# FACTS AND MEASURES TO DEVELOP SOFTWARE INDUSTRY IN HCMC

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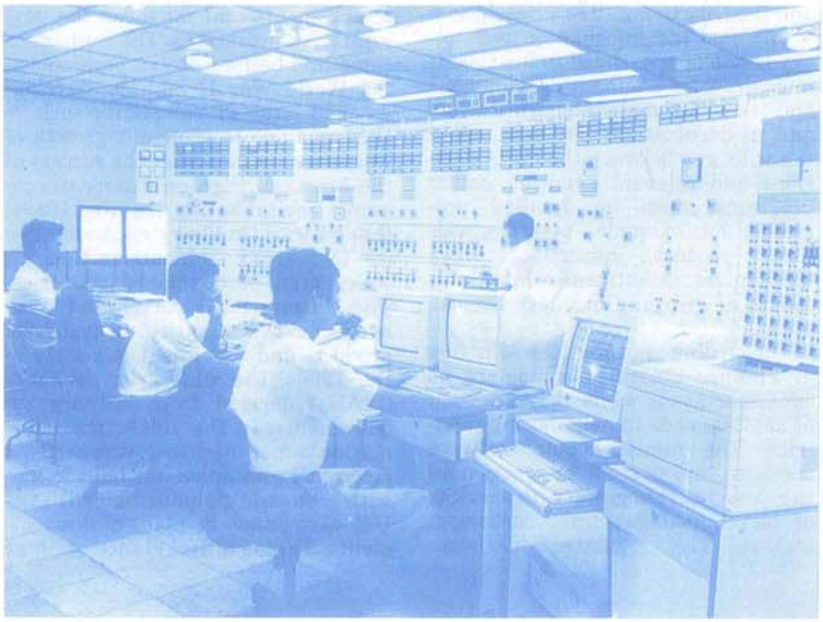
The software industry is a techno-economic sector to study, produce and distribute software products as well as services such as consultancy, solution supply, training, technical assistance, maintenance...

## I. IS THE SOFTWARE INDUSTRY A SPEARHEAD?

The Party Central Committee's Resolution II and the HCMC Party Committee's Resolution V have considered the information industry as a key industry. However, based on the industry's development across the country as a whole and in HCMC alone, we see its actual role is not as expected. A software expert said: "In 1997 the software industry's revenue reached around US$6 million, including US$1.5 million from export processing and US$4.5 million from local markets." In HCMC this figure was VND1.5 billion. This leads to a gloomy figure of VND3.75 million per software writer. Not surprisingly, it is said that the industry's income is far lower than that from motorbike safeguarding services (there are 1.2 million motorbikes safeguarded, and the safeguard is 200 times for each motorbike per year and the charge is VND1,000/motorbike/ time, then the income amounts to VND240 billion). However, the revenue is only a part of the spearhead industry. Why does a spearhead industry - an industry allures the world's prior investment - face an unimaginable paradox?



As a result, it's not surprising that some managers and leaders express their suspicion of the selection of the information technology including the software industry as one of spearheads of the national economy. The industry itself has no faults.

To solve this paradox, in my opinion, will be to find solutions to the matter to which many leaders pay attention.

As a person directly involving in the software production, I would like to present some ideas as follows:

## II. SOME CURRENT RADICAL CONFLICTS

In my opinion, an industry should meet conditions of market, person-

nel, technology, organization and environment to develop.

We will consider conflicts in each factor.

### 1. Market

At present, due to slow economic development of the country as a whole and the city in particular, there happens a conflict between simple and small-size demand (using personal computers to type documents and calculate figures) with high capacity of a software. This conflict results in that to turn out softwares does not require highly qualified skills, the added value is not large and the product prices are certainly not high. Consequently, the software industry finds it hard to develop and attract investment, in addition, this will cause great waste of equipment and software purchased from foreign countries.

### 2. Personnel

Everybody thinks the country's greatest resource is human being. Moreover, according to many foreigners' evaluation, Vietnamese have physical and mental features suitable for this industry. But they are just potentials. There should be great efforts to make them come true. The city's human resource is facing current challenges as follows:

- The development level of software industry is high but the available workers' skill is low (from concepts of software production to development methods and etc.)
- The software production is a teamwork with obvious assignment, and strict process opposite to the existing software writers' dawdling style.
- There should be a harmonious army including programmers, analysts, team leader, project manager, system engineers, network engineers, salespersons and so on while the city's IT personnel is not uniform and divergent.
- The information technology develops fast while the training programs and quality are not updated (until now, information technology is still seen as a mathematics subject. Even though universities have set up faculties of information technology for years!).

### 3. Technology

The information technology has become an industry with diverse equipment, facilities and technologies. However, HCMC still uses technologies of the 1970s with the traditional programming from A to Z. This conflict has generated products slowly at high cost, and when they come into being, the market demand almost vanishes, so they can not be distributed widely.

As a result, even though some overseas Vietnamese want to bring the processing contracts to Vietnam and the city, but due to inappropriate technology, these contracts cannot be implemented.

### 4. Organization

The significant challenge in this field is that most of HCMC-based software companies face unsuitable organizations to manufacture softwares, although their knowledge about information technology, system analysis and design is available.

Most of software manufacturers have not established a distinct process of production as well as a system of product quality management. Given current situation, they cannot turn out high-quality products meeting the market requirements for reasonable costs and timely delivery, not to mention the processing of softwares for export.

The selection of personnel to realize important projects is not impartial and does not pay attention to the IT skill and experience. In many costly and ambitious projects, the assignment is wrongly made, leading to failure and disadvantages in the industry development.

### 5. Environment

The sector has encountered a lot of obstacles to the software industry progress. The dominant conflict lies between concept and activity of levels and branches.

As mentioned above, the Party Central Committee's Resolution II and the City Committee's Resolutio n V affirmed the information technology is one of spearhead industries, it must grow for economic development and the national industrialization and modernization. However, there is a wide gap between the Party decisions and relevant agencies' action programs, even no detailed programs, for example, taxation, cultural product inspection, wage mechanism, investment capital, procedure of granting business license, etc.

Regarding tax rates, the Ministry of Finance classifies computers as consumer goods while they are seen as capital goods in neighboring countries. The ministry puts software services, and system integration in the same tax rate group with services of bicycle safeguarding, barbering, massage...The regulated hardware depreciation is 5 years while its life cycle does not exceed 3 years.

One of factors to develop the software industry is the IT infrastructure, telecommunications network, and Internet, but the costs of leased lines, of access are many times higher than those in neighboring countries. For example, the rent of a 1.53 Mb/s T1 line is US$76,856 per month (118 times higher than the U.S. charge), the 155 Mb/s gate is leased for US$7.786 million (1.034 times as much as Singapore lease). Under these costs, how can the infant industry grow up, how can it compete with the regional country's counterparts and how can the foreign investment be attracted in this sector? Moreover the Vietnam Post and Telecommunications Corporation is both a monopoly in Internet access provision and an Internet service provider. The wage problem remains thorny. The wages of engineering graduates stand at VND300,000/month, and system analysts with 20-year experience VND700,000/month, therefore, how can the software industry develop?

There are also shortcomings in the bid of IT projects and the project realization. This has caused unfair competition in the country's IT market.

## III. SOME SOLUTIONS

The information technology has taken shape and made progress for over 5 decades, from first electronic computers in the 1940s to the birth of software industry, from the military networks in 1960s to information super highways in 1990s. Observing the above landmarks, we will see they were in line with the social requirements and mirrored the government's incentives. The computers came into being to solve problems of the World War II and the development of large IT companies such as IBM was due to economic growth of western countries after the success of the Marshall Plan on European economic revitalization. In the 1980s, the software industry expanded due to increasing computerization in every area of developed countries. These countries have shifted from needs for the quantity to quality of products and services. Ultimately in the 1960s, the wide area networks (WANs) derived from military requirements. In the 1990s, the information super highway was well as electronic commerce was built in line with economic globalization with the U.S. Government's plans and investments. Taking a first glance, we may

misunderstand that the IT industry operates spontaneously without the government's intervention. In fact, the government role is very important. They do not make detailed involvement, but macro-level orientations through product orders and incentive policies in the early stage of IT development. The customers of such IT companies as IBM, DIGITAL, CDC...include the U.S. Defense Department, and sectors of aviation, petroleum, banking...

The experience from neighboring countries should be carefully learned to boost our IT industry. Regrettably, our studies in this industry are not intensively made with adequate and trustworthy data.

We would like to present some solutions to the above conflicts

**1. Market**

a. How to stimulate the market demand?

The Government's Decree 49-CP and the appearance of the Steering Board for IT Development in central and local governments are active decisions. However, to bring these decisions into real life, the Government has earmarked a budget of VND300 billion for three-year administration but the efficiency is not as expected. But the Decree 49-CP has partly contributed to the demand stimulus and generated first progressive steps for the IT industry. Maybe this is a lesson that the HCMC should study. To increase more demands, the Government should be a potential customer in at least five more years. But it is required to draw the experience in the past years. and liberalize the market with impartial legal frames.

First, the business circle and the authorities should improve their knowledge about IT role and facilities, then the software manufacturers should make their products easy to use and user-friendly and meeting their requirements with a view to increase needs for software products.

b. How to enhance the processing of software for export?

We are facing opportunities to answer this question. The U.S. has had their softwares processed overseas for a long time. Just because of this, South Korea, India, China and other Asian countries are able to export their gray matter. Among them, India shows the most successful exporter.

Given current situation, to increase the competitiveness of their products, manufacturers have invested great funds in information technology to make their performance flexible and perfect the after-sales process. In the mean time, the wages of IT experts in the North America and Europe are rather high, so these companies have their softwares processed by Asian and Southeastern IT experts. This is just a precious chance to seize.

In the other hand, many contingent problems such as Y2K, programs on standardizing the EU currency, e-commerce expansion, audio and video equipment integration and information processing are in need of many IT experts. According to statistics, France is lacking 2,000 to 3,000 IT experts annually.

If having proper strategies and policies for wages, processing conditions, marketing, after-sales services, good infrastructures, the HCMC will acquire significant market shares in this area.

**2. Human resource**

We have potentials, but to make them come true, we need suitable mechanisms and policies to generate qualified personnel. First, the colleges and universities should design training programs which provide students with both fundamental knowledge and high skill with the aim to meet requirements of the market of software writers. The current curricula are both backward and slowly updated in favor of theory.

In addition to the public training system, the Government should encourage other economic sectors to build IT schools, even foreign investors.

The Internet access fees should be reduced and the cumbersome procedures of using Internet removed to intensify the human resource quality.

**3. Organization**

- There should be an appropriate advising organization to leaders and a target program should be implemented in five years to accelerate the software industry.
- The public recruitment of qualified persons should be soon carried out for development projects.
- The Government should devise policies to encourage entities to produce softwares, set up production process and train personnel. It may grant aids and soft loans to software companies which have feasible plans to produce softwares.

**4. Technology**

- The relevant agencies should boost up research and development activities and disseminate new technologies to software businesses. They should create favorable conditions for foreign companies to market their products and technologies. The Government should remove cumbersome administrative procedures in granting visas to overseas Vietnamese and foreigners.
- The Government should set up a center for high technology dissemination and transfer.

**5. Environment**

The Government should review all policies and regulations on IT development and soon delete overlapping regulations and unreasonable policies (taxation, inspection of cultural products...).

a. The IT industry should be liberalized for evolution.

The central and city governments should take following measures to speed up the software industry:

- Creating large IT outlets and encouraging every economic sector to use information technology.
- Expanding IT applications.
- Stimulating on-line exchanges and reducing paperwork.
- Giving incentives to IT investors.

b. Generating favorable conditions for IT development and utilization.

- Setting up a software development center.
- Executing the copyright law.
- Encouraging the registration of IT products.
- Establishing an organization to evaluate the product quality.
- Forming the consulting organization for customers.
- Issuing simple regulations to inspect cultural products.
- Enhancing the use of Intranet and fully exploiting the Internet.

c. Setting up a Government body for IT planning, management and development under the city Service of Science, Technology and Environment or the Service of Industry, or setting an independent organization.

d. The industry should propose the Government initial preferential policies for IT development as follows:

- Giving incentives like investment in high-tech industry parks.
- Applying low tax rates for hardware and software export and import.
- Calculating suitable depreciation percentage for IT equipment.
- Paying reasonable wages to IT experts.
- Offering credit to IT development entities.

e. Training about 5,000 IT experts by 2000■