

Uncertainty of the Textile Industry in Indonesia (A Theoretical Review)

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This article aims to review the ideal conditions of the textile industry in Indonesia. Theoretical studies are carried out through an approach to reviewing concepts obtained from previous books and research, as well as examination empirically through observations in curricula over the last five years. The Indonesian textile industry has decreased due to several things, one of which is the inability of managers to deal with environmental uncertainty. Based on observations, changes in the textile industry environment are persistent and sophisticated so that more expertise is needed from managers to respond to this. Not only managers but also other stakeholders, especially the government, who must participate in finding solutions to environmental uncertainty.

Key words: *Perceived environmental uncertainty, The textile industry, Indonesia.*

Introduction

Environmental uncertainty causes individuals/managers to not recognize important opportunities and threats such that it hinders managers from making decisions. For example, if an organization knows little about the likes or dislikes of its customers, then the organization will find it difficult to design suitable products. In other words, the organization is often in uncertainty. Environmental uncertainty itself is interpreted by (Bateman & Snell, 2012) as not having enough information about the environment to understand or predict the future. Environmental uncertainty arises from two related factors; (1) complexity and (2) dynamic. Complexity is the number of problems that a manager must solve, while the dynamic environment is the level of change that occurs (Bateman & Snell, 2012). Facts that occur in Indonesian industrial companies are stated by (Wirakusumah, 2018). Environmental uncertainty is an obstacle to investment, such as uncertainty in the political environment, regional licensing, electricity tariffs, limited supply, and expensive gas prices, rising exchange rates, and logistics costs. The growth of Indonesia's processing industry averages below economic growth, which is between 4.24%. Apart from being influenced by domestic economic conditions, as well as uncertain global conditions, weak support from the industrial

sector, such as labor issues, are the key to success in the textile industry (Wirakusumah, 2018). This article reviews the theoretical uncertainty of the textile industry in Indonesia in the last five years. And then the results of this theoretical study became the forerunner of research to find out what factors have caused Indonesia, especially the textile industry, to be unable to anticipate environmental uncertainties.

Theoretical Review

Organizations are open systems. These organizations interact with various dimensions of the organizational environment in various ways. Three basic perspectives can be used to describe the influence of the environment on the organization, namely; a) changes and environmental complexity, b) competitive forces and c) environmental management (Suarez & Oliva, 2005).

James D. Thompson was one of the first people to recognize the importance of the organization's environment (Tung, 1979). (Duncan, 1972) states that the environment can be described in two dimensions; the level of change and the level of homogeneity. The level of change is the extent to which the environment can be considered relatively stable or relatively dynamic. The level of homogeneity is the extent to which the environment can be considered relatively simple (few elements, little segmentation) or relatively complex (many elements, many segments).

Environmental uncertainty arises when managers do not have enough information about environmental factors, and they have difficulty predicting their impact on the organization (Fitrios, Susanto, Soemantri, & Suharman, 2018). Uncertainty has been described as a result of the complexity and dynamic in the environment (Duncan, 1972). Environmental complexity is the number of environmental components that influence organizational decision making. Environmental dynamism is the rate at which these components change (Sener, 2012).

Uncertainty is used as material for making decisions in an organization (Lee, Song, & Cao, 2011). Environmental uncertainty with the perspective of information processing treats the environment as a source of information so that if the manager does not have enough information about the surrounding environment it will be difficult to understand or predict the company's future (Correia, 1996).

According to (Milliken, 1987) environmental uncertainty is the level of environmental change and the complexity of the problems that exist in the environment itself. The same is the opinion of (Afsaneh, Robert, Janet, & Maria, 2014), who states that two factors that form uncertainty are (1) *the rate of change*, and (2) *the complexity of the environment*. *Rate of change* refers to the speed of change in various environmental elements. *Complexity* refers to

the number of organizational sectors that must be considered in the decision-making process (Afsaneh *et al.*, 2014).

The same opinion, by (Sawyer, McGee, & Peterson, 2003) states that environmental uncertainty is *"the degree of variability in the environment, the degree of environmental complexity, the degree of importance to the organizational goals (strategic importance)"*.

Furthermore, (Wheelen & Hunger, 2012) states that environmental uncertainty is the level of complexity and level of change in the external environment that occurs and is experienced by an organization. Complexity itself is described as environmental heterogeneity or various environmental components.

(Milliken, 1987) states that environmental uncertainty is the inability of individuals to predict the organization's environment accurately due to lack of information, or the inability to distinguish between relevant data and irrelevant data. (Duncan, 1972) defines environmental uncertainty as to the inability to set probabilities for possible future events.

The same thing was stated by (Merchant & Stede, 2012) who indicated that environmental uncertainty included a wide range of factors that are individually and collectively making it difficult to predict the future in a particular field. *"Environmental uncertainty is the broad set of factors that, individually and collectively, make it difficult or impossible to predict the future in a given area"*.

A similar definition, stated by (Lysonski, Levas, & Lavenka, 1995) indicated that environmental uncertainty involves unpredictability stemming from the lack of clarity in information, the time span for feedback, and the nature of causal relationships. From this definition, it can be interpreted, that environmental uncertainty comes from a lack of clarity of information, the time span for feedback and the nature of causal relationships. Because the information is not clear, the individual who runs the task has difficulty in achieving the goal (Jusoh, 2008).

Similar opinions from (Miller, 1993), measure environmental uncertainty through 1) general uncertainty, consisting of; government policy, political policy, and economic policy, 2) industrial uncertainty, consisting of; product marketing, competitors and technology, and 3) firm-specific uncertainty consisting of uncertainty in research & development, management and employee activity.

According to (Boyd & Fulk, 1996) the dimensions of environmental uncertainty are measured by changes in the market, technology, and income. According to (Duncan, 1972) environmental uncertainty is assessed through the following six dimensions:

market competition, raw material competition, customer competitors, government regulations, public attitudes towards industry and trade unions. Likewise according to (Gordon & Narayanan, 1984), environmental uncertainty can be measured through dimensions: environmental stability, new products in the industry, competitiveness predictability, customer predictability, emergence of scientific discoveries, competitiveness, and regulatory constraints.

(Wang & Huynh, 2013) detail the dimensions of environmental uncertainty as: government policies, economy, resources and services used by the company, product market and demand, and competitiveness. Furthermore (Gordon & Miller, 1976) mentions the dimensions of environmental uncertainty as: "dynamism, heterogeneity, and hostility." (Sia, Teo, Tan, & Wei, 2004) added that the dimensions of environmental uncertainty include: environmental complexity and environmental variability.

(Miles & Snow, 2003) describes the dimensions of environmental uncertainty through relations with *suppliers*, price/quality/ design of competing companies, customer demand, relations with investors, relations with government regulatory agencies, relations with trade unions. In line with the opinion above, (Yusuf, 2002) suggests to measure environmental uncertainty using the following dimensions: government, competitive, technology and access to finance.

(Zhang, Majid, & Foo, 2012) measure environmental uncertainty through two dimensions, namely environmental uncertainty, which has a direct impact (task environment), and environmental uncertainty that has a remote environment.

The environment consists of customers, resources (suppliers and investors) and competitors. Meanwhile, the remote environment consists of the political, economic, social-cultural, technological, natural environment and legal/developments (Zhang, Majid, & Foo, 2011). Each dimension reflects conditions and events that have the potential to affect the organization in many ways, along with an explanation of each dimension:

1. The economic dimension is the health and overall vitality of the economic system in which the organization operates. Economic factors that are especially important for business growth, the economy in general, inflation, interest rates, and the unemployment rate.
2. The technological dimension includes the methods available to convert resources into products or services.
3. The socio-cultural dimension includes the habits, customs, values, and demographic characteristics of the community in which the organization functions.

4. The political-legal dimension involves government regulations of business and general relations between business and government.
5. The competitor's dimension is another organization that competes for resources; the most obvious contested resource by competitors is consumer money.
6. The customer dimension is anyone who pays money to obtain an organization's product or service. For example new marketing methods, new products & services, increasingly fussy customers, lower brand loyalty.
7. The supplier dimension is an organization that provides resources for other organizations.
8. The dimensions of rule makers are elements of the task environment that have the potential to control, regulate or influence the policies and practices of an organization.

Discussion

Based on the results of observations found some empirical data related to environmental uncertainty in textile companies in Indonesia in the period of 2016-2019. The following are detailed explanations for each dimension.

Consumer uncertainty

Consumers of textile companies are trading companies or manufacturing companies. Trading companies will resell textiles within retail systems while manufacturing companies will process textiles into clothing (garments) or other products. Some textile companies are observed to produce orders but they're also not based on orders, meaning that the company produces a homogeneous type of product (fabric), for example, PT Trisula Textile which produces Bellini pants.

Factors that shape consumer uncertainty in textile companies include increasingly critical customers. Customers are increasingly critical of the products/services they order starting from raw material selection and color selection. The superiority of the product (fabric) is seen from the quality of raw materials and the uniqueness of colors, with consumers truly observant in the selection of these two elements. For color selection, chemists are needed to produce colors according to the wishes of consumers since, with chemical technology, from one red color more than one hundred types of red can be produced. The company will provide several color samples to be shown and selected by consumers before the fabric is produced. The selected color will be saved as an archive to anticipate re-ordering.

Another factor that shapes consumers' environmental uncertainty in textile companies is that brand loyalty is diminishing, as consumers are now favouring cheap prices rather than quality. This is because the quality is an unreliable basis for product selection or in other

words producers are inconsistent in maintaining quality.

Textile companies make effort to increase their ability to accommodate the uncertainty of the consumer environment, namely by making improvements based on customer perceptions and customer expectations. The approach of textile companies in an effort to meet customer/consumer satisfaction is through understanding customer desires, namely by:

1. Accommodating complaints from customers and then finding solutions.
2. Communicating with customers, answer questions asked by customers and introducing new products. Examples of conducting unstructured surveys, analysis of sales data and feedback from the survey section.
3. Network information from customers and act on the customer's perspective. The way it can be done is in the form of personal interviews with customers, *benchmarking* which is understanding the business carried out by other similar companies.

Uncertainty of government regulations

Government regulations are dimensions of the outside environment of textile companies that have the potential to control, regulate or influence management policies and practices in textile companies. The regulations that apply to textile companies in the past five years are quite dynamic; from regulations on imports, exports, about setting electricity tariffs, on employment, and so on.

The author collects empirical data related to export & import regulations, labor regulations and other regulations related to the textile industry environment. The data is obtained from the results of interviews, observations, observations both from the company and from newspapers / electronic media that can be accounted for.

The export & import regulations in textile companies are at a high level of complexity and a dynamic level of change. The explanation of how the changes and complexity of these regulations affect organizations (textile companies) are as follows:

(Sudrajat, 2016) states that textile imports should be made to produce products which are then imported. But what happens is that the imported products are sold domestically. This causes Indonesia's products to not be able to compete with other products that are cheaper. Consequently, it can be considered that the regulation is very easily misused.

The ease of imports of textiles as regulated in PMK No.176 / 2013 concerning the Ease of Importing Export Destinations (KITE), needs to be reviewed and the role of the government is needed to solve this problem since many importers actually import and sell products

domestically more than export. The characteristics of the imported textile products are, among others, often called the remaining export products. As a result of the abuse of KITE, imported products eroded the market share of the domestic textile industry.

The above problems have resulted in a decline in Indonesia's textile exports in 2015, which is 3%. In addition to the KITE regulations, other regulations that are often a problem in export & import activities are import duties. Currently, European Import Duty is 6-12%, and to the United States 11-30% this results in high logistics costs, which is one of the obstacles to export & import problems.

Another impact with KITE is the problem of a flood of illegal imports that has damaged trade in Indonesia. From 60% of the total imported textile products on the market as much as 40% are illegal. The war against illegal imports has been programmed by the government but this has not provided an optimal solution.

The team formed to fight the flood of imported products has been formed by President Jokowi and consists of three institutions namely the Directorate General of Customs and Excise, the Attorney General's Office, and the Police. In addition, through the Ministry of Trade, policies for simplifying import permits were made, harmonizing duties and tariffs (Soetrisno, 2015). Some problems of textile companies are related to the difficulty of operational costs due to electricity problems. This problem is related to enactment of the regulation related to 30% electricity discounts, which until now has not been no follow-up even though the discount plan has been agreed upon in volume III economic package (enacted 6 November 2016). The third volume economic package was made by the government in order to provide stimulus to increase production. One such policies was a reduction in electricity tariffs and a discount of 30% for use at 23.00-08.00 in the hope of reducing labor-intensive industrial burdens (Sibarani, 2015).

Changes in government regulations and the complexity of labor problems have caused a large impact. The recorded cases of layoffs throughout early 2016 have occurred in many textile industry companies as expressed by the Chairperson of the Indonesian Employers Association (Apindo). According to (Suprihartono, 2017), there have been two thousand cases of layoffs throughout the quarter of 2016, with the conditions of the wage system one contributing cause. Employers rate district/city minimum wages (MSEs) too high when productivity problems are declining, although other countries' minimum wages are lower, for example, the minimum wage in Vietnam and China State.

The regulations described earlier have led to the determination of production costs. Improvements to the aspects of production costs caused by uncertainty in the determination of electricity tariffs, minimum wage rates, raw materials, and other costs need

to be done given the very dynamic changes in these provisions. The steps taken by textile companies that the authors observe in controlling production costs are by separating production costs into variable costs and fixed costs. This separation of fixed costs and variable costs makes it possible to use “flexible budget” which is a budget that provides different calculations according to the activities of the department concerned.

With the separation of fixed costs and variable costs, it will be easier for managers to predict reactions from certain costs of changing activities. If the activity goes up or down then certain costs will go up or down or may remain. For the purpose of planning, managers must be able to anticipate the situation that will occur and if a cost is expected to change, the manager must be able to estimate how much the change.

To assist the manager's duties, costs are categorized into fixed costs and variable costs. Fixed costs are costs that are not overall affected by the volume of activities/sales. While variable costs are costs that are overall influenced by the volume of activities/sales.

Uncertainty of technological change

The technological dimension reflects the methods available to convert resources into products or services. Although technology is applied in organizations, the form and availability of these technologies come from outside the textile company. Technology in textile companies can be grouped into two parts, namely production technology to process raw materials into fabrics and chemical technology to create fabric colors and quality/type of fabric.

Production technology is very dependent on the production machine. The production machine used is a product of a particular country (most Indonesian textile companies use Japanese product machinery), so the raw materials used must correspond to where the machine came from. For example, PT Indovon uses machinery and raw materials from Japan.

Based on the results of observations/observations conducted during this study, the Indonesian textile industry machinery is quite alarming with the average age of machinery being 15 years. Consequently, it is necessary to restructure textile machinery. As stated by the Deputy Chairperson of API Jateng, (Airlangga, 2017), it is explained that in order to increase competitiveness there needs to be a restructure of textile machinery across the textile industry, with the restructuring being able to save 6% -18% in electricity usage so that production costs will be cheap.

Chemical technology produces recipes/ingredients that will be used in the dyeing process (color rendering) and refinement. In the dyeing process, chemical engineering produces high-quality fabrics, as expected, and gives satisfaction to consumers.

Textile companies not only experience changes in aspects of production technology, but also chemical technology and aspects of information technology. At present, the leaders of textile companies recognize the expanding role of information technology in their ability to make decisions. Information system applications that have high technology have advantages such as 1) high flexibility to meet future needs, 2) providing more information, and 3) enabling faster recording cycles.

Textile companies through operational managers strive to improve their ability to predict changes in information technology through:

1. Increasing the understanding of the application of information technology in financial and accounting functions.
2. Improve ability in using information system applications in *real time*, namely in the occurrence of events for the purpose of planning and control.
3. Follow *up-to-date* types of equipment and newer technological developments.
4. Identify the terms commonly used in the field of Information technology.
5. Carry out continuous checks on the installation/program costs, proposed costs to complete the project.
6. Ensure that information system applications are safe from those who will steal information.

Competitor environmental uncertainty

Competitors of textile companies are other textile organizations/companies that compete for resources. The most obvious resource for textile companies is consumer money. The observations prove that Indonesian textile companies' competitors are starting to emerge, such as South Korean companies that opened textile companies during September 2016, in the Jepara area of Central Java (Sibarani, 2016). Another competitor is Vietnam, who are a heavy competitor for the US and European markets. The strength of the Vietnamese industry is due to the low production costs and cheaper labor, while in Indonesia labor and raw material cost are increasing due to the impact of the weakening rupiah. According to Performance records, Vietnam's exports rose 11% in 2015. Competition with Vietnam is getting tougher because Vietnam has completed negotiations for free trade in a *free trade agreement* (FTA) with the European Union and Vietnam already included in the *Trans-Pacific Partnership* (TPP), while Indonesia can only join the TPP in the next two years (Lembong, 2015).

If Indonesia has joined the *Comprehensive Economic Partnership Agreement* (CEPA) and TPP, to open the American and EU markets and increase exports, it has the opportunity to increase investment, increase production and increase employment. As when Indonesia

conducted free trade with Japan in 2009, Indonesia's export performance grew to US\$12 million, whereas previously it was only around the US\$ 9.50.

Not only consumer money, but also investor money will be contested by technology companies and other companies that compete with each other for investment money. For example, abundant funds from China are targeted by many countries such as the United States and a number of Southeast Asian countries, such as Malaysia and Indonesia. The Investment Coordinating Board (BKPM) noted that the realization of Chinese investment was still low. Deputy of BKPM (Lembong, 2015) said that currently many countries are targeting *foreign direct investment* (FDI) from China. Malaysia and America entered the top ten countries that got investment from China. Indonesia is not, however, included in this level because China is often worried about political and social developments in Indonesia. Investors need conditions that can be controlled and Indonesia is still considered uncontrolled in terms of political and social conditions.

Competition to get raw materials is often experienced by Indonesian textile companies. Indonesian textile companies are very dependent on raw materials from China. According to Aryanto, Head of the Agency for the Assessment of Climate Policy and Industrial Quality (BPKIMI) of the Ministry of Industry, Indonesia needs 700 thousand tons of cotton per year (Aryanto, 2016). This low competitiveness with Chinese textile companies, is what causes Indonesian Textile Companies to experience difficulties in getting raw materials (Sudrajat, 2019). Government efforts through the Director General of the Chemical, Textile and Multifarious Industries of the Ministry of Industry, in responding to the competition for the availability of raw materials, have considered cotton logistics at Cikarang Dry Port, so that those in need can obtain raw materials at more efficient prices.

Competition between domestic textile companies and competition with foreign companies in marketing their products has caused the leaders of textile companies to be sensitive to changes and developments that occur, both technological changes and developments in designs, modes and types of fabrics that are popular in the market.

Based on observations, it is shown that the leaders of textile companies are striving to make improvements to achieve quality products and increased productivity by conducting training of employees when employment is accepted or training managers regarding developments that occur. The leaders seek to increase and grow the expertise of workers, so that workers are motivated to improve performance, meaning leaders have an interest in providing training (coaching), guidance, support, and rewards that are necessary to achieve effective performance. Given this, the contribution of leaders and workers in achieving quality performance is clear.

Improvements made by textile companies, based on research findings indicate the nature of the " *tremble effect*. " That is, improvements made by one company will affect the quality and satisfaction of other companies. For example, improvements made by *spinning* companies to improve yarn quality will provide satisfaction to *weaving* companies due to receiving quality raw materials. In turn, during the weaving process we will be able to produce quality grey fabric. Similar satisfaction is seen then in customers of *weaving* companies, *dying* company, *printing*, and *finishing* by ensuring that the grey fabric to be dyed or printed is from a quality raw material. This reduces the possibility of failure and can improve patterns and designs. *Tremble effect* is alleged to have provided opinions textile entrepreneurs to build a new integrated textile company (*integrated*). With the integrated operations of the company from *spinning* to *finishing* production, the company can make quality improvements and controls in integrated programs, so that the achievement of operational quality and production quality can be controlled.

Conclusion

Based on observations, the authors find other forms of business managers in textile companies are needed to improve the ability to predict the environment. The application of the concept of the Quality Management System Integrated (Total Quality Management) is a way to achieve such improved performance continuously (continuous performance improvement) at every level operations or processes in each functional area of an organization using all available human and capital resources.

The form of continuous improvement in the implementation of Integrated Quality Management in textile companies is based on the existence of internal and external problems. Internal problems are related to the production department, administration department, marketing department, and other parts. Meanwhile, external problems are related to customer satisfaction, market changes, technological changes, changes in government regulations and other changes. Then continuous improvements are made to the PDCA Planning (Plan) cycle, Implementation (Do), Check (Check), Actions (Act).

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