SOME MEASURES TO MANAGE SOURCES OF NEW TECHNOLOGY IN HCMC

by MEcon. NGUYỄN QUỐC TÒNG

After ten years of economic renovation, HCMC economy has changed basically and many good results have been achieved. Regarding the growth rate and technical renovation, HCMC has become one of the most active development centers of the country.

In order to make the best use of HCMC comparative advantages, we want to discuss here the orientation and measures to manage sources of new technology in HCMC in the period from now to 2000 and 2010.

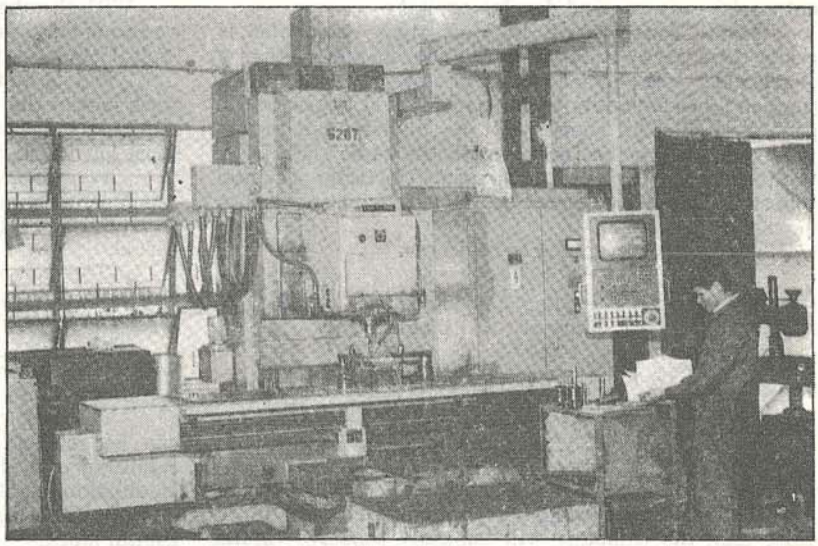
I. PRESENT TECHNOLOGY ABILITY IN HCMC

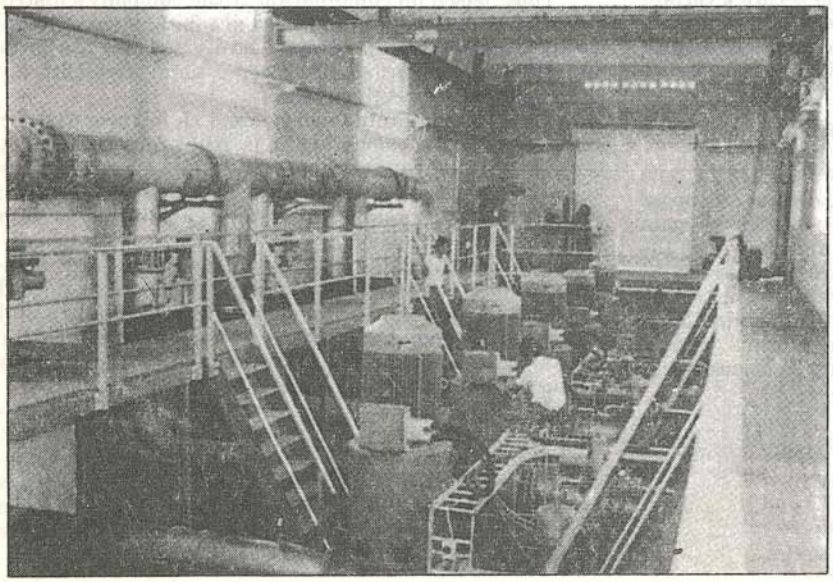
1. Source of new technology

We can divide these sources of technology in HCMC into two main sources for the purpose of management:

- Imported technology
- Local technology

2. Situation





- Although HCMC is one of the country's biggest industrial centers (supplying 30% of nationl industrial output and 40% of HCMC gross output) but, according to estimate of professional services, the technology level of industries in HCMC was backward. A recent survey of 900 economic concerns in HCMC showed that 91% of their machines and equipment were of obsolete, or semi-obsolete, technology (even in 19 joint ventures with foreign partners, this percentage also climbed to 55%).

A recent estimate made by the Ministry of Science-Technology and Environment also showed that in centrally-managed enterprises only 45% of workload were mechanized. This percentage in locally-managed enterprises were 25%. This percentage in manufacturing industries was slightly higher: 62% in centrally-managed factories and 47% in loccally-managed factories. In agriculture, it was only 19%, a very low percentage.

- The market economy has forced all economic concerns to innovate their technology in order to produce goods of higher quality and compete with imported goods. Many businesses have succeeded in doing so, such as textile, plastic, electronics, garment, agro-industry, building materials businesses.

The structure of plant grown and animal kept has been also changed to produce high-quality agricultural products (milk, poultry, vegetable, maricultural products, etc.)

- However, the annual rate of technological innovation was only 10%. This didn't come up to expectations. Most of 40 main industrial products made in HCMC were con-

sumer goods, and 80% of raw materials were imported.

Obsolete technology has produced bad effects on the environment. Although there are government bodies monitoring the pollution in HCMC but there must be plans to rearrange location for factories and accelerate the technology innovation process with a view to getting the sustainable development.

+ Regarding local technology ability, although there are some 100,000 graduates and postgraduates in HCMC (14.3% of this army of the whole country), around 800 of which are Masters or Doctors (10% of the country's total number of postgraduates), but only 5% of them are under the management of local authorities.

There are some 150,000 skilled workers and 90,000 others of intermediate level in this city.

Thus, this army is both qualitatively and quantitatively weak and can't meet requirements of such a big industrial and trading center as HCMC. Moreover, it's worth noting that in this city, only 18.7% of technological experts were working in manufacturing industry, 12% in R&D business. Moreover, the average age of this army is high: 63% of doctors and 20% of graduates are of over fifty.

In HCMC, there are 35 research institutes (30 of which are run by central government bodies), 25 universities and faculties and many experiment centers. Service supplying information about science, technology, industrial property, quality control, etc. isn't well developed but could help local government bodies manage economic activity.

From such a situation, we want to present here some main development directions and measures to manage sources of technology with a view to developing HCMC economy from now until 2000 and 2010.

II. MAIN DEVELOPMENT DIRECTIONS

1. For traditional and medium-size industries

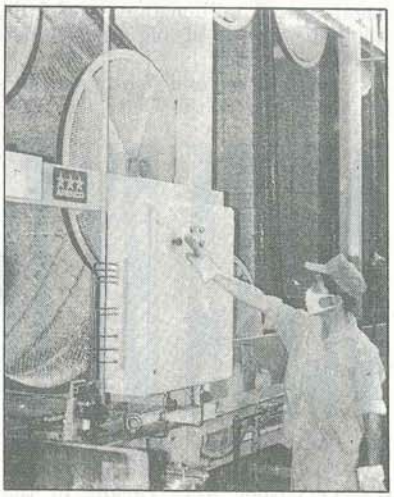
This sector includes textile, leather, clothing, agro-industry, electronics, mariculture businesses. Its main development direction is to import new technology used for principle stages of production in order to make high-quality goods, bridge the gap between Vietnam's and foreign production, supply goods to domestic and foreign markets, tap local natural resources, create more jobs, and protect the environment. The process of importing new technology must be combined with technology transfer and development of local technology.

2. For high-tech industries

This sector includes businesses producing new materials, informatics and telecommunications, biology technology, automation, sustainable power production, etc.

This sector requires big investment and involves a high degree of risk. However, it has decisive effects on the modernization of industrial production in HCMC. So we must give priority to the development of technology-intensive and eco-friendly industries. We can realize it by making two main projects:

- Project to develop applied technology: giving priority to the production of goods competing with regional countries and the world as well in the next century (alloy steel, non-ferrous metal, composite materials, high-tech ceramic, software, fibre-optic cable, automation system, genetic engineering, waste treatment, etc.)



- Project to develop basic technology: to develop all technologies essential to socio-economic development.

III. MEASURES TO MANAGE SOURCES OF TECHNOLOGY

1. Law system

The Government had better promulgate laws on science and technology, industrial property, environment protection, technology transfer, commerce, quality and technological standards, etc. These laws must enable us to estimate new technology according to international practices and Vietnam's conditions in the period from now until 2010.

- HCMC authorities had better take measures to encourage all social classes to apply new technology (by supplying soft loans for example), and to encourage the development of technology advisory service, technology research centers, etc.

2. Organization

- A technological advisory agency at national level with its branches in big cities can be formed. It can be a commission including several experts in technology. This commission can invite other experts if need be to estimate a specific technology. This commission will operate according to laws and delegated legislation regulating technology importation and development in the country in order to permit no contradiction between technology importation and development of local technology.

There must be also regulations on technology imported by foreign companies or foreign invested joint ventures in order to limit importation of harmful technology and encourage foreign investment.

- The Government can form technology centers combining research centers, technological training centers and technological information services to supply advisory service, information about foreign commercialized technology, etc. in order to help policy-makers in their decision making process.

- The R&D operation must be reorganized and managed by one government body only in order to enhance local ability to research, to master foreign technology and improve new technology, and then, invent new technology.

- To create a market for technological researches and make new achievements in researching operation based on contracts.

- To create conditions favorable for scientific and technological researches in order to encourage new inventions and improvements, encourage people to choose technical professions and learn of common technology.

- To integrate into the world economy by absorbing foreign technological achievements selectively and developing local technology.

- HCMC authorities have to enforce laws and regulations in order to control and encourage technological development and attract experts from all sources of education.

3. Development of human resources

- There must be plans to train new experts in order to reach an experts population rate of 30:10,000 by 2010.

- To attract Vietnamese experts from foreign countries by creating favorable conditions for their operation, call for cooperation of foreign experts and give tax reduction to training centers run by all social classes.

- To force businesses employing more than 200 workers to train skilled workers and allow skilled workers get higher salary■