國立交通大學九十學年度碩士班入學考試試題

科目名稱：管理個案分析(501) 考試日期：90年4月21日 第3節
系所班別：科技管理研究所 組別：丙組 第1頁，共5頁
＊作答前，請先核對試題、答案卷（試卷）與准考證上之所組別與考試科目是否相符！

1. 請在閱讀下列文章後回答下列問題:
   a. 何謂創設業(VC)? 10%
   b. 在文中有多少商業計劃書得到VC的重視？有多少比例會得到VC的投資資金？請說明何以比例會如此低。 10%
   c. 文中所謂第一代VC與第二代VC的差異何在？ 10%
   d. 請說明文中所謂創業過程中的Stage 0, 1, 2 & 3？ 20%

KEYNOTE ADDRESS

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A couple of years ago, the School of Management began to look at the field of venture capital and entrepreneurship. We saw a kind of black art, I think many in the business will agree. There was a certain mystique about it, some of it real and some of it probably created. There seemed to be no rules for the game. Everybody did it differently and there seemed to be no particular pattern.

As an academic institution, which is theoretically a neutral ground, we decided to study the venture capital business and see if we could derive some patterns. We hoped we would be able to develop some guidelines which would be useful to both those who wanted to form companies and those who wanted to invest in companies. We then would be in a position to take some educational action in the form of courses, seminars and consulting.

We are currently in the midst of what might be called the “analysis phase.” What have we learned about the business of venture capital so far?

Experts cite all manner of facts and figures about the success or failure rates of new ventures sponsored by venture capital companies — that they do not fit the normal pattern of small business failures and are more often successful than the normal small business. What they often overlook is the careful filtering that takes place before many of these new companies ever get started.

Some of our studies and investigations reveal that about 95 to 97 percent of the initial proposals submitted to a well established venture capital firm are rejected out of hand. About 3 to 5 percent, the remainder, will get a second reading. Approximately 1 percent will get a close look and about one-half of 1 percent will be financed.

Now, these statistics are based on studies done within the last couple of years. What the situation would be today in a tight money market would be anybody’s guess, but we do find that money is available and ready to be placed in good venture opportunities.

Too often, as you can see from these statistics, the venture capital business has been one of waiting for an accident to happen — sitting back and waiting for the right man with the right idea to walk in the door. We think that something can be done to improve these statistics, where only one-half of 1 percent of the proposals are funded.
Our venture capital seminars this year and last year have focused on technology companies, and for deliberate reason. We don’t feel, however, that our seminar activities and conclusions are necessarily restricted to technology companies. The lessons learned can and have been applied to many other types of activities and industries.

But the technology companies and so-called “knowledge” industries have historically been at the forefront of new knowledge. From their environment has sprung what we know as basically the venture capital business today. These have been the glamorous high-fliers in the stock market. The technology companies have essentially been the foundation of the venture capital business in this country.

Also, when we talk about technology companies or when we define the venture capital business, we are talking about growth companies — companies which from the time they get started want to grow just as fast as they can. They are aggressive. They want to go public just as fast as they can.

They want to be as large as possible, as soon as possible, and while initially they would be classified as Small Business these companies want to move from that classification just as quickly as they can. Their planning and outlook is oriented toward becoming a large company within a relatively short time frame.

There are companies that have been very growth-minded through the acquisition route in the past few years. Because of their high price/earnings multiples, these glamorous companies have been in a position to acquire other companies, often with “Chinese paper,” as it has been called, but they have been, nonetheless, acquisition-minded in philosophy and approach.

A good number of the acquisition-minded growth companies in this country started with a technology base. They used the glamour and leverage of the technology base and its associated price/earnings ratio to develop into a conglomerate — Teledyne, Litton, I.T.T., to name a few.

On the other hand, we are not talking about small or “cottage” industries — the garage shops and mom-and-pop operations. These industries have a place in the economy and we consider them to be a very important segment, but we will not be addressing ourselves to them in this Conference on venture capital.

You will notice that our title, “VENTURE CAPITAL AND MANAGEMENT,” is different from titles people have used in seminars on related topics. We think this is a significant difference and that management is as important as capital in an understanding of venture operations.

Of course, we all expect good management in the corporation itself or in the new company, but what we are talking about particularly is the management expertise, cooperation and coordination obtained from the financial backers and the financial partners, in a venture involving a new entrepreneurial type of company. It is a form of handholding. It is a form of parenthood. It is the backing of a man and an idea.

It makes many conservative bankers shudder with horror to think of putting several million dollars into an organization which doesn’t yet exist, for the new venture company is often just a group of people with an idea. But this is the nature of the business we are talking about — the joining of technology, management and money to form a viable corporation.

It is very appropriate that we should be conducting a venture capital seminar in Boston. It has been called the “cockpit” of the venture capital business. In fact, the growth of venture companies here has been labeled in many other parts of the country as the “Route 128 phenomenon,” because many of these companies grew up around Boston’s Route 128.

We and others have looked into the reasons why this phenomenon occurred. Many of the factors were, in fact, accidental, a certain combination of the right things at the right time: strong
universities with a pragmatic approach, such as Harvard and M.I.T., working with industry and a receptive community; cheap, available floor space; and a venturesome financial community.

It is interesting to note that while the Boston financial community has been considered by many outsiders to be a conservative financial community, historically this is not true. This was the same community which backed the clipper ships and the whaling ships which were the venture capital industries of their day. It is a community that is accustomed to backing risky, forward looking ideas, based on men who are self-confident entrepreneurs.

We see the same pattern repeating itself now in other areas of the country where some of these same factors are operating — San Francisco, the Minneapolis-St. Paul area, Washington, D.C. and others.

The Route 128 concept involves what we chose to call “first generation” venture capital operations. In Boston, we are moving now into “second generation” venture concepts.

Some of these “second generation” concepts include companies which form companies, that is, venture capital companies who do not wait for the accident to happen but who go out and try to put together the package. We have called this “planned parenthood” of new companies.

Then, there is the institutional approach. Many large institutions, quite different than the classic small venture capital operations, are moving into the business. Some of these are financial institutions. Some are operating companies which are getting into the venture capital business themselves. Rather than losing people who ordinarily would spin-off and form their own companies, these companies are spinning off their people, subsidizing and financing them, helping them to set up their operation, providing some of the management umbrella that a venture capital firm would supply, and getting a piece of the equity in return.

Also, in the last few years, the concept of venture capital as a regional area and development tool has emerged. We have had many discussions with our government friends in New England and Washington. We and they think that with appropriate regional organization and proper education, venture capital can be applied to facilitate the creation of new companies in particular areas where growth is desired.

At times, the venture capital business can be very confusing and needs some definition. What do we mean when we use the words: “steps,” “stages,” “phases”? All the old words that used to mean something ten to twenty years ago in the business have become blurred and fuzzed. I would like to provide some definitions here, so that we will have a starting place and a basis of understanding throughout the Seminar.

“Stage 0” in a venture capital operation is the stage where the entrepreneurs are still working with the basic organization from which they are planning someday to spin-off. They are still employed in the organization, but they are working in each other’s house basements at night, working up plans and dreams; they are getting ready to go.

“Stage I” is the start-up phase, where the entrepreneurs actually break off and form their new company. They start with seed capital which can come from a number of diverse sources. Generally, the new company will have a high ratio of equity to debt. Its initial financing will be largely from selling ownership in the company to the financial backers, which is the classic venture capital step. Here, the venture capital company participates with relatively small amounts of funding but, of course, great growth possibilities.
“Stage II” occurs when the company has built up a bit of a track record; it has gotten through the initial growth phase and some of the conventional investment analysis techniques and facts and figures can be applied. It is in Stage II where a number of other financial sources, in addition to the traditional venture capital companies, have begun to participate.

At this point, the company has developed capital equipment and can begin to think of growth. Usually, the investment terms are in the form of unregistered letter stock and in terms of a few hundred to a few million dollars. Here different partners begin to move into the game, more the investment type than the venture capital type.

“Stage III” is usually the public equity offering, where the company goes to the public market for money. This can often include a secondary public offering of a small company, which is in a growth phase, it can even include some unregistered securities of public companies. But in Stage III, a company is still in a high growth phase and hasn't fully matured as yet.

These stages, which developed in the classic sense many years ago, have been warped badly out of shape by rather easy public money in the rapidly rising stock market of recent years. So that before many companies had anything more than a name and a prospectus, they were going to the public money market. In other words, they skipped Stages I and II; they went right to Stage III and went public with just some people and ideas and perhaps a garage shop.

I think that some of the shake-out in the market in the last few months will realign much of this, because there hasn't been a large gathering at the well of the public money market in the last few months, by any means. In fact, many companies who have matured and were about to put out public offerings have retracted them, as you know, because of the unstable market situation right now.

In conclusion, the objectives of this Seminar are a bit different from those of other venture capital seminars. Using what might be called a much abused term, the “systems” approach, we are trying to present all aspects of the subject of venture capital and management. Certainly, all aspects are represented in the audience, as well as on the panels. We hope that this will provide a balanced viewpoint for you and generate informal, free-wheeling discussion and even some healthy argument. We know that the speakers and panelists will present different viewpoints; in fact, that is why we asked them here.

We hope you will have an enjoyable couple of days with us throughout our second annual seminar on "VENTURE CAPITAL AND MANAGEMENT."
How Portfolio Planning Nearly Destroyed the Cabot Corporation

In the 1970s the Cabot Corporation was one of the eager adopters of the Boston Consulting Group’s (BCG) portfolio planning matrix. By all accounts, it nearly destroyed the company. Cabot is one of the world’s leading industrial companies, with 1992 revenues of $1.5 billion. Its products are rarely seen by the public but are all around us. They include carbon black, which is primarily used in rubber products and inks, tantalum powders used by the Electronics industry, and plastic concentrates.

After an analysis undertaken with the aid of the BCG in the late 1970s, the company decreed that its traditional chemical businesses were “cash cows.” The plan was to milk these divisions for cash that would then be reinvested in the “star” divisions. The star divisions included diversification efforts in metal manufacturing, ceramics, semiconductors, and a gas transmission business. The result, however, was to throw good chemical earnings into businesses in which Cabot had no experience and to which Cabot could add little value. In the meantime, Cabot’s chemical operations were starved of the capital that they needed to keep them operating efficiently. Moreover, morale in the chemical operations began to slide as managers realized that funds were being siphoned off to support other operations. As a result, throughout much of the 1980s Cabot’s return on assets declined.

Ultimately the Cabot family, which owns 30 percent of the stock, woke up to what was going on and brought in a new CEO, Sam Bodman, to run the business. Bodman spent his first few years restructuring Cabot, selling off many businesses that the BCG had designated as “stars” and redirecting funds toward the company’s core chemical operations. He spent more than $500 million refurbishing and expanding the long-ignored chemical plants and building five new ones. At the same time, research efforts were redirected toward Cabot’s traditional areas of expertise—organic chemicals—in which the emphasis was upon adding value to Cabot’s commodity products. The result is that Cabot’s operating costs have fallen dramatically and the development of a new generation of specialty chemicals has allowed the company to widen its margins. After years of financial malaise, in 1992 Cabot’s earning surged 55 percent ahead of the 1991 figures on flat revenues (reflecting divestments).5

Although the BCG model has been widely used as a tool for portfolio planning. In recent years, however, corporate leaders have limited utility of using this model for strategic planning, especially for companies operating in dynamic and fast-changing industries. Please read the case show above, and indicate what you know about the portfolio planning. Also point the assumption, the utility and limitations of the BCG model for portfolio planning.