

Date: 7th Nov 2020

Acceptance Letter

Dear Author(s): Thongphon Promsaka Na Sakolnakorn, Aree Naipinit, Thanaphan Naipinit Chula Charernvong, Arun Sonechai Teeraphat Kitjarak, Supachai Tritose Wanchai Dhammasaekakarn Pongsatean Luengalongkot

Paper ID	ARDA_JOURNAL_12608
Paper Title	Strategic Management of Community Enterprises using Recycled Raw Materials

This is to enlighten you that above manuscript reviewed and appraised by the review committee members of ARDA and it is accepted for the purpose of publication in the "**International Journal of Modern Agriculture**" with ISSN: 2305-7246 that will be available at <http://www.modern-journals.com/index.php/ijma>

You have to send following documents at info@ardaconference.com on or before 9th Nov 2020.
1. Final Paper | Ms Word .doc/.docx file.
2. Proof of Registration | Scanned | Online Received Email.

Note: Please read carefully

1. Above manuscript will be published within 30-45 days from your registration.
2. International Journal of Modern Agriculture is a ESCI-Web of Science Indexed Journal.
3. Author(s) will receive Publication information and Published Paper link through ARDA.
4. You may see more about the journal at: <http://www.modern-journals.com/index.php/ijma>.
5. You will receive Volume/ Issue information of your paper very soon.

Sincerely

Dr. Simpson Rodricks

Dr. Simpson Rodricks
President,
ARDA.





Want to receive updates from select journals, publishers and organizations: including call for papers, curated articles, new journal & book updates, and conference & events updates?

Dismiss

Subscribe

General Information

Web of Science Coverage

Return to Search Results

INTERNATIONAL JOURNAL OF MODERN AGRICULTURE

Share This Journal

ISSN / eISSN 2305-7246

Publisher MODERN JOURNALS, UNIV JORDAN, PO BOX 13440, AMMAN, JORDAN, 11942

General Information

Journal Website

Visit Site

Frequency

Quarterly

Issues Per Year

4

Country / Region

JORDAN

Our policy towards the use of cookies

All Clarivate websites use cookies to improve your online experience. They were placed on your computer when you launched this website. You can change your cookie settings through your browser.

Ok to Continue

Cookie Policy

STRATEGIC MANAGEMENT OF COMMUNITY ENTERPRISES USING RECYCLED RAW MATERIALS

**Thongphon Promsaka Na Sakolnakorn¹, Aree Naipinit², Thanaphan Naipinit³, Chula Charernvong⁴,
Arun Sonchai⁵, Teeraphat Kitjarak⁶, Supachai Tritose⁷, Wanchai Dhammasaccakarn⁸,
Pongsatean Luengalongkot⁹**

¹Faculty of Management Science, Silpakorn University, Thailand

²Faculty of Business Administration and Accountancy, Khon Kaen University, Thailand

³College of Asian Scholars, Thailand

^{4,5,6,7}Faculty of Humanities and Social Science, Phetchabun Rajabhat University, Thailand

⁸Faculty of Liberal Arts, Prince of Songkla University, Thailand

⁹Faculty of Political Science and Law, Burapha University, Thailand

Corresponding author:

Thongphon Promsaka Na Sakolnakorn

Faculty of Management Science, Silpakorn University, Thailand

Email: thongphon.p@gmail.com

Abstract

The objective of this paper is to present the strengths, weaknesses, opportunities, and threats of the use of recycled raw material by community enterprises and the strategic management of this use. This study uses qualitative methods including in-depth interviews with 12 key informants and a focus group with six participants to discuss guidelines for the strategic management of community enterprises. In addition, the data were analyzed using SWOT, a TOWS matrix, and descriptive analyses. From the study, we found that community enterprises face many problems, such as product design, market channels, and lack of knowledge. Therefore, we divide the strategic management of community enterprises that use recycled raw materials into four strategies: product design, new distribution channels, promotion of the 3R concept, and promotion of the circular economy.

Key words: Strategic; Management; Recycle; Raw Material

Introduction

In Asian cities, the costs of waste management are increasing as the costs of transport increase and as available land decreases [1]. Community solid waste in Thailand faces critical problems similar to those of large cities around the world. There were 27.93 million tons of solid waste generated in 2018, but only 10.85 million tons were managed with appropriate sanitation [2]. Community solid waste in Thailand is divided into four categories: compostable waste, such as food and vegetable matter; recyclable waste, such as plastic and paper; hazardous waste such as medical refuse; and general waste that is difficult to decompose, such as plastic bags [3]. In Thailand, solid waste management is divided into three categories by process: the origin (household solid waste), the midway point (the process of waste collection and transportation to landfills), and final disposal [4].

In addition, the Thai government is seeking ways to resolve the problem of solid waste in the community, and it has implemented guidelines for local administrative organizations to manage waste using the 3Rs (reduce, reuse, and recycle). The government encourages community enterprises to implement recycling by using raw materials as components of goods and products [3]. In Thailand, a community enterprise is a group of residents in the community. Production occurs in the community, and ideas and innovation are based on local wisdom, knowledge, and practice [5]. In addition, the raw materials of community enterprises are based on the natural resources in a residential area or neighborhood [6].

As mentioned above, community waste is a significant issue that the Thai government has established policies to solve. It also encourages local administrative organizations to set policies and activities for waste management in their areas. Encouraging community enterprises to use recycled raw materials as components in products is one strategy that can reduce waste and provide many benefits to the community. Thus, the objective of this paper is to study the strengths, weaknesses, opportunities, and threats (SWOT) of community enterprises using recycled raw material, and to analyze the strategic management of community enterprises in such use.

Literature Review

The concept of the green economy has become a global trend in sustainability, and many customer decisions, behaviors, and attitudes are based on environmental awareness. Customers consider the environment when deciding whether to purchase products, and they adopt attitudes related to the importance of individual acts in solving waste problems and in promoting recycling [7]. Thus, this literature review presents studies on the benefits of and obstacles to recycling.

The recycling of plastics from waste can conserve resources. Therefore, a hierarchy for waste management needs to be proposed to reduce the amount of plastic waste and protect the environment [8]. The recycling of waste is the process of collecting and processing materials from trash and turning them into new products. Recycling can benefit the community and the environment in many ways. It reduces the amount of waste sent to landfills; conserves natural resources such as timber, water, and minerals; prevents pollution by reducing the need to collect new raw materials; helps create jobs in the recycling and manufacturing industries; and increases economic security by tapping domestic sources for materials [9].

Recycling benefits the conservation of natural resources as it saves trees and forests. The recycling of glass reduces the need to use new raw materials such as sand, protecting ecosystems and wildlife. Recycling reduces the demand for raw materials, saves energy, and reduces climate change. It is less expensive than waste collection and disposal, and it creates jobs. For example, in the United Kingdom, researchers have found that the recycling of 70 percent of waste can create 50,000 jobs by the year 2025 [10]. Thus, one of the major benefits of recycling is that it creates more jobs in the community and provides stability to the entire process. For example, people who take aluminum cans or glass bottles to a recycling plant receive cash benefits in return. Old newspapers, appliances, plastic, rubber, steel, copper, and even beer cans can be sold for money [11].

On the other hand, many authors point out the obstacles to recycling: governments do not have policies to support it, and businesses incur more operational costs by implementing it [12]. Furthermore, many consumers continue to buy low-price products made from raw materials that are difficult to decompose, and the recycling of technology and machinery is costly [13]. In some countries, recycled materials have high prices, and this reduces the motivation of businesses to use recycled raw materials [14].

In conclusion, recycling has important benefits for businesses; it can reduce the costs of waste disposal and save money compared to buying raw materials. Making products from recycled materials requires less energy than making them from new raw materials, and it reduces the cost of raw materials for production. However, the obstacles to using recycled raw materials are that many people still want to buy products with lower prices, and the materials in these products are often difficult to decompose. Moreover, governments do not have policies to support recycling, such as tax promotion, and businesses incur high costs by purchasing new machinery that uses high technology for recycling.

Methodology

In this paper, we use a qualitative method through in-depth interviews and focus groups with a purposive sampling of seven community enterprises in Thailand that have made products using recycled waste as a raw material. This study was conducted between March and October of 2019.

Methods

For this study, we used multiple empirical methods of data collection including interviews, focus groups, observations, and fieldwork investigations. We used purposive sampling for interviews with 12 key informants responsible for community enterprises as well as focus-group discussions (six participants per discussion) with academicians and members of community enterprises.

Analytical Techniques

We used data and investigator triangulation and methodological triangulation techniques to check and compare the data. We then used SWOT, a TOWS matrix, and descriptive analyses of the interview data to analyze the full data set.

Results

A community enterprise is a small business that creates economic activity in rural areas and contributes to the quality of people’s lives. Our study found that numerous community enterprises try to use recycled raw material in their production; most recycled material in rural areas consists of glass and plastic bottles, beer and soft-drink cans, rags, and waste paper. Residents in rural areas understand the concepts of reducing, reusing, and recycling (3R). However, few residents show concern for using the 3R concept, especially the sorting of garbage before disposal. In addition, many community enterprises try to produce products from recycled raw material, but few succeed. In table 1, we present the strengths, weaknesses, opportunities, and threats for community enterprises that use recycled raw material.

Table 1. Strengths, weaknesses, opportunities, and threats (SWOT) for community enterprises using recycled raw material.

<i>Strength</i>	<i>Weakness</i>
<ul style="list-style-type: none"> • Incentive to recycle more waste • Low cost of raw material • Positive impact of social influence on purchase intentions for eco-friendly products • Ability to sell products online • Environmentally friendly 	<ul style="list-style-type: none"> • Lack of market channels • Lack of necessary internet-marketing knowledge and activities • Lack of product design • The struggle of competing on price • Competitors offer similar products quickly
<i>Opportunity</i>	<i>Threat</i>
<ul style="list-style-type: none"> • Municipalities encourage communities to use the 3R concept. • Ministry of Interior emphasizes municipal waste management. • Thai government allows businesses to import plastic beads and/or polyethylene resin from overseas at lower cost than local recycled material, with community enterprises using recycled raw material at lower cost or for free compared with a few year ago. 	<ul style="list-style-type: none"> • Lack of concern among residents for the concept of 3R • Less knowledge about recycled material • Less concern about the environment • Recycled products are often of lower quality • Scarcity of materials

Table 1 shows that local and central governments have policies to encourage the 3R concept in communities, especially reuse and recycling, to reduce solid waste. Many community enterprises try to use

recycled raw materials in their production, but market channels present a major obstacle to their success. In an interview, one member of a community enterprise stated: "We used recycled cans as a raw material to produce sun hats, but it is a difficult product to sell. We have only a few farmers and tourists who like hats made from recycled cans" (interview in October 2019). Table 2 presents solutions to the problems that community enterprises face in using recycled raw material.

Table 2. The analyzed strategic management of community enterprises using recycled raw materials.

	<i>External Opportunities (O)</i>	<i>External Threats (T)</i>
TOWS Matrix for Community Enterprises Using Recycled Raw Materials	<ul style="list-style-type: none"> • Municipalities encourage communities to use the 3R concept. • Ministry of the Interior emphasizes municipal waste management. • Prices for raw materials are low compared with a few years ago. 	<ul style="list-style-type: none"> • Lack of concern among residents for the 3R concept • Less knowledge about recycled material • Less concern about the environment • Low quality of recycled products • Scarcity of materials
<i>Internal Strengths (S)</i>	<i>SO</i>	<i>ST</i>
<ul style="list-style-type: none"> • Incentive to recycle more waste • Low cost of raw material • Positive impact of social influence on purchase intentions for eco-friendly products. • Ability to sell product online • Environmentally friendly 	<ul style="list-style-type: none"> • Use new distribution channels to meet new market demands. • Promote a circular economy. 	<ul style="list-style-type: none"> • Community enterprises should collaborate with local government to promote 3R among residents and educate them about the benefits. • Set up a place for residents to donate recycled products to community enterprises.
<i>Internal Weakness (W)</i>	<i>WO</i>	<i>WT</i>
<ul style="list-style-type: none"> • Lack of market channels • Lack of necessary internet marketing knowledge and activities. • Lack of product design • The struggle of competing on price. • Competitors can offer similar products quickly. 	<ul style="list-style-type: none"> • Establish partnerships with local educational institutions to design quality products and meet market demand. • Collaborate with professional marketing companies for domestic and international markets. 	<ul style="list-style-type: none"> • Product design: Community enterprises should develop a wide range of products from recycled raw materials such as bags woven from plastic bags or home decorations from recycled waste.

In Table 2, we used a TOWS matrix to analyze the strategic management of community enterprises that use recycled raw materials. Based on this study, strategic management can be divided into three categories:

product design, new distribution channels, promotion of the 3R concept, and promotion of a circular economy in the community. We explain these categories in Table 3.

Table 3. Strategic management of community enterprises using recycled raw material.

<i>Strategy</i>	<i>Management</i>	<i>Remark</i>
1) Product design	<ul style="list-style-type: none"> • Community enterprises should develop a wide range of products from recycled raw materials such as bags woven from plastic bags, or home decorations from recycled waste. • Government units should train members of community enterprises to understand product design and creative thinking, and product design should follow customer satisfaction. • Establish partnerships with local educational institutions to design quality products that meet market demands. 	<ul style="list-style-type: none"> • Product design should be based on recycled raw materials found in the community such as glass and plastic bottles, beer and soft-drink cans, rags, and waste paper. • Product design should be based on free natural resources.
2) New distribution channels	<ul style="list-style-type: none"> • Use new distribution channels to meet new market demands. • Use online platforms for Product distribution. • Collaborate with professional marketing companies for domestic and international markets. 	<ul style="list-style-type: none"> • Many community enterprises do not use the internet and online marketing because they lack knowledge and higher education.
3) Promotion of 3R in the community	<ul style="list-style-type: none"> • Community enterprises should collaborate with local governments to promote 3R among residents and to educate them about its benefits. • Establish waste bank projects in all communities and encourage community enterprises to buy recycled raw materials from the waste bank. • Set up places for residents to donate recycled materials to the community. 	<ul style="list-style-type: none"> • A waste bank is an intermediary institution to transform waste into cash by buying waste back and properly saving money from the waste in the banking system.
4) Promote a circular economy	<ul style="list-style-type: none"> • Government units should help residents of a community to understand the circular economy concept. • Community enterprises should implement the circular economy into 	<ul style="list-style-type: none"> • Circular economy, based on 3R, improves or uses waste as components of new products to create new value. The life cycle of the circular economy is a closed loop from the source of material through product design, using

Table 3. Strategic management of community enterprises using recycled raw material.

<i>Strategy</i>	<i>Management</i>	<i>Remark</i>
	their production lines.	material that can decompose, to production, logistics, distribution, consumption or use, and finally collection for reuse and recycling [4].

In addition, to support the recycling of raw materials, community enterprises should collaborate with waste bank projects to collect recycled raw materials. Government units (local administrative organizations or LAO) are also key agencies in promoting the 3R concept and circular economy in communities to raise concern among residents about how to receive value from waste.

Conclusion

For the strategic management of recycled raw materials, community enterprises should implement a circular economy in all production lines. They should rethink product design by using recycled raw materials combined with material from natural resources. Product design is also a requirement for meeting customer demand. In addition, the study found that community enterprises face many problems such as market channels and knowledge of innovation. Therefore, they should collaborate with professional marketing companies on surveys and product distribution in both domestic and international markets. In Thailand, government agencies are important in encouraging community enterprises in all aspects of knowledge. Therefore, they should establish more training programs appropriate to the current business environment, and they should continue to promote the value of the 3R concept, including circular economy, in the community. Finally, the Thai government should revise tax laws to reduce tax for enterprises that use recycled raw materials and produce goods that are friendly to the environment.

References

1. C. Godden-Bryson, "Waste pickers in Asia". Contesting value and values, recycling cities (p.107-145). Singapore: Asia Research Institute, 2011.
2. Office of Natural Resources and Environmental Policy and Planning, "Amount of community solid waste". Database for Environmental Quality Report 2019. Retrieved from http://www.onep.go.th/env_data/2019/
3. T. Promsaka Na Sakolnakorn, "The guidelines for promotion of circular economy program of Local Administrative Organization for sustainable community development," Master Thesis in Human and Social Development, Graduate School, Chulalongkorn University, Thailand, 2020.
4. T. Promsaka Na Sakolnakorn, U. Leknoi, A. Naipinit, P. Luengalongkot, and A. Dhiravisit, "Strategic management of implementation of the circular economy concept into municipal solid waste management: A case study municipality in Thailand." *Solid State Technology*, vol. 63 no. 2s, pp. 249-256, 2020.
5. A. Naipinit, T. Promsaka Na Sakolnakorn, and P. Kroeksakul, P., "Strategic management of community enterprises in the upper northeast region of Thailand," *Journal of Enterprising Communities: People and Places in the Global Economy*, vol. 10 no. 4, pp. 346-362, 2016. <https://doi.org/10.1108/JEC-06-2015-0032>
6. T. Promsaka Na Sakolnakorn, and A. Naipinit, "Guidelines for the management of community enterprises in the Songkhla lake basin of Thailand," *Asian Social Science*, vol. 9 no. 11, pp. 166-173, 2013.
7. G. Martinho, A. Pires, G. Portela, and M. Fonseca. "Factors affecting consumers' choices concerning sustainable packaging during product purchase and recycling," *Resources, Conservation and Recycling*, vol. 103, pp. 58-68, 2015. <http://dx.doi.org/10.1016/j.resconrec.2015.07.012>
8. F. Gu, J. Guo, W. Zhang, P.A. Summers and P. Hall, "From waste plastics to industrial raw materials: A life cycle assessment of mechanical plastic recycling practice based on a real-world case study," *Journal of*

- Environmental Management, vol. 266, pp. 1192-1207, 2020.
<https://doi.org/10.1016/j.jenvman.2020.110577>
9. United States Environmental Protection Agency. "Recycling basics". 2020. Retrieved from <https://www.epa.gov/recycle/recycling-basics>
 10. Friends of the Earth. "7 benefits of recycling." Friends of the Earth 2018. Retrieved from <https://friendsoftheearth.uk/natural-resources/7-benefits-recycling>
 11. Rinkesh. "Are benefits of recycling worth all the effort." Conserve Energy Future 2020. Retrieved from <https://www.conserve-energy-future.com/benefits-of-recycling.php>
 12. G. Mario, R. Lucia, and N. Monia. "Circular economy, permanent materials and limitations to recycling: Where do we stand and what is the way forward." Waste Management and Research, vol. 35 no. 8. pp. 793-794. 2017
 13. S. Ritzén, and G. Ölundh Sandström, "Barriers to the circular economy – integration of perspectives and domains." Procedia CIRP, vol. 64, pp. 7 – 12. 2017. <https://doi.org/10.1016/j.procir.2017.03.005>
 14. B. Simon. "What are the most significant aspects of supporting the circular economy in the plastic industry." Resources, Conservation & Recycling, vol. 141, pp. 299-300, 2019. <https://doi.org/10.1016/j.resconrec.2018.10.044>