



Internal Audit as a Quality Assurance Instrument: A Case Study from Garment Manufacturing Enterprises in the Western Balkan Region

Jolta Kacani¹ 
Sajmira Kopani² 

Received: August 30, 2023

Accepted: November 2, 2023

Published: March 16, 2024

Keywords:

Internal audit;
Control environment;
Circular garments;
Quality standards



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Abstract: *The European Strategy for Sustainable and Circular Textiles (2022) aims to ensure that by 2030 garments have a longer life, are made as much as possible from recyclable material, and are free of harmful substances. For garment producers, this means compliance with mandatory requirements along the value chain focusing on the entire lifecycle of garments, while supporting the green and digital transitions within the industry ecosystem. Compliance with the new environmentally friendly standards required for garment exports in the European markets demands an improved control environment and consolidated internal audit procedures within manufacturing enterprises. The objective of this paper is to evaluate the effectiveness of the current internal audit procedures in garment manufacturing enterprises located in the Western Balkan region and exporting to end customers in the European market and other international markets. In doing so this paper analyses a sample of thirty enterprises according to 5Cs elements of internal audit. The 5Cs in the internal audit include the criteria, conditions, causes, consequences, and corrective actions within the sample of the enterprises. Based on 5Cs elements new improvements in the standard operating internal audit procedures in garment manufacturing enterprises are proposed in line with new European strategies.*

1. INTRODUCTION

The garment industry is one of the main drivers of the European economy, which is expected to grow in the future due to flexible prices which encourage customers in the European market to purchase large quantities of garments. However, garment manufacturing significantly impacts the environment due to excess consumption, a trend created by fast fashion and dangerous chemicals used in the production and dyeing of fabrics (McNeill & Snowdon, 2019). Most customers in the European market possess a spending behavior by purchasing more than they need and regard low-priced garments as fully disposable. The cheap garments are usually disposed of after just seven or eight wears as they are no longer fashionable, their appearance fades, and their durability diminishes. A major adverse consequence of this purchasing behavior is that opportunities for the reuse and recycling of cheap garments at the end of their cycle are low (Camacho-Otero et al., 2020).

In its current state, the garment industry brings major concerns regarding sustainability and circularity. Most raw materials (fibers and clothing) are damaging to the environment with fast fashion speeds up the rate at which garments harm the environment. Manufacturing of fibers is mostly based on non-biodegradable synthetic fibers, with few opportunities for recycling and reuse due to their complex chemical structures (Ferro et al., 2019). In addition, the garment industry severely suffers from water consumption and pollution especially for and from textile wet processing operations of dyeing, finishing, and sizing generating significant issues of concern regarding sustainability in the garment industry (Heinze, 2020).

¹ University of Tirana, Faculty of Economy, Tirana, Albania

² University of Public Service, International and European Studies, Budapest, Hungary

Under such circumstances, the transition into green manufacturing processes requires rigorous monitoring of the entire process starting with the selection of raw materials, design, production, distribution, and waste management resulting in extensive costly investments, a challenge for most enterprises in the industry. The rate and the degree of transition to a circular manufacturing model in the garment industry will depend on the knowledge, awareness and engagement of all parties involved in the global value chain of the industry (Prieto-Sandoval et al., 2018). In the transition phase, the 4Rs (reducing, reusing, repairing, and recycling) principles need to be applied throughout the whole cycle of garments including all stages in manufacturing, consumption and return of resources. Application of the 4Rs principles generates a major challenge in the garment industry as it requires simultaneously reduction in the use of raw materials, minimization in the quantity of toxic substances, maximization in the use of renewable resources, and augmentation in garment durability (Chae & Hinestroza, 2020).

Implementation of the 4Rs principles intends to prevent the generation of waste throughout the garment life cycle with a significant reduction in the waste that ends up in the landfills of the industry. Waste management at all levels is a new approach to modifying the ways garments are designed, produced, and consumed (Jia et al., 2020). Effective waste management based on the proper application of all 4Rs generates a reduction in the use of raw materials, reusing of textiles, and recycling of clothing. However, effective waste management mostly depends on the initial phases of product design and development. Within these new dimensions embracing sustainable and circular processes requires maximum use of resources with little or no waste, with zero emissions, without harming the environment while generating profits in the industry (Zhang et al., 2021).

2. SUSTAINABLE AND CIRCULAR GARMENTS IN THE EUROPEAN UNION

It is estimated that garment consumption within the European Union ranks among the four industries with the most impact on the environment and climate change. The garment industry is also among the three industries for the usage of water and land use in the European market. Given the substantial impact the garment industry has on environmental and resource consumption, the European Union drafted a new Strategy for Sustainable and Circular Textiles (European Commission, 2022). This strategy introduces a detailed action plan and the necessary steps so that by 2030 garments sold in the European market are mainly manufactured from organic or recycled fibers and are free from hazardous materials respecting both social and environmental rights (Juanga-Labayen et al., 2022).

This strategy also introduces across the value chain of the garment industry new processes related to the circular economy including reuse and repair. This strategy intends to make manufacturers responsible for waste management and recycling of garments throughout the entire life cycle of garments. These new responsibilities for manufacturers aim to promote an ecosystem in the garment industry that strongly favors the use of circular processes and materials, significantly reducing activities in corresponding landfills (Ikram et al., 2021).

The European Strategy for Sustainable and Circular Textiles introduces a new vision for garments placed by 2030 in the market to be long-lived and recyclable made with high-quality fibers so that fast fashion is no longer the most dominant trend in the industry. This way consumers will enjoy high-quality textiles for longer, while fast fashion becomes less popular. As such, the strategy requires garment enterprises to reduce the number of collections introduced every

year to minimize environmental footprints and stimulates member states to take on board favorable advantageous taxation measures for enterprises engaged in the reuse and repair sector (Sikander et al., 2021).

The strategy introduces several measures to promote sustainable and circular garments including among others ecodesign requirements, which make garments last longer and are easier to repair and recycle. However, to comply with eco-design principles garment manufacturing enterprises need to make additional investments in innovative technologies, acquire new knowledge, and train employees to meet the predetermined requirements, potentially leading to increased costs (Saha et al., 2021).

Another measure is the introduction of the digital product passport for garments in the European Union. This digital passport will include the necessary information on circularity ensuring that customers are aware of the environmental impact of their purchases (energy use, recycled content, presence of substances of concern, durability, reparability, etc.). Also, for the implementation of digital passports, garment manufacturing enterprises are required to make new investments in technology and train their employees, resulting in additional manufacturing costs (Vazquez-Brust & Plaza-Ubeda, 2021). Given the new demanding requirements introduced in the new Strategy for Sustainable and Circular Textiles, internal audits in garment manufacturing enterprises become a key instrument in compliance with strategy requirements (Juanga-Labayen et al., 2022).

3. INTERNAL AUDIT IN GARMENT ENTERPRISES

Internal audit is an essential instrument that garment manufacturing enterprises have in developing resource efficiency capacities and improving operational abilities. Internal audit affects the overall performance of the enterprise as resource efficiency is achieved by complying with standard operating procedures, international standards in garment manufacturing, and EU regulations that dominate the global value chain of the industry (Chang et al., 2019). This compliance leads to better integration in international markets and long-term growth. In addition, an internal audit is one of the most effective tools for higher transparency to all relevant shareholders and stakeholders to get accurate information on the performance indicators of garment manufacturing enterprises and their path toward sustainable and circular end products (Christ et al., 2021).

Internal audit assists the management in managing risks, restructuring manufacturing processes, making strategic decisions, and objectively evaluating the financial performance of the enterprise. The findings of the internal audit reports serve as a good basis for the management to make a sound judgment on the innovation opportunities most suitable for the enterprise attaining this way sustainability and circularity in garment manufacturing (Dahlbo et al., 2017). According to the literature, one of the most effective ways to prepare an internal audit is evaluation based on five priority areas that include: (i) criteria, (ii) conditions, (iii) causes, (iv) consequences, and (v) corrective actions, alternatively referred to 5Cs (Turetken et al., 2019). More specifically, the 5Cs in internal audit are introduced below:

1. **Criteria:** Refers to reasons for having an internal audit, the parties requesting the internal audit, and how it will help with the external audit.
2. **Conditions:** Refer to any objectives, targets, standards, or expectations that are not met due to the issues identified in the first step.

3. **Causes:** Refer to a detailed analysis of what causes the issues the enterprise is having, including all steps involved in the manufacturing of finished garments or administration of the enterprise.
4. **Consequences:** Refers to the outcome of issues previously identified, the risks, and the financial implications related to the issues in the enterprise.
5. **Corrective Actions:** Refers to the actions the enterprise needs to take to eliminate the issues identified and establish a monitoring system so that they do not recur. The fishbone diagram in Figure 1, explains in detail the 5Cs of internal audit.

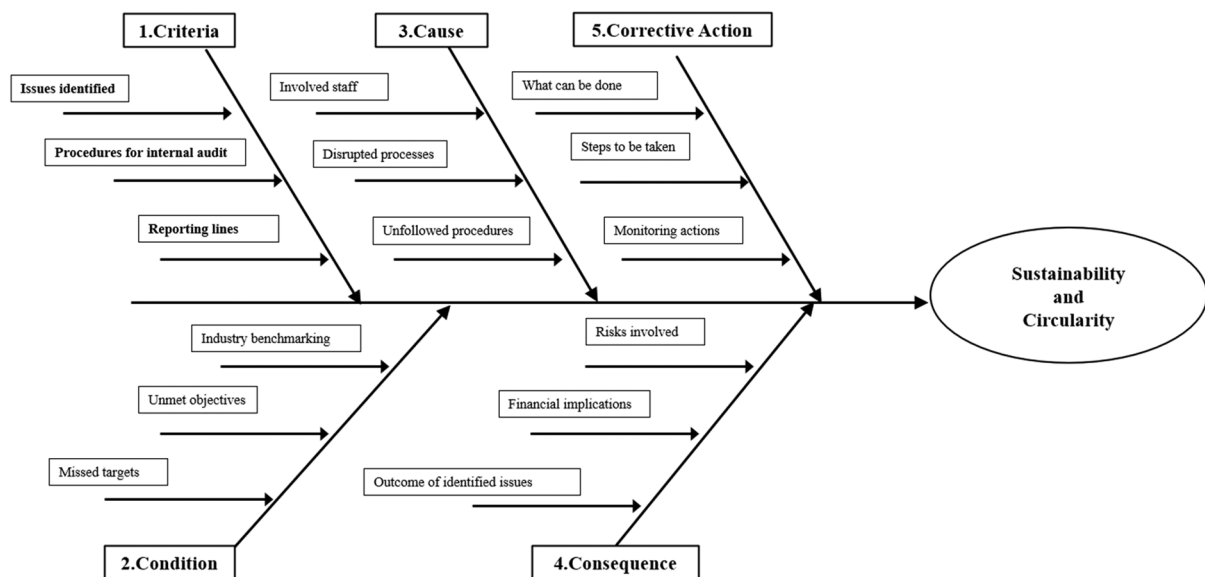


Figure 1. Introducing the 5Cs of internal audit.

Source: Authors

4. METHODOLOGY

This paper examines in detail the internal audit procedures of twelve enterprises from Western Balkan countries ³ (Kacani et al., 2022). mostly based on detailed interviews with high-level managers (administrators, head of quality assurance, head of logistics, head of finance, and head of maintenance). Additional interviews included middle-level managers mostly focused on line supervisors and technicians. In total thirty-six interviews were finalized which included both closed and open questions to understand the dynamics of internal audit in attaining sustainability and circularity within garment manufacturing enterprises (Kacani, 2017).

The questions were drafted based on four main priority areas including (i) sustainability reporting, (ii) diversification of raw materials, (iii) eco-design of end products, and (iv) implementation of circular processes which are also included in the European Union Strategy for Sustainable and Circular Textiles. Questions in the interview intended to identify both conventional and original solutions of circular and green garments applied in enterprises under consideration. Conventional solutions refer to mechanical and thermal processes like shredding of textile materials, weaving of shredded materials, and spinning of fibrous materials. On the other hand, original solutions consist of end products made entirely of biodegradable materials such as bioplastic, recycled plastic, recycled leather, and textile scraps, etc (Kacani, 2020).

³ The sample size has twelve enterprises from the Western Balkans.

In addition, the paper is based on purposeful sampling. When determining the sample composition, several criteria were used to select the twelve enterprises (Corovic et al., 2020). Among the criteria used are the following: (i) turnover of over 5 million /EUR, (ii) operation mode under the provision of full package services, (iii) having over three hundred employees, (iv) having at least three major international brands as their customers, (v) exports in the European, preferably also in the American, and Asian markets, (vi) the percentage of recyclable raw materials used in the manufacturing of products, (vii) and at least one major investment for the use of renewable energy sources in manufacturing (Kacani et al., 2022; Zamani et al., 2018). Selection of enterprises is based on these criteria as only large garment manufacturing enterprises have an internal audit unit, subject to this paper. Responses received during the interview were analyzed according to the 5C introduced in the previous section. A summary of the main findings is presented in Table 1.

Table 1. Main finding on internal audit procedures in garment manufacturing enterprises

| No. | Main Topic | Priority Areas | Evaluation according to 5C |
|-----|---|---|---|
| 1. | Reporting on sustainability | <ul style="list-style-type: none"> Preparation of a yearly sustainability report. Assessment of economic, environmental, and social performance of the enterprise. Reporting to enterprise stakeholders. Application of Sustainability Accounting Standards (SAS). | <p>1. Criteria Enterprises in the sample size do not prepare an annual sustainability report. Such a requirement is not included in the internal control procedures. No reporting is made to stakeholders.</p> <p>2. Conditions Enterprises receive basic information on industry benchmarking for sustainability through their main clients yearly. Sustainability practices are partially applied.</p> <p>3. Causes Enterprises depend mostly on practices applied by their clients and are not autonomous in developing their practices. Exceptions are enterprises that have their brand.</p> <p>4. Consequences Financial implications are not high to prepare a sustainability report and risks are low if the right procedure is in place.</p> <p>5. Corrective actions Enterprises can prepare a detailed action plan to draft a sustainability report for their brand, as they do have the autonomy to do so.</p> |
| 2. | Diversification of raw materials | <ul style="list-style-type: none"> Application of green procurement rules. Clear written procedures for the selection of suppliers of raw materials. Use of recyclable raw materials in end products. Use of biodegradable materials. Internal laboratory for testing of raw materials. Application of Global Organic Textile Standards (GOTS). | <p>1. Criteria Enterprises have standardized procurement procedures, most of which are not fully compliant with green procurement rules. On average 35% of all raw materials are recyclable or biodegradable. All enterprises have a testing laboratory for raw materials.</p> <p>2. Conditions Enterprises receive basic information on industry benchmarking for sustainability through their main clients yearly. Those with their brand have made small steps toward the adoption of GOTS.</p> <p>3. Causes Enterprises depend mostly on practices applied by their clients and are not autonomous in developing their practices. Clients have a predetermined list of suppliers and technical specifications for raw materials. Exceptions are enterprises that have their brand.</p> <p>4. Consequences Financial implications are not high enough to prepare guidelines for green procurement. It can be outsourced to external experts. Risks are low especially after the guidelines are in place. Financial implications for GOTS implementation are higher.</p> <p>5. Corrective actions Preparation of green procurement guidelines and organizing processes to prepare for GOTS implementation.</p> |

| | | | |
|----|---|---|--|
| 3. | Eco-design of end products | <ul style="list-style-type: none"> • Use of renewable resources in manufacturing. • Use of fewer resources in the manufacturing of end products. • Trained personnel for introducing eco-design in manufacturing. • Utilization of green technologies in manufacturing. | <p>1. Criteria Eco-design criteria are only present in seven enterprises that are designed by main clients to conduct design processes. They have trained staff and have acquired green technology. All enterprises operate fully or partially based on renewable energy sources.</p> <p>2. Conditions Enterprises with a design unit receive information on industry benchmarking for eco-design. The rest of the enterprises are only basically informed on eco-design requirements.</p> <p>3. Causes Enterprises depend mostly on practices applied by their clients and are not autonomous in developing their practices. Even though autonomy exists for enterprises with their brand, eco-design practices are missing.</p> <p>4. Consequences Financial implications are not high enough to prepare guidelines for eco-design. It can be outsourced to external experts. Risks are low especially after the guidelines are in place. Financial implications for the acquisition of green technology are high.</p> <p>5. Corrective actions Preparation of eco-design guidelines for own brand and technical specifications for green technologies.</p> |
| 4. | Implementation of circular processes | <ul style="list-style-type: none"> • Application of Global Recycle Standards (GRS). • The existence of standard operating procedures for 4Rs (reducing, reusing, repairing, and recycling). • Waste management to reduce environmental footprint. | <p>1. Criteria All enterprises do not apply GRS in manufacturing. At the same time, standard operating procedures for 4Rs in circular processes are missing. Circular processes are only present for waste management mainly through outsourcing services.</p> <p>2. Conditions Enterprises receive basic information on industry benchmarking for waste management through their main clients yearly. Waste management practices are not applied internally, only outsourced.</p> <p>3. Causes Enterprises depend mostly on practices applied by their clients and are not autonomous in developing their practices. This also includes enterprises that have their brand.</p> <p>4. Consequences The financial implications of internalizing circular processes are high and enterprises in the sample do not have the financial means to do so even for their brand.</p> <p>5. Corrective actions Enterprises can start by acquiring new knowledge on circular processes and by creating a dedicated team that will smooth the transition to circular processes.</p> |

Source: Authors

5. FUTURE RESEARCH DIRECTIONS

Research on the sustainability and circularity of garment manufacturing enterprises is still at a very early stage, mostly attributed to the developing characteristics of the Western Balkan region and their lack of membership in the European Union. The market economy in the region is primarily based on enterprises that lack the necessary organizational structures of European enterprises. As such multiple research areas arise including uncertainties in the circular value chains of the garment industry, risk assessments in improving waste management along production lines, knowledge transfer models to develop 4R practices, etc.

6. CONCLUSION

Garment manufacturing enterprises in the Western Balkan countries possess only basic internal audit capacities which are limited to responsibilities assigned by their main clients. Despite that, the purposeful sampling in this paper with criteria oriented toward established garment manufacturing enterprises in the Western Balkan region, internal audit abilities toward sustainability and circularity are still at the early stages. In their current state, garment manufacturing enterprises with their brand have little knowledge of the requirements of the European Strategy for Sustainable and Circular Textiles and on how to introduce circular practices in the industry. They have sporadically made investments in new technology; however, these are not coordinated throughout all manufacturing stages from the selection of raw materials to the delivery of ready-to-wear garments to end customers. As a result, these measures only partially affect overall circularity in manufacturing. An exception is investments in renewable energy sources which all enterprises agree are largely beneficial both in terms of diversification of resources but also in cost cutting. A similar diversification is very limited in the selection of raw materials, with a minor share in fully eco-friendly and fully biodegradable materials.

Despite the minor progress made so far toward sustainability and circularity in garment manufacturing, enterprises in the Western Balkan region have an unexploited potential to master green and environmental practices in the industry. In all enterprises, the management is willing to strengthen their internal audit capabilities by acquiring more knowledge on the implementation of the 4Rs, undertaking additional steps like procuring more green raw materials, applying eco design principles for their brand, drafting the first sustainable reports, while preparing for implementation of GRS and GOTS standards.

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