

Implementation of Environmental Protection, Sustainable Production, and Labor Protection in Garment Industry Study: Bangladesh and Indonesia

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ABSTRACT: Fast fashion is a global problem which generate seriously impact for environment, even associated with garment industry worker protection in entire world. The study which using Systematic Literature Review method aims to compare the environment protection, sustainable production, and occupational health and safety through garment industry labor between in Bangladesh and Indonesia. From the results of the discussion, it is known that green logistic management, green human capital, and sustainable production take positive effect to circular economy practices. In side of occupational health and safety, protection for worker can done by occupational health and safety training, provision of personal protective equipment, medical check up, provision of labor social security, establishment of a occupational health and safety steering committee, and occupational health and safety application in work environment.

KEYWORDS: Fast fashion, sustainability, labor protection

I. INTRODUCTION

One of the international organizations in the environmental field, Greenpeace said that fast fashion industry take impact to the environmental sustainability. This industry is recorded as a contributor of 20% liquid waste in the world which has an impact on the availability of clear water globally (Eyskoot, 2018). This is supported by the fact that a garment company can spend approximately 2.700 liters of water to produce a cotton t-shirt. In addition, the fast fashion industry is also the largest contributor to carbon emissions in the world with a scale of 10%, exceeding carbon emissions produced by the aviation industry which is only 2% (Eyskoot, 2018). Indonesia is also one of the countries affected by the fast fashion industry. The results of Greenpeace's investigation said that Indonesia is in danger of emergency ecological damage as a result of a number of main springs on the island of Java being polluted by the presence of clothing industry wastes (Muazimah, 2020).

Another problem faced by the fast fashion industry is regarding the fulfillment of human right, labor salary, and gender equality (Kim and Oh, 2020). The fast fashion industry employs around 75 million factory workers in entire world, with long working hours of up to 16 hours a day, 7 days a week.

In addition, another problem is the occupational health and safety factor. Threats to workers health, such as the risk of cancer and respiratory and skin diseases, resulting from the use of chemicals in the clothing manufacturing process (Stanton, 2023). Also about the safety of garment workers who always deal with machines such as cutting and ironing equipment.

In order to get the best solution to this problem, this study aims to compare the application of environmental protection, sustainable production, and labor protection in the garment industry in Bangladesh and Indonesia, which is then used as a basis for developing the application of environmental protection, sustainable production, and labor protection that can be applied in Indonesia.

II. METHODS

This research basically uses secondary information and literature studies. Because this research seeks to identify the problem in question and to compare between research in Bangladesh and Indonesia, the methodology used is Systematic Literature Review, known as SLR.

Comparative treatment is applied to searching for relevant information regarding the implementation of environment protection, sustainable production, and labor protection through related literature taken from journals, books, and reports. The collected literature materials were then analyzed qualitatively and presented descriptively.

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III. RESULTS AND DISCUSSION

The clothing industry is one of the largest, most global and most essential industries in the modern world (Jansson and Power, 2010). Most countries produce clothing components not only for domestic consumption but also for the international textile and clothing market (Gereffi and Frederick, 2010).

Fashion now is “fast fashion” – quickly available to many, created by many, promoted by many, enjoyed by many. All of those new fashion realities are based on affordability – an affordability build from cheap fabrics (Anguelov, 2016).

Bangladesh’s apparel industry accounts for around 83% of the country total export volume. Bangladesh’s garment sector has steadily grown over the past decades, surpassed China as the second largest in the world. To survive from the dynamic business climate at home and abroad, Bangladesh adopts sustainable and environmentally friendly business practices (Cheng, 2023).

Research conducted by Cheng (2023) on 320 Bangladeshi Readymade Garments shows that the application of green logistic management (green transportation, distribution, packaging, and warehousing) has a positive impact on circular economy practices and sustainable production of companies, because it significantly encourages reduction of material consumption, reuse, and recycling of materials and waste. Implementing sustainable alternative, such as green logistics, reduces environmental pollution and saves the environment from damage by collecting obsolete and damaged products for reproduction.

Another result that is very influential on circular economy practices is green human capital. Cheng’s research (2023) shows that if managers and employees have motivation and awareness for environmental preservation, they are more likely to be involved in circular economy activities, so it is very important to introduce and manage sustainable production in a company.

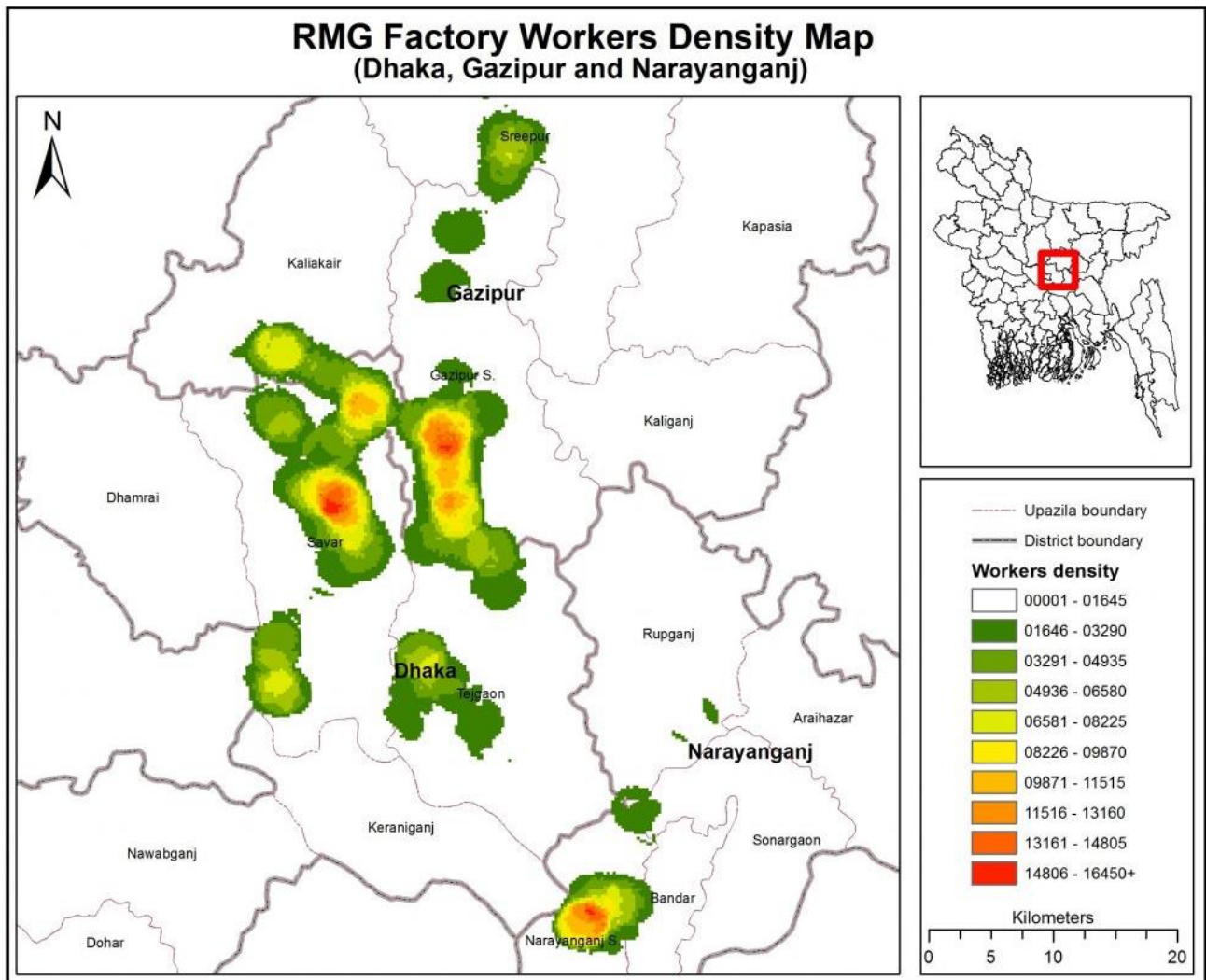
In addition, sustainable production has a positive relationship with the company’s circular economy practices. This is corroborated by Jinru et al. (2021) which shows that sustainable production is an element driving the company’s circular economy practices. Through optimal use of resources (example energy, raw materials, and labor), sustainable production can produce valuable products with significant positive impacts for the environment.

Sustainable production also mediates the relationship between green logistic management and circular economy practices; and mediates the the relationship between green human capital and circular economy practices.

This is reinforced by research conducted by Rakesa (2022) on textile and garment companies listed on the Indonesia Stock Exchange for the 2014-2019 period, which revealed that the greater the application of green accounting, the greater the corporate sustainability of the company. When a company implemetns green accounting, the public can obtain information about how far the company makes a positive or negative contribution to the quality of human life and the environment (Darlis, 2020). In addition, the application of material flow cost accounting also has a positive effect on corporate sustainability in textile and garment companies, because it can reduce waste and increase profits.

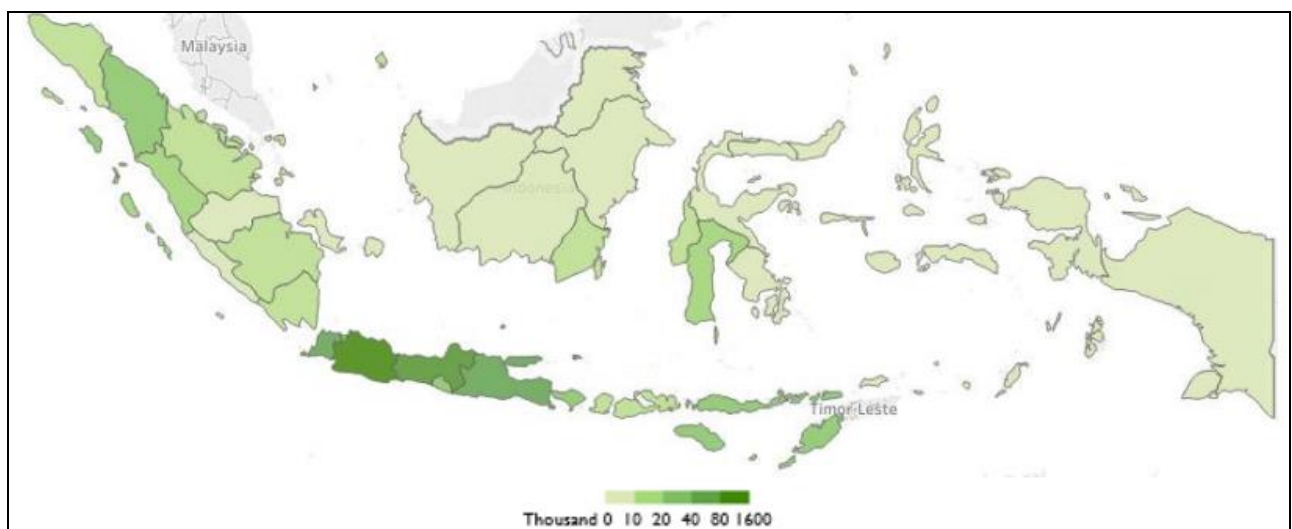
Asian Center for Development (2020) suggests that between 2015 and 2020, number of garment labors in Bangladesh has grown by 1.07% per year. Of the total labors, nearly 20% are employed in knit factories, 20% are in sweater, 51% are in woven factories, and the rest are in mixed factories.

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1. Garment Labors by City in Bangladesh, 2020
(Source: Mapped in Bangladesh, 2020)

In Indonesia 2016, around 4,2 million people were employed in the garment, textile, and footwear industries, which accounted for 26,6% of all manufacturing jobs (Horne, 2017). This number is slightly more than Bangladesh which employs around 4 million people in its garment industry.



2. Garment, Textile, and Footwear Industry by Province in Indonesia (in Thousand), 2016
(Source: Indonesian Garment and Footwear Sector Bulletin, 2017)

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The difference between the highest and lowest minimum salary by province in Indonesia has widened in the last decade, but if the average is calculated, the results are as shown in table I, which is then used as a comparison for garment labor in Bangladesh.

| Country | Average Salary (per month) | Cost of Living (per month) | Percentage About Cost of Living that can be Fulfilled Using Monthly Salary |
|------------|----------------------------|----------------------------|--|
| Bangladesh | 5.300 taka | 8.900 taka | 59% |
| Indonesia | Rp2.000.000 | Rp1.800.000 | 111% |

I. Salary Comparison of Garment Labors in Bangladesh and Indonesia

(Source: processed data, 2015-2016)

The data shows what is worrying, that the salary given to garment labors in Bangladesh are still far from enough to make ends meet.

The garment, textile, and footwear industries in Indonesia are characterized by long working hours (Horne, 2017). It turns out that this is not only happening in Indonesia. Bangladesh implements much longer hours for its garment labors. The comparison of working hours of garment labors in these two countries is shown in table II below.

| Country | Working Hours Average (per week) |
|------------|----------------------------------|
| Bangladesh | 60-140 hours |
| Indonesia | 43 hours |

II Working Hours Comparison of Garment Labors in Bangladesh & Indonesia

(Source: processed data, 2015-2016)

Looking at the occupational health and safety side, Gunawan's research (2020) reveals that a garment company in Indonesia has implemented occupational health and safety protection as follows: 1) Occupational health and safety training; 2) Provision of personal protective equipment; 3) Medical check up; 4) Provision of labor social security; 5) establishment of an occupational health and safety steering committee; and 6) Occupational health and safety application in work environment.

If all garment companies in the world implemented the minimum occupational health and safety protection as mentioned above, then the tragedy about the collapse of Rana Plaza, an 8-floor garment production building in Bangladesh would not have occurred. Poor work safety management and lack of guarantees for work safety were the reasons for the deaths of 1.132 labors, in addition to 2.500 injured labors. This shows the facts behind the exploitation of the fast fashion industry players towards their labors.

IV. CONCLUSION

The garment industry in Bangladesh has implemented environmental protection in the form of green logistic management and green human capital, and also sustainable production which has been proven to significantly encourage company's circular economy practices. Environmental protection to achieve corporate sustainability is also implemented in Indonesian garment companies through green accounting and material flow cost accounting. The similarity as a developing country allows Indonesia to also apply environmental protection in the form of green logistics management and green human capital, and also sustainable production in its garment industry.

Compared to Bangladesh, Indonesia seems to be more humane, when viewed from the point of view about the implementation of working hours and the provision of salary for garment labors. Work accidents are unavoidable in any industry, including the garment industry. However, for the protection of occupational safety and health, Indonesia has better practices than Bangladesh.

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