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## **EXTENDED ABSTRACT**

**Title:** Sustainability and Circular Economy in Spanish textile clusters: Main driving forces and challenges

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## Abstract:

**Purpose** – The purpose of this paper is to identify the main catalysts and inhibitors in the achievement of environmental goals by Spanish textile clusters, especially in the context of developing a Circular Economy. The choice of the textile industry for this research was dictated by two considerations. First, according to the European Cluster Cooperation Platform, Spain with 7 textile clusters is the leader in Europe, where a total of 28 clusters assigned to this industry operate. Second, the textile industry has been listed by the European Commission (2020) among the industries whose actions can have the greatest impact on circularity. It is also recognized as one of the priority sectors in the Spanish Circular Economy Strategy 2030.

**Design/methodology/approach** – In this paper, the research strategy adopted was qualitative research based on case studies (Yin, 2014). The study was conducted in May and June 2022 in two purposively selected clusters operating in Valencia (C1), and Catalonia (C2). The examined clusters, despite they represent companies with different profiles of activity (C1: broadly defined textile industry, C2: home equipment), have a common basis, which is the manufacture of textiles. The main method of data collection was in-depth interviews with people representing cluster coordinators. The interviews were standardized and partially structured, with the aim of capturing as many details of the respondents' statements as possible. The conventional qualitative content analysis procedure was the basic techniques for analyzing and interpreting the collected qualitative data. The study also conducted an analysis of secondary data, which included popular science publications, research reports, EU and government documents, as well as internal documents of the studied clusters and Internet resources.

Findings – Sustainability issues are complex and require appropriate governance structures that facilitate the pooling of resources and capabilities beyond the boundaries of individual companies (Niesten et al., 2017). In the Sustainable Development Goals package, one of the goals (SDG Goal 17) is to build partnerships for sustainable development. Numerous studies also confirm that interorganizational collaboration and industrial symbiosis play a key role in sustainability initiatives. This is particularly evident in the example of industry clusters. Clusters as meta-organizations offer a complex governance structure and play an important role in managing sustainable business practices because of their attributes (Awan et al., 2018; Giglio et al., 2020; Tepic et al., 2011). They serve as a platform to connect different stakeholders, provide reporting and accountability mechanisms, and facilitate coopetition and, above all, mutual learning. Participating in clusters can support access to information on environmental, social, and economic issues and help disseminate sustainability standards (Berkowitz, 2018; Ratten, 2018). Because of the knowledge spillover processes observed in clusters, member firms are able to quickly adopt new ideas and practices (Puig et al, 2022).

Different studies of Spanish textile clusters found that clusters undertake a wide variety of activities aimed at supporting companies in achieving environmental goals, including building a Circular Economy (Hervas-Oliver et al, 2017; Cantarero et al, 2021). A Circular Economy is "an economic system that is based on business models which replace the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes" (Kirchherr et al., 2017, p. 224). It is a production and consumption model that is able to extend the life cycle of products. The Circular Economy-building activity observed in the Spanish textile clusters is largely due to the specific nature of the textile industry, which places particular emphasis on product and production issues (including reuse of basic materials and machinery), supply chain and collaborative relationships among actors along the value chain.

On the basis of the conducted research it was possible to identify main driving forces that make textile clusters and associated companies undertake actions aimed at sustainable development and building a Circular Economy. These include sustainable investments, digitalization, changes in legislation (both at national and European level), changes in customer behavior, but also growing awareness and knowledge of sustainable business models. The study also identified main challenges associated with supporting the development of Circular Economy by clusters. They can be divided into system, market, organisational and knowledge challenges. The first group – challenges of a systemic nature – include the need to build an integrated management system that incorporates product life cycle thinking as well as interaction with internal and external stakeholders of the organization, the need for supply chain alignment, and the development of collection and reverse logistics infrastructure. Market challenges concern insufficient consumer and user knowledge, low demand for used products and recycled materials, and high repair and renovation costs. Finally, organizational challenges comprise short-term strategies and lack of adequate financial resources (especially in SMEs), while knowledge challenges are lack of expertise and know-how as well as high research and innovation costs. The study also shows that activities undertaken by clusters are, on the one hand, aimed at helping companies to take advantage of opportunities arising from the environment and to adapt to changing conditions. On the other hand they can eliminate some of the identified barriers, especially in the field of knowledge.

**Originality/value** – Sustainability is a growing issue in the literature, which is reflected in the number of published papers from various disciplines that address this problem.

However, there is a lack of research on how sustainable development initiatives should be coordinated. This paper fills the research gap by taking a management discipline perspective to sustainability research in the context of clusters. The research study contributes to literature which refers to the question of the implementation of sustainability, especially Circular Economy by industrial clusters.

**Practical implications** – The findings also provide practical implications related to sustainability in conjunction with the concept of industrial clusters. Knowledge about the main catalysts and inhibitors in the achievement of sustainable development goals by the clusters, especially in the environmental pillar and building a circular economy can be useful for different stakeholder groups: public authorities, cluster coordinators and facilitators and cluster companies.

**Research limitations** – The study is not free of limitations. The main limitations are related to the qualitative approach adopted, which does not allow generalizing the results. This applies primarily to the small research sample (three intentionally selected clusters) and the subjectivity characterizing qualitative research, mainly due to the applied techniques of data collection and analysis (the qualitative interviews). An additional research limitation is the adoption of only the perspective of cluster coordinators, without including the perspective of cluster companies.

**Keywords**: Clusters, Textile Industry, Sustainability, Circular Economy **JEL Codes** D22, L23, L52, L67

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