

coinvestment of public and private funds and investment decisions made solely by the private sector. H.R. 820 is based on the same principles.

Therefore, whether one agrees or disagrees with the direct approach, H.R. 820 and the venture capital provisions in the bill must be recognized as a serious and credible effort to promote economic opportunities and entrepreneurial activities in the technology sector. More efficient or effective proposals for accomplishing the same objectives are certainly welcome. Whatever the final outcome, the legislation and policy process will benefit from thorough public debates like this one.

THREE

Keep Government Out of Venture Capital

Richard Florida

A review of the evidence suggests that government involvement in venture capital is not necessary, that such involvement is not likely to succeed, and that government's scarce resources could be more effectively and efficiently used in other areas.

If the proponents of a federal venture capital program such as the one included in the National Competitiveness Act of 1993 (H.R. 820) are right, making the government a venture capitalist will generate the start-up companies, the new technologies, and the economic growth that President Clinton and Robert Reich, secretary of labor, point to as the keys to long-term prosperity. But as we say in the Midwest, where there is a lot of venture capital but not a lot of high-technology investment, the road to bigger deficits is paved with good intentions.

Those who seek to make government a venture capitalist argue that private venture capitalists and other investors are underinvesting in new start-up com-

panies. In particular, they argue that venture capitalists are putting more of their time and money into so-called later-stage activities such as follow-on investing and leveraged buyouts (LBOs). To bridge the "capital gap," proponents conclude, the government should be involved in the venture capital business.

We Have Enough Venture Capital

Before we tackle the issue of the government's role, we need to know whether there is really a problem with the venture capital market and how much venture capital is enough.

One problem with the policy debate is that there is little evidence that the United States is underinvesting in venture capital. Venture capital investment was quite substantial even in the so-called lean years of 1990 and 1991, when the United States invested more than \$3.25 billion in venture capital in more than 2,000 entrepreneurial companies. More than \$330 million of that was in seed and start-up businesses. And U.S. venture capital investments rose to more than \$2.2 billion in 1992, as the country began to pull out of recession.

Is this too little venture capital? In both comparative and historical terms, the answer is no. The U.S. venture capital system is, by all accounts, the envy of the world. It is our great strength. We invest more capital than our two major competitors, Japan and Germany, combined. The United States is also raising and investing more venture capital today than we ever did before. Think back to the late 1970s and the early 1980s, a period in which many of the most innovative start-up companies in the high-technology revolution were founded, companies like Intel and Apple. The

United States invested between \$200 million and \$600 million a year in contrast to the average of \$1.4 billion invested in 1991 and 1992. U.S. venture capital investments were also up in 1992, as the country began to pull out of the recession. Activities that determine success such as the initial public offering (IPO) rate and the share of IPOs financed by venture capital also reached near record highs in 1992.

Moreover, venture capital is not the whole ballgame. Venture capitalists finance less than 1 percent of all business start-ups and about 10 percent of all high-technology start-ups, considerably more than the 2 percent figure quoted by advocates of a greater government role. Other investors include angels and informal investors such as the doctors, the dentists, the rich relatives, and so forth.

Global corporations are also starting to invest directly in high-technology start-ups and thereby provide an important new source of capital for entrepreneurs who have come to recognize the hazards of venture capital. In fact, global corporations in many cases offer a compelling alternative to venture capitalists. In the eighteen months from the beginning of 1990 through the first six months of 1991, corporations invested more than \$1.4 billion directly (equity investments) in start-up companies; that was more than 50 percent of the total venture capital invested in this period. Take the multimedia industry, for example, that is, the integration of the television set, the computer, the fax machine, and digital communications. Two of the most promising start-ups in this field, Kaledia Labs and General Magic, have been funded almost entirely, not with the old-style venture capital model, but with direct investments of IBM, Apple, Sony, and Toshiba. The corporations gain because they gain access to the technol-

ogy and production. The entrepreneurs like it because they do not have to give away the store.

From the entrepreneur's perspective, venture capitalists get too much for their money. They can take, for example, 51 percent of a company, dominate its board seats, and get rid of the owner. Their objective is to sell the company within five to seven years; their success in fact means selling the company. In fact, entrepreneurs refer to them as "vulture capitalists." With corporate investments, entrepreneurial companies gain instead a long-term partnership and a stream of "patient" capital for manufacturing, marketing, and distribution. Alliances between fledgling start-ups and large companies also make sense for the American economic system as a whole because they offer a way to turn new innovations into successful commercial products.

A second problem with much of the policy debate is the prevailing assumption that the United States needs as much venture capital today as it had in the mid-1980s. But do we have too little venture capital now, or did we have too much venture capital then? There is strong evidence to suggest that the United States may have had too much venture capital then. Or, as those familiar with the venture industry put it, "There was too much money chasing too few good ideas." There was a lot of cash out there but not many promising companies in which to invest.

The venture capital market virtually exploded during the 1980s. The influx of new capital brought so many new and inexperienced venture capitalists into the business that the talent base of the industry was diluted. Only 28 percent of venture capital funds in this country have one general partner or person with more than ten years of experience. Many of the new venture capitalists lacked the knowledge, the contact base, or

the judgment to identify good deals. A "herd mentality" developed, where venture capitalists who could not find good new investments began to follow one another. This follow-the-leader syndrome, or what Bill Sahlman has called a "myopic capital market," meant that more start-up companies were being funded than could hope to survive in industries such as computer disk drives, notebook personal computers, or biotechnology. Devastating shakeouts and huge losses were the result.

The venture capital industry responded the way financial markets are supposed to—it corrected itself. Returns on venture capital plummeted, and investors redeployed their capital; that is why the market fell sharply in 1990 and 1991 before rebounding to more than \$2 billion in 1992. According to Venture Economics, the internal rate of return for venture capital, which hovered in the range of 25 to 35 percent for funds formed in the mid-1970s and 15 to 25 percent for those formed in the early 1980s, fell to less than 5 percent for funds formed in the heyday of the mid-to-late 1980s. Yet it is this period that H.R. 820 wants to emulate—not the kind of return that, in my opinion, demands an expansion of the market.

Moreover, why should the government try? The market is already correcting itself. Market-based forces appear to be correcting what industry insiders view as the overfunding of the late 1980s. It would be an ironic mistake for government to intervene at the very time the market seems to be working.

Government Is a Poor Venture Capitalist

Even if the premise is accepted that government should get involved in the venture capital business, can the government do a good job? Does it make sense for government to become a venture capitalist?

Proponents of a federal venture capital program argue that the government has a successful track record in the venture capital business, and 3I, the U.K. venture capital fund, is cited as the example. But perhaps we should think twice about trying to emulate the United Kingdom on this. More important, consider the problematic records of two American examples: the Small Business Investment Company (SBIC) program and state venture capital programs.

People around Washington argue that the Small Business Administration's SBIC program has been a great success and should be used as the model for a federal venture capital program. SBIC was started in the late 1950s to secure capital for small businesses, but it was not such a success. Its failures are well documented, and the SBIC program is littered with mismanagement and abuse. Less than ten years after the program's inception, hundreds of SBICs went bankrupt. Today, SBICs make up just 5 percent of the venture capital, while continuing to consume considerable public capital as leverage.

The states provide a more contemporaneous example. During the 1980s, a wide range of states, my own state of Pennsylvania included, decided to create venture capital funds as part of a strategy—which ultimately failed—to develop high-technology enclaves or Silicon Valleys and Silicon Prairies. Cities like Pittsburgh would somehow be magically transformed into venture-capital and high-technology centers. By 1990, twenty-three states had established venture capital programs, consuming nearly \$200 million in public capital.

What happened? Our empirical work shows that these states watched most of their locally subsidized venture capital leave for Silicon Valley in California, Route 128 around Boston, and other places with good

investments, or go to local companies that failed to generate any profits. As a result, the states are pulling back from taking on the role of venture capitalist. Through my work with the state governments and the Council of Great Lakes Governors, I have come into contact with those who are now saying that "government can't do venture capital well; let the private sector do it." The states are also pulling back on their so-called "critical technology" programs.

The bottom line is basic: Government is ill equipped to deal in the high-risk, high-return world of venture capital, where tremendous profits from one or two home runs offset nine or ten strikeouts. Moreover, a public venture capital fund will likely face political pressure to invest in pet projects in key congressional districts. It is silly for government even to consider the costly business of direct financing. There are more powerful ways that government can influence the flow of capital, such as manipulating the tax rate on capital gains or liberalizing restrictions on private investors.

Venture Capital Is Not the Problem

The U.S. venture capital system for financing start-ups is not the problem or an area of weakness. Instead, the system is by every account a source of comparative advantage. Japan, Germany, and many other countries are trying to emulate how we get private venture capitalists to invest in technology start-ups.

Why does Washington consistently try to mend our strengths while ignoring our weakness? The real competitiveness problem lies downstream from innovation—in the difficulties both start-ups and large corporations have in turning new ideas and technologies into a continuous stream of quality products that peo-

ple around the world want to buy. The United States leads the world in making the technological breakthroughs, generating the innovations and the new industrial sectors, but then fails to follow through. The problem is the "breakthrough illusion" of the U.S. innovation system.¹ Venture capitalists create incentives for people to chase after breakthroughs or home runs rather than following through. Venture capital, especially too much of it, contributes to the breakthrough illusion problem.

Another problem is that venture capitalists create powerful incentives to commercialize technology by pulling an invention out of existing companies and forming start-ups. In Silicon Valley, for example, every new idea seems to lead to the formation of a new start-up—a wasteful and inefficient process. In a system of "chronic entrepreneurship," existing firms suffer from raids and defections of key scientists, technologists, and management personnel. Promising projects are abandoned and companies find it hard to follow through on breakthroughs they have made. A delicate balance is required for our system of venture-capital-backed innovation to succeed. Too much venture capital, while it may lead to more start-ups, may in fact be detrimental to the national economy.

More important, the focus on finance and on having government fill the so-called capital gaps misses the point. It diverts attention from the more fundamental issues at hand. The United States possesses an innovative financial system; finance is where we are strong. We invent financial institutions and instru-

¹Richard Florida and Martin Kenney, *The Breakthrough Illusion: Corporate America's Failure to Move from Innovation to Mass Production* (New York: Basic Books, 1990).

ments in ways and at a pace that exceed any of our competitors—witness our venture capital market, our futures trading, and our ability to turn mortgages into securities and trade them like stocks and bonds. No one comes even close to our ability to do this. Our financial system does a good job—an impressive job—of channeling capital to industries and sectors where the return is highest. When existing institutions and instruments fail to do this, our financial markets create new ones.

The real problem lies elsewhere—in our research and development (R&D) labs, in our factories, and in our start-up companies themselves, which produce an impressive array of breakthrough technologies but still fail to provide the follow-through required for long-term commercial success. This is something that corporations, not government, need to address.

In a nutshell, we have the equation reversed. We continue to focus attention on repairing our financial system, or our "capital allocation problem," while the real problem lies in our industrial base. Firms and managers are taking too long to restructure themselves into world-class global competitors. The United States needs to create an economic climate where individuals and firms can be more effective at harnessing the full creative capabilities of all people in the R&D lab, in the start-up company, and on the factory floor. In the Great Lakes states, we have begun redefining the technology policy debate to focus on these challenges. There are no quick fixes, but corporations, not government, have to lead.