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A Note on Venture Capital Networks: Promise and Performance

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Since 1984 Informal Venture Networks (VCNs) have been formed and are currently operating in several states and Canada. However, little has been written in regard to the performance of these networks. This article presents the results of preliminary research concerning their performance. Our research reveals several factors that are presently limiting the VCNs' success and will continue to do so until they are changed. The limited success of the VCNs to date is primarily the result of a lack of funding. Because of small operating budgets, most VCNs have only minimal amounts available for marketing and promotion. Until the VCNs are adequately funded, their high promise will not be matched by performance.

When the first informal venture capital network was formed, at the University of New Hampshire's Whittemore School of Business and Economics in 1984, expectations rose that these networks could hold high promise as a vehicle through which small businesses in need of risk capital might acquire financing. Based on the original model developed at New Hampshire by Dr. William Wetzel and with his assistance, fourteen additional venture capital networks have been established at various locations in the United States and Canada over the past five years. These networks are essentially a conduit through which information can flow, and contacts can be established between potential investors and entrepreneurs. The networks role is simply to bring the two groups together. This is accomplished by listing information taken from each group in a computer data base and then seeking to "match" those with similar interest profiles. This type of service has been described as a "computer dating service for investors and entrepreneurs" [17]. Once the two have been brought together, the network's involvement ceases. They cannot be involved beyond the point of initial contact since they lack the authority to act as broker-dealers or as investment advisers. Their contribution to the efficiency of the informal venture capital market is that of collecting, aggregating and distributing

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information which is useful to investors and entrepreneurs for each ones decision-making process.

The objective of this paper is to review and assess, where possible, the development of this segment of the informal venture capital market. We realize that most of the networks are under three years old and that limited resources have been committed to them in most cases but we believe much can be learned by examining their success and or lack thereof to date.

Some of the relevant questions which can be answered relate to the costs of operating a network, how each is funded, how they are marketed, what the people involved see as important issues to be addressed and how these networks can be improved. We realize that more time is needed before a complete assessment can be done but we believe a preliminary assessment has value at the present.

REVIEW OF THE LITERATURE

The best account of the founding of the Venture Capital Network concept is written by its creator, Professor William E. Wetzel of the University of New Hampshire. Writing in 1983, Professor Wetzel explored the dilemma facing many entrepreneurs during the early 1980s, namely, that venture capital companies normally invest in projects that "require $500,000 or more of financing, that yield projected revenues of more than $20 million within five to ten years and that can go public or sell out by that time" [23]. Citing a 1980-1981 study by Professors Timmons and Gumpert that surveyed fifty one of the largest and most active professional venture capital firms, Wetzel noted that the study revealed that the size of a typical individual investment by a venture capital firm was $813,000. But research by Gaston indicates the average size investment in the informal equity capital market is only $66,700 [16]. The problem for the relatively new company is to grow large enough to attract venture capital financing and with limited resources of family and friends, the entrepreneur must turn to "angels"—those willing to purchase "founders' stock" in the enterprise. Under a grant from the Small Business Administration, Wetzel and his colleagues turned up 133 investors who fit the self-imposed description of a business angel. The objective of this research was to find out "where angels come from, how many there are, how to find them or what angles look for in a venture proposal" [23]. One of the questions Wetzel asked the angels was whether they were satisfied with the effectiveness of existing channels of communication between bona fide entrepreneurs and investors like themselves. Using a Likert scale, totally dissatisfied respondents outnumbered "definitely satisfied" respondents by more than four to one [23] confirming other studies reflecting general dissatisfaction with the market efficiency/flow of information by participants in the venture capital industry [4]. Armed with the results of the SBA study, Wetzel persuaded the University of New Hampshire and the Business and Industry Association of New Hampshire to create VCN as a joint project which in turn would contract VCN's management to the Office of Small Business Programs of UNH [19].

The significance of the role of "angels" can only be brought into focus by examining the research on the function of the entire venture capital industry on the economy. Venture capital has been described as serving the function of accelerating the process of technological change and that venture capitalists perform a gate-keeping function [14]. The researchers conclude that "venture capital-financed innovation overcomes a variety of barriers which stymie technological progress including: the risk aversion of established financial markets, the organizational inertia of large corporations, and the multifaceted technological, organizational and financial requirements of new business development" [14]. Interestingly, while the researchers charted the roles of venture capital in terms of three phases—catalyst-organizational to assistance to liquidation—they did not describe "angels" or identify the role of those willing to invest relatively small amounts of capital in seed or start up entities. To the extent that "angels" make possible entities large enough to attract the investment interest of the professional venture capital industry, the existence of such angels may yet form another "gatekeeper."

While the emphasis of this study is to assess the impact of Venture Capital Networks in their respective locations, it is important to note the research on the venture capital industry as a whole. In the United States, there are seven venture capital complexes: California (San Francisco/Silicon Valley), Massachusetts (Boston), New York, Illinois (Chicago), Texas, Connecticut, and Minnesota. Researchers have suggested that although venture capital is not absolutely necessary to facilitate high technology entrepreneurship, "well developed venture capital networks provide tremendous incentives for entrepreneurship by lowering the difficulties of entering an industry" [15]. If the existence of the professional venture capital industry is, as the researchers suggest, a self-feeding magnet that tends to attract more capital and more professional venture capitalists because professionals seek syndications or a sharing of risk, or as one researcher suggests the sharing of information [9]; and if the existence of such centers of venture capital help to promote new business formation, then the question of the economic impact of the Venture Capital Network is all the more intriguing for communities that are considering practical means of fostering new business development.

Wetzel suggests through his 1987 study of risk capital that private investors manage a portfolio of venture investments aggregating in the neighborhood of $50 billion which in 1987 was about twice the capital managed by professional venture investors! [25] Furthermore, Wetzel builds a case that by participating in smaller transactions, private investors finance over five times as many entrepreneurs as professional venture investors: 20,000 or more firms per year compared to two or three thousand. Wetzel uses two methods to reach these conclusions about the size and nature of the "informal venture capitalists." One is simply using data on wealth, income and asset distribution of U.S. households, and concluding that the top one percent of U.S. households have invested over $151 billion in non-public businesses in which they have no management interest. "It is not unreasonable to believe that venture-type financing in the portfolios of the top one percent may be at least $50 billion" [25]. Citing research conducted by Applied Economics Group, Inc. (AEG), Wetzel notes that the typical firm in AEG's sample raised $220,500 of equity and near-equity financing, typically from three informal investors [25]. Using this data, Wetzel concludes, "According to AEG's data, informal investors commit some 10-24% of their net worth to venture investments. If there are 345,000 informal venture investors in the U.S. with an average net worth of $750,000, and with 10-24% of their net worth available for venture investments, the aggregate informal venture capital pool is between $25 billion and $62 billion" [25].

Other research recently completed by Gaston indicates that the contribution from the informal side of this market may be much larger than even Wetzel's estimate [16]. Using national survey data from the Informal Investor Microdata File, he estimated that 720,000 investors make some 489,600 investments per year valuing an estimated annual flow of $32.7 billion [16]. This is almost eight times the annual investment from the formal venture capital market. Informal investment is the single largest source of small firm equity capital available and is approximately equal to the amount raised from all other sources combined [16]. Gaston concludes that the total investment from the informal group may exceed $167 billion based on a 5.1 year mean holding period [16].

In spite of the size of the informal venture capital market, Wetzel's review of studies shows that the most common and reliable sources of investment information among the "informal" or non-professional venture investors were friends and business associates [24]. Most significantly, Wetzel cites many studies that document the inefficiency of the informal capital market leading to what is described as "a discouragement effect operating among unsuccessful seekers of venture capital, would-be seekers of venture capital, and would-be entrepreneurs" [3, cited in 25]. A study published in 1988, provides additional research describing the "informal capital risk investors—

angels" and confirms that their most common entry into an investment is through associates or friends. The researchers confined their study to the East Coast and explored not only the issue of "market efficiency" but also the issues of investment criteria and the decision-making process utilized, and the results achieved by surveying a sample population consisting of members of New York venture capital clubs, graduates of specific professional schools (NYU and Wharton MBA graduates and medical), personal referrals and NY Metropolitan dentists. From a sample of 2989 potential respondents, 320 responded affirmatively to their study. The researchers developed a demographic profile reflecting the biases of their sample, but more intriguing was their analysis of the decision making strategies used by the respondents in evaluating an investment [18].

During the period July 1984 through June 1986, VCN arranged in excess of 1,000 introductions for over 200 entrepreneurs from 30 states and over 300 investors from over 33 states [25].

The establishment of the Venture Capital Network in New Hampshire was not unnoticed by both trade and academic publications. One writer noted that "taking the randomness out of matching angels with entrepreneurs would mean a wide range of opportunities for investors, while providing a badly needed pipeline to growth capital for small companies" [5]. *Business Week* [8], *D & B Reports* [5], *In Business* [17], and the *Boston Herald* [19] have all carried articles about the development of the Venture Capital Network and its spread throughout the country.

The concept of a database designed to match companies seeking capital with prospective investors was implemented on January 1, 1987 in Canada and by January 1988 the network had received over 7,000 requests for registration material from interested investors and corporations. The system called Computerized Investment Network (COIN) went national following an initiative by Ontario premier David Peterson who "described COIN as an excellent opportunity for provinces to help one another" [12].

A review of the literature on informal venture networks reveals several key studies on the difficulties of identifying and measuring the informal venture capital investor called Angels [23, 24, 25, 20, 18]. The research cites the problems of market efficiency due to a lack of formal informational networking among needy companies and ready investors. The historical development of the Venture Capital Network and how it operates is fully described [22, 23, 24, 25, 6]. However, there has been little assessment as to the impact of all the VCNs, nor an assessment of the costs and benefits of such programs (which receive public funding for their support), nor an analysis of what factors account for higher participation or matches.

PURPOSE AND METHODOLOGY

The purpose of this informal/preliminary study is to assess the Venture Capital Network concept using the very simple criteria of number of participants, the number of matches, the number of fundings, and a subjective assessment of indirect benefits of the program.

To obtain the data needed, questionnaires were mailed and telephone calls were placed to fifteen directors of Venture Capital Networks during the first week of September 1989. The questionnaire was designed to obtain the following data: number of months of operation, number of investors per year, number of companies on the system, number of recorded matches, number of reported fundings, cost of operating and maintaining the system, fees charged to both companies and investors, types of companies listed in the system, and the profile of investors. In addition, the directors were solicited to respond to a more detailed survey which will form the basis of a more sophisticated analysis of the Venture Capital Network concept with the hope of determining what expectations the system can reasonably fulfill and what variants tend to influence the impact of the network.

PRESENTATION OF THE RESULTS

The response to the questionnaire was very good. We received ten usable questionnaires out of a total of fifteen which were mailed out. The analysis of this group provides a useful understanding of this segment of a very important section of the financial markets. In addition to the usable questionnaires, we also received responses from three other VCNs indicating that they did not wish to participate in our research. Only two of the fifteen failed to respond in some manner. Dr. William Wetzels' office sent out an information memo on our behalf which certainly contributed to our response rate.

As this is a descriptive study, we present the questions asked and the results received in answer to each question. These questions and the aggregate response to each one is presented in Tables 1-10 and is referred to in the following discussion.

Table 1
Year of Organization of the VCN

Number organized in:	*1986*	*1987*	*1988*	*1989*
	2	3	4	1

Table 2
Number of Employees

VCNs with:	*Full-time employees*	*Part-time employees*	*Volunteers*
	3	10	2

Table 3
Number of Active Investors on All Networks

Number of VCNs with:	*0-10*	*10-20*	*20-30*	*Greater than 30*
	2	2	3	3

Table 1 shows that this part of the informal Venture Capital Market is very young. Only one of the networks reporting to date is more than three years old, and from other sources of information we know that no more than three out of the total of fifteen are more than three years old.

Table 2 shows that only three of the reporting networks employ anyone on a full-time basis. All the networks showed part-time employees or volunteers with the most time available.

Table 3 indicates the number of investors who are currently registered as active investors on the reporting networks. The procedure is generally to keep the investor on the active list for only six months to one year per each registration. If they do not indicate that they wish to continue as an active investor they will then become classified as inactive and will no longer receive data on firms seeking capital. Some may become active at a future date after being inactive or they may choose to remain inactive. The number of active investors ranged from a low of three, on a very new network, to as many as 163 on one a little older. The total number of active investors on those reporting networks is 417.

The budgets of the Venture Capital Networks are relatively small. Table 4 shows that only five have operating budgets greater than $10,000 annually. The smallest budget for annual operations of a network was estimated at $2,000 and the largest is $500,000.

Table 4
Annual Operating Budget

$10,000 or less	*$10,000-$25,000*	*Greater than $25,000*
5	3	2

Table 5
Number of Firms Seeking Capital

VCNs with:	*0-24 firms*	*25-50 firms*	*Greater than 50 firms*
	2	3	5

Table 6
Number of Initial Matches Identified

VCNs with:	*0-99*	*100-150*	*Greater than 150*
	5	2	3

The total number of entrepreneurs who are currently actively seeking capital through one of the Venture Capital Networks is 730. The most on any one center is 223 and the fewest is three. Table 5 reveals two centers have fewer than 25 entrepreneurs; three have between 25 and 50, and five have more than 50. These numbers, as well as the number of investors shown in Table 3, may reflect the importance of the size of the annual budget. An examination of the data shows that the center with the largest number of investors (163) and the largest number of entrepreneurs (223) also has the largest annual budget ($500,000), and has only been in operation since late 1987. Also, the center which has the second highest numbers in these two areas has the second largest budget and has only been operational since late 1988. More dollars may not mean more success, but from the limited data available it would appear that if these centers are going to reach their potential users they will need more funding.

Tables 6 and 7 show that some limited amount of capital has been raised through the centers in 1989. As the tables show, several successful matches were reported. These involved a total of more than $3,000,000. When one considers the limited budgets of the centers it appears that they are cost effective. However, if operating budgets remain small, they are not likely to reach a large enough group of entrepreneurs and investors in order to have a significant impact on their region's or state's economic growth rate.

Table 7
Amount of Investment Resulting From Matches

Dollar amount:	*Unknown*	*$0-$100,000*	*Over $100,000*
	4	2	4

Table 8
Marketing Plans of VCNs

	Yes	*No*
Do you have a formal marketing plant?	7	3
Is your plan a written plan?	0	10

More time and much more data are needed before this type of determination can be made. Also, in addition to the funding acquired through the centers, some firms are acquiring funding from other sources because of their effort to get funding through the centers. The center directors interviewed were aware of several such occurrences. Because of the expertise the entrepreneur gained through their association with the center, they were successful in obtaining other funding. Also, there were reports of other fundings which occurred as a result of an entrepreneur's involvement with a center. In some cases, the result of the company's involvement with a center took the form of debt funding from a bank. In these instances, the banks were willing to lend the firm additional funds because of the equity investment made by the Angel or because the Angel agreed to help secure the debt. This type of funding is much more difficult to track but it is apparent from these past experiences that direct equity funding from Angels is only one benefit which can result from entrepreneurs involvement with a Venture Capital Network. Gaston's analysis of the Microdata file provides an estimate that in addition to a $32.7 billion annual equity flow, $22.0 billion is extended to small firms in the form of loans and loan guarantees from the informal investors [16].

Tables 8, 9 and 10 reveal a great deal about the importance of marketing on venture capital activity through venture capital networks. Since these VCNs are new organizations without prior history or track records, they need wide exposure in order to generate interest both from investors and

Table 9
Advertising Methods of VCNs

Method used	*VCNs*
Newsletters	4
Brochures	10
Seminars	3
Business publications and/or business newspapers	5
Word-of-mouth	10

Table 10
Sources of Funding

Percentage Supplied by Each Source:	*0-25%*	*25%-50%*	*>50%*
Federal Government		1	1
State Government			5
University	1		
Company fees	3	2	2
Investor fees	2	2	1
Private Donation			2
Private Grants			1

entrepreneurs. Like any new product or service, VCNs need a well-organized, aggressive marketing program if they are going to fulfill their promise. As Tables 3 and 5 show, VCNs are enjoying limited success in attracting investors and entrepreneurs. Our analysis suggests a direct correlation between funding and participation. Table 4 reveals that only one or two of the VCNs have sufficient funding to allow any amount of marketing beyond the minimal effort of producing informational brochures about the centers. What is needed is an organized marketing campaign targeting those who are involved with small businesses and those groups which are most likely to produce Angels. Given the current operating budgets of the centers, their ability to develop and implement aggressive marketing programs are very limited. Funds are simply not available for such an effort. The VCNs need Angels!

The importance of effective marketing for these centers is supported by Gaston's finding that "the majority of responding investors (53.9 percent) wanted to invest more than the volume of opportunities permitted" [16]. On average these investors wanted to invest 34.7 percent more than they were able to find suitable investments to support. The total amount of uninvested capital from this group is estimated at $19.3 billion [16]. The obvious reason these funds are not being used to create jobs is because of a lack of sufficient information flowing between investors and firms seeking capital. Well-marketed VCNs could be a solution to this problem.

Table 10 shows the sources from which these centers are funded. Seven of the ten which responded to our questionnaire must depend on state or federal funds for the bulk of their budgets. This generally means that they are not being funded as separate entities but are included in the funding for some other agency such as a Small Business Development Center. Being housed and operated within these other organizations may be a hinderance to the development of the VCN. It appears from our research that those VCNs which are more or less separate entities have a better chance of higher participation levels. However, our data is too limited in this area to make a definite statement at this time.

The success of the Venture Capital Networks has been limited. This should be anticipated since they have been in operation for such a short time and they have had very limited amounts budgeted for their operations. In almost every case, money was not available to fund any kind of marketing program. The limited amount of money available for marketing is used to produce brochures detailing characteristics of the center. There is little or no money available for any additional marketing effort. Word-of-mouth is the only marketing or advertising avenue for most centers.

SUMMARY AND CONCLUSIONS

It is apparent from the data presented that much more needs to be done in this area of the Venture Capital Market. The limited success of the centers reflects a lack of adequate funding, and the short time they have been in operation. If the potential users, both entrepreneurs and investors, are to be reached by these centers there needs to be a greater marketing effort. However this cannot occur if budgets remain so limited. The literature on small firm financing indicates that a strong need exists for the type of funding these Venture Capital Centers promote.

Recent articles in the financial journals indicates that traditional venture capital providers are becoming less interested in this group. Even those firms that need amounts in the $500,000-$600,000 range may find few, if any, venture capital companies that are interested. Research indicates that much of the vitality and competitiveness in our economy must come from the development of small firms in the technology areas. If small firms can acquire adequate equity funding they are much more likely to make a significant contribution to job creation in our economy. Studies indicate that firms with fewer than 100 employees account for the majority of job creations.

The concept of the Venture Capital Networks appears to hold high promise in helping to fulfill this major need of small firms, but without more marketing effort they may be like the man who winks in the dark—only he knows what is happening. When adequate funding is available the results have been very promising. However, the performance as measured by participation of investors and entrepreneurs will not likely equal the promise unless the present level of funding for promotion and marketing is increased.

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