

# The Role of Knitting Craftsmen SMEs in Realizing Sustainable Development Goals

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## **Abstract.**

*The results of the study show that until now research on the relationship between MSMEs and SDGS is still limited to the MSME sector in the field of Knitting Craftsmen. On the other hand, the city of Yogyakarta as one of the cities famous for its crafts requires deeper study and involvement in the development of the Creative Industry sector in the form of knitting crafts. This takes into account how current trends related to knitting materials are starting to attract the attention of consumers in the generation Z era and have export sector opportunities to be marketed internationally. However, apart from the quality of materials, design, and packaging that must be given more attention, there are Capital and Conventional Financial Systems, Inconsistent Training and Minimal Mentoring, and Local Economic and Cultural Potential which also require special attention.*

**Keywords:** SDGS; SMES; Sustainable Development Goals

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## **I. INTRODUCTION**

Globally, small and medium-sized businesses (SMEs) are acknowledged as essential catalysts for social inclusion, job creation, and economic growth (OECD, 2019). SMEs in the creative sectors, such as knitting and crafts based on textiles, have a lot of potential to advance sustainability, especially in urban settings. According to the United Nations Sustainable Development Goal 11: "Make cities inclusive, safe, resilient, and sustainable," sustainable urban development has emerged as a major global goal as cities confront growing issues with social inequality, environmental degradation, and economic disparity (United Nations, 2015). Because of their capacity to stimulate inclusive economic growth, encourage innovation, and encourage responsible production and consumption, small and medium-sized enterprises (SMEs) are increasingly seen as essential players in accomplishing the Sustainable Development Goals (SDGs) of the UN. The private sector, particularly SMEs, is acknowledged by the 2030 Agenda for Sustainable Development as a key player in tackling global sustainability issues (United Nations, 2015).

According to recent empirical study, there can be financial and societal benefits when SMEs align with the SDGs. According to a panel analysis done by Kovalov (2024) across 27 EU nations, progress in SDG 2 (Zero Hunger), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action) is positively connected with SME development indicators like employment and

turnover. This demonstrates the dual function of SMEs as facilitators of sustainable development and economic actors. Furthermore, SMEs are adopting SDG-oriented initiatives due to a mix of external and internal causes. In their systematic review, Neri et al. (2024) identified several important enablers, including leadership commitment, digital transformation, green funding opportunities, and stakeholder pressure. In support of this, Kannan and Gambetta (2025) discovered that digital tools, such as eco-design software and data analytics, improve SMEs' capacity to measure, track, and successfully carry out SDG-related activities.

A sustainable city is commonly defined as an urban space that meets the needs of its present inhabitants without compromising the ability of future generations to meet theirs. This involves a balanced integration of environmental protection, economic development, and social equity (Jabareen, 2006). Within this framework, knitting craftsmen SMEs can contribute significantly through local production, empowerment of marginalized groups (particularly women and low-income communities), and environmentally responsible practices such as using recycled yarn and low-emission production methods (De Medeiros et al., 2014). Case-based studies further illustrate this relationship. For example, Kamberi and Rjepaj (2021) investigated SMEs in the United Kingdom and emphasized the role of organizational culture and digital visibility in shaping SDG engagement. Meanwhile, Horvath et al. (2023) examined Hungarian SMEs and discovered that awareness of the SDGs was relatively low but increased when institutional support and community collaboration were present.

The contribution of innovative SMEs to the promotion of sustainability in urban settings has been emphasized in earlier international studies. Bocken et al. (2016), for example, looked at how small-scale creative enterprises could use the concepts of the circular economy to cut waste and extend product life cycles. More precisely, Holmes (2020) investigated urban knitting networks and discovered that they promote mental health and community cohesion in addition to sustainable consumption. According to research, small and medium-sized enterprises (SMEs) engaged in knitting and textile crafts make a substantial contribution to local economies by creating jobs, especially for low-income, older, and female workers. These SMEs often operate in the informal or semi-formal sector but play a major role in inclusive economic development and local entrepreneurship (OECD, 2019; Holmes, 2020). This research finding the Knitting craftsmen SMEs help stimulate community-level economic activity, supporting job creation and local value chains, especially in underserved urban and peri-urban areas.

Despite the growing body of evidence, little is known about the precise ways in which knitting-based SMEs support the more general objectives of sustainable cities. Using criteria for sustainable cities and communities, this study attempts to investigate how research on the existence of MSMEs in the handcraft knitted textiles sector aids in achieving sustainability goals.

## **II. METHODS**

This study employs a mixed-method approach, gathering primary data through direct observation (participatory observation) and secondary data analysis through Systematic Literature Study (SLS). This approach aims to provide a thorough grasp of how knitting artisan SMEs contribute to the development of sustainable cities.

### **1. Systematic Literature Study (SLS)**

Systematic Literature Study is used to review various previous studies that are relevant to the theme of MSMEs, knitting crafts, and their relationship to sustainable development goals (SDGs), especially SDG 11 (Sustainable Cities and Settlements).

The steps in SLS include:

- Identification of keywords: such as "SMEs", "sustainable development", "knitting craft", "urban sustainability", and "SDGs".
- Data sources: Articles are taken from reputable international databases such as Scopus, ScienceDirect, SpringerLink, and Google Scholar in the period 2015–2025.
- Inclusion criteria: Articles in English, published in peer-reviewed journals, and explicitly discuss the relationship between MSMEs and sustainable development.
- Content analysis was conducted to identify themes, indicators of MSME contribution to SDGs, and relevant implementation challenges.

## **2. Direct Observation (Primary Data Collection)**

Primary data collection was conducted through direct observation of the research object, namely the Nogosari Knitting Center MSME located in Wukirsari Village, Imogiri District, Bantul Regency - Yogyakarta.

Observations were made on the following aspects:

- Knitting production process: use of raw materials, energy efficiency, waste management.
- Economic activities: business forms, involvement of local workers, business sustainability.
- Social involvement: community empowerment, participation in local communities.
- Relation to sustainability aspects: such as the principles of a circular economy, production ethics, and support for the preservation of local culture.

Direct field observations were made by documenting everyday tasks, workflows, and interpersonal relationships inside the knitting center setting. The observations' outcomes served as an empirical backdrop for the analysis and were utilized to support and validate the conclusions drawn from the literature review.

## **III. RESULT AND DISCUSSION**

Since urban sustainability efforts encourage infrastructure development, innovation, and effective resource management, the achievement of sustainable cities is inextricably tied to economic growth. In order to increase productivity and draw in investment, sustainable urban planning places a strong emphasis on resilience, equitable growth, and environmental stewardship. Furthermore, policies that support energy-efficient buildings, low-carbon transportation, and green technologies have positive effects on the environment and the economy. Implementing the Sustainable Development Goals, especially SDG 11: Sustainable Cities and Communities, encourages balanced growth that lowers inequality and fosters long-term development, according to the United Nations (2015). Similarly, the OECD (2020) emphasizes that sustainable cities are essential engines of economic growth due to their capacity to integrate ecological responsibility with economic competitiveness.

From the visualization results using Vos Viewer on research related to economic development and its influence on achieving SDGS, it was found that there were 5 main clusters with a total link strength of 243 and 78 items. However, among the five clusters, the cluster related to MSMEs is



Craftsmen create products on their own, and they typically follow preexisting patterns without coming up with anything new. The packaging is still quite basic, and there is no system in place for quality control or harmonization of product standards. Craftsmen create products on their own, and they typically follow preexisting patterns without coming up with anything new. The packaging is still quite basic, and there is no system in place for quality control or harmonization of product standards. These results are consistent with earlier studies that show that a lack of knowledge, funding, and market exposure prevents many MSMEs, especially those in rural and craft-based industries, from having access to design innovation, quality control procedures, and contemporary packaging (Tambunan, 2019; Sari et al., 2021). Additionally, the absence of collaboration with design experts or institutions often leads to repetitive and outdated product models (Nugroho & Yuliana, 2020). Poor packaging and the lack of standardization also hinder the competitiveness of products in wider markets, especially in digital or export-oriented trade (Hadiyati, 2015).

### **3. Use of Less Environmentally Friendly Raw Materials**

The majority of the materials, including synthetic yarn and polyester, are harmful to the environment. The production process is still done by hand and does not follow the circular economy's tenets. The majority of the materials, including synthetic yarn and polyester, are harmful to the environment. The production process is still done by hand and does not follow the circular economy's tenets. This situation is in line with earlier research that found that cost concerns, a lack of knowledge about the effects on the environment, and a lack of access to eco-friendly alternatives cause many MSMEs, particularly those in the textile and craft industries, to continue using unsustainable raw materials (Putri et al., 2021; Wahyuni & Astuti, 2020). Research also highlights that manual production methods, although preserving traditional skills, often fail to incorporate sustainable practices like waste reduction, material recycling, and energy efficiency, which are central to the circular economy model (Sukma & Santoso, 2022). As a result, MSMEs face challenges in aligning with global market trends that increasingly prioritize sustainability and environmental responsibility (Handayani et al., 2019).

### **4. Challenges of Capital and Conventional Financial Systems**

Limited business capital is a problem for Wukirsari MSMEs. Without organized financial records, the down payment (DP)-based payment structure makes it challenging for them to obtain funding or company support. Limited business capital is a problem for Wukirsari MSMEs. Without organized financial records, the down payment (DP)-based payment structure makes it challenging for them to obtain funding or company support. This problem has been well documented in earlier studies, which show that a lack of collateral, standardized financial documentation, and low financial literacy make it difficult for many MSMEs in Indonesia to obtain formal financial institutions (Tambunan, 2019; Aribawa, 2016). Informal financial practices—such as DP-based transactions without clear bookkeeping—further complicate credit assessments and eligibility for government or private financial programs (Suryani et al., 2021). Additionally, studies show that the reluctance or inability to adopt digital or formal accounting systems prevents MSMEs from building credit profiles or accessing broader financial support networks (Nurhadi & Purwanto, 2020).

## **5. Inconsistent Training and Minimal Mentoring**

Government or partner training has been done, but just once and hasn't been repeated. No further coaching is available to help with the development of marketing or design abilities. Government or partner training has been done, but just once and hasn't been repeated. No further coaching is available to help with the development of marketing or design abilities. This is in line with earlier studies that show that a large number of MSME development initiatives in Indonesia are discontinuous and frequently consist of one-time workshops with no mentorship or follow-up (Susilo et al., 2020; Wibowo & Dewi, 2021). Studies show that while initial training can raise awareness, its long-term impact is minimal without ongoing assistance, especially in areas like product design innovation and digital marketing (Prasetyo & Sutopo, 2019). Effective capacity-building for MSMEs requires structured mentoring, periodic evaluations, and sustained engagement from stakeholders to ensure skill development translates into business growth (Yuniarti et al., 2022).

## **6. Local Economic and Cultural Potential**

One type of locally based MSME with significant potential to support sustainable urban development and village community empowerment is Wukirsari Knitting Center. One type of locally based MSME with significant potential to support sustainable urban development and village community empowerment is Wukirsari Knitting Center. This potential is still underutilized, though. According to other studies, culturally oriented MSMEs can contribute significantly to local economic development by creating jobs, conserving traditional knowledge, and drawing tourists (Firman & Hudalah, 2018; Supriyanto & Wibowo, 2020). According to studies, including local cultural identity into product development boosts community pride and participation while also making a product more distinctive in the market (Utami et al., 2021). Despite this, many community-based enterprises fail to fully capitalize on their cultural assets due to weak institutional support, lack of marketing strategies, and limited capacity to innovate within traditional frameworks (Sari & Widodo, 2022).

## **7. Expectations for Government Support and Collaboration**

Business players anticipate financial backing, up-to-date design instruction (based on YouTube or TikTok), and continuous marketing support from third parties and local governments. Wukirsari's MSMEs have high hopes for increased government assistance and intersector cooperation. They anticipate steady support in areas including market expansion, infrastructure, training, and finance availability. This is consistent with other research that demonstrates the tight relationship between MSMEs' competitiveness and sustainability and the availability of integrated support from academic stakeholders, business partners, and government institutions (Tambunan, 2019; Hartono & Darmawan, 2020). Studies emphasize that collaborative efforts—such as public-private partnerships, innovation networks, and university-led community empowerment programs—can significantly enhance MSME capacity and resilience (Ismail et al., 2021; Rahayu et al., 2022). Moreover, MSMEs that receive continuous institutional support tend to show better

adaptation to digitalization, improved product quality, and greater market reach (Yuliana & Nuraini, 2020).

#### IV. CONCLUSION

This study shows that the MSME sector that is currently being studied is the MSME food industry sector. On the other hand, the knitted craft sector requires further study. As for the MSME Knitting Center sector, to encourage contributions to the development of a city in supporting the achievement of SDGs, it is necessary to pay attention to and improve 7 main inhibiting factors, namely: 1) Limitations of Promotion and Marketing Digitalization; 2) Limited Product Quality and Design; 3) Use of Less Environmentally Friendly Raw Materials; 4) Challenges of Capital and Conventional Financial Systems; 5) Inconsistent Training and Minimal Mentoring; 6) Local Economic and Cultural Potential; 7) Expectations for Government Support and Collaboration.

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