



## THE INFLUENCE OF QUALITY MANAGEMENT AND INTELLECTUAL CAPITAL MANAGEMENT ON SUSTAINABLE BUSINESS IN FASHION COMPANIES

Professional paper  
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**ABSTRACT:** *The changing global market, along with modern management methods implemented through organizational structuring, requires flexibility and adaptability from fashion companies. These companies face increasing demands for sustainable business practices. In countries in transition, such as ours, fashion companies can respond to user demands and meet their growing needs in terms of design and technology, thereby gaining a competitive advantage. This paper analyzes the impact of modern management methods on the competitiveness and sustainability of fashion companies in our country. In addition to numerous factors influencing sustainable business, market performance, and competitiveness, the paper examines the effects of quality management and intellectual capital management. The results can help fashion companies in Serbia - where maintaining adequate quality and preventing intellectual capital fluctuation remain significant challenges - to monitor and adapt to the factors and methods influencing competitiveness and sustainable business in today's globalized business environment.*

**Keywords:** *fashion industry, sustainable business, quality management, intellectual capital management.*

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## UTICAJ MENADŽMENTA KVALITETOM I MENADŽMENTA INTELEKTUALNOG KAPITALA NA ODRŽIVO POSLOVANJE U MODNIM KOMPANIJAMA

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**APSTRAKT:** *Promenljivo globalno tržište, kao i nove savremene metode upravljanja kroz izgradnju organizacione strukture zahtevaju od modnih kompanija fleksibilnost i prilagodljivost. Pred modne kompanije postavlja se zahtev za održivim poslovanjem, gde zemalje u tranziciji, kao što je i naša mogu da prate zahteve korisnika, odgovore na njihove sve veće potrebe u okviru dizajna i tehnologije i tako omoguću konkurentsku*



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*prednost. U radu se analizira uticaj savremenih metoda upravljanja modnih kompanija u našoj zemlji na konkurentnost i održivo poslovanje. Analizira se pored mnogobrojnih faktora koji utiču na održivo poslovanje, tržišne performanse i konkurentnost, uticaj menadžmenta kvalitetom, i upravljanja intelektualnim kapitalom. Rezultati omogućavaju modnim kompanijama u Srbiji, gde je veliki problem postići odgovarajući kvalitet sprečiti fluktuaciju intelektualnog kapitala, da prate i prilagode uticaj faktora i metoda koje utiču na konkurentnost i održivo poslovanje u globalizovanom poslovnom svetu.*

**Ključne reči:** *modna inustrija, održivo poslovanje, upravljanje kvalitetom, upravljanje intelektualnim kapitalom.*

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## 1. INTRODUCTION

Today's fashion industry faces numerous challenges related to competition, environmental pressures, and shifts in consumer habits. The modern trend as an imperative calls for high-quality and sustainable products, while companies simultaneously strive to preserve creativity and innovation. Modern business is characterized by rapid and widespread changes, requiring organizations to adopt new tools and methods to improve their efficiency. Success is achieved only by those organizations that are ready to continuously apply techniques and methods aimed at constant improvement, development, and the generation of new ideas about the roles and activities of organizations in order to maintain a competitive advantage. Continuing to operate with an outdated business model can be highly damaging for companies [1]. This is especially true for fashion companies, where trends change rapidly and consumers are becoming increasingly demanding in terms of design, quality, and price. In this context, alongside numerous other business factors, two key concepts stand out for achieving sustainable business practices: quality management and intellectual capital management. Their implementation significantly enables fashion companies to respond to market demands, reduce their negative environmental impact, and create long-term competitive advantages [2].

It is necessary for organizations to refine their strategies not only to generate profit but also to achieve long-term sustainability. Achieving competitiveness is challenging and requires effective management, including improvements in various business areas such as distribution, logistics, production, and quality. Modern techniques, tools, and management methods are essential for creating a successful, market-competitive organization and ensuring sustainable market performance. The implementation of management systems based on methods and concepts such as Kaizen, 5S, Six Sigma, TQM, Just-in-Time, and Lean Manufacturing has been validated by the successes of companies that apply these systems [3,4].

In more developed economies, where management systems are often well established, Serbian companies face challenges such as limited access to advanced technologies, an evolving regulatory framework, and the need to adapt to rapid changes in the global market. While environmental and social sustainability are often discussed in the broader



context of contemporary management and corporate responsibility, specific modeling and research tend to focus on how management practices contribute to economic sustainability within companies. Sustainable business practices and competitiveness are essential for survival in a competitive environment [5].

## **2. QUALITY MANAGEMENT IN THE FASHION INDUSTRY**

Quality management (QM) in fashion companies plays a key role in fostering sustainable development, both within organizations and in the broader socio-economic environment. Quality does not refer solely to the aesthetic component and durability of fashion products, but also to responsible behavior toward human resources and environmental protection. In the context of sustainability, organizations must adopt a holistic approach to quality management, one that encompasses environmental, social, and economic dimensions to ensure not only business excellence but also the long-term sustainability of their operations [6].

To achieve business excellence and sustainability, organizations must address all aspects of quality, including product quality, process efficiency, environmental responsibility, and social equity. By applying the principles of Total Quality Management (TQM), companies can improve all phases of their business. Quality control along the supply chain prevents the occurrence of defective products and reduces waste, thus contributing to the conservation of resources and the reduction of CO<sub>2</sub> emissions.

One of the most significant opportunities to contribute to sustainable development is the integration of quality management knowledge and practices. From a micro perspective, the relationship between quality management and sustainability can be seen within organizational processes, where resources are transformed into value for customers. Research has shown that the implementation of TQM programs, which emphasize continuous improvement and the active involvement of employees at all levels, has a positive impact on corporate sustainability. By incorporating TQM into their operations, organizations not only improve their overall quality performance but also contribute to broader sustainable development goals, such as reducing environmental impact and increasing social responsibility.

QM philosophies, methods, and tools such as Six Sigma, Lean Manufacturing, and continuous improvement methodologies are essential for creating value and promoting sustainability within an organization. Focusing on quality increases consumer satisfaction and loyalty, as customers increasingly seek fashion products that last longer and have a lower environmental impact. In this way, product quality directly supports sustainable business models such as the capsule wardrobe, slow fashion, or recycling [7].

## **3. INTELLECTUAL CAPITAL MANAGEMENT IN THE FASHION INDUSTRY**

Market conditions have become more competitive than in previous periods. A competitive company at all levels requires employees equipped with the skills to drive innovation, manage risk, transform economic systems, and achieve social goals within the framework of sustainability. In fashion companies, intellectual capital as an intangible asset includes



employees' knowledge, designers' creativity, the ability to follow fashion innovations, brand management, and customer relationships.

Intellectual capital in the fashion industry is extremely important because competitive advantage depends on creative ideas and brand reputation, representing a key point of differentiation in the fashion market.

Intellectual capital management in fashion companies involves:

- Resource mapping: systematic recording and assessment of creative potential
- Intellectual property protection: through trademarks, industrial designs, and patents
- Human capital development: continuous training, and fostering innovative and digital competencies
- Commercialization: through licensing, co-branding, and digital platforms [8]

Through digitization processes, intellectual capital management in the fashion industry increasingly uses artificial intelligence, blockchain technology, and digital factories as new tools for sustainable business and competitive advantage.

World-renowned brands build their reputation on sustainability and innovation, and are perceived as ethically responsible, thereby enhancing their reputation and customer loyalty, which leads to better market results. Brands such as Gucci and Balenciaga invest heavily in protecting their designs and developing digital communications with customers, thus safeguarding and developing their intellectual capital. Meanwhile, Zara relies on agile design teams and advanced digital tools to monitor consumer trends, successfully transforming creative capital into rapid production [9,10].

#### 4. METHODS

The research was conducted through a structured survey of managers of small and medium-sized fashion enterprises in Serbia. The collected data were analyzed using descriptive statistics to summarize and describe the key characteristics of the sample, providing a basis for more advanced analyses. Correlation analysis was applied to examine relationships between different variables, linear regression was used to predict outcomes based on one or more independent variables, while logistic regression was employed to model binary or categorical outcomes. The survey results were analyzed using a range of statistical procedures and methods. Basic descriptive statistical methods were used to summarize and describe the collected data. Categorical variables were analyzed through their frequencies and percentage shares, while numerical variables were described using measures such as means, standard deviations, minimum, and maximum values.

As part of the research, an analysis was conducted to assess observed dimensions of organizational performance. These dimensions included quality management, human resource management, intellectual capital management, management methods, and market performance. Each of these dimensions was evaluated through a set of questions rated on a 1–7 Likert scale. For each dimension, the mean value of all responses was calculated, resulting in measurable variables that represent specific organizational factors. These variables were then used for further analysis and comparison, enabling a detailed quantitative assessment of organizational performance.



Quality Management (QM) received the highest mean score of 6.03, indicating that respondents assessed this area most positively. Such a high rating suggests that fashion companies are increasingly incorporating sustainable development principles into their quality management strategies. QM provides processes and standards for environmentally friendly production and high product durability. In contrast, Intellectual Capital Management (ICM) obtained the lowest mean score, indicating that respondents perceive this area as having the greatest potential for improvement. The mean value of 5.47 for ICM reflects a solid yet comparatively lower level relative to QM, which may imply that fashion companies still lack systematic investment in developing employees' knowledge, skills, and creative capacities to support sustainable business practices. ICM enables innovation, new materials, sustainable design concepts, and competitive advantage through knowledge and creativity. The relatively low standard deviations (ranging from 0.85 to 1.22) demonstrate a high degree of consistency among respondents' answers. The greatest variability was observed in Modern Management Methods (1.22), suggesting more diverse opinions regarding this dimension. All factors showed exceptionally high Cronbach's alpha values ( $>0.9$ ), indicating very high internal consistency of the measurement scales. The maximum value for all dimensions was 7, while the minimum values varied but remained above 2, suggesting that none of the dimensions was rated extremely low.

**Table 1:** Descriptive statistics [4]

| Dimension/ Factor                     | Mean ( $\mu$ ) | Standard Deviation ( $\sigma$ ) | Min  | Max  | Cronbach's Alpha |
|---------------------------------------|----------------|---------------------------------|------|------|------------------|
| Quality Management (MQ)               | 6.03           | 0.85                            | 2.57 | 7.00 | 0.922            |
| Human Resource Management (HRM)       | 5.69           | 1.00                            | 2.13 | 7.00 | 0.914            |
| Intellectual Capital Management (ICM) | 5.47           | 1.05                            | 2.25 | 7.00 | 0.901            |
| Modern Management Methods (MMM)       | 5.61           | 1.22                            | 2.00 | 7.00 | 0.955            |
| Market Performance (MP)               | 5.75           | 0.88                            | 2.56 | 7.00 | 0.941            |

## 5. CONCLUSION

The combination of quality management and intellectual capital management provides a strong foundation for sustainable business in fashion companies.

The synergistic effect of these two concepts enables greater awareness among managers and employees about modern business practices, reduces negative environmental impacts, increases competitiveness, improves customer relationships, enhances resource management, and boosts profitability.

In order to improve the sustainability of market performance at the national level, the fashion industry should integrate quality management and intellectual capital management into its strategic goals under modern market conditions, as these elements are crucial for the future.

By improving product quality, responsibly managing supply chains, and fostering innovation based on knowledge and reputation, the fashion industry - through an integrated approach to these managerial practices - can ensure sustainable business



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operations and achieve a stable competitive advantage, while consistently maintaining a focus on environmental protection and social responsibility.

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