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From Awareness to Action: Implementing Sustainable Supply Chain Management in Food Processing Small & Medium Enterprises

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Abstract

In the current environment, when stability is not a key focus, all small and medium-sized enterprises (SMEs) are conversing about sustainable practices merely out of obligation, instead of concentrating on fermentation. SMEs in the food industry play a critical role in solving social stability problems of the supply ecosystem. This research document considers the introduction of stable supply chains for SMEs for food processing that focuses on major factors and barriers. FMCG supply chain is nothing, but the network & processes involved in producing, distributing & selling the products that are of high requirements and low cost. The most important driver for FMCG supply chain would be rapidity and efficacy. This research findings recognizes the basics for assessing the maturity of knowledge management practices that support initiatives for sustainable development. This research paper talks about the importance of factors such as labor rights, food safety, tracking and children/forced labor to stimulate the socially stable initiative of the distribution channel. The highlighted issue addressed here in this study is "Demand Volatility". All results are provided with ideas for SMEs for food processing to increase efficiency and contribute to a wide range of understanding of supply management in the agricultural voltage sector.

Keywords: Sustainable Supply Chain Management, Food Processing SMEs, Sustainability Practices, Knowledge Management, Social Sustainability, Agri-Food Sector

Introduction

The food industry has a significant role to play in ensuring global nutritional safety and sustainability. SMEs are always prone to high pressure to solve Socially Responsible Process issues in the supply chain, namely labor rights, food safety and environmental impacts. By implementing sustainable supply chain management practices, these companies can weaken risk, improve reputation, and contribute to the general sustainability of the Agar grinding sector. (Tsoulfas & Mouzakis, 2021) The role of Food industry in ensuring global nutritional safety and sustainability. SMEs are subject to increased pressure to solve social sustainability issues in the supply chain, such as labor rights, food safety and environmental impacts. With the application of sustainable supply chain management practices, these companies can reduce risk, improve reputation, and impart to the general reliability of the agricultural domain (Mohamed, A. A. M. A. 2023). Producing many traditional Indonesian sauces and spices,

the company struggled to ensure fair labor practices and working conditions under a network of small suppliers (Bux, H., Zhang, Z., & Ali, A. (2024). Lack of sense of supply chain clarity and auditability makes it difficult for small businesses to monitor and address issues such as child labor and excessive overtime. (Tsoulfas & Mouzakis, 2021). To improve sustainability performance, Indonesian SMEs worked to develop stronger relationships with suppliers and provide training on labor rights and safety in the workplace. They also invested in Systems for digital traceability and investigation on the degree of development of knowledge management techniques to better pursue the origins of raw materials. These efforts have helped the company improve social standards compliance, improve brand appeal and access new markets that produce sustainably produced food.

This case illustrates the importance of knowledge management and cooperation across the supply chain for small and medium-sized businesses that want to implement sustainable practices. (Tsoulfas & Mouzakis, 2021) Small businesses for food processing often lack resources, expertise and intellect to effectively apply the efficient supply chain management practices. This research paper focuses on the role of knowledge management in supporting the Sustainability initiative and aims to examine the most important enablement's and obstacles SMEs face in implementing sustainable supply chain management. (Batista et al., 2019). This study also examines key factors such as labor rights, food safety, traceability, and child/forced labor are intended to drive socially sustainable supply chain initiatives as part of small businesses for food processing. (Agyemang et al., 2020)

Objectives:

1. Identify the most important enablement and obstacles for small and medium-sized food processing businesses when implementing sustainable supply chain management practices.
2. Assessing the relative significance of social sustainability factors such as labor rights, food safety, traceability, and child/forced labor to promote sustainable supply chain initiatives in the agri-food sector.
3. Develop frames for small and medium-sized food processing businesses to improve sustainability performance and contribute to

the general sustainability of the agri-food supply chain.

Current study is based on multiple case study approaches that can limit the generalizability of results. Additionally, the research focuses on the food manufacturing organizations, and results may not be directly applicable to different sectors. This study is also based on self-registration data from SME managers who may be subject to bias. There is a research gap related to the maturity of this small business adoption of knowledge management to support sustainability initiatives. Furthermore, the most important enablers and obstacles to implement socially sustainable supply chain practices must be identified in the agri-food sector. (Hsu et al., 2021) (Agyemang et al., 2020) Goals: The main objectives of this research work: 1) a framework for assessing the maturity of knowledge management practices, the Sustainability practices in Food Processing SMEs, 2) to identify important factors. Provide insights into and recommendations to small businesses about food processing to improve your sustainability. This research assess the application of sustainable supply chain management practices. This highlights social sustainability aspects such as labor rights, food safety and traceability.

Limitations:

Various limitations to this research work are noted here. At the outset, this finding supports multiple case study approaches, allowing the generalizability of the results to be limited to a larger population of SME's businesses in food processing. In addition, data collection and analysis are influenced by the potential distortions and subjectivity inherent in qualitative research methods. The required inputs were gathered by a interviews that are not fully structured with mid-level stakeholders and key staff of several SME organizations in developing countries.

Secondary data includes a complete review of literature for designing a structure for the assessment of the maturation level of knowledge management practices that support sustainability initiatives. Data analysis included a combination of content analysis, optimal methods, and gray relational analysis to prioritize key factors (Agyemang et al., 2020) (Batista et al., 2019) (Khan et al., 2021).

Statistics:

This study summarizes the main characteristics of participating in SMEs using several statistical data analysis methods, including descriptive statistics.

1. The Best-Worst Method to determine the relative importance of the social and stable standards of the supply chain (Agyemang, M., Kusi-Sarpong, S., Agyemang, J., Jia, F., & Adzanyo, M. 2020)
2. Gray Rational analysis to assess the impact of SMEs on certain standards

Such statistical methods provide quantitative information to complement the qualitative results of subject research.

This study used several expansion statistics methods for the strict analysis of the collected data. The statistics of the explanation were used to summarize the basic demographic statistics and operating characteristics of small and medium -sized companies and provided a valuable context of the outcome. So, in view of determining the relative importance of various social stability standards of the supply chain, we leveraged the Best-Worst Method and strong multi-criteria decision-making tool. This approach has permitted SME stakeholders to assess the priorities assigned to SMEs for factors such as labor rights, food safety, tracking and children/forced labor.

Further, this study used Grey Relational Analysis, a methodology that solves various attributes to evaluate the impact of SMEs on the identified social stability standards. This finding stressed the strength and improvement area by comparing the penetration ratings between participating companies.

The combination of such statistical methods, including descriptive and analysis methods, provides a comprehensive quantitative idea set to complement the qualitative results of various topics. The approach to this mixing method allowed researchers to produce a complete notion of the problems & functions faced with SMEs for food processing when introducing a socially sustainable practice of the supply chain.

Results and Discussions:

The major findings of this Investigation emphasize an important role in knowledge management that supports initiatives in stable SME supply chains for food processing. The developed structure shows many maturities of KM

implementation, and most MSPs show the basics of the medium level of KM practice.

Analysis of the standards of socially stable supply chains show that food safety, labor conditions and labor conditions, tracking and subsidiaries/forced labor are the most important factors (Agyemang et al., 2020). SMEs face some problems in solving these problems, including resource absence, restrictions on participation of suppliers, and insufficient knowledge exchange. This study also shows that effective knowledge management methods controlled by information exchanges, joint plans, and -Data decisions can be improved in a stable MSP supply chain.

The study's findings highlight the primary role of knowledge management in the provision and support of stable supplies in the framework of the food industry of SMEs. The structure developed in this study shows the extensive level of maturity of Knowledge Management adoption process among participating SMEs, most of which show the main methods of knowledge management and medium levels. Analyzing the standards of socially stable supply chain, not only food safety, working conditions and labor conditions, but also traces and removal of children/forced labor are the most important factors in this context (Agyemang et al., 2020). Nevertheless, SMEs are facing numerous problems in solving these problems such as lack of resources and partners of supply networks and lack of joint use of knowledge.

This study also shows that the adoption of effective knowledge management methods, such as decisions controlled by information exchange, joint planning and data, can greatly improve the application of initiatives in stable supply of SMEs. These results emphasize the importance of Knowledge Management reinforcement with the barriers and successful means of control chain of the supply chain in the social network of this sector. Analysis of the stable social standards of the supply chain in the food industry shows that not only the safety of food, labor and labor conditions, but also the tracking and removal of children/forced labor is the most important factor in this context (Agyemang et al., 2020). These results emphasize various characteristics of social stability, which should be solved in a difficult order with complex problems related to worker work, quality and ethical sources. Nevertheless, this study shows that small and medium-sized food processing companies are facing numerous problems in

solving these social stability problems. This includes lack of financial and human resources, participation and adjustment with partners in the supply chain, and there is not enough opportunity to use the general knowledge between the organization and the tissue. These obstacles to his study also advocate the adoption of effective knowledge management can greatly prevent the implementation of social responsibility practices to manage the supply chain. This research findings draws the attention to the adoption of effective knowledge management methods that can play an important role in overcoming these problems and ensuring the successful implementation of initiatives in stable SMEs. Strategies controlled by strategic data, such as data exchange, joint planning and decision-making, can help these companies acquire, disseminate and apply the knowledge necessary to solve social stability problems in the operating network. These results emphasize the importance of strengthening KM as a means of overcoming barriers and guaranteeing the successful implementation of social responsibility activities of the supply chain in the food industry.

Conclusion:

This study provides valuable information to implement stable supply of SMEs for the food industry. The result shows that expanding knowledge management is important for SMEs for effective solutions to the social stability issue of the supply chain. In order to support the implementation of a social stable supply chain, SMEs on food processing should focus on making decisions to improve knowledge exchange and control data, including suppliers.

Suggestion:

The following suggestions are made for small and SMEs to boost food in order to increase the impact of stability, based on the study's findings.

1. Create a thorough knowledge management plan that addresses knowledge, dissemination, and storage to support efforts in efficient distribution channels.
2. Interact with members in the distribution channel contributing to knowledge exchange for cooperation and social stability.
3. Use technical support to invest in decision-making to improve tracking and monitor the solution according to data and control the entire visibility of the supply chain.

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Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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