

# THE IMPACT OF IMPORTED TECHNOLOGY ON ECONOMIC DEVELOPMENT

by MEcon.NGUYỄN QUỐC TÔNG

**B**efore analyzing the impact of imported technology on economic development, we had better speak briefly about the concept of technology. If the science is considered as researches on natural laws carried out with a view to exploiting the physical world, then technology consists of practical measures, solutions or know-how which could be exchanged or transferred. Thus the science is the property of the human knowledge which could be popularized, but the technology is the property of certain private persons, its value is determined by supply and demand relationship and it's hard for us to get it free. At present, there's a lively market in technology all over the world. Developed countries are transferring obsolescent technologies at big profits. Developing countries, willy-nilly, have to import technologies from developed countries and suffer a lot of losses.

The technology is the dynamic of the socio-economic development and has a decisive effect on the wealth of a country. The current industrial revolution, in nature, is the technological revolution. Vietnam is in the process of industrialization and modernization. This process, in nature, is a series of changes in the economic structure, and the core of this process is the innovation and development of the technology. After a decade of economic renovation, Vietnam has adopted many policies and measures to make a policy on technology aiming at exploiting the source of imported technology. Then what is the technology? According to UNIDO (the United Nations Industrial Development Or-

ganization), the technology consists of four parts:

a. *Equipment*: consisting of machines, equipment, factory buildings. This is the hardware of the technology which enhances human capability. There's no technology without equipment, but it's wrong to identify the equipment with technology.

b. *Personnel*: consisting of employees who control and operate the equipment. This part depends on knowledge level and skill of employees.

c. *Information*: including documents, data, facts, instructions, description of invention, catalogue, description of technical features, etc.

d. *Management*: this comprises many activities, such as employing resources, building networks, making policies and strategies, marketing, etc.

What mentioned above is a precise definition of the technology. In fact, it should be explained more carefully and minutely.

In reality, many people have only a limited knowledge of the technology. They thought that the technology consisted of only equipment and machinery and paid no attention to other parts of the technology (such as know-how; production process; methods of installing, operating or repairing; ways of training workers, etc.). Just because of this, many technologies imported by them have become objects of ridicule. These shortcomings have bad effects on business performance and production development, and create an unfavorable impression of the importation of technology.

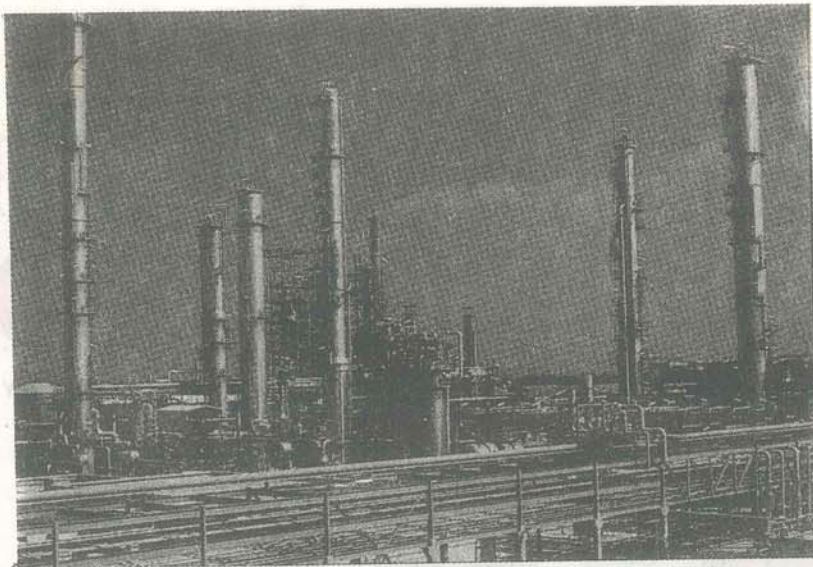
At present, the imported technology is the decisive factor in the process of industrialization and modernization in Vietnam. Because of a low development level, we can't produce the technology of our own. Therefore, for the time being, we should fully understand sources of imported technology in order to make a right policy on technological development appropriate to the present period of industrialization process.

Basing on the concept of "sources of imported technology", we will examine and estimate the process of applying and developing the imported technology in Hồ Chí Minh City.

The term "sources of imported technology" is used to discriminate it from the term "technology" in general, and classify forms of technology imported into Vietnam. And then, we could examine characteristics, effects, results and tendencies of the importation of technology along with channels of technology transferred to Vietnam. Basing on these examinations, we could adopt measures to adjust these channels to the short- and long-range goals of the industrialization process.

To understand the impact of the imported technology, we had better examine the industrialization process in Vietnam up to now. In fact, in the period between 1961 and 1975, this process was carried out in North Vietnam. Although it produced many considerable and undeniable results, but there were also many shortcomings. Up to then, a lot of attention was given to the heavy industry solely, the light industry and service industry





were low on the list of priorities. In this period, sources of imported technology came mainly from the USSR and Eastern European countries. They were considered as economic aid. From 1955 to 1975, Vietnam received a large amount of equipment and machines, but they were much more obsolescent than Western equipment of the same kind at the time. However, due to efforts of the Vietnamese workers, the factories with such obsolescent equipment and machinery (such as Hòa Bình and Trị An hydroelectric plants, Sông Công Engineering Factory, Đáp Cầu Glass Factory, Bim Sơn Cement Factory, etc) have contributed remarkably to the Vietnam GDP.

At present, in the market mechanism, to develop the economy quickly and stably, we should replace all of the obsolescent and polluting equipment and machinery. In order to integrate the Vietnam economy into the world and region, we should produce goods of high quality with a view to finding a foothold in the world market. This requires that both the Government and business should map out the strategy for importing new technology and developing technology in order to ensure the competitiveness and survival of Vietnam products. Therefore, a market for new technology has come into being and there's real demand for it. Sources of imported technology have made their appearance. In order to estimate exactly the impact of the imported technology on the economic development, that is, on employment, income, labor efficiency, skill of workers, training and education, traditional cultures, etc, we had better, at first, identify

these sources of imported technology:

#### a. Sources of imported technology

This is the process of receiving, popularizing, assimilating, adopting, and then, renovating and developing new technology of one's own. Receiving imported technology, in fact, is the process of transferring technology. This is an important source which could help us develop the technology of our own in the period of industrialization.

The Government could facilitate the technology transfer by allowing foreign direct investment; buying franchise, patent, technological services; organizing workshops and meetings, exchanging experts, etc. Besides the above-mentioned official channel, technology could be transferred through the unofficial channel, such as buying equipment, organizing workshops, exchanging experts, carrying out researches, copying foreign documents, etc. In sum, no matter by what channel the technology is transferred, the imported technology could make remarkable changes to our economic structure.

Popularization of new technology is of great importance. It will enhance the people's knowledge of technology thereby enhancing the labor efficiency.

The tasks of assimilating, adopting, renovating and developing new technology are important to our ability to create or receive new technology.

There are many ways of transferring technology, but all these ways require that we should develop our technological ability in order to make the best use of the imported technology.

ogy.

#### b. Sources of imported technology could be examined at many aspects:

- Imported technology classified by form of importation.
- Imported technology classified by importer
- Imported technology classified by structure of equipment
- Imported technology classified by economic sector
- Imported technology classified by managerial level
- Imported technology classified by level of pollution
- Imported technology classified by date of manufacture
- Imported technology classified by structure of industry
- Imported technology classified by goal of investment
- Imported technology classified by geographical feature
- Imported technology classified by cultural tradition (habit, custom, etc)
- Imported technology classified by technology exporter.
- Imported technology classified by national and local policy

The above-mentioned classification of imported technology, however, is influenced by subjective factors. If we carry out researches into this problem, we could achieve good results and right orientation of the importation of technology, we could also find out positive and negative factors or shortcomings affecting the economic development.

In another article, we will analyze the impact of each source of imported technology on the economic development ■