovery of significantly important entrepreneurial opportunities. Fundamentally, these significant opportunities are unequally distributed across economies and the improvement of business conditions or market failures is likely to be insufficient to equalise differences in access to entrepreneurial opportunities. Disequilibrium models further take into account the possibility that entrepreneurial ability may be located unevenly across different economies, suggesting that the role for economic policy relating to the entrepreneur may be far-reaching. Venkataraman's (1997) definition of entrepreneurship highlights the range of considerations that policymakers may need to take into account when he states that entrepreneurship is simultaneously the study of "how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited".

#### A1.2 **Entrepreneurial activity and attitudes in the UK**

In order to place the companies supported through the GEP in context, it is important to understand the existing profile of UK entrepreneurial behaviour. As such, we present findings from the Global Entrepreneurship Monitor (GEM), which measures the entrepreneurial activity, attitudes and aspirations in several countries worldwide, including the G7 (Canada, France, Germany, Italy, Japan, United Kingdom and United States) and the "BRICs" (Brazil, Russia, India and China).<sup>27</sup> The research is based on a survey of the general adult population – 32,007 entrepreneurs in the case of the UK in 2008 (Levie and Hart, 2008).

#### A1.2.1 **Entrepreneurial attitudes**

First, we consider perceptions of entrepreneurs and of opportunities for starting a business. This gives an indication of how entrepreneurship is perceived in the UK relative to other countries - and may provide some suggestions as to appropriate actions for Government to take to increase levels of entrepreneurial activity.

Data on entrepreneurial attitudes is collected by the GEM in order to help to explain rates of entrepreneurial activity. To ensure unbiased measures are constructed, the GEM surveys the proportion of the working population (18-64) in its Adult Population Survey (APS) that are not nascent entrepreneurs or business owners. It is hoped that the measures used will avoid excessively positive responses that entrepreneurs or business managers might feel compelled to provide by choosing not to survey this group.

The findings for entrepreneurial attitudes in the UK are shown in Table 9 below – figures show the percentage of survey participants responding positively to the questions posed. The data suggests a moderately strong entrepreneurial culture, with 47% of those surveyed believing that they have the capabilities to start a business. This is roughly in line with other countries such as the US and Italy; however, significantly higher than countries such as Japan. Opportunities for start-ups are perceived to be good in the short-term, though the 2009 level is close to one-third lower than the 2007 level, which is likely to be due to the more challenging economic climate. Fear of failure remains high as a barrier to new business creation, with 32% citing this as the reason for not exploiting a perceived business opportunity in the UK (slightly lower than the G7 average).

<sup>&</sup>lt;sup>27</sup> More detail on the GEM is available at www.gemconsortium.org.



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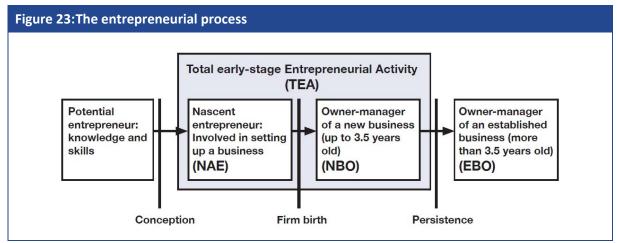
Table 9: Entrepreneurial attitudes and perceptions (% of respondents)							
	"Perceived opportunities"	"Perceived capabilities"	"Fear of failure"	"Entrepreneurial intentions"	"Entrepreneur as a good career choice"	"High status to successful entrepreneurs"	"Media attention for entrepreneurship"
G7 countries							
US	28	56	27	7	66	75	67
France	24	27	47	16	65	70	50
UK	24	47	32	4	49	73	44
Japan	8	14	50	3	28	50	61
Italy	25	41	39	4	72	69	44
Germany	22	40	37	5	54	75	50
G7 avg.*	21.8	37.5	38.7	6.5	55.7	68.7	52.7
BRIC countries							
China	25	35	32	23	66	77	79
Brazil	47	53	32	17	73	57	51
Russia	17	24	52	2	60	63	43
BRIC avg.*	29.7	37.3	38.7	14.0	66.3	65.7	57.7

Note: \*Data on India and Canada not available. The variables reported are based on seven questions asking individuals whether they: see good opportunities to start a firm in the area where they live ("perceived opportunities"); believe they have the required skills and knowledge to start a business ("perceived capabilities"); indicate that fear of failure would prevent them from setting up a business having also perceived entrepreneurial opportunities ("fear of failure rate"); intend to start a business within three years ("entrepreneurial intentions"); agree with the statement that in their country, most people consider starting a business as a desirable career choice ("entrepreneur as a good career choice"); agree with the statement that in their country, successful entrepreneurs receive high status ("High status to successful entrepreneurs"); and agree with the statement that in their country, you will often see stories in the public media about successful new businesses ("Media attention for entrepreneurship").

Source: GEM (2009)

# A1.2.2 Entrepreneurial activity

The GEM distinguishes between different stages in the entrepreneurial process, as illustrated in Figure 23.



Note: To qualify as a nascent entrepreneur, a business must have begun to commit resources (e.g. time or money) and not have been paying wages for more than three months; to qualify as a NBO, a business must have been paying income for more than three, but not more than forty-two, months.

Source: Bosma, N., Acs, Z., Autio, E. and Levie, J. (2008).

The TEA index (i.e. the proportion of people who are involved in setting up a business or owners-managers of new businesses) in the UK in 2008 stood at 5.5%, comprised of nascent entrepreneurs (2.65%) and new business owner-managers (2.85%). The TEA rate in the UK has been relatively stable in recent years, varying between 5.4% and 6.4% over the period 2002 to 2008.

Entrepreneurial activity rate varies regionally, with a substantially higher TEA rate in London (9.4%) than in other NUTS2 regions in the UK. In fact, a London resident has twice the propensity to start a business in the next three years compared to residents of other regions. London also has a relatively low ratio of established business owner-managers to early-stage entrepreneurs, as well as a relatively high business closure rate.

In 2008, a total of 40,455 business deaths were recorded in London among all companies, with over 90% of closures recorded among companies employing between 0 and 4 people. In the same year in London, a total of 59,100 businesses were set-up with a large proportion (over 90%) employing between 0 and 4 people. These data suggests that business performance is most volatile amongst the smallest companies but that, on average, significantly more businesses are being established than dissolved, i.e., the ratio of births to deaths is in the region of 1.5 among all companies in London.

Internationally, the UK is a moderate performer in terms of entrepreneurial activity as shown in Table 10. The UK rate of TEA (5.5%) is slightly below the average of G7 countries (6.0%), lagging behind the US but higher than that of Japan, Italy and Germany. In comparison with BRIC nations, the UK lags far behind China, Brazil and India, but lies above Russia. The moderate position of the UK regarding entrepreneurship is also reflected in intermediate rates of established business ownership, business churn, early-stage business survival rate, growth expectations with respect to G7 and BRIC countries.

Table 10: Measures of entrepreneurial activity in G7 and BRIC countries, 2008, sorted by TEA rate (% individuals)								
	I expect to start a business in the next 3 years	Nascent Entrepreneurial Activity rate (NEA)	New Business Owner- manager rate (NBO)	Total early-stage Entrepreneurial Activity (TEA)	Established Business Owners (EBO)	Business closure rate (last 12 months) (BC)	Proxy early-stage business survival rate (EBO/TEA)	Proxy business churn rate BC/(NBO+EBO)
G7 countries								
US	12.4	5.9	5.0	10.8	8.3	2.7	0.8	0.2
France	15.2	3.8	1.9	5.6	2.8	1.7	0.5	0.36
UK	6.8	2.8	2.9	5.5	6.0	1.4	1.1	0.16
Japan	8.0	3.2	2.3	5.4	7.9	0.6	1.5	0.06
Italy	9.2	2.0	2.7	4.6	6.5	1.2	1.4	0.13
Germany	6.2	2.4	1.5	3.8	4.0	1.0	1.1	0.18
G7 avg.**	9.6	3.4	2.7	6.0	5.9	1.4	1.0	0.16
BRIC countries								
China*	37.2	6.9	10.0	16.4	8.4	6.1	0.5	0.33
Brazil	25.0	2.9	9.3	12.0	14.6	2.2	1.2	0.09
India	32.7	6.9	4.9	11.5	16.5	4.8	1.4	0.22
Russia	5.3	1.7	2.0	3.5	1.1	0.8	0.3	0.26
BRIC avg.	25.1	4.6	6.6	10.9	10.2	3.5	0.9	0.21

<sup>\*2007</sup> estimate. \*\*Data on Canada unavailable. Some columns do not add exactly, as reported in the original data source. Source: Global Entrepreneurship Monitor UK 2008 Report (p. 14)

## Entrepreneurial activity by migration status

Levie (2006) uses GEM data to show that migrant status has a positive effect on the level of new business activity in the UK. This may be an important result for a programme such as the GEP, which aims to attract foreign entrepreneurs to relocate to the UK. Data presented in Table 5 suggests greater entrepreneurial activity among migrants insofar as in-migrants (those relocating from other UK regions) and immigrants (those relocating from abroad) tend to have a higher level of education and more positive entrepreneurial attitudes than life-long residents of the UK. Inmigrants may be more likely to perceive opportunities for starting a business in the area that they live in than life-long residents, as 31.3% of in-migrants surveyed responded positively to a question about perceived opportunities relative to 26.9% of life-long residents. Other indicators – relating to entrepreneurial skills, attitudes towards risk and networks – suggest similar differences between in-migrants'/immigrants' and life-long residents'. In terms of skills, 52.1% of immigrants surveyed believe they have the skills to be an entrepreneur compared to 44.6% of life-long residents. Fewer in-migrants (33.8%) indicated that a fear of failure would deter them from

setting-up a business compared to life-long residents (34.1%), implying that more in-migrants may possess the risk characteristics required to set-up a business. Additionally, more in-migrants and immigrants answered that they knew an entrepreneur compared to life-long residents, which may relate to their likelihood of setting up their own businesses in the future.

This evidence, alongside the main finding of the Levie (2006) study, suggests migration has a positive impact on levels of entrepreneurship.

Table 11: UK entrepreneurial characteristics, by migration status					
	Life-long residents	In-migrants	Immigrants		
Mean age	38.6-39.2	41.9–42.4	36.7–38.1		
% with further education	33.5	50.1	62.0		
Opportunities*	26.9	31.3	29.9		
Skills*	44.6	51.4	52.1		
Fear of failure*	34.1	33.8	35.1		
Know an entrepreneur*	23.0	26.0	30.5		

Note: \*Figures report percentage of people that answered "yes".

Source: Levie (2006)

## A1.2.3 Entrepreneurial aspiration

Entrepreneurial aspiration may be the set of GEM measures that are of greatest relevance to the Global Entrepreneur Programme. Three measures — "High Job Expectation", "New Product Market" and "High or Medium tech sectors" — are used to understand the contribution entrepreneurial activity might have on the economy as a whole through its employment effects and its contributions in the form of new products and technologies.

#### **Employment generation**

The percentage of entrepreneurs that expect to create more than ten jobs and grow by more than 50% over the next five years is presented in Table 12, split by country. One clear pattern that emerges is that the owners of businesses that are greater than 3.5 years old (established business owners, EBOs) have significantly lower expectations than entrepreneurs in the TEA group. This may partly be due to EBOs having realised some or a major proportion of their employment and growth aspirations or respondents in the EBO group having more pessimistic expectations about the future, given their three and a half years of operating a business.

Compared to the G7 average, a smaller proportion of UK entrepreneurs in the TEA group expect a high rate of employment growth (15.2% versus 19.0%), although the proportion of EBOs is similar (at 4.6%). The highest incidence of High Job Expectation TEA occurs in Japan, Russia and the US; where approximately one-quarter of entrepreneurs believe they will grow substantially over the next five years. As such, on average, there may be a rationale for attracting entrepreneurs from these regions due to the positive employment effects they generate.

Table 12: Rates of entrepreneurial aspiration							
	High Job Expectation (% TEA or EBO greater than ten jobs and growth >50%)			New Product Market (% of all TEA or EBO)		High or Medium tech sectors (% of all TEA or EBO)	
	TEA	ЕВО	TEA	EBO	TEA	EBO	
G7							
UK	15.2	4.6	22.0	2.0	12.0	8.9	
France	17.4	5.7	23.6	1.4	3.8	0	
Germany	11.2	2	24.3	0.7	2	3.9	
Italy	15.2	3.7	10.8	2.4	12.5	8.3	
Japan	25.7	3.3	13.3	1.9	2.2	2.8	
US	29.2	8.5	20.2	4.2	7.3	4.7	
G7 average*	19.0	4.6	19.0	2.1	6.6	4.7	
BRIC							
Brazil	8.8	2	3.8	0.8	3.3	2.4	
Russia	13	18.1	11.5	0	4.7	0	
India	3.1	6.6	5.3	0.7	0.8	1.9	
China	26.6	10.8	8.9	2.8	6.3	2.6	
BRIC average	12.9	9.4	7.4	1.1	3.8	1.7	

Note: EBO (early business owners), TEA (total entrepreneurial activity).

Source: GEM UK 2008, p.24

#### Innovative products and technologies

The TEA group in the UK believes that it brings new products to the market more so than the TEA groups in the G7, on average; in addition, there is a far greater incidence of entrepreneurs operating in the high or medium technology among the TEA group than the G7 averages (12.0% compared to 6.6%).

While this data suggests that the UK outperforms other countries in measures of innovation, this data must only be used cautiously in regard to the GEP because while the UK outperforms comparison countries on average, there is still a rationale for attracting exceptional entrepreneurs or "outliers" to the UK that may have significant economic impacts.

# A1.3 Economic benefits of entrepreneurs and start-up firms

The discussion above has summarised the theoretical frameworks that have been used to discuss the entrepreneur, and has discussed empirical evidence relating to various aspects of



<sup>\*</sup>Data on Canada unavailable as they did not participate in the survey in 2008.

entrepreneurship. In this section we develop this to discuss the channels through which entrepreneurs are predicted to provide economic effects.<sup>28</sup>

Little empirical evidence investigates the impact of entrepreneurial behaviour directly and instead, studies have tended to focus on entrepreneurs through an analysis of young, small or newly established firms. From a conceptual standpoint these businesses are not necessarily entrepreneurial (particularly when identified on the basis of firm size). However, given the GEP's focus on identifying young start-up companies as a basis for attracting entrepreneurs to the UK, these studies remain relevant to assessing the strength of the rationale for the GEP.

#### A1.3.1 **Employment**

Through undertaking innovative activities and bringing new products to market, entrepreneurs are able to drive job creation and hence increase the level of employment. In practice, the approach taken to measure the employment effects relating to entrepreneurship is to determine whether small or young firms (i.e. firms that have been established by entrepreneurs) generate more job creation than their larger or older counterparts. It is found that smaller firms tend to drive economy-wide job creation (Davis, Haltiwanger and Schuh, 1996) to a greater extent than larger firms but that newer firms tend toward greater staff turnover than older firms (Davis and Haltiwanger, 1992) and that science-based or innovative technology firms generate greater employment effects than other firms (Almus and Nerlinger, 1999; Weigand and Audretsch, 1999).

Classic studies such as Birch (1987) argue that smaller firms create more jobs than their larger counterparts in the US. Gallagher and Stewart (1986) and Storey and Johnson (1987) find similar results for the United Kingdom – that small enterprises create most new jobs. However, there are a number of statistical problems with the approach taken in these studies, and as such, it is difficult to conclude whether or not smaller firms create notable employment effects. 29

In response to this, Davis, Haltiwanger and Schuh (1996) show that when these issues are corrected for smaller firms still account for a disproportionately large percentage of job creation and a disproportionately small percentage of job destruction in the US, implying that small firm characteristics may have important employment effects. In a more recent study, Haltiwanger, Jarmin and Miranda (2009) found that business startups and young businesses play an important role in U.S. job creation. Konings (1995) comes to similar conclusions using UK data when correcting for some of the statistical issues highlighted in footnote 29.

In regard to age, Davis and Haltiwanger (1992) find that younger firms have larger fluctuations in employment (i.e. job creation and destruction) than their older counterparts. They are able to accredit this to a "learning effect". As firms age, they gain a greater understanding of their cost

A second issue is the establishment of a benchmark year against which firms' future employment figures are compared. In general, larger firms are more likely to have experienced a transitory spurt in net employment creation while smaller firms are more likely to have experienced a transitory fall in net employment creation. The result is that in future years, these transitory fluctuations will be rectified and it will appear that smaller firms are growing faster than larger ones.



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<sup>&</sup>lt;sup>28</sup> The following draws on literature reviews conducted by Audretsch (2002) and Van Praag and Versloot (2007).

<sup>&</sup>lt;sup>29</sup> Firstly, the approach that these studies take tends to focus on job creation over job destruction. That is, while smaller firms have systematically higher job creation rates, they may also have higher job destruction rates, creating an inaccurate impression of the employment effects associated with smaller firms.

base and growth potential, permitting them to employ a stable number of workers (or at least grow their staff at a stable rate). Initially, however, they are experimenting with different configurations of labour and capital, which create relatively large fluctuations in observed rates of employment creation and destruction.

Despite the results relating to the employment effects of young or small firms, neither set of studies target the specific companies that are the main focus of the Global Entrepreneur Programme. One paper, by Almus and Nerlinger (1999), however, looks at differences between the employment effects of what they term new technology-based firms (NTBFs) and non-innovative young firms, finding that the net employment effects of NTBFs is positive, while this is not the case for non-NTBFs. In addition, in the German context, Weigand and Audretsch (1999) find that science-based SMEs increase employment by 3.57%, which is greater than non-science based SMEs (3.17%).

In sum, the evidence suggests that small, technology-related firms may have particularly significant employment generation effects. However, one caveat regarding the evidence of employment effects of early-stage technology companies is that it is unclear whether changes in firm-level employment reflect a net benefit on an economy-wide basis. Companies new to the UK may be hiring workers that were employed at other, UK-based companies, but are less productive in their new jobs. This may be the case, for instance, if workers had built up a large amount of firm-specific knowledge that is not transferable to their new roles. The implication is that positive employment effects need not be economically beneficial.

## A1.3.2 Productivity

A complementary line of research to that relating to the employment effects of entrepreneurship, therefore, are studies relating to productivity effects, measured through wages. This is because if a new firm is willing to pay a higher wage to a worker than his or her current firm, given certain assumptions, the new firm is revealing that it is able to employ this worker in a more productive way, which implies a net benefit to the economy.

"Static" studies, which take a snapshot of productivity at a point in time, generally tend to show that smaller firms employ workers less productively. Brown, Hamilton and Medoff (1990), for example, show that larger firms pay higher wages to their employees, indicating that they may be more productive. In a literature review on entrepreneurship, Van Praag and Versloot (2007) corroborate this observation with many other studies with similar findings.

However, determining the causal relationships between smaller or younger or more innovative firms and productivity is a complex problem. One of the main issues is that employees within smaller firms (for instance) may be less productive than in larger firms because they have not yet built-up enough firm-specific knowledge to work effectively. Empirically, "dynamic" studies corroborate this assertion by tracing worker productivity over time. For instance, Audretsch et al. (2001) shows that less productive workers in smaller firms eventually grow and pay their workers higher wages than other large firms (Audretsch et al., 2001).

From a policy perspective, these findings provide a twofold rationale for assistance provided to firms through the GEP. Firstly, supporting younger/smaller/more innovative firms can have beneficial effects on competition over time as they grow. Secondly, low productivity workers can



become high productivity workers, implying that there may be positive growth impacts associated with the support of younger/smaller/more innovative firms.

Van Praag and Versloot (2007) consider the literature relating labour productivity and growth from a macroeconomic perspective and find, on balance, that larger firms tend to employ more productive labour. However, this may be due to a variety of reasons, including: an "experience effect" associated with older firms, e.g. the build up of firm-specific knowledge leads to improved labour productivity; and a "survival effect", insofar as the larger firms that are solvent are more likely to employ productive workers than firms that have closed their operations. On balance, larger firms do intend to employ more productive workers; however strategic support of smaller firms could produce these larger more productive firms over time.

## A1.3.3 Innovation

Innovation, while intuitively considered to generate economic benefits, is challenging to measure. Three approaches have been taken – the measurement of R&D inputs (employment and expenditure), intermediate outputs (patents) and final outputs (products). The measurement of R&D inputs and intermediate outputs tends to capture innovation unreliably compared to final outputs. Evidence based on the latter measure suggests that smaller firms are more innovative and this is perhaps due to more risk-taking management structures and the "new economy", in which product lifecycles are much shorter than they once were.

In terms of R&D inputs, Castany et al. (2005) shows that larger Spanish firms invest 2.5 times more than small Spanish firms into R&D. In terms of intermediate outputs of R&D, Almeida and Kogut (1997) and Sørenson and Stuart (2000) show that entrepreneurs produce fewer patents within the semiconductor and biotechnology sectors than their counterparts.

Measuring R&D inputs and intermediate outputs have a large number of methodological shortcomings, however.<sup>30</sup> A particular problem with measuring R&D inputs is that innovative activities taking place in small companies tends to be underestimated because it takes place informally implying that studies using this approach would underestimate the innovation effects of firms with a similar profile to those participating in the GEP.

The most fruitful approach to measuring R&D is through final outputs that directly measure innovation by asking companies about significant new products that have been introduced in their sector. On the basis of one such dataset for small businesses in the US, Acs and Audretsch (1990) show that in some sectors large firms are the innovators (e.g. pharmaceuticals) while in other sectors small firms are the innovators (e.g. ICT). However, where larger firms innovate more, this tends to be because of barriers to innovation such as capital-intensity or a monopolistic market

The issues with measuring intermediate outputs of R&D are: (i) patented "inventions" may not be successfully commercialised to become "innovations"; and (ii) some firms do not patent their innovations, due to the length of the patenting process (which exceeds the product lifecycle in some sectors) or because they prefer to protect their innovation through other means (e.g. secrecy).



The issues with measuring R&D inputs are as follows: (i) by focusing on inputs, there is no indication as to the economic value of products or processes that may be generated through R&D activity; (ii) this approach creates a bias towards companies that invest formally in R&D, thereby underestimating the level of innovative activity that may take place informally (see Kleinknecht, 1987; Kleinknecht and Verspagen, 1989; and Kleinknecht et al., 1991); and (iii) R&D activity may not be focused on innovation per se, but other activities such as imitation, for instance.

structure. Further, the authors show that smaller firms, in general, tend to innovate more per employee than larger firms.

Several interpretations have been provided to explain patterns favouring smaller firms. Rothwell (1989), Scherer (1991) and Link and Bozeman (1991) highlight differences in management structure (the tendency of larger firms to be more bureaucratic and less risk-taking) as one of the causes that explain differences in innovative activity. Scherer (1988) also describes how some innovations require the accumulation of a number of smaller inventions before a significant advancement can be realised and that it is generally not in the interest of larger corporations, relatively, to support such incremental improvements. Jovanovic (2001) argues that changes in the economy that now emphasise new technologies with short product lifecycles has seen a shift toward favouring younger or smaller firms as drivers of innovation, when previously this was not the case.

In regard to innovation, therefore, there appears to be a rationale for the GEP's focus on small firms developing new technologies, which can have a knock-on effect on the rate of economic growth, as elaborated below. That being said, research in the area of innovation has produced conflicting conclusions and it is difficult to conclude with confidence one way or another – in favour of entrepreneurial firms or larger organisations. In a review of the literature, van Praag and Versloot (2007) conclude that "entrepreneurs invest no more in innovations than their counterparts and they produce fewer innovations. However, the quality of their innovations may be higher and these innovations seem to be produced more efficiently." (p. 16).

## A1.3.4 Innovation and economic growth

Technological innovation is considered to be the fundamental driver of economic growth in the long-run. This finding is established in models of economic growth and empirical studies. However, as these studies are of a macroeconomic nature, they do not consider the microeconomic foundations of technological innovation as it relates to the entrepreneur. Entrepreneurs are seen as the agents that take abstract technological innovations and transform them into economically valuable products. However, there is little empirical evidence of this process in the economic literature.

This reflects the general difficulty in pinning down innovative processes. Models of neoclassical economic growth (e.g. Solow, 1956) when tested empirically, have accredited growth to tangible factor inputs, such as labour and capital and technological innovation, the latter of which is treated as "exogenous" and immeasurable (e.g. Mankiw, Romer and Weil, 1992).

More recently, researchers have attempted to explain the process of technological innovation through growth models. Romer (1986), for instance, describes an economic model in which investments in research and development can spur on technological progress. Grossman and Helpman (1990) emphasise the network effects associated with research and development processes, demonstrating that the number of domestic and international linkages researchers have has a positive influence on the rate of economic growth. Aghion and Howitt (1992) also analyse the economic aspects of technological innovation in their model, which shows that economic growth is driven by factors such as the size of the skilled labour force, the productivity of research and levels of investment in innovation taking place in other firms. These models highlight how economic agents (e.g. entrepreneurs) might go about innovating; however, they do not



provide direct insight into the contribution that the establishment of early-stage companies might have on the economy.

Some policy studies have attempted to relate levels of entrepreneurship to economic growth. Thurik (1999) for instance, finds that entrepreneurship, measured by levels of business ownership is positively related to employment growth in a cross-sectional study of OECD countries based on 1984-1994 data. Audretsch (2002) draws similar conclusions by measuring entrepreneurship on the basis of firm size and on the basis of levels of self-employment. Notably, the Global Entrepreneurship Monitor study (Reynolds et al., 2000) comes to a similar conclusion; although as the authors of this and the other studies conclude, it is difficult to draw concrete conclusions regarding the relationship between entrepreneurship and growth on the basis of this data.

## A1.3.5 Spillovers

As well as the firm-specific benefits discussed above, entrepreneurs may be able to provide broader economic benefits through their relationship with other firms. For instance, innovation in one firm may inspire innovation elsewhere – as shared knowledge pools benefit all firms within a geographic area. If this is the case, firms may benefit by locating nearby to one another, for instance, due to knowledge sharing. However, due to their inability to appropriate the returns of the knowledge they share with other firms (potentially), there is likely to be a suboptimal level of co-location among firms. There is therefore a role for government intervention in incentivising the optimal level of co-location from a society-wide perspective. This provides a particular rationale for a programme, such as the GEP, that focuses on the location of entrepreneurial activity, as opposed to promoting entrepreneurship more generally.

The spillover literature emphasises the need for firms, particularly those involved in high-tech sectors, to co-locate in order to fully benefit themselves and the wider economy from their innovative activities. Regional agglomeration or industrial clusters – in which private and public organisations or academic research laboratories locate nearby to one another – have been highlighted as a feature of knowledge-intensive sectors (e.g. the life sciences and pharmaceuticals). These are hypothesised to arise because organisations benefit from one another's research and development activities through faster innovation than might be expected if these same organisations were not located nearby to one another.<sup>31</sup>

The presumption, therefore, is that knowledge is "sticky" -- it is transferred more effectively when organisations are located nearby to one another, e.g., formed into industrial districts, science parks or learning regions. In particular, distance matters in cases where knowledge is transferred between organisations in a tacit form (as opposed to in a codified, and hence easily transferrable, form). The transfer of tacit knowledge might require demonstration involving face-to-face contact or hands-on training and is likely to rely on mutual trust between the organisations involved.

In making their location and relocation decisions to industrial clusters, organisations typically only reap part of the benefits created through their research and development activities. They may be able to monetise their inventions by commercialising products or registering intellectual property,

<sup>&</sup>lt;sup>31</sup> This may take place through the more rapid commercialisation of existing technologies, which the current focus of innovation policy (e.g. set out in the Lisbon Strategy) as opposed to the traditional emphasis on basic research or invention



but they are unlikely to benefit from tacit knowledge that they transfer to other organisations within an industrial cluster. This shortfall in the incentive to locate nearby to one another implies a tendency for fewer/smaller industrial clusters to form than might be optimal for innovation.

From the perspective of an economy as a whole, such as the UK, this is detrimental because innovation is the key driver of long-run economic growth. Innovative steps increase the productivity with which the resources of an economy are utilised, which expands national income. If fewer industrial clusters form than is optimal, the rate of innovation and the rate of economic growth may be below its potential level, stifling national income growth. The implication of the knowledge is "sticky" hypothesis is therefore that there may be a role for Government to foster regional agglomeration/the formation of industrial clusters.

The evidence suggests some support for the sticky knowledge hypothesis. Jaffe, Trajtenberg and Henderson (1993) and Almeida and Kogut (1997) find that knowledge flows from academic research to innovative firms are more likely to occur if the research institution is located closer to the firm. The authors trace knowledge flows on the basis of patent citations. Maurseth and Verspagen (2002) observe that cross-citations between two regions drops significantly as distance increases, lending further support to the sticky knowledge hypothesis. In the Netherlands, Brouwer et al. (1999) find that firms within industrial clusters produce a greater number of products than firms located elsewhere. While Kelly and Hageman (1999) show that US state-level knowledge transfer (measured by the stock of patents in all other sectors) determines the level of innovation (measured by patenting activity).

Aharonson, Baum and Feldman (2004) note, the role that knowledge spillovers play in the entrepreneur location decision is not clear. They note the contrasting pressures underlying the location decision; spillovers can flow to and from the entrepreneur. On the one hand, new entrepreneurs will want to co-locate with active and innovative incumbents within the same area of technology. On the other hand, they will want to locate away from potential competitors to protect the entrepreneur's innovation and knowledge. They find that the first weakly dominates the latter effect, due to the increasing returns from geographical concentration and the development of cooperation norms. Van Praag and Versloot (2007, p. 135) find that "entrepreneurial firms produce important spillovers that affect regional employment growth rates of all companies in the region in the long run."

While the above studies suggest that knowledge transfer is easier when organisations are located nearby to one another, Breschi and Lissoni (2001) attempt to uncover precise channels through which knowledge transfer takes place. Firms locating next to universities, for instance, may lead to the creation of localised markets for highly skilled labour. That is, firms hiring many university graduates and researchers may lead the workforce to achieve levels of productivity that they would be unable to reach if employed elsewhere. Alternatively, firms may be involved with universities explicitly via collaboration agreements through which researchers' findings are commercialised by firms.

Within the biotechnology sector, Powell et al. (2005) conduct tests of how inter-organisational knowledge transfer takes place with a variety of interesting results. Firstly, well-established firms tend to prefer diversity, partnering with organisations involved in activities dissimilar to theirs; however, this is not the case for less-established firms. Secondly, the most well-connected firms do not necessarily have an advantage in increasing the size of their network relative to other organisations. And thirdly, "network expansion reflects a choice of partners that connect to one



another through multiple *independent paths* (emphasis added), which increases 'reachability' and the diversity of actors that are reachable" (Walter et al., 2005).

In sum, there is evidence of the benefits of firms co-locating together but the precise channels through which these are achieved might be less clear. At first sight, it might appear that merely co-locating with other organisations can yield benefits for the wider economy through the transfer of tacit knowledge. However, in reality, organisations may reach these benefits via labour markets, collaboration agreements or other mechanisms.

# A1.4 Which types of firms have the greatest economic impact?

The literature suggests, as discussed above, that entrepreneurs and small firms are able to provide significant economic benefits, in the form of job creation, innovation and through the provision of spillover effects.

However, understanding more precisely which types of firm have the greatest economic impact allows for better targeting of government support. Importantly, evidence suggests that it is not the quantity but the *quality* of start-ups that is important for economic impact. In this regard the literature on high impact firms ("gazelles") and "born global" firms that export from day one are considered below. Unfortunately, the results of this analysis prove inconclusive, with the existing empirical literature providing different findings for different contexts as to which types of firms generate the largest economic impacts.

## A1.4.1 Characteristics of high impact firms ("gazelles")

Much of the literature in this arena has identified "gazelles" as high-growth firms, which is not necessarily synonymous with firm age or size. A Department for Business, Enterprise and Regulatory Reform (BERR) report in 2008 considered the role and impact of high growth firms in the UK, noting that high-growth firms contribute a disproportionate amount to employment growth and tend to display higher-than-average levels of productivity. Therefore, while smaller, younger and technology-based firms might create positive employment effects, gazelles appear to be a special group of firms that are particularly strong job contributors. The OECD defines gazelles as: "all enterprises up to 5 years old with average annualised growth greater than 20% per annum, over a three year period, should be considered as gazelles". From a policymaking perspective, being able to identify gazelles early is beneficial for designing programmes of assistance for firms.

A recent review of the literature by Henrekson and Johansson (2009) involved a meta-analysis of the empirical evidence regarding the net employment growth contribution of so-called gazelles. They found that high-growth firms are outstanding job creators; that gazelles are, unambiguously, responsible for the creation of all or a large share of new net jobs. <sup>32</sup> Acs, Parsons and Tracy (2008) find some quite different findings in the context of the US on which firms are job creators. Firstly, the average age of a high impact firm<sup>33</sup> is 25 years old and that there are very few high impact start-up firms. Secondly, in regard to size, high impact firms can be small or large. Thirdly, in terms

<sup>&</sup>lt;sup>33</sup> A high impact firm is defined as possessing sales that have at least doubled over a four year period and an employment growth quantifier (the relationship between its absolute and percentage change) of two or more over the period.



<sup>&</sup>lt;sup>32</sup> An adaptation of their meta- analysis, including summary details of the studies included, is presented in the Annex.

of job creation, the balance between small and large firms was even over two of the three time periods under consideration (1994-1998 and 1998-2002). Fourthly, high impact firms are not restricted to any particular industry or sector (e.g. "high-tech" sectors). Finally, the location of high impact firms are not concentrated in particular geographic areas and can be found in almost all regions, states, metropolitan areas and counties. The Acs, Parson and Tracy (2008) study also considers super high impact firms, which double their sales and revenue in more than one time-period and expand their employment over eight years or more. These firms tend to be large, employing more than 500 employees.

In the UK context, a recent report by Anyadike-Danes et al. (2009) concurs with the findings of Acs, Parson and Tracy (2008). In regard to age, the majority of high growth firms (70%) are at least 5 years old. From a sectoral perspective, high-growth firms are not concentrated in any particular activity, with each major sector representing at least 4-10% of all high growth firms. Interestingly, the report also shows that over the period 2002-2005, the UK had one of the largest shares of high growth firms among OECD countries, suggesting the outward focus of the GEP, at least among OECD countries, might not lead to the largest Programme impact.

Overall, while Henrekson and Johansson (2008) find that on average gazelles *are* younger and tend to be smaller than the population of other firms, recent evidence considers high impact firms to have quite a different profile (e.g. Anyadike-Danes et al., 2009). This implies that targeting firms by certain high-level criteria such as age and company size might not necessarily be favourable. Further, there appears to be little evidence that high growth firms operate primarily within high-technology sectors of the economy.

## A1.4.2 Born Global firms

While the literature relating to "gazelles" has distinguished firms primarily by their high growth rates, a separate tract of literature has focused on "born global" companies that internationalise at an early age. Traditionally, firms have been expected to develop their international activities incrementally, moving into export markets from an established home market. However, new literature has analysed firms that operate in an international market from an early age. (Turnbull, 1987; Knight and Cavusgil, 1996; Madsen and Servais, 1997; Oviatt and McDougall, 1999)<sup>34</sup> and that these have substantial economic impacts. Harris and Cher Li (2007) for instance find that born global companies play an important role in the economy – while 2% of all firms in the marketable goods and services sector of the economy were 'born global' in 2000-2004, they accounted for 6.8% of total employment, 8.1% of total UK turnover and 14.5% of export value.

#### Definitions and identifying characteristics

Rasmussen and Madsen (2002), in a review of the born global concept, identify born global firms as firms that are involved in international activities from birth. In a similar fashion, Knight and Cavusgil (1996) identify born global firms as "small, [usually] technology-oriented companies that operate in international markets from the earliest days of their establishment". Empirically, Harris

<sup>&</sup>lt;sup>34</sup> The concept of "International New Ventures" (INVs) as put forward by Oviatt and McDougall (1994) is closely related to that of "born global" firms.



and Cher Li (2007) identify born global companies as aged 5 years or less and having completed overseas sales transactions within 2 years of establishment.<sup>35</sup>

Prior to the born global literature, other concepts were used to identify these types of firms: McDougall, Shane and Oviatt (1994) identify an "international new venture" as "a business organisation that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries"; Ganitsky (1989) referred to these firms as "innate exporters", which are more flexible and have a larger international outlook but are limited in their experience and resources; and Hedlund and Kverneland (1985) analyse "leapfrogging" companies that jump the stages of development that firms are traditionally believed to go through before they are able to export.

Some studies view market conditions as the key drivers of some firms' ability to export from a very early stage of their development. Hedlund and Kverneland (1985) argue that the likelihood of a firm being born global increases the more homogenous export markets are, with Young (1987) concurring with this conclusion but only for high-tech firms. Knight and Cavusgil (1996) identify characteristics such as changing production and communication technologies, as well as international networks as a key force behind the emergence of born global firms.

Other studies believe that firm characteristics drive the likelihood of a firm being born global. Rasmussen et al. (2001) and Harveston et al. (2000) find that a powerful determinant of being born global is a management commitment to internationalisation. Similarly, Madsen and Servais (1997) find that firms export more quickly if the manager or founder has knowledge about international markets and is able to reduce uncertainty surrounding exporting. Harris and Cher Li (2007) find indicative evidence supportive of this contention for the UK, identifying that a far higher proportion of born global companies are foreign-owned (27%) than other exporters (21%) and especially, non-exporters (4%).

In addition to foreign ownership, Harris and Cher Li (2007) also identify other characteristics of born global firms that might help them to begin exporting early. The authors especially recognise their absorptive capacity, in particular, in internalising external knowledge for the purposes of innovation, and hypothesise that this impacts on firms' propensity to export. Based on their measures, born global companies have, on average, 57% more absorptive capacity than other exporters and non-exporters. These differences are largely driven by comparisons between born global companies and non-exporters and the authors find that 'born global' companies are generally not more innovative compared to other exporters.

In an attempt to capture the various studies on born global firms and related concepts, Rialp et al. (2005) conclude that the factors that create born global companies are not well-established with the authors researching the area drawing conclusions on the basis of context-specific features that do not generalise easily.

<sup>&</sup>lt;sup>35</sup> Coviello and Jones (2004), in a review of methodological issues in international entrepreneurship research, note that age of firms considered to be born global vary across studies but six years old appears to be the cut-off point for a firm to be characterised as born global.



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#### **Policy implications**

Given the array of available definitions for born global firms it is difficult to derive precise policy implications from this literature.

On the one hand, it may be difficult to clearly distinguish born global firms, as it relies on the definition used. Some born global companies identified for assistance may be spin-offs from well-established parent companies, and due to this knowledge and experience, these firms may be able to internationalise successfully without the need for government support (Madsen and Servais, 1997). In these cases there is little rationale for assistance through programmes such as the GEP. More generally, given the mix of firms that come under the umbrella term of "born global", policy measures appropriate for one set of firms may not be for another.

Rasmussen and Madsen (2002) attempt to take a step back to understand the commonality across the born global literature. They highlight that the underlying concern of each study they review is, essentially, the internationalisation of small firms. This literature deals with accelerating the process of internationalisation by addressing the difficulty of managing a small firm in regard to market expansion, export models, cultural issues, etc. (Misenbock, 1988; Ghauri and Herbern, 1994; Bagchi-Sen, 1999; Carrier, 1999; and Graham, 1999). In this context, there is a rationale for the GEP, which assists companies through its networks and access to support services, aims to accelerate the process of internationalisation.

In summary, the emerging literature on gazelles and born global companies appears to provide a fruitful avenue for targeting government assistance through programmes such as the GEP. However, careful examination of the empirical evidence suggests that it is not easy to target assistance on the basis of observable firm characteristics and that careful consideration must be paid to potential programme participants on a case-by-case basis.

# A1.5 Determinants of entrepreneurial relocation

Given the GEP's focus on encouraging entrepreneurs to relocate to the UK, it is important to understand the factors that underpin their locational decisions. Unfortunately, we have not identified any literature directly addressing this issue. Instead we discuss the evidence relating to the choice of firm location on the basis that entrepreneurs' decisions are likely to be driven primarily over the optimal location for the business in which they are primarily involved.

The majority of previous studies have addressed the initial location decision of a *business* rather than the decision of businesses to relocate. The determinants of relocation are clearly similar to initial location decisions. As such, this literature provides a useful framework in which to analyse choices over relocation. However it is important to note that relocation choices differ in that they result from a series of previous decisions taken by the firm (Arauzo Carod and Manjón Antolín 2007).

It is possible to identify three main approaches in location theory: neoclassical, behavioural and institutional (Hayter, 1997; Brouwer, et al., 2004; Arauzo Carod and Manjón Antolín, 2007).<sup>36</sup>



<sup>&</sup>lt;sup>36</sup> The following summary of the three approaches is based on Brouwer, Mariotti and van Ommeren (2003).

Under the neoclassical theory, firms are assumed to be rational and make their choices in order to maximise expected benefits. Under this model, the decision is affected by push factors affecting profitability in the original location, and pull factors affecting possible profitability at the new site.

The behavioural approach is similar to the neoclassical model in its reliance on firms as individual agents. However, in contrast to the neoclassical approach, it assumes that entrepreneurs have cognitive limitations and hence fail to process information fully and rationally, settling for suboptimal outcomes. Under this approach, both relocation costs and imperfect information are seen as significant barriers to firm relocation. The behavioural approach also tends to place greater emphasis on the importance of internal firm characteristics, such as age and size, in determining relocation decisions.

In contrast to both neoclassical and behavioural approaches, the institutional approach sees economic activity as operating within a socially shaped environment. As such, firms' relocation decisions are a result of their negotiations with other bodies such as customers, suppliers and Government.

These three approaches identify a number of factors that underlie firms' decisions to relocate, and their choice over where to relocate to. We discuss factors these below, distinguishing between two groups: those that are specific to the firm, and those that relate to the relocation environment.

## A1.5.1 Internal firm factors

Firm-specific considerations are also key factors in the decision to relocate. Lack of space at the existing location and accessibility of the site are particularly important in this respect (van Dijk and Pellenbarg, 1999). An alternative set of obstacles has been put forward by Lichtenstein and Lyons (1996), who summarise the difficulties faced by entrepreneurs as including: obstacles to using resources; availability of raw materials; availability of suitable workforce; information about resources (visibility); costs; delivery problems; and capacity problems. Further, Malecki (1997) argues that the primary obstacle faced by small firms is the shortage of resources, and in particular financial resources. Wright, Westhead and Ucbasaran (2007) on the other hand stress the liabilities associated with 'smallness' and 'inexperience'.

Brouwer et al (2004) test (and subsequently accept) four hypotheses regarding the characteristics of firms associated with firms likely to relocate. The first hypothesis considers that firms are thought to be more likely to relocate if they are smaller. As firms become larger, the costs of relocation become greater both because they are faced with a greater loss through sunk costs in the original site and also due to greater organisational difficulties. Larger companies on the other hand are able to manage expansion better through the development of a network of plants or through acquisition (Van Dijk and Pellarberg, 1999).

Secondly, older companies are thought to be less likely to relocate than younger companies. This prediction is based on the institutional approach discussed above, and the expectation that older firms are more likely to be embedded in local networks.

Third, firms are thought to be more likely to relocate if they serve larger markets. Larger markets provide firms with a wider spread of customer links. In addition, it also presents the opportunity to partially relocate operations, without suffering sunk costs in the additional market.

The final hypothesis relates to the impact of firm growth on the likelihood of relocating. As firms grow they are required to find a new site. In the particular case of start-ups, once a company has passed through the "initial survival" stage, mobilising and generating additional resources is likely to mean that a more appropriate business location needs to be found (Stam, 2006).

## A1.5.2 Environmental factors

The discussion above has highlighted the findings of the literature regarding which types of firms are more likely to choose to relocate their operations. However, it does not consider where entrepreneurs choose to relocate – or whether they choose to relocate within the same region, within the same country or internationally. In fact, the literature identifies a number of characteristics that promote entrepreneurial behaviour, and which make a location attractive (or unattractive) to entrepreneurs. Dubini (1989), for instance, argued that some areas have environmental deficiencies that hinder entrepreneurship. In particular, these "sparse environments" were found to include a lack of entrepreneurial culture, traditions of entrepreneurship, family businesses, or innovative industries. In addition, they also suffered from weak infrastructure, weak capital markets, few effective government incentives and the absence of networks and support services.

We consider the important environmental factors in the decision of where to relocate in more detail below, with reference to the situation in the UK where appropriate.

#### **Business climate**

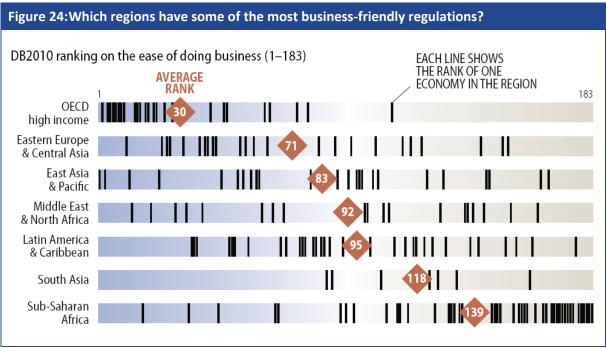
One driver of entrepreneurial activity is whether the system of government regulations in a given economy assists or hinders economic activity. The ability to establish a business at low cost and the ease with which firms are able to access credit are key pull factors for entrepreneurs as poor business climates stifle business performance. Particularly in the case of high technology sectors, where product lifecycles are short, the ability to establish a business rapidly may be an important determinant of success.

The World Bank ease of doing business index attempts to capture regulations that assist entrepreneurs to conduct economic activities, particularly those operating small- and medium-sized enterprises (SMEs) that may be relevant to companies participating within the Global Entrepreneur Programme. Ten indicators are used in total and these relate to:

- starting a business;
- dealing with construction permits;
- employing workers;
- registering property;
- getting credit;
- protecting investors;
- paying taxes;
- trading across borders;
- enforcing contracts; and
- closing a business.



The index ranks countries on the basis of each of these indicators and the overall average is used to determine the ease of doing business index across 183 countries. The average rank among OECD countries is 30<sup>th</sup> in the world as shown in Figure 24, with the underlying figures (not shown) showing the United Kingdom to be ranked 5<sup>th</sup> in the world. This suggests that entrepreneurs may be motivated to locate to the UK or relocate to the UK from other countries except from Singapore, New Zealand, Hong Kong and the United States – where conditions for establishing, operating and closing a business are better than in the United Kingdom.



Source: World Bank, Doing Business database

#### Agglomeration/clusters

As indicated above, agglomeration or already-formed industrial sectors may be an important pull factor for businesses to relocate. This is because relocating firms may be able to tap into the an array of knowledge-based resources that other firms make available to them, including access to innovative ideas, customers, investors, highly skilled employees, etc. In addition, there may be competitive benefits associated with agglomeration/clusters insofar as observing one's competitors drivers further internal innovation.

Feldman (2001) notes that one of the most observed features of entrepreneurial location is the propensity for entrepreneurs to cluster geographically. Whilst little is known about the conditions and the factors that lead to the establishment of clusters, once established, clusters become virtuous circles that are self reinforcing.

Cooke (2002) identifies five ingredients of knowledge-based clusters, with each of the five manipulable by policy:

- research funding;
- a systemic method of supporting clusters of new businesses;
- incubators for new firms;

- venture capital; and
- policy intervention to build clusters outside large metropolitan areas.

Notably, Figuiredo, Guimaraes and Woodward (2001) find that foreign location choices are often governed by agglomeration economies and proximity to major urban centres.

## Venture capitalists and financing opportunities

Research conducted by the OECD (2009) highlights that funding assistance targeted at SMEs venturing across borders is central to achieving economic growth. This contention is based on two stylised facts. Firstly, that cross-border venturing has a significant effect on economic growth (OECD, 2009). Secondly, smaller, newly internationalising SMEs face credit constraints due to factors such as a lack of international contacts from whom to access external finance (OECD, 2009).

A recent report by BERR (2009) highlights the importance of funding assistance for SMEs and the UK economy as a whole. For instance, it suggests that the productivity gap between France and Germany on the one hand and the UK on the other is based on differences in capital intensity (e.g. the UK is using less intangible capital such as intellectual property, software, branding and process improvements). It is claimed that this gap can be closed through the improved provision of funding to UK SMEs.

Due to recent economic conditions, funding problems in the UK have become an issue of even greater concern. A CBR Financing UK SMEs survey, for instance, finds that 5% of firms delayed plans due to a lack of external finance, 7% dropped them altogether and 16% experience severe financial difficulty due to an inability to gain access to external finance. Given these conditions, it is reasonable to believe that in order for the GEP to operate effectively it should either: (i) offer funding assistance as well as relocation assistance; or (ii) make relocation assistance and other forms of assistance conditional on the assisted company already having sufficient funding in place. In the absence of funding, for example, resources directed to helping foreign entrepreneurs to relocate to the UK may go to waste as credit constraints prevent entrepreneurs from growing their businesses once in the UK.

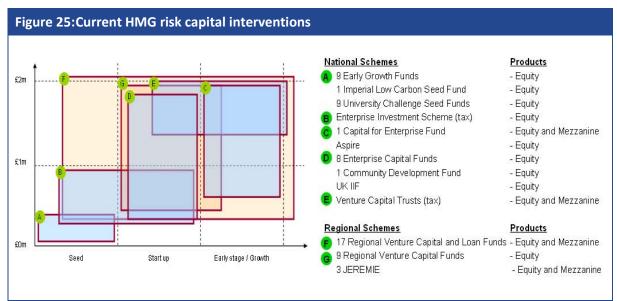
HM Government currently has a number of national and regional schemes aimed at providing equity or mezzanine capital to early-stage companies ranging from seed financing to start-up funding and subsequent capital infusions. These are summarised in Figure 25 with a description of the interventions provided in a separate Annex. There are three sets of funding covered by current HMG risk capital interventions: seed capital<sup>37</sup>, start-up capital<sup>38</sup> and early state/growth capital<sup>39</sup>, which are represented in Figure 25 below. In general, each tranche of capital is larger than the previous tranche (with early stage/growth capital being larger than start-up capital, which is larger than seed capital). This is indicated by the average size of disbursements provided by different national schemes – the "Early Growth Funds", for instance, provide less than £500,000 of seed



<sup>&</sup>lt;sup>37</sup> Seed capital relates to funding for the establishment of a new enterprise necessary to sustain itself for an initial period of development

<sup>&</sup>lt;sup>38</sup> Start-up capital is provided to companies that have not yet fully established commercial operations, which may involve funding product development, initial marketing or advanced stages of research and development

<sup>&</sup>lt;sup>39</sup> Growth capital is a broad term relating to financing that helps established companies to expand



capital on average while the "1 Capital Enterprise Fund Aspire" provides growth capital ranging from a minimum of over £500,000 to close to £2m.

Source: BERR (2009)

Venture capital organisations, in addition to providing funds to businesses, serve as a distinct pull factors to firms considering relocation for many other reasons through the provision of advice and assistance to their portfolio companies (Malecki, 2009). Petit and Qu Quéré (2006) refer to this as 'relational expertise', arguing that it is a key contribution provided by venture capitalists. In fact, the management advice that comes with venture finance is often as important as the funding as the venture can fail without either (Garnsey and Heffernan 2005).

Unlike capital markets such as the FTSE or NASDAQ, in which publicly available information is the primary basis on which investment decisions are made, markets for angel or venture capital (VC) funding rely primarily on private information ascertained through networks. Hochberg, Ljungqvist and Lu (2007) show that VC firms with better networks are more likely to have invested in a more successful portfolio of firms (gauged by number of successful "exits") and equally, these firms are more likely to survive in the future. The authors show that a one standard deviation increase in network centrality leads to a 2.5% average increase in the internal rate of return on an investment and a 5.6% average increase in survival probability from the time of the first VC funding round).

The reasons why networks are beneficial to the smooth functioning of venture capital markets include the following. Networks of investors co-investing in a given firm or investment advisors making recommendations to one another is an important form of information sharing through

Network centrality is defined as "the number of VCs with which it has a relationship, as a proxy for the information, deal flow, expertise, contacts, and pools of capital it has access to; the frequency with which it is invited to coinvest in other VCs' deals, thereby expanding its investment opportunity set; its ability to generate such coinvestment opportunities in the future by syndicating its own deals today in the hope of future payback from its syndication partners; its access to the best-connected VCs; and its ability to act as an intermediary, bringing together VCs with complementary skills or investment opportunities that lack a direct relationship between them" (Hochberg, Ljungqvist and Lu (2007), p. 253).



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which shared opinion can immediately be acted upon or differences in opinion can be resolved through debates regarding the assumptions upon which each investor or advisor has reached his/her conclusion. These processes are essential to investment decision-making, especially within small or young firms where there is a great deal of uncertainty regarding the risks being undertaken. Moreover, the international scope of the GEP permits investors to diversify their portfolios. They present foreign entrepreneurs who, while locating in the UK, are seeking to earn revenues in export markets that assist VC firms to diversify sector-specific and location-specific risks that they tend to be exposed to (Stuart and Sorenson, 2001). Once an investment decision has been made, networks are utilised for the provision support services to portfolio companies such as legal, financial and human resource services (Gorman and Sahlman, 1989; and Sahlman, 1990). Finally, if successful, the approach of the GEP to funding assistance can lead to a virtuous cycle of growth for the programme. As VCs are provided with investment opportunities through the GEP network, there is a tendency for VCs to reciprocate by presenting the GEP with companies that may be well-suited to the programme (Lerner, 1994).

## **Entrepreneurial role models**

Fornahl (2003) refers to role models as "positive... entrepreneurial examples" that attract firms to a particular region. However, more than simply representing a positive example, role models can take a more active role and provide advice to nascent and new entrepreneurs. The experience of the Capitol region in the United States has shown the role that experienced entrepreneurs can play in mentoring early-stage entrepreneurs, although this seemed to lag development rather than lead it (Feldman, 2001). This links in with the agglomeration/clusters effect and venture capitalists role identified above.

Interestingly for role model-style advisory initiatives, the conclusion of research conducted by Fischer and Reuber (2003) was that high-growth firms seemed to prefer to receive advice from peers rather than external resource providers. Based on their results, the authors proposed a networking approach involving active participation by high-growth firm owners to support entrepreneurs. This point is supported by Lussier and Corman (1995) who found that successful firms used more professional advisors than failed firms. Moreover, research shows that users of UKTI services are more likely to be more innovative than non-users (Bishop, Forth and Riley, 2010). While this evidence is based on a small sample, it suggests that advice utilised by firms from public and private channels can both be valuable in terms of final business performance.

## A1.5.3 Barriers to relocation

The existing literature focuses on the factors underlying entrepreneurs' decisions to relocate. However, there is less discussion over the potential barriers to relocating. In practice, we might expect that firms face several difficulties in successfully relocating their business, in terms of identifying an appropriate site, meeting customers and suppliers and raising finance.

While little evidence directly relating to barriers to relocation, for international relocations some useful information can be gathered from the literature relating to barriers to trade. Many of the difficulties in relocating a business abroad are similar to those in entering export markets: it can be difficult to find business partners, and it may be hard to establish a profile. Given the geographic separation, and a lack of knowledge of the target market, it is likely to carry out a conventional search for relevant opportunities. Similarly, integrating into innovation networks (i.e. networks of



researchers and other bodies) in new countries can be extremely difficult, and may prohibit R&D investment overseas even where the new location is clearly superior (Crisculo et al., 2002).

Rauch (2001) identifies the importance of "network intermediaries" in overcoming these barriers to trade. Intermediaries can provide firms with access to networks in other countries, and so help them minimise search costs, and overcome reputational barriers to trade. Such a reliance on informal networks is likely to be particularly important where products are heterogeneous, preventing clear reference prices from being developed (Rauch, 2001).

However, while network intermediaries may in theory be able to overcome the barriers faced by companies looking to relocate, in practice the market may not provide adequate investment in such services. Clients are unable to judge the quality of any "match" made by an intermediary (as they do not, by definition, hold the relevant knowledge) and so any such service is inherently uncontractable, preventing intermediaries from making a profit (Rauch, 2001). Furthermore, in general, networks grow in particular regions or where there are strong bilateral trade flows: where these are not present there may be little incentive for firms to invest in developing networks (Department for Trade and Industry, 2006). This may be a particular issue when considering networks relating to firm relocation, given the relatively limited number of companies that are liable to relocate each year.

# Annex 2 Case studies with assisted firms

# A2.1 Company A

Region of origin	Australasia and the Pacific		
Business sector	Software for public safety		
Firm size	Turnover in previous financial year: £100,000 or less Turnover at relocation: £500,001 - £2 million Staff: not available		
GEP assistance received	Relocation assistance		
Relocation to the UK	2009		
UK operations	Global holding company, sales and marketing operation, product development operation		
Innovative activities	Staff engaged in R&D, company engaged in patenting activity		
Use of UK suppliers	N/A		
Membership of networks	No		
Agreements with UK organisations	Yes, one customer		
Export-orientation	Primarily UK-focused but expects to export		
Growth expectations	High		
Benefits of GEP assistance	Basic information provision, supply of business contacts, improved credibility/profile among investors		
Additionality of GEP support	Business acceleration. The company would have relocated the same operations to the UK and expects to have achieved the same level of performance.		

#### Company background

This case study focuses on a software development company providing software to public sector clients. It employs 20 people, 5 of which are employed in the UK operation which was set-up three years after the company was first incorporated.

The company was first incorporated in the Australasia and Pacific region. It was founded by a public sector practitioner who saw room for improving public safety through the development of a software package for managing safety-related information in hospitals. Initially, the focus of the company was not commercial, but through its investors, who provided commercialisation advice, the software package is now marketing to a range of clients.

Prior to its participation in the GEP the company had developed a prototype of their software and a link with the UK public sector. The company has recently begun to sell their product and have signed their first major sales deal. The UK operation includes: the global holdings company, sales

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<sup>&</sup>lt;sup>41</sup> Summary boxes reflect information provided through both the quantitative survey and case study interviews.

and marketing and input into the development process (which primarily takes place outside of the UK).

The company has until now been self-financing with investment being generated internally. There are plans to raise up to £500,000 this year to expand the company and support development.

The UK public sector client is currently the firm's main customer, as the UK currently is a bigger and more IT focused market than Australasia. It is envisaged that success in the UK would develop the visibility of the company in other markets such as the United States and would generate the income needed to enter into other markets.

"The market sector we operate in (healthcare) has the size to attract us and the market seemed committed to improving the use of IT to help improve care so we judged it to be an attractive market. We felt that success in the UK market would carry more credibility in other markets we may choose to enter than Australasian success."

## **GEP** support

In the first instance, the GEP provided the company with introductions to networks of support with issues such as legal regulations and accounting. The company has further received the promise of support through its fundraising process in the form of introductions to investors and guidance on company presentations. In addition, the company commented that the prospect of getting potentially useful messages to regulatory representatives through the Dealmakers. The interest and support shown by the GEP was particularly appreciated in the early stages of the company's development.

"Start[ing]-up can be a lonely road to do. If I needed someone to sound out [an idea] it was them that I could go to. It sounds informal but is very valuable to a start-up."

Now the company has evolved, the Dealmaker is developing some further public sector contacts that they have been unable to develop themselves. Prior to getting involved in the GEP the company were at the stage of developing their prototype and a sales contact in the UK. The company acknowledged that they were going to need a UK-based operation but were not sure about the form or shape it would take. At that point the Australasian-based Dealmaker introduced Company A to the GEP and its offering.

"The Dealmaker's timing was good. So, having spoken to him it made sense for the holding company and operations to be based in the UK."

The UK-based Dealmaker has remained the company's contact, providing ongoing support as necessary and is currently helping to develop a new sales contact.

#### Views of the GEP

The company's view of the GEP is positive with a favourable view of the quality and relevance of the support and advice offered in assisting its business acceleration. The strong entrepreneurial nature of the company means that the GEP did not support the company to do anything that they would not have done without the programme but has enabled them to enter the UK more quickly and with more confidence.

"We value it [the programme] and I think that it is a good thing to have. If I was moaning then I wouldn't be a very good entrepreneur...we don't wait for them or rely on them – we value them. What the GEP can't replace is a good idea executed." [However, as a result of the programme] we've done it quicker and we've done it with more confidence – often it is confirming what we think we need to do. When you're out in a new country and on your own, it [the programme] helps you to do things quickly and in a cleaner sort of way."

The company do not view the GEP as part of a government agency. As a business organisation, what they mean by this is that they feel confident that the Dealmakers "know what they are doing" and are business-focused – understanding the needs and workings of new businesses.

Since relocating to the UK, other aspects of support provided by the GEP, either directly via Dealmakers or indirectly via the alumni network (through which firms are provided support from other assisted companies) were emphasised.

"We have received supportive guidance on preparing for fundraising with the offer of introductions when we start the process."

"We have had offers of useful market introductions from our Dealmaker."

More broadly, it was felt that "the GEP has provided comfort [...] in the early stages and now we will keep in touch knowing that they may from time to time support our efforts."

The views of the Dealmaker were also overwhelmingly positive, with the entrepreneur lauding his professionalism, attitude, competence, knowledge, communication and impartiality. Whilst the company remained in contact with their Dealmaker and are currently pursuing a new sales contact, they have also remained in contact with others involved in the GEP such as members of the UKTI team regarding external financing options.

#### Development of firm

The company currently have one major client in the UK and are in the process of developing sales with another. Once that second sale is made and a view as to what the pipeline of future sales are expected to be, the company are looking at expanding their sales and marketing operations. The company are particularly looking at taking on senior individuals with experience in the company's sector. They believe that sales of their specialist product cannot be negotiated by anything other than experienced sector-specific personnel. On the back of this expansion will be the corresponding expansion of software technicians and administrative staff. The company expect to increase staff size by 20 or 30 people over the next two years. The company are also currently anticipating entry into other markets and will use the Dealmakers to help with this process.

In terms of risks to the company's strategy for growth, the economic climate was identified as was uncertainty surrounding the uptake of the company's product among clients.

#### Relocation to the UK

The initial attraction to the UK was based on a cultural link and the view that the UK is a very large economy and potential market. The UK was viewed a favourable centre for business and good base for internationalisation into Europe and the US. The market in the UK was thought of as the



sort of size that was attractive to the company in the establishment phase, as the use of IT had enough similarity to Australasia to make such a move feasible.

There was never any serious consideration placed on starting development elsewhere. The company could not stay locally as the market was not big enough. A larger market was needed and the UK was culturally the most comfortable choice. There was also a feeling that success in the UK market would carry credibility in other markets that the company may choose to enter in the future.

In terms of the impact of the GEP on location selection, the Dealmaker did not have to dispel any negative opinion about the UK. Company A felt that they "probably" would have relocated to the UK without the assistance of the GEP within a year of when relocation actually took place; therefore, what the GEP Dealmaker did was make the relocation process easier and bring it to a head.

# A2.2 Company B

Table 14: Summary of Company B's involvement in the GEP				
Region of origin	UK			
Business sector	Agricultural biosciences			
Firm size	Turnover in previous financial year: not reported			
	Turnover at relocation: not reported			
	Staff: 40			
GEP assistance received	Relocation			
Relocation to the UK	Not reported			
UK operations	Not reported			
Innovative activities	R&D and introduction of new products to the UK			
Use of UK suppliers	Yes			
Membership of networks	No			
Agreements with UK organisations	In negotiations			
Export-orientation	Yes			
Growth expectations	Moderate			
Benefits of GEP assistance	Introductions to potential suppliers, customers and			
	financiers			
Additionality of GEP support	Small			

## Company background

This case study focuses on a company operating within the agricultural bio-sciences sector with global headquarters, marketing and production activities based in the UK. The company employs approximately 40 people with 20 based in the UK. It has recently begun to sell its product after a long period of breaking even during its product development phase.

Prior to relocation, the company was based in North America. The founders are serial entrepreneurs operating within the agricultural sector in North America and have started four or five other successful businesses.

In terms of product inputs and outputs, the main inputs are micro-biological and other scientific supplies some of which are provided by the UK. Other inputs are sourced globally from countries such as Canada, the United States and Germany.

Major customers are retail supply chains or very large agricultural service providers located in Canada, the US and UK, Indonesia, Europe.

## **GEP** support

The company discovered a venture capital connection to UKTI, which encouraged the company to think about relocating to the UK. The entrepreneur already knew of the GEP programme as he had brought over two or three different companies to the UK over a number of years with assistance from UKTI.

The GEP were supportive of the original founders and their technology in coming to the UK and arranged meetings with government departments to get a foothold in the UK.

#### Views of GEP

The initial support promised by the programme was key to relocating because it involved engaging with potential suppliers, customers and financiers that would help to set-up the business in the UK. While this was provided to some extent, the company would have liked the GEP to do more in terms of providing general guidance and introductions to potential sources of finance and government grants.

"We got the feeling that we should be over in the UK and we made the commitment to do that but they [the GEP team] lost interest. There was the interest in establishing us as a UK company but the follow-up process would not rate more than 5 out of 10."

"For the things that they do I cannot praise them highly enough. But it's all the other things – you feel a little left hanging in the breeze. Some people are able to do all of that other stuff on their own – others can't and this has a real effect on the overall success rate of businesses that have relocated."

"In this project we were disappointed that our Dealmaker showed no interest in the development of the company – they have never taken the trouble to make a phone call...The Dealmakers are not interested and are concentrated in finding new companies"

The company do not particularly see problems as a reflection on the Dealmakers; but more a case of UKTI failing to have funded the back up support that a GEP client may need/expect.

The founders felt that if they'd known this they might not have relocated to the UK. While one of two individual Dealmakers go above and beyond what is expected of them, institutionally this ethos is not encouraged or incentivised. The company also felt that there needs to be "consistent support from overseas UKTI personnel".

## Linkages to the UK and spillovers

The company negotiate agreements with other UK organisations, for example, over licensing their technologies. The company also, by and large, work on collaborative ventures with foreign



companies in order to gain access to new markets. As an innovative activity there are only a very small number of companies operating in this company's particular sector.

## Development of firm

The company have an ambition to grow moderately and are looking at developing new products. Overseas sales and exporting remain strong although UK sales are important as well. Production will remain in the UK into the future due to the need for specialist facilities.

In terms of risks to growth, those are mainly based around other technologies superseding those embodied in the company's products. The global economic situation has also had an effect on business performance and may continue to do so in the future.

#### Relocation to the UK

The founders felt that the market in the UK was good and that they would get good government support and finance. The company did get a large amount of finance because of the company being located in the UK but this was not through GEP contacts.

### Perceptions of the UK

The company feel that the UK is a good place to do business. However, the one thing that it does not have is the money to encourage businesses to relocate. There are the general funding pots and grants any business can apply for but none with any special breaks.

# A2.3 Company C

Table 15: Summary of Company C'	s involvement in the GEP
Region of origin	Central and Eastern Europe
Business sector	Internet media / advertising
Firm size	Turnover in previous financial year: not available
	Turnover at relocation: not available
	Staff: 2.5
GEP assistance received	Relocation assistance
Relocation to the UK	Not reported
UK operations	Global and European headquarters and marketing and sales operations
Innovative activities	Development of new products not otherwise available in the UK
Use of UK suppliers	Yes
Membership of networks	No
Agreements with UK organisations	Yes, long-term licensing, supplier, customer and collaboration agreements
Export-orientation	Yes – conducts overseas business
Growth expectations	Low – no expectation of growth over the next five years
Benefits of GEP assistance	Gained access to new ideas about products, services, techniques or technologies; improved profile/credibility with investors; improved approach to attracting funding from investors
Additionality of GEP support	Business acceleration but would have relocated to the UK and achieved similar results in the absence of the programme.

## Company background

First incorporated in Eastern Europe this company operates within the software, internet and media advertising sector. The company have recently relocated its global and European headquarters and sales and marketing operation to the UK, employing two people; with research and development remaining in Eastern Europe, employing five.

The company have recently launched their product in the UK and are looking to move from being loss making profit making within 18 months. Prior to locating in the UK the company had recently begun the sales process with two clients signed up for product trials.

This is the third business start up for the company's founder who wanted to start a company that had a more global potential, which was one of the primary reasons for locating the venture in the UK.

In terms of supply chain, the company sell their product through merchants and publishers. As the company is software and internet-based there is no material supply chain. Major customers for the company are located in the UK amongst media companies, broadcasters and networks.

## **GEP** support



The company first got involved with the GEP through meeting a Dealmaker at a seed camp – an event aimed at helping start-up technology companies develop – which was part of a European start-up competition the company was partaking in.

In terms of support, the first stages mainly involved introductions to potential customers, partners, financiers and networks. The company's Dealmaker further provided advice on how to grow the business, including establishing a go-to-market strategy and advice on how to structure the business.

Since having relocated, the company meets with their Dealmaker on a weekly basis to discuss various topics of the business.

"Whenever there is something that the Dealmaker can get involved with he helps."

## Views of GEP

The company have found the introductions set up by the Dealmaker very important for the business.

"It is a lot easier to get the attention of people once you get an introduction from someone that they trust. It's definitely paid off getting the Dealmaker to do the introductions with funders."

"The most valuable part of the whole experience was that they [the Dealmaker] made the right introductions to the right people. It was so much easier to sell to them because they trusted the Dealmaker."

In terms of whether the actions of the company would have occurred without the support of the Dealmaker, the company feel that relocation and set up would have been much slower. The GEP has not influenced what decisions have been made — it has been more about 'tweaking' or improving what was already being done.

"The GEP and seed camp definitely speeded things up for us and put us in front of the right people."

The support of the GEP has been important to the company both from a network perspective and also in terms of developing credibility. The company have found it reassuring and confidence boosting that their Dealmaker supports the business and is willing to actively support its development.

#### Linkages to the UK and spillovers

The Dealmaker has introduced the company to a number of networks which have been found to be particularly useful for developing links with potential customers and gaining exposure. In particular, the programme has contributed to the establishment of long-term licensing, supplier, customer and collaboration agreement deals.

## Development of firm

The company have an ambition to be the market leader in their sector with aspirations for employing 10 to 15 people focused on sales with revenues of £5 million in three years time. The

main risk to the future development of the company is time-related - i.e. if the firm is not able to lock-in good customer relationships rapidly their competitors may dominate the market. Due to this risk, the company's expectations of future performance are low relative to their aspirations.

Exporting is an important part of the business strategy. The focus is currently in the UK but the company want to use it as a launch pad for the rest of Europe and the US.

#### Relocation to the UK

The potential to export from the UK and grow a global company was one of the key reasons for relocating to the UK. The company felt that in Europe there are limited options for cities where a global business can be grown from and the UK has the language advantage over other areas such as Berlin. The UK also offers a good hub of markets. In the absence of the programme the company felt that they would probably still have relocated to the UK, however the GEP accelerated this process.

# A2.4 Company D

Region of origin	UK
Business sector	Software / social media recruitment
Firm size	Turnover in previous financial year: £0
	Turnover at relocation: £0
	Staff: 2.5
GEP assistance received	Relocation assistance
Relocation to the UK	2008
UK operations	Global headquarters
Innovative activities	Introduced new products to the UK; staff engaged in R&D and possess intellectual property rights
Use of UK suppliers	N/A
Membership of networks	No
Agreements with UK organisations	Long-term licensing, customer and collaboration agreements
Export-orientation	Yes, conduct business overseas
Growth expectations	High
Benefits of GEP assistance	None highlighted but some benefits through programme in terms of improved profile/credibility in the UK, ability to attract funding and management practices and processes
Additionality of GEP support	Business acceleration – would have relocated to the UK at the same time but achieved results less rapidly in the absence of GEP support

## Company background

This case study focuses on a social media recruitment company. The company currently has its global headquarters in the UK and employs four people, with a total of eight involved in the company overall, and is currently hiring five further employees and an additional five for the board. The company has one employee each in India and Australasia and is looking for someone in the US, not for mass selling but for using those markets to do a small amount of trial business in.



The company was in its ideas development stage prior to locating to the UK and was looking at other potential areas such as the US and India to set up the business. The company has now recently begun to sell their product and have started generating revenues.

The company is internet-based and outsources engineering and web provision. The company does not use one supplier and those suppliers can be based anywhere in the world.

Customers are other organisations and businesses. The market for the company is active in the US; however the company's major focus is the UK.

## **GEP** support

The company became involved in the GEP through a contact at a trade mission who knew about the GEP and who put the company in touch with a local Dealmaker.

The Dealmaker provided the company with free accounting and legal advice as well as good networking introductions that led to the firm securing funding from an investment bank under the auspices of a government-backed investment scheme. The company found that the Dealmaker provided good ongoing support which was there when they asked for it and PR which the company found useful.

## Views of GEP

The company found that being part of the GEP added credibility through being able to say to potential investors that the company was supported by the GEP programme.

"When I started I was quite young and the GEP programme was a tick mark for potential success – it is a brand in itself."

The company further feel that it is the best government programme out there because "it is run by entrepreneurs. Most people in government don't' know about business."

In regard to the counterfactual, the company felt that it is hard to attribute actual events to the programme. Yes, the company was incorporated through the free legal advice but trying to apportion credit to the GEP for the company relocating to the UK is difficult. The way the programme has really helped has been through giving a mark of credibility than anything else.

The company feel that the UK government could give start-up cash (as is the case in other countries), with the GEP playing a role in selecting the highest potential firms to allocate funds.

#### Linkages to the UK and spillovers

The company work with an outsourcing and public relations agency and are working in more partnerships with other companies around the world to drive site content.

## Development of firm

The current major focus is the UK and the company are using it as a platform/spring board to scale internationally. The company expect that its headquarters will remain in the UK in the future. However, it plans to develop offices wherever opportunities emerge.

Risks to growth relate to tailoring the product to suit client needs and attracting a large number of users. In terms of the economy, the company feel that the state of the economy affects everybody and cannot really be changed.

#### Relocation to the UK

The UK was always the primary choice for locating the company. It provides the right market with excellent opportunities for expansion into international markets with a good supply of appropriately skilled employees. Additionally, the entrepreneur has cultural ties to the UK. It was believed that the UK would provide a "a springboard to the global marketplace" and that Company D's business could develop quickly because "there are more decision makers in London than any other global city."

The company feel that they probably would have relocated the same operations to the UK without the support of the GEP and that it would have been around the same time. Results would have been the same but not achieved as guickly.

# A2.5 Company E

Table 17: Summary of Company E's	s involvement in the GEP
Region of origin	India
Business sector	Nanotechnology
Firm size	Turnover in previous financial year: not reported
	Turnover at relocation: not reported
	Staff: 2.5
GEP assistance received	Relocation and funding assistance
Relocation to the UK	2006
UK operations	Marketing operation
Innovative activities	Staff engaged in R&D
Use of UK suppliers	Yes
Membership of networks	No
Agreements with UK organisations	Long-term manufacturing, supplier, customer and collaboration agreements
Export-orientation	Sell overseas
Growth expectations	High
Benefits of GEP assistance	Improved processes and management practices, improved method of attracting funding

## Company background

This case study focuses on a company in the nanotechnology sector at the forefront of a new and developing area of science and technology.

Looking to develop an international focus, the company has developed its marketing head quarters and an amount of distribution and sales in the UK addressing the UK, European continent, American and Russian markets. The company currently have a customer base and market share, including a large automobile manufacturer, a premium hotel, hospitals, IT parks and has recently been awarded a contract to supply its product for an international sporting event in 2010.



Prior to establishing a UK base the company was located in Asia and had been established between one and three years. The company had been selling its product and employed approximately 15 people. The company now employs approximately 65 people in Asia and seven people within the UK and uses a number of freelance consultants.

The company was developed by a scientist who had not been in any prior entrepreneurial roles previously. The company's founder remains in a scientific development role.

The company uses raw materials to develop nano-materials (using nanotechnology) for products such as paints, plastics and resins. The raw materials are sourced globally depending on product requirements. As the volumes of source materials required are not particularly high they can be sourced from anywhere in the world with quality, price and convenience as consideration factors. The chosen supply location of the technology is to a certain extent dependent on the location of the scientists, which are currently based within North America and Asia.

Many of the products are currently manufactured in Asia and shipped to the UK for sales and distribution. However, it is likely that manufacturing of some products will move to other parts of Europe, including the UK to provide a European base tailored to meeting European and the United States' legal requirements.

#### **GEP support**

The company first came into contact with the GEP and the Dealmaker through an Asia Summit with UKTI where the company were invited to relocate to the UK.

The advice of the Dealmaker has influenced some of the investment and development decisions the company has made, particularly in developing into complex foreign markets which the company would not necessarily have ventured into without GEP support.

Company E stated that "Unless they were around we wouldn't have done thirty to forty per cent of the things we have done." However, Company E contrasted this statement by indicating that it "would have achieved the same results but not as quickly in the absence of GEP support" in a response to the quantitative survey.

#### Views of GEP

The company view the support of the GEP as extremely supportive. The Dealmaker has provided support with: trade missions; contacts and meetings for funding and investment opportunities; business support and advice; introductions to potential business opportunities; and support with developing promotional contacts.

"They provide us with a shoulder to cry on which is so important. They have given us good advice on the business front and general support for our products."

The company has found the Dealmakers to be useful and are particularly valued for their entrepreneurial outlook.

"It doesn't take them long to find the right people to help us. If the programme was more government-orientated then it wouldn't work. Their [the Dealmaker] ability to act in an entrepreneurial way is the very thing that supported their success."

"In our view, GEP has given us a quality business support service that allows us to exploit opportunity, receive professional mentoring, underpinned with real entrepreneurial thinking."

The company have maintained a relationship with their Dealmaker with less frequent contact than at start-up. The company are developing new initiatives with the support of their Dealmaker to open in different locations around the world.

Company E made some suggestions regarding potential improvements to the programme. In particular, on improving firms' ability to access basic support services through a GEP website: "I would like to see more online resources linked to the GEP site to do with sales, distribution channels, marketing, legislation, government bodies, registering UK and European patents, links to investment bodies, brokers and angel forums, legal and financial services, recruitment companies, etc. with links to other vetted UK companies that provide these services. This would save a lot of time and effort for companies arriving in the UK who would have to spend much time and cost researching and implementing all these things and would get their businesses up and running much more quickly. It would also encourage UK business and potential industry partnerships." This online resource may be beneficial to assisted firms insofar as it allows Dealmakers to utilise their resources to provide tailored support to firms rather than expending resources on basic and easily replicable advice.

#### Linkages to the UK and spillovers

In its initial considerations of whether or not to relocate to the UK, Company E felt that "The UK is an excellent central hub for addressing the sale opportunities throughout Europe because of the common language of English and the mature relationship base between the governments of India and the UK."

Since then, the company has and is developing links and agreements with other UK companies. However, the company are not part of either formal or informal networks and this has not been something suggested by the company's Dealmaker.

#### Development of firm

The company aims to grow substantially, becoming more global in terms of its product manufacturing base and sales, although current focus is on UK sales. Some operations in terms of configuration and assembly are likely to be moved to the UK as it makes economic sense for this to be done at the point of sales and distribution. The company are continually developing new products and applications for nanotechnology. In terms of risks for growth, competition and public perception of nanotechnology are seen as the greatest risks.

The UK is an important part of the company's exporting strategy as the UK creates the credibility the company requires in terms of convincing clients about the quality of its product and foreign regulators (e.g. in the US) about standards of its activities. The company sell their products through a network of distributors based globally with some markets more fully developed than others.

#### Relocation to the UK



The UK was viewed an excellent central hub for addressing sale opportunities throughout Europe because of the common language of English. The UK represents a good product market and is a good base for expansion into international markets. Cultural ties and language have been important factors in relocating to the UK.

#### Perceptions of the UK

There have been no real changes in perceptions of the UK since opening a UK base. The company did not consider any alternatives.

## A2.6 Company F

Table 18: Summary of Company F'	s involvement in the GEP		
Region of origin	Europe		
Business sector	Other ICT		
Firm size	Turnover in previous financial year: £100,000 or less		
	Turnover at relocation: £100,000 or less		
	Staff: 2.5		
GEP assistance received	Relocation, talent and funding assistance		
Relocation to the UK	2007		
UK operations	Global headquarters		
Innovative activities	Staff engaged in R&D, introduced new products to the UK		
Use of UK suppliers	Yes		
Membership of networks	No		
Agreements with UK organisations	Long-term licensing, supplier, customer and collaboration agreements		
Export-orientation	Yes		
Growth expectations	High		
Benefits of GEP assistance	None emphasised but company improved profile/credibility in		
	the UK and the way it attracts funding to some extent		
Additionality of GEP support	Business acceleration – firm would have achieved similar results but not as quickly		

#### Company background

This case study focuses on a retail technology solutions company.

The company was developed by three people as a first entrepreneurial venture located in Spain. It was in operation six years prior to becoming involved with the GEP programme and now has a global headquarters and a European sales base in the UK.

Prior to relocating to the UK the company were developing their product and starting to approach their first clients. Whilst the company was established for six years prior to UK development, the company had only recently made the decision to set up their own technology platform for commercialisation. At that time the company employed approximately seven people. The company currently employs 16 people with one UK employee although two to three positions are currently being recruited for. Technical development and Spanish sales remain in Spain.

The company is currently operating at a loss. However, they are still a relatively small company and are in their fifth year of growth, now having an established customer base. The past years of

operation have been about proving the product and getting the company off the ground. This year's focus has been on developing the business more fully through its base of contacts.

As a technology-based company there are no established supply chain relationships; that is, suppliers are chosen for transactions on the basis of quality and price of services on a case-by-case basis (rather than having long-term contractual agreements in place).

Major customers are currently European retail organisations of which some are long-term clients and others are currently in short pilot and trial phases. There are currently no major UK-based customers. However, is the result of having inherited European, as opposed to UK, customers through the original company in Spain. The UK is currently being used to establish pilots with customers to develop longer-term relationships. This, and the focus on larger clients in the UK, has been the reason for slower development in the UK.

#### **GEP** support

The company became involved with the GEP programme as a result of being on an advisory board, which included a Dealmaker. The Dealmaker heard that the company were considering relocating to the UK and got in touch with an offer of GEP support.

The support the company received was mainly funding related. The company did not receive any introductions or access to networks. The Dealmaker set up a road show with potential investors and attended the first meeting to facilitate introductions. The meetings were productive with three offers tabled but the company did not accept them, as at that time a separate offer was made for the purchase of the company which did not complete. The company then sought and developed further funding but not through the Dealmaker's contacts.

Further support from UKTI introduced the company to a couple of banks who granted it a small firm guaranteed loan. This provided cash flow for the company whilst undertaking other financing activities which took the company members away from generating cash flow income.

#### Views of GEP

Whilst the company ultimately found the funding themselves for the development of operations in the UK, the GEP had been helpful, particularly in securing the small firm loan.

"The GEP has been very helpful and we might not be around today if we hadn't got the bank finance at that time."

However, the company feel that there is much more the GEP could do outside of introductions to venture capital companies which are seen, by Company F, as the only role of the GEP at the moment. The ultimate use of GEP time should be to plug business into networks with other businesses and and other UKTI services, which are viewed as not being joined up enough. For instance, access to potential public sector clients would have been useful. This 'after-sales' service is seen as lacking in the GEP programme. Whilst there are introductions to administrative contacts such as lawyers, accountants and financing, there is little beyond this, particularly in the area of business contacts where the UKTI network as a whole is strong. There has been no continued relationship between the company and the Dealmaker, which the entrepreneur accredited to



Dealmakers being incentivised solely in terms of providing access to VCs and/or NEDs and there is no process in place to receive any other form of assistance.

"What is does it is does well – sources of capital, location in a global city and it can get you finance. The introductions to potential clients is not there and it needs to be."

There is a further view that there could have been more clear provision of information on the availability of government agency funding, including regional and local development grants, European Framework 7 and Eureka funding.

#### Linkages to the UK and spillovers

The company does have agreements with other organisations who either work as resellers or as 'pitch partners' to clients through providing additional expertise for a larger package of services. Some of these linkages are with UK-based companies.

The company are currently the only one in the world providing their service to the retail industry and is it a new and innovative approach providing real technological advance.

#### Development of firm

In terms of development, the company see the UK as the primary focus and is the big push market. The company are expanding in employees and are due to hire sales staff shortly.

The company has an aim to grow moderately and develop, selling new products from their existing platform with an estimate of doubling UK revenue and then moving on to a higher growth path in the next year, exporting the technology and working with other global companies to expand.

Managing cash flow is seen as an internal risk to the company as it costs to develop contacts and clients. Ensuring the company has a structure to grow properly is also seen as a potential risk as there is quite a change in moving from a start up to a larger established company.

Externally, there is a risk with increased competition as the company grows and other organisations develop their capabilities in a new market.

#### Relocation to the UK

Existing and potential clients based in the UK were a strong motivator for relocating to the UK. The UK is currently the biggest source of revenue for the company. The company were also starting to develop some clients in the United States where it is more advantageous in terms of sales to have an operations base in London. The UK is seen as a logical springboard for international expansion, access to venture capital funding and cultural ties were other key motivators.

The company feel that they would have relocated to UK anyway, possibly less than a year later than they had, as they were attracted to the UK as a base for international expansion. However, the GEP made it more of an incentive to come.

"It is nice to have someone to come and say to come over. There was more support available than if we had not known anyone etc that was very useful."

## A2.7 Company G

Region of origin	Australasia and the Pacific		
Business sector	Transport manufacturing		
Firm size	Turnover in previous financial year: £0		
	Turnover at relocation: £0		
	Staff: 4		
GEP assistance received	Relocation and funding assistance		
Relocation to the UK	2009		
UK operations	Global headquarters and research and development		
Innovative activities	Introduced new products to the UK, possession of intellectual property rights and patents filed with patent offices worldwide.		
Use of UK suppliers	Yes		
Membership of networks	No		
Agreements with UK organisations	Short-term manufacturing and supplier agreements and long- term collaboration agreements		
Export-orientation	No		
Growth expectations	High		
Benefits of GEP assistance	Obtaining basic information about doing business in the UK; understanding the legal system, gaining access to specific information not easy to come by and identifying, or gaining access to, key contacts for your business.		

#### Company background

Originally located in the Australia and the Pacific region, this company operates within the marine manufacturing sector and has been trading since the early 2000s. The company has recently set up its global headquarters, research and development and contract manufacturers in the UK. The company has also begun to sell their product in the UK with a focus of resources on marketing.

The founders of the company had not been involved in a business in the marine sector but had been an entrepreneur in other areas such as telecommunications and business consultancy.

The company operates on a lean basis contracting with UK-based businesses to manufacture their product. In terms of employees, the company retains three directors and two active shareholders involved on an unpaid basis.

Major customers are currently a UK-based network of marine sector retailers and dealers; for direct sales, the company would have to be larger. Expectations are that the UK will remain as the only manufacturing base with the firm exporting to mainland continental Europe.

#### **GEP** support

The company were put in touch with the GEP programme through a contact in the London Business Angels who they were talking to for equity funding.

Once the company joined the GEP, the Dealmaker helped in a number of ways. Firstly, he supported the company by helping to develop its finance presentation, including mock question



and answer sessions. Secondly, the Dealmaker provided the company with general set up support, putting the company in contact with lawyers, accountants and IP advisers who provided free advice, which the company found extremely useful. The company did not use all of the administrative contacts provided as they found some others which were more competitively priced. Currently, the GEP is providing support on issues such as research and development, tax, legislation and grant funding.

"He's helpful with putting us in contact with the right people...it's hard to know where to start when you don't know a country."

#### Views of GEP

To date, Company G highlights "contacts to lawyers, accountants and IP advisers, reduced funding costs and brainstorming of ideas" as the benefits of the programme it has received. In the future, it expects the GEP will provide assistance in terms of "navigating the grants landscape and with preparation to export to other European markets".

More specifically, Company G described how the administrative and start up contacts the Dealmakers provided were very useful to the firm. The support received was financially beneficial particularly getting free advice which otherwise the company would have had to pay for. There is also a general feeling that the knowledge amongst the Dealmakers, given they are entrepreneurs themselves, is high.

The company did not ask for much more support outside of this initial set up support and so are unsure of what else the programme had to offer. The company did feel that the GEP could provide more in the way of financial support in the form of a small business grant.

The company also felt that they would have achieved the same results without the support of the GEP, but the journey would have been more difficult. The fact that the company got the investment they needed quickly means that they have been able to launch their product at the right time.

"Considering that he is running a business himself, he spent a surprising amount of time with us."

#### Linkages to the UK and spillovers

The company solely uses UK suppliers for their product including the outsourcing of manufacturing. It is a labour intensive product with manufacturing taking between seven and nine people. Once the company are selling larger volumes of their product, job creation numbers will increase.

In terms of innovation, the product itself is the first of its kind – there is nothing like it on the market at the moment.

#### Development of firm

The company aim to get a firm foothold in the UK market and then expand through exporting into other European markets. Exporting into Europe is an important part of the company's growth strategy. The long-term expectation is for expansion into the North American market. Due to the presence of trade tariffs, this will involved setting up a US manufacturing and sales operation.

One of the main factors and risks affecting growth is the cost of currency and potential changes in taxation. The company feel that if there was a steep increase in taxation and taxation of labour they would have to look at revisiting their location choice. With outsourced production the company are fully mobile to be located anywhere in the world.

#### Relocation to the UK

Language was an important factor in locating to the UK. Setting up in a country with a different language would have been more difficult. The manufacturing skills available in the UK were a further key factor for the company and something they felt that the UK does not shout about enough.

The business environment in the UK was seen as favourable in terms of simplicity. Compared to other potential locations identified by the company such as Germany and Spain, there was less red tape. Agencies are also more forth coming than in other countries to offer support. It is easier to raise funding in the UK due to the enterprise investment scheme.

The exchange rate is also currently good and makes the UK a fairly low cost location in terms of production and export. The company feel that they will at some point have to consider the currency risk for exports into the euro zone.

The company were pretty close to choosing the UK as their location but seeing that the government were providing programmes such as GEP was helpful in finally making their decision.

"The information available from UKTI and GEP on the web is in plain language and you get hand holding from the dealmakers – that is a lot of comfort. The dealmaker was another argument to come here."

#### Perceptions of the UK

Perceptions of the UK as a place to do business have changed in some regards as a result of relocation but not in others. The company feel that the manufacturing capability in the UK is very impressive. However, the speed at getting suppliers together is slower than anticipated with many companies slow to quote and with some not quoting at all. However, the supplying partners the company are working with have been good partnerships to date. Getting press coverage for the product launch has been more difficult than anticipated also.



## A2.8 Company H

Table 20: Summary of Company H	's involvement in the GEP			
Region of origin	UK			
Business sector	Other ICT			
Firm size	Turnover in previous financial year: £100,000 or less			
	Turnover at relocation: £100,000 or less			
	Staff: 2.5			
GEP assistance received	Relocation and funding assistance			
Relocation to the UK	2008			
UK operations	Global headquarters, sales and research and developmen			
Innovative activities	operations  Introduction of new products to the UK, possession of intellectual property rights and staff engaged in R&D			
Use of UK suppliers	Yes			
Membership of networks	No			
Agreements with UK organisations				
Export-orientation	Yes – conducts business overseas; expect overseas sales to be			
	important but mainly focusing on the UK in the future			
Growth expectations	High			
Benefits of GEP assistance	None highlighted			
Additionality of GEP support	Business acceleration – would have achieved the same results but not as quickly			

#### Company background

This case study focuses on an ICT company that develops corporate governance management, web monitoring, evaluation and assessment tools.

The company was first founded in South Africa and had been selling its product. The company was recently restarted in the UK and has it s global headquarters, sales and research and development operations located in UK, where it has recently gone to market with its product.

The founder of the company had been involved in starting up two businesses previously – one within the same area as the current company and one in a different field.

The product developed by the company is bespoke and is maintained in-house – the company have developed their own software which is hosted on their servers and content is managed by the company themselves. The company currently has five employees excluding some of the IT development staff who are contracted out on an ad hoc base. As the company is software and web-focused there is no material supply chain.

In terms of a customer base the company are currently establishing themselves in the UK. They are in the pre-revenue phase but are shortly about to generate revenues as they are currently in major discussion with clients.

#### **GEP** support

The company found the GEP through their own research when they were looking to develop in the UK.

The GEP provided some initial contacts of investors, to which the company submitted a business plan that was successful in securing finance.

#### Views of GEP

Financial assistance was the route through which the GEP was most successful. However, the company felt that the GEP could do more in 'after sales' support, particularly in offering more introductions to support networks and potential clients.

"Following the introduction finance contacts the support completely died. I assume that they don't have the capacity to offer more and that is one of my issues. When you move to another region like this you are away from all your business contacts and support groups. The biggest challenge is starting all over again. Some of the best assistance that can be offered besides finance is in introductions...which are worth a fortune to new or start up businesses."

"This was something that I didn't get. We had meetings discussing these things but nothing has every come of it."

In terms of raising finance without the support of the GEP, the company felt that possibly they might have ended up accessing start-up capital regardless. However, as the Dealmaker knew the funders and could put the company in touch with those who were most appropriate, the company feel that it saved them time and money.

The support of the GEP did not quite match expectations. However, what the GEP does, it does very well. The company feel that the fact that there is such a service in the first place and that they were extremely friendly is good.

"In my limited exposure I have had in relocating there is nothing that compares to this. The fact that it is there at all is encouraging and I think it is remarkable."

"The follow up side is where it falls short but I wasn't expecting too much. I think there are too few of them and too many businesses for the dealmakers to deal with. That type of after-care support would be great."

#### Linkages to the UK and spillovers

The company has recently gone towards setting up partnerships with academic institutions for development content and research and development to further the company's activities into new and innovative areas.

The GEP did not put the company in touch with any potential networks and this is where they felt that the programme could be improved.

"Being a stranger in a new country it is the networks that are important – someone who has the time to build the relationship with you so that when they find an opportunity that they can make a referral. That is one thing that they don't' have is the networks and contacts and introductions."

"Here you are like a fish out of water as far as networks are concerned – in smaller countries you know someone who knows someone else who can help."



In terms of product innovation, the combination of the technology and service that the company offers is something that is not available with other ICT companies in the UK at the moment.

#### Development of firm

The company have an ambition to grow substantially, mainly through UK sales although overseas sales will be important as well. The company are currently in negotiations with a large potential client. The company are also looking to develop related products and links into other industries.

Given the nature of the business, the company will remain with a UK base and will use that to expand into European and Asian markets.

In terms of risks to growth ambitions, the company do not anticipate too many risks in the short-term although they recognise that situations are changeable but have not found the recession a particular challenge for them. They have the added bonus of being the first to market with their services in the UK.

In terms of internal factors, the main risks are staff retention and access to skills. However, in IT, the company's location in the UK means they are close to good skilled labour.

#### Relocation to the UK

The initial attraction of the UK was around market opportunities, both local and as a base for expansion into global markets. The company were not thinking of anywhere else to locate other than the UK.

#### Perceptions of the UK

The company anticipated that they would be able to close deals more easily than they have – decision-making processes with potential clients and other UK parties has been relatively slow. Getting into the public sector which the company viewed as one potential entry point has been really difficult and it is around issues such as this where UKTI might be a bit more useful.

## A2.9 Company I

Table 21: Summary of Company I's	involvement in the GEP
Region of origin	Russia/Central and Eastern Europe
Business sector	Renewables/sustainable technologies
Firm size	Turnover in previous financial year: £0 (dissolved)
	Turnover at relocation: £100,000 or less
	Staff: 0
GEP assistance received	Relocation, funding and talent assistance
Relocation to the UK	2005
UK operations	
Innovative activities	Introduction of new products to the UK, staff engaged in R&D,
	patenting activities across several patent offices
Use of UK suppliers	Yes
Membership of networks	No
Agreements with UK organisations	
Export-orientation	No
Growth expectations	Low – expecting to become smaller
Benefits of GEP assistance	Improve company profile or credibility in the UK and improve the
	way in which funding is attracted

#### Company background

This case study focuses on a renewable and sustainable technologies company. The original technology and patents were developed in Eastern Europe and the company located a global head quarters in the UK to commercialise the technology and develop full demonstration of proof of concept. Prior to locating in the UK the product was being developed prior to market entry.

In the UK the company employed one person to start the development of proof of concept although nominally there were approximately six people involved in the business. The company is not currently trading having gone into liquidation and is without any formal employees.

#### **GEP** support

The UKTI recruited the company directly into the GEP in the mid-2000s after hearing about the technology being developed in Eastern Europe. The Dealmaker contacted those involved in developing the technology and provided information that assisted them to set up in the UK. A CEO for the UK operations was recruited two years later.

In terms of the support provided by GEP the Dealmaker provided all of the contacts and introductions for the founders to set up a limited company in the UK including patent attorneys, bank accounts, legal advice, support on how to do business in the UK and organisation of funding and investment rounds to raise seed funding to start the business. The GEP programme itself also assisted the business in developing the company profile and credibility which is important for a fledgling business that is looking for investors.

The company raised £200,000 in seed funding which went towards research and development, business planning and marketing surveys to get peer reviews of the product.



Following this development phase venture capital funding was needed to get the product to the next stage. The Dealmaker supported a venture capital funding round with positive results with companies offering notions of support. However, the recession hit just at the time the company went back to the venture capitalists to firm up their offers of support. With no bank lending most of the venture capital companies were not as positive wanting less risk for their investment. The company was too big a risk because they were not yet revenue generating.

To minimise the risk the company changed its investment requirements with an increased move towards commercialisation over a shorter period of time.

However, the cost of maintaining the patents became more than the company's shareholders had available and so, eventually, the company was closed down. Following the company's liquidation the patents have been purchased and a project to develop a less costly and more quickly available prototype is underway. The prototype unit has now been produced and is undergoing testing.

The GEP continued an amount of support during this time following the relocation of the company in the UK and its liquidation, putting the company in touch with other industrially-related companies that have wanted to joint venture and finding other possible sources of income to keep the company going.

#### Views of GEP

The view is that GEP programme is fundamentally a good or excellent programme as that it certainly enables small companies to become established without the necessity of employing expensive accountants and lawyers to get the company in a fit state to trade.

As the technology is fundamentally progressive and innovative there is a feeling that the technology and ideas would have been picked up elsewhere if it had not been through the GEP.

However, there is not much financial support for small new technology businesses and it's something that the GEP or elsewhere does not cater for.

"Venture capital companies are very risk averse – when I went to the other government funding scheme there were criteria meaning that we didn't qualify for funding. RDA funding is based on matched funding and the Technology Strategy Board will not assist small or micro companies. So on the one hand the GEP is actively establishing micro companies but then there are no further resources from the government. We are then pitched into the world of trying to get funding from large venture capital companies and it becomes very hard to complete."

The company feel that this results in either micro companies potentially having to share the IP with a larger companies, be bought out or work with a larger company which in many cases is just not feasible.

The overall view is that there is a lack of continuity in the system with different government agencies offering and operating different levels with a lack of financial support for smaller projects to get over the initial period of set up. Patent costs are particularly expensive and resultingly difficult to maintain during the set up phase.

#### Linkages to the UK and spillovers



This company are the only ones working on the technology and so there are no real networks. However, the GEP did put the company in contact with other companies that were looking at the same issues.

#### Development of firm

With the recent developments it is difficult to assess what the growth expectations for the firm are. However, there is a certain amount of thought that eventually the manufacturing of the final product will be located outside of the UK due to the location of research and development sites within this industry.

"To some extent whilst the GEP started off wanting to get the company in the UK, as we haven't had the funding, the chances are that the real profitability will go outside of the UK."

#### Relocation to the UK

Although Company I developed their patent and core technology in Russia, the company's management felt they needed a strategically viable location to globally protect and expand their intellectual property and business. Factors such as culture and language as well as the opportunities in the UK for expanding the business were initial attraction to the UK. Overall the company feel that the support of the GEP was critical to the relocation of the business in the UK and it would not have happened without the support.

## A2.10 Company J

Table 22: Summary of Company J'	s involvement in the GEP
Region of origin	Africa
Business sector	Other ICT
Firm size	Turnover in previous financial year: £0
	Turnover at relocation: £0
	Staff: 1 (in the UK)
GEP assistance received	Relocation assistance
Relocation to the UK	N/A
UK operations	Global headquarters
Innovative activities	Development of new products to the UK and staff engaged in R&D
Use of UK suppliers	Yes
Membership of networks	No
Agreements with UK organisations	N/A
Export-orientation	Yes – conducts overseas business
Growth expectations	High
Benefits of GEP assistance	Gain access to new ideas about products, services, techniques or technologies; improve your company's profile or credibility in the UK; and improve your marketing strategy.
Additionality of GEP support	Substantial – would not have relocated to the UK in the absence of GEP support and would not have performed as successfully but may have sold to UK customers.

#### Company background



First founded in South Africa 20 years ago this company is based within the retail technology solutions sector.

The company has recently set up a European head quarters in the UK and currently employs over 400 people in South Africa and one in the UK who is developing the new UK operations.

"The UK was an attractive market from a new sales point of view but it became apparent that it would also best serve our companies growth to have our European HQ here as well. In addition, our Global development team will work out of the UK.""

Prior to launching in the UK the company were developing their product prior to market entry. The company are currently pre-revenue and have recently completed the initial sales process and are in pre-contract negotiations with a number of companies.

The company's founder had set up three or four businesses before but wanted to try to develop and sell a product in a different way.

In terms of supply chains, the majority of systems the company run are on their own platforms built and controlled by the company and these are used in the UK and Europe. The company use a mix of their own in-house technology and outsource some with partnerships. Those partnerships will be based in the country of operations.

Currently for the UK, the main suppliers are UK-based companies. Research and development will come from a mixture of companies with some being lead by advancements the company makes.

#### **GEP support**

The person employed by the company to start developing its expansion knew one of the Dealmakers and so got the GEP involved in the early stage of the development.

Initially support was about getting the green light status that the company could be part of the GEP. The company felt that the Dealmaker offered them a broad platform of support with administrative and political contacts and networks. Funding had not been part of the company need but they may be looking for it in the future and will look at the GEP for that.

The company have regular meetings with their Dealmaker mainly around what support they can give the company and are helping with contacts for their product launches.

This company, as well as Company E, highlight the benefits that "a member GEP website as a central resource would be useful".

#### Views of GEP

The company feel that they have benefited significantly from the advice and support of their Dealmaker who has introduced the company to a number of opportunities. The company has also benefitted from the Green Light endorsement of being a member of the GEP which in the early stages has helped the company bridge a credibility gap when dealing with large corporate bodies. Overall, they feel that the service has been very good and could help them become established faster and create more jobs and wealth in the UK. However, the support is something that businesses have to ask for.

"It has been what we expected. It is one of those organisations that you have to really engage with them – the more you put in the more you get out. You have to ask for what you want."

In terms of things the GEP could do better funding is an area where support could be greater perhaps for companies that set up in the UK getting a tax break initially would be good.

There is a feeling that the UKTI need to increase awareness of the GEP and be more active in the promotion of the GEP as a brand. A GEP members' website as a central resource would be useful as it is critical that the member could communicate with each other more effectively.

Further to this, after care could be improved with more regular meetings with Dealmakers. The Dealmakers are currently looking at new businesses and lose their focus with their existing companies once they have landed in the UK.

In regard to evaluating the programme, however, this company believed that its generally positive experience will have important demonstration effects for companies aspiring to relocate to the UK in the future that may not be captured effectively at this point in time.

"The positive impact the GEP programme has had cannot just be measured by tangible figures alone. Back in [South Africa], we have spoken very enthusiastically about the GEP support to companies who are thinking about relocating or starting operations in Europe and I'm sure our positive experience will have an effect on those companies in their choice of European HQ."

#### Linkages to the UK and spillovers

The company are currently in the initial stages of discussions with other networks of third party suppliers to sell their services.

#### Development of firm

The company have an ambition to grow substantially driven by roughly equally by overseas sales and UK sales. The company see that they will either be employing zero people because the company hasn't worked or employing 500 people because it has. It is really up in the air at the moment as the UK venture is a new development.

The main factors and risks affecting the firm's growth over the next five years surround issues such as the company not getting contracts signed quickly enough so the company does not get launched in the UK properly. Further risk factors include the possibility of other technologies overtaking theirs.

#### Relocation to the UK

The UK was an attractive market from a new sales point of view but it became apparent that it would also best serve the company's growth to have our European head quarters in the UK as well. In addition, the global development team will also work from the UK. The size of the market, the fact that it is secure and stable and an English speaking country and that it has the ability to launch at multiple countries.



The company were considering other countries such as Germany, Ireland, USA and Canada. However, the help and what the company could get from GEP was one of the factors that encouraged the company to go to the UK.

#### Perceptions of the UK

The company are still pre-revenue and haven't found the contacts they need yet which has been slower than anticipated. The company feel that the UK is still in a period of pulling out of the recession and that the UK has been really damaged by the downturn.

## A2.11 Company K

Table 23: Summary of Company K'	s involvement in the GEP
Region of origin	Australasia
Business sector	Healthcare
Firm size	Turnover in previous financial year: £0
	Turnover at relocation: £0
	Staff: 3 (in the UK)
GEP assistance received	Relocation and talent assistance
Relocation to the UK	2009
UK operations	European headquarters, marketing operation and sales operation
Innovative activities	Staff engaged in R&D patenting technologies with EPO and USPTO
Use of UK suppliers	No
Membership of networks	No
Agreements with UK organisations	Long-term manufacturing and collaboration agreements
Export-orientation	Yes, sales growth in Europe
Growth expectations	High
Benefits of GEP assistance	Provision of specific information (e.g. business strategy and marketing to investors) and key business contacts
Additionality of GEP support	Business acceleration and realising some goals that would not have otherwise been achieved.

#### Company background

First founded in Australasia the company is involved in healthcare technology developing support systems.

The company currently operates its global, European and strategic headquarters and marketing and sales operations in the UK.

Prior to relocating to the UK the company had been established for more than three years and were developing their product prior to market entry moving on to regulatory approval.

The company currently employs nine people in Australasia and three in the UK.

The company currently earns no revenues as it is in its start-up phase. However, the product has been recently launched in the UK and European market following a conference, through which the company are pursuing a number of sales leads.

The founder of the firm is a serial entrepreneur. He is currently involved in setting up three startup businesses focusing on health technologies and prior to establishing Company B he has been involved in other ventures, one of which he grew in the UK and sold to a US buyer.

In terms of its supply chain, the company develops its hardware in Taiwan with final testing taking place in Australasia. Currently, the company is investigating relocating its final testing and assembly operation in UK. Its software component is purchased via licence through other technology companies.

Main location of suppliers is overseas. The hardware used has to be made to healthcare standards and there are very few manufacturers that can achieve the standards required.

#### **GEP** support

The company was referred to an Australasia-based Dealmaker as a company that had the potential to UK based operations. The Dealmaker may have, in part, been a catalyst for relocation as the company only made a firm decision to relocate once they had engaged with the GEP.

"When you are at those big decision times [e.g. considering relocation] you can always find reasons for not doing things. We were encouraged by his [the Dealmaker's] enthusiasm and encouragement."

The Dealmaker provided access to networks – his own and those through the GEP – introducing the company to useful people including finance and manufacturing contacts. The Dealmaker also provided administrative contacts such as accounting firms. The company are continuing a relationship with their Dealmaker who is potentially providing advice for other start-ups.

#### Views of the GEP

The most important way in which the GEP has supported the company has been through access to the Dealmakers' networks – introducing the company to other organisations the company feel would have been difficult to identify and meet with on their own.

"It's fairly easy to have administrative networks but in addition to that he has had some good business connections. He's a creative thinker around plugging people together – that has been really good."

The company feel that the Dealmaker made a real effort to get to know the business and the company felt able to call up the Dealmaker on a wide range of issues to get help and advice.

"If he doesn't know then he knows someone who does."

The company feel they would have achieved good results without the GEP but that the programme has helped significantly.

"He [the Dealmaker] has met several of our team and is held [...]as someone who we can call on for good advice and contacts. "

"It helped us make the decision to move and get going in UK as a base for Euro. It has helped us to get things going faster than we would have done."



The company feel that there needs to be greater awareness of the programme and that additional forms of support, such as grants, may be beneficial to firms relocating to the UK. Other programmes overseas are often too narrow and the advisers are not really mentors – they are just administering the programme.

#### Linkages to the UK and spillovers

The provision of networks and contacts is something that has been key for the company in its development who have found networking sessions have opened doors with people.

The company are currently collaborating on manufacturing contracts, potentially in the UK, and are looking into software licensing.

#### **Development of firm**

The company have an ambition to grow substantially with UK sales as an important driver. However, mainland European sales have grown faster than had been anticipated. The company are also looking to the US market.

Development in terms of location of operations depends on which side, software or hardware, develops as the primary market. If software based sales grow then operations will be concentrated in the UK. If the hardware sales grow then operations will primarily be located across Europe distribution networks. If the company enters the US market then there be a direct presence in the US.

In terms of potential risk factors to the company's growth ambitions, it sees market acceptance of its product as the primary risk; and secondarily, whether it makes the correct choices in its commercial strategy (e.g. direct market entry or entry via a partnership with another company, entry and timing of entry into other countries, etc.).

#### Relocation to the UK

The primary factors motivating the company's relocation to the UK were related to its aspirations to build a presence in the UK and European markets.

The company viewed the UK and European markets to be more innovative than elsewhere and to have a record in making innovative products and taking them in to the mainstream -- "that set up is perfect for a lunch into the US".

Language and culture were other important factors that minimised some of the perceived risks of relocating.

#### Perceptions of the UK

In terms of the role of the Dealmaker in changing perceptions of relocating to the UK, the company felt that they probably would have come to the decision to relocate the UK but the Dealmaker enabled the company to make that decision more clearly and faster.

"There are so many drivers going on that there is no one cause but GEP was highly instrumental. The company made the right strategic decision based on the facts available. He [the Dealmaker] pointed out the benefits to the company which did help us."

"Personally relocating to the UK has been a very wise decision – there is a lot going in UK and I've been amazed at the opportunities around."

## **Annex 3** Existing government funding interventions

#### A3.1 National level funds

**Enterprise Capital Fund programme** was launched in 2005. This is a rolling programme of investments into early stage technology-oriented venture capital funds, many managed by new and emerging fund management teams, typically investing between £1m - £2m into SMEs. There are currently 11 ECFs with ranges from £10m to £30m and with an average fund size of just over £26m. As of November 2009, these funds total £297.5m with a £196.2m government commitment supported by private investor commitment of £101.3m. £46m has so far been invested in 50 companies.

The **UK Innovation Investment Fund**, announced in June 2009, will provide an additional boost for high growth, high tech businesses struggling to raise equity finance. The Government has committed £150m with the aim of attracting significant private sector investment into a fund of funds, to invest into underlying specialist technology venture capital funds. The UK Innovation Investment Fund has the flexibility to make larger investments than Enterprise Capital Funds, which are restricted to a maximum of £2m. The fund expects to start making investments in 2010.

## A3.2 Regional Development Agency venture capital funds

In addition to national led funds RDAs operate their own venture capital programmes which aim to provide investment for SMEs drawing on European structural funds and tied to wider economic and regeneration objectives. RDAs draw down European Regional Development Funds to fund these - which can be used in regional venture capital and loan funds targeted at that region. These typically invest smaller amounts than national schemes (between £250k-£1m) in a wide range of local business sectors, not just technology.

The Capital for Enterprise Fund (CfEF) supports viable business with equity or mezzanine investment aimed at releasing and sustaining growth and can invest between £200,000 and £2 million where the business has exhausted its borrowing capacity with lenders. It is a £75m fund (£50m in Government funds and £25m from the main banks), announced as part of the Real Help Now programme in January 2009 and is distributed through two fund managers and a small element (£15m) of co-investment. The fund will invest up to March 2010 with £20m held back for follow on investment.

The Aspire Fund was launched in November 2008 and acts as a beacon for women's access to finance. This £25m fund (£12.5m of government funds to be matched by the private sector) has a particular focus on women-led businesses with high-growth potential seeking equity investment of between £100,000 and £2m.

## Annex 4 Summary of studies on gazelles as job contributors

Table 24: Summary of s	Table 24: Summary of studies on Gazelles as job contributors (Henrekson and Johansson, 2008)				
Study	Period	Gazelle definition	Country	Industry	Main result
Birch and Medoff (1994)	1988–92	A business establishment ≥ 20% sales growth each year over the interval, and base-year revenue ≥ \$100,000	U.S.	All	A small number (4%of ongoing firms create disproportionately large share (60%) of all new jobs in the U.S.
Kirchhoff (1994)	1977–78 to 1984	The 10% fastest growing firms in the investigated population	U.S.	Non-agricultural, private sector	4% of firms produce 75% of employment in studied cohorts
Storey (1994)	Various	Various	U.K., except for one U.S. study	Mainly manufacturing	Approximately 4% of firms create approximately half the new jobs in studied firms
Birch et al. (1995)	1990–94	A business establishment ≥ 20% sales growth each year over the interval, and base-year revenue ≥ USD 100,000	U.S.	All	Gazelles account for all new jobs in the whole economy
Picot and Dupuy (1998)	1978–92 and 1983–86	Different high-growth thresholds	Canada	Commercial economy	Job generation concentrated in the few fast-growing firms in the sample
Autio et al. (2000)	1994–97	≥ 50% sales growth three consecutive years 1994–	Finland	All	High-growth firms increased their

		97 and ≥ FIM 1 million in sales at end of period.			employment by more than 400%
Brüderl and Prisendörfer (2000)	1985–86 to 1990	Surviving firms, growing more than 100% and growing by ≥5 employees in the studied period	Germany, Upper Bavaria	All, but crafts, agricultural businesses, physicians, architects and lawyers	A small number (4%of rapidly growing firms are crucial for job generation
Schreyer (2000)	1985–94	The 10% fastest growing firms in the investigated population	France, Canada(Quebec), Italy, Netherlands, Spain, West Germany	Manufacturing and other non-service industries like mining	High-growth firms contribute disproportionately large part of job creation among studied firms
Sweden in Schreyer (2000); Davidsson and Delmar (2003, 2006); Delmar et al. (2003)**	1987–96	The 10% fastest growing firms in the investigated population	Sweden	Private commercially active firms	Gazelles created all new jobs in the investigated population
Littunen and Tohmo (2003)	1990–97	Doubling sales turnover in real terms between 1990 and 1997 and sales exceeding FIM 500,000 in 1997	Finland	Metal-based manufacturing and business service firms	High-growth firms accounted for all jobs created in the investigated population
Fritsch and Weyh (2006)	1984–2002	Employment shares of the 1, 5, 10 and 25% largest firms in different cohorts	West Germany	All private sector industries	A small proportion of the firms dominate job creation in the studied cohort
Halabisky et al. (2006)	1985–1999	Firms growing by more than 50% between 1985 and 1999	Canada	All, except health, education and government	Fast growing firms generated the bulk of new jobs in the private sector
Acs and Mueller (2008)	1990–2003	New rapidly growing firms with 20–499 employees in the year of entry	320 Metropolitan Statistical Areas in the U.S.	Every U.S. private sector (non-farm) business with employees	Gazelles in large diversified metropolitan regions generate long-

					term employment growth
Acs et al. (2008)	1994–2006	Enterprises that double sales over the 4-year period between 1998 and 2002 and that have an employment growth quantifier of at least 2e	U.S.	All	High-impact firms (2–3% of all firms) create almost all net jobs in the economy
Deschryvere (2008)	2003–2006	High growth firms defined as firms with an average growth in em-ployees > 20% cent p.a. over a 3-year period, and with ≥ 10 em-ployees initially	Finland	All	High growth firms (5% of all firms) generate more than all net jobs in the economy. Firm size and organic growth negatively related

Note: \*\* Studies used the same data and produced similar findings, so are reported together

Source: Adapted from Henrekson and Johansson (2008, pp.23-25)

## Annex 5 Dealmaker consultation interview topic guide

#### YOU/ YOUR ROLE

- Please could you briefly outline your role in the GEP?
  - o Motivation for participating in GEP
  - o Personal history/experience, up to and including your time as a Dealmaker
  - Markets or sectors of focus
  - Length of time involved in the programme
  - Amount of time spent per month on GEP activities
  - Targets

#### Recruitment

- How do you seek out entrepreneurial talent for the GEP?
  - o Formal networks
  - Referrals
  - Personal contacts
- Do entrepreneurs approach the GEP independently? What are the differences between these firms and the firms that you actively seek out?
- How many business plans do you consider for the GEP each year? What criteria do you use/processes do you go through to assess these businesses?
- Of the total number of entrepreneurs you assess each year, what proportion do you subsequently approach to recruit on to the programme?
- Please describe the process of recruiting entrepreneurs on to the GEP
  - o What type of firm is / is not attracted to the GEP?
  - o What challenges do you face during the recruitment process?

#### Nature of support offered

- What are the main ways in which you assist companies?
  - o Strategic advice
  - Operational advice
  - Management/governance
  - Financial advice (e.g. capital structure / valuation)
  - o Introductions to potential investors / partners/suppliers / etc.
  - o Introduction to government
  - Access to information or networks otherwise unable to come by
  - o Raise a company's profile
  - Aftercare
- Can firms get access to support similar to that offered by the GEP elsewhere?
  - o How does the support offered through other channels differ to the GEP?
- What are entrepreneurs' chief concerns when considering whether to relocate to the UK?
  - o Ability to raise funds
  - Market size
  - Access to contacts or networks otherwise unable to come by
  - Legal and tax environment
  - o Talent pool / social access to like-minded individuals, i.e., other entrepreneurs
  - Location (UK vs. US)
  - Quality of life (e.g. distance from home)
- How does the support provided to firms by the GEP change over time?
  - O How much / what type of support is provided to companies while part of the GEP (e.g. in years 1, 2, 3)?
  - o What type of after care is provided to companies?
  - o How valuable is the GEP alumni network?



• For you, has the focus of the GEP programme changed since you first became a Dealmaker? How has this affected the nature of support provided to firms?

#### **BENEFITS OF THE GEP**

- What do you see as the main benefits of the GEP to participating firms?
  - o Availability of a successful/experienced entrepreneur (i.e., a Dealmaker)
  - Direct benefits (funding, access to markets, etc.)
  - Building networks (advisors, investors, etc.)
  - Advice on new technologies / competition / market trends
  - Additional skills and expertise
  - Helped companies make improvements or gain new ideas about their products and services, technologies
  - Helped companies overcome a particular problem or difficulties with legal issues, regulations or quality standards
  - o Improved knowledge of the competitive environment of the market
- How do you measure these benefits?
  - Funds raised
  - Orders/contracts won
- What performance indicators do you use to track the future successes of GEP firms?
  - Operating indicators (e.g. employment)
  - Financial indicators (e.g. earnings growth)
  - Strategic indicators (e.g. R&D investment or intellectual property rights)
- What proportion of subsequent performance do you believe is a direct result of having been part of the GEP?
- How have the entrepreneurs you have supported performed? Why have some businesses succeeded while others have failed to grow?
- How do you think firms participating in the programme would perform without the support of the programme?
  - o What plans of action would firms choose to pursue (or not to pursue)?

- o Would firms achieve some results but not others?
- o Would it take firms longer to achieve these results?
- o How likely do you think it is that firms would achieve these results?
- If firms chose not to relocate to the UK, how do you think they would have performed based elsewhere?
- Are you aware of private initiatives similar to the GEP? How do firms fare under the GEP compared to these initiatives?
- What do you see as the wider costs and benefits of attracting young firms to the UK economy?
  - Employment creation
  - Collaborate vs. competitive consequences for domestic firms
  - Investment in R&D or innovative activity
  - o Enhancement of the UK's entrepreneurial gene pool and technology infrastructure
- What have been the effects of the economic cycle on the pipeline of entrepreneurs entering the GEP and the performance of firms currently in the programme?
  - Change in the number of new entrepreneurs wishing gain support through the programme
  - o Change in the composition of entrepreneurs by sector, country of origin, etc.
  - Change in the nature of support
  - o Change in benefits / subsequent performance



### **ASSESSMENT / IMPROVEMENTS**

- How is the GEP viewed amongst stakeholders (entrepreneurs, investors, etc)? What are the costs and benefits of the government brand/reputation?
- Could the GEP be improved/made more effective?
  - o Change nature of programme?
  - o Change role of dealmakers?
  - o Improve knowledge of the programme (i.e. marketing)?
  - o Widen scope?
- What other actions, if any, do you feel could facilitate the flow of high calibre start-up firms into the UK?
- Please provide any additional comments you might have with regard to the Global Entrepreneur Programme, its effectiveness and the use of UKTI support

## **Annex 6 Evaluation survey**

# GEP Evaluation Survey – December 2009 London Economics for UK Trade & Investment (UKTI)

#### **SECTION 1. Introduction and overview**

London Economics has been commissioned by UKTI to undertake an economic evaluation of UK Trade & Investment's Global Entrepreneur Programme (GEP). The GEP aims to create high profit sustainable global companies from pioneering start-ups, using the UK as a strategic headquarters and base for international expansion.

As part of the evaluation, we are undertaking a survey of companies that received support through the GEP. We would greatly value your assistance with this research, and would appreciate it if you could help us by completing the survey by 19 February.

We anticipate that the survey will take around 25 minutes to fill out. The questions are mostly multiple choice, covering areas such as your current business activity, and the impact of the support you received through the GEP.

Please note that the survey is entirely voluntary. The responses of participants that choose to participate will be combined into a statistical report and no firm-level information will be passed on to UKTI or any other organisation in any form. All answers will be treated in the strictest confidence. If you have any queries about this, or the survey more generally, please do not hesitate to contact Shaan Devnani (on 0207 866 8188 or sdevnani@londecon.co.uk) at **Economics** or Nilum Patel at UKTI (on 0207 215 8891 nilum.patel@ukti.gsi.gov.uk).

Thank you for your time. Please click on the button below to proceed to the survey.

## SECTION 2. Business overview / introductory questions

1.	Where was your company first established?	
	United Kingdom	1
	Europe (excl. UK)	2
	Russia or Central Asia (incl. Turkey)	3
	North America	4
	The Middle East	5
	The Indian subcontinent (incl. India, Pakistan & Sri Lanka)	6
	China	7
	Japan and South East Asia (incl. Taiwan & Hong Kong)	8
	Australia and the Pacific	9
	South America	10
	Africa	11
	Do not wish to answer	12
	Don't know	13
	Other [PLEASE SPECIFY]	14
2.	Does your business operate in any of the following technology	
	Wireless applications/content	
	Software	
	Technology for 3G	
	Nanotechnology	
	Optoelectronics	
	Microelectronic design	
	Other ICT	
	Pharmaceuticals	
	Human Genome Project	
	Proteomics	
	Environmental cleaning	
	Bioinformatics	
	Other life sciences	
	Renewables/sustainable technologies	
	We do not operate in any of these technology areas	
	Do not wish to answer	
	Don't know	
	Other [PLEASE SPECIFY]	18
3.	How would you describe your company's current stage of devel	onment?
٥.	We are developing our product prior to market entry	-
	We have recently begun to sell our product	
	We have an established customer base / market share	
	Do not wish to answer	
	Do not wish to answer	

**158** 

	Don't know5 Other [PLEASE SPECIFY]6
4.	Which of these types of operations does your company have in the UK?
	SELECT ALL THAT APPLY
	Global HQ1
	European HQ2
	Strategic HQ3
	Marketing operations4
	Production facilities5
	Sales operations6
	Research & development7
	Do not wish to answer8
	Don't know9
	Other [PLEASE SPECIFY]10
5.	What stage of development was your company at when you first received GEP support?
	We were developing our product prior to market entry1
	We had recently begun to sell our product2
	We had an established customer base / market share3
	Do not wish to answer4
	Don't know5
	Other [PLEASE SPECIFY]6

#### **SECTION 3. Relocation to the UK**

All questions in this Section (6-11) will be posed to respondents within companies that have received relocation assistance. All other respondents will be redirected to Section 4.

6.	How long had your business been established before you relocated it to the UK?
	Less than 1 year1
	Between 1 and 3 years
	More than 3 years
	The business was established for the first time in the UK4
	Do not wish to answer5
	Don't know6
	Other [PLEASE SPECIFY]7
7.	What originally attracted you to relocate to the UK?  OPEN QUESTION
8.	Please identify how important each of the following factors were in your decision to move to the UK, answering on a scale of 1-5, where 1 means that it was "not important at all" and 5 means that it was "very important".
	Important centre for businesses / technologies in my sector1
	Good supply of appropriately skilled employees2
	Availability of workforce with strong work ethic3
	Good base for expansion into international markets4
	Large market for your product5
	Access to funding opportunities6
	Communications infrastructure7
	Support from UK Government8
	Favourable tax regime10
	Favourable political and regulatory environment9
	Favourable legal environment for property rights protection11
	Language12
	Cultural ties / affinity / similarities13
9.	When you were thinking of relocating to the UK, did you consider relocating to other countries?
	Yes1
	No2
	Do not wish to answer3

10. If yes, which countries?

**OPEN QUESTION** 



11. Did any of the following issues represent a significant difficulty in establishing your business operations?

Please answer on a scale of 1-5, where 1 means that it was "not at all difficult" and 5 means that it was "very difficult".

Difficulty	Difficulty (1-5/ DK/NA)
Relocation costs (e.g. travel, company set-up costs)	
Problems obtaining work permits or visas	
Understanding the legal system	
Obtaining basic information about doing business in the UK	
Accessing external finance	
Hiring employees with appropriate skills	
Identifying appropriate contacts (could include potential partners, service providers, or suppliers)	
Cultural and language differences	
Personal considerations (e.g. distance from home)	
Other [PLEASE SPECIFY]	

### Section 4. Quality of Service

### **QUESTION 12 FOR RELOCATION COMPANIES ONLY**

12. Overall, how would you rate the support you received from the GEP?

Please rate the assistance that you have received in terms of each of the following service aspects, using a scale of 1 to 5, where 5 means "very good" and 1 means "very poor".

Rating	Rating (1-5/ DK/NA)
a)The quality and relevance of information and advice you have received in helping you to prepare to relocate to the UK	
b) The quality and relevance of information and advice received after relocation to the UK	
c) The quality and relevance of any contacts provided	

13. Thinking specifically about the Dealmaker(s) that you have been working with, how would you rate...

Rating	Rating (1-5/ DK/NA)
a)The attitude and professionalism of the Dealmaker	
b) The competence and knowledge of the Dealmaker	
c) The impartiality of the Dealmaker	
d) The ability of the Dealmaker to communicate in a clear and effective manner	

14. Thinking about your total experience of the GEP, how would you rate your satisfaction overall?

Very dissatisfied	1
Fairly dissatisfied	2
Indifferent	3
Fairly satisfied	4
Very satisfied	5
Do not wish to answer	6
Don't know	7

### **SECTION 5. Business operations**

We would now like to move on to talking a bit more about your business operations in the UK.

15. Does your company hold any of the following types of assets in the UK?

	Y/N	DK	NA
a) Property/land	_	_	
b) Machinery/equipment	_	_	
c) Intellectual property rights	_	_	

16.	Does your company own any patent rights (granted or pending)?
	Yes1
	No2
	Do not wish to answer3
	Don't know4
17.	Does your company hold exclusive UK commercialisation rights for any intellectual property where patent rights are owned by other companies?
	Yes1
	No2
	Do not wish to answer3
	Don't know4
<u>F0</u>	R COMPANIES THAT OWN PATENTS (QUESTION 16)
18.	For the patent rights that you own, which of the following patent offices have you or do you intend to apply to?
	SELECT ALL THAT APPLY
	United Kingdom Intellectual Property Office1
	European Patent Office (EPO)2
	Japanese Patent Office (JPO)3
	United States Patent and Trademark Office (USPTO)4
	Other patent offices5
	Do not wish to answer6
	Don't know7
19.	Do you have, or are you currently negotiating, any agreements with other UK enterprises?
	Yes1
	No2
	Don't know3

### FOR COMPANIES THAT ANSWERED "1" AT QUESTION 19

### 20. Do you have, or are you currently negotiating, any of the following types of agreements with other UK enterprises/organisations?

Agreement	Yes: longest contract is 3 years or less	Yes: longest contract is more than 3 years	Don't know	Do not wish to answer
a) Manufacturing contracts	_	_	_	_
b) Licensing agreements	_	_	_	_
c) Supply / distribution contracts	_	_	_	_
d) Agreements with customers	_	_	_	_
e) Collaboration agreements	_	_	_	_

21.	Are y	your main	suppliers	<b>UK-based</b> co	mpanies o	or com	panies	based	overseas?
-----	-------	-----------	-----------	--------------------	-----------	--------	--------	-------	-----------

UK-based companies	1
Companies based overseas	2
Don't have any suppliers	3
Both UK and overseas companies	4
Do not wish to answer	5
Don't know	6

### **SECTION 6. Fund raising**

22.	2. Has the GEP helped you to raise your profile or to improve your credibility with poinvestors?	tential
	Yes1	
	No2	
	Do not wish to answer3	
	Don't know4	
23.	3. Which of the following sources have you raised investment from?	
	SELECT ALL THAT APPLY	
	Venture capital1	
	Grants from government and research bodies2	
	Angel funding3	
	Banks4	
	Do not wish to answer5	
	Don't know6	
	Other [PLEASE SPECIFY]7	
24.	4. How much external finance have you raised in total?	
	Up to £250,0001	
	£250,001-£500,0002	
	£500,001 -£1million3	
	£1million -£5million4	
	£5million -£10million5	
	£10million -£25million6	
	More than £25million7	
	Do not wish to answer8	
	Don't know9	
	Other [PLEASE SPECIFY]10	
QU	QUESTION 25 AND 26 ONLY TO COMPANIES THAT HAVE RECEIVED FU	NDING
	SSISTANCE. OTHER COMPANIES TO QUESTION 27.	
25.	5. And how much of this funding did you raise as a result of the assistance th received through the GEP?	at you
	Up to £250,0001	
	£250,001-£500,0002	
	£500,001 -£1million	
	£1million -£5million4	
	£5million -£10million5	
	£10million -£25million6	
	More than £25million7	
	Do not wish to answer8	
	Don't know9	
	Other [PLEASE SPECIFY]10	

### 26. Which ONE of the following statements best describes your view of the fundraising support provided by the GEP?

We would have raised similar funding anyway	1
We would have raised similar funding but not as quickly or easily	2
We would have raised some similar funding but not all of the funding	3
We probably would not have raised similar funding	4
We definitely would not have raised similar funding	5
Do not wish to answer	6
Don't know	7

### **SECTION 7. Impact of the action taken**

We would like you to think about all the ways in which your company has and will benefit from the GEP support.

- 27. In what ways has your business benefited from GEP support? Please include any benefits that you expect to realise in the future.

  OPEN QUESTION
- 28. To what extent has the GEP helped you to deal with issues in the following areas?

Please identify the extent to which you feel your business has been assisted by the GEP on a scale of 1-5 where 1 is "to no extent", and 5 is "to a critical extent".

For any issue that was not a problem for your business, please select NA. ANSWER OPTIONS TO BE RANDOMISED

Impact	Extent (NA or 1-5)
Finding solutions to problems obtaining work permits or visas	
Understanding the legal system	
Obtaining basic information about doing business in the UK	
Gaining access to specific information not easy to come by	
Finding solutions to problems in hiring employees with appropriate skills	
Identifying, or gaining access to, key contacts for your business	
Overcoming a particular legal or regulatory issue	
Cultural and language differences	

### 29. Has the GEP benefited your business in any of the following ways?

Please identify the extent to which you feel your business has, or is expected to, experience each benefit as a result of the support provided by the GEP (i.e., that would not have occurred if you had not received support) on a scale of 1-5 where 1 is "to no extent", and 5 is "to a critical extent".

Benefit	Extent (1-5/ DK/NA)
Improve your processes or management practices	
Gain access to new ideas about products, services, techniques or technologies	
Improve your company's profile or credibility in the UK	
Improve the way you attract funding in the UK	
Improve your knowledge of the competitive environment	_
Improve your marketing strategy	

30. How has the size of your company changed since your business received support through the GEP?

Please give your overall impression of the growth of the business taking into account factors such as size, number of employees, turnover and sales.

Remained the same size	1
Become smaller	2
Grown moderately	3
Grown substantially	4
Do not wish to answer / don't know	5

31. And, how do you anticipate that the size of your company will change over the next five years?

Please give your overall expectation of the growth of the business taking into account factors such as size, number of employees, turnover and sales.

Remain the same size	1
Become smaller	2
Grow moderately	3
Grow substantially	
Do not wish to answer	
Don't know	6

<u>FOF</u>	R COMPANIES THAT ANTICIPATE GROWING (OPTIONS 3 AND 4 AT QUESTION 31
32.	Over the next five years, do you think that your company's growth will be driven by sales in the UK or sales overseas?
	Nearly all by UK sales1
	Mainly by UK sales, but overseas sales will be important 2
	Roughly equally by overseas sales and UK sales 3
	Mainly by overseas sales, but UK sales will be important 4
	Nearly all by overseas sales5
	Do not wish to answer 6
	Don't know7
COL	MPANIES THAT DID NOT RECEIVE RELOCATION ASSISTANCE GO TO QUESTION 36,
33.	Would you have relocated the same operations to the UK if you had not received support from the $\ensuremath{GEP?}$
	Definitely1
	Probably2
	Probably not3
	Definitely not4
	Do not wish to answer5
	Don't know6
	MS THAT WOULD "DEFINITELY NOT" OR "PROBABLY NOT" HAVE RELOCATED THE ME OPERATIONS (QUESTION 33).
34.	If you had not relocated to the UK, do you think that you would you have undertaken any of the following activities in the UK instead?
	SELECT ALL THAT APPLY
	Collaborated with UK organisations1
	Used UK suppliers2
	Sold to UK customers
	Do not wish to answer4
	Don't know5
FIRI	MS THAT WOULD "DEFINITELY" OR "PROBABLY" HAVE RELOCATED (QUESTION 33).
	If you had relocated, do you think this would this have been
	At around the same time
	Less than a year later2
	More than a year later 3
	Do not wish to answer4
	Don't know5
	K RELOCATION FIRMS
36.	If you had relocated without GEP support, how do you think that your business performance would have compared?
	We would achieve similar results anyway1
	We would achieve similar results but not as quickly2



### Annex 6 Evaluation survey

We would achieve some but not all the results3	,
We probably would not achieve similar results4	
We definitely would not achieve similar results anyway5	,
Do not wish to answer 6	i
Don't know	

### ASK NON-RELOCATION FIRMS

# 37. If you had not received GEP support, how do you think that your business performance would have compared?

We would achieve similar results anyway	1
We would achieve similar results but not as quickly	2
We would achieve some but not all the results	3
We probably would not achieve similar results	4
We definitely would not achieve similar results anyway	5
Do not wish to answer	6
Don't know	7

### **SECTION 8. Company Information**

Finally, we would like to ask you some questions about your business. These are to classify your answers for analysis purposes. For each of the following questions, please focus only on your business within the UK. If your company is a subsidiary, please answer only for the subsidiary in which you work.

38.	What was the annual UK turnover of your business in your previous financial year, i.e., your annual sales, income or receipts?
	Amount in £:
39.	If you are unsure, please select one of the following ranges:
	We are not currently trading / no turnover1
	£100,000 or less2
	£100,001 - £500,0003
	£500,001 - £2million4
	£2million - £10million5
	£10million - £30million6
	More than £30million7
	Do not wish to answer8
	Don't know9
40.	What was the annual turnover of your business in the financial year in which you received support from the GEP? $\pounds$
41	If you are unsure, please select one of the following ranges:
41.	We are not currently trading / no turnover1
	£100,000 or less2
	£100,001 - £500,000
	£500,001 - £2million4
	£2million - £10million5
	£10million - £30million6
	More than £30million7
	Do not wish to answer8
	Don't know9

42.	Approximately, how many people UK? (Including both full and part-	e are currently employed by your business within the time staff)
	Number of staff:	
43.	• •	ne of the following ranges:1
	5-9	3
	10-19	4
	20-49	5
	50-99	6
	100-199	7
	200-249	8
	250-499	9
	500 or more	10
	Do not wish to answer	11
	Don't know	12
44.	How many staff did your busine through the GEP?	ss employ in the UK when you first received suppor
	Number of staff:	
FO	R RELOCATION COMPANIES ONLY	,
45.	How many staff did your busines the UK?	ss employ when you first established your business in
	Number of staff:	
46.	If you are unsure, please select or	
		1
		2
		3
	10-19	4

	20-49	5
	50-99	6
	100-199	7
	200-249	8
	250-499	9
		10
		11
		12
	Don't know	12
47.	Is your company currently making an	annual profit or loss?
	Profit	1
	Loss	2
	Break even	3
	Do not wish to answer	4
	Don't know	5
45	K IF COMPANY MAKES A PRE-TAX PRO	OFIT (OUESTION 47)
		<del>.</del>
48.	annual turnover is accounted for by p	tax profit, approximately what proportion of your pre-tax profits?
	Up to 5%	1
	6-10%	2
	11-15%	3
	16-25%	4
	26-50%	5
	51-75%	
		7
		8
	Don't know	
	DOTT KNOW	9
49.	Does your company sell, or are you are not otherwise available in the UK	currently developing, any products or services that market?
	Yes	1
	No	2
		3
	Don't know	
	Don't know	
50.	Are any of your staff engaged in R&I or technical research in the past three	D activity or have you commissioned any scientific e years?
	Yes	-
		2
		3
		4
	DOIT CRITOW	

51.	Has your company sold any goods or services to either businesses or individuals based abroad in the last two years?		
	Yes	1	
	No	2	
	Do not wish to answer	3	
	Don't know	4	
52.	Do you anticipate conducting any business overseas in the next 2 years?		
	Yes	1	
	No	2	
	Do not wish to answer	3	
	Don't know	$\Delta$	

### **SECTION 9. Additional comments**

53. Do you feel that there is any additional support that the GEP or UKTI could have offered you to help you to establish or expand your business in the UK? Please be as specific as possible.

**OPEN QUESTION** 

54. If, in addition to the points addressed above, there are any additional issues that you feel should be considered during the evaluation, please provide them below.

**OPEN QUESTION** 

### **END OF QUESTIONNAIRE**

GEI	P, we will be carrying	out a qualitative research pr	aire. As part of the evaluation of the ogramme with companies that have ntacted in relation to this exercise?	
55.	If you say yes you are time.	not obliged to take part and ca	n always decline if it's not convenient at th	ıe
	Yes		1	
56.	If you are willing to par	ticipate, please provide your cor	ntact details.	
	Name:			
	Company:			
	Position:			
	Phone:		-	
	E-mail:	·	-	

## **Annex 7** Interview topic guides

In the following pages we present the topic guides used during the evaluation fieldwork.



#### <u>Evaluation of UKTI's Global Entrepreneur Programme – Case study topic guide</u>

- 1. Please could you provide a brief overview of your company's operations?
- 2. Please could you provide some details on the background of the person that set up your firm? Are they an experienced entrepreneur? Or is this their first company?
- 3. Please describe the global supply chain for your business.
- 4. Please could you explain the situation of your company before you received GEP support?
- 5. How did you first come into contact with the GEP and the Dealmaker?
- 6. Please could you provide a brief overview of the support that you received through your contact with the GEP Dealmaker?
- 7. Were there any elements of the support that you received that you found particularly helpful?
- 8. What factors influenced your decision to relocate to the UK?
- 9. Are there any other ways in which either the GEP or the UK Government more generally could have helped you in relocating to the UK?
- 10. Has the GEP provided you with any valuable contacts and/or introductions? If so, please provide details of how this has helped your business.
- 11. Have you found the UK a good place to do business?
- 12. Has moving to the UK helped your company's development? And how?
- 13. Are exports an important part of your company's strategy?
- 14. Is your organisation a member of any UK-based trade, sector or research networks?
- 15. How has your membership of the network benefitted your company? How has it benefitted the other members of the network?
- 16. Please provide details of any collaboration contracts that you identified in the survey (if relevant).
- 17. Have you introduced any innovative production techniques or technologies within your sector?



- 18. Which factors influence your choice of suppliers?
- 19. How do you expect your company to develop over the next five years?
- 20. What do you see as the main factors and risks affecting your firm's growth over the next five years?
- 21. Do you think there are any ways in which the GEP could be improved to make it more effective in convincing foreign entrepreneurs to relocate to the UK?



### **Evaluation of UKTI's Global Entrepreneur Programme – Interview topic guide**

- 1. Please could you provide a brief overview of your company's operations?
- 2. How did you first come into contact with the GEP and the Dealmaker?
- 3. Please could you provide a brief overview of your discussions with the GEP Dealmaker?
- 4. In your opinion, why did the deal not complete in the end?
- 5. Do you feel that the Dealmaker or the GEP could have helped overcome any of these issues in any way?
- 6. Although you did not relocate to the UK through the GEP, did your company benefit from your discussions with the Dealmaker at all?
- 7. Given your experience, do you think that the GEP makes it more likely that firms from your country will relocate to the UK?
- 8. Has your company relocated since being first established?
- 9. Does your company have any presence in the UK market?
- 10. Do you see the UK as an attractive place to set-up a business? Which factors are important?
- 11. If your firm is not currently located in the UK, do you think that relocating some or all of your operations to the UK might be beneficial for your business in the future?
- 12. Do you think it would be easier or harder to relocate to the UK compared to other countries?



### Evaluation of UKTI's Global Entrepreneur Programme - Interview topic guide

- 1. Please could you provide a brief overview of your investment focus (e.g. technology/ location / firm size).
- 2. How did you first come into contact with the GEP and the Dealmaker?
  - a. How did you first hear about the GEP?
- 3. Please could you describe the process leading to your investment in the GEP-assisted firm?
- 4. What factors were important to your decision to invest in the GEP-assisted firm?
- 5. What role did the GEP/the Dealmaker play in your decision to invest?
- 6. Do you think that you would have invested in the same firm without any contact from the GEP? Why?
- 7. Was the fact that the company relocated to the UK crucial to your decision to invest? Would you have invested if the company had relocated elsewhere (e.g. the US)?
- 8. Do you feel that the decision to relocate to the UK has been beneficial to the company?
- 9. Has the investment been successful to date?
- 10. Has the recent economic climate (downturn) affected your decision-making over investments in newly established firms?
- 11. Overall, do you feel that the GEP was an important factor in leading to the company relocating to the UK? In what ways was it most important?
- 12. Do you think there are any ways in which the GEP could be improved to make it more effective in convincing foreign entrepreneurs to relocate to the UK?