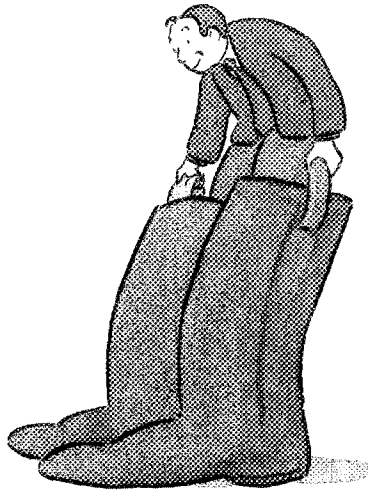


*It's not raising money but having the wits
and hustle to do without it.*

Bootstrap Finance: The Art of Start-ups



by Amar Bhidé

Entrepreneurship is more celebrated, studied, and desirable than ever. Business school students flock to courses on entrepreneurship. Managers, fearful of losing their step on the corporate ladder, yearn to step off on their own. Policymakers pin their hopes for job creation and economic growth on start-ups rather than on the once-preeminent corporate giants.

Belief in a "big money" model of entrepreneurship often accompanies this enthusiasm. Books and courses on new ventures emphasize fund raising: how to approach investors, negotiate deals, and design optimal capital structures. The media focuses on companies like Immulogic, which raised over \$20 million in venture capital years before it expected to ship any products. Executives-turned-entrepreneurs try to raise millions from venture capitalists before they have sold a dime's worth of goods to customers. Lawmakers who favor entrepreneurship focus on tax incentives for venture capital and loan guarantees for start-ups.

This big-money model has little in common with the traditional low-budget start-up. Raising big money requires careful market research, well thought-out business

plans, top-notch founding teams, sagacious boards, quarterly performance reviews, and devilishly complex financial structures. It is an environment in which analytical, buttoned-down professionals can make a seamless transition from the corporate world to the world of entrepreneurship. It is not the real world of the entrepreneur.

Without question, some start-ups powered by other people's money have rocketed to success. Mitch Kapor raised nearly \$5 million of venture capital in 1982, enabling Lotus to launch 1-2-3 with the software industry's first serious advertising campaign. Significant initial capital is indeed a

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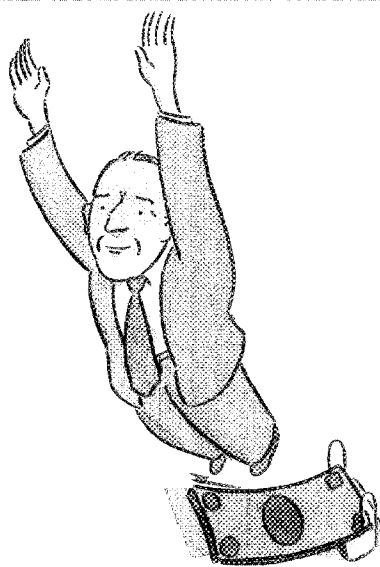
must in industries such as biotechnology or supercomputers where tens of millions of dollars have to be spent on R&D before any revenue is realized. But the fact is that the odds against raising big money are daunting. In 1987 – a banner year – venture capitalists financed a grand total of 1,729 companies, of which 112 were seed financings and 232 were start-ups. In that same year, 631,000 new business incorporations were recorded.

Does this disparity mean that the United States needs more tax breaks, aggressive investors, and financially sophisticated entrepreneurs to channel venture capital to more start-up companies? Not at all. Over the past two years, my associates and I interviewed the founders of 100 companies on the 1989 *Inc.* "500" list of the fastest growing private companies in the United States (see the insert, "The Study of Start-ups"). The companies – Software 2000, Symplex Communications, Gammalink, and Modular Instruments, to mention just a few – are not household names. But they are the mainstay of the entrepreneurial revolution that politicians want to sustain and that so many people, managers and business students alike, hanker to join.

These interviews attest to the value of bootstrapping: launching ventures with modest personal funds. From this perspective, Ross Perot, who started EDS with \$1,000 and turned it into a multibillion-dollar enterprise (and a presidential campaign), remains the rule, not the exception. More than 80% of these companies were financed through the founders' personal savings, credit cards, second mortgages, and in one case, "a \$50 check that bounced." The median start-up capital was about \$10,000. Furthermore, fewer than one-fifth of the bootstrappers had raised equity for follow-on financing in the five or more years that they had been in business. They relied on debt or retained earnings to grow.

What, then, is the problem? To quote Michael Lutz, CEO of Gammalink, a high-flying Silicon Valley venture that provides PC-to-facsimile communications services, "Raising money has become a disease. Entrepreneurs are wasting lots of brainpower scheming to raise money."

Professionals with MBAs and corporate experience are attempting to strike out on their own as never before: Michael Lutz, for example, is a physi-



Ross Perot's \$1,000 start-up of EDS attests to the value of bootstrapping.

cist and Stanford MBA who worked at Hughes Aircraft and Raychem for 15 years before he joined up with a Silicon Valley guru to launch a new venture. Unlike the scrappy drop-outs and malcontents of yore, however, these new entrepreneurs are unwilling to pursue business opportunities without raising big money first. Following textbook formulas for snaring investors, they attempt to recruit experienced teams. They write business plans with crisp executive summaries describing their proprietary edge. If venture capitalists are unresponsive, they network with venture angels. Even today, they have heard there is more money than good ideas.

In fact, as Gammalink's founders learned, an entrepreneur's time is rarely well spent courting investors. Despite a well-written business plan and excellent contacts, Lutz and his partner failed to attract venture capital in a year of trying. Eventually, they contributed \$12,500 each to launch Gammalink. Years later, after their company was a proven success, it attracted \$800,000 in unsolicited venture capital.

For the great majority of would-be founders, the biggest challenge is not raising money but having the wits and hustle to do without it. To that end, it helps to understand what it takes to start a business – and why that is likely to conflict with what venture capitalists require.

A Poor Fit

Many an entrepreneur's hopes are dashed when a venture capitalist rejects a promising business plan. But would-be founders should not interpret lack of interest from the investor community as a pronouncement that the business is doomed. Often entrepreneurs fail to qualify for venture capital not because their proposals are poor but because they do not meet the exacting criteria that venture capitalists must use.

Venture capitalists (and other investors in start-ups) are neither greedy nor shortsighted, as some disappointed entrepreneurs believe; they are simply inappropriate for most start-ups. Their criteria are understandably exacting: venture capitalists incur significant costs in investigating, negotiating, and monitoring investments. They can back only a

The Study of Start-ups

Lessons about entrepreneurship are often drawn from individual case studies, which provide rich but potentially idiosyncratic data, or from survey statistics that reveal little of the hows and whys of success. In pursuit of both depth and breadth, I recently completed a far-reaching field study of start-ups. With the help of Research Associates Kevin Hinton and Laura Pochop and Professor Howard Stevenson, I interviewed 100 company founders about how they overcame the daunting obstacles that confront start-ups.

The companies in the study came from the 1989 *Inc.* "500" list, a compilation of the fastest growing privately held companies in the United States that had sales of at least \$100,000 in 1983. (The average company on this list had 1988 revenues of about \$15 million, 135 employees, and a five-year sales growth record of 1,407%.) I narrowed my list of prospective interviewees to companies founded after 1982, on the grounds that the start-up history of older companies would be more difficult to obtain.

Finding a representative cross section of start-ups was a challenge. Since many incorporations are just attempts at self-employment or poorly conceived ventures that would say little about starting new businesses, I could not simply draw from the hundreds of thousands of new businesses incorporated every year. At the same time, I also wanted to avoid the few billion-dollar successes like Federal Express or Microsoft, which the typical entrepreneur cannot realistically hope to emulate. My sample provided a happy middle ground. The *Inc.* list's requirement of a five-year track record of rapid growth helped eliminate

low-potential or "born to fail" ventures. And with 500 companies on the list, I avoided "outliers" that succeeded because of the unusual talent (or luck) of the founder.

To get the start-ups' stories in all their complexity, I chose to conduct face-to-face interviews rather than send out a mail survey. Start-ups are characterized by close relationships among financing, marketing strategies, hiring, and control systems that would be hard to capture through a structured survey. Since executives of successful companies are inundated with mail surveys, response rates are generally low. Although we had some difficulty in contacting entrepreneurs and scheduling appointments, only a few declined to be interviewed.

Each interview lasted from one to three hours. Usually two researchers took handwritten notes, which were then compiled into a single transcript and returned to the interviewees for review.

To my knowledge, this is one of the broadest, most in-depth studies of U.S. start-ups. Where other field studies have focused on limited geographic regions or industries, we visited over 20 cities and towns in a dozen states to interview entrepreneurs in a wide range of businesses. Researchers who have tackled similarly broad samples have relied on mail surveys.

Reflecting *Inc.*'s criteria, my sample was biased toward very high-growth companies. But the skew actually reinforces my findings about the importance of bootstrapping: start-ups that grow more slowly are even less likely to need or be able to attract outside risk capital.

few of the many entrepreneurs who seek funding, and they must anticipate that several investments will yield disappointing returns. One study of venture capital portfolios by Venture Economics, Inc. indicates that about 7% of the investments account for more than 60% of the profits, while a full one-third result in a partial or total loss. Each project must therefore represent a potential home run.

Start-ups, however, typically lack all or most of the criteria investors use to identify big winners: scale, proprietary advantages, well-defined plans, and well-regarded founders.

Most start-ups begin by pursuing niche markets that are too small to interest large competitors—or venture capitalists. Venture capitalists are hesitant to pursue small opportunities where even high-percentage returns will not cover their investment overhead. They favor products or services that ad-

dress hundred-million-dollar markets. Legendary investor Arthur Rock goes so far as to limit his investments to businesses that have "the potential to change the world."

Few entrepreneurs start with a truly original concept or a plan to achieve a sustainable competitive advantage through a proprietary technology or brand name. Instead, they tend to follow "me too" strategies and, particularly in service businesses, to rely on superior execution and energy to generate profits. But it is hard for outside investors to evaluate an entrepreneur's ability to execute. Nor can they count on cashing in their investments in companies whose success cannot be sustained without the founders' capabilities.

Many entrepreneurs thrive in rapidly changing industries and niches where established companies are deterred by uncertain prospects. Their ability to

roll with the punches is far more important than planning and foresight. Investors, on the other hand, prefer ventures with plausible, carefully thought-out plans to address well-defined markets. A solid plan reassures them about the competence of the entrepreneur and provides an objective yardstick for measuring progress and testing initial assumptions.

Finally, many entrepreneurs are long on energy and enthusiasm but short on credentials. Michael Dell was a freshman at the University of Texas when he started selling computer parts by mail order. Others are refugees from declining or oligopolistic industries, seeking new fields that offer more opportunity but where they lack personal experience.

Investors who see hundreds of business plans and entrepreneurs, however, cannot gauge or rely on the intangibles of personality. Thus Mitch Kapor was a good bet for investors because he already had a successful software product, Visiplot, under his belt before he launched Lotus. Bill Gates, on the other hand, a teenage college dropout when he launched Microsoft with his high school friend, Paul Allen, probably was not.

The Hidden Costs of Other People's Money

Entrepreneurs who try to get investors to bend their criteria or create the perception that they meet those criteria do so at their peril. Several entrepreneurs pointed to the pitfalls of rushing to raise external financing. Winning over investors too early, they said, can compromise your discipline and flexibility.

Bootstrapping in a start-up is like zero inventory in a just-in-time system: it reveals hidden problems and forces the company to solve them. "If we had had money," said Tom Davis of Modular Instruments, manufacturers of medical and research equipment, "we would have made more mistakes. This way, I wrote all the checks. I knew where the money was going."

There can also be problems with raising too much money. As one founder noted, "It is often easier to raise \$5 million than \$1 million because venture capitalists would rather not have to worry about a lot of tiny investments. But then you have \$4 million you didn't need but spend anyhow."

George Brostoff, cofounder of Symplex Communications, which manufactures data communications equipment, agreed. "People in my industry

think they need to be able to do x, y, and z at the outset. But the money gets burned up quickly, and it doesn't produce either profits or sales. Then they address the symptom – 'we need more money' – instead of the underlying problems."

Diminished flexibility is often another consequence of premature funding. Start-ups entering new industries seldom get it right the first time. Success, especially in new and growing industries, follows many detours and unanticipated setbacks; strategies may have to be altered radically as events unfold. Failure to meet initial goals is a poor guide to future prospects. For example, Gammalink expected its first product, a high-speed modem, to be used to allow PCs to communicate with each other. Cofounder Lutz thought he had done his homework and was sure there was a market for the product. But, in fact, buyers never materialized. Gammalink next tried to sell its modem in volume to Dialog as part of a new database Dialog was developing for corporate attorneys. But the database never got off the ground, and Dialog bought a mere three modems.

Lutz and his partner had to rethink their strategy again. This time they targeted large companies with dispersed PCs. They sent out 5,000 mailers at \$1 each and got only 25 responses. Twenty-four of them led nowhere but the twenty-fifth, from BMW of North America, said, "This is the product we've been waiting for." BMW bought a few, then placed a blanket order for \$700,000."

Outside investors, however, can hinder entrepreneurs from following the try-it, fix-it approach required in the uncertain environments in which start-ups flourish. The prospect of a radical change in course presents outside investors with a quandary: "Was the original concept wrong or was it poorly executed?" The entrepreneur is sure the new strategy will work but was just as confident about the original plan. The investors wonder, "Are we being fooled twice?" Supporting the proposed new strategy rather than, say, changing management is an act of faith that requires investors to discard what seems like hard evidence of poor planning, bad judgment, or overselling.

For their part, entrepreneurs may develop the confidence to push back against investors once the business has taken shape. But in the early years, they tend to avoid direct challenges. Instead, they stick with their original plans even when they begin to lose faith in them because they fear that radical shifts will draw the wrong kind of scrutiny. The former CEO of an advanced materials company described the pressure to stick with untenable strategies that outside investors can create.

"When we started, well-defined markets for our materials did not exist. My first job as CEO was to figure out what product market we would go after, so I hit the road for about three months. I identified a product—aluminum oxide substrates—but by the time we got to market, the competition had improved and our substrates never really took off. I realized that, given our size, we should have been manufacturing to order rather than for the market at large. But by that time, we were already stumbling and I was losing credibility with the investors. They weren't interested in a new strategy. They just wanted the substrates to be profitable. I wish I had stood my ground and said, 'I'm turning off the furnace tomorrow.' But I didn't quite have the guts to do that."

Conflicts between investors in a business and its day-to-day managers are a fact of life. They are less debilitating, however, after the entrepreneur has the credibility to be a true partner. Entrepreneurs who are unsure of their markets or who don't have the experience to deal with investor pressure are better off without other people's capital, even if they can somehow get investors to overlook sketchy plans and limited credentials.

Flying on Empty

Starting a business with limited funds requires a different strategy and approach than launching a well-capitalized venture. Compaq Computer, for example, was a venture capitalist's dream. Rod Canion, Jim Harris, and Bill Murto had all been senior managers at Texas Instruments, and they had a well-formulated plan to take on IBM with a technologically superior product. Seasoned investor Ben Rosen helped Canion raise \$20 million in start-up capital—funds that allowed the new business to behave like a big company from the start. Canion could attract experienced managers by offering them generous salaries and participation in a stock option plan. Compaq also had a national dealer network established within a year of exhibiting its first prototype. Sales totaled more than \$100 million in the first year.

Bootstrappers need a different mind-set and approach. Principles and practices imported from the cor-

porate world will not serve them as well as the following axioms drawn from successful entrepreneurs.

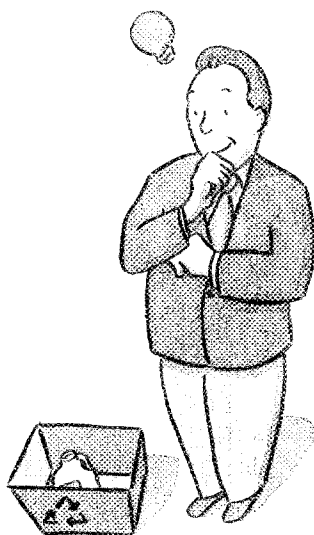
1. Get operational quickly. Bootstrappers don't mind starting with a copycat idea targeted to a small market. Often that approach works well. Imitation saves the costs of market research, and the start-up entering a small market is unlikely to face competition from large, established companies.

Of course, entrepreneurs do not reap fame and fortune if their enterprises remain marginal. But once they are in the flow of business, opportunities often turn up that they would not have seen had they waited for the big idea.

Consider, for example, the evolution of Eaglebrook Plastics, now one of the largest high-density polyethylene recyclers in the United States. Eaglebrook was founded in 1983 by Andrew Stephens and Bob Thompson, who had been chemical engineering students at Purdue. At first, they bought plastic scrap, had it ground by someone else, then sold it, primarily to the pipe industry. One year later, they bought a used \$700 grinder, which they operated at night so that they could sell during the day. Soon they moved up to a \$25,000 grinder, but they only began to hire when they couldn't keep up with demand.

In 1985, the company developed an innovative process for purifying paper-contaminated plastic scrap—and began to make a name for itself in the industry. In 1987, with the profitability of scrap declining, the partners turned to recycling plastic bottles, a novel idea at the time. Next came plastic lumber made from recycled materials and then, most recently, a joint venture with the National Polyethylene Recycling Corporations to manage their styrofoam recycling operations. Few if any of these opportunities could have been foreseen at the outset.

2. Look for quick break-even, cash-generating projects. The rule in large companies and well-funded enterprises is to stick to the basic strategy. Not so with the bootstrapped start-up. Profit opportunities that might be regarded as distractions in a large company are immensely valuable to the entrepreneur. A business that is making money, elegantly or not, builds credibility in the eyes of suppliers, customers, and employees, as well as self-confidence in the entrepreneur.



Bootstrappers often start with a copycat idea targeted to a small market.

For example, Raju Patel launched NAC with the ambitious goal of serving the Baby Bells created by the AT&T breakup. NAC's first offering, however, was a low-end auto-dialer targeted to the many start-ups that were reselling long-distance services from carriers like MCI. "We thought it would be appropriate to get a cash generator to make us known

How do you get customers to buy your product when they're asking, "When are you going out of business?"

as a new entrant," Patel explained. Then at a conference, Patel happened to meet a reseller who mentioned his need for more accurate customer-billing capability. NAC stopped work on the auto-dialer and rapidly developed and shipped a billing system. The system was later phased out as the customers themselves began to fold. But its quick, albeit short-lived, success helped NAC attract the engineers it needed to grow because it enabled Patel to offer security as well as the excitement of a start-up. "We weren't seen as a revolving-door company. We were able to offer health plans and other benefits comparable to those of large companies." More ambitious products, aimed at the Bell companies, followed. Today NAC is well established as a small systems supplier to the Bell companies.

Robert Grosshandler's Softa group also used the cash flow from one business to develop another. "Our property management software was funded by selling hardware and peripherals to *Fortune* '500' companies. It was low-margin, but it had fast turnaround. Goods arrived in the morning and left in the evening. Our software, on the other hand, took nearly a year to develop."

Many entrepreneurs sustained themselves by part-time consulting. In the early days, says Robert Pemberton of Software 2000, which develops and distributes business applications software, consulting accounted for more than 50% of the revenue of the business.

3. Offer high-value products or services that can sustain direct personal selling. Getting a customer to give up a familiar product or service for that of a shaky start-up is arguably the most important challenge an entrepreneur faces. "When we first started selling," Modular's Davis recalled, "people would ask, 'When are you going to go out of business?'"

Many entrepreneurs underestimate the marketing costs entailed in overcoming customer inertia and conservatism, especially with respect to low-

value or impulse goods. Launching a new packaged food product without substantial financial resources, for example, is an oft-undertaken and futile endeavor. Creating a serious business means persuading hundreds of thousands of customers to try out a new \$5 mustard or jam in place of their usual brand. Without millions of dollars of market research, advertising, and promotion, this can be a hopeless task.

Therefore, successful entrepreneurs often pick high-ticket products and services where their personal passion, salesmanship, and willingness to go the extra mile can substitute for a big marketing budget. As John Mineck, cofounder of Practice Management Systems said, "People buy a salesperson. They bought me and I had no sales experience. But I truly believed our systems and software for automating doctors' offices would work – so the customers did too. Also, we did an awful lot for our first clients; if they wanted something, we'd deliver. We were providing service and support long before that became a cliché."

Like Mineck, three-quarters of the founders we interviewed were also their company's chief or only salesperson. They sold directly, usually to other businesses. Only 10% used brokers or distributors, and only 14% offered consumer goods or services. The median unit sale was \$5,000, an amount high enough to support direct personal selling and also, presumably, to get the attention of buyers. The few consumer items we encountered were also important purchases for buyers: a \$20,000 recreational vehicle from Chariot Eagle or an SAT preparation course from the *Princeton Review*, rather than a \$5 to \$10 staple that consumers purchase without great thought.

Overcoming customer inertia is easier and cheaper if a product offers some tangible advantage over substitutes. Our successful entrepreneurs overcame reservations about their long-term viability by selling concrete performance characteristics – faster chips and fourth-generation language software, for instance – rather than intangible attributes like a tangier sauce or more evocative perfume. "We had no track record and no commercial office – I was running the company from my home," recalled Prabhu Goel, founder of Gateway Design Automation, which supplies CAE software tools. "So we went after the most sophisticated users who had a problem that needed to be solved. The risk of dealing with us was small compared with the risk of not solving the problem."

Concrete product attributes also contribute to important serendipitous sales. With just a prototype, Brostoff of Symplex got an order for 100 units

from Mead Data, his first significant customer. "We didn't call them, they called us," Brostoff told us. "A high-level manager read an article about us that suggested our product could offer customers like Mead dramatic cost savings – as much as \$55,000 annually on a one-time investment of \$10,000 to \$20,000. Mead had an on-line database product and was looking to cut costs."

Intangibles like responsiveness and attention do provide greater leverage for entrepreneurial selling in service and distribution businesses. Clay Teramo, founder of Computer Media Technology, a computer supplies distributor, described the way he used service – and the customer's perception of service – to make up for the fact that early on his competitors had far more resources. When someone called with a next-day order that Computer Media couldn't handle, Teramo would tell them that he didn't have the whole order in stock and ask if he could fill part of it the next day and part later on. If the customer agreed, he'd follow up personally to make sure everything had gone smoothly and to say thanks. As Teramo pointed out, his competitors could probably have filled the whole order at once. But the customer wouldn't think he had received any special service.

Carol Russell of Russell Personnel Services took a similar approach. "Our business is done on the cult of personality," she said. "You roll up your sleeves and say to the customer, 'Hi, I'm Carol Russell, and I'm going to work overtime to get you employed or employees.' In a people business, being a

Bootstrappers can't afford six-figure CFOs. Their challenge is to find and motivate diamonds in the rough.

young company and visible is an advantage. In the large services, you won't meet the Mr. Olstens or the Mr. Kellys."

4. Forget about the crack team. It is not unusual for investor-backed start-ups to hire CFOs or marketing managers at \$100,000 a year. Bootstrappers cannot afford this investment. Besides, if the entrepreneurs' credentials aren't strong enough to attract investors, they are even less likely to be able to attract a highly qualified team. Novices who are urged to recruit a well-rounded team rarely succeed. Steve Jobs had his pick of talent for NeXT; Apple, however, was built by youthful exuberance.

The start-ups that we studied attracted employees by providing them with opportunities to up-

grade skills and build résumés, rather than by offering cash or options. Their challenge was to find and motivate diamonds in the rough.

"I never hired experienced people," said Bohdan Associates's founder Peter Zacharkiw, "and there are very few college graduates here. My vice president of sales was the best curb painter around – but that's the secret. He'll always be the best at what he does. Personality and common sense are the most important things that people here have."

John Greenwood's first employee at Micron Separations was a 62-year-old machine shop worker who had just been laid off. His production manager was a Worcester Polytechnic Institute graduate who had been working as an accountant in a company he hated and was looking for another job. "We never attempted to lure anybody away from another company," Greenwood told us. "One, we were cheap. Two, we had moral reasons – if we went under and it didn't work out for them, we wouldn't feel so bad. We never felt that we had an inadequate pool, though. I believe the people in the 'unemployment market' are just as good if not better than the people in the employment market. And we have no prejudice against people who've been fired. My partner and I started Micron after we were fired! In large companies, people tend to get fired for lack of political skills."

Not all entrepreneurs were so fortunate, however. Some had to cope with employees who had neither the formal qualifications nor the right temperament and attitude for their jobs. "Large companies can hire by credentials and screen people carefully," said Robert Rodriguez of National Communications Sales Promotion, a Miami-based company that helps customers manage their sales promotion campaigns. "We needed to have things happen quickly and took people on the basis of their initial presentation. But many didn't do what they said they could."

5. Keep growth in check. Start-ups that failed because they could not fund their growth are legion. Successful bootstrappers take special care to expand only at the rate they can afford and control. For example, they tend to invest in people or capacity only when there is no alternative, not in advance of needs. "Our first product was done before the company was founded," said Warren Anderson, founder of Anderson Soft-Teach. "I produced it, paid for it, took it to a trade show, and we started taking orders before we hired people. It was like brick-laying. We added one layer at a time. We didn't have a venture capitalist putting up money for us – just \$30,000 of our own money – and we were selling our tapes for \$200 each."

Keeping growth in check is not only financially prudent but it also helps the entrepreneur develop management skills and iron out problems under less pressure. Even entrepreneurs who don't have to make radical changes in strategy may have to make adjustments as they learn about the nuances of their chosen industry. Learning the nuts and bolts of running a business is particularly important for first-time entrepreneurs. Stephanie DiMarco and her partner encountered few major surprises when they started Advent Software. Nevertheless, in the early years, DiMarco noted, they felt constrained by their lack of knowledge and held back on their growth. "Instead of trying to create an organization, I wanted to prove myself first. It was important for me to learn the business before I hired someone else. I had never managed anyone before." After the partners learned how to run a business, Advent enjoyed explosive growth.

In their rush to grow, some entrepreneurs told us, they took on customers who nearly put them under. "When you are new and cold-calling customers," observed Fred Zak of Venture Graphics, "the business that comes your way is usually from customers who can't pay their bills or shop only on price—the worst kind of customer base. About 40% of our early work came from deadbeats. I soon determined that I would have to call on them personally, and I'd show up unannounced. It was nerve-racking, but they would pay us off so that they wouldn't have to see me again!"

Some will argue that controlled growth and reactive investments allow competitors to preempt the market. In fact, there are few businesses that entrepreneurs can realistically expect to start in which grabbing dominant market share first is crucial. In mature service industries such as temporary services, advertising, or public relations (where many of our entrepreneurs found their niches), dominance, early or late, is out of the question. But even in high-tech fields, first-mover advantages are often short-lived. Compaq's early start in the IBM clone market did not thwart later bootstrapped entrants like Dell Computer and AST Research. Similarly, WordPerfect, today's dominant player in word processing software, was not among the first half-dozen entrants.

Frequent changes in technology allow entrepreneurs who miss one wave while getting organized to ride the next. Several computer distribu-



Successful bootstrappers know when to be cheap.

tors we interviewed missed getting in on the first generation of PCs and so could not obtain the all-important "IBM Authorized Dealer" medallion. But the growth of Novell and local area networks created new opportunities, which the established, first-generation competitors, engrossed in traditional products, couldn't easily take advantage of.

6. Focus on cash, not on profits, market share, or anything else. A well-funded start-up can afford to pursue several strategic goals; bootstrappers usually cannot. For example, cash-constrained start-ups cannot "buy business." In venture capital-backed or intrapreneurial ventures, it may be feasible for a start-up to sell at a

loss in anticipation of scale economies or learning curve advantages. But the bootstrapper must earn healthy margins, practically from day one, not only to cover the company's costs but also to finance growth. "I learned early that it is better to have a low-profile, positive cash-flow job than a high-ego, negative cash-flow job," said Keith Kakacek, founder of the commercial insurance group, SIR Lloyds. "If the market doesn't pay for your business—and you can't develop positive cash flow—you probably don't have a good enough concept."

Getting terms from suppliers and timely payments from customers are critical in managing cash. Ron Norris of Automotive Caliper Exchange told us he started with and maintained positive cash flow from operations in spite of rapid growth. Building on contacts developed over 20 years, he went to six suppliers and asked for 90- to 120-day terms for one time only on his first order. All but one agreed. Now established, Norris gives modest discounts to customers who pay quickly. But he won't tolerate any "gray" whatever. If a customer doesn't pay in 30 days—and hasn't called to explain why—the company won't sell to him any longer.

Equally important is knowing when to spend and when to economize. Successful bootstrappers are generally cheap, except in one or two crucial areas. "We began in a modest room," recalled Brian Cornish of Oscor Medical Corporation, which makes instruments for microsurgery. "We licked stamps instead of buying a Pitney Bowes machine. We never had plush offices or any of the other trappings of some start-ups. But we made sure we got the very best microscopes."

7. Cultivate banks before the business becomes creditworthy. It is common wisdom that bank loans can be a cheap alternative to external equity and crucial for financing additional inventory or larger receivables. But bank financing is often unavailable for start-ups, as many entrepreneurs we interviewed discovered. Winning bankers over requires preparation and careful timing.

Consider, for example, how Phil Bookman of Siltan-Bookman went about managing his company's bank relationship. Bookman did not even try to borrow until his software company was creditworthy. But he made sure that the company kept good books, that its records were immaculate, and that its balance sheets were sound. In addition, he opened accounts with a big bank's local branch and from time to time asked the branch manager's advice to familiarize him with Siltan-Bookman's business. Then when the company had been in business for the requisite three years, Bookman went to the banker with the company's business plan. "He looked over the numbers," Bookman explained, "and said, 'It looks like you need a \$50,000 term loan.' We knew that all along, but it was important that he suggested it. We got the loan and paid it back, then used the same method the next year to get a line of credit."

Abandoning the Rules

Growth and change create difficult transitions for all entrepreneurial companies. The challenges faced by a charismatic founder in letting go and designing an organization in which authority and responsibility are appropriately distributed are well-known. The bootstrapper's problem is particularly acute, however. To build a durable business—as opposed to a personal project or an alternative to employment—successful entrepreneurs not only have to modify their personal roles and organization, but they may also have to effect a U-turn and abandon the very policies that allowed them to get up and running with limited capital. As part of these changes, the start-up may have to:

- ☐ Emerge from its niche and compete with a large company. When *Princeton Review* was launched, it competed with private tutors of uneven quality in Manhattan. To become a nationally franchised operation, the company had to confront the well-established Stanley Kaplan chain.
- ☐ Offer more standard, less customized products. "We did a lot of things for our first clients that we


wouldn't do today," said Practice Management Systems's Mineck. "The easiest thing for a salesperson to say is, 'we can do it,' and the hardest thing is, 'we can't do this for you.'"

☐ Bring critical services in-house. Automotive Caliper never hired an in-house controller because it didn't need the expertise. But it does have its own fleet of trucks. The smartly dressed drivers project the company's image, and they provide an important source of information because they can find out things the sales force cannot see.

☐ Change management's focus from cash flow to strategic goals. Phil Bookman, a self-confessed "cash management fanatic" in the early years, pointed out how important—and hard—it was to shift gears later on and remind people that they had to think more about the big picture and worry less about the little expenditures.

☐ Recruit higher priced talent, perhaps encouraging early employees to move on. Sometimes the need to turn over early employees and hire professionals in their place is an obvious business decision. At National Communications Sales Promotion, for example, all but two of Rodriguez's original employees left within a few years. A few had simply grown stale, but most were fired for unprofessional behavior or because their attitude was bad. To get people with the right attitude and experience, Rodriguez began to pay more and to look for different qualities: MBAs with family responsibilities replaced "swinging singles" who weren't above making side deals.

More often, however, replacing the start-up's early team presents the entrepreneur with one of the most difficult transitions he or she must confront. At Rizzo Associates, an engineering and environmental services company, four of the first seven employees had to leave because they could not grow with the company. "We promised employees substantial opportunities in terms of personal growth and sold them a future," William Rizzo recalled. "But we did not tell them that they had to live up to that future. In time, we had to bring people in over them, and they felt their future was sealed off. Eventually they said, 'The hell with you.' Today I would be more candid about the fact that our promises are contingent on their performance."

Changes in strategy or personnel at more "professionally" designed and launched start-ups may be less dramatic or personally wrenching. But hard as making these changes may be, they are unavoidable for the entrepreneur who succeeds enough to turn a start-up venture into an ongoing business. 

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