

November 2004

What Rôle for Entrepreneurship in India?

by Amar Bhidé
Uris Hall 722
Graduate School of Business
Columbia University
New York, NY 10027
bhidé@columbia.edu

This memo discusses three issues on the optimum role for entrepreneurship in the Indian economy. First, how and why the optimal role for individual entrepreneurs is likely to be different in India (and other countries at a similar state of economic development) than in an advanced economy? Second, are Indian entrepreneurs playing their optimal role? Third, if they are not, what obstacles stand in their way?

These ideas are based on a research project that I've been working on since about May 2003, in collaboration with a team from the Indian Institute of Management Bangalore. Our team has thus far interviewed nearly a hundred entrepreneurs in Bangalore.* We've also collected data on five percent of all registered shops, commercial establishments and factories and on more than 90% the software and software related companies located in Bangalore.

1. OPTIMAL ROLE

A system of entrepreneurship has evolved in the U. S. that has been quite successful and that may have considerable applicability to some other technologically advanced countries, such as Germany and Japan, which appear to need more economic dynamism. The system needs modification however, for underdeveloped economies like India's. In particular, I believe that the optimal role for individual entrepreneurs – and the public policies necessary to support this role – are somewhat different in India than in an advanced economy.

In advanced countries, most resources are already in or near their highest-valued use. Any increase in their productivity requires new technologies (broadly defined). Without new technologies, economic growth winds down and business life stagnates.

In the U.S., small businesses started by individual entrepreneurs and the initiative of large established companies play complementary roles in developing new technologies. Startups have advantages in conducting low budget experiments on novel ideas. Although the results achieved by any single startup are not dramatic, their collective efforts transform novel yet primitive ideas into technologies of demonstrable commercial

* Funding was provided by the Wadhvani Foundation. Prof. K. Kumar, from the Indian Institute of Management served co-leader of the team. Prof. Edmund Phelps suggested I prepare this memo for use in his course "World Economic Problems" and provided considerable help in its revision.

viability. And as these technologies appear ready for prime time, large established companies (or transitional companies seeking to become large) mobilize the resources required for these technologies' mass use. It's pointless to argue about whether the contributions of the small or the large companies are more important. Technological progress in advanced economies requires both types of contributions.*

In an under-developed economy, however, increases in living standards do not require U.S.-style technological innovation. Almost by definition, the actual productivity of its resources is below that in developed economies since the technologies in wide use in it are inferior to the technologies already introduced and in extensive use in developed economies. Rapid growth can be achieved merely through the introduction into and diffusion through the economy of such superior technologies. (A contrary view is that poor countries need to evolve "appropriate" technologies of their own to raise their productivity.) Moreover, the returns from investing in new technologies are generally lower than the returns from acquiring and implementing existing technologies from the developed countries. This is because existing technologies can be acquired at lower costs since the outlays required for their development have already been incurred. And although there is some uncertainty about the fit of transplanted technologies with the local environment, the basic technical and market risks are long gone. Therefore resources devoted to innovation would actually impair growth by diverting resources from the more valuable tasks of adopting known-to-be superior technologies.

This has implications for the role of wealth-constrained individual entrepreneurs in an underdeveloped economy and their relationship to large organizations.

An ample supply of applicable, unexploited technologies from the developed world will, barring perverse policy interventions, supplant most of the demand that would otherwise have existed for innovations from indigenous entrepreneurs. Therefore, one of the important roles that entrepreneurs play in the U.S., namely, their role in early-stage innovation, has relatively little value in India.

Moreover, individual entrepreneurs do not have the capital and personnel required to acquire technologies from abroad.† Proven technologies usually require large-scale operation. New technologies often start-out in niche markets; their subsequent application to mass use turns on the realization of significant economies of scale, through mass production techniques, for instance. So by the time many technologies become proven they are no longer suited for entrepreneurs' small startup businesses. In addition, the acquisition of proven technologies, even when it is just a matter of copying or reverse engineering, involves fixed costs. These costs are more easily amortized by a large enterprise. And, large, established organizations (including wealthy family groups) have natural advantages in mobilizing the resources required to operate a large-scale enterprise. So, much of the low-hanging fruit offered by proven overseas technologies lies outside the reach of wealth-constrained individual entrepreneurs.

* Amar Bhidé, *The Origin and Evolution of New Businesses*, New York: Oxford University Press, 2000.

† Here and below I include in "acquire" not only the transfer of the know-how but also the evaluation, modification, and learning necessary to make the new technology profitable.

This does not mean, though, that small entrepreneurs cannot contribute to underdeveloped countries' progress in catching up. Even in the U.S., experimenting with completely new technologies is only one of the contributions that individual entrepreneurs make to economic growth. The entrepreneurs' capacity to try out highly novel ideas has value not just in the very early stages of a new technology; even after the basic elements of a new technology have been proven, considerable trial and error is necessary for its widespread diffusion. Thus, low budget entrepreneurs played the preeminent role in the development of the personal computer between 1975 and 1980. Yet, their contribution didn't end after IBM entered the market in 1981. In the decades that followed, entrepreneurs helped develop a host of complementary products and services that made the PC a ubiquitous artifact.

Similarly, the successful implementation of technologies that are 'new' to India will almost certainly require a host of new complementary goods and services to make them suitable for local use. Individual entrepreneurs who have a comparative advantage in conducting low budget experiments can play a critical role in developing such small-scale complements, many of them unique to the less developed economy. For instance, large companies may have an advantage in acquiring and implementing modern technologies to build automobiles; however the widespread diffusion of the new automobiles requires a host of new distribution and servicing outlets. Individual entrepreneurs may enjoy advantages in starting these outlets.

2. FAILURES TO PLAY OPTIMAL ROLES

My on-going field research suggests that in Bangalore – supposedly the Silicon Valley of India – individual entrepreneurs (and large companies too) are not pushing the technological envelope. That according to the analysis above is no bad thing. (In contrast, the state-financed scientific establishment does attempt cutting-edge research, though with questionable results.) Unfortunately, as I will discuss next, entrepreneurs also do not seem to play a role appropriate to a catch-up economy either.

Earlier, in 1990, I had interviewed about 100 founders of companies that made it onto the list in *Inc.* magazine of the 500 fastest growing private companies in the U.S. Only a handful competed against Fortune 500 companies; the great majority competed against other small companies or startups. In contrast, a great many of the businesses in Bangalore competed against much larger businesses. Moreover the competition is apparently head-on: The Bangalore entrepreneurs did not even claim to focus on different customer segments, provide more customized products and services or rely on different kinds of inputs.

Nor were the Bangalore entrepreneurs attempting to reach the size of their large competitors: Less than a quarter expected to grow significantly in the next five years. The entrepreneurs preferred to diversify into new businesses rather than expand. In the U.S. too we find 'serial entrepreneurs' (though my *Inc.* interviews suggest that they are probably more the exception than the rule) but there is an important difference. The U.S.

serial entrepreneurs sell their prior businesses, often to parties who believe they can realize greater economies of scale or scope. Or they may simply liquidate the prior business. In Bangalore, entrepreneurs continue to operate their prior businesses and thus created conglomerates comprising many small units.*

By competing with instead of complementing the activities of large organizations, Indian entrepreneurs likely hinder economic development. As I have mentioned, small units lack the scale to acquire and use advanced technologies. For instance, the productivity of the Indian garment industry is estimated to be well below Chinese (and of course developed country) standards. Closing the gap will require, besides more advanced machinery, the acquisition of know-how by, for instance, hiring local industrial engineers and expatriate garment industry experts. A small-scale garment unit cannot however afford the necessary costs; and to the degree that small units compete for scarce resources (such as skilled tailors) with large units, they hinder improvements in productivity growth of the industry.

The Bangalore entrepreneurs we interviewed also seemed to be unable to perform a role that would contribute to dynamism, namely by starting and growing businesses with limited funds.

For instance, the *Inc.* list's entrepreneurs whom I had interviewed in the U.S. started with \$10,000 in median capital. Companies on more recent *Inc 500* lists report having started their businesses with around \$20,000 in median capital. Our very preliminary numbers suggest that a similar sample of Bangalore entrepreneurs started with around Rs. 500,000. Converted to US dollars this amount is roughly equivalent to the starting capital of the *Inc.* entrepreneurs. However if you scale the amounts by local incomes a rather different picture emerges: Rs. 500,000 amounts to about 10 times the local per capita income in Bangalore; the *Inc.* founder's start up capital amounts to about one half or one third of US per capita incomes.

Not only is the startup capital used by Bangalore entrepreneurs large when compared to local incomes, the size of the businesses built is relatively small. The median number of employees of the Bangalore businesses that we surveyed was 38; the median *Inc.* company I had studied had 100 employees. This is in spite of the concerns about absenteeism and employee turnover expressed by the Bangalore entrepreneurs that caused them to "overstaff" their businesses. The differences in revenues are even starker: the median Bangalore company booked under Rs. 30 million or \$666,000 in revenues; the *Inc.* company earned \$5.5 million in revenues, or more than 8 times the Bangalore company.

The limited – and possibly negative – contribution of Bangalore entrepreneurs is reflected in their low contribution to job creation. In the U.S., although there is some dispute about the precise numbers, there seems little doubt that small high growth companies have made an important contribution to the tens of millions of new jobs created in the past

* Results of the study are described in more detail in the working paper, "What holds businesses back in Bangalore?" posted at www.bhide.net/publications

quarter-century. Our preliminary estimates suggest that in Bangalore, the number of jobs created by legitimate businesses – small or large – has been modest. A noteworthy exception to the overall pattern of stagnant employment has been in the software and software related services sector. And within this sector, large public companies, and subsidiaries of multi-nationals and wealthy Indian family groups rather than small entrepreneurial companies have been responsible for most of the growth in employment and value added.

POSSIBLE EXPLANATIONS FOR THE FAILURES

Why do Bangalore entrepreneurs operate small units in domains that in the developed world would be dominated by large companies? Historically, the government reserved certain sectors for small units. Today however, many of these reservations have been removed. But, several other factors continue to encourage entrepreneurs to start sub-scale units and to avoid growth.

The tax system appears to play a major role. From colonial times, indirect taxes (such as excise duties and sales taxes) have been a major source of the government's revenues. Today such indirect taxes account from about 20 to 40 percent of final prices. The tax regime exempts small businesses from paying some of these taxes; small units apparently can also evade indirect taxes more easily than large businesses through off the books transactions. These tax effects can more than offset the disadvantages of operating below technologically efficient scale.

The tax system encourages the formation of sub-scale businesses in other ways as well. The black money that it engenders can be more easily recycled into the assets of many small units rather than one small unit. The government also periodically grants indirect tax exemptions and holidays to promote causes it deems to be worthy or in response to lobbying. But tax benefits for particular businesses can make competing businesses unviable. And the unpredictable grant of benefits increases the risks of making large scale investments.

Rules intended to protect workers also contribute to the reluctance to operate on a large scale. In particular, our respondents expressed concerns that employing more than 20 workers makes them liable for inspections under the Factories Act and requires them to contribute to health insurance and retirement plans that increase their labor costs.

Restrictions on layoffs and terminations however, did not seem to concern any of the entrepreneurs we interviewed. One entrepreneur said that as workers see signs of business failure they leave for greener pastures of their own accord: this explanation would be consistent with the widespread unwillingness of employers to pay efficiency wages. Another entrepreneur claimed that when employers run short of funds, they often stop contributing to their employees' insurance schemes and retirement plans and may even stop paying salaries. The employers' subsequent inability to clear these unpaid dues

(which can lead to criminal prosecutions) then makes it impossible to terminate unwanted employees.

Our interviews also suggested reasons for the relatively low efficiency in the use of capital by Bangalore entrepreneurs -- why they require more funds (compared to local incomes) to start their businesses and why the revenues and number of employees is smaller. In Bangalore, entrepreneurs usually:

- Pay a deposit equal to 11 months of rent to lease space (instead of one month in the U.S).
- Extend credit for 90 days or longer, (instead of 30 days).
- Acquire their own premises as soon as they can, instead of renting them. I do not recall interviewing a single *Inc.* entrepreneur who had purchased real estate to house his or her business. The acquisition of real estate obviously ties up capital. More subtly, it can also limit the entrepreneur's ability to grow (if that requires more space) and thus limits the revenues the business can achieve.
- Purchase equipment like copiers that US entrepreneurs lease, because the leasing market is thin or non-existent.
- 'Make' goods and services that the US entrepreneurs routinely 'buy'. For instance, more than half of the entrepreneurs we interviewed have their own electrical generators – something I simply did not observe at all in the U.S. The propensity to make rather than buy (which is by no means restricted to public utilities) increases absolute capital requirements. And because entrepreneurs typically forgo economies of scale when they 'make' in-house, their output (and revenue) to capital ratios are also reduced.

Some of the factors that impair the relatively inefficient use of capital can be traced to defects in the regulatory and legal system. The market for copier leases collapsed because the legal system could not limit the disappearance of leased copiers to levels that would allow the market to function. The erratic supply of electricity boards by poorly regulated and misgoverned utilities encourages businesses to install their own generators. Poorly maintained land records, the shortages of plots with access to basic municipal services (i.e. roads, water and electricity) and the sale of plots (with clean titles and utilities) at below market prices to favored individuals and organizations create incentives for businesses to buy instead of renting their premises.

Other factors reflect dysfunctional beliefs and conventions. For instance many entrepreneurs we interviewed claimed they had to extend credit for lengthy durations and desist from demanding instruments (such as post-dated checks) to secure timely payment. Otherwise their customers would patronize some other supplier. Now it's likely that small businesses who rely on tax advantages rather than any distinctive value added have weak bargaining positions vis-à-vis their customers. But why don't customers use their bargaining power to demand lower prices instead of extended payment terms? Such

bargains would benefit both parties in situations where customers have better access to credit than their suppliers. But only a minority of customers does so. So apparently because of sheer habit, we find sellers maintaining “marketing” departments devoted to collecting unpaid bills and their customers devoting resources to fending off collection efforts.

Beliefs and conventions also seem to be behind the excessive vertical integration and staffing. In the U.S. firms routinely pay premium prices and efficiency wages to encourage their vendors and employees to provide reliable high quality goods and services. Many of the Bangalore entrepreneurs have as little faith in the reliability of private vendors and employees as they do in the State electricity board. They also believe that that because vendors and employees place a low value on long term payoffs, paying premium prices or wages cannot elicit responsible behavior. So entrepreneurs ‘make’ instead of ‘buy’ and hire five people to do the job of four.

To conclude: The prescriptions of the so-called Washington consensus may be necessary for development, but are far from sufficient. Development requires many conditions such as the adequate provision of electricity, water, roads, clean title to land and willingness of the actors to place a value on future payoffs that we simply take for granted in the developed world. And there is no assurance that these conditions will always spontaneously emerge because of a few broad brush changes in policy. Countries like India have to get the big picture right and fix the details.

At the same time, everything that’s wrong cannot be corrected at once: development needs priorities that reflect specific local conditions. For instance, at this particular juncture in India, my interviews suggest, reforming the system of indirect taxes is more important than reforming the income-tax code and that preventing the theft of physical goods is more important than the enforcement of complex contracts. In the future, or in a different place a different set of problems could come to the fore. For instance, it is possible that in more industrialized Latin American countries, policies that limit employers’ ability to lay off employees may represent the binding constraint on growth. And the only way to discover what is and isn’t critical is through a close, systematic study of the facts on the ground.