

ON THE MODEL OF HIGH TECH ZONES IN VIETNAM

Dr. Doan Ngoc Luu

National Institute for S&T Policy and Strategy Studies

Abstract:

Initially the terms “model” and “pattern” have been used in relation to high technology zone (high tech zone). Then these terms are used largely in the world today to reflect the core content of “high tech zone”.

The “objective rules” of the development of high techs and high tech zones which combine the specific advantages and are based on the issued legal documents of Vietnam make the important background to propose the suitable model for high tech zones in Vietnam.

Introduction

The Party and the Government of Vietnam consider the development of high techs and construction of high tech zones as national important policy for development of the country.

Statement No. 234-TB/TU dated 01 April 2009 by the Politburo on the Implementation of Decree II of the Central Committee on the S&T tasks and solutions for S&T development up to 2020 noted [1]: “Developing the high tech based industries and services, shifting fast the economic structure to the technology and knowledge based sectors, getting over difficulties of global economic depression and getting a higher position in the international production network in the process of international integration”.

Decree No. 99/2003/ND-CP dated 28 August 2003 [2] on the status of high tech zones stipulated: “The high tech zone is the multi-functional economic-technical zone with determined borders. They will be established by the Prime Minister’s decision with duties to conduct the research of development and application of high techs, incubation of high tech businesses, and training of high tech human resources, production and commercialization of high tech products. The high tech zones may have production-export zones, custom warehouses and living house zones”.

This document had been issued long years ago (2003) but it still provides suggestions for further studies to set up the suitable model of high tech zones in the actual conditions of Vietnam.

The highest legal document in power is the High Tech Law encoded Law No. 21/2008/QH12.

According to the High Tech Law: *“the high techs are the technologies with high content of scientific research and technological development integrated from modern S&T advances, producing the products of advanced quality and performance, high added value and environment friendly, playing the important role for forming new producing industries and services or modernizing the existing producing industries and services”* .

Also, Article 31 of the Law stipulates:

1. *The high tech zone is the area concentrating and linking R&D activities, high tech application, incubation of high techs and high tech businesses; training of high tech human resources, production and commercialization of high tech products, provision of high tech services.*
2. *The statement of duties of the high tech zone.*
3. *The regulations for setting up the high tech zone.*

The above mentioned documents are the background for further studies and proposal of solutions of high tech development and suitable models of high tech zones in the actual situations of Vietnam.

1. Paths of S&T development including the one of high techs

1.1. High reputed universities

Through hundreds years of the development of market economy the high reputed universities of every nation remain the big centers of scientific research. These centers produced many S&T researches and inventions. Many laboratories of them gained Nobel Prizes. In these universities, naturally there would be strict links formed between the education of human resources, researches and production activities.

Actually in developed countries almost all the large corporations and companies have their contracts signed with laboratories and departments of universities. It becomes popular that large corporations such as General Motors, Atrium, Canon and etc. have their representative offices in big universities. One of the world leading IT companies locates in Silicon Valley, South San Francisco and North California (USA). Here, Stanford University produces many new scientific researches and technologies. The research results are transferred to producing facilities to produce newest products including the most sophisticated and powerful chips. These facilities include units of big size companies and small size enterprises. They

are here not only to participate in the production chain but also fall in the “management” scope of Silicon Valley.

1.2. Academies of sciences

Actually the Academies of Sciences existing in some countries remain only the noble symbol of scientific glories with their prizes to award. Many of them do not exist any more as centers of scientific research and implementation.

Since the World Second War end the world had been splitted to the opposite blocks, namely “the Western Block” led by the USA and developed European countries and “the Eastern Block” lead by the USSR. The Cold War lasts for long years between them. The Socialist Block had to focus efforts for economic development and enhancement of defensive capacities and security. One of the principles developed by the USSR and then followed by other socialist countries emphasized: “Priorities for development of heavy industries and, at the same time, big efforts for reasonable development of light industries”. Under the leadership of the Communist Party, the Socialist State directly governs the aggregates of socio-economic development. In this process the State directly guides the allocation of financial resources for science-technical development between ministries, sectors and divisions of the Academy of Sciences which is under the direct control of the Government. The Academy of Sciences carries out the direct management of the largest S&T and research facilities of the country. They have full potentials for S&T development including high techs. The large national research tasks in S&T fields are assigned to the Academy of Sciences.

The activities of national research institutes are conducted on demands and orders made by the State. They are provided with the full financial allocations from the State planning authorities. This mode of management has advantages in the capacity to mobilize the full potentials of research institutes in certain time periods to complete the largest research tasks of the nation. But the negative sides of this “State controlled and subsidized” management mode exist also. They make these organizations gradually “distant” from production practice and education and training activities of universities.

The Cold War finished and Russia experiences the brain drain. Some leading scientific sectors of Russia get stagnated. Russia actually issues a series of policies to recover and push up the S&T activities to a new development stage. Russia constructed a new high tech zone in suburb of Saint-Petersburg, and the President Medvedev directly controls the construction of

INNOGRAD (Innovation City) in suburb of Moscow which, in fact, is the Russian Silicon Valley. They are the messages to show the shift of Russia in the scientific field to orient the scientific research and high tech development to the market mechanism and bind the activities in R&D - Training - Business fields [9].

1.3. Japanese way

Early the 20th century Japan was the industrial power. Since 1907 Japan had set up the Railway Technique Research Institute and they had built up a complete railway system.

Since the World Second War end Japan concentrated efforts for development of its industrial production capacities through purchasing patents from other countries. By the last decades of the 20th century Japan emerged as the second economic power of the world. In order to keep this world leading position Japan had oriented the development to deeper fundamental researches and inventions in the most sophisticated fields of technologies. In this context the science city TSUKUBA appeared. The Japanese Government focused efforts for construction of their world leading research institutes. In this city there are no industrial production facilities but they remains attached to industrial enterprises and carry out research orders offered by the Japanese leading industrial corporations.

1.4. New industrialized countries

At the end of the 20th century the world has witnessed the booming development of S&T and this development had given the contributions to the emergence of New Industrialized Countries including Taiwan, South Korea, Singapore and some others. The next concerns of these nations relate to the continual efforts to produce high added value products to compete with the ones of the industrialized countries (G7 countries). They target the construction of integrated high tech zones where they can conduct research, application and manufacture activities to produce of world market competing products as well as train and provide high qualification human resources. It is possible to say Taiwan, South Korea, Singapore, Malaysia are home countries of the first high tech zones where the concept of “high tech zone” gets its proper meanings and becomes popularized (see [5, 6, 7, 8, 9]).

1.5. China develops high techs and high tech zone [see 12]

By the first decade of the 21th century the Chinese economic development had made the spectacular mark stone to take over the position of the World second largest economy from Japan. Ones can mention frequently “the

Chinese colors” in “the well based features” and “the rule-full features” in the choice of development way.

First of all, it concerns the industrial development and industrial zones.

At the early opening stage they had built a series of concentrated industrial zones in coastal regions. The lands found infertile for agricultural production were transferred to industrial centers and urban cities and then extended. In term of technological level the Chinese was fully agreed to choose the “relatively advanced technologies” where the knowledge and techniques are suitably coupled with the existing technical background and high class orienting strategies. *They target key sectors of micro-electronics, new materials and bio technologies where the leading role is assigned to the electronic industry. The Chinese State defined not to repeat the heavy lessons of other countries in their development of industrial zones, i.e. to turn industrial zones to the destination of “classical technologies”.* It is necessary still to keep on some enterprises with traditional technologies but they would be gradually upgraded afterwards.

The strategies of industrial zones not only target the production of export commodities but they also do not neglect the target to replace import ones.

The most remarkable particularity of their way is, among the three stages of establishment of industrial zones, to cut down the stage of set-up and investment preparation to 5 - 10 years.

Secondly, it concerns the development itself of industrial zones.

In fact, the industrial zones in China were set up in the following models.

- Maximal use of existing facilities of universities and research institutes in order to mobilize the local potentials to set up high tech zones under the center controlled management. The links between scientific research, production implementation and commercial business are formed in these new organizations;
- Concentration of plants built under plans and operated under unified management;
- Construction of industrial zones based on advantages from coastal location and incentive policies for foreign investment and overseas market status;
- “Zone-inside-zone” structure.

By the issue of license for set up of high tech zones the State Council promulgates many regulations and rules related to sectors to be developed in high tech zones, namely: *electronics, information technologies, aerospace,*

material science, solar and high efficient energy, eco and environment protection, earth sciences and marine physics, basic and radioactive elements, medical and micro-biological sciences and other technologies to replace the traditional ones.

Not only high tech zones but also the majorities of industrial zones, particularly the ones locating in special economic zones, are encouraged to apply high tech based techniques. It relates to transfer and application of high techs for production of high tech based products. The research activities for creation of high techs are conducted in research institutes and universities.

The special economic zones have their Centers of Exhibition of High Techs oriented to international targets. Here the products produced by using the Chinese and overseas high technologies are exhibited regularly.

Summarizing the paths of S&T and high tech development by various countries we can note:

1. The thousands of years of experiences show that the S&T development is based on the development of universities and their combination of education and research activities. The Academy of Sciences becomes the symbol of scientific glories;
2. Since the appearance of the USSR the world had been splitted into two blocks based on different political backgrounds. They have the different ways of socio-economic development then the different ways of S&T development. They have the ideological differences leading to the different models of high tech development.

Therefore, “the pattern” is the large concept used to describe the mode of S&T and high tech development. The use of this concept can explain our “chronic” diseases which are reflected in the lack of close links in the development of S&T, universities and high tech businesses. And “the model” is the concept used only to classify different high tech zones.

2. Typical models of high tech zones of the world

Actually there are about 800 zones classified as high tech zones of various models. They are set up to develop high techs, attract the “bright brains” to produce the products having much higher scientific contents than industrial and economic zones can produce. They target to create breaking-through impacts for the development of local industries. The local authorities provide incentive measures to encourage investments and attract researchers to produce products with high value S&T contents.

The high tech zones can be classified in 5 groups, namely:

- Traditional Science Parks including incubation centers, science parks/technology parks and research parks;
- Science Cities or Technopolis including regional innovation clusters;
- Technology Innovation Parks (TIP);
- Technology Centers; and
- Special Science Parks.

2.1. Brief presentation of three successful high tech zones

	TSUKUBA Science City	HSINCHU Science Park	KULIM High Tech Park
Establishment	September 1963	December 1980	1996
Area	28,400 ha	2,100 ha	1,450 ha
Decided by	Government	Government	Government
Distance to urban centers	Tokyo: 60Km	Taipei: 70km	
R&D investors	Mainly Government institutes. R&D and Education. 33 Institutes. 131 R&D facilities and International Conference Center ¹	National High Quality IT Center National Research Center of Radiation and Cyclotron National Office of Special Programs Center for development of accurate measurements Center for Chip Development National Laboratories of Nano Equipment Industrial Technologies Research Institute Tsing Hua and Chiao National Universities	Advanced Material research Center MIMOS Electronics Center PLC and Machine Laboratories CNC Technical Center Center of IT Technologies Center of Network Security and Management
CNC industry		ITs: 169 PC/56 periphery	Production:

¹ Brief list of research organizations in Tsukuba Science City: Tsukuba University and research centers including National Research Institute of High Energy and Cyclotron, National Research Institute of Material Sciences, National Research Institute of Earth Sciences and Prevention of Disasters, National Science Museum, Tsukuba Research Center, Tsukuba Botanic Garden, Tsukuba Aerospace Center, Research Institute of Physics and Chemistry, National Institute of Bio-Medical Innovation, National Institute of Bio-Agricultural Sciences, National Research Institute of Foods and Aliments, National Center of Seeds and Plants, Research Institute of Forest and Forest Products, National Research Institute of Advanced Industrial Technologies, Center of Meteorological Equipments, Meteorological Research Institute and etc.

	TSUKUBA Science City	HSINCHU Science Park	KULIM High Tech Park
investors		equipment Communication: 47 Optical Electronics: 65 Accurate mechanics: 21 Bio technologies: 24 Total: 382 companies	Electronic, Mechanical, ITC, Transistors, Optical electronics, Bio technologies and Advanced materials.

Remarks:

1. The successful high tech zones are those integrated zones which are found to include many important sub-zones for R&D, training and high tech industries. These three sub-zones are closely linked to produce high tech products of high value and strong competing forces in international and domestic markets.
2. The integrated high tech zones are focused on research of advanced technologies and production of high tech products with the most popular presence of electronic commodities.
3. Tsukuba Science City is the destination for large R&D institutes from the world. They, however, still keep on the traditional contacts with large industrial corporations through R&D contracts. These zones are “opened”, i.e. have no fences like conventional industrial zones.
4. The successful high tech zones are found in the countries having developed industries.

2.2. Development of high techs in Vietnam and the necessity of adequate transition process

The first national university of Vietnam had been established in 1945 and was recorded as the first scientific education establishment of Vietnam². The

² Since 1897 some vocational schools had been established such as Ecole professionnelle de Hanoi (in French) set up in 1898, Ecole d’Administration de Hanoi in 1897, Ecole des Travaux Publics in 1902 and Ecole de Médecine de l’Indochine in 1902. Particularly l’Universite Indochinoise set up on 16 May 1906 had 5 divisions including some divisions established before and newly established ones, namely College of Law and Administration, College of Sciences (Mathematics, Physics, Chemistry and Biology), College of Medicine, College of Construction and College of Literature.

As purpose of colonial exploitation the French had set up some scientific research establishments such as Institutes of Parasitology (Sai Gon – 1899, Nha Trang – 1896 and Hanoi – 1900), Veterinary Department (1897), Meteorological Department (1898), Sai Gon Research Institute of Agriculture and Techniques (1898), Geographical Department 91899), Forestry Inspection Department (1901) and the Far East Archeological Department (1898). These establishments, however, operated almost separately from the above mentioned training schools.

publication of the French-Vietnamese scientific glossary by Hoang Xuan Han [12] in 1942 remarked the initial efforts of overseas Vietnamese scientists who returned to give their contributions for the development of science. The war against the French colonialism started and the development of sciences and university education passed the difficult war time.

In 1959-1960 the Soviet Government sent a delegation of Academicians of different disciplines to help Vietnam to build up a program for scientific development. This event becomes the mark stone to record the methodically structured stage of development of sciences in Vietnam. It is the first time a big center of scientific research of Vietnam appeared. It was named the Institute of Scientific Researches of Vietnam and based on the model of the Academy of Sciences very popular among the socialist countries where the State determines the tasks of research and allocates the budget for implementation. Vietnamese scientists started gradually their approaches to the modern topics of sciences.

After long years Vietnam, however, fails to establish its scientific identities. The reasons may come from the low starting points, low economic development, lack of leading experts, low quality higher education and research infrastructure of establishments even the one of national laboratories. All of these factors lead to the impossible application of research results and the gradually increasing distance from real practice and socio-economic development of the country. In fact, the establishments of scientific research and higher education get the tasks and allocations from the State budget through the planning and financing authorities and have no links to the production practice.

2.2.1. S&T development of Vietnam

We are facing, from one side, the challenges to get out of the list of economically poor and technologically out-dated countries. From other side we have increased considerably the number of S&T staffs. Many of them were educated in advanced countries and they would find good applications for their knowledge and keep pace with the world's S&T development if they stay overseas. Once returned home they have their knowledge eroded in an environment really unsuitable for S&T research and development. The problem is *how to cover the gap between the low developed economy and out-dated industries, and the promotion of potentials and capacities of S&T staffs which have been educated in advanced countries.*

After the August Revolution the State had established the National University of Vietnam which is the heritage from the University Indochinese and the first year of education had started on 15 November 1945.

We need to have time for transition from the “academic pattern” to the “research-training-production pattern”. This transition stage depends on the socio-economic development context, namely:

- The development of industries coupled with the development of supporting industries which have functions to provide the industries with equipment and spare parts. Supporting industries have to be upgraded gradually to meet the requirements of high tech development;
- The construction of the system, as next step, to support and promote the high tech development.

The successes recently gained during the last half century are not only stimulating but show also some obstacles in the way of development of high techs and construction of high tech zones.

The considerable positive records include:

- Developed system of secondary education with many prizes gained in international Olympiads;
- Established system of universities and colleges which satisfies the needs of the socio-economic development of the country. Many of them get further educations in high tech fields in developed countries;
- Established system of S&T research institutes of national level. These establishments keep permanent scientific cooperation and exchanges in high tech fields and produce many papers published in reputed international journals.

The existing negative remarks include:

- No established identities of S&T research and development caused by the lack of leading experts;
- Limited investment for S&T (rate of around 1% of GDP) which is not enough to promote the S&T development, particularly the development of high techs which requires big venture capitals;
- High “disintegration” between S&T activities and production practice. S&T researchers cannot provide industrial producers with effective solutions and therefore the latter “turn their back” to S&T activities. The surveys show a very low rate of investments (about 1% of turnover) for S&T activities;
- Very low rate of high tech enterprises among operating enterprises in Vietnam.

Then, what is the platform for the development of high techs and construction of high tech zones?

In the actual globalization context we do not need to follow the “time-linear development rule”. From the knowledge volume accumulated from the development based on the pattern of the Academy of Sciences of the USSR and Eastern European countries we surely will find out the suitable steps to become a basically industrial country by 2020. And then we can immediately start the development of high techs and high tech based industries. The support pillars should be as follows:

- Favorable natural conditions with rich resources and high bio-diversity. It is the very particular feature in comparison to other countries in the region and in the world. These diversified potentials can provide resources for creation of high tech products of high value and competitiveness in domestic and export markets;
- Long history of national development and defense inspires the spirits of hard working and learning, patience and courage to overcome difficulties and gain successes which are the precious pre-conditions necessary to carry out the development of high techs and construction of high tech zones.

Some recent successes are the deference for this faith, namely:

- The Dong Thap Center for Research and Preservation of Pharmaceutical Materials (Remedica - Imexpharm), Long An Province produces tens hundred of essences including the ones for medical and cosmetic use to supply reputed European producers [13];
- Fucoidan Vietnam Company produces Fucogastro capsules containing fucoidan extracted from a Vietnamese species of brown ague. This pharmaceutical product is indicated to increase tonic and immunologic capacities, prevent the formation of tumors and support the treatment of enteritis, gastric diseases and cancers.

2.2.2. Actual situation of development of high tech zones

2.2.2.1. Hoa Lac High Tech Zone

In October 1998 the Prime Minister had signed the Decision to establish the Hoa Lac High Tech Zone over the area of 1,586 ha and approved the Master Plan and Project of Initial Investment - Stage 1 of the Hoa Lac High Tech Zone.

The Hoa Lac High Tech Zone has the structure, functions and duties to meet the status of high tech zone as stipulated in the High Tech Law. The actual link, however, of the three pillars of high tech zone, namely R&D activities - Training activities of high qualification human resources - Operation of high tech enterprises is not seen clearly.

The links between the Hoa Lac High Tech Zone and the Hochiminh City High Tech Zone and other surrounding industrial zones remain underdeveloped. (for details see [14]).

2.2.2.2. Hochiminh City High Tech Zone

The Hochiminh City High Tech Zone had been established by Decision No. 145/QD-TTg dated 24 October 2002 by the Prime Minister over the area of 913 ha.

The incubator system of businesses has been introduced to operation since October 2006. The links, however, between research - training - development of businesses to produce products labeled “The Hochiminh City High Tech Zone” remain the problem full of challenges in the immediate future and long vision. (for details see [15])

2.2.2.3. Software parks

Up to now over the whole country there are 8 software parks introduced to operation in Hochiminh City, Da Nang, Hanoi, Hai Phong, Can Tho and Thua Thien-Hue. Almost all of them were built recently and started operation in 2003-2005 period. Some of them use efficiently the installed equipment and infrastructure, particularly Quang Trung Software Park in Hochiminh City, Sai Gon Software Park and E-Tower Software Center (these parks alone had attracted 118 domestic and overseas enterprises). Particularly in July 2008 SaigonTel has been partnered with Teco (Taiwan) to start the construction of Thu Thiem Software Center with USD1.2 billion of investment, targeted annual turnover of USD6.5 billion and staff number of 70,000 engineers. There is also Da Nang Software Company which gains also many successes and effective development.

The links between the parks and other organizations are relatively good.

2.2.2.4. Projects oriented to high tech products

Projects oriented to high tech products were invested in industrial zones in some provinces and cities. Some of them were established in Hai Phong (Nomura), Hai Duong, Quang Nam, Ba Ria - Vung Tau, Dong Nai, Binh Duong (Vietnam - Singapore). If these projects target and produce high tech

products accompanied with scientific research activities they would become high tech zones.

2.2.2.5. High tech agricultural zones

There are established 12 agricultural zones with application of high techs in Hochiminh City, Hanoi, Thai Nguyen, Son La, Can Tho, Hai Phong, Quang Ngai, Phu Yen, Binh Dinh, Lam Dong and Bac Lieu. Other provinces and cities in the key economic regions target also to establish agricultural zones with application of high techs.

2.3. Suggestion of references for establishment of suitable high tech zones in Vietnam

2.3.1. Development of high techs and construction of high tech zones

High techs have been applied largely in all the sectors and fields and they bring a production efficiency many times bigger than traditional technologies do.

The experiences of development show:

- South Korean Government promoted strongly the development of high techs and by this way the annual income per capita increased to USD20,000-30,000;
- Japan who lacks natural resources and develops high techs had become the world second nation in term of national production (by 1985);
- Brazil, without development of high techs since the years of 70s, could not get the position of technological power. The annual income per capita of Brazil remains USD8,000;
- China gained also the strong development of industrial zones (particularly for coastal regions) where the technologies clean, advanced, environment friendly and sustainable would be the platform for development of high techs and construction of high tech zones.

Vietnam, if its development is based only on the export of aquatic products, rice, coffee and etc., would have the annual income per capita of USD4,000-5,000. Therefore the development of high techs surely will be the way to make the Vietnamese economy developed and integrated into the world economy with the target of the annual income per capita of tens thousand of USD.

New industrialized countries, when having gained the industrial development, look for high tech based solutions for promotion of their economic competing forces.

2.3.2. High tech zones would produce products of high competitiveness

New inventions created from scientific research activities would be capable to give products with high added value and strong competitiveness. The studies show that R&D results and production technologies are secrets of competition advantages the owners *would not transfer them* in ordinary way.

2.3.3. Determination and policies by the Government

The policies issued by the Government are the background necessary for the development of high techs and construction of high tech zones. It is the Government to provide financial investments and human resources required for this development.

The development of the leading industrial nations such as England, US, Germany, Japan, South Korea was based always on the industrial development policies. The US particularly had carried out them in form of R&D supports in the fields of their high competition advantages including defense industries, communication and biology.

The experiences from fast developed East-Asian countries show *it is necessary to apply Government supported policies in certain fields.*

In fact, the lessons from TSMC (Taiwan Semiconductor Manufacturing Corp) show that from the first days of its establishment the Government had kept the majority of shares to support the development of the corporation and passed to the privatization afterwards. Actually TSMC becomes the world largest company in silicon processing field with the annual turnover of USD10 billion. Samsung Electronics also spent 25 years with the strong support from the Government to gain the actual position. Actually it is almost impossible to give an example of industrial development without strong Government supports.

2.3.4. Strict links of the three high tech pillars

They are needed for purposes of:

- Producing high added value products;
- Training high qualification human resources for research and production activities;

- Developing high tech businesses on the basis of application of research results and use of selected and well trained human resources.

These links should be taken as “*gold principles*” in the development of high techs and construction of high tech zones.

Every high tech zone, as norm, is focused on linking the three pillars only for *certain high tech products* while industrial zones may accommodate many different enterprises as the investors want and they may produce various industrial products. Intel Corporation, for example, as world leading producer in semiconductor field, produces only CPU chips for PCs and does not produce and sell complete PCs. It is a very spectacular particularity of the development of high techs and construction of high tech zones.

Naturally the investors look for high benefits from low land fees and cheap labor forces. Therefore, their *designing and manufacturing facilities* should be based in their home quarters while their *producing and assembling facilities* are set up in various locations which would offer incentives advantages (cheap labor forces, low taxes, high benefits).

The “*gold principles*” would be kept in mind to avoid the “trap” to make an industrial zone instead of a high tech zone.

2.3.5. Paths of Vietnam to develop high techs and construct high tech zones

As noted in Section 2.1, the majority of high tech zones are found in the developed countries while Vietnam just gets out from the list of poor nations and does its best to become a basically industrial nation by 2020 with the average annual income by capita of USD3,000. It is a big challenge for Vietnam in development of high techs and construction of high tech zones. We should keep it in mind when we want to look for a pattern for development of high techs and construction of high tech zones in the immediate future.

The most useful solution is to mobilize the advantages and mitigate the disadvantages as noted in Section 2.1.

2.3.6. Priority for development of electronic industries

It would be necessary to have a basic background for development of modern industries as it was the case of China and new industrial countries in their initial stage of development of high techs and construction of high tech zones.

This problem should be examined and analyzed in objective manner by concerned authority agencies to get the answer to the question why we could

not develop well the electronic industries and confirm the necessity of the development of this sector in Vietnam.

2.3.7. *The absence of “multi-functionality” and “defined border”*

This typical feature for high tech zone is stipulated in the High Tech Law - 2008. It would be taken as “opened” terms and conditions for establishing various models of high tech zones in Vietnam./.

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