

## **ECONOMIC RECIRCULATION AND CIRCULAR ECONOMY PRACTICES IN SUPPORTING MIGRANT WORKERS: A CASE STUDY OF PERMAI PENANG, MALAYSIA**

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### **ABSTRACT**

This study explores the role of economic recirculation and circular economy practices in enhancing the sustainability of small and medium-sized enterprises (SMEs) and improving the socio-economic conditions of migrant workers managed by PERMAI in Penang Island, Malaysia. Migrant workers contribute significantly to the local economy but face challenges related to social inclusion, economic vulnerability, and limited access to sustainable livelihood opportunities. By integrating circular economy principles into business operations and community programs, PERMAI aims to empower migrant workers, stimulate local economic development, and promote environmental sustainability. The findings suggest that targeted financial support, capacity building, digital market access, and community-based circular initiatives foster economic resilience, social cohesion, and environmental responsibility within migrant communities and SMEs.

**Keywords** : Economic Recirculation, Circular Economy, SME Sustainability, Migrant Workers, Community Development

### **1. INTRODUCTION**

Small and medium-sized enterprises (SMEs) are pivotal to economic growth, innovation, and employment globally, especially in developing regions (OECD, 2022). In Penang, Malaysia, the migrant workforce, predominantly from Indonesia and neighboring countries, plays a vital role in supporting SMEs across sectors such as manufacturing, construction, hospitality, and services (PERMAI, 2024). PERMAI (Pertubuhan Masyarakat Indonesia di Pulau Pinang Malaysia), a non-political NGO, facilitates social, educational, and economic support for Indonesian migrant workers in Penang, aiming to enhance their quality of life and integration.

The economic recirculation model emphasizes the continuous reinvestment of economic value within local economies, creating sustainable cycles of growth and development (Kirchherr et al., 2021). This approach, when combined with circular economy strategies—focused on waste reduction, resource efficiency, and sustainable production—can address the challenges faced by SMEs and migrant workers, promoting inclusive growth and environmental stewardship (Geissdoerfer et al., 2020).

This study investigates the application of economic recirculation and circular economy principles by PERMAI to support migrant workers and SMEs, evaluating their impact on business sustainability, social inclusion, and community well-being.

### **2. LITERATURE REVIEW**

#### **2.1 Economic Recirculation in SMEs and Migrant Labor Context**

Economic recirculation fosters local wealth retention by encouraging SMEs to reinvest revenue in community resources, labor, and local suppliers, strengthening regional economic networks (Zeng et al., 2023). For migrant workers, inclusive practices, fair wages, and skills development increase productivity and retention, contributing to economic resilience (Ding & Powell, 2022).

#### **2.2 Circular Economy and Sustainability in SMEs**

Circular economy adoption reduces waste and reliance on non-renewable resources, cutting operational costs and meeting regulatory demands (Lacy & Rutqvist, 2020). SMEs embracing circular business models gain competitive advantage by appealing to eco-conscious consumers and enhancing brand reputation (Ellen MacArthur Foundation, 2021).

### **2.3 Social Inclusion and Skills Development for Migrant Workers**

Vocational training, legal aid, and community support improve migrant workers' social integration and economic participation, reducing vulnerabilities linked to informal employment and exploitation (ILO, 2022). Community-based circular economy projects involving migrant workers have shown success in improving livelihoods and environmental outcomes (Tan et al., 2023).

## **3. METHODOLOGY**

This study employs a mixed-methods approach combining qualitative data from PERMAI's program reports, interviews with migrant workers, SME owners, and community leaders, and quantitative analysis of economic and social indicators over the past 3 years. Key performance indicators (KPIs) include microloan disbursement, training participation, SME revenue growth, migrant employment rates, and environmental impact metrics.

This study adhered to ethical research standards. Participants were informed of the purpose of the study and gave informed consent before participation. Anonymity and confidentiality were ensured throughout the process. Ethical clearance was obtained through collaboration with local institutional partners affiliated with Universiti Sains Malaysia (USM).

## **4. RESULTS AND DISCUSSION**

### **4.1 Financial Support and Capacity Building**

PERMAI's facilitation of microloans and financial literacy workshops led to a 35% increase in SMEs accessing capital, with a 17% average productivity increase. Financial training enhanced business management and reduced dependency on informal lending (PERMAI Annual Report, 2024).

### **4.2 Adoption of Circular Economy Practices**

Training programs on circular economy principles resulted in 60 SMEs implementing sustainable practices, including waste recycling, local sourcing, and energy efficiency, reducing costs by 12-15%. Partnerships with recycling firms created sustainable supply chains, fostering economic recirculation (Tan et al., 2023).

### **4.3 Digitalization and Market Access**

E-commerce and digital marketing initiatives increased SMEs' online presence by 65%, boosting sales by 22% and expanding exports by 11%. Migrant workers gained digital skills, improving employability and facilitating remote or flexible work options (Malaysia Digital Economy Corporation, 2023).

### **4.4 Social Inclusion and Vocational Training**

Vocational training programs enrolled over 1,200 migrant workers in hospitality, construction, and technology sectors, achieving a 32% employment rate post-training. Language support and legal assistance reduced social exclusion, while community groups fostered solidarity and peer support (ILO, 2022).

### **4.5 Community-Based Circular Economy Initiatives**

Engagement of 550 migrant workers in circular economy projects such as upcycling and eco-friendly waste management generated an average income increase of 25%. Cooperative businesses established under PERMAI's guidance provided sustainable livelihoods and promoted environmental awareness (Kirchherr et al., 2021).

## 5. CONCLUSION

The integration of **economic recirculation** and **circular economy principles** into the programs spearheaded by PERMAI in Penang Island has proven to be a strategic and impactful approach to advancing the sustainability of **small and medium-sized enterprises (SMEs)** while simultaneously addressing the socio-economic challenges faced by **migrant workers**. This dual-impact strategy aligns economic growth with social and environmental priorities, creating a model that promotes long-term resilience and inclusive development.

The implementation of **targeted financial support mechanisms**, such as microloans and financial literacy training, has empowered SMEs to overcome capital constraints and improve operational efficiency. By enabling access to funding and fostering better financial management practices, these interventions have strengthened the financial resilience of businesses and enhanced their capacity to scale sustainably.

Moreover, **capacity building initiatives**, particularly those focusing on circular economy practices—such as resource reuse, sustainable production, waste minimization, and green entrepreneurship—have equipped both SME owners and migrant workers with the skills necessary to operate in a resource-constrained and environmentally conscious economy. These practices not only reduce operational costs and environmental footprints but also position SMEs to meet rising consumer and regulatory expectations for sustainability.

The promotion of **digitalization** and access to online marketplaces has opened new avenues for SMEs, enabling them to expand their market reach, improve visibility, and boost revenue. For migrant workers, digital tools and training have enhanced employability, promoted digital inclusion, and provided access to non-traditional forms of income generation, thereby reducing dependency on low-wage or informal labor sectors.

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