

Plans for Hanoi City Industrial Clusters - And Research of Experiences of Countries in the World in Developing Infrastructure for Industrial Clusters

Nguyen Dinh Trung, PhD^{1*} & Dinh Tran Ngoc Huy, MBA²

¹National Economics University (NEU), Hanoi, Vietnam.

²Banking University HCMC, Ho Chi Minh city, Vietnam, International University of Japan, Niigata, Japan.



DOI: <http://doi.org/10.46382/MJBAS.2022.6206>

Copyright: © 2022 Nguyen Dinh Trung & Dinh Tran Ngoc Huy. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Article Received: 31 January 2022

Article Accepted: 27 April 2022

Article Published: 30 May 2022

ABSTRACT

One purpose of this study is to present lessons and experiences from other countries in developing clusters and industrial zones (IZ).

According to OECD, they stresses that “cluster policies exist at the border of industrial policies, regional development policies and science & technology policies, and their ultimate goal is to strengthen industrial competitiveness through enhanced interconnection between the industry and the research sector.”

By using qualitative analysis, our study findings show that for example, in case of Thailand, they have many industrial clusters in which they can transfer technology and training programs enhanced from workers across industrial parks. They also focus on sustainable development of industrial clusters. Different from traditional concept of industrial park, Thailand industrial clusters have areas for manufacturing, services, industries, resident, etc.

Keywords: Clusters, Lessons, Experiences, Countries, Industrial.

1. Introduction

Development of industrial clusters in Hanoi city with more presence of SMEs for socio-economic development is hot concern in recent years. In many countries around the world, SMEs always play an important role in socio-economic development. In the context of the prolonged Covid-19 epidemic, which has negatively affected many businesses. The Organization for Economic Co-operation and Development (OECD) defines clusters as “networks of strongly interdependent firms, knowledge production organizations (universities, research institutes, knowledge-intensive business services), bridging institutions (brokers, consultants) and customers, linked to each other in a value-adding production chain.” Meanwhile, Professor Michael Porter of Harvard Business School, who played a crucial role in spreading the discussion on clusters to the public, characterizes clusters as “geographic concentrations of interconnected companies, specialized suppliers and service providers, firms in related industries, and associated institutions (e.g. universities, standard agencies, and trade associations) in particular fields that compete but also cooperate.”

Next, the rapid development is somewhat uncontrolled in terms of urban scale and boundaries, making the urban structure somewhat unstable. Many areas previously identified as peripheral such as industrial zones, waste treatment areas, cemeteries, railway lines and railway stations, are now surrounded by new urban areas. In many urban areas with developed industrial parks in suburban areas, the workers' housing system lacks urban utilities and social infrastructure because it is far from urban centers. Most of the space planning and construction design, choosing the location to build housing for workers is not suitable and there are few real estate investors interested.

In particular, social infrastructure, including worker housing, cultural, sports and welfare institutions in the industrial park is lacking and has not been linked and synchronized with industrial park development. This was

revealed during the fourth outbreak of the Covid-19 pandemic, showing that most of the local industrial zones have not yet paid attention to the construction of worker accommodation, so the implementation cannot be guaranteed. The 20% land fund for construction of social housing or accommodation for workers in many places is not available or not implemented. The Ministry of Construction has issued a document directing localities when formulating and approving industrial zone planning, to arrange appropriate land area in the area to build workers' houses, ensuring synchronous infrastructure system, technical and social infrastructure to serve workers and employees working in the industrial park.

Research Questions:

Question 1: What is situation of industrial clusters in Hanoi city Vietnam?

Question 2: What are lessons and experiences from other countries in developing clusters and industrial zones (IZ)?

2. Previous Studies

First, over the past 50 years of economic growth since the Korean War, the Korean government has implemented industrial location policies, which are similar to clusters. Industrial locations refer to geographical area where companies gather together to conduct business activities. Some examples are the steel industrial complex in Pohang, the machinery complex in Changwon, and the petrochemistry complex in Ulsan. Industrial locations are sites reserved and developed for industrial activities. The Korean government initiated the policy of designating industrial location to heighten the land efficiency of the nation and secure some of the territory for production and other industrial activities.

Beside, roles of banks are vital as well (DTN Huy, 2015; PM Dat et al, 2020)

The decision to borrow capital of an enterprise is an act to satisfy the needs of corporate customers for products and services (borrowing funds) provided by banks. If banking products and services meet the needs and expectations of the business, then the business tends to continue using that service in the next time and recommend it to other customers (Philip Kotler, 2001).

The relationship between SMEs and banks: According to Khalid Hassan Abdesamed (2014), if businesses have a good relationship with banks, it will help businesses complete procedures faster because they know the regulations of the bank. Tran Quoc Hoan (2018) pointed out that the relationship between businesses and banks has a positive impact on the access to credit capital of SMEs.

Researches by Pham Hong Manh and Dong Trung Chinh (2013) and Nguyen Quoc Nghi (2011) both suggest that the faster and more flexible the loan procedure, the more customers intend to use the bank's lending services. . The speed of the bank's loan application processing must always be fast, helping businesses to circulate cash flows, create credibility with partners in terms of payment time and meet the needs of using capital to serve customers and business. Last but not least, the most effective way to achieve innovation-led growth is none other than the promotion of industrial cluster policies. The industrial cluster policy in Korea was promoted to convert the Korean

economy to an innovation-led growth system by upgrading existing R&D districts or production complexes to industrial clusters equipped with both production and R&D capacities where innovation keeps occurring on a regular basis

(Source: The Industrial Complex Cluster Program of Korea, 2010).

And Kulpina et al (2020) stated that Need to identify key areas in Economy Clustering and to increase Efficiency and Resource Usage for Sustainable Social and Economic Development, in case Kuzbass.

3. Research Method

In the study, authors will use qualitative analysis combined with analyzing basis of previous studies. This content was then checked to accurately reflect the content of the research problem.

Synthesis and inductive methods also used.

4. Research Results

4.1. Situation of developing industrial clusters

Despite making positive contributions to socio-economic growth, many comments say that industrial parks and economic zones have revealed shortcomings and limitations in recent years. Specifically, the construction of a master plan for the development of industrial zones and economic zones lacks an overall and long-term vision in relation to other economic sectors and to society. IZs and EZs are planned fairly spread out, mainly based on local proposals, not attached to the local and national socio-economic development master plans and master plans, and have not closely followed actual requirements. Practices, orientation and ability to attract investment, local competitive advantages and efficient use of resources. The occupancy rate in many industrial zones is still low, leading to the state of abandoned land and waste of resources. There are still quite a few IPs with slow deployment and low investment attraction for many reasons such as slow site clearance, high investment rates, overlap in planning or infrastructure outside the industrial park fence.

Multimedia connection infrastructure is not synchronized and unbalanced when road transport accounts for 77% of the total amount of goods transported throughout the country. Technical standards of infrastructure and factories are still low.

The synchronicity and cohesion between the planning of industrial zones and economic zones with those of social infrastructure, human resources, construction, land use and urban areas is not high. The development of industrial zones and economic zones in the direction of sustainability, harmony between industry, urban areas and services, creating links, cooperation, forming value chains between enterprises inside and outside the IZs and EZs has not been focused. In particular, the technical infrastructure for environmental protection of industrial zones in some localities has not been synchronized. The operation of environmental protection works has not been serious and has not fully complied with the provisions of the law on environment.

In the context of international integration and the development of the 4.0 revolution, it is necessary to innovate, restructure and perfect the industrial park model to catch up with the global trend, ensure the harmony of long-term

interests, and take efficiency. Socio-economic, environmental protection and sustainable development as the highest goal, are demanding comprehensive breakthrough solutions, rational arrangement of industrial zones according to standards, standards and regulations.

One of the top solutions is to review detailed urban planning, linking housing planning for industrial workers with urban development planning.

Paying attention to the traffic structure connecting the region and the national territory through the formation of a system of highways, airports, and seaports. This will create shifting trends in the geographical distribution of industrial zones in the coming period. Therefore, the strategy of integrating the industrial zone system with the new urban system and industrial residential areas needs to be clearly shown in the orientation of the National Master Plan and the urban-rural system planning in order to create the power of the future. strong synergy between production development and human resources; attaching infrastructure inside and outside the technical fence; link between urban development and the system of modern residential areas and the system of industrial zones. Promote research and innovation in planning to build models of urban-industrial, service-industrial-urban, eco-industrial parks (energy saving, low emission), building industrial park models ecology, urban IZ, service synchronous industrial park structure.

4.2. Experiences of other countries in development

The case of Taiwan:

In order to develop industrial clusters, Taiwan government agencies have to evaluate potential and competitive advantages of each region to see the forecasts of science and technology development as well as trade trends in each area, for time 10-20 years.

Then they will construct an internal infrastructure for clusters including: internal communication and information system and internal transportation system, etc.

Taiwan also direct for high technology development and produce products toward exports.

So we see they have a solid process in cluster development.

The case of Thailand:

Thailand has many industrial clusters in which they can transfer technology and training programs enhanced from workers across industrial parks.

They also focus on sustainable development of industrial clusters.

Different from traditional concept of industrial park, Thailand industrial clusters have areas for manufacturing, services, industries, resident, etc.

The case of China:

Over the years, the Chinese government has taken many measures to improve the digital infrastructure. The first measure is to establish and strengthen the mechanism of all-people telecommunications services, including

piloting all-people telecommunications services, supporting upgrading of fiber optic networks and building network systems for villages. Second, China has accelerated the construction of access points to the backbone network and completed the restructuring of the network system. Third, China strives to expand internet bandwidth by formulating and implementing an annual bandwidth expansion plan. China is also actively involved in the construction of the international undersea fiber optic cable system.

The case of India:

The Government of India is working hard to extend the coverage of mobile networks and network connectivity to all remote islands and villages that are not yet connected. To get more rural areas to have internet access, India initiated the “BharatNet” program. This program brings the Gigabyte network to the entire country, and develops an efficient connectivity solution for remote areas. At this time, more than 230,000 km of fiber optic cable has been installed at Gigabyte speeds to more than 50,000 villages. Similarly, a "Rural Broadband System" is also being developed by the Government of India, whereby 25,000 public Wi-Fi hotspots are expected to be installed in rural telephone stations.

The case of Korea:

Korea is trying to develop more venture ecosystem in clusters. And Pangyo Techno Valley is a state-of-the-art IT technology centered on high technology companies. If wide-scale cooperation measures are established between Daejeon and Gyeonggi-do clusters, which are different from each other in the process of formation and complexity, a great synergy will be created at the national level. Gwanggyo Techno Valley has several high-tech convergence research institutes, bio-research institutes, and nano research institutes. It has potential to grow as a base for advancing biotechnology in connection with hospitals nearby (Lim, DS, 2012). On the other hand, the model of high tech (CNC) zones in the world is very diverse, depending on the type of ownership, tasks, functions and operating history. Most of the high tech (CNC) zones in the world receive funding in other forms from the State. In the US, up to 80% of hi-tech parks are funded by the government or universities. Similarly, in Europe, up to 85% of hi-tech parks receive funding from the government budget or in Southeast Asia, the government is often the one to provide the infrastructure for hi-tech parks.

State capital has different roles depending on the development cycle of each hi-tech zone, but often plays an overwhelming role in the early stages because this stage requires large capital, slow capital recovery time, and carries many risks. In the next stages, when research activities have stabilized, research results are confirmed, the private sector will participate more in investment, then the state budget for the hi-tech zone will be decrease. External capital mobilized and used effectively will increase economic growth, raise income and create internal accumulation for the economy. Among external capital sources, FDI plays a very important role in promoting technology and laborers. This is confirmed by (NT Hoang, DTN Huy, 2021).

5. Discussion and Conclusion

The State has a consistent investment policy on the basis of incentives high, especially taxes. In addition to the interventions by mechanisms and policies, the Government also provides economic support for industrial zones in difficult areas to promote the development of the whole industrial zone system in the country.

- Flexible and highly effective management mechanism, the management model of the industrial park must be really open, implement the OSS mechanism well, simplify administrative procedures, compact administrative apparatus, avoid low level. The worst bureaucracy and administration cause troubles for investors. The Management Board of the Industrial Park is financially proactive in order to facilitate the good performance of the assigned functions.

Second, banks need to focus on researching and improving the process of appraising and processing loan applications and disbursements as quickly as possible while ensuring risk prevention and compliance with the bank's regulations in order to reduce risks. Roles of banks need to enhance (DTN Huy et al, 2021; Hac LD et al, 2021; THach NN et al, 2021; DTN Huy, NT Hang, 2021).

Third, in order to contribute to improving the loan decision of SMEs, improving the quality of staff is a very important solution of commercial banks. Bank staff also need to provide specific instructions, explain clearly and in detail the loan procedures that SMEs need to have when taking out loans, and clearly explain to businesses the provisions or terms in the loan contract, mortgage contracts to avoid the situation that enterprises do not understand or do not understand, leading to complaints or dissatisfaction of enterprises with service staff.

Fourth, commercial banks need to continue to innovate the lending process in the direction of simplifying loan procedures, reducing troubles for businesses, ensuring loan safety and in accordance with the provisions of the law. High appraisal capacity to shorten the loan settlement time is essential.

Last but not least, The State must ensure a stable political, social and macroeconomic situation, and an appropriate trade regime.

- The industrial zone is organized according to a reasonable territorial space on the basis of regional and national planning. The development is not only within the scope of each locality, but also takes into account the linkages between neighboring provinces and cities in order to promote the potential of each region.

- Synchronous planning and construction of the IP between technical and social infrastructure inside and outside the IP, paying attention to the development of satellite areas outside the IP such as residential areas, urban areas, raw material areas ensure more and more sustainable development.

- Investment capital is based on promoting internal resources within the country, not focusing too much on capital from outside. Have a consistent policy in attracting foreign direct investment. The State mobilizes all capital sources in the society and encourages all economic sectors to participate in the development of IZs.

- Reasonable land and factory rental prices, good industrial park technical infrastructure.

- In case building industrial clusters or industrial parks, it is necessary to ensure favorable conditions in the organization of workers' working conditions.

- When arranging an industrial cluster in the city or on the land outside the city, it should be combined into an industrial - residential cluster. Accordingly, the industrial-residential cluster is a special spatial planning complex, including industrial enterprises with requirements of level III to V hygiene protection (not emitting hazardous

waste, or not producing hazardous waste) considerable or craft enterprises capable of combining with housing areas into a unified planning structure. The inter-relationship between the Industrial Park and the Residential Area is mainly on foot, partly by public transport, sharing the same facilities for workers working in factories and residents of neighboring housing areas.



(Source: author synthesis)

Fig.1. Hanoi clusters (industrial)

Limitations

The research still has some limitations such as: The research is needed to make quantitative model with control variables such as: enterprise size, operating time, enterprise assets, etc. That is also the direction for further research.

Declarations

Source of Funding

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

Consent for publication

Authors declare that they consented for the publication of this research work.

References

- [1] Bui Xuan Bien, Hoang Tran Hau, Nguyen Thi Thuy Nga, Tran Thi Phuong Diu, (2020). The role of social capital in credit access of small and medium-sized private enterprises. *Economic and Development Review*, Issue 279, September, pp.12-19.
- [2] CC.Frangos, Constantine C.Fragkos, (2012). Factors Affecting Customers' Decision for Taking out Bank Loans: A Case of Greek Customers.
- [3] Christos C. Frangos and partner, (2012). Factors Affecting Customers' Decision for Taking out Bank Loans: A Case of Greek Customers, London.

- [4] D Thi Ngu et al. (2021). Language teaching application to English students at master's grade levels on history and macroeconomic-banking management courses in universities and colleges, *Journal of Language and Linguistic Studies*, 17(3): 1457-1468.
- [5] Do Thu Huong et al. (2021). Discussion on Case Teaching Method in a Risk Management Case Study with Econometric Model at Vietnam Listed Banks-Issues of Economic Education for Students, *Review of International Geographical Education*, 11(5).
- [6] Kaliba, A.R. (2014). Industry Cluster Analyses for Capital Region Planning and Development District and the North Delta Regional Planning & Development District, Louisiana, USA. Retrieved from: https://www.researchgate.net/publication/297759080_Industry_Cluster_Analyses_for_Capital_Region_Planning_and_Development_District_and_the_North_Delta_Regional_Planning_Development_District_Louisiana_USA.
- [7] Kulpina et al. (2020). Economy Clustering as Efficiency Increase for Resource Usage in Key Areas of Sustainable Social and Economic Development in Kuzbass, *E3S Web of Conferences* 174, 04060 (2020). <https://doi.org/10.1051/e3sconf/202017404060>.
- [8] PM Dat et al. (2020). Comparative china corporate governance standards after financial crisis, corporate scandals and manipulation, *Journal of security & sustainability issues*, 9(3).
- [9] Tran Dinh, K.N. & Ramachandran, N. (2006). Capital Structure in Small and Medium-sized Enterprises. *ASEAN Economic Bulletin*, 23(2): 192-211.
- [10] Tran Quoc Hoan (2018). Improving access to bank credit capital of SMEs in Phu Tho province, PhD thesis, Academy of Finance, Hanoi.
- [11] V Van Chung et al. (2021). Eastern Philosophical Theories and Marxism-Lenin Philosophies in Viet Nam Society and Education, *Review of International Geographical Education Online*, 11(8): 1586-1591.