TECHNOLOGY TRANSFER WITHIN CHINA

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ABSTRACT

This paper examines technology transfer within China. The Chinese government is currently placing great emphasis on developing indigenous scientific and technological capacity. In order to expedite the strengthening of science and technology capabilities, the government is promoting extraordinary measures designed to enhance the diffusion of technology within China. Special attention is focusing on strengthening the links between the academic, industrial, and defense sectors. In addition, the government is experimenting with policies commonly used in the West that encourage decentralization and the taking of local initiative. Although China's concern with technology transfer is very recent, it appears that the new technology transfer policies are having an immediate positive effect.

INTRODUCTION

Attempts by the People's Republic of China to acquire foreign technology are well known. A cornerstone of its commercial relations with Western countries is the acquisition of machinery and know-how from the scientifically and technologically advanced countries. It is also investing heavily in strengthening the scientific and technological capacity of its manpower pool by sending tens of thousands of students abroad to study scientific, technological and managerial subjects.

While a good deal of attention has focused on the international transfer of technology to China, very little is known in the West about China's large scale effort to enhance the diffusion of scientific and technological capabilities within the borders of the country. This article offers a brief overview of efforts -- all of which are very recent -- to enhance the domestic transfer of technology.

In examining technology transfer within China, we must always keep in mind one very important, overwhelming fact: There was little or no technology transfer in China from the middle 1960s until the late 1970s and early 1980s.

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During this period technology transfer was, therefore, a non-issue. No one really thought about it or practiced it. Suddenly in the late 1970s it took on great importance and became an integral part of the national development policy. However, there was no experience base on which to build technology transfer policies. Consequently, China's current efforts to strengthen technology transfer have a strong experimental character to them. Virtually everything that is being done in the technology transfer area is being done for the first time.

The implications of all this are dramatic. China is trying to establish a new institutional framework for carrying out technology transfer. Also, it is trying to develop a new mind set in scientists, engineers, and bureaucrats -- one that encourages the sharing of knowledge and the identification of practical applications of science and technology.

Background

The Cultural Revolution of 1966-1976 virtually eradicated China's scientific capabilities and nearly destroyed its technological base. During this decade, research ground to a halt, science education ceased, and all contact with foreign scholars ended. Internationally, China ceased to be a member of the global scientific and engineering community, while domestically science and technology suddenly disappeared as viable undertakings.

By 1976, after the Cultural Revolution had finally spent itself, the economy was a shambles. In 1978, the government announced that China would be rebuilt on the pillars of what was termed the Four Modernizations, which were proposed by the late premier Chou Enlai. In the future, all national development efforts would focus on the strengthening of:

- agriculture
- industry
- science and technology
- defense

The fact that science and technology were given special attention signalled the realization among China's leaders that without strong scientific and technological capabilities, China would not develop economically.

In 1978, China took a major step toward economic reform when the third plenary session of the 11th Party Central Committee offered specific guidance on how reform should come about [14]. The Party stated that special attention should be directed at decentralization of government and commercial activities; an open-door policy should be put into effect in regards to China's relations with foreigners; and major emphasis should be placed on development of China's poverty stricken rural areas, where 80 percent of the population lives.