New Economy Working Papers

The early stage equity market in Manchester: the impact of public policy on investment, talent and networks

Adrian Nolan / Michael Corbishley
September 2009

NEWP 01

New Economy Working Papers

New Economy Working Papers are designed both to produce robust pieces of analysis that stimulate the long-term sustainable economic growth of the Manchester city region and to act as a vehicle for economic development professionals to further their personal development. Papers are intended to invigorate intellectual and challenging debate on the key economic issues and ideas of the time. Overall responsibility for developing the Working Papers lies with an independent Editorial Board consisting of: Mike Artis, Mike Emmerich, Baron Frankal (Editor-in-Chief), Liz Goodger, Cathy McDonagh (Editor), Neil McInroy, Adrian Nolan, Simon Nokes, Lucy Powell and Kram Sadiq.

For further details contact:
Cathy McDonagh
Editor
New Economy Working Papers
6th Floor
Churchgate House
56 Oxford Street
Manchester
M1 6EU

T: **0161 237 4077**
F: **0161 245 4835**
W: **www.neweconomymanchester.com**

©Corbishley and Nolan. All rights reserved.
This text may be quoted without explicit permission, provided that full acknowledgement is given.

The Working Papers are produced by New Economy Working Papers. The views expressed in this paper are those of the authors alone and do not necessarily reflect the views or the policy of members of the New Economy Editorial Board or the Commission for the New Economy.

The authors would like to thank Richard Baker, Peter Fell, Beverley Linsley, Mike Palin and Scott Sage. This Working Paper draws on work originally commissioned by Business Enterprise Xchange, Manchester City Council and Manchester: Knowledge Capital.

Design: **TYPOCOM.net**

Abstract

New, innovative high growth companies increase city and regional competitiveness. But they need to be nurtured and have access to the necessary financial support mechanisms.

This paper examines the access these potential high-growth companies have to capital within Manchester and the surrounding areas. It assesses the factors that may limit the quality and quantity of early stage equity investment and considers how the flow of capital can be improved.

Broad issues around the supply of early stage finance are also examined, including the levels of early stage investment activity in Manchester, how it is co-ordinated and what evidence is available to determine demand for finance. Attention is paid to:

(i) the role of public venture capital funds and their relationship with private investment;

(ii) Business Angel activity and networks between groups of potential investors;

(iii) connectivity and the development of expertise and knowledge in the investment community;

(iv) investor readiness and the support for businesses from their inception onwards to ensure they are ready to receive investment.

Examples of best practice in other cities and countries are examined, and recommendations made for Manchester to both stimulate the private sector market and increase the level of attractive investment propositions across the city region.

Table of contents

Abstract.. 03

Table of contents.. 04

Executive summary.. 05

1 Introduction.. 08

2 Theoretical context.. 12
2.1 Public investment policy - investing in start ups.. 13
2.2 The role of venture capital in investment policy.. 14

3 Policy context.. 20
3.1 National policy on venture capital.. 21
3.2 Supply side initiatives.. 22
3.3 Comparative policy.. 24
3.4 Improving access to finance: exampes of best practice from comparator cities.. 26
3.5 The effects of recession upon early stage equity investment.. 29

4 Investment activity in Manchester.. 30

5 Development of early stage finance activity in Manchester.. 36
5.1 The equity gap and the issue of public vs private venture capital funds.. 37
5.2 Business Angel activity in Manchester.. 39
5.3 Proof of concept funds.. 42
5.4 Demand for venture capital and Angel finance in Manchester.. 42
5.5 Investor readiness in Manchester.. 43
5.6 Connectivity and supply of talented VC managers and angel investors.. 46
5.7 Entrepreneurialism in Manchester.. 48

6 Conclusions and recommendations.. 50
6.1 Concluding discussion.. 51
6.2 Recommendations.. 53
Annex Methodology.. 59
Bibliography.. 60

Executive summary

- Venture Capital (VC) should be regarded as an industry in its own right that can stimulate high growth activity and provide benefits to the region. Investment by Business Angels is also important.

- In recent years, the public sector has played an increasing role in helping firms to gain access to early stage equity, as private VC has moved towards less risky, later stage investments.

- VC investment in the UK is dominated by London and the South East. However, outside of these locations recent deal activity has been highest in the North West, with the Regional Venture Capital Funds (RVCFs) being particularly prominent. Despite the high number of deals public money is leveraging, the average deal size in 2008 was one of the lowest of the UK regions. North West funds have, however, succeeded in filling in the gap of small investments below £500,000.

- Public funds may not be sustainable in the long term. Co-investment deals between the public and private sectors are increasingly common in the North West and UK and may be a way of starting the process of gradual public disengagement. There are issues, though, that could negate the impact and volume of private investment. These include the tensions between the objectives of publicly backed and private VC and the sectoral targets and limitations of investment levels in publicly backed funds.

- Business Angels are a key source of equity investments at the early stage and often they invest in syndicates. Small VC deal sizes in the North West could crowd out some of their activities. Within Manchester there are several privately run angel networks, but they are not well understood. Angel activity in the region is not dense enough to have generated a critical mass of activity, although this can take decades.

- There are demand side issues to be accounted for, in particular investor readiness. In Manchester, many companies applying for early stage equity finance are not ready for investment. Examples of good practice to address this are evident in Manchester and from the NWDA, but further initiatives are desirable.

- A potentially important element of fund development is the leveraging of finance and expertise from external sources. There is no readily available evidence to suggest that Manchester and North West based funds are exploiting these external influences. Policy makers should explore this option further, but any development would need to aim for embedded, long term relationships to be of benefit. It is also notable that the highest performing companies may be global facing in their activities, and there is limited evidence of international business connectivity in Manchester.

- A key requirement in building a sustainable VC industry is to attract and retain talented fund managers. Some public fund managers commented that they have gone on to create their own privately backed partnerships and raise new privately backed funds, together with some informal groups and corporate financiers in Manchester beginning to develop critical mass. The University of Manchester investment funds are beginning to generate increasing volumes of spin outs, and there is evidence of experimentation with different support models for new businesses.

- Within Manchester there would appear to be the seed of a VC industry, supported by important regional structures. However, there is not currently the available talent, cashed out entrepreneurs and levels of collaboration to create dense networks and the required levels of critical mass.

- Early stage equity finance is just one part of the wider innovation 'ecosystem', and policy must be focused around complementary actions in wider innovation policy. There is also a need for realism in the ambitions and timeframes of developing a VC industry and maximising innovative capacity. Manchester may not quickly become another San Diego, but it has the potential to grow into a significant centre of innovation in its own right.

- Key recommendations for local policymakers and stakeholders, include:

  – engaging with regional stakeholders to ensure that public funds, in particular the RVCF, focus on long-term growth, and ultimately the development of a commercially viable VC sector in Manchester. This will require adopting a "private sector approach" to managing public funds, including ensuring sufficiently high ceilings of investment for high growth companies, the freedom to invest in those sectors likely to generate the biggest profit (with no geographical/sectoral constraints), whilst ensuring that activity compliments, rather than crowds out private sector activity;

  – identifying and working with relevant partners to ensure public support is structured to attract talented investors and fund managers to work with and create new funds – this will require adopting new approaches such as "the right for fund managers to buy out public shares in VC funds they believe are likely to be successful";

  – enhanced collaboration between local actors (including local policy makers, academia, corporate financiers and the private sector) to design new funding mechanisms that stimulate demand for equity finance. This might include proof of concept funding and due diligence equity grants for business angels;

  – a detailed study into demand for early stage equity finance in Manchester, if feasible;

  – a clear and transparent 'signposting' service, developed in partnership with private sector actors, would be of value in pushing potential high growth firms towards RVCFs and other equity sources; and

  – helping to forge networks through providing focused events that bring both relevant public and private sector actors together.

Within Manchester there would appear to be the seed of a VC industry...but there is not currently the available talent, cashed out entrepreneurs and levels of collaboration to create dense networks and the required levels of critical mass.

The early stage equity market in Manchester: the impact of public policy on investment, talent and networks

Adrian Nolan / Michael Corbishley
September 2009

Introduction

A recurring issue in government enterprise policy has been the role of new businesses in spurring growth, development and wealth creation. In recent years, policy makers and academics have increasingly focused on the role of new companies with the potential to grow rapidly. Of particular interest has been the contribution they make to economic competitiveness through increased investment, greater productivity and innovation. These businesses often emerge in specific areas and so the debate has also taken on a new dimension: exploring why this occurs in certain locations and not others. From a public policy perspective, the question has been asked as to what might be the best way to encourage such activity where the rewards justify public intervention.

In this paper we analyse venture capital and Business Angel activity (the key elements of early stage equity finance) in Manchester. The paper explores this activity's place in the wider innovation 'ecosystem' and examines the role of public policy. We take an explicitly historical viewpoint, assess what current conditions might mean for future developments, and make recommendations on how policymakers and private sector actors might help to nurture and develop their local market. It should be noted that this paper is primarily supply side based. It was beyond the scope of the authors to engage in a wider study that would assess the demand for early stage equity finance in Manchester and the perceived success of policy by businesses. One of the key recommendations is for such a future study to be commissioned.

What is Venture Capital/Business Angel activity and how do these differ from other forms of equity investment?

There are a number of definitions used across the globe to define venture capital, which can be confusing. For the purposes of this paper, the following definitions are applied:

Venture Capital: investment funds providing risk capital for start up and early stage companies (as opposed to private equity which is for established businesses) (BVCA, 2008). These funds are typically run by managing agents on behalf of investors, who raise money from the investors before using the fund to invest in multiple companies. The management receives a fee for picking the companies to invest in, providing advice and support to investees, and disposing of their equity stake at a suitable point. In this paper, venture capital is separated from other early stage equity investment, which is usually provided through **Business Angels**, who are high net worth individuals. They will invest their own capital into an early stage business in return for a stake within that firm, and may use their experience to take a 'hands on' management role in the company. Angel investments are usually smaller than venture capital investments.

It is useful to understand these definitions in the context of the lifecycle of a high growth firm.

Start up financing is for companies that have completed product development and initial marketing. These companies may be in the process of being set up or may have been in business a short while, but will not have sold their products commercially.

Other early stage financing is for companies which have completed the product development stage and require further funds to initiate commercial manufacturing and sales. These companies may not yet be developing products, and will certainly be pre-profit.

The other element of equity finance at the early stage is in **expansion capital**[1] which is provided for the growth of a developed company. However, this paper focuses on start up to early stage growth. **Private equity** generally refers to large sale investments being made at later stages in a company's life cycle, and includes management buy ins (MBIs) and management buy outs (MBOs). Figure 1.1 illustrates the different stages of funding for a successful firm, and the type of equity finance they typically access, from inception onwards.

[1] It should be noted that expansion capital crosses over with other financing, including secondary purchase and refinancing of bank debt, therefore also including what could be deemed as later stage investments.

Figure 1.1: Stages of funding over the life cycle of a high growth firm

Seed stage	Start ups	Expansion / growth stage	Maturity and beyond
Capital through grants (such as proof of concept funding) and equity less than £1m	Venture funding in the pre-profit stage – equity ranging from £000's to £5m at the maximum	Increasing capacity in profitable firms, up to £10m but can be larger	Profitable firms, MBO/MBI, sale
Angel activity	**Angel and VC funding**	**VC funding**	**Private Equity**

→ **Time**

Source: Gill et al (2007)

In recent years, policy makers and academics have increasingly focused on the role of new companies with the potential to grow rapidly.

2

Theoretical context

Venture capital and Business Angel activity have generated a growing and diversifying range of literature. The primary focus has been on the funds, investors and businesses invested in, but a strand of the research has dovetailed fairly neatly with discussions about regional economic development. Encouragement of new business start ups has long been seen as a key policy tool for economic development and evolution, and the role of finance in this process has linked the two agendas, with a particular focus on employment and productivity growth. This section firstly discusses why governments would want to see high levels of start ups – especially innovative, high tech companies – before examining in more depth the debates on how VC industries develop, why this occurs in certain locations and not others, and the justification for particular forms of public intervention.

2.1Public investment policy – investing in start ups

Historically, enterprise policies have supported business start ups based on a belief that they bring increased competition, employment growth and wealth creation. This draws upon Schumpeterian growth theory and Karl Marshall's idea of creative destruction (Mueller et al, 2008). This is reflected in UK policies that have actively targeted fast growing small businesses on and off since the early 1970s. Supporting start ups has also become a key part of the overarching "Lisbon agenda" designed to develop a larger and more innovative knowledge economy in Europe (Atherton, 2006).

Initially it was believed that high levels of business start ups led to increased employment, but in recent years the focus has shifted to anticipated productivity and innovation benefits. Birch initially proposed in the 1970s that a high start up rate had a positive impact on employment growth. Since then, this view has been refined to say that only a small proportion of new businesses actually generate future employment. The ramifications are that public business support may result in considerable deadweight amongst lower risk firms, and even the displacement of existing entrepreneurs (Atherton, 2006).

Job creation is no longer seen as the key justification for regional interventions, because evaluations show that higher start up rates are not necessarily associated with employment growth. In fact, higher volumes of start ups in less prosperous areas of the UK have actually been associated with long term decreases in employment (Mueller et al, 2008). This is because a company that is primarily serving a local market, i.e. selling to people and businesses located nearby, is also likely to be close to its competition and their employees. Any public help for this company might simply lead to employment shifting from one local company to another that is more productive and employs less people (assuming output remains fairly fixed).

However, if a company is providing a new or innovative product / process, and is more orientated towards long distance trade or exports, its competitors will often be spread globally. Alternatively, the idea may be completely new, and generate high value production and employment, benefiting local residents and attracting talented workers. These innovations can also spread through the company's supply chains, boosting productivity amongst local suppliers, and spurring on competitors. Therefore, it is those start ups which have the most potential to access global markets, increase local investment in physical and human capital, or open up new markets and develop new products, that most justify public intervention on economic grounds.

This suggests the role of new start ups is as a catalyst for increased productivity rather than employment per se (Fritsch, 2008). Employment growth doesn't necessarily occur in the new businesses but in their supply chain, their competitors and the additional businesses they spawn. It is increasingly believed that "the most important impact of (new firm) entry is that it spurs competition and market selection" by generating supply side impulses to (Fritsch, 2008):

- secure efficiency and stimulate productivity gains amongst competitors;
- accelerate structural change through the opening up of new markets;
- amplify innovation – incumbents can favour current products, or perceive new products as a threat, so therefore new firms may be the outlet for new ideas; and
- generate greater variety, through a better fit with customer needs.

This may only have benefits in certain industries or areas because the costs of reaching the technology frontier (i.e. keeping up) are prohibitive. Quantitative evidence from the UK shows that high volumes of new firm entrants only spur innovation in sectors closest to the technology frontier (Aghion et al, 2005). This does not mean that Manchester should slavishly try to emulate areas that have grown large high tech industries, but VC can enable new enterprises to take advantage of local strengths, introducing new, innovative ideas and associated jobs.

2.2 The role of venture capital in investment policy

The benefits of access to VC finance for new innovative businesses are apparent, but few major concentrations have emerged despite a sustained policy to encourage growth. This has prompted some to ask why there have been "such a proliferation of ill-advised policies similar to ones tried previously (that), not surprisingly, meet with minimal success or fail outright" (Avinmelech et al 2005).

Supply side barriers to early stage equity finance and the equity gap

The main focus of VC research is on the agents (investors, intermediaries and investees), the process of investing, the mechanisms of raising finance and the linkages between agents (e.g. contracting). There have also been several quantitative studies of the macro-economic influences on activity by these agents (Romain and Van Pottelsberghe de la Poterie, 2004). The biggest impact is commonly found to be the interest rate, which determines the cost of raising investment funds and the relative returns of alternative investments [2]. The other major determinants are GDP growth and technological opportunities which covers high levels of R&D activity and entrepreneurial activity that turns this research into investment opportunities, and stimulates demand and supply of VC (Clarysse et al 2009).

[2] Contrary to expectations, a higher interest rate is associated with more investments, even though it makes raising capital more expensive.

However, most research looks at the process of early stage investment, as many of the above factors are interlinked and feed off each other. Venture Capital is a considerably different form of investment to traditional bank lending, as investors face the risk of adverse selection, i.e. they are sought out by the riskiest opportunities. Banks can rely more on security through collateral and established cash flows. However, investees seeking VC cannot generally offer security against a loan. That means they have to offer a high potential reward to the investor by offering up a stake in their company (Mason and Stark, 2004). Because equity investors get the highest risk opportunities, only businesses with sufficiently large potential returns will be attractive propositions.

Dedicated, long term support is required to realise these rewards, including high levels of business advice, multiple rounds of fundraising and investment periods of up to 5-10 years to reach a stage for exit (Harding and Cowling, 2006). Judging the attractiveness of an offer requires considerable due diligence (transaction costs).

"Moral hazard" is another risk for the investor. Whereas a bank can take collateral as security, a VC investor or Business Angel takes a stake in the business, so must ensure that the entrepreneur behaves appropriately, ensuring that the investment provided by the investor is used as intended (Hartmann-Wendels and Keinburg). To overcome this, further transaction costs are incurred in controlling them, perhaps through complex contracting or even hands on management, which again raises the cost (Mason and Harrison, 2002). However, at this early stage deal sizes are usually small and the costs of due diligence, contracting, management and other measures to overcome "moral hazard" and adverse selection are fairly fixed, regardless of deal size. Without specialised knowledge, the motive is to look for bigger investments.

As transaction costs are high, investors will require significant equity to make investment attractive, but these are balanced by several benefits to the investee (Harding and Cowling, 2006):

- management expertise and hands on support, which may overcome inexperience;
- intangible assets such as access to the investor's business networks; and
- leveraging effects for second round financing, i.e. signalling of faith in a company.

Taken together, there is a scale of investment that is highly risky, but potentially beneficial for the economy, known as the 'equity gap'. The equity gap is often expressed as the range of investment between that usually provided by Business Angels and that deemed viable by Venture Capitalists. An individual investor can use their own money, experience and time to pick up very early stage investments, but cannot raise large amounts to invest (Mason and Stark, 2004). Conversely, larger investment firms have seen poor returns and high failure rates (especially after the dot com bubble) at the early stage, which damages or even precludes future fundraising. Returns have been higher in the early to mid market (£3 to £5 million upwards) after a business is more or less established, but the transaction costs of making the investment are about the same, and so eat up less of the return. One of the clearest statements of the problem was the move by 3i to later stage deals, where it was previously the largest early stage financier in the UK, especially outside of the South East.

Yet the concept of an equity gap is a slippery one, with the empirical considerations posing a considerable challenge to successful measurement. Most policy interventions in the UK have targeted the very early stages of firm's growth where a business needs an equity investment of up to £250-500,000, using a mixture of guarantees on investment, tax incentives, co-investment and so on. However, the equity gap is now thought to lie somewhere between £500,000 and £2-3 million (Harding and Cowling, 2006). The impact of the recession may change this further.

It is argued that "public sector funding acts as a signal for private sector involvement, as the probability of investment from the private sector rises with the amount of public sector funding attached" (Huggins, 2008). Unfortunately the data lacks universality and any real measurement of the potential of a firm applying for finance. This means it has not been possible to robustly scope or even establish the existence of an equity gap, which is why there is lack of clarity on its nature (Cowling et al, 2007). Indeed, not all accept the concept of an equity gap, instead suggesting that low investment activity results from a lack of demand (i.e. investable businesses) or a failure in market information – the knowledge gap (Mason and Harrison, 2004). Critics argue that there is no equity gap but instead it is a failure of communication, and that there may be a supply bias where money is pumped in, but may not be needed, so is going to companies that do not really have the potential to grow (Avinmelech et al, 2005).

The knowledge gap and information failures

The knowledge gap considers the interaction between investor and investee, particularly the difficulty for an investor to decide whether an opportunity is a good one or not. One line of argument is that many potential investees are not "investment" ready. In addition to being a high risk opportunity, they may have poor business planning skills, e.g. badly written business plans, so make unrealistic assumptions about growth. Unfortunately, while VC exists in part to service these very entrepreneurs, many are not able to re-work their propositions because of the cost of doing so, and investors don't have the time to work through the proposition in depth. This has led to calls for programmes to increase investee readiness through free advice and workshops and small grant (or even equity) funding that allows investors to do due diligence work themselves, along the lines of the Scottish Investment Grants (Mason and Harrison, 2004).

A further issue is the supply of talented investors, either to run VC funds or to invest their own money. This is not necessarily an area that government can easily address, because it may take a long time for individuals to develop these skills. It is argued that one of the core failures of regional policy is not a lack of finance, but a lack of cashed out entrepreneurs and technologically savvy investors to deliver it, as demonstrated by the lack of applications to run government VC funds (Mason and Harrison, 2004).

Israel has developed a successful and rapidly growing VC industry. One of the key factors was the hundreds of defence engineers laid off by the Israeli army who subsequently went into technological entrepreneurship or worked as advisers to VC firms. The other was the ability of Israeli firms to leverage foreign finance and associated expertise from the US (Avinmelech et al, 2005).

Dense networks of investors and entrepreneurs offer entrepreneurial experience, and also allow greater diversification in specific technological fields and thus better analysis of opportunities. Research in Silicon Valley found that dense networks help new businesses attract finance earlier, increase the likelihood of achieving multiple rounds of investment and increase pooling of financial resources (Zhang, 2007). This partially relies on perceptions and embedded networks, but the evidence suggests that larger funds can invest in businesses that are more risky and speculative (but generate larger returns), employ more people and make bigger profits on average. It may lead to excessive speculation, but multiple funds can exploit single big successes to cover many failures, with some funds in the US having billions to invest. This, of course, relies on a highly entrepreneurial dynamic, with investors and entrepreneurs able to write off failures and start again without stigma and social damage.

However, networks can also fail, even where considerable expertise exists, so it is important to understand the dynamics of a place and city. For example, London has many VC investors and many

universities hoping to spin out companies. Yet, despite their proximity, many universities are unable to attract the attention of financiers or break into rapidly changing and evolving networks whereas elite universities have captured the market. In response, many lower order actors actually scale back their engagement attempts. The network has a "lack of connection between the two communities accentuated by a lack of effective intermediaries or strategic influences linking them" (Huggins, 2008).

Most investors generally dismiss the idea of a regional equity gap, but some researchers argue otherwise. On the one hand there is a "tendency for classic VC funds to be heavily involved with investee companies in both a monitoring, and advisory capacity" (Mason and Harrison, 2004). "Venture capital firms...depend crucially on access to personal networks and face-to-face contacts in findings, evaluating, and monitoring investment opportunities, or so the argument goes." (Sunley et al, 2005). Business Angels also prefer to invest in areas that are within two hours of travel time (Sunley et al, 2005). In the UK, investment is regionally concentrated in the South East, which is where the majority of VC/Private Equity firms are located (about 75%). Although there is little evidence, the counter argument states that in an area where there are few VC investors, demand is dampened because of reduced expectations of financing, perhaps creating a vicious cycle of low deal flow (Sunley et al, 2005). The empirical evidence does not exist to judge whether regional gaps in provision exist because of a lack of demand, or breakdowns in the supply of finance. But the above analysis does show that VC activity should not solely be viewed through a prism of incentives to capital fundraising and investment (Framing of Venture Capital Policies in a Diverse Europe, 2008). Key questions include:

- Is there a sufficient supply of good quality opportunities for investment?
- Do local actors believe an equity gap exists either by amount or round of investment?
- Do the funds exist, and are they of sufficient size, to adequately guide their investees through multiple rounds of funding that will deliver commercial viability?
- Are entrepreneurs capable of showing they are ready for investment?
- Is there evidence that public funds have displaced private investors?
- Does the density of investors exist to allow diversification and specialisation in investor knowledge, and for them to club together to support investees long term?
- Are there enough investments to enable sub-contracting of due diligence to generate diverse specialisms and supporting expertise (legal, technological advice, etc)?

Evolutionary views

Recently, work funded by the EU, and led by Finnish and Israeli academics, has begun to explore these issues in a more systemic and historical fashion (Avinmelech, and Teubal 2006). Drawing on evolutionary economics, they consider the emergence process (the industry life cycle), and the inter-mediation function, looking at how designs, product and service bundling, and mutual adaptation of agents change. They argue that there are phases in the emergence of VC industries, based on what they term a "systems-evolutionary perspective", and that different policy interventions are only appropriate at certain stages (Avinmelech, and Teubal 2006).

The focus is on developing capabilities and the creation of "multi-agent structures" rooted in the local institutional and economic landscape. These are built by the agents involved (investors, investees and sometimes policy makers), but this occurs over a period of time. Investors need to build credibility to raise new finance, which requires multiple successes. They therefore need track records and management experience. In turn, this attracts new investors, many

of them serial entrepreneurs, who often make the best investors themselves (Gompers et al, 2008). Entrepreneurial cultures in these areas can develop, and feed the supply of new opportunities, and this can grow in tandem with VC activity.

Public backing of monetary incentives is sometimes necessary, but probably only at a particular point in an industry's evolution. If demand for finance isn't there then it may be that policy should focus on promoting hi-tech entrepreneurs – private sector actors were already meeting the needs of the companies coming through but have now been crowded out. Linked to this, policy has failed to emphasise the links between VC policy and high tech policies. Policies to promote angel networks, university spin outs, regulatory and tax regimes and wider infrastructure for technology all need to be linked tightly together with VC policy. For example, in Israel the crucial factors were initially:

- support for technology enterprise by the Israeli army;
- a later influx into the industry of laid off Israeli defence engineers;
- Soviet émigré engineers; and
- the leveraging of foreign expertise though VC funds in the US.

These formed the key pre-conditions for a successful policy of public co-investment through the Yozma programme in the 1990s. This created 10 VC funds and has gone on to give Israel by far and away the largest value and volume of early stage investments per capita in the world. The questions that emerge from this include:

- Is there evidence of institutional forms changing over time, e.g. becoming more specialised?
- Is there a growing density of investors?
- Is external talent and knowledge being drawn in to the local area, and if not do the networks exist to support this (e.g. being able to test a product in the US)?

Dense networks of investors and entrepreneurs offer entrepreneurial experience, and also allow greater diversification in specific technological fields and thus better analysis of opportunities.

3

Policy context

In light of the previous points, this section reviews the policy context for the Manchester sector.

3.1 National policy on venture capital

In the UK, national policy for the support for enterprise, particularly for access to finance, is central to the government's approach to economic policy, although it is a comparatively latecomer into the field. The Confederation for Business Industry (CBI) says that government policy has made great progress and the UK is a "world leader" in providing access to finance for business (CBI, 2006), but failures are recognised by government. There are significant challenges, with the national enterprise strategy Enterprise: Unlocking the UK's talent (2008), suggesting that:

- an estimated 25,000 businesses with viable propositions are unable to access finance each year;
- there is an increase in the number of young, fast growing businesses seeking finance (from 21% to 32% if under four years old; and from 22% to 27% of businesses anticipating growth); and
- the number of businesses unable to secure finance from the first source they approach has risen (from 9% to 13%).

For venture capital, the key long term policy goals are to encourage indigenous capability, a critical mass of venture capital firms and associated services and expertise, and a healthy flow of investment ready proposals.

Policy rests with the Department for Business, Innovation & Skills (BIS – formerly BERR), which is responsible for small business and enterprise policy and also the Regional Development Agencies who provide many of these services. Enterprise: Unlocking the UK's talent was the first national policy for enterprise under the New Labour government and dedicated a full chapter to access to finance. A key part of the strategy is to address supply and demand for early stage risk finance, although the majority of resources have been concentrated on the supply side. This has been done through incentivising potential investors via tax relief and guarantees, and through direct supply of finance via venture capital funds.

Venture capital policy in the UK has developed only recently when compared to other countries. VC policy as it is presently constituted only began in the mid 1990s. There were two previous periods of active VC policy. In 1945, The Bank of England and some major banks created the Industrial and Commercial Finance Corporation, to increase capital flow to small businesses. This rapidly grew to become the biggest UK investor over the following decades until the banks slowly exited in the late 1980s/early '90s. The firm came to be known as 3i, but has moved out of early stage investments in recent years. 3i was one of the major drivers of investments in the regions, and its shift out of the early stage market raised an ongoing question about whether it was possible to operate a commercially viable business in the regions, although the model of a single provider might not be appropriate.

Following a period of non-activity, which in part rested on the findings of the Bolton Committee, the Thatcher years witnessed a number of policies that aimed to stimulate entrepreneurship and self-employment in a more general sense (Landstrom, 2005). The focus of enterprise policy was on increased start up rates of any type, as opposed to business quality, and represented a distinctly different set of policies to the present (Greene et al, 2004).

It wasn't until the 1990s that central government made serious moves to attempt to increase the early stage investment supply, using incentives and supporting the creation of the AIM market, before directly intervening in supply in the late 1990s. This period of policy is discussed below.

3.2 Supply side initiatives

At a national level, the longest standing policy approach still in existence is tax breaks used to encourage venture capital and private investment through the Enterprise Investment Scheme (EIS) and Venture Capital Trusts (VCTs). They provide a range of income tax and capital gains tax relief for investments either directly into a business via the EIS or into publicly listed venture capital funds via VCT, where private managers pick the investees. The EIS in particular has been important in the growth of Business Angel investment, and the evidence available suggests that, so far, beneficiaries of these schemes show increased capacity building compared to control groups. In other words, there isn't any evidence yet of greater profitability but there is more capital investment and employment (Cowing et al, 2007).

Since 2000, the government has also focused on direct supply side policies to address the 'equity gap', with regional VC funds (RVCFs) co-financed by the European Regional Development Fund (ERDF) and privately run with private co-investment. A key longer term objective of the RVCFs is to encourage private risk funding through the demonstrable success of these programmes. However, in 2005 a mapping exercise by the Small Business Service found that 26% of the funds (50 out of 191) were at least partially public-backed and public money has started most new funds. Up to 2001, 106 out of 118 funds were private, but since then 38 out of 65 new funds have been publicly backed (SBS, 2005). With the RVCFs now divesting themselves, only time will tell if the businesses (and people) that delivered them will be able to raise private investment funds and carry on.

Implementation of UK policy in North West England – supply of VC funds

It is notable that the venture capital programmes in England have an important regional dimension, which is justified in two ways (Sunley et al, 2005):

- there are potential efficiency benefits arising from the regional method – venture capital programmes can work better when they are regionally focused because this facilitates close relations between investors and investees; and

- regionalising the venture capital programmes means that a region's particular needs and market failures can be properly addressed based on local knowledge.

In the North West, regional delivery of start up finance policy is provided through the North West Development Agency (NWDA). The Business Support Simplification Programme (BSSP) 'finance for business product' stipulates the range of criteria for the type of public intervention allowed. Equity investment of up to £2m is available (two thirds public supplemented by a minimum one third private investment). The BSSP also outlines the necessity for intervention in ensuring applicants for equity finance are investor ready (NWDA, 2008). It is a key local player in the provision and co-ordination of start up and early stage finance in Manchester. Whilst it has responsibility for the full range of regional government business support programmes, Manchester itself has a number of local agencies which co-ordinate local programmes, allocate funding and work together based on agreed strategies.

What is notable about the North West VC industry is the high concentration of publicly backed funds. It is the most extreme example in the country, with considerable funds available, possibly due to a legacy of ERDF funding in the region. In 2005 the ratio of public to private funds was 8:1 – nearly twice that of the next highest region, the West Midlands (5:1) (SBS, 2005).

In recent years, the NWDA, along with public and private investors, has supported four co-investment funds targeted at high growth companies (all ending in November 2008). Totalling £82 million, including matched funds from the private sector and other public sector investment vehicles, they comprised:

- The North West Equity Fund: a £35.5m fund, investing up to £500,000 per company.

- The Northwest Seed Fund: which had £4.5 million for matched (50% minimum) deals of up to £250,000.

- The Northwest Business Investment Scheme: a £23 million venture capital fund for SMEs in Objective 2 and Transitional areas.

- Rising Stars Growth Fund: a £19 million fund, for investments of between £50,000 and £500,000, mostly in the medical technology, software and environmental sectors.

In addition to the RVCF funds there are university spin out focused funds:

- The original fund was the Manchester Technology Fund, which was unusual in that it covered only one institution, the University of Manchester (and formerly UMIST). As such, the fund was quite small – £6 million – but one of the largest funds per institution. This has been superseded by the recently launched University of Manchester Intellectual Property (UMIP) Premier Fund which has £32 million to make 15-20 late seed investments of up to £2-3 million per company, in materials, medical or IT technology spin out companies. It is the largest institutional fund in the UK.

Finally, a new round of RVCFs is to be launched in 2009, with an initial provision in the North West of over £140m from the European Regional Development Fund (ERDF) programme. The ambition is to attract further private sector investment to build an 'evergreen' fund beyond the 2007-13 European programme. The objectives of the new RVCF are "to increase the supply of finance to meet existing demand from and stimulate and speed up the development of additional high growth businesses; focusing on seed finance; R&D, innovation and expansion finance in the North West".

In addition, there is a national scheme, the Enterprise Capital Fund, set up in 2006 and consisting of 6 separate funds with £141 million to inject nationally with another £150 million committed up to 2011. The ECF can make larger investments than preceding schemes with a limit of £2 million per company. Finally, and most significantly, the 2009 budget announced a £750 million early stage fund, although details are not yet forthcoming. This is designed to address the worry that, in the credit crunch, small innovative companies will flounder given their long development times and need for high levels of funding to grow (NESTA, 2009).

Clearly there has been a large supply of capital for the region and it is hoped that this supply will generate expertise and a long lasting VC industry. It is too early yet to say whether it has succeeded. Although some of the early supply may not have been rooted in a thorough analysis of what was needed to stimulate private activity, there is evidence that policymakers have learnt many lessons from best practice elsewhere in designing the new fund. A key objective is to stimulate a privately run VC industry that will run beyond the set life period of the fund. This 'evergreen' fund is intended to run for up to 15 years. Private sector involvement will help to ensure that fund managers provide strategic direction for the sector, directing investment towards those companies with the greatest growth potential.

It is also important that there is a clear recognition of the need for long term support and patience as results may take time to emerge. Private sector investment is paramount to success beyond the end of the 2013 ERDF programme. The hope is that, in the next few years, this new fund will allow good opportunities to invest in low value companies where a positive return on investment can be easily achieved.

What is not yet clear is whether the new fund offers clear incentives for the attraction of talent and high

performance, and does enough to develop the human capital necessary. For example, in Israel the Yozma programme succeeded in creating a sustainable VC industry by attracting foreign investors to the limited partnerships it set up. This integrated Israeli VCs into an international network and leveraged its knowledge and experience. It did this by offering clear incentives to attract talent and high performance by allowing successful investors to buy out the government's share if they were succeeding. Eight out of the ten funds did so and most are now amongst the most successful in Israeli.

The North West should not seek to emulate the exact nature of Israeli growth, as the business links between the US and Israel in the 1990s were far more developed than they are in Manchester. The economic trajectory of sectors such as IT were also very different (IVCRC, 2008). Israeli financial firms were linked to the US and Israeli technology companies were linked to US markets so could demonstrate product potential. But the new funds need to look increasingly at what evidence exists for leveraging of local strengths and outside expertise, and take account of its wider systemic role.

Northwest Business Angels

The NWDA has also identified the importance of the informal equity market (Business Angels). This started with the early Northwest Business Angels Club, and is now being re-branded and re-launched, modelled on a sub-regional basis. The process appears to have been successful so far, with an increase in both Business Angels who want to invest and in businesses looking for equity since the start of the network.

The NWDA is also helping investors manage their portfolios, syndicate deals and come up with exit strategies. For example, with syndicates many businesses require around £200,000 to £250,000 which will typically involve four to five investors. There is usually a 'lead' angel who could, for example, be the one who has the most expertise within the particular sector that the syndicate is investing in. Other programmes cover pitching to investors, and coaching, which is looked at in more depth in the discussion section. So far the feeling is that the numbers securing investment has increased since working with the NWDA.

3.3 Comparative policy

It is not a straightforward process to simply compare the UK policy with other countries, as there are no like-for-like comparisons available. Each country's venture capital industry has developed uniquely due to the economic characteristics, drivers of investment and the maturity of the early stage VC market (Clarysse et al 2009). They also operate within different tax and regulatory frameworks. In the UK, it was only from the 1990s onwards that issues in this area began to be addressed sufficiently by government.

Finland is perhaps the most similar to the UK in that policies that sought to stimulate VC activity were tied to wider financial support reforms. The main difference, perhaps, is that the Finnish national economic strategies were more complementary to VC investment. Government intervention, particularly support in the wake of the 2001 bubble collapse, has allowed Finland to reach a situation where young innovative companies have "a considerable choice in the selection of both debt and equity financing instruments" (Makela and Maula, 2008).

The first VC firm, set up in 1967, was 60% funded by the Bank of Finland and was primarily an attempt to re-invigorate the Finnish financial system. Other important organisations in Finland have been the National Fund for Research and Development, which focused on technological development and research, Finnish Industry Investment Ltd and Finnerva. These act as supporters of regional and limited partnership

funds and have a number of SME related support functions. The primary aims of these policy interventions have been to act as a catalyst in the shift towards technologically advanced industries, achieve SME growth and reach certain regional development objectives.

The VC policy, part of which was closing the early stage finance gaps, was largely a spin-off of these factors. Direct public VC funding accounted for 23 of the 38 investments made in 1995, but a moderate private market has now grown with 268 private investments in 2005 versus 46 public investments. Although Finland has not seen the success of California or Israel, the value of total early stage investments is amongst the highest in Europe at 0.44% of GDP in 2005, just lower than in Sweden, Denmark and the UK average (OECD, 2007). A clear lesson from Finland is that VC industries, developing alongside growing industries, can require considerable public support in a variety of forms, and can take a long time to even approach sustainability. However, it is also clear that supporting finance provision for innovative companies can have a major impact.

The US is the world's most mature VC market, evolving over a period of many years. The consolidation of the VC industry during the 1960s was largely a market led process with limited public sector involvement – although there were still crucial direct and indirect policy effects (Avinmelech et al, 2005). US policy is particularly difficult to compare, as early phases in the US were longer with more failures, but the lesson remains that VC emerges in tandem with industries, not alone. The same lesson is also true in Israel. In contrast to the US, the development of the Israeli VC market has been heavily policy led. The key policy was the Yozma Fund of Funds, which succeeded in creating a sustainable VC industry by attracting foreign investors to the limited partnerships it set up, and leveraging knowledge and experience. This integrated Israeli VCs into an international network and was only possible because of the existing linkages between the US and Israel. However, the key market drivers were the considerable upside potential for potential bidders created by the right to buy back the public share and labour market conditions. There was a glut of talent coming out of the Israeli defence industry, with many defence engineers laid off in the 1980s and 1990s, while there was also an influx of engineers leaving the Soviet Union as the Communist system disintegrated. The Yozma programme was very successful, with many of the leading VC investment firms originating as partnerships set up by Yozma. VC investment was just $5.5 million in 1990 but is now equivalent to 0.36% of GNP, twice as much as the US which invests 0.18% of GNP but is still comfortably ranked second in the world (OECD, 2003).

The key catalyst for the VC communities in locations such as San Diego and Tel-Aviv was military research and development, where considerable capital was expended in academic institutions. This created the background conditions and critical mass of talent needed for tech-based entrepreneurship and VC investment. UK policy has imitated some aspects of this and, in a local context, the importance of the University of Manchester in the creation of commercial innovative activities is vital. However, the scale of investment in the US and Israel has been significantly larger than in the UK. A VC industry focused on funding and commercialising new technologies through start ups will have difficulty creating a local investment market (such as in the North West / Manchester region) without the requisite background conditions. In the US and Israel this is the willingness to invest in universities and other research institutions, making VC industries a key feature of the innovation ecosystem. In Finland, it is difficult to ignore the importance of Nokia which rapidly cornered a large chunk of the wireless technology market in the 1990s and has generated a strong domestic supply chain of technology companies, who act as research centres, suppliers of talent and potential acquirers of businesses.

While the VC industry has developed in these examples through direct government action or the indirect effects of other policies, one central theme is paramount – programmes were structured to limit direct government involvement in investment decisions to ensure that private investors captured the capital gains. In the US and Israel, successful transition of the funds to limited partnerships has been a key outcome as government intervention is scaled down and more VC activity is private rather than public led. This leads to comparisons with the UK model, in which the increasing importance of publicly backed funds across much of the country is an issue of considerable debate. However, it is difficult to compare directly due to the differing stages of maturity of the VC industries in each of the countries. The propensity of publicly backed funds is discussed later in this paper. Cambridge is also a relevant comparator for Manchester, as it sits within the same regulatory and policy framework. The differing trajectories of Cambridge and Manchester are explored in more depth below.

3.4 Improving access to finance: examples of best practice from comparator cities

This section analyses San Diego and Cambridge, which have been successful in developing their innovation ecosystems, a key aspect of which is attracting venture capital and Business Angel investment into the regions.

San Diego, California

San Diego has grown significantly in its global reach over the last decade and was recently ranked the fifth most successful region in the world for attracting inwards VC (between 2001 and 2006 it attracted $665 million from outside of the US alone)[3]. It is now the second leading city in California for new business start ups, behind Los Angeles. There is cutting edge research and leadership in science and technology based industries, with a boom in VC funding since 1995. The rapid increase has been down to[4]:

- **the role of land use decisions and infrastructure investments** (creating the physical environment required for businesses to thrive);
- **building globally competitive research institutions** which are magnets for world class scientists and research professionals;
- **a major commitment of time and resource from the private sector to grow this capacity** – SMEs, businesses and professional services are pooling their assets in order to support new and uncertain ventures (there is the element of risk taking that is essential to grow high growth start ups);
- **collaboration that goes beyond simply networking** – there is a shared agenda setting out investment, risk and shared rewards. San Diego has a unique level of seamless collaboration among public, private and academic institutions, transferring science and technology into commercial success;
- **a powerful sense of place that binds people to an area** – skilled talent will be more likely to stay due to relationships formed with the location. The collaborative approach anchors the powerful sense of place; and
- **strong civic leadership** – key in San Diego is the business community that has championed innovation and investment through an active programme of civic leadership. San Diego has also had the policy enabling platform available with a strategy to build excellence, fast through ‘great’ science.

3 San Diego Regional Economic Development Corporation (2008): http://www.sandiegobusiness.org/Policy_and_Inititatives-Partnership_background.aspx accessed 20/09/2008

4 University of California San Diego at the Manchester: Knowledge Capital Annual Event (2008) http://www.manchesterknowledge.com/video.asp accessed 10/10/2008

The investors who make up the San Diego Venture Group are an example of collaborative attitude and well connected networks[5]. This is an informal group that fosters ideas on how to form, fund and build new ventures. There are 800 members and monthly meetings of over 300 people, all helping San Diego become an investment centre. This creates a networking forum of entrepreneurs, venture capitalists and advisers, with a board of directors comprised of top executives and venture capitalists.

San Diego Connect[6] aims to accelerate innovation and support the growth of the most promising technology and life sciences businesses and play an important role in public policy. It works with Southern Californian based investors and connects them with entrepreneurs, in addition to running mentoring programmes to ensure investor readiness.

The University of California San Diego has also been key in the success of the region. It has linked researchers and, as the place where many innovative activities begin, has been a key catalyst.

It is factors such as the above which encourage private equity investment and build the wider innovation ecosystem – it is not just about an investor considering an individual firm in isolation, it is about creating the environment.

Cambridge, Eastern England

Cambridge has many companies of global significance, and is of national importance in several high tech sectors (Library House, 2000). The business community in the city has experienced unparalleled growth and has enlarged its expertise over the last two decades, particularly in high technology. The importance of Cambridge University in the wider success of the region has been key. The mix of academic excellence and growing commercial acumen has been tied to a burgeoning VC industry and strong networks and collaboration between investors.

Cambridge has high numbers of high-tech start ups, spin outs and profitable exits:

- in 2007 there were 108 venture backed companies in the Cambridge 'cluster'. Within healthcare and life Sciences alone, 36% of the companies were venture backed;
- the deals completed are both small and large, with the largest deal being £50 million in 2007;
- the largest exit in 2007 was for £230 million;
- the university is still very active in the number of spin-outs, worth a total £140 million between 2001 and 2006, more than any other UK or US university, with the exception of Stanford; and
- 25% of all deals in the Cambridge cluster in 2007 involved at least one US investor.

The largest and most active VC fund since 2006 has been the Cambridge Gateway Fund, with several institutional investors active. Looking at the number of deals, many of the investors are actually based in Cambridge. However, foreign investments, particularly from the US, are prominent in high value syndicated deals.

Angel finance is also highly developed in Cambridge, with three main angel groups (in addition to others) that have helped develop the seed and early stage funding environment (Library House, 2007):

- GEIF Ventures: investing an average of £70,000, mainly in life sciences and IT.
- Cambridge Capital Group: which aims to attract angel investors from outside the area to invest, mainly in medical technologies, biotech and communications hardware (much of which is supplied by University of Cambridge spin-outs).
- Cambridge Angels: although this group is also involved in deals outside the Cambridge area, the main focus is within Cambridge and, since its inception in 2001, £11.5 million has been invested in start ups in the hi-tech and bio-tech sectors.

5 San Diego Venture Group (2009) http://www.sdvg.org/ accessed 30/01/2009

6 Connect (2009) http://www.connect.org/ accessed 15/01/2009

This leads to comparisons with the UK model, in which the increasing importance of publicly backed funds across much of the country is an issue of considerable debate.

The collaborative environment means that, where there are mutual interests, different angel groups often syndicate deals, giving potential high growth firms in the area a higher chance of access to early stage finance and making it a more attractive area to start a company.

In addition to this, Cambridge also has a £25 million early stage Enterprise Capital Fund (ECF), designed to provide early stage funding to those SMEs adversely affected by the equity gap.

3.5 The effects of recession upon early stage equity investment

In theory, investing in early stage companies during a slowdown can be highly beneficial to the investor as they can invest at lower prices. Investors don't expect a profitable exit within the first 1-3 years, so would be well placed to exit at the end of the recession period. However, past evidence would suggest that investments will fall during the current recession. Investors will be balancing their asset allocations, as they did during the dot com crash which wiped trillions of Dollars off the market value of massively overvalued technology companies. This is a key reason private VC activity has fallen in recent years. Many fund managers are also running short of cash ('dry powder'), so will need funds to keep investing, and new sources of investment. The effects of the economic slowdown are illustrated in section 4, with a considerable drop in the levels of early stage investment in 2008 from BVCA members, compared with 2007.

It is also clear that some start ups, funded by VC investments over the last three or four years, will struggle to maintain growth and momentum through the recession if their sector is badly affected. Early stage investments in particular may need refinancing (if only in the product development stage) with a recent survey suggesting that 85% of firms will exhaust their cash reserves in the next 12 months (BVCA and Populus, 2009). Finally, the exit market has been weak for a couple of years, and so companies looking to divest may struggle. This is a particular issue for the fund managers of the RVCFs, although in the North West most seem to have raised their own new funds already.

The current economic climate is a major concern, especially given the limited nature of activity and its fragility – confidence within the industry is now at an all time low even within Silicon Valley. It would be foolhardy to try and predict the future, and this paper is more concerned with addressing key long term structural issues surrounding investment, and the need for local policy makers to look beyond the current economic volatility when formulating strategy.

4

Investment activity in Manchester

This section focuses on the volume and size of investment deals in Manchester.

There are few data sources available to analyse investment activity in Manchester, so this analysis is based on the freely available data from the main VC investment association, the British Venture Capital Association [7] (BVCA et al, 2008). Note that not all public and private sector VC activity is captured here, only those registered with the BVCA [8]. However, in recent years this has become increasingly comprehensive, and regional comparison should be robust. This also excludes Business Angel activity, which is not well documented (Mason and Harrison, 2008).

The UK has one of the most developed equity markets in the world, although investment was down from nearly £12 billion invested in the UK in 2007 to under £9 billion in 2008 as a result of the lack of major buy outs. However, later stage activity for established companies (i.e. non early stage investments) accounts for the vast majority of this investment. In total, early stage investment was £360 million in 2008, just 4% of the total, and a considerable decline from 9% in 2006, and down from £434 million in 2007, suggesting a significant impact from the recession. Expansion deals may also capture financing of VC funds which are big enough to support their investees through multiple rounds of funding, but there are also other forms of activity captured in this category. Considerable caution should be exercised in drawing any conclusions from these figures, but we have included them in the tables for comparative purposes.

7 Local policy makers might consider investing in analysis of the more detailed library house data, to understand what the dynamics of start-ups receiving equity financing in the area are like, in terms of scale and relative to other areas.

8 The data in the tables overleaf do not account for later stage equity activity such as management buy outs/buy ins.

Early stage equity investment is generally heavily concentrated in London and the South East, but there have been a large number of low value deals in the North West since 2005. In 2008, 66% of early stage investment was into companies based in London and the South East, as shown in figure 4.1. Scotland received the second highest value of investments followed by the North West with 6% of total UK investment. However, 17% of the total number of deals occurred in the North West, the highest volume for a single region, as shown in figure 4.2. Although statistics don't filter to sub-regional level, the Manchester City Region represents half of the total economic output and is the main finance and business services centre for the North West so is likely to be key in the relatively high levels of deal activity.

Figure 4.1: Investment stage breakdown by amount invested, 2008

Region	Early Stage		Expansion	
	£m	%	£m	%
South East	64	18	236	11
London	172	48	1278	62
South West	12	3	41	2
East of England	20	6	61	3
West Midlands	12	3	46	2
East Midlands	9	3	72	3
Yorkshire and the Humber	5	1	226	11
North West	23	6	70	3
North East	10	3	16	1
Scotland	24	7	9	0
Wales	2	1	10	0
Northern Ireland	7	2	1	0
Total	**360**	**100**	**2,066**	**100**

Source: BVCA Private Equity and Venture Capital Report on Investment Activity, 2008

Early stage equity investment is generally heavily concentrated in London and the South East, but there have been a large number of low value deals in the North West since 2005.

At the early stage within the North West, the high number of local investments but low overall value shows there are many low value deals. The average deal size of £291,000 is one of the lowest across the regions, and compares to a national average of £791,000 and over £2 million in London. The East of England (Cambridge) accounts for 6% of deals and 6% of total value invested. This is down on the high figures of previous years but is still a large volume of investment relative to total output for the region, and reflects the more mature private market. The unusually high number of deals in the North West likely reflects the number of small public backed deals being done in the region. In contrast, the East of England (Cambridge) sees slightly less deal making but the investment size has historically been close to the average for the UK, along with London and the South East.

Another method of comparing investment activity involves looking at volumes of investments against business population. Again this shows that the highest level of activity is in the North West, with 0.88 companies per 1,000 receiving investment, higher than the national average of 0.63 and the figure for the South East and London (0.76). This has been a particular trend in the last three years and would suggest that public interventions have driven up the volume of investments but not the deal size.

A review of the historical data shows that, as the value of investments dropped after the 2001 dotcom bubble, the number of investments continued to rise. Prior to 2001 (figure 4.3) there were comparatively few early stage investments in the North West, even as the other areas saw a rapid rise during the dot-com bubble.

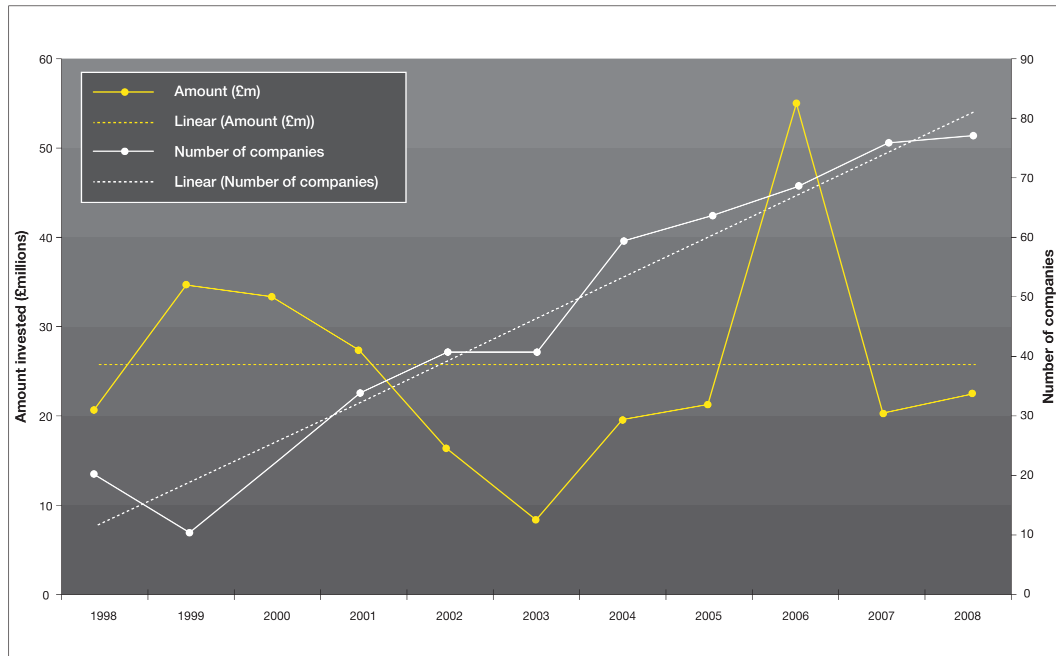
Figure 4.2: Investment stage breakdown by number of companies, 2008

Region	Early Stage		Expansion	
	Number	%	Number	%
South East	74	16	61	12
London	78	17	130	26
South West	25	5	35	7
East of England	29	6	35	7
West Midlands	45	10	22	4
East Midlands	11	2	34	7
Yorkshire and the Humber	28	6	60	12
North West	79	17	54	11
North East	22	5	24	5
Scotland	33	7	27	5
Wales	13	3	21	4
Northern Ireland	18	4	6	1
Total	**455**	**100**	**509**	**100**

Source: BVCA Private Equity and Venture Capital Report on Investment Activity, 2008

But since then the volume of deals in the North West has continually risen, up from 6% of all investments nation-wide in 2000 to 17% of the UK total in 2008. The growth from 2005 to 2008 has been focused in the telecoms, utilities and financials sector, while there has also been growth in healthcare and consumer services and the oil and gas, basic materials and industrial sectors (BVCA et al, 2008).

Figure 4.3: Early Stage VC in the North West by amount invested and number of companies invested in, 1998-2008



Source: BVCA Private Equity and Venture Capital Report on Investment Activity, 2008

5

Development of early stage finance activity in Manchester

This section explores the themes emerging from the context sections, using interviews and secondary evidence to consider how the venture capital industry and market is developing in Manchester.

5.1 The equity gap and the issue of public vs private venture capital funds

The North West is somewhat unique in that the volume of deals occurring is higher than most regions, relative to the size of the local economy. But where the average value of investments by VC funds for the UK averages around £791,000, it is just £291,000 in the North West. This is somewhat concerning because the latest literature (tentatively) suggests the equity gap for potential high growth SMEs is considered to begin somewhere around £500,000 and end anywhere in the £1-3 million range depending on the source (Harding and Cowling, 2006). The low average value of investment in the North West may be partly due to rules governing these funds in the past. According to NWDA sources, the new 2009 fund will aim to increase average equity investments to around £700,000, with the potential for significantly higher individual deals – this would be a welcome development.

However, following discussions with key stakeholders, there is a clear perception that an equity gap exists in Manchester and the North West, although again estimates vary. This is not just a function of location – it can depend upon the sector and be up to £10 million. This throws immediate light on public interventions in providing funds. Whereas in Merseyside, public money backs funds right through to investments in the equity gap, other public funds across the rest of the North West have been limited to investments of £200-500,000 per company, so are operating on the border of the Business Angel market. Most public funds are large enough to support bigger investments – 10% of their value per company is the rule of thumb in private funds which would have allowed investments of £2-3 million in the best companies. Current RVCFs are restricted in the amount that can be invested into one firm and quotas are required to fulfil obligations – these restraints are not applicable to private sector VC funds. The nature of public funds, primarily imposed by EU state aid rules, has meant that there is still a gap up to around £3 million. So, despite the presence of RVCFs, this element of market failure still exists.

National evidence highlights an important development in the UK's early stage VC market with the increasing significance of public sector funds since the turn of the century. This raises some important questions as to how this has affected the market – is public sector intervention crowding out the market? How sustainable are the public VC funds and will they encourage private market activity? Clearly this issue varies by region, but in the North West there was a stated view amongst interviewees that there had been a wholesale retreat of private funds from the early stage market.

At the national level there is not yet any evidence that publicly backed early stage venture capital investing has crowded out private sector investment (Pierrakis and Mason, 2008). On the contrary, much of the opinion suggests that they have been complementary and additional, and have succeeded in filling in a gap of small investments, as the average size of private sector investments has decreased. Indeed, if it were not for public funds, then the gap in VC investment between London and the South East and other areas might be even more pronounced. But public sector support on this scale may not be a long term viable option. In recent years public-private sector co-investments have also become increasingly significant sources of early stage investments. Co-investment deals accounted for 37% of total investment in 2007 compared to just 10% in 2001 (Pierrakis and Mason, 2008).

At present it is clear that private VC houses will not risk putting their own freestanding capital into start up and early stage high tech companies where the record of previous investments is patchy. Since the dotcom bust this attitude within private VC houses has become increasingly entrenched. So private VC will not be as readily available in the future, especially as a result of the current economic climate. The key question is therefore whether this type of activity can be encouraged? Public venture funds have to play a major role in ensuring that conditions are as conducive as possible for private VC investment, and there are certain criteria that need to be fulfilled:

- absolute clarity of objectives – there are often political objectives tied to the funds, and each additional objective can potentially dilute the impact of funding; and
- the funds need commercial discipline – there are examples of public funds which have been used in un-investable ideas. Setting up unsustainable businesses is an inefficient deployment of capital and resource, with a longer term, more strategic view required (SBS, 2005).

As the above suggests, whilst the RVCFs have been successful to an extent in compensating for the lack of private sector investment, there are apparent weaknesses. Public funds have to balance the risk profile across the appropriate sectors (e.g. X% in creative / digital / new media, X% in ICT). Therefore companies with good ideas could be rejected on the grounds that they do not fit into the correct sector required for risk profiling. Equally, as stated, the limits on funding can inhibit growth, and it is due to issues like these that the funds can be open to criticism from certain quarters, as they are linked to government policy rather than being market driven. In some circumstances are the funds trying to drive a market that is not there and skewing market development which may not be the 'natural order' in the long term? From the private VC perspective, one comment from a report mapping out VC provision nationwide (SBS, 2005) stated that:

"People like us are involved in straight commercial funding of early stage businesses whereas they (public backed funds) think that there is a bigger obligation to the economy to establish these businesses. We don't always speak the same language. They don't seem to understand that our obligation is to generate returns for our investors. The bottom line is that we will do whatever makes us money."

This and other comments highlight some level of friction and cast some doubt on the attractiveness of co-investment for all private sector VC houses, despite the growing prominence of this type of funding. This could have implications for desired public sector disengagement further down the line. Another issue is the lack of expansion phase activity (second round funding). Interviews suggested that not enough businesses in the North West receive this funding to grow (as discussed in section 4). Given the small size of initial deals in the North West, this appears to be a particularly acute issue. More expansion phase funding is required from the public sector funds to illustrate to private investors that there is potential for profitable exits. Are high growth firms able to reach their potential with small deal sizes at the early stage in addition to the limited amounts invested at the expansion stage?

A key aspect of policy in two countries with advanced VC markets, the US and Israel, is that direct government involvement is limited as much as possible so private investors capture the capital gains. Another key element of their success is that VC funding has been part of a wider innovation policy to create an environment in which innovative firms can prosper. These countries have invested huge amounts of capital and resource into academic institutions and research. If VC backing is not matched by spending on these other elements then it will be difficult to create a self sustaining VC market that attracts sufficient private VC.

Clearly the importance of the University of Manchester is paramount and it has received considerable funding. But the question remains as to whether Manchester has attracted enough investment and created the wider ecosystem needed to be conducive to long term private VC funding. A study on the City Region's innovation ecosystem previously concluded that it has the existing infrastructure and the potential to possess an innovation eco-system which can be an effective driver in further increasing the economic development of the area. However, this is potential rather than reality at the present time (Manchester: Knowledge Capital / Manchester Enterprises, 2007). The key message is that attracting VC runs in parallel with the creation of an innovation ecosystem and that this is an evolving process. Therefore, ambitions about investment into the area need to be realistic in the short term.

One other area from which North West publicly backed funds could learn is in the utilisation of external partners. In the Israeli Yozma programme, utilising and integrating foreign limited partners was a major success and a key reason for the rapid rise of the Israeli VC market. Opening up funds to foreign VC institutions means best practice could be learnt from elsewhere and the experience of the Yozma programme resulted in a rapid increase in VC investment, triggering the industry's growth. Although the UK VC market is more mature than that in Israel pre Yozma, the experience shows that opening up regional funds to external investors may well be beneficial. It could possibly be an important component of the long term transition process from public to primarily privately driven funds. Utilising foreign partners in the North West would, at present, be difficult, especially in Manchester where not enough firms are globally interconnected at present (MIER, 2009). In order to take advantage of foreign expertise, Manchester needs to increase the internationalisation of its firms and the activities of its high growth SMEs.

5.2 Business Angel activity in Manchester

The above analysis has focused primarily on VC funds but these are only one source of early stage risk capital, with individual investors such as Business Angels being another source who risk being crowded out. This is a particular concern because the average investment size in the North West is small enough to fit within the typical investment bracket of Business Angel activity. The Enterprise Investment Scheme, the main tax relief system for individual investors, covers investments of up to £300,000. There isn't really a means of assessing the volume of Business Angel investment due to the hidden nature of the sector, but there are an estimated 4,000 Business Angels across the UK. In the Manchester area we came across some evidence of private networks alongside the publicly backed NW Business Angel Network, which has invested £20 million across the region in the last 15 years (NESTA, 2007).

Business Angels are often experienced investors, who are invaluable to many early stage businesses (NESTA, 2007). They can often go further than VC funds by being far more hands on about ensuring the companies they invest in are run efficiently and maximising their commercial potential. As such, they tend to operate in the very early stage of investments. The best available research suggests that Business Angels generally suffer from a lack of opportunities for investments, so there is a demand side issue. However, this depends on the volume of other investors in an area and the ability of investors to meet entrepreneurs with proposals.

At the regional level, the rebranded North West Business Angels Network has so far successfully increased its intake of angels who wish to invest in businesses (currently at 120), and in the number of businesses across all sectors looking for equity finance, according to NWDA sources. It has also been focusing activities

within the sub-regions, attempting to create viable networks and connecting up local investors and potential investees. The new network has clearly expanded its activities into areas such as managing portfolios for investors, attempting to identify exit strategies and putting together syndicate deals.

What evidence is there for networks within Manchester and what issues around effectiveness of angel investment does the sub-region face?

In the last 15 years there has been a clear development of several privately run networks. We interviewed two of these and also heard references to other, smaller networks. The growth in these networks suggests that there is little direct competition with VC funds, although it is an open question as to whether the size of VC fund investments has limited the number of angel networks that have emerged.

Alongside the private angel networks there has also been the publicly backed North West Business Angels Network. There would appear to be some tension between the private sector activities and that of the regional (publicly backed) networks. However, respondents were keen to stress that they did see a place for the publicly run network, with the issue more one of positioning and the way it ran its operations. Several investors believe that there is a danger that regional Business Angel networks can fail to conduct enough front-end filtering, and may have added to the confusion in the matching process between investor and investee. They felt the North West network had a high profile, high volume approach to matching investors and companies, which sucked in a large number of candidates but often disappointed them. They would have preferred to see a more focused and collaborative approach by the network.

Overall, the development of angel investment seems to be running positively, but it is not yet dense enough to have a generated a critical mass of activity. A particular issue for Manchester that emerged is that there is a lack of connectivity between investors and an absence of leaders to guide syndicates of investors to appropriate small businesses. This perceived lack of experienced investors was felt to be holding Manchester back.

"It is important for successful seed finance that major individuals (investors) are clustered in the area. If these major ambassadors are here, others will follow, many with the finance needed. So a sort of agglomeration effect will ensure that businesses in the area have better chances to access the finance they need."

In the South East and Cambridge, there are many more successful entrepreneurs within the science and technology sectors, and investors and entrepreneurs are better connected to each other. This is because the venture capital market is already well established, with appropriate expertise within these fields. The risk is therefore minimised as there are significant players who know their sectors well and can signal to other major investors which businesses have genuine potential.

The analysis perhaps highlights action required by Manchester policy makers, which will complement, rather than crowd out, action being taken by the NWDA. Despite the possible limitations suggested, the public networks have been effective and raised awareness of the opportunities for investment of both investors and potential investees. Working closely with private brokers / corporate financiers who have access to investors may be an important progression.

Providing resource to set up private led networks within the sub-region may help local connections between investors and also between investors and appropriate investees. This subtle approach, with public sector involvement moving into the background after initial support, would require significant work beforehand in identifying brokers and, where possible, investors. It would require working with them pro-actively in a two way process to foster a more connected angel market in Manchester.

“It is important for successful seed finance that major individuals (investors) are clustered in the area. If these major ambassadors are here, others will follow, many with the finance needed.”

5.3 Proof of concept funds

Although this paper is primarily concerned with equity finance, there is also another potentially important source of finance that should be accounted for. Proof of concept (POC) grants are usually awarded to ventures before the start up / early stage and, indeed, often before seed funding. Typically POC funding is awarded to ventures which can be up to two years away from market entry and will require an intensive support programme. Primarily, POC funds are about exploiting more economic value within the economy from academic spin outs.

A good example of successful use of POC funds is from Scotland. Funds provided by Scottish Enterprises with some additional European monies have supported innovative technology rooted in substantial research from Scottish universities, research institutes and the NHS. As part of the POC process, there is also the support for spin outs to achieve an understanding of where their technology will fit in the commercial value chain, and there are also links provided to seed funding. A fully integrated programme is provided with thorough mentoring, assessment and support at all stages of the process from a range of stakeholders. This includes tough due diligence with commercial focus being a key feature from the outset.

POC funding has been successful in Scotland, with investments from £100-300,000 helping companies which have been spun out of POC leveraging over £235 million follow on funding by 2008. In 2008, £41 million was awarded and 42 high tech companies formed (Scottish Enterprise at the University of Glasgow, 2008). The Scottish example shows POC funding is important in stimulating both supply and demand and can potentially increase the number of companies succeeding when applying for equity finance at the early stage, having come through the POC process.

There is a lack of POC funding within Manchester. According to University of Manchester sources there isn't any available apart from what was generated by themselves for their own use. Local evidence shows that the more POC monies available at the University, the higher the number of spin outs which become commercially viable. An important point raised was that, despite Oxford, Cambridge and London having better access to such funding, even universities in these areas have had to invest their own capital when setting up POC funds. This would therefore appear to be a nationwide issue rather than a geographical one.

5.4 Demand for venture capital and angel finance in Manchester

When looking at the demand for business finance in Manchester, it is useful to know how many businesses are receiving, and how many are seeking, finance. Whilst there is no single set of data that gives these figures, a number of different sources can be used to see how many companies are receiving finance, applying for it, how much they are getting and what sectors they work in. These are top-down sources (i.e. survey data). Alternatively, various bottom-up sources can be used, such as applications to public funds, private investment figures and anecdotal evidence from experts in the sector. Thus the sources to produce these figures come from the NWDA and BERR's Small Business Survey. Although no comprehensive figures exist for the numbers of businesses seeking equity investments some tentative conclusions can be drawn:

- approximately 100-150 companies in Manchester receive equity financing each year, three quarters of this for early stage finance;
- up to another 250-350 companies are actively seeking equity finance in Manchester; and
- approximately half of these companies are IT / digital or biotech/ health-based. The IT / digital sector is noted as being particularly strong by some of the fund managers we spoke to.

5.5 Investor readiness in Manchester

The above statistics highlight a considerable number of companies which are seeking equity finance in Manchester. But how many of these companies are ready for investment? There is a growing body of evidence suggesting that an exclusively supply side approach to tackling the lack of early stage finance and the equity gap will not be successful on its own and will fail without measures which address the demand side constraints (Mason and Harrison, 2003). Business Angels and VC fund managers are unable to invest as frequently or as much as they would like because of the low quality of investment opportunities that are presented to them. So what are the aspects of a lack of investor readiness among Manchester entrepreneurs and SMEs? A recent NESTA report suggests that, nationally, reasons for businesses not being investment ready often include (NESTA, 2007):

- a limited amount of hard data about financial and other aspects being put forward by businesses, making it difficult to communicate the quality of their business ventures to potential investors;
- lack of awareness among businesses about investors' aspirations and expectations;
- weak business plans;
- weak management teams;
- unclear exit plans; and
- entrepreneurs not wanting to lose control of any aspects of their business and feeling that the priorities of equity investors do not chime with their own business objectives.

These points illustrate that, beyond the perceived risk in investing in early stage companies for venture capitalist and other equity investors, businesses risk failing to make themselves sufficiently attractive to investors. They may lack the business acumen to turn their innovative ideas into a successful commercial venture. It is imperative that businesses meet the requirements from equity investors to secure investment – failure to do so means that innovative projects with potential do not materialise.

Unsurprisingly, many of the comments from Manchester financiers and high net worth individuals cited several of the above points. From the interviews conducted, it is apparent many businesses that present investment opportunities lack investor readiness. It is assumed that the number of deals regionally and locally would further increase if entrepreneurs were better equipped to attract investors.

There was consensus that effective management teams were just as important in the early stages of a business as later on, when performance often suffered due to a lack of understanding of the market. A company might be successful in the beginning, but further down the line may not be agile enough to respond to rapidly changing conditions. Basic business fundamentals such as cash-flow management are also cited as lacking in applicants for investment.

"The problem with technology in particular is that you're expecting lightning to strike not once, but twice. These are very gifted people, often academics, but what business experience have they got? You're also expecting this team have the skills to get through all these business challenges."

The above confirms that the general theoretical discussion about investors and investees linking up is also true of Manchester. The following reviews possible solutions to ensure that good ideas are well presented and inexperienced entrepreneurs with ideas get the chance to build good management teams around them.

Several respondents suggested a solution, unprompted, that matches very closely to one of Mason & Harrison's key proposals for development of the Business Angel market. Like the Scottish Investment Facilitation Grant run by LINC (the largest angel network in the country),

rather than public funding going to clubs and in-depth investment ready seminars, several respondents said they would rather see fees provided to investors to help businesses carry out due diligence. This was generally recommended on a contingent basis, i.e. money is returned in some form for successful investments. One option is for the fee to become equity in any investment.

There are also concerns about the all too generic nature of what the public sector has offered up to now in terms of helping businesses become investor ready:

"The main problem with a lot of the public sector support are the so-called business advisers – very few of them have actually run their own company so they don't actually really know from an experimental point of view what is required to set up and run your own business."

Examples of good practice within Manchester and the North West

At the regional level, the implementation of BERR's new 'Solutions for Business' package so far appears to be an effective approach for developing investor readiness among businesses seeking early stage capital. In this case, the NWDA works with businesses to ensure that they are ready to apply for investment.

At the sub-regional level, there are some examples of good practice through the University of Manchester Incubator Company (UMIC) and Venture Point, based at One Central Park. These provide mechanisms in which to support start ups, and part of the process is helping entrepreneurs and young firms become investor ready. The UMIC now has a leading biotechnology incubator and a core technology facility. Speaking about the experiences of helping one firm, an interviewee said:

"I have been acting business development manager for x at the very earliest stage of development… did not have the investment to get going really, we happened to write their business plan, introduced them to investors, getting them what I call investor ready. So that's a real key element of what we're doing, and a real key element of what the region needs to continue doing. There is lots of money there but we're not getting the quality of presentation and business plan that we expect and that's a real problem."

Also based at One Central Park, Winning Pitch, a consultancy which specialises in providing coaching and mentoring support to high growth businesses, is delivering the High Growth Programme funded by the NWDA. It has also been successful in helping to enhance business skills amongst small companies in Greater Manchester [9].

Other corporate financiers are also involved in bespoke investor readiness solutions, actively working with the companies who are seeking finance. The key message again is that investor readiness has to be done through working closely with the business and on a case-by-case basis.

[9] Northwest Development Agency (2009) http://www.highgrowthprogramme.co.uk/partners/winning-pitch/ accessed 26th May 2009

“The problem with technology in particular is that you’re expecting lightning to strike not once, but twice. These are very gifted people, often academics, but what business experience have they got? You’re also expecting this team have the skills to get through all these business challenges.”

5.6 Connectivity and supply of talented VC managers and angel investors

The following section further probes the issue of supply of propositions to investors and the supply of VC fund managers and angel investors in Manchester who have the necessary skills and talent to ensure effective early stage funding for businesses.

Do the right propositions get to the investors with the knowledge to adequately assess them?
One of the key conditions of any successful industry is that network connections are strong enough to enable rapid filtering so that the right investors are meeting the right entrepreneurs. Do entrepreneus know where to go for finance? As a privately run business this is their job, but there may be simple actions the public sector can take to improve the process. Does the issue of a limited investment size for each public VC fund block them from building alliances around certain investee companies and leveraging large amounts of cash into the business?

Some of the corporate finance advisers we spoke to said that there was confusion in the market about who to speak to for early stage VC deals. Firms that had moved out of the 'equity gap' were still meeting early stage businesses who didn't know where else to go and had misunderstandings about who actually provides the funding. Disruptions to public support services have added to this confusion, although the Business Support Simplification Programme may go some way to addressing the issue.

Many of the respondents pointed to events run in places like York and Cambridge as exemplars of what worked in ensuring that entrepreneurs are aware of the options for financing their products. In the North West, similar events had lost focus on the VC industry, and the initially positive impacts they had for networking were being lost.

A problem mentioned by several respondents was that companies which were invested in often struggled at the second round because of the limitations on investment amounts prescribed under European state aid rules. Given the limitations on the amount the public sector backed funds can invest in per firm, this may actually be a driver of failure to develop better connectivity. On occasion, funds have been able to come together and help some of the firms with most potential raise significant funds. But, in general, they aren't able to, even though their funds are more or less large enough. This prevents leading investors emerging, and success stories developing. The new RVCF in the North West is perhaps welcome in light of this, and hopefully will be able to drive strategic direction in the most important sectors.

Another issue on the policy side is where private VCs are looking to invest in a range of regions in partnership with the public sector. The need to speak to several public sector partners across different geographies (e.g. the RDAs) can be logistically difficult and create a barrier to investment.

"We have another fund, which is the x fund, which will invest across the North; we feel that there is huge potential for early stage businesses across the North. I would advise the co-ordination of all of these government bodies and consultants, all for a common aim, how can we all work together. But x is doing one thing, y is doing another and I'm sure z is doing something there."

"We've actually tried to get (3 RDAs) together to talk, but it's so hard to get each party because each has their own area, their agendas and budgets and they won't have a common link or fund."

It would be useful to explore if the three Northern regions could co-ordinate their early stage VC activities, perhaps through some form of forum hosted by The Northern Way. Many of the firms who run their funds are increasingly run on a pan-Northern basis, and may struggle to operate across several different agencies.

Have policies sought to leverage knowledge, finance and experience from external sources of expertise?

As discussed, an important factor in the emergence of most emergent VC industries in other locations has been the leveraging of foreign investment and technology expertise. Early attempts to bring in foreign investors to Manchester were advised against, and failed when they did because they did not consider the deep seated nature of relationships required. We did not come across any other evidence of formal links with external sources of expertise, other than clubbing together on occasional deals, and links to fundraising and professional services in London. The one area where there did seem to be links to foreign businesses was through the process of investing in technology orientated businesses.

"(we said) you go and prove this technology with the best, people of calibre in your space. You'd think this is a small regional fund: we've got directors in California, products tested in Korea, testers and advisers in Japan. It's amazing how global even at this scale it is."

These show the first shoots of interactions, but did not appear to be widely held sentiments, with many of the funds focused on non-global sectors. Biotech was the one exception, with several strongly allied agencies working together to present a unified front for inward investment marketing.

"We are benchmarked, we have visits from external companies from Singapore to China to Sweden, we are world leading in biotech. We're not Oxford or Cambridge, but we're coming up on the rails I think."

However, the same respondent felt that the sector itself wasn't quite big enough yet to attract international talent like the thick labour markets in places such as San Diego, or even Cambridge or Oxford. But it was improving with the emergence of alternative employers to the likes of Astra-Zeneca.

Is there a sufficient pool of talent for VC investing (VC investors with knowledge and experience?) What evidence is there of long term attraction of talent?

In terms of attracting talent, the funds put in by the NWDA have clearly supported a small body of skilled individuals and re-orientated existing organisations towards VC. Some of the key criticisms of public interventions by Mason & Harrison are that, in the VC market, there were only a few applicants to run the first 9 RVCFs. Indeed they were run by only 5 fund managers and they came from earlier public finance programmes in the 1980s. However, there is evidence that these organisations are beginning to experiment, to diversify and attract talent – one of the key success factors in building a VC industry. Public fund managers we spoke to had gone on to raise their own, privately backed partnerships, or had been bought out by owners, cashed out entrepreneurs and corporate finance specialists. Each had raised at least one new privately backed fund, generally in the range of £10-20 million.

"It was originally a creature of (public sector body), eventually became a quoted company. We did a buy-out five years ago, and now it's wholly owned by its management. In total we have £50 million under management, some from government, (and the latest fund) was raised totally from the private sector."

These funds were also professionalising by attracting staff in from other areas and from the bigger investors that had deserted the early stage market. Whether these VC funds were attracting foreign funds was not clear. Anecdotal evidence and reviews of investments shows that some technology deals by the local VCs are being done in partnership with different European investors. There was an opinion expressed that the number of locally run funds wasn't sufficient to serve the opportunities on offer:

"That's just one fund, but bearing in mind the size of the economy and the number of businesses, you need 5 or 10 funds available for businesses in the North West or North East, or whatever, and that's accessible, not a fund that you manage from London. They have to be people on ground."

It should be noted that there are limits to direct public sector involvement with regards to attracting talented fund managers or other investors. This is something that takes a long time and the UK is still relatively young as a country when it comes to investing in early stage VC (only really in any significant volume since the mid 1990s compared to the 1940s in the US). This should be accounted for by policymakers in Manchester.

The role of corporate financiers has also been increasing in recent years. At the start of the 1990s there were virtually no corporate finance functions for any stage of investment in the North West. However, economic growth in Manchester began to attract corporate finance advisers from the mid 1990s, and they have become involved in the early stage equity industry.

From the interviews and other local evidence, it is clear that there are informal groups and brokers/corporate financiers within the sub-region who work with local and outside investors. Some of the emerging success stories are beginning to create waves, and showing that advisory firms can benefit from being involved in high tech sectors such as bio-technology.

Overall, there appears to be the seed of a VC industry but it is clearly small so far. A salient comparison was made between Manchester and Cambridge by one interviewee. They pointed out that it didn't have the bed of talent, cashed out entrepreneurs and organisation that Cambridge did, which is 10 to 20 years ahead. The nucleus of experienced investors, required to make the area attractive for sustained investment, is also missing.

It is not clear that the range of technical talent exists, with the known funds in the North West investing across a wide range of sectors. One interviewee pointed out that there was general opinion that most activity in Manchester and the North West was focused around media / ICT / finance. Yet the deals that get headlines were the increasing volumes of bio-tech / medical investments, with the locally headquartered Astra Zeneca a major potential customer. While Astra Zeneca is gradually 'winding down' its own research, there is opportunity for funds to leverage the expertise of many staff coming out of the company.

The large University of Manchester investment funds are also generating increasing volumes of spin outs, many of which receive additional capital from VC funds. One interviewee said they considered the biotech sector to be developing some form of self-sufficiency, with engaged and knowledgeable VC funds, and this needed time to develop on its own, away from public interventions. This is not to suggest that this will be 'the' growth area, but there is evidence of clubbing together on deals, various privately and publicly run support companies experimenting with different models and potential supplies of talent from good quality departments in several local universities. These match the background conditions that Avinmelech, Kenney & Teubal state were prerequisites for successful emergences in Israel and the US.

5.7 Entrepreneurialism in Manchester

Are different areas more entrepreneurial in nature than others? Is there a culture of risk in the South of the country that is not evident in the North which results in higher levels of early stage deals? There are no simple answers to these types of questions, however some data, such as VAT registrations, can be used to provide a proxy of entrepreneurship levels.

The data in figure 5.1 suggests that Manchester has a level of start ups that is considerably higher than other comparators outside of the Greater South East (GSE) and comparable with the Leeds City Region. De-registrations are considerably higher than all comparators outside of the GSE, another sign of relatively higher levels of entrepreneurialism – higher rates of business failures means more people are willing to take risks and start up their own businesses. However, the data also shows considerable differences between Manchester and the Greater South East, where levels of new business activity, together with failure rates, are high.

Again, when assessing the reasons for high levels of VC and angel activity in this region, the entrepreneurial nature must also be taken into account together with other factors. Policy in Manchester must therefore also account for increasing levels of entrepreneurialism, e.g. boosting entrepreneurship among the younger age cohorts, where mentoring and support activities are most effective (Harding, 2007).

The academic community within Manchester has recently been making positive moves in addressing this, with Manchester Business School announcing the creation of the Manchester Enterprise Centre, and Manchester universities currently in the running for a government project – University Enterprise Networks – aimed at turning more graduates into entrepreneurs (Crain's Manchester Business. March 16th 2008). With the high number of students and graduates in Manchester, there is a real opportunity for policy makers to increase entrepreneurialism levels and, as a result, potentially enhance the chances for increasing early stage equity investment.

Figure 5.1: VAT Registrations and De-registrations per 10,000 working age population in Manchester and comparator areas[10]

Comparator Area	VAT Registrations per 10,000 working age population	VAT de-registrations per 10,000 working age population
Birmingham	41.9	34.5
Manchester	49.6	37.3
Greater South East	68.3	48.2
Leeds	50.6	36.2
Liverpool	43.5	27.3
Sheffield	39.4	30.2

Source: ONS, 2007

10 Registrations: Number of enterprises registering for VAT each year. This is an indicator of the number of business start-ups. It excludes most of the very smallest one-person businesses.

Deregistrations: Number of businesses de-registering from VAT each year. Businesses deregistering from VAT do so due to closure, or (in a minority of cases) because turnover has fallen below the registration threshold. Closure does not necessarily involve bankruptcy or insolvency proceedings, which make up around one in four closures.

6

Conclusions and recommendations

6.1 Concluding Discussion

This paper has provided a top level overview of early stage risk capital for new businesses within Manchester and the North West. We have not focused on data, attitudes and views from entrepreneurs/early stage firms – it is recommended that a separate study is carried out to fill this demand side gap in knowledge. It is also evident that the downturn is going to have a negative effect on investment levels, although RVCFs are likely to be unaffected. While this has been covered to an extent in the report, the aim of this paper is to look at inherent structural patterns and long term issues to be taken into consideration. Key conclusions that can be made include:

- the NW has more early stage investments than many other parts of the country, much of it in and around the Manchester Liverpool corridor;

- public VC money is important in Manchester, and there are some resulting distortions in the market. Despite this small scale future capacity (human capital) is being created by public money;

- the challenge is to provide long term support for these funds and businesses through recession and ensure that the sector develops commercial viability – the new NWDA fund is important if capacity is not to fold;

- if continued public investment is to be of value there needs to be much more funding for activities that increase demand and deal volumes – such as proof of concept funding and business angel due diligence equity grants to increase investor readiness;

- there are increased levels of public-private co-investment deals as policy attempts to draw in more private VC activity at the early stage;

- Manchester has the seeds of an angel market, however there is a lack of connectivity between investors.

What is clear is that there has been much activity from central government in recent years to address the issue of increasing early stage start up finance for young, high growth companies. Much of this policy is being implemented by the Regional Development Agencies. The efforts of the NWDA should be applauded as they have clearly increased the number of investments being made, and the continuing innovative activities being undertaken by the NWDA will have a positive effect on the Manchester market going forward. Although there are potential issues with RVCFs and regional angel networks, activity on the whole in the region has provided finance for firms which was not readily available beforehand. The new measures being taken at regional level recognise that it isn’t just about finance in isolation and that there is a need to make investors and investees ready for the challenges ahead.

Local evidence analysed through interviews with stakeholders and empirical evidence shows a mixed picture of Manchester’s performance. The sub-region is a key part of the North West’s strong performance in increasing early stage capital deals, stimulated by the regional policy interventions. There is also evidence of innovative funding processes from the academic institutions. The importance of the University of Manchester and associated spin outs, is encouraging. Also encouraging are some of the local examples of incubators and mentoring activities which help entrepreneurs and companies become investment ready.

However, there are areas in which Manchester can make significant improvements. The nature of its angel networks appear to be fragmented with no lead investors or formal investor networks. Although investment activity at the early stage is high, deal values are low, with potential implications around the

equity gap and possibly crowding out of some of the Business Angel activity operating at similar values in terms of deal size. The examples of good practice with regard to business mentoring could also be extended and it is important to further develop an environment where collaboration goes beyond simply networking.

There is also an issue around central government policy being guilty of 'supply push', with public money coming with strings attached in terms of sectoral and geographical constraints within the region. Although all respondents were at pains to say they did not want to criticise their funders (and that it is clear that the leveraging in of new funds has been a key positive) they felt that benefits to the region could be reduced by such activities warping the decision making process. What this clearly shows is that the new funds need to allow people to invest in the sectors that are likely to generate the biggest profit and, in turn, make their own operations more sustainable. They also need to complement private sector activity, not crowd it out.

The North West has one of the lowest average deal sizes of the UK regions and devolved administrations. This is worrying for Manchester and the North West because greater returns can be achieved where an investor can invest more and achieve optimum growth for its most successful companies. The small average size of investments in the North West is possibly a function of the size caps on public backed investments, and the aim of the new RVCF 2009 fund is to markedly increase the deal sizes. It is important that public funds leverage private activity in the long term, so these funds need to generate strong returns to gain follow on funding for new privately backed funds. Despite investment limits, the public funds have achieved this, albeit on a limited scale. Private management firms have attracted experienced staff and cashed out entrepreneurs, who have gone on to raise their own entirely private funds of £10-20 million, more or less large enough to operate at a commercial scale. The key for future policy is to support an increased proliferation of even larger, more sustainable funds that can develop niche specialities rooted in the Manchester city region's particular strengths, using the local expertise of an increasing number of talented fund managers.

Lessons Manchester can learn from comparator cities

The development of areas such as San Diego and Cambridge is much more advanced than Manchester. However, some of their experiences are comparable. Firstly, the importance of a world class university is crucial in the development of a burgeoning knowledge economy, and focus had been developed around universities in these locations. In Manchester, policy has already focused upon the importance of the academic assets, in particular the University of Manchester, which is an institution of national and growing international significance. The mentoring and spin out activities, in addition to VC funds related to the university, are signs that the potential is there for Manchester to build upon this asset as the foundation of the knowledge economy. Manchester also has an existing reputation for strong civic leadership, as in San Diego, policymakers need to exploit this further to build focused innovation strategies which involve the increase of early stage (and expansion/second round) finance for SMEs.

The unique levels of collaboration in San Diego and, to a lesser extent, in Cambridge are something to which Manchester needs to aspire. The culture of shared agenda, risk and rewards must be absorbed, with further collaboration between local policy makers, academia and the private sector. With regards to finance, establishing contacts and reaching out and talking to investors is better than simply trying to draw them in. The collaboration and networking between investors in San Diego and Cambridge is not evident in Manchester – a prominent issue being lack of connectivity between investors. These investors are

willing to sacrifice their own time and resources because they are convinced that there is a strong innovation ecosystem that can deliver mutual success for all.

The angel networks in Cambridge are well developed. They have clear focus on the sectors that they invest in and have sector leaders with a deep knowledge of their markets who will put together syndicates. The fragmented situation within Manchester illustrates the scale of development required in the future.

Foreign, especially US, investment, is also of importance – this links again to the argument that funds, and investors perhaps, need to be outward looking. They have to further embrace internationalisation and 'global' sectors which will attract higher levels of foreign investment, such as biotech (already a relative strength in terms of spin outs in the sub-region) are important in the development of VC investment patterns. However, in general, Manchester firms are not well connected internationally and this must be improved in order to enhance links to foreign investors.

The overarching theme is that policies and developments have focused on developing a wider, mature innovation ecosystem, of which attracting VC and angel finance is just one interconnecting part. Investment in start ups and early stage SMEs may naturally follow once the critical mass is in place. This is a gradual process for which there are no quick or easy solutions. Manchester may not have ecosystems as developed and mature as those in San Diego and Cambridge, but applying some of the basic lessons from these areas can help it grow into a significant centre of innovation in its own right.

6.2 Recommendations

There are a number of possible routes for local policy to take, and clearly there will be competing priorities within the innovation policy making agenda. Key recommendations for local policymakers and stakeholders, include:

- engaging with regional stakeholders to ensure that public funds, in particular the RVCF, focus on long-term growth, and ultimately the development of a commercially viable VC sector in Manchester. This will require adopting a "private sector approach" to managing public funds, including ensuring sufficiently high ceilings of investment for high growth companies, the freedom to invest in those sectors likely to generate the biggest profit (with no geographical/sectoral constraints), whilst ensuring that activity compliments, rather than crowds out private sector activity;
- identifying and working with relevant partners to ensure public support is structured to attract talented investors and fund managers to work with and create new funds – this will require adopting new approaches such as "the right for fund managers to buy out public shares in VC funds they believe are likely to be successful";
- enhanced collaboration between local actors (including local policy makers, acadaemia, corporate financiers and the private sector) to develop activities that stimulate demand in viable propositions including proof of concept funding and business angel due diligence equity grants;
- a detailed study into demand for early stage equity finance in Manchester, if feasible;
- a clear and transparent 'signposting' service would be of value in pushing potential high growth firms towards RVCFs and other equity sources; and
- helping to forge networks through providing focused events that bring both relevant public and private sector actors together.

The above recommendations are detailed further below, with additional ones based upon the evidence collated from the work. Some of these relate directly to early stage finance and others are relevant to the wider innovation ecosystem.

Supply of finance

More than most parts of the UK, Manchester and the North West have seen a large injection of public funds which have generated a high volume of deals, and this is set to continue in the long term. Given the paucity of activity before, this has been a positive development. But there are number of issues that future policy needs to be addressing:

- There has been a high volume of small early stage deals over the last three years. However, consultations suggested that, compared to other regions and cities, more businesses in the North West struggle to move on to the second round of financing and continue to grow. This creates two potential problems: either the VC funds cannot develop their investee companies further or they have to take on a fellow investor. In the first case they struggle to make an exit from the company or get less from their investment. This is because they cannot get it to a stage where it will raise a lot of money from a public flotation or a private buyer because it requires further investment. Taking on additional investors can dilute their equity share in the company and prevent them from realising the full benefits of their best investments. This is necessary to cover the amount they spend on less successful investments and decreases the amount the VC fund can return to investors. All future public supply of finance should be flexible enough to support companies through their development, with a large enough fund and higher ceilings of investment per company, to ensure follow on funding is secured on good terms or successful divestment is possible (the new NWDA fund should meet these conditions).

- All VC funds need to show high returns, but publicly backed VC funds more so than others. They need to develop a track record that enables them to go on to operate on a purely commercial basis by raising new investment funds entirely from private investors. The greater their returns from previous funds the more they are likely to be able to raise. The large new RVCF public fund may help with this, as long as it focuses on being commercially viable. It is essential that policymakers in Manchester support this approach through ongoing engagement with NWDA. This requires patience from policy makers, to wait for investments to mature, and for the skills of fund managers to grow. All policy making needs to take the long view.

- An increase in the supply of finance will require upside benefits to attract more funds and talented managers. Upside benefits are those that reward success, rather than attracting private sector investment by reducing risk (the downside), e.g. public sector co-investment funds should have a built in right for the fund manager to buy out the public sector share if they believe they are going to succeed. The talent to deliver is one of, if not the biggest barriers to investment, and the structure of public support needs to both reward those who succeed, and attract in outside talent where possible. It is important to develop a sufficient pool of talented investors and fund managers who have the knowledge and experience to succeed. This will develop over time, and is already occurring on a limited scale.

- It is important that the new regional public fund does not crowd out the funds that have been raised by the fund managers of the first round of RVCFs, otherwise it will be damaging that which it hopes to achieve. The industry as it stands in the Manchester and the NW is fragile, so the new fund should seek to work with other actors and complement activity. It can enhance their commercial potential through co-investment, supporting their biggest successes when they need partners to rapidly scale up their best investments.

- Local actors need space to develop innovative methods of funding developed to suit local needs and strengths. Pro-active moves have been taken within Manchester, for example with the UMIP fund, and further collaboration with local policymakers and stakeholders would be welcomed in order to maximise the potential of local funding in addition to wider RVCFs. All relevant parties need to work closely with each other to ensure that Manchester can be a pioneer in this area.

- Policy actors should work closely with the private sector to develop a long term succession strategy that will enable private sector investment activity to expand and eventually replace public investment as the major player. Several of the fund managers and other investment advisers interviewed in this study indicated a desire to be part of this process with the need for public sector disengagement being a part of the strategy in the long term.

- Proof of Concept (POC) funding, while not equity finance, is another important source of capital that can stimulate both supply and demand for equity finance at the early stage. There is a lack of POC funds in Manchester, and lobbying government for greater resources in this area would be welcomed.

Networks and connectivity

Dense networks of investors, advisers and serial entrepreneurs are a core component of emerged VC industries. This density can increase in the long term, as actors work and invest together and build their relationships and collective knowledge about how best to work with each other. But there are a number of simple steps local policy actors could take to provide strategic direction in helping to move this process forward.

- There is evidence of a lack of understanding from young firms and entrepreneurs about where to access equity finance, and whether their needs are best served by debt or equity sources. A clear and transparent ‘signposting’ service would be of value in pushing potential high growth firms towards RVCFs and other equity sources.

- Manchester policy makers should work closely with the corporate financiers located within the sub-region, using their knowledge and expertise as key assets. Corporate financiers could potentially be helpful in bringing sector leaders to the table and will show other investors where to go and what to invest in. They would make valuable advisers on local policies being enacted and could help to create effective angel networks in Manchester and build up the critical mass required.

- In the near future, it is unlikely that Manchester will develop the scale and density of investors present in London or Cambridge. Local partners could investigate examples of best practice in linking local actors into national and international networks of technological and financial expertise. Relationships need to have some depth to be effective, so partners would be wise to consider these examples first, and consult with local investors and advisers on how the public sector might help this process. Again, this cannot be a one-off, it requires patience and long term support.

More than most parts of the UK, Manchester and the North West have seen a large injection of public funds which have generated a high volume of deals, and this is set to continue in the long term.

Bridging the knowledge gap and increasing demand
The investor-readiness of entrepreneurs is both a local and national issue. A number of programmes have been run in Manchester and the North West to address it, but there are several other options that should be explored further.

- The generic nature of business advice in the public sector can be unhelpful, especially for potential high growth firms with specific needs. Employing specialist business advisers, whether on a full time or consultancy basis, could strengthen both supply and demand side factors relating to supply of early stage capital. In addition, working with local actors already active on the ground may help in setting up such structures.

- Using examples of best practice from elsewhere would be beneficial in increasing levels of investor readiness. For example, consideration should be given to Scottish Investment Grants, where payments are made for investors to carry out due diligence on potential high growth firms. Evidence from Scotland suggests that this approach effectively addresses the business development component of investor readiness for limited public cost. A similar scheme would make grants of up to £5,000 available to Business Angels who see an opportunity that they think has potential but don't have the time to do due diligence. They receive a day rate of £300-500 to do 10 days' checking, which overcomes the knowledge barrier. If they do invest then this grant can be turned into deal equity by the public sector. This is not an expensive programme to run, and can be partly self funding in this way, although the regulations surrounding this type of programme are complex and partners would need to work with an exemplar to implement it.

- Encouraging higher levels of entrepreneurialism is one basic demand side factor – the VAT registration and de-registrations in the Manchester city region and North West are considerably lower than the Greater South East. Embedding an entrepreneurial culture may further increase the supply of proposals for potential investors. This paper has noted that there are already some innovative programmes being designed at the local level to increase entrepreneurialism, but more clearly needs to be done.

Broader Policy Issues
In this report we have seen that policy efforts lack, or are perceived to lack, co-ordination. It is vitally important that policy and private sector activity achieve this co-ordination. Because of the way investing is done, VC is more collaborative than many industries.

- The majority of public money for VC policy is channelled into the supply of finance, but it is a very different form of finance to more generic access to finance issues. VC finance policy must be co-ordinated with other related policies around innovation. There are a multitude of local actors who already work reasonably well together. Although we would not suggest formalising new structures, the investors we spoke to clearly felt that current ones could still work better. Firstly, the three northern RDAs need to work together, perhaps through the Northern Way, as the new emerging funds operate on a pan-Northern basis.

- The role of universities in encouraging innovation cannot be over-estimated. They now invest significant funds and run incubators for many of the businesses that receive VC funding. They should be a cornerstone of both innovation policy and wider economic development policy in the city region if aspirations of financing large volumes of high growth businesses and the associated wider benefits are to be realised.

- Focused events that bring relevant public and private actors together have already proved valuable in forging networks, and this should not be sacrificed for the sake of scale. If there are only enough people to attend smaller workshop type events then this would be more beneficial than diluting such 'get-togethers' in bigger business conferences.

- As in areas such as San Diego, a change in direction of elements of the current economic development strategy (such as increasing resources given to support high growth SMEs in addition to trying to attract big business) may be a positive factor in increasing the number of successful high growth start ups. This could create a sizeable innovative capacity which drives up total productivity.

Attracting more private VC is interlinked with wider issues in further strengthening the position of the city region:

- developing the critical mass of existing economic assets;
- encouraging an entrepreneurial culture;
- ensuring the professional services which are part of the supply chain for VC houses are further developed; and
- encouraging higher value activity in professional services as well as the high tech sectors which private VC would potentially invest in.

It is by building up this critical mass that other areas have emerged with strong VC industries. While Manchester will not match the performance of these comparators, as a sizeable second UK growth pole, there is the possibility in the future to attract higher levels of interest from VC houses whether in co-investment or freestanding investment at early stage and/or second round funding.

Finally, it is important to re-emphasise that the whole innovation ecosystem needs to be developed and finance is just one, albeit important, element of this. Creating the finance structures in tandem with the wider conditions for innovative businesses to flourish was recognised by other successful areas. The potential for a well developed innovation ecosystem in Manchester is clear. However, there is also a need to be realistic in local aims and ambitions, and fully developing the innovative capacity of Manchester will take significant time and effort.

ANNEX Methodology

This paper emerged from two previous studies carried out for Manchester: Knowledge Capital and Business Enterprise Xchange (BEX): public funded initiatives involved in the 'innovation' and 'knowledge economy' agendas. These papers focused respectively on an audit of the innovation ecosystem in Manchester and the early stage equity market in Manchester.

This working paper uses the transcripts of interviews carried out for these projects with a secondary analysis of the academic and grey literature, and secondary data sources.

The interview participants were selected using a snowball methodology, beginning with key contacts supplied by the clients and then speaking to new contacts that interviewees provided, until a representative range of differing opinions had been captured. The advantage of drawing on these two papers was the broad range of participants spoken to, including public VC fund managers, private financiers, financial advisers, public and private managers of Business Angel networks, managers of incubators, public policy makers and university staff involved in technology spin out. This allowed a more systemic analysis of issues. We also asked very open questions, inviting participants to define the issues that they felt were most important locally, rather than questioning on very specific points.

It was not possible within the scope of this paper to cover demand side work in any depth. This would be an eminently suitable subject for future research, and would build on this paper to further answer some of the main unknowns about the success or not of equity finance policy in Manchester.

Bibliography

Aghion, P., Blundell, R. W., Griffith, R., Howitt, P. & Prantl, S., 2005. *The Effects of Entry on Incumbent Innovation and Productivity*, CEPR Discussion Papers 5323, C.E.P.R. Discussion Papers

Atherton, A., 2006, Should Government be stimulating start-ups? An assessment of the scope for public intervention in new venture formation *Environment and Planning*, 24, pp. 21-36

Avnimelech, G., Teubal, M., 2006, Creating venture capital industries that co-evolve with high tech: Insights from an extended industry life cycle perspective of the Israeli experience, *Research Policy*, 35, 10, pp. 1477-1498

Avnimelech, G., Kenney, M. and Teubal, M., 2005. A Life-Cycle Model for the Creation of National Venture Capital Industries. In Guilani, E. Rabellotti, R. and Dijk, M. (Eds.) *Clusters Facing Competition: the Importance of External Linkages*, London: Ashgate.

British Venture Capital Association, Capital Dynamics and Price Waterhouse Coopers, 2008, *BVCA Private Equity and Venture Capital Report on Investment Activity 2008*, London

British Venture Capital Association, Capital Dynamics and Price Waterhouse Coopers, 2007, *BVCA Private Equity and Venture Capital Report on Investment Activity 2007*, London

Clarysse, B., Knockaert, M. and Wright, M., 2009, *Benchmarking UK Venture Capital to the US and Israel: What lessons can be learned?* London, British Venture Capital Association

Confederation of British Industry, 2006, *Improving Access to Finance: Unlocking the UK's talent*, London

Cowling, M.C., Bates, P, Murray, G. C. and Jagger, N. 2007, *Enterprise Investment Scheme and Venture Capital Trusts: an Evaluation. Report prepared for HM Revenue and Customs and HM Treasury*, London: HMSO

Networks link up with firms, 2008, *Crain's Manchester Business*. March 16.

Fritsch, M., 2008, How does new business formation affect regional development? Introduction to the special issue, *Small Business Economics* 30, pp. 1-14

Gill, D., Minshall, T. H. W., Pickering, C. and Rigby, M., 2007, *Funding Technology: Britain Forty Years On. Cambridge*, St John's Innovation Centre and Institute for Manufacturing,

Gompers and Lerner (1998) Jeng and Wells (2000) both cited in Romain, A. and Van Pottelsberghe de la Potterie. B. The determinants of Venture Capital: Additional Evidence, Deutsche Bundesbank, Discussion Paper Series 1, 2004, Studies of the Economic Research Centre, No.19

Gompers, P., Kovner, A., Lerner, J. and Scharfstein, D., 2008, Performance Persistence in Entrepreneurship, Harvard Business School Working Paper 09-028, Harvard

Greene, F.J., Mole, K.F. and Storey, D.J., Does more mean worse? Three decades of Enterprise policy in the Tees Valley, *Urban Studies*, 41, 7, pp.1207-1228

Harding, R. and Cowling, M., 2006, Assessing the sale of the equity gap, *Journal of Small Business and Enterprise Development* ,13, 1, pp. 115-132

Harding, R., 2007, *GEM United Kindgom 2006 Report - NorthWest* Global Entrepreneurship Monitor / NWDA Available at: http://www.gemconsortium.org/document.aspx?id=572

Hartmann-Wendels, T. and Keinburg, G. *Risk reduction and moral hazard control in venture capital financing - Empirical evidence from German early stage investments* (Working Paper, University of Koln, details unknown)

HM Treasury, 2008, Enterprise: *Unlocking the UK's talent*, London: HMSO

Huggins, R., 2008, Universities and Knowledge-based Venturing: Finance, Management and Networks in London, *Entrepreneurship & Regional Development*, 20, March, pp.185-206

Israeli Venture Capital Research Centre, 2008, *Summary of Israeli High-Tech Company Capital Raising*', Tel Aviv

Landstrom, H., 2005, Pioneers in Entrepreneurship and Small Business Research accessed online. Available online via http://books.google.co.uk

Library House, 2007, Looking Inwards, Reaching Outwards – The Cambridge Cluster Report 2007, Cambridge / London

Library House, 2000, *The Cambridge Phenomenon Revisited*, Part One, Cambridge / London

Makela, M. and Maula, M., 2008, Attracting cross-border venture capital: the role of a local investor, *Entrepreneurship & Regional Development* 20, May, pp.237-257

Manchester Independent Economic Review (2009) *Innovation, Trade and Connectivity*

Manchester: Knowledge Capital / Manchester Enterprises, 2007, *The Manchester City Region Innovation Ecosystem An Audit*

Mason, C. and Harrison, R., 2002, Barriers to investment in the informal venture capital market *Entrepreneurship & Regional Development*, 14, pp.271-288

Mason, C. and Harrison, R., 2003, Closing the Regional Equity Gap? A Critique of the Department of Trade and Industry's Regional Venture Capital Funds Initiative, *Regional Studies* 37, 8 pp. 855-868

Mason, C. and Harrison, R., 2004, Improving access to Early Stage Venture Capital in Regional Economies: A New approach to Investment Readiness, *Local Economy*, 19, 2, pp. 159-173

Mason, C. and Harrison, R., 2008, *Developing Time Series Data on the Size and Scope of the UK Business Angel Market*. Department for Business, Enterprise and Regulatory Reform, London: HMSO

Mason, C. and Stark, M., 2004, What do investors look for in a business plan, *International Small Business Journal*, 22, 3, pp. 227-248

Mueller, P., Van Stel, A and Storey, D., 2008, The effects of new firm formation on regional development over time: The case of Great Britain, *Small Business Economics* 30, pp. 59-71

NESTA *Government lifeline for high-tech businesses* Press Release 22nd April 2009, London

NESTA Policy Briefing, March 2007, *Making money at the early stage: the challenge for venture capital in the UK*, London

OECD, 2007, *Science, Technology and Industry:* Scoreboard 2007, Paris

OECD, 2003, *Venture Capital Policy Review:* Israel, STI working Papers 2003/3 Industry Issues, Paris

Pierrakis, Y., Mason, C., 2008, *Shifting sands: The changing nature of the early stage venture capital market in the UK* London, NESTA

PRIME, Venture Fun project, 2008, Framing of Venture Capital Policies in a Diverse Europe, Memorandum on policy conclusion, Available at: http://www.prime-noe.org/Local/prime/dir/Projects/Venture%20Fun%Position%20Paper.pdf

Scottish Enterprise at the University of Glasgow (2008) Available at: http://www.grpeng.ac.uk/media/media_94264_en.pdf accessed 17th June 2009

Small Business Service, 2005, *A mapping study of venture capital provision to SMEs in England*, London: HMSO

Sunley, P., Klagge, B., Berndt, C. and Martin, R., 2005, Venture capital programmes in the UK and Germany: in what sense regional policies? *Regional Studies,* 39, 2, pp. 255-273

The Northern Way, Private Investment Commission, 2009, *Realising the £25bn Potential: Stimulating the long term private venture capital market in the regions*

BVCA/Populus (2009) *Venture Capital Outlook Survey 2009*, London

Zhang, J., Access to Venture Capital and the Performance of Venture-Backed Start-ups in Silicon Valley, *Economic Development Quarterly*, 21, 2, May, pp.124-147

Disclaimer: The material presented within this paper, is to the best of our knowledge, current and accurate at the time of printing. The authors, members of the New Economy Working Papers Editorial Board and the Commission for the New Economy do not guarantee the accuracy or completeness of this information, and are not liable for any errors, omissions or inaccuracies.

Use of this material by third parties is therefore at their own risk. This document contains general information only and is not intended to be comprehensive nor to provide professional advice. It is not a substitute for such professional advice and should not be acted on or relied upon or used as a basis for any decision or action that may affect you or your business. The authors, members of the New Economy Working Papers Editorial Board and the Commission for the New Economy accepts no duty of care or liability for any loss occasioned to any person acting or refraining from acting as a result of any material in this publication.

The production of this Working Paper has been sponsored by Manchester City Council and the North West Improvement and Efficiency Partnership.

MANCHESTER
CITY COUNCIL