ESG in perspective: analysis of challenges and possibilities in a textile company, using the GUT matrix

ESG em perspectiva: análise de desafios e possibilidades em uma empresa têxtil, usando a matriz GUT

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ABSTRACT
Environmental, Social and Governance (ESG) has gained a large viewership through its primary function in assessing the social, environmental and governmental parameters within a company, taking into account a successful change in business model. Therefore, the objective of this work is to reframe the processes and purposes of recycled textile production, considering corporate socio-environmental governance, prioritising actions through the application of the Gravity, Urgency and Tendency (GUT) priority matrix. In this work Bardin’s content analysis methodology was used so that it was possible to organise the data obtained in the interview. The GUT matrix was used to verify which of the listed problems should be prioritised. From the application of the tool, it was possible to detect problems and guide decision making on the company. The main problems include sustainable actions, actions to include locals and vulnerable communities, access to 100% cotton and difficulty in finding local companies responsible for separating fabrics. Solutions for the industry generate advantages which add value to the company, with the objective of reducing costs, increasing revenues, eliminating risks and enjoying opportunities, preferably in all sectors.

Keywords: industry, production, recycling, sustainability, governance.

RESUMO
Ambiental, Social e Governança (ESG) ganhou uma grande audiência através de sua função principal na avaliação dos parâmetros sociais, ambientais e governamentais dentro de uma empresa, levando em conta uma mudança bem sucedida no modelo de negócios. Portanto, o objetivo deste trabalho é reformular os processos e propósitos da produção têxtil reciclada, considerando a governança socioambiental corporativa, priorizando ações através da aplicação da matriz de prioridade Gravidade, Urgência e Tendência (GUT). Neste trabalho utilizou-se a metodologia de análise de conteúdo de Bardin para que fosse possível organizar os dados obtidos na entrevista. A matriz GUT foi usada para verificar quais dos problemas listados devem ser priorizados. A partir da aplicação da ferramenta, foi possível detectar problemas e orientar a tomada de decisões na empresa. Os principais problemas incluem ações sustentáveis, ações para incluir moradores e comunidades vulneráveis, acesso a 100% algodão e dificuldade em encontrar empresas locais responsáveis pela separação de tecidos. As soluções para a indústria geram vantagens que agregam valor à empresa, com o objetivo de reduzir custos, aumentar receitas, eliminar riscos e aproveitar oportunidades, de preferência em todos os setores.

Palavras-chave: indústria, produção, reciclagem, sustentabilidade, governança.
INTRODUCTION

Unconscious and unbridled consumption in contemporary society produces significant volumes of waste. The textile industry, due to the short life cycle of its products, contributes greatly to environmental waste accumulation and degradation. In Brazil, this is one of the most dominant economic sectors with the country being the fifth largest textile producer in the world and fourth largest producer of clothing as of 2019. It is estimated an average of 2.4 million tons of textiles and 9.04 billion clothing items were produced the same year. In addition, the country is considered the fourth largest producer and consumer of Denim in the world (Pereira, 2017; Abit, 2020).

According to the United Nations (UN), the fashion industry is the sector which uses the most water, 20% of which is wastewater. This results in the release of roughly 500,000 tons of synthetic microfibers into the oceans every year. This sector is also responsible for around 10% of greenhouse gas emissions. From the 1990s onwards, sustainable methods were beginning to be implemented (Troiani, Sehnem & Carvalho, 2022). Following this, many terms were coined, such as “ethical fashion”, “green fashion”, “conscious fashion” and “ecofashion” (Galleli, Sutter, Maclennan, Polo & Correa, 2016).

After the Global Fashion Agenda, the textile industry began the implementation of administrative change. The 2018 agenda determined 7 priorities: traceability in the supply chain; efficient use of water, energy and chemicals; respectful and safe work environments; sustainable raw materials; a closed-loop operating model; improvement of treatment systems; digitalisation in line with the fourth industrial revolution (Pinheiro, 2022).

For a more sustainable production to exist, some changes need to be implemented. These should include economics unified with creativity, style, ecological awareness, and social responsibility. These concepts should influence manufacturers regarding both the environment and social areas (Fletcher & Grose, 2011; Fajardo, 2010; Müller, 2016).

The term slow fashion originated with the intention of highlighting production value. Increasing consumer awareness and changing consumption options encourages seeking out of information about the production process, quality, and durability of a
product. Consequently, redirections can then be undertaken by brands and their values (Irokawa, Maia & Câmara, 2017; Barcellos, 2018). Highlighting sustainable development mitigates the negative impacts of fast fashion which are products of global corporations. The methodology of fast fashion is the production of high quantities of goods in a relatively short time, achieving a large circulation of goods (Santos, 2017; Fletcher, 2007; Coutinho & Kauling, 2020).

In 2005 the UN released the “Who Cares Wins” report in collaboration with the Global Bank. Out of it the Environmental, Social and Governance (ESG) was formed. The objective of the ESG was to evaluate the social, environmental and governance actions of a corporation, imposing strict compliance rules. Due to an increase in problems globally, in regard to these three areas, the term ESG has gained a sense of rigidity. Specifically, this means companies are evaluated not only using market measures, like profitability, safety and competitiveness but are also taking into account the aforementioned ESG evaluations (Belinky, 2021).

The term ESG is intertwined with the concept of Socially Responsible Investment (SRI) and sustainable investment (Diniz & Duarte, 2022). EGS investments arise from the need for more responsible corporate behaviour and expectations regarding the role of companies in the transition to a socially just and environmentally viable economic society, requiring a significant change in business model. When applied to the textile sector there is no change in model, as ESG practices must be applicable to the strategy of all business types (Belinky, 2021; Axt, 2023).

In recent years, many industries have been concerned with implementing new approaches based on sustainability. Concerns can be in regard to sustainable management, development of new products and technologies with a lessened environmental impact, introduction to new markets, use of codesigns and recycling of fabrics. Strategic management models are used by companies to focus on environmental issues and transform investment into competitive advantage (Gonçalves-Dias, Guimarães & Santos, 2007; Mrozinski, Steffen & Meurer, 2017).

Given the worries associated with these new markets, corporations establish themselves within a sustainable mindset, to invest in the social image of the brand and
the technology for its products. An image encompassing awareness and engagement with environmental studies and technology is fundamental and often results in an increase in quality of the final products (Rüthschilling, Bessa & Broega, 2009).

The sustainable technologies adopted by these textile companies range from the use of recycled Polyethylene terephthalate (PET) fibres to manufacture fabrics (Mrozinski; Steffen; Meurer, 2017), to the reuse of fabric fibres made by third parties (Costa, Tomazi, Bassi, Silva & Baptista 2021). The latter process is known as “defibration” which consists of using scraps of various fabric types and transforming them into new products. This process can occur without the need for chemicals and water (Wang, 2007). Production of this type uses 30% less energy when compared to virgin fibre, minimising environmental impact, resulting in an economic recycled product (Costa et al., 2021).

It is essential to develop research that deals with political, environmental and social aspects. With this goal, the objective of this work is to reframe the process and purposes of recycled textile production, considering corporate socio-environmental governance, through the application of the Gravity, Urgency and Tendency (GUT) priority matrix. This research also has the objectives of identifying practices and processes that have socioeconomic potential, establish priorities for the problems identified with aim to incorporating socio-environmental gain into applicable processes, propose solutions to identified problems, aligning decision making with ESG principles.

Organisations cannot be considered innovative when the sole use of social responsibility is for marketing purposes. Ethical measures which are beneficial to both the company and society need to be undertaken (Mello & Mello, 2018). It is understood that socio-environmental responsibility is greater than simply making a profit also encompassing actions within society and promotes development of local culture. Several economic sectors note the relevance of socio-environmental responsibility inserted within the textile market. It creates opportunities and differentiates a company from others constructing a new link with consumers (Silva & Pontes, 2018). Therefore, the execution of sustainable development requires adequate and reliable planning, monitoring, and
analysis so that the desired result can be achieved (Correia, Oliveira, Feitosa & Goméz, 2015).

By adopting these socio-environmental measures it is possible to create a sustainable enterprise, keeping in mind the methods of applying sustainable concepts with the intention of reducing costs, increasing revenues, eliminating risks and taking opportunities. The ways in which corporations integrate sustainable ideas into strategy is essential in understanding integration of operational attitudes that comply with the social-environmental criteria for decision-making.

2 METHODOLOGY

This research is qualitative specifically, exploratory-descriptive work, it describes and analyses the socio-environmental aspects of a textile recycling company in the Northeast of Brazil. The GUT priority matrix was applied to survey and analyse problems. Qualitative research consists of the systematic collection, ordering, description and interpretation of conversations, observations or even documentation. Interviews are commonly used to collect qualitative data, especially semi-structured interviews (Kitto, Chesters & Grbich, 2008; Kallio, Pietilä, Johnson, & Kangasniemi, 2016).

a) Locus of research

The site chosen for research was a SuperFios fabric industry, they specialise in the production and commercialisation of defibred yearns. It is in the municipality of Paulista metropolitan region of Recife, the capital of the state of Pernambuco – Northeast Brazil (Figure 1).
b) Data collection

In March 2023 collection of data took place during a visit to the study site. A semi-structured interview script with established questions was prepared and presented to the company’s manager. The objective was to understand company processes in regard to the parameters studied in the Postgraduate Environmental Planning program and the masters program in Management of Sustainable Local Development both from the University of Pernambuco. Subsequently, the interview was conducted with the direction of operations for SuperFios, with the intention of describing the process of producing shredded yarn. From this the companies strengths, threats, weaknesses and opportunities could be identified. The choice of an industry representative allows for the compilation of information from the institution regarding textile production. It is then possible to decipher all the necessary areas of this sector in the market.

The interviewee was chosen based on criteria applied in the script, to better achieve the objective of the work. The interview took place remotely with recording of the participant and researcher. Firstly, was the presentation from the company representative and from that the guided script was utilised, citing questions related to the company’s internal and external socio-environmental issues.
c) Data Analysis

Analysis of the interview was conducted using the content analysis technique employed by Bardin (2016). It was used to compare and order the data obtained in the interview and collected during the visit to the study site. From this the GUT matrix could be constructed. Bardin’s content analysis technique is a method comprised of three stages: (1) pre-analysis: Organisation of initial ideas, operationalisation and systematisation; (2) exploration of material: systematic management of decisions taken in the analysis phase, conducted through coding, enumeration and decomposition operations in light of the previous formulated rules; and (3) treatment of results, interference and interpretation: raw results are treated in a way that significance and validity will be attributed (Seramim & Walter, 2017; Souza & Santos, 2020).

The GUT matrix was used to highlight problematic areas for SuperFios using the criteria dictated by the tool (table 1). The aim was identification and an ordered prioritisation of problems. This type of methodology can analyse the priority of solving such problems in both internal and external environments of the institution, guaranteeing standardised conditions for the study of each specific problem. It provides subsidies for the development of an action plan with hope of partially or completely mitigating identified problems (Periard, 2011; Alves, Mendonça, Veloso & Magalhães, 2018; Silva, Cobas, Matta & Juliani, 2020).

Values between 1 and 3 were assigned to each of the dimensions of the matrix (G= Gravity, U= Urgency, T= Tendency), where 1 corresponds to the lowest intensity and 3 to the highest using the criteria shown in table 1. Gravity was analysed by the intensity of the problem and the negative consequences associated if not solved. The urgency consists of the time available and needed to correct the problem. The tendency evaluates and predicts what can happen if the problem is not solved due time.

In severity, the value criteria 3 designates an extremely serious problem, 2 is considered serious damage and 1 is considered a minor problem. For urgency, a value of 3 means immediate action is necessary to solve the problem and 1 means the problem is not urgent. In the tendency criterion 3 states that the situation can negatively develop if
not quickly resolved. I state that said problem will worsen but in the long term, not acting immediately.

Table 1: Criteria used for characterisation and prioritisation of problems.

<table>
<thead>
<tr>
<th>Processes</th>
<th>Value</th>
<th>Gravity</th>
<th>Urgency</th>
<th>Tendency</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems encountered</td>
<td>3</td>
<td>Extremely serious financial damage</td>
<td>Immediate action required</td>
<td>Situation can worsen quickly</td>
<td>Prioritisation order</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Serious</td>
<td>Action as early as possible required</td>
<td>Situation will worsen in the medium term</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Less serious</td>
<td>Action can wait</td>
<td>Situation will worsen in long term</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Ferroli et al. (2000)

After scoring each process, the values assigned to each index and parameter were multiplied (G*U*T = Total). The factor with the highest value is determined as the highest priority and so on. It aims to contribute to the implementation of sustainable actions, allowing for the construction of an action plan to solve each problem. Weight was given to problem raised via this method and an action plan was discussed for the 4 problems with the highest priority score (Table 2).

3 RESULTS AND DISCUSSION

Four socio-environmental factors were considered as most relevant when following the prioritisation outlined by SuperFios’ management (table 2). The problem with the highest priority (Total = 27) when evaluated by the GUT matrix, was about a “lack of sustainable actions”. This shortcoming can be attributed to the fact many sustainable practices are already in use. The company does not use water or chemical products to dye fabrics, there is no use of polluting machinery, they reuse the maximum amount of fabric and cardboard and a solar Pannel installation project has already been established for 2025. According to the National Confederation of Industry (2017, p32), sustainability initiatives bring benefits to business where risk and cost reduction can be achieved, creating new opportunities.
Table 2: Priority of socio-environmental problems at SuperFio using the GUT Matrix.

<table>
<thead>
<tr>
<th>Problems</th>
<th>Gravity</th>
<th>Urgency</th>
<th>Tendency</th>
<th>Total</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microfibre waste</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5º</td>
</tr>
<tr>
<td>No reuse of fabrics</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5º</td>
</tr>
<tr>
<td>Lack of sustainable action</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>27</td>
<td>1º</td>
</tr>
<tr>
<td>Lack of social inclusion for minorities and vulnerable communities</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>18</td>
<td>2º</td>
</tr>
<tr>
<td>Lack of certification</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4º</td>
</tr>
<tr>
<td>Difficulty in accessing 100% cotton material</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>3º</td>
</tr>
<tr>
<td>Difficulty finding local companies responsible for separating fabrics by type</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>3º</td>
</tr>
<tr>
<td>Competition from other production processes more accepted by the consumer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5º</td>
</tr>
<tr>
<td>Security of property</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5º</td>
</tr>
</tbody>
</table>

Source: Created by the author

Inserting the concept of sustainability within the attitude of the company is essential to encourage operational actions which consider social-environmental impacts. It is noted that an increasing number of textile companies are seeking to shape themselves sustainably with an aim to reduce environmental degradation (Milan, 2010; Toniollo, Zancan & Wüst, 2015). During the interview with SuperFios’ production manager, it was questioned if preference would be given to products of sustainable origin. They stated (translated) “[…] our main and sustainable input is from [the reuse of] scraps left over from clothing that would go to the trash, polyester that is produced from PET bottles, cardboard cones that act as yarn spools. All of these are sustainable, and we insist that it be of sustainable origin”

However, as the execution of actions regarding environmental planning become of paramount importance, they act as challenges for businesses to seek sustainable strategies. Combating environmental challenges is a difficult task, sustainable expansion starting from times of crisis management forces paradigm change (Alencar, Simoni, Fiorelli & Neto, 2015). The practices already carried out by SuperFio require implementation of actions that align medium- and long-term actions with ensuring survivability of nature and the maintenance of natural resources to sustain a high quality of life for future generation (Castro & Souza, 2018). The company’s management must not only consider economics but also social and environmental areas in all processes and
decisions which interact with the local market. Evaluation of impacts needs to be considered to determine the socio-environmental responsibility of actions (Silveira & Lopes, 2022).

The level 2 prioritisations concern the “Lack of social inclusion for minorities and vulnerable communities” (Total = 18). Compiling the information gathered in the interview process and in perceptions of the visit, it was possible to identify no effort regarding the implementation of a project to incentivise the inclusion of minority groups. This was considered a priority as socially responsible practices within an enterprise, when strategies and skills align, can result in a competitive advantage and can be of value to the company. In addition, social responsibility strategies based on an institutionalised vision can contribute towards the transition to sustainability. If there is the construction of new technical member regimes, it can facilitate the development of stability. With this, we can infer that for an industry to achieve sustainable development there must be social responsibility, due to the convergence of responsibility and sustainable development (Sousa & Sugahara, 2015; Barbieri & Cajazeira, 2009). This means it is of paramount importance to develop programs that cover the themes of social responsibility to remedy this need.

Through the list of priorities, “difficulty in accessing 100% cotton material” was considered the next greatest priority (Total = 12). From this it was possible to assess that one of the greatest difficulties inflicted on this sector is the supply chain.

Mesh production utilising the integration of synthetic material at a large scale, of which polyester is most common, often promotes a drop in production costs. According to Viana (2008), in the Brazilian textile sector, the use of mixed fires including synthetic polymers is common. Mixture of yarns aims to reduce costs and raw cotton is likely to increase expenditure and effects the economics of the business. The increased savings from utilisation of polymers show the method may not be applicable to all areas as an increase in cost can affect the processability of the factory (Klein, 1985; Antoneli, 2016).

On the other hand, the results obtained highlight the “difficulty in finding local companies responsible for separating fabrics” (Total = 12). This is attributed to the business models applied in the United States, as stated by the interviewee (translated).
“[…], we have a difficulty in the culture of reuse, at the time of making, fabrics are cut and not separated by colour or type. Ultimately, selling [unsorted fabric] is cheaper.” Through literature it was possible to verify that the expenses of separation, logistics and transport combined with the absence of fiscal incentives creates a large obstacle for recycling companies to receive textiles already separated by type and colour (Amaral, 2018; Arendartchuk, 2021). The lack of sufficient logistics for collection and the culture of mixing recyclable waste ends up removing the real value charged to the reusable textile retail (Amaral, Baruque & Ferreira, 2014). The result of such difficulty highlights the importance of encouragement to develop practices to separate discarded fabrics.

We can state, even though this industry presents sustainable actions, it does not follow the ESG guidelines. It is necessary that in addition to waste management there is recycling of fabrics and reduced carbon emissions through responsible energy management. Socially, it is necessary for organisation to promote social inclusion, diversity and equality combined with local inclusion and communication. When it comes to governance (relationship with shareholders) within the institution, anti-corruption policies, risk management and transparency in performance, independent auditing and a code of ethics should be applied (Axt, 2023). These points were not recognised and not raised by the business but must be fully implemented so that they can comply with socio-environmental and governance criteria in decision-making.

4 CONCLUSION

The sustainable practices identified in the industry were related to not using water and chemical products in production processes. In addition, no machinery is used which emits pollutants and raw materials are efficiently consumed, avoiding waste, show there is responsibility in the management of generated waste.

Problems to be priorities at SuperFios were identified which held high urgency, namely: a lack of sustainability action, lack of action for social inclusion of minorities (including local and vulnerable communities), difficulty in accessing raw materials and difficulty finding local companies able to separate waste fabric by type.
The solution of these problems guarantees, for the industry in question, competitive value for the business. Competition is largely the result of the perception of the brand by consumers, through an increase in quality for the product, reduction of costs and reducing environmental opportunities, whilst creating new opportunities.

By adopting these resolutive measures, it is possible to create a sustainable enterprise within this sector. Application of sustainable concepts intends on reducing costs, increasing revenues, reducing risks and promoting opportunities. The way corporations integrate sustainable ideas into strategy is essential in triggering a divergence in current attitudes towards one that complies with socio-environmental criteria when making decisions.
REFERENCES


Kitto, S. C; Chesters, J.; Grbich, C. (2008). Quality in qualitative research: Criteria for authors and assessors in the submission and assessment of qualitative research articles for the Medical Journal of Australia. MJA, 188 (4).


