CIRCULAR BUSINESS MODEL STRATEGY OF SMM FASHION BRAND: THE IMPACT TOWARDS SDG GOALS

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Abstract
The linear system known as “Take-Make-Waste” has positioned fashion and textile industry as the second largest waste contributor in the world after the oil and gas industry. Consequently, the disruptions we currently face have led us to the global textile waste crisis era, including Indonesia. On the other side, Ellen MacArthur Foundation observes an increase in market and business opportunities within the slow/circular fashion industry. This research aims to explore the business strategies of the Indonesian fashion brand, SMM, which has been committed to implementing responsible fashion practices since 2014 and actively addressing environmental impacts. Through value hill analysis as the research framework to identify current circular activities, gaps, and challenges faced by SMM, the analysis focuses on three stages: uphill, tophill, and downhill. This qualitative research employs semi-structured interview techniques, primary and secondary data observation to comprehensively understand the adopted circular business model. The research findings indicate that SMM utilizes Circular Supply Models as its primary business model, Resource & Recovery Models as an effort towards using 100% new materials, and Product Life Extension Models as a form of loyalty to its customers. These circular business model strategies have helped SMM reduce carbon emissions by nearly 20% of the total emitted. This indicates that SMM is a manufacturer promoting responsible consumption and production.

Keywords: Circular Business Model, Circular Fashion, SDG, Responsible Consumption & Production

Introduction
The textile industry is spread globally, generating around 1.7 trillion dollars (Smith, 2023) and employs around 60 million workers around the world (Van der Linden, 2019). Despite its significant part as the seventh largest economy in the world (Burkacky et al., 2022), the fashion and textile industry comes with consequences which is nominated as one of the biggest global polluters.

For more than years, the linear system known as “Take-Make-Waste” in the textile and fashion industry has resulted in numerous disruptions which have led us to the global textile waste crisis era. The European Environment Agency reported that it is causing 270 kg of CO2 emissions from textile purchases per person in 2020. Moreover, the sector is responsible for the second-greatest annual quantity of hazardous ocean microfiber pollution, which is the same amount of 50 billion tons of plastic bottles (Goyeneche et al., 2018). The fashion sector is believed to contribute to 20% of worldwide pollution in clean water resources. Notably, textile dyeing and finishing mills are substantial water consumers, utilizing a minimum of 200 tons of water per metric ton of produced textile (Muthu et al., 2014). Additionally, the textile sector is playing a role as the third
significant factor in the degradation of water and the occupation of land (Mikhaylov et al., 2020).

Despite this, on the global level the textile waste crisis is also happening in other developing countries, including Indonesia. Indonesia is in the world’s top 10 textile and apparel production (Ishaque et al., 2019). Unfortunately, this has made Indonesia as the second-highest water pollution contributor (29.25%) arising from the textile sector among the more industrialized G20 members (Paraschiv et al., 2015). According to the SIPSN KLHK 2021, the amount of textile waste in Indonesia reached approximately 2.3 million tons, equivalent to 12% of the total household waste and only 0.3 million tons of this waste can be recycled (Safitri & Pratama, 2022).

Citarum River is one of the most dangerous rivers in Indonesia impacted by the textile industry. A decade ago, the World Bank designated Citarum as the world's most polluted river—a characterization embraced by both the media and environmental advocates. Despite this, approximately 30 million people depend on this contaminated water for activities such as irrigation, washing, and even drinking, posing potential health risks (Sagita, 2018).

The impact is rising cruelly because the entire industry’s value chain aspects could lead to environmental damage (Niinimäki & Durrani, 2020). If nothing changes, globally there will be at least 102 million tons of global clothing waste and the situation will only get worse (Kivrak et al., 2017). Considering the consequences of the above destructive outcomes due to the irresponsible textile production, addressing the issue has to be an essential for multi-dimensional stakeholders.

Back in 2015, global leaders including Indonesia, collectively committed to Sustainable Development Goals (SDGs). According to the SDG Index 2020, Indonesia has achieved high rankings in the following three Sustainable Development Goals (SDGs): SDG 4, SDG 12, and SDG 13. Therefore, refining Indonesia’s responsibility in terms of industry production may contribute to not only environmental health impact but also the success of the SDG goals.

At the same time, there is still a shortage of research dedicated to sustainable textiles and fashion, especially in developing countries like Indonesia (Boström & Micheletti, 2016; Hassini et al., 2012). To address the gap, the research of this study will be conducted on Indonesia’s fashion brand study case with the aim to discover new perspectives that may give some practical implications for other fashion players. The research also proposed to present valuable insight in mitigating the negative environmental impact.

SMM is one of the fashion brands established in 2014. The brand has a strong commitment to empower slow and circular fashion principles and their commitment to sustainability. The founder is aiming to support a circular economy and help protect the environment by repurposing the fashion activity.

Thus, to explore SMM’s business model and strategy this given research this research aims to explore the business strategies of the Indonesian fashion brand, SMM, which has been committed to implementing responsible fashion practices since 2014 and actively addressing environmental impacts.

It is also important to note that there may be some limitations in this study. The research is only limited to Indonesia's fashion brands and only observing industry’s business strategy around internal circles without giving any judgement to external parties such as government and government policies as nation’s decision holders. Further, the
findings may need future exploration and research to enrich the quality and context of current study.

Research Method

The research adopts a qualitative research approach involving descriptive analysis through two distinct data collection resources both primary and secondary sources (Hidayat et al., 2022). Therefore, the data collection techniques consisted of data observation, in depth interview, and documentation (Hidayat et al., 2023). The qualitative methods objective is to grasp and appreciate the contextual influences that shape the research topics (Hennink et al., 2020).

The primary data will be generated by in-depth interview and SMM 2023 sustainability report to uncover primary findings that hold broader relevance beyond the rapid barrier of the study while the secondary data is collected by some published research by other authors that is leveraged to fulfil the research objectives. The in-depth interviews will be employed to gain a comprehensive understanding of the participant's viewpoint regarding the research subject (Rosenthal, 2016).

The interview media channel was conducted in a virtual platform in a semi-structured interview. The interviews run professionally by offering a list of questions that has to be proved first before the interview process. Moreover, the instrument of data collection involves the use of transcriptions and notes made by the interviewer regarding the interview's content, participants, and context.

Results and Discussion

Value Hill Analysis

![Value Hill Analysis Diagram]

Figure 1. Circular Value Hill Tools
From European Commission, 2020

SMM directs its focus towards controlling and achieving circularity throughout the entire production process, particularly emphasizing responsibility, right from the strat (uphill phase).
Beginning with the design processes that are both environmentally friendly and conducive to circularity, SMM avoids following trends and opts for limited production quantities. Moreover, during the production phase, SMM utilizes materials that are responsibly processed and biodegradable. The company also employs production processes that are both traditional and innovative methods, aiming for minimal environmental impact, energy efficiency, and water conservation. In the distribution phase, each SMM product is packaged using reusable & recyclable materials.

SMM's commitment to circular fashion goes beyond upstream activities; it also seeks to enhance product productivity (tophill phase) by extending its lifespan. SMM provides repair services to customers, as a way to reduce textile waste while increasing brand loyalty.

In the post-use or product recovery phase (downhill phase), SMM implements upcycling and recycling practices. Upcycling involves repurposing unused materials into new products such as the Daur collection and various SMM fashion accessories. In managing unusable clothing waste, SMM applies recycling practices to convert it back into raw materials, aiming to reduce the consumption of entirely new materials, and collaborates with various partners.

Overall, this concept of circularity has been woven into SMM's product design collections, known as Baru (first life - new), Daur (second life - upcycle), and Baur (third life - recycle).

**SMM Circular Network Support**

The SMM brand is engaged in collaborations with more than 200 artisans, Small and Medium-sized Enterprises (SMEs), as well as various partners such as PABLE Indonesia, EcoTouch, and artisans specializing in hand-drawn batik, stamped batik, and digital printing using OEKO TEX STANDARD 100 and OEKO TEX ECO PASSPORT certified dyes.

These collaborations cover various production aspects, from sourcing raw materials to waste management. Collaborations with local artisans involve the production of various fabric types, including hand-drawn batik and stamped batik, as well as digital printing artisans using certified dyes. Additionally, partnering with EcoTouch showcases SMM's commitment to managing textile waste more responsibly. Moreover, partnering with Instalasi Pengolahan Air Limbah Terpadu highlights SMM's efforts to mitigate the negative environmental impact of its production by ensuring efficient and eco-friendly wastewater management.

**SMM Circular Business Model Strategy**

SMM is a fashion brand committed to ushering in a more environmentally responsible future for the fashion industry. This commitment is rooted in five core pillars that underpin SMM's approach: Circular Economy, Transparency and Traceability, Ethical Supply Chain, Giving Back, and Climate Action. In essence, SMM's business model focuses on reducing environmental impact by embracing principles of circularity.

Following a Value Hill analysis, SMM emerged as a fashion brand dedicated to circular fashion. Addressing the research question of how SMM applies the circular business model to achieve sustainable fashion and meet responsible consumption and production goals, SMM adopts three of the circular business models outlined by Lacy & Ruqvist: circular supply models, product life extension models, and resource recovery models.
Circular Business Model Strategy of SMM Fashion Brand: The Impact Towards SDG Goals

This commitment is evident in SMM's strategy to ensure that every stage of production, leftover materials, and unused clothing waste can be reused, repaired, and ultimately recycled.

**Circular supply models**

This circular business model implements the concepts of longevity and durability. In this model, businesses ensure that the products they create are made from high-quality materials and through innovative and safe manufacturing processes. In other words, the circular supply chain model offers a comprehensive concept of circular economy where products are recyclable or biodegradable, replacing the linear economic concept.

SMM applies the circular supply model concept from design, preparation, raw material processing to production. Below is the table of the circular supply chain model from the SMM clothing label:

<table>
<thead>
<tr>
<th>Activity</th>
<th>SMM Circular Strategy</th>
<th>Linear Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Responsible design</td>
<td>Fast fashion &amp; unlimited</td>
</tr>
<tr>
<td></td>
<td>- Apparel: Kids, women, and mens wear</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Fashion accessories: Shawls, Bandana, bags &amp; purses, headband, footwear, etc</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Home &amp; Decoration</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Raw Material (100% organic):</td>
<td>Polyester Materials</td>
</tr>
<tr>
<td></td>
<td>- Kapas organik</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Linen &amp; rami</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Hemp</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Tencel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- non-poliester</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural &amp; Certified Dyes:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- OEKO-TEX standard 100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- OEKO-TEX ECO PASSPORT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Packaging:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- bio-Cassava bag</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Paper bag</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Reusable pouch</td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>Responsible &amp; Innovative Process:</td>
<td>Massive production</td>
</tr>
<tr>
<td></td>
<td>- Traditional process: Local artisans for any kind of batik, tenun ikat, sablon tangan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Upcycle: patchwork technique</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Digital printing: certified dyes</td>
<td></td>
</tr>
<tr>
<td>Revenue model</td>
<td>Direct Selling &amp; Retail</td>
<td>Direct &amp; Non-direct selling: Distributor, reseller, massive selling</td>
</tr>
<tr>
<td></td>
<td>- Official Website</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Official eCommerce Platform</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Pop-up store</td>
<td></td>
</tr>
</tbody>
</table>

**Product life extension models**

This circular business model is a circular strategy aimed at extending the lifespan of products in various ways. According to Ibrahim (2021), this model consists of six
approaches: build to last, refurbish, take-back/trade-in, upgrade, refill, and repair.

The primary objective of this business model is to help customers find value in a product for as long as possible. In other words, the product life extension model is one of the circular models aimed at maximizing product’s value while optimizing profitability throughout its lifecycle.

SMM provides repair services for damaged products to its customers. The repair process is tailored to the type of product damage. This service serves as SMM's brand loyalty initiative to enhance customer satisfaction. However, this model does not serve as the primary business model for SMM, as the company ensures that the products it creates are inherently durable and long-lasting.

Resource and recovery models

The Resource & Recovery business model concept aims to optimize resource utilization and reclaim the value of products that are no longer in use. Unlike traditional recycling models, this circular business approach perceives waste not as an external issue requiring intervention from third parties or waste management entities, but rather as an integral resource fully integrated into the business framework. This integration facilitates processing and the creation of additional revenue streams.

SMM applies the principles of upcycling and recycling to transform unused products into new ones with added value or even as resources, thereby striving to reduce the consumption of entirely (100%) new materials. Presented below is a table illustrating SMM's circular strategies for managing fabric scraps and clothing waste.

<table>
<thead>
<tr>
<th>Activity</th>
<th>SMM Circular Strategy</th>
<th>Linear Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upcycling</td>
<td>- DAUR Collection</td>
<td>Unwanted item, waste to landfill</td>
</tr>
<tr>
<td></td>
<td>Utilizing pre-consumer waste, namely Sisa Kain Perca or rejected fabrics, to transform them into new value-added products.</td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>- BAUR Collection</td>
<td>Unwanted item, Waste to landfill</td>
</tr>
<tr>
<td></td>
<td>Initiating a program to collect used clothing that is no longer wearable (post-consumer waste) to be recycled into new textiles.</td>
<td></td>
</tr>
</tbody>
</table>

The resource & recovery model is an integral part of the circular approach in business, where waste is considered a valuable resource that can be managed and utilized as efficiently as possible to reduce environmental impact and enhance resource efficiency.

Gap and Opportunity in Fashion Circularity

The SMM brand recognizes the increasing trend towards sustainable practices in the fashion industry. Many designers and fashion brands are starting to study and implement sustainable principles and circularity in their production processes. Moreover, there is a growing number of public figures or communities embracing slow fashion/circular fashion, which influences consumer purchasing decisions.

Furthermore, consumer awareness regarding the environmental impact of the
fashion industry is on the rise. However, this awareness is predominantly prevalent among younger demographics such as millennials and Gen Z, while older generations still lack knowledge and interest in this regard.

Meanwhile, a gap arises as circular fashion products remain inaccessible to all segments of society due to their relatively high prices. This is attributed to high raw material costs, production processes requiring lower-impact investments, and fair wages and facilities for the local partners. Additionally, the lack of infrastructure supporting circular fashion practices in Indonesia poses a challenge, potentially exacerbating production costs.

**SMM Impacts towards SDG 12**

SMM's commitment to responsible fashion practices, as executed through various initiatives in accordance with SMM's Responsible Supplier Guidelines, has successfully reduced carbon emissions by a total of approximately 307,000 kilograms of CO2 per year, equivalent to 19.7% of the total emissions generated by all SMM activities, reaching 1.5 million kilograms of CO2 per year.

In the recycling program conducted from 2021 to 2023, it managed to collect as much as 5.7 tons of unusable clothing. More than 2.4 tons of this were successfully processed into new resources, such as yarn and insulation material. This program succeeded in saving as much as 6 million liters of water per year and reducing emissions by 60,000 kilograms of CO2 per year.

Furthermore, the upcycling program also yielded positive impacts, with sales of over 12,000 SMM DAUR Collection items since 2019. This has resulted in the DAUR Collection saving more than 31 million liters of water per year and reducing carbon emissions by more than 6,500 kilograms of CO2 per year.

**Conclusion**

Through an analysis that has been carried out based on data collection methods of SMM's circular business strategies and using the value hill framework to analyze its business concept, it can be concluded that the implementation of Circular Supply Models, Resource & Recovery Models, and Product Life Extension Models has answered to the problems that arise in the object of research. The impact of all various SMM strategies aligns with Sustainable Development Goal (SDG) number 12 the responsible consumption and production practices, subpoint (12.5), which aims to reduce waste generation through prevention, reduction, recycling, and reuse. The five business models are a great option as a guiding framework when exploring how to transform resource use and value propositions to capitalise on elimination of waste. Hence, other fashion and textile player brands can take advantage or take the opportunity to leverage this circular fashion practice, either partially or fully, similar to the approach adopted by SMM. The research has identified the basis initial action for fashion industry before execute circular strategy: (1) identify the resource and opportunity that business has, (2) reassess what value business want to delivery to customer, and (3) start with small circular action and focus to improve it. As transforming toward a circular concept will take time and effort, it is important to remember that collaboration among fashion players, industry stakeholders, and government as well as the consumers behaviour-change is essential to drive the development and successful upscaling of circular business models. It took almost 10 years for SMM brand (since 2014) to establish a responsible and resilient circular fashion ecosystem that required more than 200 diverse local collaborations.
BIBLIOGRAPHY


