

# **PROBLEMS, CHALLENGES AND POTENTIAL DEVELOPMENTS ON CLUSTER OF TEXTILE INDUSTRIES IN INDONESIA**

(Case Study on Cluster of Textile Industries in South of Bandung)

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## **ABSTRACT**

The aims of this research are to capture general descriptions or to overview cluster of textile industries in Indonesia. The research is a case study which Bandung was chosen as a sample representation, because according to the data of Industrial Ministry, Republic of Indonesia, year 2005, about sixty five percent (65%) of Indonesian textile industries location are in Bandung and area surrounding.

This study focused on problems, challenges and potential developments in order to improve industrial performances as competitive advantages of Indonesia. It has been proven that since many years ago the industries have given significant contribution to devisa of Indonesia, outside oil & gas industries. However, recently years the contribution is lowering because of many reasons. Global market competition forces Indonesian textile products to have better advantages rather than outsider's products. But in facts, local (domestic) market were fulfilled by foreigners products such as China's and Korea's textiles products. The condition were getting worse because export (international) market are also decreasing by the same reasons.

Surveys, interviews, and FGDs (Focused Groups Discussions) were conducted to all representations of textile industries stakeholders, as methods of data collections. Furthermore, data and findings research were analysed using SWOT (Strengths, Weakness, Opportunities, Threats) matrix identification. Those findings were tabulated and resumed as an official recommendation as considerants for Indonesian Government to establish precise strategies or policies in order to increase (textile) industrial competitive advantages of nation.

**Keywords** : Cluster, Textile Industries, Strategies, Competitive Advantages, Indonesia.

## **BACKGROUND**

In Indonesia, cluster of textile industries, has been proven to have significant role in the economics of nation. Since many years ago, contribution from textile industries have been the biggest devise (foreigner exchange) outside oil & gas sector. In addition, about 65% of textile industries location were in Bandung. Bandung is a well known city as the capital of West Java Province, of which the nearest province to Jakarta, the capital of Indonesia. The distant of Bandung – Jakarta is about 150 kilometers or about 2 hours travelling duration using highway public transportations.



Figure 1 : Location of Bandung in Indonesia

Indonesia has complete main textile industries (upstream to downstream), which consist of this such as industries: fiber, yarn, cloth, and garment. Indonesia has also derivatives textile industries such as: towel, dust-cloth, pillow-case, soc, etc. However, several barriers or problems are still rise toward challenges. This needs more serious attentions from all related stakeholders, especially from Indonesian government because problems in the sector seem not to be only internal company problems but also governmental problem, since industrial challenges have deeply relation with G to G (government to government) policies.

In general, Indonesian textile industries sector have many comparative advantages, as listed below:

1. Natural resources: Indonesia has many nature resources that can be kindly managed as raw materials for textile industries, eventhough still need further developments. These such as resources are : cotton, silk, cellulose, etc, which come from local agroindustries supplies.
2. Human resources: Indonesia has much labour and also potential educated labour. As known that textile industries especially garment industries need a big number employment.
3. Infrastructures. Physical infrastuctures, particularly in south of Bandung, seem to be greatly supported for industrial activities. Bandung has relative wide main streets, availability of telecommunication facilities, supply of energy, cargo, public transportation, etc.
4. Differenciated products advantages. Variety on products of textile industries is in a broad range. This is proportional with variety in Indonesia. As it is well known that Indonesia is an archipelago nation; has many islands that people live dispersely on those (Java, Sumatera, Kalimantan, etc); has many races (Chinesse, Malayan, etc); has many religions (islam, budha, hindu, protestan, catholic); and has many ethnics (Javanesse, Sundanesse, etc). In overall, the slogan is "Bhinneka Tunggal Ika" that means "Variety in Unity". The condition causing Indonesian textile products are vary in broad raw material, design, style, colour, etc.

On the other side, Indonesian textile industries have many problems which need serious all stakeholders attention, as followings:

1. Low performance because of low supports from related industries i.e : industrial textile machineries, industrial of chemicals, industrial accessories (buttons, thread, etc.), and so on.
2. Weak networking or interaction among textile industries, and among others cluster components.
3. The rising up of new competitor : Chinesse and or Korean textile products, etc.
4. Manuver of Chinesse industrial policies which tend to cause China industries as a main player in the world. In Indonesia many types of Chinesse products are easy to find everywhere with lower price.

As a consequence, Indonesian government through Industrial Ministry determine textile industries as an approach to raise the economy of nation. In order to achieve the goals or the objectives, it is absolutely helpful to find precise Grand Strategies or Policies for sustainable competitive advantages development of industries, using clustering principles.

## **LITERATURE REVIEW**

Michael Porter (1998) issued that the best nations should have many advantages for sustainable development. He divided the advantages into 2 categories : comparative and competitive advantages. Comparative advantages of nations were settled or given by its nature, but competitive advantages were endeavorable. In order to be the best, nations should sustain and increase their comparative advantages toward challenges. Porter initiated clustering principles as an approach to emerge sustainable industries by sector and related sectors because of snowball effects.

Furthermore, Porter defined cluster as a group of industries and or related industries which have champion industry, supporting industries, related industries, and there are partnership networking or relationship among them, in order to have collective efficiencies to improve collective competitive advantages. In such as efficiencies are : cost minimation of raw materials, promotions, transportations, delivery times, advocations, creating collective asset, and so on. In conclusion, clustering principle is a method to organize industries (among sectors) so that industries be easier to be managed, or to be developed in term to establish integrated and comprehensive policies. This approach had been well applied in Silicon Valley, United State of America, and also in other countries.

## **METHODOLOGY STUDY**

This research was conducted using methodology as listed in figure 2 as following :

- a. Setting goals of research : to capture general descriptions about problems, challenges and potential developments in textile industries practices in Indonesia.
- b. Preliminary studies : to identify and collect preliminary data exactly at cluster components in the area of study.
- c. Developing questionnaires: to guide FGDs
- d. Running FGDs : to find problems, challenges and potential developments on textile industries cluster.
- e. Analysing data and research findings.
- f. Developing conclusion and recommendation for Indonesian government.

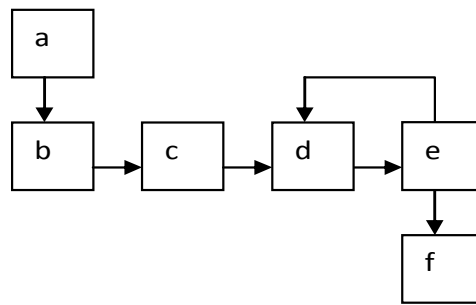


Figure 2 : Methodology Study

## DATA COLLECTING AND DATA ANALYSING TECHNIQUES

Data were collected by conducting FGDs (Focused Group Discussions) to gather informations related to problems arising, potential challenging, and options of recommended solutions. Surveys and interviews methods were used also to complete and examine the data. In the forums, stakeholders or each representations participated together into discussions. They were representation of big textile industries, SME (Small Medium Enterprise) textile industries, researcher institution, freight forwarder, entrepreneur association, labour association, and so on.

The type of data collection were focused to 2 (two) main data. Firstly, the data related to input-output aspects of textile industries (upstream to downstream : fiber industries → yarn industries → fabric or cloth industries → garment industries). Secondly, the data related to interaction or networking among cluster components (champion industry, supporting and relating industries, etc) in the area of study, in accordance with government policies. Furthermore, data analysing methods used were SWOT matrix tabulation, of which to be detailed as formal document.

## Findings

In general, textile cluster industries available in a big number variety of products. Each of sub-cluster (fiber industries, yarn industries, cloth industries, garment industries) is operated and managed independently to produce variety of products textile, not to produce one type only product. In such that way, each industries has specific problems, challenges, and potential development accordingly.

## Fiber Industries

There were only limited fiber (synthetic and nature) industries in Bandung. The industries use their fiber to supply specific yarn industries which are managed by the same group or ownership. Raw material for fiber synthetics industries are PTA (Pure Terephthalic Acid), and EG (Etilen Glikol) supplied by petrochemical industries from outside of south of Bandung. Otherwise, nature raw materials for fiber industries are supplied from Bandung surrounded areas of agroindustries. Fiber industries has only little number of human resources (labour) because almost all of textile machineries are generated automatically.

## Yarn Industries

Raw materials of yarn industries are synthetics or nature fibers. General descriptions about yarn industries in the cluster are as following:

- i. Automatically production processing; as a consequence, they need lower employment.
- ii. They highly depend on machinery aspect and need a lot of energy supplies. Those are why yarn industries are sensitive to energy and electrical aspects.

### **Cloth Industries**

Cloth industries consist of weaving and knitting industries. General captures of these industries are resumed as following:

- i. Available on broad variety in design, raw material, colour, type of products.
- ii. Production processing : make to stock or make to order.
- iii. Most of industries are operated under capacity. As a result, most of labours work only in a half day period, or some days only per week.
- iv. Sensitive to energy, electrical and wastewater regulations.
- v. Wastewater facilities are costly. These causing many industries avoiding such facilities in order to minimize production cost.

### **Garment Industries**

General description of garment industries are:

- i. need a lot of labours (high employment) because one machine should be operated by one employee.
- ii. be sensitive to labour legal aspect (dispute, retirement, pension, etc).
- iii. many industries are export oriented; be sensitive to export regulations, tax insentives, etc.
- iv. production process can be operated stage by stage (splitable). The condition emerges many challenges into cooperation with among industries.
- v. By those potential cooperations with many other industries, garment industries wisely chosen as a champion industry of a cluster for further developments.

### **Supporting and Related Industries**

Supporting industries for each sub-cluster industries were available in limited number. Those industries were supplier of chemical, thread or button industries, resletting, packaging, embroidery, spare-part or components, etc. In addition, many related industries or institution involved in the cluster. They are local government, state electrical and petroleum company, transportation service company, and so on.

### **DISCUSSION**

Agglomeration of many textile industries in south of Bandung as described above take places by main principles of efficiency in the cluster.

- a). Collective of efficiency among the same industries or among related industries, in such ways : buying joint action of raw materials in order to minimize unit price per product and to lowering economics of scale; join action in marketing, or sharing of machinery utilization.
- b). Intensive partnership among textile industries, supporting industries and related industries based on supply-chain interdependently.
- c). Utilization of sharing facilities: cargo railway station, main road, wastewater treatment, labour availability.

### **CONCLUSION**

Cluster of textile industries are facing problems on many aspects: internal factor of an industry, internal factor of a cluster area, and outside (external) cluster environment or area surrounding. These are indicated by the number of industries which stopped to operate, are increasing by time. Two main problem arising are :

a) Internal factor

Supply-chain pattern were relative stable. Industries activities are managed wisely, eventhough some of industries lowering their production capacity.

b) External factor

Indonesian Textile Association (API) identified there are many barriers in the sector: basic monthly-payment of labours, basic cost of energy unit price, petroleum; and many contra-productive regulations, labour disagreement, tax holidays, outsider-product attacks, complexity of export-import procedures and the regulations.

### **RECOMMENDATION**

Based on research findings, that textile industries in Indonesia are facing problems whereas Indonesian government established the industrial development strategies, including textile industries, use clustering approaches based on comparative and competitive advantages. In order to maintain and improve the advantages, Indonesian government should develop appropriate programs involved all textile stakeholders.

1. Network building: conducting routine FGDs among textile stakeholders to explore and communicate all aspects related to textile industries. Building trust among cluster components by playing as facilitator, and creating business climate condusively.

2. Developing Sinergy Programs

If were trust had been established among cluster components (all stakeholders), it is hopeful that new champion industries will emerge, and new clusters will be developed. As a result, there will be many potential partnerships and broad sinergy collaborations based on collective efficiency, in order to sustain comparative and improve competitive advantages of nation.

### **REFERENCES**

1. Diagnosis of Problems and Potential Development of Textile Cluster Industries in South of Bandung; Final Report Projects, Industrial Ministry of Republic Indonesia, 2005.
2. ASEAN – China Free Trade Era; General Directorate of Regional & International Cooperation, *Ministry of Indonesian Trading*, 2005.
3. Mutakin, F dan Salam, A.R.; Applied of ASEAN-China Free Trade Agreement (ACFTA) and The Impacts to Indonesian Trading; *Jurnal Economic Review*, 2009.
4. Porter., Michael E., Competitive Advantages of Nations, *Mc-Graw Hill International*, 1988.

### **BIBLIOGRAPHY**

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