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Should government support business angel networks? The tale of Danish business angels network

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Policies promoting informal venture capital generally and business angel networks (BANs) in particular have gained increased attention in recent years. As a consequence, BANs are now widespread across Europe. However, there continues to be a debate whether BANs should be supported with public money. This article discusses the possible rationale for governments to support BANs and what criteria to apply when evaluating such networks. The article is based on an in-depth observation study of the whole life cycle of a national BAN – the Danish Business Angel Network (DBAN) – and a comparison with a similar national angel network in Wales. Results show that applying traditional evaluation criteria for assessing BANs may provide only a partial picture. DBAN was squeezed between political pressures, impatience and lack of understanding of the broader benefits of an angel network. It was therefore left to die. This contrasts Wales where Xenos was shown more patience and persistence and it was rapidly integrated into the investment community. The implication is that lack of consistent funding, even in economic downswings, may erase the position and awareness of BANs in the capital markets. When governments consider whether to provide continuing support to BANs they should evaluate not only their immediate effectiveness but also whether BANs should be considered a part of the general small business support infrastructure.

Keywords: business angels; networks; small firms; evaluation; government

1. Introduction

Governments have played a key role in the development of venture capital markets around the world (Lerner 2010; Mason 2009). Although the primary focus has been on the formal venture capital market, governments have also tried to support the development of the informal venture capital market (Mason 2009). However, there is debate on the appropriateness of government intervention to support the informal venture capital market. On the one hand, this market may be said to be functioning under severe informational constraints and ‘market failures’. On the other hand, it could be argued that this type of market is best kept informal and functions best without too much formalisation. Furthermore, if government does decide to stimulate the informal venture capital market then it must choose from a range of possible instruments, including tax incentives, co-investment schemes and support of business angel networks1 (BAN). As the titles of academic papers such as ‘Business...
Angels: should they fly on their own wings?” (Aernoudt 1999) ‘Should we ban the BANs?’ (Goossens and Aernoudt 2002), and ‘Do business angel networks deliver value to business angels?’ (Knyphausen-Aufsess and Westphal 2008) indicate that this debate is not only a policy issue but has also attracted considerable attention in academic debates.

Most countries in Europe have some kind of business angel network or are considering establishing such networks. One of the reasons for this is the evidence, albeit from more than a decade ago, of the low costs associated with creating jobs through this type of intervention (Aernoudt 1999; EBAN 1998; Mason and Harrison 1999). The potential deficiencies in the market are argued to be easily remedied through simple means (Aernoudt 1999). A further rationale for public intervention in this market is related to the characteristics of the investments made by business angels: they have a different cost structure than institutional venture capital allowing them to make smaller investments; they are widely distributed geographically, which means that they contribute to alleviating regional financing gaps; and they provide management assistance to the businesses in which they invest in addition to the money they provide (Mason 2009).

Nevertheless, by no means all commentators are convinced by this rationale for public intervention in this market (Brander, Egan, and Hellmann 2008; Knyphausen-Aufsess and Westphal 2008; Leleux and Surlemont 2003). Furthermore, although the majority of researchers would appear to advocate the promotion of business angel activity in general (e.g. Mason 2009; Murray 2007; Sohl 2007) there continues to be debate about the means, the timing and the extent of a possible role for government. This article discusses the rationale for governments to support business angel networks, the criteria that should be applied when evaluating such networks and the importance of the time dimension and the timing of policies for strengthening BANs. The article contributes to the business angel literature in two further ways: first, by examining the evolution of BANs and second by showing that their activities extend beyond pure matching activities. The relevance of this discussion is accentuated by the fact that government financial support for many BANs across Europe is ending and decisions will have to be made whether or not to renew this funding. More knowledge on evaluation methodologies and processes is therefore timely.

The story of the Danish business angel network (DBAN) is an interesting one in this context because it includes both initial considerations to support a BAN, thorough feasibility studies, hesitations to implement it, major investments in the establishment of a BAN, and decisions to pull out, all of which occurred over a seven-year time span. Motivations and criteria for these decisions are discussed and general lessons from this story are drawn. As such, the contribution which the article makes is an in-depth, observational study of the entire life cycle of a national BAN which provides a new and broader understanding of how BANs should be evaluated.

The study is based upon interviews with key actors in the DBAN as well as observation studies. Particular attention is given to the development phases of DBAN from idea generation, to inception through to establishment of working practices. The study of this development was facilitated by the author’s involvement in the first idea generations and subsequent membership of the Board of DBAN (which enabled access to internal written documentation such as internal minutes and status reports to and from the Ministry). Interviews with key persons involved in the DBAN and in the broad business angel community were undertaken after
network had closed. A comparison with the Welsh national business angel network, Xénos, is instructive in giving perspectives on this story. This comparison is based upon interviews with its managing director and also draws upon work by scholars having collaborations with Xénos to study the development of this network.

Section 2 points to the main problems, primarily informational deficiencies, of the informal venture capital market. The pros and cons of government involvement in the financing of BANs are discussed in section 3. Section 4 tells the story of DBAN and section 5 makes the comparison with Xénos in Wales. The concluding section applies the insights from the studies to the principal considerations of the role of government intervention and the evaluation criteria.

2. The BANs in the capital markets

The business angels market is characterised by highly asymmetric information and also a general lack of information. Business angel networks essentially try to remedy this informational gap. Because of the nature of the market for informal venture capital, with a great deal of activity being of an invisible character, our knowledge on how the market has developed remains limited. Following the increased interest in this type of financing from both academia and policy makers investment activity has increased. However, we do not know exactly how much should be attributed to a real increase of activities and how much is a result of improved statistics and registration of the phenomenon. 2

What we do know is that in Europe there has been an increase in the number of BANs and an increase in the number of business angels registered with these networks. For example, the European Business Angel Networks, EBAN, an umbrella organisation for business angel networks, has registered 334 BANs in 2009, an increase from 50 in 1999. The number of BANs increased steadily until 2004 when it stabilised until 2006 and has risen since then (EBAN 2010). 3 Moreover, BANs are now widespread across Europe (EBAN 2008, 2010).

The development in the number of BANs is, though, not evenly distributed across Europe. The number of networks has decreased in mature angel markets but increased substantially in emerging economies. The increase in the number of BANs may be seen in the context of increased attention from policy makers towards improving the access to risk capital in general, which is accentuated by recent turbulence in financial markets and associated increased financial constraints for entrepreneurial businesses. Policy intervention has been targeted towards specific gaps at the market. Various ‘gap-analyses’ have appeared (e.g. Harding 2002 for the Danish venture capital market) to show the extent and nature of these financial gaps. Many financial institutions specialise in the type of investments that they make in order to minimise their transaction costs and to focus their competencies. The extent of this specialisation in turn determines where, and to what extent, gaps in the market prevail. In ‘thin’, under-developed venture capital markets, specialisation tends to be not as deep as in developed venture capital markets. This market context is important when considering where potential policy initiatives should be targeted.

Policies with respect to BAN differ from interventions aimed at closing the gap in supply of finance. It targets different cause of financial constraint, that of informational problems. The business angel market may serve as an example of an incomplete market. The players in the market are even often not visible. In a much-cited passage by Gaston (1989, 4), it has even been described as ‘a giant game of hide
and seek with everyone blindfolded’. This means that initial search costs are relatively high and actors at the market have immense difficulties finding each other. This market has therefore often been described as an example of a market with severe informational deficiencies.

BANs are potentially an important means of increasing transparency in the market. BANs are part of a wider system in which important institutions feed the BAN with relevant investment opportunities. This enables BANs to act as intermediaries in matching demand for capital and competences with supply of these resources which are embedded in business angels. The analogy of a dating agency has often been used. In fulfilling this function, BANs differ in their profile and operation. For example, Lange, Leloux, and Surlemont (2003) list seven typological dimensions to characterise BANs:

- Private vs. public
- For profit vs. not for profit
- Early stage focused vs. all stages
- Specialist investors vs. generalists
- Active screening and support vs. passive
- Regional or local geographical reach vs. national or pan-national
- Introduction services only vs. a broader range of services offered

Evidence on the practice of BANs suggests that the first of these dimensions determines several of the other dimensions (Mason 2006). For example, it would appear that private and public BANs perform different functions in the market and in fact, may target different segments (Mason and Harrison 1997).

Sohl (2007) uses the term ‘angel portal’ to reflect the growing variety of approaches to intermediation in the market. His typology of angel portals comprises the following: matching networks, facilitators, informal angel groups, formal angel alliances, electronic network, individual angels (Sohl 2007). Using this typology, Sohl recommends some basic features for angel portals. First, they should generally strive to maintain an informal structure, operate on a regional basis, facilitate personal interaction between the parties, and ensure that deals and investors alike are of high quality. Stages of investments may also vary between types of angel portals. ‘Individual angels’, ‘matching networks’ and ‘informal angel groups’ may be appropriate for seed stage investments, whereas the ‘formal angel alliance’ and to some extent ‘matching network’ types may be more appropriate for later stage investments.

Whereas these dimensions may differentiate BANs and provide general recommendations they do not take a dynamic approach. BANs may change their profile, organisation, and business model over time as a response to market changes, changes in the demand for their services and changes in their core funding. Such changes will be illustrated later in the article. However, we begin with a more general discussion of the rationale for government intervention in the informal venture capital market.

3. The costs and benefits of government intervention

3.1. The problem to be addressed

The traditional discussion of public intervention generally rests on several arguments, the most prominent of which is the ‘market failure’ argument. This
argument claims that where the market is not able to solve a (allocation-) problem efficiently, perhaps because of lack of information or externalities, then there may be a case for government intervention (European Commission 2002; Mason 2009; Murray 2007). In relation to policies on informal venture capital, the objective of policy is to provide small firms with access to networks and coordination that the markets fail provide. Policies now increasingly refer to system failures rather than market failure. Policies to alleviate system failures may address institutions and capabilities related to the interaction between key agents in the system. As such, this perspective is more adequate for modern industrial policies than the market failure perspective and may be particularly relevant in relation to BANs.

The business angel market may be a case of either market failure or system failure, and is therefore an area for government intervention. Whereas the early discussion was previously only concerned with supplying an adequate amount of money, attention is now much more directed towards the informational problems. BANs themselves may, however, face information problems. In addition to finding a sufficient number of investors and entrepreneurs with investment-ready proposals to join the network, many business angel networks have experienced difficulties in creating awareness of the network and in funding the activities in the network (Mason and Harrison 1993; Sohl 2007).

There are several ways to promote business angel financing (Mason 2009). However, the primary policy strategy has been the establishment of business introduction services (Aernoudt 1999, 2005). The knowledge about the performance of such services is still limited although a few evaluations have been undertaken (e.g. Collewaert, Manigart, and Arnoudt 2010; Harrison and Mason 1996; Mason and Sackett 1996). Because most of these evaluations have been undertaken in the UK, it has been UK experiences that typically have been referred to when discussing the socio-economic return of BANs. These evaluations have shown that BANs contribute substantially to job creation and that the public costs per job are low (EBAN 1998). It should be stressed that the data used in various evaluations are limited, largely because the majority of BANs have not existed long enough to be subject to evaluation (Collewaert, Manigart, and Arnoudt 2010). However, even if more adequate data were available severe problems in estimating the total costs and benefits for society of BANs would remain.

The promotion of informal venture capital should, however, be weighted against the costs involved in interfering at the market.

3.2. Costs of policy intervention

There are three main potential costs in relation to government participation in supporting business angel activity through the financial support of BANs. The first is the financial aspect of this involvement. Government must not only consider whether there is a positive socio-economic return from investing in BANs, but also consider if the amount invested would have paid off better somewhere else. In other words, are there opportunity costs involved in the decision on where to invest government money? The second consideration is that in the longer term, significant government involvement may create the expectation in the market that this is the norm. In this sense, government involvement may be locked-in, which is difficult to get out of. Third, public intervention may crowd-out private investment in these introduction services (Leleux and Surlemont 2003). However, evidence both from the UK (Mason
and Harrison 1997) and from a wider array of European cases (Lange, Leloux, and Surlemont 2003; Leleux and Surlemont 2003) suggests that private and publicly supported angel networks target different segments of the market, with the deals done through privately financed BANs being larger and at a later stage of development than those going through government sponsored networks (European Commission 2002; Mason and Harrison 1997). This, in turn, suggests that privately financed BANs serve a different function than those which are recipients of government funding. Therefore, crowding-out of private initiatives is unlikely.

Business angels have been criticised for their lack of screening of entrepreneurs and their business proposals, lack of quality and coherence in the information about the investment opportunities and the matchmaking process (Harrison, Dibben and Mason 1997). However, these critiques may apply to both private and public BANs. Moreover, they are mainly criticisms of the specific practice of BANs rather than how they should operate in principle. Although no solid evidence is available to this effect, it is possible that the business angels signing up for BANs are those who are not able to attract enough quality deal flow by themselves through their own network and referrals. They may also prefer to circumvent the angel network in their investments for different reasons, such as avoiding fees. These two arguments raise the question whether BANs induce an adverse selection effect as they may attract the low quality angels (Mason and Harrison 2002). Similarly, one could argue that firms approaching BANs may be of a lower quality as it indicates that they are unable to attract capital through other channels.

The argument that BANs attract angels who are less able in terms of leveraging networks, reputation and so on has little validity in the DBAN case. Both general surveys and surveys specifically for Denmark of motives for business angels to invest have pointed out that they often invest not only for the potential returns, but also for ‘the fun in it’ or because they want to ‘pay back’ to society (Baty and Sommer 2002; Sullivan and Miller 1996; The Danish Growth Fund 2002). This latter motive may apply to not only investing time and money in developing entrepreneurial businesses but also participating in developing a BAN and an angel culture in a country. Indeed, the angels in the Danish case referred to this contribution to the development of a business angel culture as a primary motivation for participating. Moreover, some of the angels in the board of DBAN were highly successful, experienced, well-known angels. Whereas this counter-argument may apply regarding the angel members of the board, it could not be ruled out that an adverse selection effect is in play to some, inherently unknown, extent in the broad sample of angels connected to DBAN. The latter effect – that BANs do attract above-average risky firms – was tested empirically by Collewaert et al. (2010) and rejected.

3.3. Benefits of policy intervention

Business angel financing has both direct and indirect economic benefits which must be taken into account when evaluating the impact of government intervention. Indirect effects are treated in more depth in this section as they are often ignored.

3.3.1. Direct effects

The direct benefits are related to the essential function of BANs which is to contribute to alleviation of informational constraints. By doing so BANs are able to
facilitate investments which, in turn create jobs, innovation and economic growth. This is often achieved with a relatively small amount of subsidy. Experiences from the few government initiatives within this area that have been running for some time suggest that the cost per job created compares favourably with other initiatives. Although the estimates of subsidy per job are inherently uncertain, there are some evaluations that point clearly to this (Collewaert et al. 2010; Harrison and Mason 1996; Mason and Harrison 1999). For example, Collewaert, Manigart, and Arnoudt (2010) find that the subsidy per job in a BAN in Flanders was €1731. They compare this with €1515 in the UK, €4000 in the European business incubator initiative, and €3100 in the Belgium structural funds initiative. Government programmes generally are often subject to dead weight – that is, they support of activities that would have been undertaken regardless of the support. However, the available evidence shows that initiatives supporting the functioning of the informal venture capital market are unlikely to suffer from dead-weight effects (Mason and Harrison 1996, 1999). Displacement effects, the redirection of activity from equivalent or otherwise economically beneficial activities, are also likely to be low (Mason and Harrison 1996, 1999). Often informal investments come from a pool of capital, which was otherwise used for consumption or invested in passive asset classes (e.g. government bonds) (Mason and Harrison 2000).

The evidence also indicates that business introduction services could not be commercially sustainable without public support if they are to operate on the scale necessary to be effective. This is concluded both in international studies (Mason and Harrison 1995, 1996, 1997) and by the Danish case a feasibility study prior to the decision to establish DBAN (Deloitte & Touche 2000). EBAN (2008) found that in 2006 only 6.4% of European BANs were for-profit networks. However, this share has risen, first, because in many cases the initial government funding has run out, and second, because of the emergence of BANs with different models for revenue generation. The activities of these BANs goes further than generating deal flow, to include the process of negotiating the deal, which generates additional fees for the BAN (Mason 2009). EBAN also found that 84% of BANs in Europe were co-funded by the public sector (EBAN 2002; Mason 2009) and that the majority of networks continue to be non-profit despite fluctuations in the share of private/public funded networks (EBAN 2010). In the UK, the majority of investments are made through non-profit networks (Mason 2009; Mason and Harrison 1997). It is widely recognised that an important task for government is to help BANs get going. Whether it is possible for government to withdraw from financing BANs at a later stage is an open question. Aernoudt, José, and Roure (2007) find that contrary to expectations almost none of the networks in Europe have become financially self-supporting.

### 3.3.2. Indirect effects

In terms of their indirect effects, BANs may act as ‘hubs’ in the market (Christensen 2008; Paul and Whittam 2010). One example of this type of indirect effect is that business angel financing is often a gateway to other types of financing – bank financing, government support programmes and other equity investments. This has been pointed out in earlier papers (Mason and Harrison 1995; Mason and Sackett 1996) and supported in a Danish survey (Christensen 1998) which found that the majority of respondents see the participation of private investors as having either
great or decisive importance for the willingness of other types of funders to participate. This particularly applied to banks. This evidence shows that the impact of business angel financing in general and BANs in particular may reach beyond its immediate instruments and targets. Furthermore, business angels are geographically widespread, which means that their investments contribute to financing also in peripheral regions.

Another important indirect effect is that BANs may generate what in evaluation studies has recently been termed ‘behavioural additionality’ (Georghiou et al. 2004; OECD 2006). Whereas the majority of evaluation studies and policy makers mainly have focused upon directly measureable effects, such as input and output additionality and substitution effects, there is now a growing recognition that policy interventions may also have a long-term impact on the behaviour and strategies of actors, with this effect lasting for longer than the duration of the scheme. These arguments clearly suggest that the criteria for evaluating the effects of BANs should include more than just the number of introductions/matches and investments made.

BANs may also enable other actors in the market for entrepreneurial finance such as business services and financial institutions to become more aware of the market structure and get better equipped for acting as intermediaries. The social infrastructure that BANs provide is therefore a further important factor in the way in which they benefit the wider system. Angels use the formal networks to establish contacts and get to know other angels professionally and socially. Although this may also occur in other contexts, government initiatives provide a common ground and create trust among the parties at the market. The trust creating effect of policy schemes have been found to be important (McCahery and Vermeulen 2010).

Although difficult to quantify, it is generally accepted that the hands-on character of the investment often provides the firm with an upgrading of competencies especially with respect to management skills in addition to the immediate value adding contribution in the actual investment. Here again, this is an effect that extends beyond the pure inputs, impacting on behaviour over a longer time perspective. On the investor side, there may also be learning effects. To the extent that angel networks bring investors together, there are possibilities for mutual learning and syndication. Some BANs (including DBAN) even have training programmes for business angels (Amparo, Roure, and Aernoudt 2007; European Commission 2002; Gullander and Napier 2003; Sohl 2007). There is now an increasing focus on these functions of BANs rather than their pure matching function. EBAN (2008) noted that investment meetings and other matching activities are still clearly the most important activities of BANs, but according to a survey among their members ‘Training in investment readiness for SMEs’ and ‘Training and capacity building for investors’ are now offered by 38% and 45%, respectively of angel networks. An often overlooked, but important function of a BAN is that they are often social meeting places. Although business angels prefer to act anonymously, they also enjoy the company of, and collaboration with, other business angels. This function was strongly emphasised by angels in DBAN.

As shown in early Danish surveys (Christensen 1998; Deloitte & Touche 2000), the players at this market often see intervention positively. Whether the top-down establishments of BANs will be regarded positively by market participants is likely to be a function of the maturity of the market. In countries where the venture
capital market is less developed and an equity culture has not been established, business angels and other actors are likely to perceive government intervention as an important and a necessary starting point. The bottom-up establishment of BANs is more likely to happen in a market where activity is already significant, although even in this setting a lack of a coordinating organisation may hinder the appearance of BANs.

A societal task for a BAN is to provide information that facilitates a more efficient screening of projects looking for capital rather than simply optimising the number of investments made. Hence, the exclusion of bad projects is an important benefit of a BAN. Even when the contact does not lead to an investment, the experience and feedback that entrepreneurs receive may be beneficial in the future, providing them with the opportunity to improve their business plan before they approach other financing sources. From a socio-economic point of view, it is important that a BAN contributes to a better allocation of resources through providing a screening function that may result in rejection of a project that does not deserve to be financed.

Several studies have established that in many countries there is a low level of awareness among entrepreneurs about the supply of equity financing (Aernoudt, José, and Roure 2007). BANs may raise awareness of this type of financing amongst both entrepreneurs and their advisors. This is an extremely important, long-term effect, but very difficult to capture with any precision in evaluations. A related point is that the improved level of information on the equity market in general and the specific solution to the search problem provided through BANs may be a precondition for other types of policy intervention that rely on market transparency and connectivity.

A further function of BANs is their co-ordinating function. Many BANs fulfil this task by drawing up standard legal documents, codes of conduct, provide guidance on questions such as tax problems, and so on, thereby minimising aggregate transaction costs in society. A BAN may therefore be important for building up of competencies with both entrepreneurs and business angels even if not providing direct training.

Finally, from a social point of view an essential function of a BAN is that it is constantly working to improve its practices. This may be in the form of benchmarking different matchmaking methods (physical, virtual, Internet, events etc.), systematic learning from experience from elsewhere, and experimenting with different ways of marketing the network. An important tool for this learning process is establishing a monitoring system of appropriate indicators to measure the performance of the BAN.

Taking these points into account clearly suggests that BANs should be assessed on more than just their measurable effects. Whereas a straightforward evaluation would count the number of investments made through the network, the number of jobs created in the businesses which raised finance, and perhaps also the number of investors registered, it is equally important to take a broader perspective which also takes into account other important variables such as the number of projects that have been screened but not financed, the learning effects, the increased awareness of equity financing, and the reduced transaction costs in society. These direct and indirect effects are shown in Table 1.

The criteria in the ‘Direct effects’ column are those usually assessed in evaluations. These indicators are obviously also those most easily measured. They
are, though, far too narrow for a complete assessment of a BAN. The following story of DBAN illustrates that relying on these easily measured metrics for evaluation may have inappropriate and negative effects, and points to the importance of measuring the indirect benefits.

4. The rise and fall of DBAN

4.1. The venture capital environment

The Danish capital market has a relatively well-developed and well-functioning debt market whereas the equity market is less developed. Equity capital sources, notably venture capital, have been in short supply. Until the early 1990s, business angels attracted very little attention as a possible financing source for SMEs in Denmark. In addition, the institutional venture capital industry in Denmark was relatively young. Most of the venture capital companies were established in 1983–1985, and the industry developed rapidly in the second half of the 1980s after a take-off period. However, only a few years later the industry dramatically declined to a negligible size. In 1990, a record low for the investments by Danish venture capital firms was set, the number of venture capital companies had fallen from a high of 26 in the end of the 1980s to 12, of which only 4–5 were actively investing, and both new investments and the supply of capital to the venture capital industry declined. A large accumulated financial loss since the start of the industry additionally encouraged many venture capital firms to follow a cautious, risk-averse investment strategy with the majority of investments occurring in the later stages of a firm’s development (Christensen 2003a).

4.2. Idea, feasibility, design and funding

As a result, there was great concern in Denmark in the early 1990s about the severe difficulties that many firms were encountering in financing their growth. These difficulties were visible both in equity markets and loan markets. The government was therefore receptive to ideas of mobilising capital sources that were rarely used. Business angels – which had largely been ignored prior to this crisis – were recognised as a potential supplement to traditional capital sources and able to offset the restricted institutional venture capital market, even though they too were affected by the negative investment climate. Following a pilot study, an angel network was

Table 1. Direct and indirect effects of BANs.

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<td>Number of investments</td>
<td>Screening of projects</td>
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<td>Amount of invested capital</td>
<td>Behavioural changes</td>
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<td>Number of sub-networks</td>
<td>Upgrading of competences</td>
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<td>Number of matches made</td>
<td>Syndication and network development</td>
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<td>Number of angels made</td>
<td>Leverage additional capital</td>
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<td>Number of firms made</td>
<td>Regional distribution of capital</td>
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<td>Number of firms registered</td>
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initiated in late 1991. Although limited in scope and budget, it nevertheless managed to identify 106 business angels, primarily through regional meetings and press announcements. However, these angels were not screened and only a few investments were made. In 1992, government support was terminated and the network ceased to exist except as a list of individuals who occasionally were sent investment proposals.

It was then pointed out that substantial amounts of capital could perhaps be mobilised if informational deficiencies at the market level could be alleviated and contact channels made available (Christensen 1992). This statement was repeated in 1998 (Christensen 1998), this time with new empirical evidence supporting the claim and a thorough discussion on possible policy measures and different design options of a BAN. Following this proposal, a feasibility study was undertaken by Deloitte & Touche (2000) on behalf of the Ministry of Industry. This study concluded that substantial resources, both financial and competence-based, could be mobilised through business angels but that there was a lack of information channels. Potential users viewed establishment of a BAN positively. However, it was concluded that such a BAN could not be established without the intervention of government. Subsequently, in 2000, the government fund, The Danish Growth Fund, was supported financially with €700,000 for a two-year period to establish the Danish Business Angel Network (DBAN). The Danish Growth Fund contributed with office facilities to host the two person staff and secretariat.

4.3. Establishment

Following its establishment, DBAN was able to mobilise 200 business angels; one-third of whom were also members of five regional business angel networks. Seventy of these business angels were relatively active and committed themselves to invest. Further regional and sector oriented BANs were set up or planned. These included a BioBan focused upon biotechnology, a creative industries BAN, Agro BAN, a succession BAN, a London-residents BAN and an IT BAN. Only the BioBan really got going. The expansion of regional BANs did not proceed beyond the planning stage.

Angels in the network were screened and signed a code of conduct agreement. Significant financial resources – more than €200,000 – were put into establishing an electronic, web-based matchmaking site and legal tools such as standard contracts were developed. Matchmaking events were held. Two major national conferences and several seminars were arranged which made a major contribution to raising awareness about business angels as a financing option, and showed to business angels the benefits of a central, coordinating entity. One hundred and fifty articles were published in newspapers. Road shows to key institutional actors took place on a regular basis. It is beyond doubt that the general awareness of business angels in Denmark was raised significantly as a result of these activities. Awareness was also raised among business angels that they were not alone and that they could increase their competences, and access standardised contracts and other centralised facilities, including defending their interests in the political system. Likewise, the awareness among entrepreneurs about business angel financing as an option also increased. This in turn may have alleviated some of the informational asymmetries and other deficiencies in the market.
4.4. Growth and getting embedded in the financial community

Running parallel to the establishment and operation of DBAN was an intense debate in the business press on the potential of business angel financing. This was to a large extent spurred by DBAN in co-operation with selected business angels who were profiled in the press. Meanwhile, the institutional venture capital boomed in Denmark in the late 1990s as the dot-com bubble grew and continued into the early 2000s after the dot com bubble had burst (Christensen 2003a). According to EVCA, Denmark’s growth of venture capital was the highest in Europe.

These developments meant that the ground was now cleared for a take-off of the activities of business angels in Denmark. The DBAN had established itself as a node for business angels with regional branches initiated and supported by DBAN. The Advisory Board was restructured to only include business angels, and a handful of key angels actively promoted the networks and helped the management of DBAN to navigate in the financial community, present the initiative and establish contacts. A competence building day was also initiated. The co-location with The Danish Growth Fund should ideally have resulted in synergies and also signal that the business angels market is an important part of the total venture market. The DBAN was exposed in the magazines and other material from The Danish Growth Fund. However, the full benefits of this co-location were never reaped and generally only very few investments were made through this link.

4.5. Evaluation, financing, re-organisation and decline

The establishment of DBAN required substantial financial resources. The costs of the feasibility study came close to €100,000, the grant for working expenses in 2000–2001 was €270,000 and €400,000 in 2002. In the 2003–2005 period, a grant of €550,000 was given from the Ministry of Science. The total investment amounted to approximately €1,320,000. Over the years, there was an on-going discussion on the funding from government. The Ministry was reluctant to support the DBAN activities on a long term basis because they feared being caught in a situation of permanent subsidy. This attitude stemmed from a general policy principle of ‘pump-priming’, that is government priming the grounds for market forces to evaluate if initiatives are to be sustained (see details on Danish innovation policies in Christensen 2003b).

However, there seemed to be a lack of knowledge within the government with respect to how BANs work and what realistically could be expected in a short-term period. The status reports and other communications were focused upon easily measurable parameters like the number of investments made, number of introductions, and number of networks created. Indirect effects of the type noted earlier, including awareness raising and behavioural changes, which are long-term efforts, were significantly underestimated. Moreover, the expectations of what could be achieved were highly optimistic, not only by the government but also by the DBAN management. Government was reluctant to see supporting the DBAN as an investment in the SME infrastructure and financial support was on more than one occasion close to being terminated. For example, by the end of November the grant for financing activities from the following 1st January had still not been approved. The staff did not know if they were still going to be in employment one month ahead. The DBAN staff, DBAN Advisory Board, and selected active angels argued that BANs needed time to achieve take-off, and that many of the benefits are not easily
measurable but take the form of community building, awareness raising and the mobilisation of angels. Indeed, EBAN (1998) had estimated that a for-profit BAN may require eight years to break-even. Until then, government co-financing is necessary.8

In spring 2004, it was decided to re-organise the network, making it part of the Danish Venture Capital Association (DVCA), which in return received the remainder of the Ministry’s grant for DBAN: €200,000 in 2004 and €110,000 in 2005. The official reason for including DBAN in DVCA was to facilitate synergy between business angels and institutional venture capital. In reality, the angels were not very eager to come under the DVCA umbrella. One explanation was that during the dot-com boom period, the institutional venture capitalists negotiated deals on warrants that left business angels with small ownership stakes when such investments hit difficulties in the subsequent dot-com bust, and that this approach, among other things, contributed to a divide between angels and institutional venture capital.

The BAN activities under the auspices of DVCA from 2005 until the present day have been limited. On the DVCA web page, there are links to the web pages of three of the regional networks that still undertake some activity. The other regional networks and sector specific networks are no longer active. There are no community-building activities or even any of the other typical BAN activities. In practice, the DBAN has ceased to exist with the withdrawal of government involvement. A few regional networks have continued to the present time, undertaking some of the activities that were initiated during the DBAN period,9 but the coordinating, national function no longer exists and the focus of the BANs has shifted towards later stage, less risky investments. DBAN was closed down before the potential had a chance to unfold. The possibility of continuing DBAN on a private, for-profit basis was investigated. However, after one month of making and testing a business plan for such a continuation of the network it was concluded that it would not be successful.

Mason and Harrison (1993) identify three pre-conditions for the successful establishment and growth of a BAN: (i) high visibility and credibility through on-going marketing is needed to build a critical mass of investors and investment opportunities, (ii) it must be well resourced and (iii) a hands-on and pro-active approach is needed. These pre-conditions were largely met by DBAN. Nevertheless, when looking back, it is fair to conclude that the initiative has not been a success if judged by the usual evaluation metrics, for example, in terms of the number of investments made with the help of DBAN. The web-based match-making facilitated limited information dissemination for the resources that had been spent on its development. On the other hand, a comprehensive evaluation has to take into account a broader set of criteria discussed in section 3. Evaluation on this basis would change this negative perception. However, there was no understanding of this in government, even though it was persistently pointed out what are the broader effects of BAN. Indeed, it was argued in the Advisory Board of DBAN from the very first meeting that future discussions (or, perhaps more accurately, fights) on funding could be foreseen and it would therefore be wise to set up a systematic registration of activities and effects.

Summarising, using the Lange-typology discussed earlier, DBAN may be characterised as a public, not for profit network focused primarily upon early stage investments. It had a passive support and screening and tried to have a regional reach, although some functions were nationally focused. The primary focus was
upon introduction services but attempts to broaden activities, for example to include investment training also occurred. The way in which DBAN was set up did not seriously violate Sohl’s recommendations on the structure of network discussed in section 2. However, although these recommendations are not very detailed, it is fair to say that DBAN failed to balance some of these dimensions in the business model. One example is that DBAN tried to do many too many things. DBAN put a lot of effort into some formal structures such as the electronic meeting place, whereas the angels wanted informal structures and saw DBAN as a social meeting place that served an important function in aligning angels and creating opportunities for syndications and exchange of experiences. The importance of this aspect, while not being neglected, was certainly under-estimated both by DBAN management and the government and back-funders.¹⁰

5. Business angel networks in Wales – A comparison

The economic environment in Wales is characterised by a number of industries such as coal and steel that contracted under the pressure of global competition. In recent decades, Wales has performed worse than the rest of the UK on many economic indicators, both aggregate indicators like unemployment and income and business related indicators such as the number of start-ups and ‘gazelles’ (Mariott and Davies 2006, Action Plan Wales). The Global Entrepreneurship Monitor surveys for the period 2002–2006 found that informal investment activity in Wales was a little below the UK average with 1.2–1.4% of the adult population claiming to be involved in such activity compared to a UK average of 1.5%.¹¹ A feasibility study from Cardiff University in 1996 nevertheless concluded that there was a rationale for a BAN in Wales, and that the number of angels that could be the target for a BAN would be 150–200 making around 15–20 deals a year. Following this study, Xénos was established in 1997 as a national BAN underwritten by the Welsh government. It is organised with a central office and manager and four regional managers. Xénos is organised with regional branches to reflect the geography of Wales.

The development of the venture capital market in Wales has proceeded largely as elsewhere in Europe. In the past, the focus was on smaller investments, but as the market has followed the general cycle, the trend has been towards larger deals in larger, more mature companies. The development of the business angel market in Wales has not followed similar trends to the formal venture capital market. In particular, the trend towards increasingly focusing upon later stage investments is not apparent. Instead, there is a trend towards more MBO/MBI investments by angels. Another trend is the growing succession market, which angels find attractive, and which Xénos help find buyers (=angels) for business owners who wish to retire. Finally, there is an increased tendency to syndicate.

Because Wales is a rather compact society where networks are strong, and the ‘who you know’ factor important and widely used, there are strong links between different actors such as Finance Wales, Xénos, banks, other public sector organisations, and government grants. This has had a positive impact on the development of Xénos and it was only a short time after it was established that it was operating on a fully functional basis. Xénos was integrated and recognised quickly, partly because of the people involved in the network from the start were already involved in the investment community.
In the 10 years since the establishment of the network in 1997, a total of 288 angels have registered with the network. There were 120 angels in the network at the end of December 2007. Xénos has facilitated over 120 deals in this period, mobilising more than £20 million in over 150 businesses. Angels are recruited through referrals, and a snow-ball effect through the existing registered investors. The general high awareness of angels and the BAN has helped recruitment. In addition, the central and regional managers keep track of persons who have sold their businesses. Typically, after six months these former business owners tend to have got tired of golf and travel but may not be ready to become independent angels. The network is instrumental in helping such people get involved with business again as business angels.

A register is kept with angels’ investment preferences and resources. There is no success fee but its introduction has been discussed. It costs £300,000 annually to run the network, most of it in the form of salaries. Investment bulletins and presentation days are used, but the primary emphasis on matching is manual because the managers in Xénos have good knowledge of their angel and business clients and therefore have a good sense of which angels would be interested in which businesses.

The performance measures used are the number of deals, the amounts invested and jobs (although this is difficult to measure and it is only registered as an effect of the initial investment, whereas the subsequent growth is not captured in the registrations). Other measures such as the number of opportunities presented, company presentations and other networking activities counts are also included in the evaluation criteria.

Mariott and Davies (2006) conclude in their study of the network that Xénos has been successful in mediating supply and demand for business angel capital, and has been able to overcome the various criticisms that are often raised against BANs. An important factor in this success has been the fact that the people running Xenos had an understanding of angel investment practices from a background in private sector business.

6. Conclusions

The tale of DBAN shows that the network closed down in spite of a relatively large financial investment in its establishment and initial operation. This can be attributed in part to some internal decisions concerning how the network was operated, such as the decision to make major investments in the electronic match-making portal, which in practice did not produce the expected benefits, but by far most important factors were external. First, the state of the general market did leave the venture capital market somewhat hesitant to invest, and had an impact on the extent to which angels could be mobilised and how both the angel community and the BAN could be positioned in the capital market. Specifically, the IT-bubble collapse in 2000 resulted in substantial losses for many business angels who then left the market and soured their relationships with the formal venture capital market. Secondly, there was a pressure from funding partners to show results within an unrealistically short time horizon, results that were measured by very narrow criteria. There was no understanding of the broader societal function of a BAN let alone a willingness to see the BAN as a part of the business support infrastructure, rather than one in a range of other policy schemes.
Applying traditional, narrow criteria for evaluation of business angel networks is inappropriate and may provide only a partial picture of a BAN's impact. The story of the rise and fall of DBAN shows that the initiative was squeezed between political pressures, impatience and lack of understanding of the broader benefits of an angel network and therefore was left to die. Unfortunate timing in terms of capital market issues did not help. A different story is revealed in Wales where persistence, patience and integration of the investment community are key. For governments, the lesson is that flexibility and patience is absolutely necessary as the full establishment of a BAN is a long process. Governments must also understand the influence of general economic conditions on the operation of BANs.

When reviewing government initiatives to stimulate venture capital markets, Lerner (2010) points out that they generally have long lead times and that one of the most common reasons for such initiatives to fail is impatience, along with ignoring the broader context and placing too much reliance on narrow evaluation indicators. This is reflected in the DBAN case: impatience; failure to install a broader evaluation and flexibility were all decisive factors in why it eventually failed.

This article has offered a broader view on what criteria to apply when evaluating BANs. This discussion may be extended to other areas than BANs, including other areas than the capital markets. For example, evaluations of the extensive support to enhance collaboration between firms that has been available across Europe for two decades may measure effects on economic or innovative performance and to some extent transfer of knowledge. But they may underestimate indirect, hard to measure effects such as transfer of tacit knowledge, reputation effects, long-term benefits from networking and the training effects in increased abilities to select and manage collaboration projects. Awareness among governments of these positive side-effects is important for a comprehensive assessment of policy initiatives and generally for policy learning. The importance of time perspectives of policies for strengthening BANs has also been emphasised, and that development phases that networks go through should be taken into account when designing support measures.

A complicating factor is that evaluations are generally undertaken by governments and at a given point in time. However, evaluations of BANs may be pursued from different perspectives, including dynamic approaches. Thus, the costs and benefits of a BAN are evaluated by the business angels before deciding whether or not to join; entrepreneurs seeking finance are likely to make a similar calculation. The criteria that angels and entrepreneurs use to make these assessments will be vastly different from those applied by governments, being much more related to the micro-level, business benefits of participating in a BAN. We also noted that business angels are also motivated by other considerations to join a BAN: some wish to contribute to building up the business angel community while others see the BAN as a professional and social infrastructure for business angels. BAN managers are also interested in evaluating BANs but may also apply different criteria than those of governments. Whereas governments are likely to place most emphasis on the effectiveness of BANs those managing BANs are more interested in the efficiency of the BAN.

For the management of BAN, one implication is that it may be fruitful to systematically register any activity that is likely to contribute to the indirect effects of their activities in addition to the traditional, direct effects such as jobs created, number of entrepreneurs and business angels registered, and number of investments.
made. For policy evaluation researchers, the need to take into account these indirect effects, including behavioural additionality, is obvious.

Adding a dynamic dimension to these different perspectives clearly complicates matters further. For example, an increased awareness of opportunities for business angel financing as a result of the marketing of a BAN is likely to increase the deal flow for business angels that are outside of the BAN community. In turn, this may mean that business angels will have less need for BAN, which limits the incentives for government to support the BAN. However, these complications should not prevent the use of thorough, well-thought evaluations. Ideally the criteria for evaluating BAN should change over time alongside the increasing specialisation and development of the venture capital market. In the DBAN case, traditional metrics were used for the entire period. Not only is there a need for more nuanced evaluations and evaluation criteria, but it is also necessary to be open about adjusting these criteria in accordance with the market developments. Future research is required to develop specific proposal for how such indirect effects may be measured.

Notes
1. Although business angels are a heterogeneous group, they are generally seen as high net worth individuals who invest their own money in unlisted businesses (Mason and Harrison 2002).
2. Generally, the activities in the informal venture capital market are not easily measured. It is, though, established that finance from business angels make up a substantial share of early-stage funding (Harrison et al. 2010) even compared to the institutional venture capital. However, it is very difficult to get a full picture of the size of the market for business angel financing due to the intrinsic measurement problems involved (Mason and Harrison 2008).
3. A steep increase from 2007 to 2008 is explained by the inclusion of a number of Scottish networks and an increase in the number of networks in France and emergent markets in Eastern, Central and Southern Europe (EBAN 2008).
4. On the basis of British experience, EBAN concluded that ‘Experience from the UK therefore strongly suggests that Business Angel Networks are a very cost-effective way in which governments, working in partnership with either not-for-profit organisations and agencies or private sector organisations, can remove many of the financial and managerial problems encountered by new and recently founded businesses, and technology-based firms. Business Angel Networks mobilise substantial pools of informal venture capital that were formerly fragmented and invisible, stimulate demand for equity finance that would otherwise have been latent, and facilitate investments by creating communication channels’ (EBAN 1998, s.7).
5. European Commission (2002) refers that publicly supported BANs in the UK have an average investment of €149,000, whereas the average angel investment through commercial networks is substantially higher, €285,000. Likewise, the share of start-up/early stage investments was 70% and 40%, respectively. In the Danish case, it was clear from interviews with angels that there was a clear difference in this respect. Therefore, even if self-financed BANs could be sustained then there would still be a role for government supported networks in order to secure early stage deals that are able to find investors.
6. The crowding-out effect from government intervention was found in the Canadian market (Brander, Egan, and Hellmann 2008), however this study focused on the formal venture capital market.
7. The criteria for what are direct benefits may differ according to the perspective taken. For example, the job creating function may be highly relevant and important from a societal point of view, whereas it is more important for other actors if profits are generated.
8. European Commission (2002) supports this opinion by stating that ‘in particular in the awareness raising stage a public support element is mostly necessary, especially because this is a general requirement for the angel market to take off.’ (p. 30).

9. The few regional BANs still in operation are in regions where there was also some business angel networking prior to the establishment of DBAN.

10. In fact, it has also attracted relatively little attention in the business angel literature.

11. Most of the numbers and descriptions in this section are kept comparable with the period of the DBAN story.

References


