

FOREWORD

Lester C. Thurow

In broad terms there are three types of entrepreneurship—technological, geographical and sociological. A technological entrepreneur brings a new technology to market in the form of new products or new processes for producing old products. For example, satellite TV is a new process for delivering an old product—television programs. The computer is a new product derived from new technologies. A geographical entrepreneur moves technology and the products and processes that go with it from one place to another. Usually this means moving a technology from the developed world to the underdeveloped world. When Taiwanese firms move laptop computer manufacturing to the People's Republic of China (PRC), they are engaged in geographic entrepreneurship. Much of the entrepreneurship in Asia today is geographic entrepreneurship, not technological entrepreneurship. A sociological entrepreneur finds a new context in which to sell an old product. The best example would be Starbucks Coffee Company. Using a different context, Starbucks persuaded millions of people to spend \$2.50 for the cup of coffee they had been buying for 50 cents.

All three types of entrepreneurship are important. But they require different kinds of people and different support mechanisms. Since most of the discussion of entrepreneurship revolves around technological entrepreneurship, let us first briefly examine the other two types.

A geographical entrepreneur is an expert on timing. He understands the product and production process, but what is the right time to move them from location A to location B? When will the people in location B be ready to buy the product? The answer to the second question relates to consumer demand, which for most products depends upon the complicated interaction between incomes and context. Everyone knows that fur coats don't get sold in large numbers in the tropics. Products (text messaging on cell phones) that have a big market in one place (Finland) don't catch on in other places (the United States).

The first question, when is it the right time to move supply chain activities from location A to B, was the question that Taiwanese firms faced in deciding whether to manufacture laptop computers in the PRC. The timing of this move depended not only on an analysis of labor skills and production costs in the PRC but also on the Taiwan firm's ability to move scarce management and technological skills, not available in the PRC, from Taiwan to the PRC. This timing dilemma is partly a management issue and partly a political issue.

Sociological entrepreneurship requires a willingness to experiment with different sociologies and to see before others that which will later become obvious. However, it is almost always impossible to transfer a business concept without also adapting it to local circumstances. For example, the founders of Starbucks initially intended to bring the European coffee house to America. In European coffee houses everyone usually stands up for a quick cup of coffee. Starbucks adapted the European coffee house concept to the American context by giving its U.S. customers a place to sit

down in a comfortable chair and an environment to leisurely drink a cup of coffee. Starbucks has also been successful at taking its modified European coffee house back to Europe and making it an economic success there. One of the reasons is that Starbucks locations are “smoke free.” Many Europeans want a smoke free environment and Starbucks gives it to them while traditional European coffee houses do not.

To be a technological entrepreneur an individual must have a new technology. Silicon Valley did not exist in the 1950s since the 50s was an era in which mature technologies advanced, giving large, established firms a tremendous advantage. Some scientific breakthroughs were necessary to allow entrepreneurial activities in Silicon Valley to get started. The 1990s were a great decade for entrepreneurs since we were in the midst of the third industrial revolution— shifting from industrial economies based on natural resources to knowledge-based economies based upon skills and the control of new knowledge. Suddenly new things could be done in new ways and there was economic room for entrepreneurs.

Realistically, many countries do not have any new technologies, and it is a mistake to think that they can create technological entrepreneurs without them. To acquire new technologies requires investment in research and development. Taiwan and Korea make these investments but many countries in Asia do not. Without those investments, technological entrepreneurs cannot be created regardless of individual attitudes or governmental support.

When a country is in the catch-up phase of industrial development, it does not need technological entrepreneurs; it needs geographical entrepreneurs. Economic leaders (firms or nations) need to assess available technologies and production processes, evaluate how they might be transferred, and be able to plot an economic path for the firm or the nation that intersects with the paths of the world economic leaders at some point in the future. That is what Japan did from 1955 to 1990. It did not have many entrepreneurs, but it did not need them to catch up with the United States in terms of per capita income.

But once a country has caught up, in what direction does it head? It is here that technological entrepreneurship is essential because many things have to be tried. The Japanese and other Asian systems of “administrative guidance” no longer work. Here the problem is not the supply of risk takers but the social tolerance of failure. At the cutting edge of economics and technology, almost everything tried will fail. Those who fail either as entrepreneurs or those who work for new firms that have failed must be able to rejoin the traditional economy without having to pay an enormous price in terms of lost wages or future prospects. If they cannot do this, they cannot afford to take a chance on something new. Entrepreneurs and those who work with them have to feed their families, and they want to enjoy a good economic life.

Entrepreneurship works in Silicone Valley and on Route 128 because those looking for jobs who have past failures on their vitas are seen as better potential employees than those who have never tried. Failure means they have worked hard, taken initiative, and understand how the world works. Failure actually raises their prospects of getting hired in the old economy. And that explains why they can afford to be risk takers in the new economy.

The issue in the end is a cultural one. How does one build cultures that tolerate and encourage failure? For it is only by tolerating failure that we can find the route to success.

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A 1960 graduate of Williams College, Thurow received his M.A. in 1962 on a Rhodes Scholarship at Balliol College (Oxford) and his Ph.D. in economics from Harvard University in 1964. He taught at Harvard from 1966 to 1968 after a term as a staff economist on President Lyndon Johnson's Council of Economic Advisers. He is a fellow of the American Academy of Arts and Sciences and served as vice president of the American Economics Association in 1993.