

The Analysis Of Framework, Model And Recommendations For Industrial Clusters Development

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Abstracts

Industrial Cluster (IC) development After The Global Economic Crisis is one of crucial issues in Modern Economy and Developing Economic. Its Theories and Practices, Standards and principles might be applied in other developing countries as well, at least from risk management and comparative approaches

This study aims to figure out What are recommendations for industrial clusters (IC) to grow in future and second, What are models and frameworks for IC development? By using qualitative analysis, inductive and synthesis methods, our study findings show that Porter frames these four elements as being mutually reinforcing and interdependent, underlining the point that a successful cluster requires a broad ecosystem of actors, as well as material resources and policy support. Next, The main contents of the CCN development planning project include: a) Legal bases and necessity for planning; b) Overview of the development situation of industries and industrial parks in the area; c) Analysis and assessment of the current status of construction and development of industrial zones that have been planned and established in the area.

Keywords: industrial clusters, Hanoi, infrastructures, building, Vietnam.

JEL code: M10, M21

1. INTRODUCTION

Hanoi currently has 70 industrial clusters operating on a total area of nearly 1,400 hectares, attracting more than 1,000 businesses into production and business and annually paying tens of thousands of billions of dong to the state budget. Among the operating industrial zones, so far, there are about 16 developed CCNs that are relatively complete, basically meeting the requirements of Decree No. 68/2017/ND-CP dated May 25, 2017 of the Government on management. , developing CCN. The remaining 54 CCNs still need to be further improved in the synchronization of infrastructure, wastewater treatment systems, fire prevention and fighting, trees...

From 2018 - 2020, Hanoi has decided to establish 43 industrial clusters (CCNs). In which, in 2020, 25 industrial parks with a total area of 497.4ha were established and investment was deployed quite smoothly because problems in planning and land were resolved by departments and branches advising

the City People's Committee.

Figure 1 - Industrial clusters in Hanoi



(source: internet)

Research questions:

Question 1: What are recommendations for industrial clusters (IC) to grow in future?

Question 2: What are models and frameworks for IC development?

The paper will be organized with introduction, issues and then previous studies and methodology. Next sections are findings, discussion and summary.

2. THEORETICAL BACKGROUND AND PREVIOUS STUDIES

Bembenek & Kowalska	2016	characterise the role of industrial clusters in SMEs development. Trying to meet demands of the current environment, these companies are forced to constantly identify new ways of development, including new sources of sustainable competitive advantage. Nowadays, focusing only on the internal (endogenous) development for many entities is insufficient and external development of the SMEs through the clusters may be a
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		<p>complementary approach for their internal development. Despite the scarcity of clear cluster definitions it is widespread that clusters - as concentrations of R&D entities, business support institutions and interconnected firms operating in the same or related economic sectors that cooperate and compete at the same time - provide favorable conditions for entrepreneurship and innovativeness development. SMEs can improve their market offer, transfer knowledge, formulate and implement R&D activities, and develop relational capital by actively operating within clusters and collaborating with their partners, both in internal and external environments (eg. involvement in foreign networks). The activities of cluster coordinators play a strategic role in shaping the appropriate conditions for the development of cluster members. Based on the good practice in the field of Polish-Spanish international networking linked to the execution of the “Adelante” project by the coordinator of Sub-Carpathian Renewable Energy Cluster, the benefits for SMEs of that cluster were pointed out. This practice shows that the involvement of</p>
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		a cluster coordinator with key cluster stakeholders for development of cluster members contribute to development of the entire cluster and boost its competitiveness
Roberts and Enright	2004	<p>Industrial clustering is a powerful framework to help organize, work together and work with external institutions to meet the needs of, and promote the interests of, the organizations comprising the cluster. Central to the idea of clustering is the personal interaction and the relationships which give rise to the opportunity to communicate, to create and to learn. Firms comprising an industrial cluster contain individuals who are participating in a community which transcends each particular organization. The firms behave in a highly co-operative and communicative way. This environment is widely accepted as providing a wide range of benefits to the components of the cluster.</p>
Morosini, P	2004	Furthermore, industrial cluster has great influence on

		<p>the optimization of regional industrial layout and regional economic structure. The international and local historical experiences of economic development have both demonstrated that the formation and development of specific industrial clusters have often played key roles in regional economic development</p>
	2005	<p>Theoretically, industrial cluster can reinforce specialized division and give full play to industry association and cooperation. Therefore, this industry pattern can promote rational allocation of technology, talent and capital, and stimulates technique progress and management innovation effectively by exemplary function.</p>
Narula	2004	<p>SMEs often suffer from limited resources and low capabilities to generate development in internal activities</p>
Darwish et al	2021	<p>The outbreak of COVID-19 threw the whole world into a deep crisis. In this time of crisis during the pandemic, enterprises have been through many challenges, so as to say; to the degree that impact of sustainability needed engaging attention.</p>

<p>Batterink et al.,</p>	<p>2014</p>	<p>Therefore, interfirm networks are crucial to SMEs' innovation processes. Extant studies on industry cluster development and innovation have focused on hub firms. Hub firms play a valuable role in facilitating social exchange within a cluster network. They are the companies that have the largest number of contacts with other member firms in the cluster</p>
<p>Alsaadi & Norhayatizakuan</p>	<p>2021</p>	<p>It is essential to hire qualified project managers who has sufficient knowledge in risk management and its main activities.</p>

(source: author synthesis)

Beside, Knowledge transfer and information acquisition vary greatly among enterprises in clusters (Giuliani & Bell, 2005; Li et al., 2013). Innovation actors are likely to obtain the knowledge and information they need in the cluster, which increases the frequency of the discovery of opportunities to turn knowledge into business value. Core enterprises often have substantial relationships with stakeholders in their regional clusters. Trade relationships can also be found between hub firms and local suppliers. By building new and promising relationships, hub firms can enhance network performance through existing relationships. In addition, by working with new enterprises that already have relationships with existing partners, the hub firm can create a new business model to adapt to the future or even enhance the structure and promote the overall dynamic development of the cluster network.

3. METHODOLOGY

In this study, the authors chose analysis, experiences, observations, practical situation with cases studies of industrial clusters in Hanoi, Vietnam, but it also uses will use qualitative, analysis, synthesis research methods. Relevant regulations and plans of clusters in Hanoi also researched.

4. RESEARCH FINDINGS

4.1. Model and frameworks for IC development

First, Munnich et al (1999) showed In Minnesota, a workforce shortage hinders the growth of some industries. By working collaboratively in industry clusters, government, education, and industry can take steps to address this problem. Industry, government, and education can respond to shortages by providing training and promoting research that enhances productivity. Employees and the region overall will benefit from enhanced skills and higher wages as their productivity increases.

Second, The four elements that constitute Porter's diamond are (Porter, 1990; Bergman and Feser, 2020):

- 'factor conditions': natural resources; educated and skilled labour; technical and research expertise; industrial, transportation, or communication infrastructure
- 'demand conditions': including consumer demand for foreign versus domestic goods, and local industrial demand for intermediate goods.
- 'firm strategy, structure, and rivalry': historical and cultural norms regarding relations between government, labour, and private enterprise; attitudes regarding inter-firm competition, rivalry, and cooperation
- 'related and supporting industries': including potential collaborators such as suppliers and service firms, as well as successful competitors and rivals.

Crucially, Porter frames these four elements as being mutually reinforcing and interdependent, underlining the point that a successful cluster requires a broad ecosystem of actors, as well as material resources and policy support

Third, In a more expansive view on the nature of industrial clusters, Gordon and McCann (2000), identified three distinct types: (1) The canonical Marshallian 'industrial district,' a densely concentrated agglomeration of various actors, who draw mutual benefit from tight association with other cluster members (2) 'industrial complexes,' designed and oriented around the material and service requirements of a small number of end-market producers (3) 'social networks,' defined by inter-firm and inter-personal relationships, where social capital and mutual trust is more relevant than mere geographic proximity.

4.2 Infrastructures building for Industrial clusters development in Hanoi city

Systematicity is reflected in the concurrent and balanced development of industrial cluster (CCN) infrastructure types and the good coordination and combination between those types of infrastructure. Synchronicity shows the suitability and adaptability of the technical level of the elements constituting that infrastructure. The systematic and synchronous nature brings great economic, social and human significance. Economic, social and humanistic content is one of the requirements of infrastructure development.

If the industrial cluster (CCN) infrastructure lacks system and synchronization, its exploitation efficiency will not be high.

- CCN infrastructure has a large investment capital, which is beyond the capacity of a production and business establishment in the CCN, the time to recover the investment capital in the CCN infrastructure is also long, so it is necessary to build the CCN infrastructure. The state plays an important role in investment, encouraging investment and creating it.

This feature requires a strategy to allocate capital not only between elements in the infrastructure system, but also to allocate investment capital reasonably between the infrastructure sector and the fields of economic and social development. . Infrastructure construction has the content of creating works with large investments. In the absence of tight financial and economic institutions, infrastructure is an area with high potential for loss and corruption.

- CCN infrastructure has a critical investment element. If the infrastructure does not make the critical investment in terms of capital, capacity, output, and quality, it will limit the effect of infrastructure, causing significant damage to the economy.

On the other hand, the limitation of the industrial infrastructure still lies in its operation, impact and efficiency in the process of socio-economic activities. The infrastructure itself does not decide everything for socio-economic development, but only one factor. Due to such characteristics of infrastructure, if too much emphasis is placed on ostentatiousness beyond its limits, it will fall into formalism, creating low efficient infrastructure, causing waste, reducing actual production capacity, affect overall growth. Therefore, the development of infrastructure in accordance with the needs of CCN development is the basis for sustainable development.

The main policies affecting the construction and development of industrial infrastructures are mainly: Policy on development of industrial zones; CCN development planning; Detailed planning on construction of industrial infrastructure; Policy on acquiring land fund for construction of industrial infrastructure; Preferential policies for investment in the construction of industrial infrastructure; Credit policy; Policy on construction quality management... This is the basis for localities to concretize central State policies

Policies of the Central State are the basis for localities to develop and issue specific policies of their respective localities depending on the conditions and circumstances of each place. The concretization of the policy is the basis, the basis for local State management agencies to develop regulations and regulations for investors and business establishments to study and consider before making them. investment decisions. Local policies have a positive or negative influence on the development of CCNs.

Figure 2- Plans for clusters



(source: internet)

5. SUMMARY AND DISCUSSION

Recommendations including but not limited to:

Based on the local budget capacity, the City People & Committee shall stipulate the level and allocate
2515

investment capital from the state budget to:

- a) Invest in the construction of infrastructure outside the fence of the industrial clusters before its establishment;
- b) Support investment in building infrastructure in industrial clusters

Figure 3 – Development plant of industrial clusters in Hanoi



(source: internet)

Next, The main contents of the CCN development planning project include:

- a) Legal bases and necessity for planning;
- b) Overview of the development situation of industries and industrial parks in the area;
- c) Analysis and assessment of the current status of construction and development of industrial zones that have been planned and established in the area, including: i) Determining the position and role of industrial zones in socio-economic development , develop local industries; ii) Analyze and evaluate the achievements and shortcomings in the investment, construction and development of industrial parks; iii) Forecasting the factors affecting the demand for industrial zones development, the ability to attract investment in infrastructure of industrial zones and the demand for land lease of enterprises and industrial production establishments in the area.
- d) Orientation for distribution and development of industrial clusters in the locality, including: identification of names, locations, expected area size, land layout capability, nature of industries and conditions of connection. external infrastructure connection of planned CCNs.
- dd) Identify solutions, mechanisms, policies and propose plans for implementation;
- e) Strategic environmental impact assessment;
- g) Show the planning options for industrial development on the planning map.

The order of formulation, approval and management of the CCN development planning scheme complies with current regulations, approval and management of the socio-economic development master plan. CCN development planning in the locality must be announced no later than 30 days from the date of approval decision.

The approved industrial park development planning is the basis for considering and deciding on the establishment of industrial zones, calling for investment in infrastructure construction, planning

to relocate polluting enterprises and production facilities or there is a risk of polluting out of craft villages, residential areas and mobilizing and attracting investment in production and business in industrial zones.

5.2. Limitations

Our study can expand to other areas for development of CSR in the business community.

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Conflicts of interest

There is no conflict of interest

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