Angel Groups: An Examination of the Angel Capital Association Survey

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Introduction

A recent development in angel investing has been the emergence of organized angel groups, which combine the start-up investment activities of multiple accredited investors. Angel groups are so new as to be virtually unexamined in the literature on angel investing. In fact, the oldest organized angel group, the Band of Angels, is only 20 years old, and the median age of an angel group that is a member of the Angel Capital Association is only three years old.

Recently a source of data has become available to examine the activities of angel groups. Many angel groups have banded together to form a trade association – the Angel Capital Association (ACA) – to help facilitate information exchange and to develop policy related to angel investing. This group surveys its members annually. Although the group does not keep the raw data from its membership survey from year to year, it made available the 2007 survey data for analysis. This white paper provides information on angel groups using the 2007 ACA Survey data.

The Sample

The ACA membership is a non-random sample of angel groups. No data on the exact number of angel groups exists, but estimates of the number of organized angel groups in the United States are between 200 and 300 groups. Thus, the angel groups responding to this survey represent somewhere between 42 and 64 percent of all U.S. angel groups. Whether this sample is representative of the overall population of angel groups is unknown, and is unlikely. The goals of the ACA are likely lead certain angel groups to join the association and others not to join. Because the members of the association are likely to be different from the non-members in a variety of unknown ways, the information described below should be viewed as representative **only** of the ACA members and should not be generalized to angel groups in general.

The Topics Investigated

Four categories of questions about angel groups were investigated:

1. What factors affect the size of an angel group, both in terms of numbers of investors and the size of the staff?

2. What factors affect the magnitude of the investment effort by the group, in terms of the number of funded companies, the number of presenting companies, the size of the typical investment, and the number of meetings per year?
3. What factors affect the length of time that entrepreneurs have to present their business ideas to the angel group, both in terms of presentation time and question and answer time?
4. What factors affect the structure of the angel group, in terms of whether it has a committed fund and the magnitude of dues paid by group members?

To identify the factors associated with these four dimensions of angel group investing, six categories of factors were examined: (1) geography (whether the group was located in California; whether the group was located in a state with an angel tax credit[1]; the proportion of companies under the age of five in the group's metropolitan statistical area [MSA] that received an external [non-relative] investment over the 1997-2002 period[2]; and the per capita rate of patenting in the group's metropolitan statistical area over the 1990 to 1996 period)[3]; (2) the age of the angel group in years; (3) the legal structure of the angel group (whether it is an LLC, non-profit mutual benefit corporation, corporation or something else); (4) the organization of the group (whether or not it is manager-led and whether or not it has sidecar investing); (5) the preference for different stages of investing (seed, start-up, early stage, expansion, or late stage); and (6) restrictions of the locus of investments (whether they need to be within the state in which the group is domiciled and whether the group prefers to make investments in businesses within four hours drive of the group's location).

Overall Descriptive Statistics

The ACA received responses to its membership survey from 127 angel groups, although not all groups answered all questions. The survey responses provide a basic descriptive picture of angel groups. In terms of geography, 10 percent of the angel groups are domiciled in California and 28 percent are domiciled in a state with an angel tax credit. The average number of patents per capita in the MSA in which an angel group was domiciled was 0.0022, while the typical (median) number was 0.0016. The average number of young companies founded in the 1997 to 2002 period that had received an external investment in the group's MSA was 0.0395, while the typical number was 0.0373.

For the 123 angel groups that reported their year of founding, the ages ranged from zero to 20 years old, with an average of 4.15 and a typical age of three.

The 124 groups that answered the question on legal form indicated that angel groups take on a variety of different legal forms, with 35 percent being structured as LLCs, 28

[1] This information was taken from Crawford, S. 2006. Angel investment: State strategies to promote entrepreneurship and economic development. Issue Brief, Center for Best Practices, National Governors Association, July 12.

[2] This information was taken from a special tabulation of the Survey of Business Owners, conducted by the U.S. Census Bureau.

[3] This information was taken from the U.S. Patent and Trademark Office, which compiles data on patenting activity by metropolitan statistical area.

percent as non-profit mutual benefit corporations, 8 percent taking the form of an S or C corporation, and 29 percent having a different legal form or no legal form.

The 113 groups that answered the question about investment preferences indicated that angel groups have a preference for early stage investing, as much as for seed and start-up stage investing with 82 percent expressing a preference for making investments at the early stage, closely followed by a preference for the seed and start-up stage (80 percent). Much smaller numbers expressed a preference for expansion stage (35 percent), and late stage (10 percent) investing.

In terms of structure, almost half (43 percent) of the 121 groups that answered the question about leadership were manager-led. However, only a small percentage (7 percent) of the 119 groups that answered the question about sidecar investments had them.

In terms of limitations on the locus of investments, the 105 groups that answered the question about investment region showed that just under half (44 percent) will only make investments within 4 hours drive of the group's location. A smaller percentage (26 percent) is restricted to investing in the state in which the group is domiciled.

The Size of the Angel Group

The ACA survey indicates that angel groups are quite varied in size, both in terms of the number of investors and the size of full-time staff. In terms of the number of investors, the smallest group has only 3 members, while the largest has 280. For the 122 groups which report their size, the average group has 47.6 members, while the typical group has 37. Only 84 groups reported their number of full-time staff. However, we still see considerable variation in size on the number of staff, from a low of zero to a high of seven, with an average of 0.98 and a median of 0.50.

Given this variation, an important question to understand is why are some angel groups larger than others? While we do not have the kind of experimental data that would let us identify the factors that **cause** angel groups to be a particular size, we can use regression analysis on the ACA survey data to identify factors that have a significant and substantive correlation with the size of the group.

Table 1 shows the regression model to predict the number of investors in the angel group. Although the model explains only some of the variance in group size (adjusted R-square of .254), the set of factors contained in the model are jointly significant ($F=2.963$, $p< 0.001$) predictors of the size of the angel group.

Older angel groups are larger than younger angel groups. All other things being equal, the age of the group has a significant and substantive correlation with the number of investors in the group. A one year increase in group age corresponds to an increase of 5.26 investors ($p< 0.0001$).

Although there is no significant correlation between being located in a state with an angel tax credit or the number of young companies in the area that had received external investments over the 1997 to 2002 period, two aspects of geography do correlate significantly with the number of investors in the angel group. First, all other things being equal, angel groups in California have 31.42 members than angel groups in other states ($p< 0.10$). Second, all other things being equal, increasing the number of patents produced in the MSA in which the angel group is located by 1 patent per 1000 inhabitants reduces the size of the angel group by 5.960 investors ($p< 0.05$).

The angel groups that take the form of an LLC or a non-profit mutual benefit corporation are not statistically different in size from those groups that have no legal form or a different legal form (other than the corporate form). However, angel groups that take the corporate legal form are larger than other angel groups. All other things being equal, angel groups that are organized as S or C Corporations have 36.45 more members than angel groups that take other legal forms ($p<0.05$).

The size of the angel group is also significantly correlated with the locus of investments. Angel groups that are required to invest in the state in which they are domiciled and angel groups that seek to invest in companies within four hours drive of their location have significantly fewer investors than other angel groups. All other things being equal, angel groups that are required to invest within the state in which they are domiciled have 18.63 fewer investors than other angel groups ($p<0.10$) and angel groups that prefer to invest within four hours drive of their location have 25.23 fewer investors ($p<0.01$).

The preferred stage of investment and the structure of the group (manager-led and side car investment) have no significant correlation with the number of members of the group.

Table 1. Factors Associated with Number of Investors in the Angel Group.

Variable	Beta	Significance
Age of Group	0.408	****
External Investment Rate in the Area	0.046	
Patent Rate in the Area	-0.270	*
Angel Tax Credit State	0.068	
Located in California	0.221	t
LLC	0.086	
Non-Profit Mutual Benefit Corporation	0.106	
S or C Corporation	0.230	*
Prefer Start-up Stage	0.027	
Prefer Early Stage	-0.133	
Prefer Expansion Stage	0.113	
Prefer Late Stage	0.046	
Manager-Led Group	0.070	
Has Sidecar Fund	0.000	
Must Invest in State	-0.189	*
Investment Region Four Hours Drive	-0.291	**
R-square	0.254	
F-Value	2.963	***
N=92		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

Table 2 shows the regression model to predict the number of full-time staff employed by the angel group. Although the model explains only some of the variance in staff size (adjusted R-square of .265), the set of factors contained in the model are jointly significant ($F=2.442$, $p< 0.01$) predictors of the number of people employed by an angel group. Only one set of factors, the organization of the group, is significantly correlated with the number of full-time employees in the angel group. Manager-led angel groups and angel groups with sidecar funds have significantly more full-time employees than other angel groups. All other things being equal, manager-led angel groups have just under one (0.93) more full-time employee than non-manager led angel groups ($p<0.05$), and angel groups with sidecar funds have 2.48 more full-time employees than angel groups without sidecar funds ($p<0.01$). The age of the angel group, its preferred stage of investment, its geographic location, the region in which it invests, and its legal form have no significant correlation with the number of full-time staff employed by the group.

Table 2. Factors Associated with Number of Full-Time Staff Employed by the Angel Group.

Variable	Beta	Significance
Age of Group	0.089	
External Investment Rate in the Area	0.027	
Patent Rate in the Area	-0.021	
Angel Tax Credit State	-0.031	
Located in California	0.144	
LLC	0.161	
Non-Profit Mutual Benefit Corporation	0.080	
S or C Corporation	0.034	
Prefer Start-up Stage	0.012	
Prefer Early Stage	0.047	
Prefer Expansion Stage	0.160	
Prefer Late Stage	-0.154	
Manager-Led Group	0.319	*
Has Sidecar Fund	0.428	****
Must Invest in State	-0.073	
Investment Region Four Hours Drive	0.023	
R-square	0.265	
F-Value	2.442	**
N=64		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

The Magnitude of the Investment Effort

The ACA survey indicates that the magnitude of the investment effort undertaken by angel groups varies considerably across groups, in terms of the number of companies funded in the previous calendar year; the size of the typical investment made by the group; the number of companies presenting at each meeting, and the number of meetings per year. Across the 86 angel groups that answered the question, the number of companies funded in the previous year ranged from 0 to 19. The average was 3.81 companies, but the typical angel group funded 2.5 businesses. Of the 113 angel groups that answered the question, 22 percent made investments of $150,000 or less in the companies in which they invested. Across the 110 angel groups that responded to the question, the range in the number of meetings per year was 0 to 52, with an average of 9.7 and a median of 12. At these meetings, the 97 responding angel groups indicated that between 1 and 20 companies present, with a typical group having 2 company presentations per meeting and the average group having 2.48.

Using regression analysis, we can see what factors are associated with the different facets of the magnitude of the angel investment effort. We look first at the factors correlated with the number of companies that the angel groups financed in the previous year (see Table 3). This model explains a fair amount of the variance in the number of companies funded (adjusted R-square of .482) and the set of factors contained in the model are jointly significant (F=4.948, p< 0.0001). However, only a few factors are significantly correlated with the number of companies funded. Among the geographic

location factors, only one – whether the group is domiciled in California – is significantly correlated with the number of companies that were financed by the angel group in the previous year. All other things being equal, angel groups located in California funded 4.14 more companies in the prior year than angel groups located elsewhere ($p< 0.05$).Also significantly correlated with the number of companies funded is the age of the angel group. All other things being equal, for each year of age, the angel groups funded an additional 0.605 companies ($p< 0.0001$). The legal form of the angel group, the preferred stage of investment, the organization of the group, and the locus of companies in which the groups would invest were not significantly correlated with the number of companies funded in the prior year.

Table 3. Factors Associated with the Number of Companies Funded in the Prior Year.

Variable	Beta	Significance
Age of Group	0.495	****
External Investment Rate in the Area	-0.079	
Patent Rate in the Area	-0.029	
Angel Tax Credit State	-0.092	
Located in California	0.307	*
LLC	0.097	
Non-Profit Mutual Benefit Corporation	-0.049	
S or C Corporation	0.146	
Prefer Start-up Stage	0.158	
Prefer Early Stage	0.129	
Prefer Expansion Stage	0.099	
Prefer Late Stage	0.044	
Manager-Led Group	0.114	*
Has Sidecar Fund	0.143	****
Must Invest in State	-0.080	
Investment Region Four Hours Drive	-0.178	
R-square	0.482	
F-Value	4.948	****
N=68		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

Table 4 examines the factors associated with the angel group making investments of less than $150,000 per investment round. Although this model explains some of the variance in the tendency to make small investments (Cox and Snell R-Square of 0.204) the overall model is not significant (Chi-square=20.13, $p>0.10$). This probably reflects the fact that the group's investment region is the only category of factors that is significantly correlated with the tendency to make small investments. Both the requirement that the angel group invest in the state in which the fund is domiciled and the preference for investing in companies located within four hours drive of the angel group are significantly negatively correlated with the tendency to make investments of less than $150,000 per round. All other things being equal, angel groups that are restricted to investing in the state in which they are domiciled are only 15.5 percent as likely as other

angel groups to make an investment of less than $150,000 per round ($p<0.05$), while angel groups that prefer to make investments within four hours drive of their location are only 25.3 percent as likely than other angel groups to make investments of this size ($p<0.10$). The age of the angel group, its geographic location, legal form, structure, and preferred stage of investment are not significantly correlated with the tendency to invest less than $150,000 per investment round.

Table 4. Factors Associated with the Tendency to Make Investments of Less than $150,000.

Variable	Exp(B)	Significance
Age of Group	0.931	
External Investment Rate in the Area	0.000	
Patent Rate in the Area	0.000	
Angel Tax Credit State	1.657	
Located in California	1.077	
LLC	0.769	
Non-Profit Mutual Benefit Corporation	1.258	
S or C Corporation	4.908	
Prefer Start-up Stage	0.482	
Prefer Early Stage	0.274	
Prefer Expansion Stage	1.397	
Prefer Late Stage	0.313	
Manager-Led Group	0.897	
Has Sidecar Fund	0.000	
Must Invest in State	0.155	*
Investment Region Four Hours Drive	0.253	t
Cox and Snell R-square	0.204	
Chi-Square	20.130	
N=88		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

Table 5 examines the factors correlated with the number of companies that present at each angel group meeting. This model explains little of the variance in the number of companies that present (adjusted R-square of .046) and the set of factors contained in the model are not jointly significant ($F=1.218$, $p>0.10$). The poor prediction of the model reflects the fact that only one factor is significantly correlated with the number of companies that present at each angel group meeting: the number of young companies in the group's metro area that received an external investment during the 1997 to 2002 period. All other things being equal, each increase of one company per 10,000 inhabitants that received an external investment in the prior period is associated with an increase of 0.43 companies presenting at each group meeting ($p<0.05$). All other geographic location factors have no significant correlation with the number of companies presenting at the angel group meetings, and the age of the group, its legal form, structure, preferred investment stage, and investment region have no significant correlation with this measure.

Table 5. Factors Associated with the Number of Companies Presenting at Each Meeting.

Variable	Beta	Significance
Age of Group	-0.067	
External Investment Rate in the Area	0.328	*
Patent Rate in the Area	-0.133	
Angel Tax Credit State	-0.078	
Located in California	-0.103	
LLC	-0.017	
Non-Profit Mutual Benefit Corporation	0.178	
S or C Corporation	-0.051	
Prefer Start-up Stage	0.200	
Prefer Early Stage	-0.116	
Prefer Expansion Stage	0.080	
Prefer Late Stage	0.180	
Manager-Led Group	0.191	
Has Sidecar Fund	0.036	
Must Invest in State	0.062	
Investment Region Four Hours Drive	-0.127	
R-square	0.046	
F-Value	1.218	
N=73		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

Table 6 examines the factors correlated with the number of meetings that the angel group has annually. This model is better at explaining variance than the model to predict the number of companies presenting at each meeting (adjusted R-square of .175) and the set of factors contained in the model are jointly significant ($F=2.103$, $p<0.05$). Nevertheless, relatively few factors are significantly correlated with the number of meetings that the angel group has annually. While there is no significant correlation between taking the legal form of a corporation or a non-profit mutual benefit corporation and the number of group meetings annually, angel groups that are set up as LLCs have more meetings every year than other angel groups. All other things being equal, angel groups organized as LLCs have 3.02 more meetings per year than other angel groups ($p<0.05$).

In addition, while there is no significant correlation between the angel groups being manager-led and the number of meetings annually, angel groups that have sidecar funds tend to have more meetings than other groups. All other things being equal, having a sidecar fund increases the number of angel group meetings by 4.44 meetings annually ($p<0.10$). None of the other measures are significantly correlated with the number of meetings that the group has annually.

Table 6. Factors Associated with the Number of Angel Group Meetings Annually.

Variable	Beta	Significance
Age of Group	0.158	
External Investment Rate in the Area	-0.051	
Patent Rate in the Area	0.146	
Angel Tax Credit State	-0.064	
Located in California	0.160	
LLC	0.270	*
Non-Profit Mutual Benefit Corporation	0.089	
S or C Corporation	0.036	
Prefer Start-up Stage	0.090	
Prefer Early Stage	0.099	
Prefer Expansion Stage	0.049	
Prefer Late Stage	0.037	
Manager-Led Group	0.147	
Has Sidecar Fund	0.208	t
Must Invest in State	0.013	
Investment Region Four Hours Drive	0.121	
R-square	0.175	
F-Value	2.103	*
N=83		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

Presentation Time

The ACA survey indicates that angel groups allow entrepreneurs very different amounts of time to present their business ideas, and permit very different amounts of time for them to answer questions posed by the angels. Across the 109 angel groups that answered these questions, entrepreneurs were allowed between 5 minutes and 3 hours to present. The typical angel group permitted entrepreneurs 20 minutes to present and the average group allowed 21.13 minutes of presentation time. Across the 97 angel groups that responded to the question, angels were given between 5 and 90 minutes to answer questions that the angels raised. The typical group limited the question and answer period to 15 minutes; and the average question and answer period lasted 16.22 minutes.

Why do some angel groups allow more time for entrepreneurs to present and angels to ask questions of them than other angel groups? Again, we can use regression analysis on the ACA survey data to identify factors that have a significant and substantive correlation with the length of both the presentation and question and answer periods. Table 7 shows the regression model to predict the length of time that entrepreneurs have to present. Although the model explains only a little the variance in presentation time (adjusted R-square of 0.099), and the set of factors contained in the model are only marginally jointly significant ($F=1.577$, $p< 0.10$), several factors are significantly correlated with the length of presentations. Among geographic location factors, being located in California significantly increased the length of time that entrepreneurs had to present. All other things being equal, angel groups in California allowed entrepreneurs 24.36 additional minutes to present than angel groups in other states ($p<0.001$). None of

the other geographic location factors were significantly correlated with the amount of time that entrepreneurs have to present.

While angel groups that take the legal form of an LLC or a corporation do not have significantly different presentation time than angel groups that have no legal form or take a different legal form, those that take the form of a non-profit mutual benefit corporation have significantly shorter presentations than other angel groups. All other things being equal, angel groups set up this way have presentations that are 16.86 minutes shorter than other angel groups ($p<0.01$).

Angel groups led by managers also had shorter presentations than those not led by managers. All other things being equal, manager-led groups allowed their entrepreneurs to present for 7.93 fewer minutes than non manager-led groups ($P<0.10$). There was no significant correlation between the length of presentations and whether the angel group had a sidecar fund. There also was no significant correlation between the age of the angel group, the preferred stage of investment, or the investment region on the length of the presentations made by entrepreneurs.

Table 7. Factors Associated with the Length of Time Entrepreneurs Have to Present.

Variable	Beta	Significance
Age of Group	-0.037	
External Investment Rate in the Area	-0.076	
Patent Rate in the Area	-0.095	
Angel Tax Credit State	0.014	
Located in California	0.429	***
LLC	-0.143	
Non-Profit Mutual Benefit Corporation	-0.441	**
S or C Corporation	-0.088	
Prefer Start-up Stage	-0.096	
Prefer Early Stage	0.196	
Prefer Expansion Stage	-0.034	
Prefer Late Stage	-0.087	
Manager-Led Group	-0.228	t
Has Sidecar Fund	0.057	
Must Invest in State	-0.140	
Investment Region Four Hours Drive	-0.152	
R-square	0.099	
F-Value	1.577	t
N=77		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

Table 8 shows the regression model to predict the length of time for questions and answers. The model explains only a little the variance in presentation time (adjusted R-square of 0.134), and the set of factors contained in the model are only marginally jointly significant ($F=1.744$, $p< 0.10$), largely because there is only one factor – the per capita number of patents created in the angel group's MSA – with a strong and significant correlation with the length of the question and answer period. All other things being

equal, increasing the number of patents by one per thousand people in the metro area increases the length of the question and answer period by 2.32 minutes. None of the other geographic location factors, nor the age of the group, its legal form, structure, preferred investment stages, or investment region had was significantly correlated with the length of the question and answer period.

Table 8. Factors Associated with the Length of Time for Questions and Answers.

Variable	Beta	Significance
Age of Group	0.076	
External Investment Rate in the Area	-0.199	
Patent Rate in the Area	0.396	**
Angel Tax Credit State	0.171	
Located in California	0.100	
LLC	0.010	
Non-Profit Mutual Benefit Corporation	-0.124	
S or C Corporation	-0.054	
Prefer Start-up Stage	-0.046	
Prefer Early Stage	-0.095	
Prefer Expansion Stage	-0.118	
Prefer Late Stage	-0.104	
Manager-Led Group	-0.106	
Has Sidecar Fund	-0.122	
Must Invest in State	0.181	
Investment Region Four Hours Drive	-0.034	
R-square	0.134	
F-Value	1.744	t
N=77		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

The Structure of the Angel Group

The ACA survey indicates angel groups are structured in a variety of different ways. For instance, the groups differ on whether they have committed funds. Of the 122 groups that answered the question on this issue, 25 percent had committed funds, while 75 percent did not. The groups also differ on sources of funds that they used to pay their expenses, most notably the size of the dues that members pay annually. Across the 117 angel groups that answered the question, size of member dues ranged from $0 to $6,000 per year, with an average of $1077.05 and a median of $900.00.

We can see what factors are associated with these different dimensions of angel group structure through regression analysis. We look first at the factors correlated with the tendency to have committed funds (see Table 9). This model explains a fair amount of the variance in the number of companies funded (adjusted R-square of .362) and the overall model is significant (Chi-square = 41.354, p< 0.0001). Several categories of factors are significantly correlated with the tendency to have committed funds. First, geographic location matters. All other things being equal, angel groups in California are 43.81 times as likely to have committed funds as those located outside the state (p< 0.05). Second, the legal form of the group matters.

Legal form also matters. While there is no significant correlation between the use of a corporate legal form and the tendency to have committed funds, there is a significant negative relationship between the tendency to have committed funds and being set up as a non-profit mutual benefit corporation and a significant positive relationship with being set up as an LLC. All other things being equal, angel groups set up as LLCs are one 4.16 times as likely as those not set up that way to have committed funds ($p< 0.10$). Moreover, angel groups set up as non-profit mutual benefit corporations are only 3.8 percent as likely to have committed funds as angel groups set up as other legal forms ($p<0.05$).

Group structure also has an effect. Manager-led angel groups are significantly less likely than other angel groups to have committed funds and angel groups with sidecar funds are significantly more likely than other angel groups to have committed funds. All other things being equal, manager-led angel funds are 17.6 percent as likely to have committed funds as non-manager-led angel groups ($p<0.10$). And angel groups with sidecar funds are 410.93 times more likely to have committed funds than those without sidecar funds ($p<0.0001$).

Finally, the preferred stage of investment matters. While a preference for start-up, early or expansion stage investments is not significantly correlated with the tendency to have committed funds, the preference for late stage investing is positively correlated with that tendency. All other things being equal angel groups with a preference for late stage investing are 13.53 times as likely as those without that preference to have committed funds ($p<0.10$).

None of the factors measuring the age of the angel group or the investment region are significantly correlated with the tendency for the angel group to have committed funds.

Table 9. Factors Associated with Committed Funds

Variable	Exp(B)	Significance
Age of Group	0.991	
External Investment Rate in the Area	0.003	
Patent Rate in the Area	0.000	
Angel Tax Credit State	2.119	
Located in California	43.809	*
LLC	4.159	t
Non-Profit Mutual Benefit Corporation	0.038	*
S or C Corporation	0.301	
Prefer Start-up Stage	0.215	
Prefer Early Stage	1.897	
Prefer Expansion Stage	0.408	
Prefer Late Stage	13.528	t
Manager-Led Group	5.692	t
Has Sidecar Fund	410.993	****
Must Invest in State	0.936	
Investment Region Four Hours Drive	0.320	
Cox and Snell R-square	0.362	
Chi-Square	41.354	****
N=92		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

Table 10 examines the factors correlated with the size of the dues paid by angel group members. This model explains very little of the variance in dues paid by angel group members (adjusted R-square of 0.036) and the combination of factors is not jointly significant (F-value=1.211, p>0.10), probably because very few factors are significantly correlated with the size of the dues paid by angel group members.

Among the things that matter is the legal form of the group. Although there is no statistically significant correlation between the corporate legal form and the size of dues, angel groups organized as both non-profit mutual benefit corporations and as LLCs charge significantly higher dues than angel groups taking other legal forms. All other things being equal, members of angel groups organized as LLCs pay $730.27 more in dues (p< 0.05) and members of angel groups organized as non-profit mutual benefit corporations pay $689.34 in dues (p< 0.10) than members of angel groups set up as other legal forms.

The group's investment region also matters. While there is no significant correlation between the size of dues paid by angel group members and the preference of the group to invest in companies located within four hours drive from the angel group's location, those angel groups that require investments to be made in companies in the same state as the angel group pay significantly lower dues than angel groups without this requirement. All other things being equal, members of angel groups that have to invest in companies in the same state as the group pay $612.97 less in annual dues than members of other angel groups (p< 0.10).

Finally, there is a relationship with preferred stage of investment. Although there is no significant correlation between preferences for most stages of investment, members of those angel groups that have a preference for expansion stage investment pay higher dues than members of other angel groups. All other things being equal members of angel groups that have a preference for making expansion stage investments pay $488.88 more in annual dues than members of other angel groups.

The age of the angel group, its geographic location, and its structure are not significantly correlated with the magnitude of the dues paid by angel investors.

Table 10. Factors Associated with Magnitude of Dues Paid by Angel Group Members.

Variable	Beta	Significance
Age of Group	0.093	
External Investment Rate in the Area	-0.093	
Patent Rate in the Area	-0.157	
Angel Tax Credit State	-0.110	
Located in California	-0.073	
LLC	0.297	*
Non-Profit Mutual Benefit Corporation	0.264	t
S or C Corporation	0.117	
Prefer Start-up Stage	-0.102	
Prefer Early Stage	-0.027	
Prefer Expansion Stage	0.198	t
Prefer Late Stage	-0.003	
Manager-Led Group	0.138	
Has Sidecar Fund	0.120	
Must Invest in State	-0.228	t
Investment Region Four Hours Drive	-0.113	
R-square	0.036	
F-Value	1.211	
N=90		

Note: ****= p<0.0001; *** = p<0.001; ** = p<0.01; * = p<0.05; t = p< 0.10

Conclusions

Although the ACA survey is limited in terms of the questions asked, the rate at which surveyed members respond to questions, and the population queried, it provides a first source of data on the activity of angel groups, and, therefore, offers insight into angel group activity. In particular, several interesting patterns emerged from analysis of the ACA survey data. First, angel groups are quite different, depending on where they are located. Angel groups from California have more members, finance more companies per year, and are more likely to have committed funds than angel groups from other states. Angel groups from metro areas in which there was a lot of inventive activity in prior years tend to have more members, and have longer question and answer periods following their entrepreneurs' presentations. Angel groups from places with a lot of external investment activity in prior years tend to have more entrepreneurs present at each group meeting.

Second, the older the angel group, the more members it has and the more companies that it finances annually. Moreover, older angel groups also tend to allow entrepreneurs more presentation time than younger angel groups.

Third, angel groups that take different legal forms are quite different from each other. Angel groups that take the corporate legal form have more members than other angel groups. Those groups that take the form of LLCs have more meetings and higher dues than those that do not. Finally, those groups that take the form of non-profit mutual benefit corporations have shorter presentations and greater dues, and are less likely to have committed funds than other angel groups.

Fourth, the approach that the angel group takes toward its investment region is also related to differences between angel groups. Angel groups that are restricted to investing in a particular state have fewer members, lower dues, and are less likely to have investments of less than $150,000 per round than other angel groups. Angel groups that prefer to have investments within four hours drive of their location have fewer meetings and are less likely to make investments of less than $150,000 per round than other angel groups.

Fifth, the organization of the groups is related to several differences as well. Manager-led angel groups have more employees and shorter entrepreneur presentations, and are less likely to have committed funds than other angel groups. Groups with sidecar funds have more employees and more meetings, and are more likely to have committed funds than other angel groups.

Finally, the preferred stage of investment is related to several aspects of angel group activity. Groups that prefer later stage investing have more committed funds and groups that prefer expansion stage investing have higher dues.

Hopefully, this initial investigation has shed some light on the activities of angel groups and will help researchers, policy makers, and interested observers gain a greater understanding of the activities of angel groups.