

**ANALYSIS OF THE BARRIERS TO THE IMPLEMENTATION OF
ORGANIC COCONUT SUGAR SUSTAINABLE SUPPLY CHAIN
MANAGEMENT AT PT. MEGA INOVASI ORGANIK BEKASI REGENCY**



POLITEKNIK NEGERI BALI

**BY:
SASQIA ZAHRA FIRDAUSI
1915744121**

**INTERNATIONAL BUSINESS MANAGEMENT STUDY PROGRAM
BUSINESS ADMINISTRATION DEPARTMENT
BALI STATE POLYTECHNIC
BADUNG
2023**

**ANALYSIS OF THE BARRIERS TO THE IMPLEMENTATION OF
ORGANIC COCONUT SUGAR SUSTAINABLE SUPPLY CHAIN
MANAGEMENT AT PT. MEGA INOVASI ORGANIK BEKASI REGENCY**



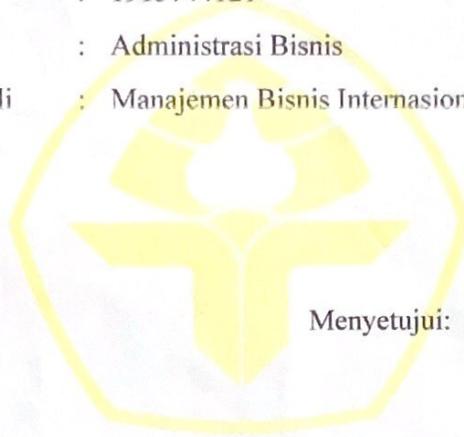
POLITEKNIK NEGERI BALI

**BY:
SASQIA ZAHRA FIRDAUSI
1915744121**

**INTERNATIONAL BUSINESS MANAGEMENT STUDY PROGRAM
BUSINESS ADMINISTRATION DEPARTMENT
BALI STATE POLYTECHNIC
BADUNG
2023**

TANDA PERSETUJUAN SKRIPSI

1. Judul Skripsi : Analysis of the Barriers to the Implementation of Organic Coconut Sugar Sustainable Supply Chain Management at PT. Mega Inovasi Organik Bekasi Regency
2. Penulis
- a. Nama : Sasqia Zahra Firdausi
- b. NIM : 1915744121
3. Jurusan : Administrasi Bisnis
4. Program Studi : Manajemen Bisnis Internasional



Badung, 18 Agustus 2023

Menyetujui:

Pembimbing I,

Dr. I Ketut Santra, M.Si.

NIP. 196710211992031002

Pembimbing II,

Putu Sandra Putri Astariani,

S.S. M.Hum

NIP. 202111011

HALAMAN PENGESAHAN TIM PENGUJI

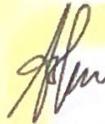
**ANALYSIS OF THE BARRIERS TO THE IMPLEMENTATION OF ORGANIC
COCONUT SUGAR SUSTAINABLE SUPPLY CHAIN MANAGEMENT AT
PT. MEGA INOVASI ORGANIK BEKASI REGENCY**

Oleh:

Sasqia Zahra Firdausi
NIM : 1915744121

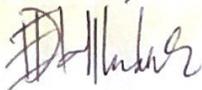
Disahkan :

Ketua Penguji



Putu Sandra Putri Astariani, S.S. M.Hum
NIP. 0008089701

Penguji I



Nyoman Indah Kusuma Dewi, SE., MBA., Ph.D.
NIP. 196409291990032003

Penguji II



Ida Ayu Putri Widiasuari Riyasa, SE., MM
NIP. 0004119601

Mengetahui
Jurusan Administrasi Bisnis
Internasional
Ketua



Nyoman Indah Kusuma Dewi, SE., MBA., Ph.D.
NIP. 196409291990032003

Badung, 20 Agustus 2023
Prodi Manajemen Bisnis



Ketut Vini Elfarosa, SE., M.M.
NIP. 196808271993031002

MOTTO DAN PERSEMBAHAN

If it doesn't get me frustrated, then I don't want it.

-Sasqia

ACKNOWLEDGEMENT

Om Swastyastu,

With all praises and gratitude to Ida Sang Hyang Widhi Wasa and the support and prayers from our beloved ones, this thesis has finally been successfully completed on time. Therefore, with a sense of pride and joy, the author expresses heartfelt gratitude and appreciation to:

1. The Almighty God
2. My beloved parents, Muhamad Tri Santoso and Hartiani, who have provided both material and moral support, as well as prayers for my success throughout my studies at Politeknik Negeri Bali until this final phase of my education.
3. My dearest sibling, Kautsar Zidane Firdaus Al-qodri.
4. Mr. Muhammad Maulana Sidik and Mr. Kartono, as Business Operation and Internal Control System representatives from PT. Mega Inovasi Organik.
5. Ms. Ijriyah, as one of the local farmers who kindly agreed to be interviewed and observed as part of this research.
6. My friends whom the author is proud of: Valindri Febrian, Octavia Dewi, Aditya Mahawiryantha, Pande Jaya Krisna, Rezza Destrawan, Adi Gunawan, Vellen Vegitqa Putri, Nadia Khairunnisa, Sadam Candra, Angga Maha Putra, Mantra Cahyadiartha and Venansius Kenny, who have always provided support and encouragement while I was working on this thesis at Bali State Polytechnic.

PERNYATAAN ORISINALITAS KARYA

I, the undersigned, hereby declare that the thesis titled: "Analysis of the Barriers to the Implementation of Organic Coconut Sugar Sustainable Supply Chain Management at PT. Mega Inovasi Organik at Bekasi Regency" is the result of my own work.

I hereby state that there is no work by others that has been submitted to obtain a degree at any higher education institution, and to the best of my knowledge, there is no other work or opinions written or published by others, except those explicitly referenced in this thesis and listed in the bibliography.

Should I engage in any of the above-mentioned acts, I hereby declare my intention to withdraw the thesis submitted as my own work.

Please note that this translation is for academic purposes only and should not be considered a legally binding document.

Bekasi, 27 Juli 2023



Sasqia Zahra Firdausi

NIM. 1915744121

ABSTRAK

Proyek penelitian ini berfokus pada menganalisis implementasi strategi Sustainable Supply Chain Management (SSCM) gula kelapa organik di PT. Mega Inovasi Organik di Kabupaten Bekasi. Tujuan penelitian ini adalah untuk mengungkap bagaimana strategi SSCM gula kelapa organik diimplementasikan dan mengidentifikasi hambatan-hambatan yang menghalangi implementasinya. Penelitian ini akan mengevaluasi praktik dan inisiatif saat ini yang diambil oleh PT. Mega Inovasi Organik dalam menerapkan strategi SSCM gula kelapa organik.

Penelitian ini akan mengidentifikasi dan menganalisis hambatan-hambatan seperti keterbatasan kesadaran, akses bahan baku organik, biaya produksi, keterbatasan infrastruktur, dan masalah kolaborasi di dalam rantai pasok. Selain itu, akan diajukan program Corporate Social Responsibility (CSR) yang selaras dengan strategi SSCM gula kelapa organik untuk mengatasi hambatan-hambatan tersebut dan mendorong keberlanjutan.

Hasil penelitian akan mencakup pengembangan Key Performance Indicators (KPI) untuk mengukur dan mengevaluasi kinerja petani dalam rantai pasok gula kelapa organik serta program edukasi akan didistribusikan kepada petani lokal terkait pengelolaan limbah. Selain itu, akan dibentuk KPI (Key Performance Indicators) sebagai panduan untuk implementasi yang konsisten dan efisien dari praktik rantai pasok berkelanjutan.

Kata Kunci: *Sustainable Supply Chain Management, Organic Coconut Sugar, Barriers*

ABSTRACT

This research project focuses on analyzing the implementation of the organic coconut sugar Sustainable Supply Chain Management (SSCM) strategy at PT. Mega Inovasi Organik in Bekasi Regency. The study aims to address how has the organic coconut sugar SSCM strategy been implemented and hat are the barriers to its implementation. The research will assess the current practices and initiatives undertaken by PT. Mega Inovasi Organik to implement the organic coconut sugar SSCM strategy.

It will identify and analyze barriers such as limited awareness, access to organic raw materials, production costs, infrastructure limitations, and collaboration issues within the supply chain. Additionally, a CSR program will be proposed, aligned with the organic coconut sugar SSCM strategy, to address these barriers and promote sustainability. The research output will include the development of Key Performance Indicators (KPIs) to measure and evaluate the performance of farmers in the organic coconut sugar supply chain education program will distribute knowledge to the local farmers regarding waste management. Furthermore, a KPI (Key Performance Indicators) will be established to provide guidelines for consistent and efficient implementation of sustainable supply chain practices.

Keywords: Sustainable Supply Chain Management, Organic Coconut Sugar, Barriers

PREFACE

Praise and gratitude be to the One Almighty God / Ida Sang Hyang Widhi Wasa, as with His grace, the author has successfully completed this thesis entitled "Analysis of the Barriers to the Implementation of Organic Coconut Sugar Sustainable Supply Chain Management at PT. Mega Inovasi Organik Bekasi Regency" in a good and timely manner.

Throughout the preparation of this thesis, the author encountered several obstacles and difficulties, yet with the support and assistance from various parties, these challenges could be overcome. Therefore, on this occasion, the author would like to express heartfelt gratitude to:

1. Mr. I Nyoman Abdi, SE, M.eCom, as the Director of Politeknik Negeri Bali, who provided the opportunity for the author to study at Politeknik Negeri Bali.
2. Mrs. Nyoman Indah Kusuma Dewi, S.E., M.BA, as the Head of the Business Administration Department at Politeknik Negeri Bali, who provided the opportunity for the author to study in the Business Administration Department at Politeknik Negeri Bali.
3. Mrs. Ketut Vini Elfarosa, SE., M.M, as the Head of the International Business Management Study Program, Business Administration Department, Politeknik Negeri Bali, who provided guidance, mentorship, and support throughout the preparation of this thesis.
4. Mr. Dr. I Ketut Santra, M.Si. and Mrs. Putu Sandra Putri Astariani, S.S., M.Hum, as the Thesis Advisors, who demonstrated immense patience in

providing motivation, advice, and guidance to the author, enabling the completion of this thesis.

5. To all the esteemed lecturers of the Department of Business Administration who have provided teaching for courses from semester I to semester VI, as well as all the staff of the Department of Business Administration who have contributed to the smoothness of the academic process, we extend our heartfelt gratitude.
6. To the entire extended family of PT. Mega Inovasi Organik, whose individual names cannot be mentioned one by one, but who have consistently provided invaluable assistance to the author during every task of the Internship (Praktek Kerja Lapangan - PKL) and unwavering support throughout the preparation of this thesis, we express our sincere gratitude.
7. To parents and family members who have provided unwavering moral and material support, continuously encouraging the author with their unwavering spirit and prayers, we extend our deepest gratitude and heartfelt appreciation.
8. My friends whom the author is proud of: Valindri Febrian, Octavia Dewi, Aditya Mahawiryantha, Pande Jaya Krisna, Rezza Destrawan, Adi Gunawan, Vellen Vegitqa Putri, Nadia Khairunnisa, Ida Bagus Putu Mantra Cahyadjartha, and Venansius Kenny, who have always provided support and encouragement while the author was working on this thesis at Politeknik Negeri Bali.

HALAMAN PERSETUJUAN PROPOSAL SKRIPSI

1. Judul Skripsi : Analysis Of the Barriers to the Implementation of Organic Coconut Sugar Sustainable Supply Chain Management at Pt. Mega Inovasi Organik Bekasi Regency
2. Pelaksanaan
 - a. Nama : Sasqia Zahra Firdausi
 - b. NIM : 1915744121
 - c. Jurusan : Administrasi Niaga
 - d. Program Studi : D4 Manajemen Bisnis Internasional
3. Pembimbing Proposal
4. Nama Lengkap Pembimbing : Dr. Ketut Santra, M.Si
5. Waktu Pelaksanaan : Februari 2023 s/d Juli 2023

Badung, 17 Februari 2023

Menyetujui: Pembimbing Proposal



Dr. I Ketut Santra, M.Si

NIP. 1967102119922031002

LIST OF CONTAINS

HALAMAN PENGESAHAN TIM PENGUJI	ii
MOTTO DAN PERSEMBAHAN	iii
PERNYATAAN OROSINALITAS KARYA	iv
ABSTRAK	v
ABSTRACT	vi
PREFACE	vii
HALAMAN PERSETUJUAN PROPOSAL SKRIPSI	ix
LIST OF CONTAINS	x
TABLE OF CONTAINS	xii
FIGURE OF CONTAINS	xii
APPENDIX OF CONTAINS	xv
CHAPTER I INTRODUCTION	1
1.1 Research Background	1
1.2 Research Questions	10
1.3 Research Objectives	11
1.4 Research Advantages	11
CHAPTER LITERATURE REVIEW	13
2.1 Literature Review	13
2.1.1 Supply Chain Management	13
2.1.2 Sustainability: The triple bottom line	15
2.1.3 Sustainability applied to SCM	18
2.1.4 Barriers for SSCM	19
2.1.5 Sustainability Reporting	25
2.2 Previous Studies	32
2.3 Theoretical Framework	36
CHAPTER III RESEARCH METHODOLOGY	38
3.1 Research Time and Location	38
3.2 Research Object	38
3.3 Data Resource	38

3.3.1 Primary Data	38
3.3.2 Secondary Data.....	39
3.4 Data Type.....	39
3.5 Data Collection Techniques.....	40
3.5.1 Observation	40
2.5.2 Interview.....	41
2.5.3 Documentation	41
3.6 Data Analysis Technique	41
CHAPTER IV RESULT AND DISCUSSION	46
4.1 Company History (Company Profile)	46
4.1.2 Business Sector	48
4.2 Findings and Analysis	56
4.2.1 Direct Observation	57
4.2.2 Interview Session	82
2.2.2 Interpretive Structural Modelling (ISM).....	104
2.2.3 Structural Self-Interaction Matrix (SSIM).....	104
2.2.4 Initial Reachability Matrix.....	106
2.4.5 ISM Formation for Barriers for SSCM.....	109
4.3 Research Implications	112
4.3.1 Theoretical	113
4.3.2 Practical	113
CHAPTER V CONCLUSION AND RECOMMENDATIONS	115
5.1 Conclusion.....	115
5.2 Recommendations	116
BIBLIOGRAPHY	118
APPENDIX	

TABLE OF CONTAINS

Table 1.1 Percentage of the role of each sector toward Indonesia's GDP	4
Table 1.2 Source: World Bank (2017), World Development Indicators	5
Table 2.1 Barriers to the implementation of SSCM	22
Table 4.1 Structural Self-Interaction Matrix	105
Table 4.2 Rules for initial reachability matrix formulation	107
Table 4.3 Initial Reachability Matrix	108
Table 4.4 Final Reachability Matrix	109
Table 4.5 Canonical Matrix	109

FIGURE OF CONTAINS

Figure 2.1	Three Bottom Line in SSM, Carter and Rogers (2008)	16
Figure 2.2	List of Barriers of Sustainable Supply Chain Based on Literature Review	21
Figure 2.3	Sustainable Development Goals (SDGs). (UNGC 2018)	31
Figure 2.4	UNGC Ten Principles and SDGs linkages. (UNGC 2016b, 6)	31
Figure 2.5.	Theoretical framework for this research	37
Figure 3.1	SSIM	43
Figure 3.2	Reachability matrix for the barriers	44
Figure 4.1	PT Mega Inovasi Organik Logo	47
Figure 4.2	The flow of organic coconut sugar supply chain at PT. Mega Inovasi Organik	59
Figure 4.3	The building of Karmatera in Purworejo	60
Figure 4.4	The training and education programs held by PT. MIO along with the ICS regarding “Dapur Sehat”	61
Figure 4.5	The implementation of “Dapur Sehat” standard. The chimney was initiated by the program to allocate the air pollution properly	62
Figure 4.6	The proper packaging based on “Daput Sehat” training	64
Figure 4.7	Conversation with the ICS, Mr. Kartono who is the local citizen in Purworejo	67
Figure 4.8	Warehouse of the Factory in Wates	70
Figure 4.9	Sorting process	71
Figure 4.10	The impurities found in sorting process	73
Figure 4.11	Drying process of organic coconut sugar using sun-dry and oven...74	
Figure 4.12	Sieving phase using machine	76
Figure 4.13	The second oven phase to make longer shelf life of the organic coconut sugar	78

Figure 4.14	The packing process	79
Figure 4.15	Preparation for the delivery process	80
Figure 4.16	Documentation with the local farmer, Mr. Ijriyah	82
Figure 4.17	The flowchart of organic coconut production process	103
Figure 4.18	ISM-based model for the barriers in implementation sustainable supply chain	109
Figure 4.19	Graph Level	110
Figure 4.20	Driving power and dependence diagraph	110
Figure 4.21	Micmac analysis of the barriers to the implementation of organic coconut sugar sustainable supply chain management at PT. Mega Inovasi Organik	112

APPENDIX OF CONTAINS

Appendix 1: Documentation for observation and interview in Purworejo (ICS and Local Farmers)

Appendix 2: Documentation for Observation and Interview in Wates (Factory)

Appendix 3: Documentation of the Interview with MIO's Representatives.

Appendix 4: Interview Questions

Appendix 5: The SSIM of the Barriers

Appendix 6: Contract for the Local Farmers

Appendix 7: The Detailed Flow for Organic Coconut Sugar Production

CHAPTER I

INTRODUCTION

1.1 Research Background

Over the last few decades, there has been a significant increase in public awareness of the importance of sustainability. The concept of sustainability itself lies at the mind of the debates that over the use of population in the planet. Sustainability is an important performance dimension that needs to be considered when designing supply chains. Sustainable Supply Chain (SSC) is driven by environmental and social objectives with economic benefits (Taticchi et al., 2013). This phenomenon has affected many companies to pay attention to the society around them that provides resources as part of the business. Typically, most companies expect their supply chain to comply with standards yet still balance social, environmental, and economic aspects for a better world. Businesses certainly face new challenges and opportunities for adopting good environmental practices (Sezen & Turkkantos, 2013). The challenges include global warming, the fight against poverty, and the use of toxic substances. Most consumers worldwide are considering their buying behavior to contribute further toward sustainable practices. Hence, companies face more pressure which appears because of the demands from both customers and government policies. This statement is also supported by the prominent research firm Nielsen which stated that 2018 as the year of the ‘Influential Sustainable Consumer’, with this trend set to continue into the next decade (Nielsen, 2018).

Due to this vision, today's international business environment has challenged many organizations to concentrate on supply chain management to gain competitive advantages. The definition of sustainable development, which many industries have begun to adopt, is "the creation of goods and services using processes and systems that are non-polluting, conserve energy and natural resources, are economically viable, safe and healthy for employees, communities, and consumers, and socially and creatively rewarding for all working people." Worldwide markets require items that are not only inexpensive but also highly variable, as well as those produced by businesses that support fair employment opportunities, a healthy work environment, and environmental sustainability.

In Indonesia, one of the tremendous potential sources is agricultural products. Indonesia's lowlands – an estimated 36 to 39 million hectares of coastal swamplands, peatlands, and mineral soils (often tidally influenced) found primarily in Sumatra, Kalimantan, and Papua – have experienced rapid development and change during the last 30 years. Lowlands cover over 20 percent of Indonesia's total area and hold considerable potential for development when it comes to meeting national targets set for food and industrial crop production. However, lowlands are also of immense importance for biodiversity, including mangroves, peat swamp forests, and freshwater swamp forests with their specific flora and fauna. With the current trajectory, Indonesia's management of lowland peatlands under agriculture may continue to result in globally significant greenhouse gas emissions, loss of important

biodiversity, and pollution from fires. The continued agricultural expansion into lowland peatlands and poor agricultural cultivation practices will escalate and accelerate soil degradation and land subsidence, and increase risks of flooding and fires. Over the longer term, this is likely to diminish agricultural production capacity, with serious implications for Indonesia's food security and the livelihoods of millions of households. (World Bank. 2021. Sustainable Lowland Agriculture Development in Indonesia. © World Bank)

Nevertheless, the practice of the agriculture sector in Indonesia has been assessed as unsustainable. World Bank (2021) stated that at present, Indonesia's land, water, and forest resources are experiencing severe degradation due to poorly managed land conversion and other unsustainable practices. The limited availability of land for large-scale agricultural activities in the most productive areas has resulted in increasingly intense pressure to expand into the less productive and more environmentally fragile areas, including in lowland areas. Both the costs of managing these more marginal lands for agricultural purposes and the associated environmental risks are significantly higher than in more productive areas.

This issue has led to the not optimal result of the role of agriculture contribution in the country's Gross Domestic Product (GDP). To point out, the share level of agricultural products is below the industry and service sectors. The slow decline in agriculture share indicates an incomplete structural transformation in the Indonesian economy, including the slow absorption process in the industry and service sectors. Meanwhile, Indonesian agricultural

commodities have a high potential to achieve a higher level of competitiveness and improve sustainability for the future, despite several problems and issues of each commodity. For a detailed illustration of the percentage, below is the diagram to portray the share of agriculture, industry, and service sectors in Indonesia:

Table 1.1 Percentage of the role of each sector toward Indonesia's GDP

Year	Agriculture	Industry	Services
	(%)	(%)	(%)
2021	13.28	39.86	42.82
2020	13.7	38.25	44.4
2019	12.71	38.95	44.2
2018	12.81	39.73	43.4
2017	13.16	39.38	43.61
2016	13.48	39.31	43.64
2015	13.49	40.05	43.31
2014	13.49	41.93	42.24
2013	13.36	42.64	41.52
2012	13.37	43.59	40.87
2011	13.51	43.91	40.58

Source: Statista, Share of economic sectors in the GDP in Indonesia 2011-2021

The data shows that the data of agriculture contribute the least if it is being compared to industry or service sectors.

In Indonesia itself, many lacks of sustainable practices occur. Indonesia is an ideal object for this study because of its wide land area and population,

which might be indicators of the supply chain needs, especially for agricultural products. Among Southeast Asia countries, Indonesia is ranked first for agricultural aspects. This ironic occurrence has a great deal of untapped potential in Indonesia.

Table 1.2 Source: World Bank (2017), World Development Indicators

	GDP per capita	Population	Rural population	Total land area	Agricultural land	Agricultural land per capita	Freshwater resources	Freshwater withdrawals agriculture	Freshwater resources per capita
		(millions)	(%)	(km ²)	(km ²)	(ha)	(billion m ³)	(billion m ³)	('000 m ³)
Cambodia	1 159	15.6	79.3	176 520	54 550	0.36	120.6	2.1	7.9
Indonesia	3 346	257.6	46.3	1 811 570	570 000	0.22	2019.0	92.8	7.9
Lao PDR	1 818	6.8	61.4	230 800	23 690	0.35	190.4	3.2	28.5
Malaysia	9 768	30.3	25.3	328 550	78 390	0.26	1003.0	2.5	33.5
Myanmar	1 161	53.9	65.9	653 080	126 450	0.24	580.0	29.6	10.9
Philippines	2 904	100.7	55.6	298 170	124 400	0.13	429.0	67.1	4.8
Thailand	5 815	68.0	49.6	510 890	221 100	0.33	224.5	51.8	3.3
Viet Nam	2 111	91.7	66.4	310 070	108 737	0.12	359.4	77.7	4.0

Source: World Bank 2017

Limited efforts of value addition in the agricultural products and slow sustainability attempts in the agriculture sector have led to such an imbalanced structural transformation. The primary benefits of farming and agricultural commodities have yet to be utilized to their full capability. If this continuously happens, it might be risky for the future of the Indonesian economic situation on a broader scale. In addition, the issue of sustainable development, from economic, social, as well as environmental perspectives, primarily because of the degree of policy response differentiate with an incentive system to major agricultural commodities.

Organic food supply has been proliferating in Indonesia since 2010 after "Indonesia Go Organic" launched. Currently, organic food (OF) is one of the fastest-growing segments of the food market, with outstanding improvements collectively in production and sales volumes in many countries

(Sari et al., 2021). Factors such as environmental sustainability, health issues, food safety, quality, consumer dissatisfaction with conventional food (CF) and pressures from various stakeholders have imposed serious considerations towards OFSC ((Reisch et al., 2013) According to World Health Organization (2015), unsafe food containing harmful bacteria, viruses, parasites or chemical substances causes more than 200 diseases, ranging from diarrhoea to cancers. Globally each year, approximately 600 million people, almost 1 in 10 individuals, fall ill after consuming contaminated food, and 4,20,000 die. Additionally, children under 5 years of age carry 40% of the foodborne disease burden, with 1, 25,000 deaths every year.

Organic agriculture is likely a good model for productive and sustainable food production. A shift towards sustainable agricultural production entails the adoption of more system-oriented strategies, which include farm-derived inputs and productivity based on ecological processes and functions (Garnett et al., 2012). (Niggli, 2014) argued that organic farming is most consistent in combining agro-ecological approaches with productivity. Because of the ban or restricted use of many direct control techniques such as pesticides, herbicides, synthetic soluble fertilisers, and veterinary medicines, organic farmers rely heavily on preventive and system-oriented practices. It improves soil fertility through the incorporation of legumes and compost and by the recycling of local nutrients and organic matter. Moreover, some serious ecological problems pertaining to CF production and consumption comprises climate change, air and water pollution, scarcity of natural resources, soil

degradation, loss of habitats and biodiversity (Reisch et al., 2013). Therefore, to overcome the above-mentioned problems, promoting organic production, availability and consumption is highly important for environmental protection, sustaining life and furthering congenial health. They also believed that long-term chemical use would harm the soil, inhibit the growth of certain crops, or prevent the selling of produce due to the presence of leftover chemicals.

The island of Java is the epicenter of organic coconut cultivation and is renowned for its high standards. In which organic coconut sugar is one of the superior products. Organic coconut sugar is nectar crystallized from the flowers of coconut trees (*Cocos Nucifera*) that is produced by boiling, cooling, and grinding. It has a distinct flavor and is not limited to use as coconut sugar. So that it has a distinct flavor and cannot be substituted with other types of sugar by alternative sugars. Indonesia is one of the leading organic coconut sugar producers in the world. As a result, the demand for this product, which is closely tied to the social, economic, and cultural aspects of rural communities in Indonesia, has increased over time. Even organic coconut sugar has numerous advantages that are growing in popularity, particularly on the global market.

PT Mega Inovasi Organik is one of the exporters of organic agriculture products. One of the company's flagship products is organic coconut sugar. Where in the production process does an Indonesian community of traditional coconut farmers participate. They perform the procedure naturally, without the use of chemicals or preservatives. The corporate headquarter of PT Mega

Inovasi Organik is located at Marquette Shophouse Citra Grand CBD Cibubur Blok GR no. 01-02 Cibubur Cileungsi Alternative Road Km 05, RT.002 / RW.003, Jatirangga, Jatisampurna, Bekasi City, West Java. In addition, PT Mega Innovation has a specialized factory in Sempu, Bumirejo Village, Lendah, Kulonprogo, Indonesia for the production of organic coconut sugar. Sempu, Bumirejo Village, Lendah, Kulonprogo, Indonesia. This company has exported organic coconut sugar, spices, herbs, and fruits to numerous countries.

Additionally, PT. Mega Inovasi Organik has incorporated fair trade principles into its operations. Fair Trade is a trading partnership based on dialogue, transparency, and respect which seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to and securing the rights of marginalized producers and workers, especially in the South. Fair trade organizations (backed by consumers) are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practice of conventional international trade (FINE, 2001). By combining the organic and Fair-Trade principles, this company is already in a strong position to maintain and enhance their sustainability concept. Sustainable supply chain management (SSCM) is an essential concept for enhancing environmental performance in TSCM and promoting a positive green image for farm commodities.

PT. MIO (Mega Inovasi Organik) stands as a brand known for its organic certification, reflecting a profound commitment to product quality and sustainability. The presence of inorganic impurities in the offerings could

significantly impact the brand reputation and disrupt business operations. The core value lies in helping local farmers improve their production processes, an essential aspect of PT. MIO's identity. The mobilization of hundreds of organic coconut sugar farmers highlights the dedication to supporting local communities. Going beyond organic coconut sugar in granulated form, PT. MIO offers a diverse product range, including organic spices, herbs, fruits, and coconut oil. Maintaining consistent quality across this array poses challenges, especially as sustainable supply chain management practices are upheld.

Preserving product integrity across the entire range remains a top priority, with investments in sustainable supply chain management. This approach involves meticulous sourcing of organic ingredients, adherence to fair trade practices, and prioritization of environmentally-friendly processes throughout the supply chain. PT. MIO's focus on empowering local farmers and unwavering commitment to quality and sustainability set it apart. Upholding these principles fosters trust and enduring connections with customers, partners, and stakeholders. The mission is to provide impeccable organic products that meet the highest standards while promoting the wellbeing of local farmers and championing sustainability in the industry.

Nonetheless, it is undeniable that there are multiple barriers to the successful implementation of SSCM, and it should be noted that not all of these barriers are of equal impact. In order for a company to be able to improve its sustainable supply chain, it is necessary to identify the dominant factors

required to enhance the SSCM concept, which requires industries to analyze the barriers and their impacts.

One of the cases that occurred is the utilization of chemical by the organic farmers that is opposed to the organic principles. Whereas, the organic/biodynamic method of farming necessitated the development of chemical substitutes. This method was the antithesis of chemical agriculture, with its emphasis on increasing soil fertility, avoiding monoculture, developing one's own inputs rather than purchasing them from outside sources, and the use of biodynamic preparations. The biodynamic group liked to have a diversified mix of crops, animals, and poultry, which they believed made their farms more robust, self-sufficient, and holistic. All of these cultural practices reduced the dangers associated with chemical-free agriculture.

Overall, the author argues that recent SSCM development at PT. Mega Inovasi Organik is necessary to be enhanced, particularly from a holistic and integrated perspective that takes into the barriers in implementing the SSCM strategy. Arguably, such a comprehensive and integrated perspective allows this research investigation to obtain more credible results and report conclusive findings, connecting the mixed views within the existing knowledge.

1.2 Research Questions

The main research questions of this research project are formulated as follows:

1. How is the implementation of organic coconut sugar SSCM strategy that has been implemented at PT. Mega Inovasi Organik?

2. What are the barriers to the organic coconut sugar SSCM strategy implementation at PT. Mega Inovasi Organik?

1.3 Research Objectives

The abovementioned research questions generate the study's overall aim of developing a conceptual SSCM implementation framework, focusing on the interaction between the barriers. In light of this overall aim and the study's research questions, the following objectives are central:

1. To understand deeper the implementation of organic coconut sugar SSCM strategy that has been implemented at PT. Mega Inovasi Organik.
2. To explore the barriers to the organic coconut sugar SSCM strategy implementation at PT. Mega Inovasi Organik.

1.4 Research Advantages

These are the benefits of this study:

1. For Company

The findings of this study can be utilized as a factor in the company's sustainable supply chain management decision-making

2. For Academics

This research is anticipated to contribute to the academic community's education, particularly in regards to sustainable supply chain strategies for organic coconut sugar.

3. For Researcher

To develop a comprehension and application of theory in actual practice in the field and as a prerequisite for earning a degree in the field and as a prerequisite for the aforementioned earning a degree.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Sustainability has emerged as a pressing global concern, prompting industries worldwide to shift towards adopting sustainable supply chains. In the modern business landscape, companies must take into account not only their profitability but also the well-being of people and the planet to ensure their continued existence. With the help of literature review, interview, direct observation, and the experts, eleven barriers encountered during SSCM implementation were identified. More or less, those reflect the issues that PT. MIO is trying to encounter the most, currently. Those barriers are consumer desire for lower prices, lack of R&D on sustainability, lack of awareness of benefits of sustainability, resistance to change and adopting innovation in sustainability, lack of training and education on sustainability, lack of performance metrics/evaluation standards on sustainability, lack of regulations and enforcement of environment standard, and lack of corporate structure and process.

There are several levels of the barriers that show their dependence level. Several barriers such as lack of awareness of sustainability, lack of structure and processes, lack of training and education on sustainability, and lack of research and development on sustainability, resistance to change and adopt the innovation on sustainability have created new barriers: the consumer desire for lower price. From this barrier as a linkage factor, lack of performance metrics/evaluation standard and

lack of enforcement and regulations of environment standard appear, which become dependent barriers.

Through the observation and interview sessions, a valuable opportunity arose to gain deeper insights into the supply chain, particularly its upstream stage involving local farmers. The findings clearly indicate that issues related to training and education were frequently mentioned, signalling the urgent need to identify and address this particular barrier. Given that the study utilized ISM as its analysis method, it becomes convenient to pinpoint additional barriers that require resolution, in conjunction with the primary concern of inadequate training and education on sustainability. In summary, it is essential to prioritize barriers with significant driving power and devise solutions that address the urgency and interplay between these related obstacles.

5.2 Recommendations

Based on the preceding conclusion, the author advocates that the company should develop distinct guidelines aimed at addressing multiple barriers through a unified program. Considering the interconnectedness of some of these barriers, maximizing existing initiatives while remaining attentive to current challenges would prove beneficial. Undoubtedly, resistance to adopting sustainability practices and the lack of training present common obstacles across various industries. Introducing more progressive concepts may face hurdles in transforming conventional practices. To overcome this, a consistent and ongoing flow of knowledge and training must be provided, accompanied by the implementation of enticing programs to bolster the motivation of local farmers.

To enhance the effectiveness of the company's efforts, attention should also be directed towards improving internal factors that can better mobilize local farmers. Allocating additional human capital to the Integrated Crop Management (ICM) position would facilitate the equitable dissemination of organic and Fair-Trade principles to the local farmers. This recommendation complements the previous one regarding training and education.

Moreover, establishing Key Performance Indicators (KPIs) for local farmers becomes imperative. This will aid in identifying which farmers require more intensive training and provide them with enhanced motivation. By implementing KPIs, the company can accurately measure the progress and impact of its sustainable practices on the farmers' performance, fostering continuous improvement and success.

BIBLIOGRAPHY

- Al Zaabi, S., Al Dhaheiri, N., & Diabat, A. (2013). Analysis of interaction between the barriers for the implementation of sustainable supply chain management. *International Journal of Advanced Manufacturing Technology*, 68(1–4), 895–905. <https://doi.org/10.1007/s00170-013-4951-8>
- Albino, V., Balice, A., & Dangelico, R. M. (2009). Environmental strategies and green product development: An overview on sustainability-driven companies. *Business Strategy and the Environment*, 18(2), 83–96. <https://doi.org/10.1002/bse.638>
- Ashby, A., Leat, M., & Hudson-Smith, M. (2012). Making connections: A review of supply chain management and sustainability literature. In *Supply Chain Management* (Vol. 17, Issue 5, pp. 497–516). <https://doi.org/10.1108/13598541211258573>
- Bohdanowicz, P., Zientara, P., & Novotna, E. (2011). International hotel chains and environmental protection: An analysis of Hilton's we care! programme (Europe, 2006-2008). *Journal of Sustainable Tourism*, 19(7), 797–816. <https://doi.org/10.1080/09669582.2010.549566>
- Brockhaus, S., Kersten, W., & Knemeyer, A. M. (n.d.). *Where Do We Go From Here? Progressing Sustainability Implementation Efforts Across Supply Chains*.
- Carter, C. R., & Easton, P. L. (2011). Sustainable supply chain management: Evolution and future directions. In *International Journal of Physical Distribution and Logistics Management* (Vol. 41, Issue 1, pp. 46–62). <https://doi.org/10.1108/09669582.2010.549566>
- Garnett, T., Charles, & H., Godfray, J., Appleby, M., Balmford, A., Barrett, J., Bateman, I., Benton, T., Bloomer, P., Burlingame, B., Coitinho, D., Dalmeny, K., Dawkins, M., Dolan, L., Fraser, D., Haines, A., Harris, B., Herrero, M., Hoffmann, I., ... Willis, K. (2012). *Oxford Martin Programme on the Future of Food Sustainable intensification in agriculture Navigating a course through competing food system priorities A report on a workshop With expert contributions from* (Issue 1). <http://www.futureoffood.ox.ac.uk>
- Gold, S., Seuring, S., & Beske, P. (2010). Sustainable supply chain management and inter-organizational resources: A literature review. *Corporate Social Responsibility and Environmental Management*, 17(4), 230–245. <https://doi.org/10.1002/csr.207>

- Hart, S. L., & Milstein, M. B. (2003). Creating sustainable value. In *Academy of Management Executive* (Vol. 17, Issue 2).
- Herren, A., Hadley, J., & Klein, E. (2010). *Barriers to Environmental Sustainability Facing Small Businesses in Durham, NC*.
- Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour*, 6(2–3), 94–110. <https://doi.org/10.1002/cb.210>
- Luthra, S., Mangla, S. K., Xu, L., & Diabat, A. (2016). Using AHP to evaluate barriers in adopting sustainable consumption and production initiatives in a supply chain. *International Journal of Production Economics*, 181, 342–349. <https://doi.org/10.1016/j.ijpe.2016.04.001>
- Menon, R. R., & Ravi, V. (2021). Analysis of barriers of sustainable supply chain management in electronics industry: An interpretive structural modelling approach. *Cleaner and Responsible Consumption*, 3. <https://doi.org/10.1016/j.clrc.2021.100026>
- Montabon, F. (n.d.). *MAKING SUSTAINABILITY SUSTAINABLE*.
- Nazam, M., Hashim, M., Ahmad Baig, S., Abrar, M., Ur Rehman, H., Nazim, M., & Raza, A. (2020). Categorizing the barriers in adopting sustainable supply chain initiatives: A way-forward towards business excellence. *Cogent Business and Management*, 7(1). <https://doi.org/10.1080/23311975.2020.1825042>
- Niggli, U. (2014). Sustainability of organic food production: Challenges and innovations. *Proceedings of the Nutrition Society*, 760. <https://doi.org/10.1017/S0029665114001438>
- Pagell, M. (n.d.). *WHY RESEARCH IN SUSTAINABLE SUPPLY CHAIN MANAGEMENT SHOULD HAVE NO FUTURE*.
- Petersen, K. J., Handfield, R. B., & Ragatz, G. L. (2005). Supplier integration into new product development: Coordinating product, process and supply chain design. *Journal of Operations Management*, 23(3–4), 371–388. <https://doi.org/10.1016/j.jom.2004.07.009>
- Preuss, L. (2009). Addressing sustainable development through public procurement: The case of local government. *Supply Chain Management*, 14(3), 213–223. <https://doi.org/10.1108/13598540910954557>

- Reisch, L., Eberle, U., & Lorek, S. (2013). Sustainable food consumption: An overview of contemporary issues and policies. *Sustainability: Science, Practice, and Policy*, 9(2), 7–25. <https://doi.org/10.1080/15487733.2013.11908111>
- Sari, R. A., Indah, S., Sari, K., Fanani, A. A., & Sholihah, Q. (2021). *Value Chain and Customer Value Analysis of Organic Food Supply Chain*.
- Sarkis, J., Zhu, Q., & Lai, K. H. (2011). An organizational theoretic review of green supply chain management literature. In *International Journal of Production Economics* (Vol. 130, Issue 1, pp. 1–15). Elsevier B.V. <https://doi.org/10.1016/j.ijpe.2010.11.010>
- Seuring, S., & Müller, M. (2008a). Core issues in sustainable supply chain management - A Delphi study. *Business Strategy and the Environment*, 17(8), 455–466. <https://doi.org/10.1002/bse.607>
- Seuring, S., & Müller, M. (2008b). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, 16(15), 1699–1710. <https://doi.org/10.1016/j.jclepro.2008.04.020>
- Sezen, B., & Turkkantos, S. (2013). The effects of relationship quality and lean applications on buyer-seller relationships. In *Int. J. Business Performance and Supply Chain Modelling* (Vol. 5, Issue 4).
- Stevens, G. C., & Johnson, M. (2016). Integrating the Supply Chain ... 25 years on. *International Journal of Physical Distribution and Logistics Management*, 46(1), 19–42. <https://doi.org/10.1108/IJPDLM-07-2015-0175>
- Sustainable-Lowland-Agriculture-Development-in-Indonesia*. (n.d.).
- Svensson, G. (2007). Aspects of sustainable supply chain management (SSCM): Conceptual framework and empirical example. *Supply Chain Management*, 12(4), 262–266. <https://doi.org/10.1108/13598540710759781>
- Sweetin, V. H., Knowles, L. L., Summey, J. H., & McQueen, K. S. (2013). Willingness-to-punish the corporate brand for corporate social irresponsibility. *Journal of Business Research*, 66(10), 1822–1830. <https://doi.org/10.1016/j.jbusres.2013.02.003>
- Taticchi, P., Tonelli, F., & Pasqualino, R. (2013). Performance measurement of sustainable supply chains: A literature review and a research agenda. *International Journal of Productivity and Performance Management*, 62(8), 782–804. <https://doi.org/10.1108/IJPPM-03-2013-0037>

- Tay, M. Y., Rahman, A. A., Aziz, Y. A., & Sidek, S. (2015). A Review on Drivers and Barriers towards Sustainable Supply Chain Practices. *International Journal of Social Science and Humanity*, 5(10), 892–897. <https://doi.org/10.7763/ijssh.2015.v5.575>
- Varsei, M., Soosay, C., Fahimnia, B., & Sarkis, J. (2014). Framing sustainability performance of supply chains with multidimensional indicators. *Supply Chain Management*, 19(3), 242–257. <https://doi.org/10.1108/SCM-12-2013-0436>
- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L. J., Fanzo, J., Hawkes, C., Zurayk, R., Rivera, J. A., de Vries, W., Majele Sibanda, L., ... Murray, C. J. L. (2019). Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. In *The Lancet* (Vol. 393, Issue 10170, pp. 447–492). Lancet Publishing Group. [https://doi.org/10.1016/S0140-6736\(18\)31788-4](https://doi.org/10.1016/S0140-6736(18)31788-4)
- Zayed, E. O., & Yaseen, E. A. (2021). Barriers to sustainable supply chain management implementation in Egyptian industries: an interpretive structural modeling (ISM) approach. *Management of Environmental Quality: An International Journal*, 32(6), 1192–1209. <https://doi.org/10.1108/MEQ-12-2019-0271>