IMPROVING THE ROLE OF BUSINESS ANGELS IN FINANCING ENTREPRENEURSHIP: A POSITIONING MAP FOR US ANGEL GROUPS[1]

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1. Introduction

Business angels are informal investors who collectively make-up the informal venture capital market. They invest in new and young unquoted companies where there is no family connection, aiming to achieve a capital gain from the divesture of their stake (Mason and Harrison, 1994). Business angels represent the oldest and largest source of seed and start up equity capital for new entrepreneurial ventures in the US, with total investments amounting to the range of US$100.000 to US$1 million (Harrison and Mason, 2000; Sohl, 2003).

It is widely accepted that the US one is the worldwide most advanced informal venture capital market. Recent estimates suggest that in the USA angel investments reached approximately 25 billion per annum for 51.000 ventures joined by over 234.000 active business angels (CVR, 2007). Informal venture capital market plays a major role in seeding new ventures in UK also. Mason and Harrison (2000) have estimated that UK business angels make eight times as many investments in start-up companies as venture capital funds and over 75% of these investments involved amounts of less than US$200.000 (Mason, 2001).

An increasing role in the development of the US informal venture capital market is played by "structured angel groups". Indeed, the recent stream of research has shown that US angel market place is evolving from a largely invisible, fragmented market dominated by solo investors to a more organised market in which groups of business angel (sometimes called angel syndicates) are becoming increasingly numerous and significant (Mason, 2006). Mainly active in USA, business angel groups are in-

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creasing the professional level of the informal venture capital market as they establish and adopt clear routines and criteria for their operational activity (i.e. how they screen and assess proposals, undertake due diligence, adopt restricted investment criteria). Estimates suggest that in the last ten years the number of these groups nationwide increased from 10 to about 200 (Preston, 2004; Mason, 2006). Some crude anecdotal estimates indicate that they represent less than 20% of the informal venture capital supply side. Thus, angel groups are an important, growing segment of the US informal venture capital industry, although individual investors still prevail in the market (Investor Pulse, 2003). These "assemblages" of investors are also becoming evident in the UK, though the phenomenon is at an earlier stage of development. However, UK angel groups haven't attracted much of attention from researchers and observers (Mason, 2006).

Despite its importance and recent evolution, the informal venture capital market (both in US and in UK) is far from be fully efficient. Various studies suggest that this market has a great undeveloped potential as most business angels have further funds available to invest (Coveney and Moore, 1998) but are unable to invest as frequently or as much they would like (Mason and Harrison, 2002; Paul et al., 2003). As a result, substantial capital remains largely uncommitted. Potential investors, that is, individuals who wish to become a business angel but have never invested, have been estimated at 850.000 in Europe and 1.75 million in USA (San Jose et al., 2005).

One of the most powerful factors which fuels the inefficiency of the informal venture capital market is poor deal flow (Mason and Harrison, 2002; 2004). Apart from the low quality of business plans, poor deal flow is fuelled by the fact that business angels do not see enough business plans that meet their investment criteria. The mismatch between the profile of investors and the nature of business plan lowers probability of matching between demand and supply and, in turn, fuels market inefficiency. Recent studies indicate that this mismatch is affecting not only individual investors but also angel groups and other types of matching organizations as well (Lange et al., 2003).

On the ground of this analysis, the present paper investigates the "mismatch problem" which affect US angel groups and it offers a conceptual but practical framework which suggests a way to improve the efficiency of the matching processes between these groups and entrepreneurs. By focusing on factors that facilitate the investments from the members' point of view, this framework maps the main angel groups' features taking into account a few behavioural dimensions. Our analysis suggests that the use of the framework may contribute to improve the quality of the deal flow and the probability of the matching process on the marketplace.

The paper is structured as follows: the next section explores the theoretical backgrounds of the informal venture capital market inefficiencies. The third section briefly analyses the features of US angel groups and focuses on those factors that render the match between entrepreneurs (demand) and these groups (offer) partly inefficient. It follows the rationale for empirical research. The fourth section presents the methodological aspects of the content analysis built out of a sample of 28 US angel organisation Websites. Fifth section reports the results of this analysis and proposes the framework which maps the main angel groups' features. Last section examines how the positioning map may contribute to increase the efficiency of the matching processes between entrepreneurs and investors by improving the deal flow, and discusses implications for future research.

2. Explaining informal venture capital market inefficiencies

One of the main factors that contributes to market inefficiencies is the existence of market failure in the supply of early stage venture capital (Harding, 2000; Sohl, 2003; Mason and Harrison, 2004). The assumptions of efficient capital markets with perfect information between buyers and sellers and low transaction costs do not apply at all for new entrepreneurial ventures. In fact, information flows very inefficiently in the early stage of the equity market. Seed investing is characterized by pronounced information asymmetries between risk capital providers and early stage entrepreneurs, given the intangible nature of their major assets. The lack of track record for a new company and the absence of a product increase information asymmetries and create a perception of higher risk for seed, start up and early growth stage businesses (Sohl, 2003; Sorrentino, 2008). Also, the fixed nature of costs involved in assessing, monitoring and providing post-investment support to investee companies may make smaller investments uneconomic (Mason and Harrison, 1999; 2004).

These inefficiencies have created a shortage of "small sized" early stage equity capital, especially from venture capital funds. This "capital gap" is a primary source of market inefficiency since many promising high growth entrepreneurial ventures do not receive early stage capital. Business angels try to fill this gap, financing entrepreneurs beyond their ability to raise funds from their own connections (including family and friends) and below the minimum size of venture capital funds (what is usually termed as "equity gap") (Mason and Harrison, 1994). However, business angels do not sufficiently satisfy the equity capital needs of early stage ventures; and despite that seed and early stage investments made by formal venture capitalists slightly increased in late 2006 and early 2007 (NVCA, 2007; EVCA, 2007), it also contributes to the market inefficiencies the fact that both US and European formal venture capitalist have increased in the last 10 years their tendency to focus on later stage investments and they continued to raise the average investment size (Sohl, 2003; EVCA, 2007). Given that individual angels have not increased their average investment size, a new "secondary capital gap" has emerged in the USA - this gap is roughly estimated to be in the $2 million to 5$ million range (Sohl, 2003; Mason, 2006).

Besides the capital gap, another reason often used to explain the inefficiencies afflicting the informal venture capital market is that of the high search costs borne by both demand and supply (Wetzel 1986, 1987; Mason and Harrison, 1994; Sohl, 1999). According to this perspective, high search costs result from the difficulty experienced by investors in finding projects to fund and by entrepreneurs in reaching business angels. In turn, these difficulties are due to two main factors. First, the difficulty which both parties experience in actually meeting originates from the investors' desire for discretion: for various reasons they prefer to remain low-profile (Benjamin and Margulis, 1996). Secondly, the difficulty in matching demand and supply stems from the informal nature of the market, in which there are no public directories of business angels and it is therefore hard for entrepreneurs to identify investors to whom they wish to submit their projects. The informal nature of the market is also due to the fact that angel investors prefer to rely on their local network of informants made of trusted friends and business associates (Fiet, 1995). Thus, discretion, informality and substantial invisibility of the participants (Mason and Harrison, 1994) generate in the informal venture capital market an information problem generally defined as an "information gap" (Sohl, 1999). It is this gap which, in turn, generates market inefficiencies: high search costs, inability for business angels to invest as frequently as they would wish or as much as they would like, entrepreneurs renouncing angel funding because of the difficulties in finding investors (Kotler et al. 2004: 68), and poor deal flow.

However, as recently shown by Mason and Harrison (2002), following the boom in business introduction services and various types of business angel networks, which provide powerful channels of communication between informal investors and entrepreneurs, the information problem cannot be considered as the only explanation for market inefficiencies. These organisations, referred to alternatively as matching organisations, matchmaking services, business angel networks (BANs), angel networks, business introduction services or business referral services, have grown significantly in the past 10 years both in many European countries (especially the UK) and in North America, where the dominant organizational forms are structured angel groups. These organizations have arisen precisely in response to the market's information problems (Aernoutd, 1999; San Jose et al., 2005). The role of such organisations is to create a channel connecting business angels and entrepreneurs which is able to reduce mutual search costs and ensure a sufficient flow of proposals for angels. Although most matching organisations have a common aim – to create a market place for matching services – the nature (public or private, local or national, etc.) and structure of such matching organisations are somewhat heterogeneous. According to Sohl, Van Osnabrugge and Robinson (2000) there exist five of these matching mechanisms. Besides the gatekeeper (a lawyer, a service provider) who helps investors access the market, they identify venture clubs and meeting organisations, angels' alliances/groups, matching networks or business introduction services and electronic matching networks (see also Sohl, 2007). The latter are usually included in some of the already recalled mechanisms. The number both of BANs in the UK and in Europe and of angel structured groups in the US has boomed in the past 5-7 years (Eban, 2005; Preston, 2004).

The significant growth achieved by matching organisations and structured angel groups has undoubtedly contributed to increasing the visibility of participants on the informal venture capital market, thereby reducing search costs. The use of communication tools on the Web by these organisations helps overcome the problem of linking business plans with investors. The reduction in search costs also means entrepreneurs have a better ability to shop around for their deals– a growing number of projects can be found on multiple network services at the same time (Lange et al., 2003). On the supply side, most matching mechanisms combine visibility of the organisation and anonymity of the angel, facilitating access to a large number of proposals without eliminating the benefits of substantial discretion as regards their operations. In accordance with Mason and Harrison (2002) it can therefore be stated that, for the part of the market that uses matching organisations, information problems, understood as the difficulty the parties incur in meeting one another, are greatly reduced. Indeed, in some senses we might say that in countries where matching organisations have reached significant numbers, for entrepreneurs there are many alternatives (both local and national) for contacting the supply side, and the majority of angels are happy with the *number* of investments proposal they receive (Investor Pulse, 2003).

However, despite being able to reduce information problems, the growth in matching organisations and other intermediation structures has not greatly affected the efficiency of the informal venture capital market. The relative success of BANs is a matter for debate (Mason and Harrison, 2002) and there is no unanimity regarding the effectiveness of such intermediate structures (Blatt and Riding, 1996). The issue that most continues to fuel the inefficiency of the informal venture capital market is poor deal flow and mismatch between investors' profile and the nature of business plans. Mason and Harrison (2002) show that one significant barrier that prevents business angels investing as frequently as they would wish or as much as they would wish is that business angels do not see enough businesses that meet their investment criteria. Given that the fit with personal investment criteria is the first thing that business angels consider when they assess an investment opportunity (Mason and Rogers, 1997), the mismatch between investors' profile and business proposals generates major inefficiencies on the market. Lange et al. (2003) showed that one of the main complaints of business angels is the lack of selectivity in the projects which they receive from matching organisations and angel groups. On the demand side, entrepreneurs find it very difficult to get their proposals financed by the investors with whom they come into contact, given that the matching probability is very low. These difficulties increase appreciably for those entrepreneurs who are not seeking 'pure financial capital', but rather investors with certain characteristics (e.g., requisite expertise, networks) – in other words for the demand segment which expresses preferences vis-à-vis the investor it seeks (Sætre, 2003).

In brief, following the most recent market trends, demand and supply of informal venture capital manage to meet more easily, yet the result in terms of matching is poor. From this standpoint, and apart from the previously mentioned 'capital gap', what the informal venture capital market suffers from may be called a 'matching gap' rather than an 'information gap'. Hence a major need in the current informal venture capital market is to reduce the mismatch between the need of the investors and the nature of the business plans. Indeed, reducing this mismatch increases the efficiency of the matching processes, hence also market efficiency[1].

3. Structured angel groups and the matching gap

Business angel groups are spontaneous unions between informal investors in venture capital who decide to pool their resources and know-how to improve the deal flow and the results of their investments. By angel groups we mean all those structured organisations of business angels ranging from informal organisations which share evaluation and due diligence of investment opportunities to more formalised structures with salaried management and a dedicated sidecar fund that invests alongside the angel group. These organisations are mainly located in the USA and often also

[1] It has been underlined that a possible increase in market efficiency where BANs or business introduction services predominate (such as Europe) may arise from adopting measures which mainly address demand-side constraints, the most important of which is the fact that many business plans are not investment ready – that is, they contain unrealistic assumptions of information that is not credible, and are promoted by entrepreneurs/management teams which lack credibility. This implies a substantial change in the role played by the same BANs. From being sim-

termed angel syndicates, angel structured groups, member organized angel clubs or angel organizations (Mit Entrepreneurship, 2000; May, 2002; Lange et al., 2003; Preston, 2004; Mason, 2006). We define this type of structure as an 'angel group'.

US angel groups are very heterogeneous - there are a multitude of angel groups that follow vastly different policies and procedures. While some are pure informal organizations, others are organized by non-angels who seek employment as group managers, and some are morphing into angel funds, which are not dissimilar from the formal venture capital funds (Sohl, 2007). However, although they are very heterogeneous, structured angel groups present some common traits. The main feature of angel groups is that such organisations are essentially created and composed by investors. Thus they represent part of the supply of the informal venture capital market. As such, they differ from European BANs which are essentially intermediate structures for creating a marketplace between demand and supply, and are often supported by public intervention. Another distinctive feature of angel groups is that investment decisions are taken by the investors themselves and not by a professional specialised management. In general, the investment proposal is brought by one of the group members to the attention of the other business angels by presenting it in a forum. Following this presentation, the investors who are interested in the initiative begin to cooperate to perform the due diligence of the project. Investment is made individually by the investors involved or by setting up a dedicated fund, which pools the resources contributed by the individual angels (Mason, 2006). With regard to their investment activity, US angel groups have been moving upstream in recent years, with a larger portion of their investments allocated in the post-seed funding stage and a decreasing part in the seed

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ple neutral intermediation structures between demand and supply, BANs should play an active role to 'educate the market' (Mason and Harrison, 2002; Lange et al, 2003; San Josè et al., 2005). This means first of all supporting entrepreneurs in developing a high level of investment readiness (Mason and Harrison, 2001). This entails helping entrepreneurs set up and present projects, educating them to understand investor expectations and requirements and to draw up attractive business plans for the latter. Secondly, BANs should also target market supply and train business angels in the more delicate aspects of investment techniques so as to compensate any lack of familiarity with such techniques and thus make them *ready to invest* (Mason and Harrison, 2002). In this context we should also view the recent experience of some European angel academies (Aernoudt, 2003; San Jose et al., 2005). This new generation of BANs should be able not only to improve the quality of deal flow and matching processes but also to exploit market potential, converting potential angels into active informal investors and increasing the willingness of entrepreneurs to turn to informal venture capital.

stage. This movement towards the second round of financing within the investment market confirms how the funding capacity of US angel groups can naturally fill the "secondary capital gap", i.e. the equity gap in the range of US$2 to US$5 million. As previously mentioned this funding need became evident as the formal venture capital industry progressed to larger and later stage financing, whilst the informal angel market made of individual investors continued to remain active below the $2 million threshold.

Mason (2006) has recently argued that angel groups emerged because individual angels found several advantages in grouping with other angels, namely in terms of better deal flow, superior screening and due diligence of investment proposals, the ability to make more and bigger investments, the reduction in risk that arises from investing as a part of a syndicate, as well as social attractions. With regard to the latter advantage, entry into a business angel group is also explained by the presence of the investor in a pre-existing circuit of trust and social exchange relations which often drive him/her to become a member of the group. Belonging to a business angel group is also seen as an opportunity to share objectives, values and exclusivity, playing upon the strong social ties between the members of the organisation. Definitively, angel groups provide opportunities for camaraderie (Preston, 2004; Mason, 2006).

Angel groups are an example of a matching mechanism which, by combining the visibility of an organisation with the substantial discretion of business angels, reduces search costs and information inefficiencies (Mason, 2006). Visibility of angel groups is due to the fact that almost all organisations have a Website which makes them visible as market players. Through their websites, angel groups very often supply information on their location, their investment activity, their mission, their investment criteria, possible sectors of interest, and their members' networks and embeddedness. Information on the identity and investment criteria of individual angels is less frequently available. Undoubtedly this flow of information for entrepreneurs attenuates the information gap (Sorrentino, 2006). Availability of information on the angel group's investment criteria or sectors of greater interest should even allow entrepreneurs to submit business plans that are more in line with the angels' investment criteria, thereby attenuating the problem which we termed matching gap.

In practice, however, this does not occur due to the great heterogeneity between angel groups and the consequent difficulties encountered by entrepreneurs in selecting angels effectively. This marked heterogeneity shows in terms of the degree of the organisation's visibility, the type of information available, the possibility of understanding investor behaviour in the pre-investment phase, restricted investment criteria, and expression of the group's mission. Moreover, it has been statistically demonstrated that angel groups are concentrated in innovative locations with concentrations of innovative research and output exceeding the country-wide average (Esposito, 2005). High heterogeneity and concentration in certain locations mean that in a certain high-innovation area there are lots of angel groups, amongst whom there are many profound differences. The entrepreneur seeking informal venture capital is unlikely to have either the time or the ability to detect and appraise such differences, which are vital for matching purposes. Thus, the most probable consequence is that the entrepreneur chooses an angel group which, in terms of mission, investment criteria or preferred sectors, is not consonant with his/her investment proposal, thereby reducing the probability of matching. In other words, the possibility of enhancing deal flow quality and the efficiency of matching processes offered by the visibility of angel groups is reduced by the difficulty encountered by entrepreneurs in selecting the 'right' angel group. From the entrepreneur's perspective, there is a need for information able to reduce the great heterogeneity on the supply side and to enable swift search and selection of the angel group most consonant with the investment proposal in question. Therefore heterogeneity does not represent a problem itself, as it is a structural aspect of such a segment of the US informal venture capital supply side. However, we assume that attempts to reduce heterogeneity can lower the mismatch between group members' profiles and investment proposals, and can increase matching probability on the marketplace.

Previous studies that have focused on angel groups have had the merit of describing the way such organisations function. Some of these angel groups have been profiled in the scholarly literature (May, 2002; Payne and Mccarty, 2002; Cerullo and Sommer, 2002). Listings of some group characteristics gleaned from anecdotal information are also available in the literature (MIT Entrepreneurship, 2000; Preston, 2004). However, none of these studies has investigated the phenomenon of angel groups with the aim of supplying a tool to reduce heterogeneity and easily grasp the differences and similarities between such organisations. In this regard, the statistical analysis below aims precisely to supply a framework able to ascribe the heterogeneity of angel groups to a limited number of key dimensions. In order to do that we focused on the members of the most important association of angel investor groups in the US. In the next two sections we show the outcomes of a content analysis of the members' Websites, from which the similar and different traits will lead to broad but analytical categorization. We believe that the use of this framework might prove to be a useful tool to increase the quality of the deal flow and the efficiency of the matching process in the informal venture capital market.

4. Methodology

In North America exists the Angel Capital Association (A.C.A.) to which several angel investors organizations belong. This association tries to establish benchmarks for angel groups' operations and activities and offers its members meeting opportunities and detailed information (see www.angelcapitalassociation.org). With its 125 members representing more than 5.000 angel investors and basically with no comparable organizations, the A.C.A. can be considered the most representative source for data collecting on North American structured angel groups[2].

The empirical analysis was based on A.C.A.'s members, in particular through their websites as highlighted in the next section. When the data gathering process finished, 5 of the 125 members had no website or non working website, and 11 members had poorly informative websites. 23 of them were included under the voice 'Capital Source Database and Other Resources', and because of this generic definition they were excluded from the sample. Moreover, 8 associations were based in Canada and they were excluded since the analysis is about the US marketplace. Since the existence of a website does not imply that the angel group is a functioning entity or an active player in the angel market, we verified (through multiple telephone contacts) how all the groups resulting from the data gathering process had members and were actually active on the market.

Thus the sample included 81 organizations located in United States and predominantly made of angel investors (see Appendix 1). Since all the units of our sample come from A.C.A. directory the analysis should be considered as a case study. However, it is important to remark that according to a study in 2002 the number of angel investors groups were estimated to be in a range of 126 to 170 (Sohl and Summer, 2002), and more recent estimates suggested a figure of about 200 (Preston, 2004; Mason, 2006).

The choice of the angel groups' websites as the observation units of this

[2] In order to be sure about the possibility of building the study of American angel groups concerning the organizations belonging to A.C.A. we contacted its director and we asked her about the definition of a typical angel group which could successfully apply for A.C.A. membership. She replied that in accordance with the definition used in the A.C.A. membership application:
ACA membership is open to groups of angel investors, located in North America, investing predominately in private equity through a member-directed investment process. These groups of angel investors need not have any particular legal structure and need not to be formally organized, but must have a good faith intent to form an angel investment group within three (3) months of membership application. Membership is granted at the discretion of ACA Board of Advisors or ACA Membership Committee. ACA member organizations have participants that are primarily Accredited Investors, as defined by the Securities Act of 1933, and in which participating investors are actively engaged in investment of their personal capital. Examples of qualifying groups include, but are not limited to:

analysis needs further comments. It is well known that the absence of public directories and certain source of data make the data-gathering process a critical operation for angel investors based studies[3]. Posting a website is one way through which angel groups have improved their visibility and the information flow toward the market. In effect, in this case, a website is not only a communication tool but the way these organizations show their existence as an IVC market player. Thanks to the Web every angel investor organization can give information about its location, its operational activities, its preferred investment targets and its members. Consequently the information flow from the investors to the entrepreneurs can be improved. This reasoning motivates the choice of the angel groups' websites as the observation units of this analysis.

In the first stage of the analysis we surveyed the websites in order to check the information availability regarding some features that were considered of interest. Table 1 sums up the results.

Table 1 Information availability from the A.C.A. angel organizations websites

	No	**Yes**
Investment Range	35,0%	65,0%
Number of deals so far	68,8%	31,3%
Total amount of capital invested so far	86,3%	13,8%
Number of members	66,3%	33,8%
Admission criteria	62,5%	37,5%
Members' identities	58,8%	41,3%
Operational Activity	17,5%	82,5%
Restricted Investment Criteria	25,0%	75,0%
Embeddedness	42,5%	57,5%
Organization's Mission	57,5%	42,5%

The majority of the A.C.A. websites give information about the organization's investment range, investment criteria and how it operates in terms of investing style (e.g. pooling funds in a single entity, individual investments, …). This information is essential for any entrepreneurs looking for funds because they could save time and prevent a stressful untargeted investor

• Member-managed angel groups,
• Angel investment funds
• Affiliation (formal or informal) of angel investors
Examples of non-qualifying entities are those in which participating investors are not involved in the investment decision process:
• Broker/dealers,
• Investment advisors and bankers,
• Venture capital funds

[3] Even though we can find a few analysis based on 400-600 investors (see for instance Sorheim and Landstrom, 2001), usually the sample for these studies ranges between 40 and 150 individuals.

search. Hence, this information can be considered as "deal flow enhancing".

We also found it interesting to check whether the website gave information about the network which the investor – and thus the backed entrepreneur – can rely on. By network we mean the links that these organizations have with other institutions (e.g. universities, research centers) or with other investors (e.g. Venture Capitalists, other angel organizations). This information can prove how 'embedded' the angel group may be and it is found to be very frequent. Also through these websites, entrepreneurs could often be able to find information about the organization's mission and about angel investors' identity.

With regard to the selection of variables, we should mention again that our empirical analysis has the goal of reducing angel groups' heterogeneity in order to facilitate matching processes. This goal requires the understanding and possibly the categorization of those characteristics of angel groups that affect deal flow and facilitate the investments of angels. Thus, the selection of variables and constructs need to include the angel groups' aspects that seem to facilitate investments of angels. Some of the previous research attempted to profile angel groups (May, 2002; Payne and Mccarty, 2002; Cerullo and Sommer, 2002). Other studies came out with some listings of relevant groups' characteristics gleaned from anecdotal information (MIT Entrepreneurship, 2000; Preston, 2004), and they attempted to identify various characteristics and organizational features that exert an influence on deal flow and angel investments. These essential features primarily include investment activity, i.e how the investment decisions are taken by angels, investment criteria, i.e. whether investors have preferences for opportunities, angel groups' organizational structure and mission, i.e whether the group is a for-profit entity and what type of mission is pursuing. Other features that are deemed to affect angel investments are anonymity (i.e. whether the group's members keep their anonymity to entrepreneurs), and the joining process (i.e. the organizational procedure through which angels can join the group and receive information about investment proposals). Thus, to be consistent with previous research, we selected the following variables:

- Investment Activity: how the angel group acts in terms of investment decisions,

- Restricted Investment Criteria: how many preferences the angel group has in terms of investment opportunities, attributes that would be positively considered,

- Members total anonymity: whether the angel investors belonging to a group reveal their identities,

- Organization Structure: whether the angel group is to be considered as a Non-Profit organization,

- Declaring an 'ethical' mission: whether the angel group has any goals other than the profit of the its members,

- Web membership application submission: whether it is possible for any investor to apply for the angel group membership through its website,
- Web based information flow: whether there exists an only-for-members area in the angel group's website.

In the second stage of the study we analyzed the information provided by the websites. In order to get an analytical set of data we developed a content analysis of the A.C.A. angel organizations' websites. This methodology has been defined as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding (Berelson, 1952; Krippendorff, 1980; Weber, 1990; Stemler, 2001). Therefore we considered it as the best tool to analyze the information from the websites as this methodology allows for words and sentences to be coded into a useful dataset regarding the angel groups.

Aware of the complexity of website content analysis, we first defined our research goal (McMillan, 2000). In particular, the aim was to get information about the selected variables of interest. Through an *a priori* coding procedure (Weber, 1990) we identified the potential results in terms of categories, and the coding rules (see Appendix 2). Then we applied them to the A.C.A. members' websites, which represent the content units of the analysis. Being not regulated by any informative standard, it was difficult to find the required information from every website. Thus after a complete analysis of the 81 websites we had to resize the study to the most informative 28 units (see Appendix 3).

At the end of this coding process a dataset about angel groups was gained through the content analysis of their websites. The data could be organized as different values of seven nominal or ordinal variables (Table 2).

Table 2 Data features of the angel groups gained through the websites based content analysis

Variables	Values	Measure
Members total anonymity	1) No 2) Yes	Nominal
Organization Structure	1) For Profit 2) Non-Profit&Others	Nominal
Investment Activity	1) Individual members' investment decisions (MD) 2) Individual members' investment decisions followed by the creation of a single investing entity (ID&SE) 3) Pooling funds into a single entity with individual members' investment decisions (PoolF) 4) Single entity investment decisions (SE)	Ordinal (*the order considers the increasing importance of the angel group as a single investing entity more than a group of independent investors*)

Restricted Investment Criteria	- 1, 2, 3, …	Ordinal (*the order considers the increasing number of the organization's investment criteria*)
Declaring an 'ethical' mission	1) No 2) Yes	Nominal
Web membership application submission	1) No 2) Yes	Nominal
Web based information flow - *members area*	1) No 2) Yes	Nominal

Being the goal of the dataset analysis to explain the differences and the common traits of angel groups, a factor analysis procedure was chosen. All the variables are categorical – either nominal or ordinal, making it more complex to conduct a factor analysis (Bartholomew, 1980). In order to accomplish the study we used the SPSS Categorical Principal Component Analysis (CATPCA) Version 1.0 procedure[4]. Thanks to the CATPCA procedure it was possible to gain insightful plots. Rather than interpreting only the parameter estimates, the understanding of this procedure's output can be based on graphical displays.

5. Results

The model includes all the seven variables with their different categories. It shows a high total Eigenvalue with a high Cronbach's Alpha, meaning that there is a latent two dimensional construct with a good level of reliability. The two dimensions explain 60% of the model's variables variance (tab. 3).

Table 3 CATPCA Model Summary

Dimension	Cronbach's Alpha[a]	Total (Eigenvalue)	% of Variance
1	,763	2,888	41,261
2	,320	1,378	19,689
Total	,893	4,267	60,950

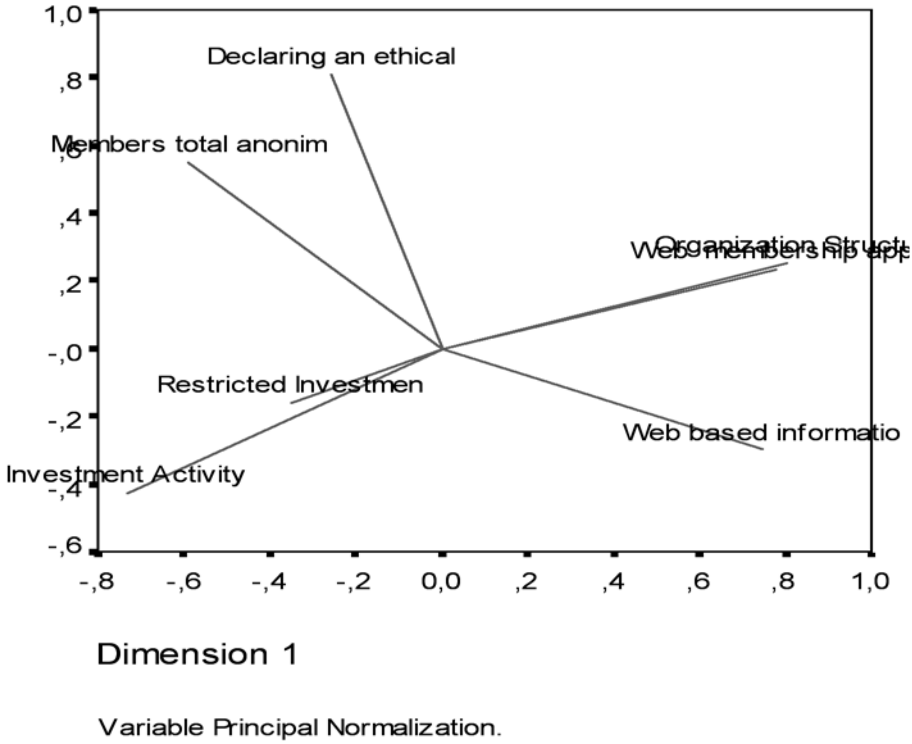
[a] Total Cronbach's Alpha is based on the total Eigenvalue.

[4] CATPCA Version 1.0 procedure has been developed for SPSS by Data Theory Scaling System Group (DTSS), Faculty of Social and Behavioral Sciences, Leiden University, The Netherlands. As reported in the software user's guide, with this procedure: *[…] Scale values are assigned to each category of every variable such that these values are optimal with respect to the principal components solution. Objects in the analysis receive component scores based on the quantified data. Plots of the component scores reveal patterns among the objects in the analysis and can reveal unusual objects in the data. The solution of a categorical principal components analysis maximizes the correlations of the object scores with each of the quantified variables, for the number of components (dimensions) specified […].*

The component loadings plot is a functional tool to understand the model's results and as a premise it is useful to remark that the variables have been quantified choosing the variable principal normalization method. This quantification process scales the objects belonging to every different category, the categories of the different variables and the variables in order to optimize the association between the variables themselves.

Component loadings represent the correlations between the variables and the two dimensions and they correspond to the vector lines in the plot (Fig.1).

Figure 1 Component Loadings Plot

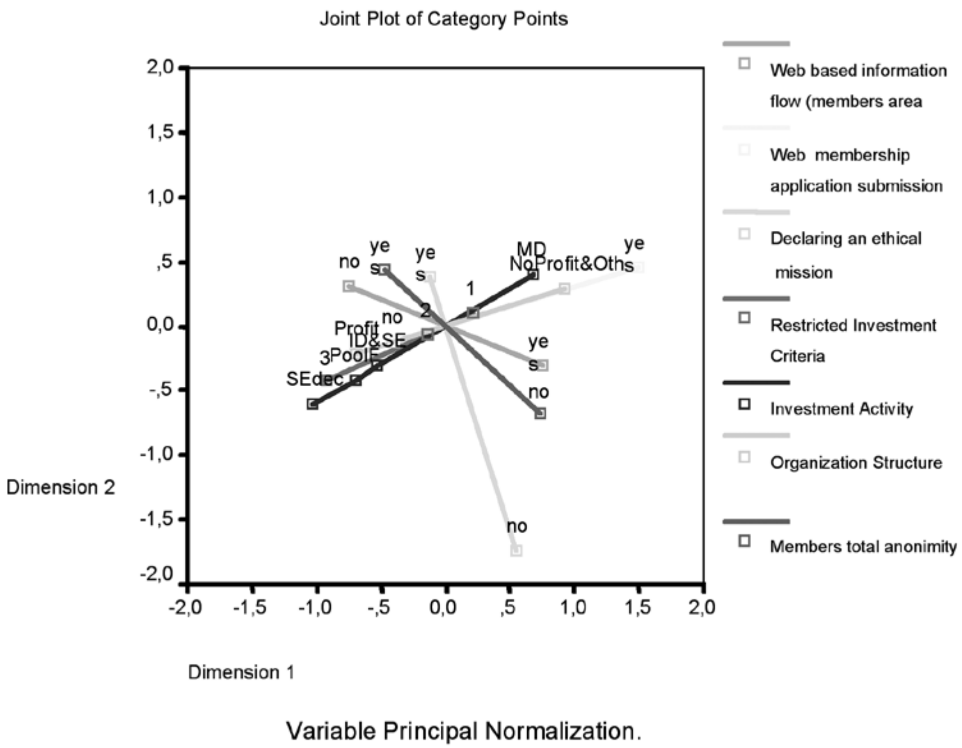


As shown above, some variables have longer lines and thus higher scores than others on one dimension. This means that they are highly correlated with that dimension. The proximity shown, as in the case of 'Organization Structure' and 'Web membership submission', means that the variables are correlated and have the same direction, whilst being orthogonal as in the case of 'Declaring an ethical mission' and 'Investment Activity' means that the variables are uncorrelated.

The first hints we get from this analysis is that Dimension 1 is highly correlated with 'Organization Structure', 'Web membership submission', 'Web membership information flow' and 'Investment Activity' either in a positive or negative way. This means that the model finds a dimension along which the angel groups show common features regarding the way they are organized, their investing activities and the web related operations. Dimension 2 is positively correlated with 'Declaring an ethical mission' and 'Members total anonymity'. The latter variables are basically uncorrelated with those correlated with Dimension 1. This demonstrates that an angel organization with a certain organization structure and investment activity style can either have an ethical mission (or not) and it can follow (or not) a members anonymity policy.

The component loadings plot represents the variables as vector lines through the origin, but we need to plot the categories scale jointly if we want to obtain more information about the endpoints of the quantified variables, as shown below (Fig. 2).

Figure 2 Joint Category Plots



From this plot we can see how Dimension 1 separates two different types of angel groups depending on its positive or negative sign. In effect, on the left side we can find angel investor groups that cannot be defined as "Non-profit". The further left we go from the origin, the more we can easily find organizations where members pool their funds and, to the endpoint, where they invest as a single entity, almost like a small venture capital fund. Additionally, the more left we go the higher the number of restrictions on the investment opportunities that the organization will consider in the deal screening phase. This reveals an increased sophistication in its investment choices. With these angel groups the membership application process doesn't start from the web and there is no members' area on their websites. The reason is likely to lie in the high professional level that such angel investors associations have reached: they are an investing group more than just an association of investors. Thus, the information about investment opportunities and their activities probably flow by more personal means than a formal instrument as the web area is, and becoming a member needs a more sophisticated process than a web application to fill in. This seems a bit counterintuitive since it appears that on one hand the groups are more formal (an investing group rather than an association of members) but yet their deal flow is more informal. However, one explanation for this might be that angel market has traditionally been based on face-to-face interactions for both deal evaluation (Freear, Sohl and Wetzel, 1994; Sorheim and Lanstrom, 2001) and investment decisions (Fiet, 1995). Thus, results indicate that the importance of such interactions is emphasized in highly professional angel groups.

On the other side of Dimension 1 (the positive sign one), it is very probable to have a Non-profit angel group in which every member takes his own decision about any investment opportunities. At the same time those associations give the opportunity to become members or to start the membership process through their website. Furthermore, the website is often used as a system for exchanging information about investment opportunities and they have unsophisticated restriction criteria. In other words, those are the less organized association of investors, usually defining themselves as a 'forum' of investors.

As a result Dimension 1 is to be considered as the 'professional level' dimension, along which we can find increasingly more professionally organized angel groups. In fact, we can start from the forums to finish with some angel investor groups that could easily be described as a small venture capital fund.

Dimension 2 instead, gives us information about the mission of the angel group which is correlated with the members anonymity policy. In other words, the analysis tells us that the angel groups' websites from where we are unable to get information about members' identities (such as email addresses or résumés) are the ones in which there is stated a so-defined 'ethical' mission. The latter stands for any mission statement other than the 'members' profit' one. For instance, the following statements were coded as 'ethical':

"Connecting opportunities in the Northwest with the means for success"

Or

"Our mission is to increase the number of growth companies that receive seed capital funding from Cincinnati area angels."

Conversely, 'non-ethical' was the code for those mission statements such as:

"All members are motivated by the potential large financial returns that investing in early-stage companies can offer"

And

"Our mission is to provide opportunities for our members to obtain outstanding financial returns by investing in early-stage technology and life science companies in Southern California and accelerating them to market leadership."

We can interpret the correlation between the ethical mission and the members anonymity variables in the following way: those associations whose purpose is to get high financial returns have to offer a sort of trustworthiness to any entrepreneurs or any potential members. Giving information about current members' skills and cultural background is probably the right way to signal the reliability of the investors and eventually their investments track record.

There is probably not the same need for 'ethical mission' groups. In this case, the investments might have a strong social connotation and investors might want to keep their social activities private.

The following map enlightens the differences between angel groups along the two dimensions identified by the factorial analysis. At the endpoints of every dimension the map indicates the features of an angel group with an extreme value for every variable we analyzed in this study (tab. 4).

Table 4 Angel Groups map from the CATPCA model based on websites content analysis

Members do not reveal their identities. The group has a mission which is not only related to members' profit

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High professional angel group, investing as a single entity which has a 'for-profit' legal structure. Members do not accept new membership application through a web based contact and do not operate through a web area for information exchange about investments.

Dimension 1

<——————————————————————————————>

Low professional angel group, basically organized as a 'non-profit' forum of investors. The angels share the information usually through the web but invest individually. Members can accept new investors through the web.

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Dimension 2

Members do reveal their identities. The group's mission is to provide profitable investments to its members

The map can give important clues about the Informal Venture Market of a certain area, region or nation. Being a positioning map, it provides IVC actors with information about the structure and possibly the competition in the market.

Plotting the different angel groups in the same area on such a conceived map might help the entrepreneur to easily target only those organizations that best fit its investment proposal. For instance, a very sophisticated investment proposal with a medium-high funding requirement could be addressed to a high professional-level group with a clear 'for-profit' orientation. In fact, the latter would probably invest almost as a venture capital fund would invest, i.e. as a single entity, with precise financial goals and a large amount of investment money available since its members probably pool their funds. On the other hand, an investment proposal concerning a business idea that could be deemed of interest for the economic development of a community area would have to target a less professional angel group with an 'ethical' mission, meaning a mission which is not concerned only with the members' profit. In other words, as with any other factorial analysis developed for marketing purposes, the map can help an entrepreneur (the firm) to target his/her investment proposal (the product) to the right investor (the consumers) by taking a few behavioural dimensions into account. Thus, having access to brief information on few behavioural dimensions of angel groups means that the entrepreneur can send the right business plan to the right angel group.

6. Discussion and conclusions

One of the greatest needs of the informal venture capital market is to develop mechanisms that allow improvements in deal flow efficiency and in resulting matching processes between demand and supply. Matching mechanisms, which are developed in Europe chiefly through BANs, were conceived and planned by policy makers with the very aim to enhance market efficiency (Aernoudt, 1999). Based on the US market, where angel groups are a growing segment of the IVC supply side, this study proposed a positioning map of angel groups conceiving its construction with the aim of building a useful instrument to reduce the mismatch between the profile of investors and the nature of the business proposals they receive.

We assume that the map might reveal itself to be a useful tool for entrepreneurs looking for funding, given that it could help them in approaching the angel group which is most consonant with their investment proposal. Indeed, the map helps the entrepreneur to rapidly recognise several key behavioural dimensions of angel groups that operate in the same area as his/hers. Such dimensions concern the level of professionalisation, the organisation's mission and the possibility of obtaining information on the identity of group members. Once the most suitable angel group has been identified, the entrepreneur can start – just for this group – assessing the variables that have most impact on matching possibilities, namely the investment criteria used and preferences, if any, expressed by individual investors, if available on the Web. This appraisal in greater depth will obviously not be made on the angel groups discarded by the entrepreneur as they are not consonant with his/her investment proposal. Thus, on the demand side, investor search times and costs are further reduced, which contributes to a rise in market efficiency.

In addition, the swift retrieval of information on the investment criteria of the selected angel groups should lead the entrepreneur to an adaptation process, redefining his/her investment proposal. Alternatively, the entrepreneur should select another angel group. This should translate into a greater probability that investors see business plans that meet their investment criteria, so the result should be an increase in matching probability. However, it should be stressed that making allowance for the key dimensions of the angel group's behaviour or its investment criteria cannot reduce other factors which express low investment readiness of demand, such as unrealistic assumptions, poor presentation or entrepreneurs/management teams which lack credibility (Mason and Harrison, 2002; 2003; Feeney, Haines and Riding, 1999).

Also, use of the positioning map of angel groups allows importance to be lent to investor selection made by entrepreneurs. Rapidity in choosing the 'right' angel group makes it easier for the entrepreneur to properly assess information on the angel group selected. This may include background information on business angels, their expertise or their integration in local networks (embeddedness). Acquiring information on business angel background, expertise and network appears critical for entrepreneurs whose approach to acquiring informal venture capital is based not on securing 'pure financial capital' but rather on finding investors with the requisite expertise and network (Sætre, 2003).

Furthermore, promoting the map of a country's angel groups entails detecting and organising data and information on the supply side in the informal venture capital market. This means reducing the lack of information *about* the market and increasing the level of awareness of the informal venture capital market. An increase in awareness positively affects the possibility of grasping real opportunities offered by the market (Esposito and Pratts, 2003) and hence its efficiency. Policy makers interested in developing the IVC market in a local area could also be interested in the pre-assessment of the angel groups critical dimensions as different typologies of groups might require different interventions. Moreover, interpretation of how the groups position themselves in the market may contribute to see whether there is a bias in the supply side at the local level.

The previous observations should be interpreted with caution for several reasons. First, although angel groups are a growing segment of the US informal venture capital market, solo investors still dominate the market. In addition, we know that there exist some US angel groups which do not have websites since they do not want to be inundated with poor deal flow and instead rely on an informal network for deal flow. Thus, the map can be applied only to a portion of the informal venture capital supply side. Second, despite the increase in membership of angel groups, research indicates that the percentage of US latent angels that are members of angel groups has grown over the last several years – 41% of angels in those groups in the US were not active in 2001, as compared to 33% of investors in 1998 (Sohl and Sommer, 2003). Thus, there is a possibility that, in the long term, websites do not reflect the actual angel group's preferences and profiles as they don't take into account preferences and profiles of latent investors. Third, the study did not incorporate age of the angel group in the analysis. It is possible that the representativeness of each of the two salient dimensions of the map – the professional level and the ethical orientation – may depend upon how long the group has been in existence. Fourth, the final sample of 28 cases is small. For this reason the empirical analysis herein conducted has to be considered an experimental methodology. Fifth, the fact that only 28 angel groups websites held sufficient information can limit the use of the map since the majority of them currently do not have the requisite data. However, given the increasing professional level of the angel market (Mason, 2006), it is likely that in the near future the number of angel groups' websites providing the requisite information will increase.

The present study has attempted to contribute to a better understanding of the characteristics of angel groups in the US. These groups are mainly located in the US. It may be worthwhile to evaluate whether there are possibilities to map the supply side of the informal venture capital market in contexts in which different types of matching mechanisms are prevalent, such as BANs in Europe. As regards the latter, it might be interesting to investigate whether and to what extent local BANs could benefit from a map of registered and active investors based on a few key variables of their behaviour, such as investment criteria, investment motivations and background. Such a map could be one of the tools used by the 'second generation' of BANs desired by Mason and Harrison (2002) in the context of programs to develop entrepreneurs' investment readiness, or *angel academies* in which the aim is to enhance investment skills of potential or less active investors (Aernoudt, 2005: 368). As regards angel academies, recognition and mapping of key behavioural dimensions of active angels with greater investment experience could be useful as a tool to promote the exchange of experience and greater cooperation between business angels. Clearly, there is a trade-off between the depth of mapping and the need for discretion expressed by active angel members of BANs.

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Appendix 1 - A.C.A. members included in the case study (n=81)

Original Case Study Sample

Aztec Venture Network	http://www.aztecventurenetwork.com/
Band of Angels	http://www.bandangels.com/index.php
Central Coast Angel Network	http://www.ccangels.net/index.php?sid=
Idealflow Angel Fund	http://www.idealflowfund.com/
North Bay Angels	http://www.northbayangels.com/
Pasadena Angels	http://www.pasadenaangels.com/
Sacramento Angels	http://www.sacangels.org/
Sand Hill Angels LLC	http://www.sandhillangels.com/
Silicom Ventures	http://www.silicomventures.com/
TechCoast Angels	http://www.techcoastangels.com/content.cfm?id=12D24070-D79D-11D4-AD8600A0C95C1653&CFID=3657338&CFTOKEN=17544150
TENEX Medical Investors	http://www.tenexmedical.com/
The Angels' Forum LLC	http://www.angelsforum.com/index.html
Active Angel Investors	http://www.activeangelinvestors.com
Ben Franklin Investment Partners (BFIP)	http://www.nep.benfranklin.org
BlueTree Allied Angels	http://www.bluetreealliedangels.com/
Chesapeake Emerging Opportunities Club	http://www.ceopportunities.com/
Jumpstart New Jersey Angel Network	http://www.jumpstartnj.com/
LORE	http://www.loreassociates.com/
Maryland Angels Council	http://www.md-angels.com/home.html
Pennsylvania Private Investors Network	http://www.ppig.com/
Richmond Venture Forum	http://www.ventureclub.com/pages/index.cfm?pageid=1
Robin Hood Ventures	http://www.robinhoodventures.com/
Silicon Garden Angels & Investors Network	http://www.njangels.net/pages/1/index.htm
Life SPAN	http://www.pghlifespan.com/
The Dinner Club	http://www.thedinnerclub.com/index_wdc.asp
The eMedia Club	http://www.emediaclub.com
The Washington Dinner Club	http://www.washingtondinnerclub.com
WomenAngels.net	http://www.womenangels.net/
Bi-State Investment Group	http://www.kcbig.com/
C-Cap	http://www.c-cap.net
Chippewa Valley Angel Investors Network	http://www.chippewavalley.org/brdirectory/angelnetwork.htm
Core Network	http://www.core-network.org
Grand Angels	http://www.grandangels.org/
Great Lakes Angels	http://www.glangels.org/
Kalamazoo Angels	http://www.southwestmichiganfirst.com/

Marquette University Golden Angels Network	http://mukohlercenter.org/pages/Welcome/Golden_Angels
Prairie Angels LLC	http://www.prairieangels.org
QCA First Fund	http://www.qcafirstfund.com
Silicon Pastures	http://www.siliconpastures.com
Wisconsin Investment Partners	http://www.wispartners.com/default.htm
Investors Circle	http://www.investorscircle.com/
Angel Healthcare Investors LLC	http://www.hcangels.com/
Angel Investor Forum	http://www.angelinvestorforum.com/
Cherrystone Angel Group	http://www.bdcri.com/BDCFinancing/angelFinancing.html
CommonAngels	http://www.commonangels.com/
Launchpad Venture Group	http://www.launchpadventuregroup.com/
Maine Angels	http://www.maineangels.org/
North Country Angels	http://www.northcountryangels.com/
River Valley Investors	http://www.rivervalleyinvestors.com/
TiE Angel Forum	http://www.tie-midwest.org/default.asp
Walnut Venture Group	http://www.walnutventures.com/site/
New York Angels	http://www.newyorkangels.com/
Tech Valley Angel Network	http://www.techvalleyangels.com/
Alliance of Angels	http://www.allianceofangels.com
Angels With Attitude I LLC	http://www.soundpointventures.com/angelsfund.html
Delta Angel Group - Post Falls	http://www.deltaangelgroup.org/
Northwest Angel Network Inc	http://www.theangelpeople.com/
Portland Angel Network	http://www.oef.org/Programs/Portland_Angel_Network/
Seraph Capital Forum	http://www.seraphcapital.com/
Atlanta Technology Angels	http://www.angelatlanta.com/
Atlantis Group	http://www.theatlantisgroup.net/
Charleston Angel Partners	http://www.charlestonangelpartners.com/
Charlotte Angel Partners	www.capnc.com
Columbia Angel Partners, LLC	http://www.cap-sc.com/
Florida Angel Investors	http://www.floridaangel.com/
Nashville Capital Network	http://www.nashvillecapital.com/
Piedmont Angel Network	http://www.pentriad.org/Microscope/index?page=PEN-PAN
Tri-State Investors Group	http://www.tignc.com/
Arizona Angels	http://www.arizonaangels.com/
Camino Real Angels	http://www.caminorealangels.com/
Desert Angels	http://www.edesertangels.com/
Houston Angel Network	http://www.houstonangelnetwork.org/
New Mexico Private Investors	http://www.nmprivateinvestors.com/
North Dallas Investment Group	http://www.nd-ig.com/
The Dallas Angels	http://www.thedallasangels.com/
CTEK Angels	http://www.ctekangels.biz/
Sierra Angels	http://www.sierraangels.com/

UH Angels University of Hawaii	http://uhangels.cba.hawaii.edu/angels_is.asp
Utah Angels	http://www.utahangels.org/
Vegas Valley Angels	http://www.aztecventurenetwork.com/

Appendix 2 - Coding rules and categories for the content analysis' of A.C.A. members' websites

ANALYZED INFORMATION	**CATEGORIES**		**CODING RULES**
Organization Structure	0	Not informative	There is no (understandable) information
	1	LLC (Limited Liability Corporation)	Putting the definition when it is stated and/or when the structure of the organization is included in the name of the association
	2	LP (Limited Partnership)	
	3	Non-Profit	
	4	Other	
Members total anonymity	1	No	There has to be information about the identities of the investors belonging to the group, even only their names
	2	Yes	
Investment Activity	0	Not informative	There is no (understandable) information about the way the organization's members invest.
	1	Individual members' investment decisions	It is stated that every members invest individually
	2	Individual members' investment decisions followed by the creation of a single investing entity	It is stated that the organization creates a special purpose entities which are members' funds for each investment
	3	Pooling funds into a single entity with individual members' investment decisions	It is stated that the group pools members' money into a fund but the decision to invest in a deal is still individually taken
	4	Single entity investment decisions	The members invest through a fund, being the group as a single entity involved in every investment
Restricted Investment Criteria	0	Not informative	There is no (understandable) information about angel groups' preferences when considering the investment opportunities
	1	1	Only one investment criterion
	2	2	Two investment criteria
	3	3	Three investment criteria
	…	…	… investment criteria

Declaring an 'ethical' mission	0		There is no mission statement, meaning a sentence regarding the objectives of the organizations
	1	Non-Ethical	The group's mission is to provide profitable investments for members
	2	Ethical	It is 'ethical' any purpose different than the profit of the group's members
Web membership application submission	1	No	It is not possible to submit a membership application through the website
	2	Yes	It is possible to submit a membership application through the website
Web based information flow (*members area*)		No	There is no reserved area for member in the angel group's website
		Yes	There is a reserved area for member in the angel group's website

Appendix 3 - Convenience Sample for the websites Content Analysis (n=28)

Aztec Venture Network
North Bay Angels
TechCoast Angels
TENEX Medical Investors
The Angels' Forum LLC
Active Angel Investors
Chesapeake Emerging Opportunities Club
Pennsylvania Private Investors Network
The Dinner Club
The eMedia Club
The Washington Dinner Club
Bi-State Investment Group
C-Cap
Chippewa Valley Angel Investors Networ
Prairie Angels LLC
QCA First Fund
Silicon Pastures
Angel Healthcare Investors LLC
Launchpad Venture Group

Alliance of Angels
Delta Angel Group - Post Falls
Atlanta Technology Angels
Charlotte Angel Partners
Columbia Angel Partners, LLC
Nashville Capital Network
Piedmont Angel Network
Desert Angels
New Mexico Private Investors

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Riassunto

I business angel sono investitori informali nel capitale di rischio che danno vita al mercato dell'informal venture capital. Negli USA i business angel rappresentano la più antica e la più grande fonte di capitale di rischio per lo sviluppo dell'imprenditorialità e delle start up innovative. Un ruolo importante nello sviluppo del mercato dell'informal venture capital statunitense è svolto dai gruppi di business angel. Questi gruppi di investitori stanno aumentando il livello di professionalizzazione del mercato dal momento che adottano procedure chiare e criteri definiti per la selezione delle imprese in cui investire. Tuttavia, nonostante la sua rilevanza e le recenti evoluzioni, il mercato dell'informal venture capital (sia statunitense che britannico) non è ancora efficiente. Uno dei fattori che maggiormente alimenta l'inefficienza del mercato è la scarsa qualità del flusso di proposte di investimento che arriva ai business angel. Oltre che dallo scadente livello qualitativo dei progetti, la scarsa qualità del flusso progettuale dipende anche dal fatto che i business angel ricevono e valutano spesso progetti che non sono coerenti con i lori criteri di investimento. Il "mismatch" tra il profilo dei business angel e i progetti presentati dagli imprenditori riduce la probabilità di incontro (il matching) tra domanda e offerta e, conseguentemente, aumenta l'inefficienza del mercato. Studi recenti dimostrano che il problema del "mismatch" riguarda non solo i business angel individuali ma anche i gruppi di business angel. Sulla base di queste premesse, l'articolo indaga il problema del "mismatch" che caratterizza i business angel groups statunitensi. Basandosi su una content analysis di un campione di 28 siti web di gruppi di business angel localizzati negli USA, il lavoro propone uno schema originale che mappa le principali caratteristiche di tali gruppi prendendo in esame alcune variabili comportamentali. I risultati di un'analisi delle componenti principali sono articolati su due dimensioni che consentono di spiegare le similarità e le differenze dei gruppi di angel statunitensi: il livello di professionalizzazione e il tipo di mission del gruppo. Una delle maggiori implicazioni derivanti dall'uso della mappa proposta è che essa può rivelarsi uno strumento efficace per gli imprenditori alla ricerca di capitale di rischio informale. L'uso dello strumento consente infatti di selezionare facilmente il "giusto" gruppo di business angel, riducendo così le inefficienze dei processi di matching.

Abstract

Business angels are informal investors who collectively make-up the informal venture capital market (IVCM). Business angels represent the oldest and largest source of seed and start up equity capital for new entrepreneurial ventures in the US. An increasing role in the development of the US informal venture capital market is currently played by "angel groups". These groups are increasing the professional level of the informal venture capital market as they establish and adopt clear routines and criteria for their operational activity. However, despite its importance and recent evolution, the informal venture capital market (both in US and in UK) is still far from be fully efficient. One of the most powerful factors which fuels the inefficiency of the informal venture capital market is poor deal flow. Apart from the low quality of business plans, poor deal flow is fuelled by the fact that business angels do not see enough business plans that meet their investment criteria. The mismatch between the profile of investors and the nature of business plan lowers probability of matching between demand and supply and, in turn, fuels market inefficiency. Recent studies indicate that this mismatch is affecting not only individual investors but also angel groups. The present paper investigates the "mismatch problem" which affect US angel groups. Based on a content analysis of a sample of 28 US angel group Websites, the paper proposes an original framework which maps the main angel groups' features by taking into account few behavioural dimensions. The output of a categorical principal component analysis is mapped on two dimensions that largely explain the main angel groups' similarities and differences: the professional level, and the ethical mission of the angel groups' members. One main implication for practice is that the map could be used as a useful tool for entrepreneurs looking for funding in order to meet the business angels' investment criteria. In fact the map can help an entrepreneur to rapidly select the "right" angel group, taking into account a limited number of investors' behavioural dimensions.

Classificazione Jel: M130 - New Firms; Startups

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