

**ANALYSIS OF REVERSE LOGISTIC (RL) PRODUCTS OF PEMPEK, PROCUREMENT OF GREEN PROCUREMENT, DESIGN AND PACKAGING ECO, WASTE MANAGEMENT AND ENVIRONMENT MANAGEMENT TO GREEN SUPPLY CHAIN MANAGEMENT (GSCM) ON SPECIAL CULINARY SME PALEMBANG.**

**<sup>1</sup>Heriyanto, <sup>2</sup>Lin Yan Syah, <sup>3</sup>Andrian Noviardy**

*<sup>1,2,3</sup>Fakultas Ekonomi dan Bisnis, Universitas Bina Darma Palembang  
email : <sup>1</sup>[heriyanto@binadarma.ac.id](mailto:heriyanto@binadarma.ac.id), <sup>2</sup>[linyansyah@binadarma.ac.id](mailto:linyansyah@binadarma.ac.id),  
<sup>3</sup>[andrian.noviardy@binadarma.ac.id](mailto:andrian.noviardy@binadarma.ac.id)*

**Abstract.** *This study aims to learn about the practices of Reverse Logistic (RL) of pempek products, the practice of green procurement, eco design and packaging, environmental management and environmentally friendly management of Green Supply Chain Management (GSCM) in pempek production in SMEs special culinary pempek in the city Palembang. As a city famous for its culinary pempek, SMEs are expected to introduce environmentally friendly products in the practices of these activities. These practices are conducted to support the GSCM Green Supply Chain Management concept to minimize the negative impact caused by what they have done. To support the Green Supply Chain Management (GSCM) concept, it is necessary to carry out expected evaluations to find out the constraints faced by SMEs in these activities. By doing research on 28 SMEs culinary specialty pempek scattered in the city of Palembang, Knowing SMEs that have not implemented the Green Supply Chain Management (GSCM) concept in their activities. Green Supply Chain Management (GSCM) concept in their activities. This is evident from the results of observations and interviews directly to each of SMEs. Therefore, to make SMEs aware of the importance of the concept of GSCM then the relevant parties need to socialize for the realization of the GSCM concept.*

**Keywords.** *Reverse Logistic (RL) Pempek Products, Green Procurement Practices, Eco Friendly Design and Packaging, Waste Management, Environmental Management and Green Supply Chain Management (GSCM)*

## **A. Introduction**

### **1. Background of study**

Palembang is one of the cities producing fish-based products, fish-based food processing is processed into processed foods such as: pempek, tekwan, model, and kemplang. This type of food has become characteristic of the city of Palembang, even can be found in remote areas of the city. Among the types of food from processed fish meat is the most popular city of Palembang is pempek. Even all age groups like this one meal, ranging from children's groups, adolescents, adults

to parents also like the deliciousness of this fish pempek. Therefore, many Small and Medium Enterprises (SMEs) are running fish pempek production. SMEs are one of the economic actors that have a role, an important potential and dominant position in realizing economic development. In addition, SMEs are also able to reduce unemployment in Indonesia because SMEs absorb a lot of manpower. Palembang city is one of the areas that have a diversity of SME sector in it. Some of the SMEs in the city of Palembang in the dominance of the culinary trade and clothing typical of Palembang. In the field of Indonesian economy, small and medium enterprises (SMEs) are very important, to increase the income of the state and as the pemerak of the state economy. SMEs have a characteristic of small capital, slightly high risk and relatively low education but able to generate high income, and bring prosperity to the owner. With the existence of SMEs unemployment in Indonesia can be reduced.

The development of culinary business is increasingly advanced and rapidly indeed is an achievement to be proud of. However, these developments also bring a new challenge for humans, namely the existence of pempek products that do not sell well so that the necessary efforts to recycle or re-use. A well-known term pertaining to the issue is reverse logistics, where the reuse of unused goods is used. Utilization has a goal both for the environment and economical. Because SMEs Pempek are already spread in the city of Palembang due to many competitors in making sales. Competition is a natural thing that every business is required to win the competition. One is to create attractive and quality design that can attract consumers, Packaging food or packing is very important that food is protected from damage. Most entrepreneurs out there think that the quality of a product and the way of marketing is much more important to increase sales, rather than focus on product packaging. food packaging has many types of plastic, aluminum and bottles there are hygienic ones that are not. Though some elements that affect the sale of products such as product quality, service, marketing, and packaging also support each other. Not only that which should be considered SMEs in opening pempek business should consider the waste generated. For example in the process of boiling pempek usually the SMEs directly dispose of water from the remaining boiling pempek. Air from the remaining boiling pempek can be said that waste has a negative impact on the environment. Waste is the waste that its presence at a certain time and place is not desired in the environment because it does not have economic value. Waste consists of substances or waste materials produced by industrial production processes whose presence can degrade the quality of the environment. In the manufacture of pempek products are usually the SMEs directly buy the milled fish market without thinking that there is a business opportunity with the manufacture of fish meal if they manage their own fish to be used as milled fish as a mixture of pempek making. If they manage their own fish it will produce solid waste in the form of fish bones, fish fins, offal and fish heads that can open business opportunities to increase revenue.

This study aims to analyze the application of GSCM conducted on pempek SMEs in Palembang City because there are still few industries that use environmentally

friendly technology, entrepreneurs tend to focus on looking for profits rather than saving a costly environment. as one of the typical culinary city of Palembang then required a step by producing a green product (green) starting from production to the product until the hands of consumers. With attractive, robust and durable packaging, safe for health and environment, it is expected that product packaging can attract consumers' attention and reduce environmental pollution.

## **2. Research Problems**

The problems studied are Reverse Logistic (RL) analysis of pempek products, green covering practices, eco design and packaging, waste management and environmental management on Green Supply Chain Management (GSCM) on SMEs culinary specialty pempek Palembang with the aim of the owners of SMEs will realize how the importance of the concept of GSCM to the practice of activities that they do. SME owners need input from related parties (Government) in implementing the GSCM.

## **B. Research Methodology**

### **1. Research design**

The design in this study uses qualitative research. Qualitative data is data presented in the form of verbs not in the form of numbers, (Noeng Muhadjir, Qualitative Research Methodology, (Yogyakarta: Rakesarasin, 1996), p.2). Furthermore, qualitative research by Moleong (2007: 6) to understand the phenomenon of what subjects experience such as behavior, perceptions, motivations, actions, etc., holistically, and by way of descriptions in the form of words and language, in a specific context that is natural and by utilizing natural methods. In this study which included qualitative data is a general description of waste management activities on Green Supply Chain Management (GSCM) on the object of research.

### **2. Data Type**

The type of research that will be conducted is qualitative research. Denzin and Lincoln (1994) consider qualitative methodologies capable of exploring a deep understanding of a particular organization or event rather than describing the surface portion of a large sample of a population including field notes, interviews, conversations, photographs and personal notes.

### **3. Data source**

The data used in this research are primary data and secondary data:

1. Primary Data is research data obtained directly from specially collected data sources and directly related to the problems studied (Bernard, 2011). Primary data of this research is obtained from the division of question guidance given to the respondents of business UKM Culinary Pempek Palembang.
2. Secondary Data is data used in the form that has been collected by the other party or a particular agency and can be directly used. The data obtained by

way of library research is the collection of materials derived from reading books, articles such as journals.

**4. Data collection** in this study, researchers used several methods to collect data such as:

1. Documentation; Documentation in this study by collecting data through, journals, internet,
2. Interview; Retrieve the necessary data Interviews are conducted directly to the respondent or the owner of the SMEs, each of whom is the respondent in this study. Interviews are used as data collection techniques if the researcher wants to do a preliminary study to find the problem to be researched, and also if the researcher wants to know the things from the more in-depth respondent and the number of respondents is little / small (Sugiyono, 2012).
3. Question Guidelines; Guidance questions that is guidance in conducting a structured interview activity and has been determined by the interviewer in collecting research data.

#### **5.Data analysis**

Data were analyzed using qualitative data analysis. as quoted by Moleong (2007: 248), is the work done by working with the data, organizing the data, sorting it into manageable units, searching and finding patterns, finding what is important and what is learned, and deciding what can be told Based on the above definition can be concluded that the initial step of data analysis is to collect existing data, arrange systematically, then present the results of his research to others.

After conducting the interview, the data analysis begins by making transcripts of the interview results, by playing back the recorded interview, listening carefully, then writing the words that are heard according to what is in the recording. After the researchers write the results of the interview into the transcript, then the researchers must read carefully to then do data reduction. Researcher make data reduction by making abstraction, that is taking and recording information that useful in accordance with research context or ignore words that do not need to get the sentence core only, but the language according to informant language.

### **C. Results and Discussion**

#### **1.Reverse Logistic (RL) Pempek Product**

To answer the Reverse Logistic Analysis (RL) of pempek product to Green Supply Chain Management (GSCM) on SMEs is done by obtaining data with question inquiries from 28 informants in Palembang City. Questions include the following:

- 1.Planning of Raw Materials Used (Fish And Starch Kanji)From the responses I can conclude that the average of small and medium business actors in the culinary field of pempek has no planning guidelines. This is seen from everyday that is if everyday usually orders only around 10-20 kg

per day but if there is an order then automatically orders will increase according to each order and customer needs.

#### 2. Please Note the Environment of Raw Materials Supplier

From the results of interviews on 28 UKM about question it can be concluded that the environment of raw material suppliers of fish should be highly considered. Fish is one of the raw materials that must exist in making pempek so that the quality of fish greatly affect pempek in terms of aroma, taste, color. The environment of fish raw material suppliers must first maintain the quality of the fish, the equipment used to grind so that the fish remain fresh and hygienic. The perpetrators of Small and Medium Enterprises (SMEs) get the raw materials of fish by directly buying fish in the market milled so that the fish used to manufacture pempek directly to the stage of manufacture without in store first. With these activities in order to save the cost for that SME players when they want to buy their milled fish think to subscribe to the fish supplier.

#### 3. Type of Raw Material Used (Kind of Fish And Starch)

Based on the results of the research 28 informants mostly chose the cork as the basic ingredient of making pempek because of the whiter color, aroma and taste produced more while the type of sago used is sago with mountain farms the reason is Sago flour has a milky white color with a texture crisp and tight, with good quality and price is also cheaper in appeal using sago merk Liauw Liong Pit flour.

#### 4. Raw Material Prices and Place of Sale

Based on the results of the question on 28 pempek informants that about the price of raw materials and place of sale is obtained by way of buying directly from the supplier so that the price earned cheaper than the market price.

#### 5. Pempek Product Not Selling Good

For pempek unsold will be sold first and then will be sold again on the next day, and there is also not sold for 2 consecutive days, then make sure the pempek is thrown away.

## **2. Green Practice Practices.**

To answer the analysis of green procurement practices on Green Supply Chain Management (GSCM) on SMEs is done by obtaining data with question questions that can be from 28 Informants in Palembang City. Questions include the following:

#### 1. Procurement of environmentally friendly pempek raw materials (not using preservatives)

Based on the authors' observation that the raw materials they use are environmentally friendly, this can be seen from the selection of quality raw

materials therefore they can guarantee that the material used does not contain preservatives or hazardous materials.

#### 2. Supplier selection

In the selection of suppliers can be concluded that they already have a fixed supplier, but how to obtain different raw materials. There are suppliers who come directly to the place of production and there are also owners of SMEs who come to the place or store the seller of raw materials.

#### 3. There is a guarantee that the materials used are certified (halal)

Based on the observations and the results of the interviews, it can be concluded that there is already guaranteed raw materials used halal certified. Like, on the sago packaging used but the average business they founded has not received a halal certificate from MUI (Majelis Ulama Indonesia) such as Pempek Rizky.

#### 4. Minimize waste from raw materials used (environmentally friendly)

From the indicator of the question, based on the information obtained, it is concluded that the owners of SMEs have not done waste minimization properly because the average waste generated a lot and the waste is not reused.

#### 5. Energy-saving, 3R power-saving (reduce, reuse, and recycle)

In terms of saving resources, 3R energy saving can be concluded that the owner of SMEs already have the number of employees in accordance with the production of pempek except Happy's Pempek not yet have employees. Electricity consumption in accordance with the usage, waste is also generated a lot and waste is not reused.

#### 6. The state of the purchasing environment

Based on the observations and the results of the interviews, it can be concluded that the circumstances of the purchasing environment already looks clean and tidy with the way they present pempek to consumers use clean plates and feasible to use and the table is always cleaned before and after the buyer come and also the glass looks clean and not dusty.

#### 7. Environmental conscious movement

From the indicator of the question, based on observations made directly found that the owners of SMEs and their employees have been doing environmental movements even though the rules have not been attached in their business as done guidelines SMEs of Pempek who have applied standard operating procedure (SOP) to employees.

### **3. Eco Design and Packaging**

To answer the analysis of green procurement practices on Green Supply Chain Management (GSCM) on SMEs is done by obtaining data with question questions that can be from 28 Informants in Palembang City. Questions include the following:

1. Guarantee packaging used environmentally friendly  
From the question asked to 28 pempek informants about Ensure Environmentally Used Packaging that the average pempek owner still uses plastic packaging, but the pempe SMEs feel confident that the packaging they use is environmentally friendly and how to distinguish attractive and environmentally friendly packaging from used plastic brands such as ampera brand, fish belida, plastic which is used to pack food and for packaging of cardboard is almost the same that distinguish only color and brand of cardboard.
2. Guarantee the packaging used does not contain harmful substances (chemicals)  
From the question asked to 28 informants pempek about Ensure Packaging Used No Contains harmful substances (chemicals). Information gleaned from 28 SMEs pempek concluded the average SME pempek studied sure that the packaging is dimereka use do not contain substances harmful to consumers because it is widely used by food vendors, from 28 SMEs pempek only one that uses the SNI and label halal LPPOM MUI , for 27 other SMEs do not have the SNI and halal label from LPPOM MUI and do not pay attention to the chemical content in the packaging that they use for the reason that the packaging used in obtaining from buyer in market instead of own production.
3. Ensure strong packaging and can hold during delivery pempek out of town and do not change the shape and taste (eco labeling)  
From the assertion about the guarantee of strong packaging and can withstand the delivery of pempek out of town and do not change the shape and taste (eco labeling) from the opinions of 28 informants almost the same answer that states that for packaging the product can keep the contents in order to stay fresh and can protect from the influence of the weather that is changing by way of sprinkling oil and sago for pempek durable and for pempek packaging is not easily damaged during remittance far and protect pempek from the smell of sting by packed with plastic, cardboard and in plastic wrap again another case with SMEs risky that use vacuum machine to pack pempek when delivery far because by using vacuum pempek machine can be more durable than sago and fried oil.

#### **4. Waste Management**

In this section will describe waste management practices on Green Supply Chain Management (GSCM) on SMEs culinary specialty pempek Palembang. There are 3 indicators in making the question for the interview, as for the 3 indicators of the question are:

1. Not dispose of liquid waste from the rest of the production just like that, processed so as not to smell and can be used again. For an indicator of the question of not disposing liquid waste from the rest of the production just like that, it is processed to avoid odor and can be used again. Information obtained from 28 Pempek SMEs can be concluded the average of the owners or Managers of Pempek SMEs in the process of boiling pempek they throw water directly from the rest of boiling pempek they do not know the impacts that occur due to wastewater they throw away. Most of them argue that the wastewater from boiling pempek produced is only a little so that they think to throw it without being processed first so as not to cause odor. Most of them do not know that the liquid waste they produce can be reused, used positively, not negatively. Why is that because the information I got from one informant said that the remaining water from boiling pempek can be used 2 times the use of boiling pempek if the water is not cloudy. They also acknowledge that although the liquid waste can be used they do not know what liquid waste is used for what. The waste water they just throw away can pollute the environment and make the quality of water, soil and air will be reduced
2. Reusing solid waste as fish bone so it can be used for cattle feed mixture. For an indicator of the question of reusing solid waste such as fishbone to be used for cattle feed mixture. Information obtained from 28 Pempek SMEs can be concluded that the average owner or Managers of Pempek SMEs do not produce solid waste such as fish bones because the owners of SMEs using milled fish that they buy directly in the market. The average of them buy direct milled fish on the market with the reason to save time and cost and not add work to manage the fish to become milled fish. Most of them do not know that, if they manage their own milled fish at home, there are business opportunities and supplement their income by managing solid waste from the remaining fish meat such as bones, heads, fins, and fish innards for cattle feed mix. Waste generated from pempek production they do not classify according to the type of waste, they throw it away without being processed first. Even the average of these SMEs no one oversees and controls in waste processing. In the process of making pempek from direct observation, information obtained from 28 informants there is one SME that uses tools can be said complete because the tools used are in the form of masks, gloves and head covering. While half of the rest only use gloves only and the other half do not use any tools in the process of making pempek.
3. The existence of related parties (government) that pay attention to AMDAL from the rest of production. Next to the question indicator about the existence of related parties (government) who pay attention to AMDAL from the rest of the production. Information obtained from interviews through 28 informants SME pempek, can be concluded the average of them said that the lack of attention of the parties (government) in terms of socialization about the AMDAL of the remaining pempek production they produce. So it is natural that there is no one from SMEs not implementing



the concept (GSCM) due to their lack of knowledge and the lack of socialization by related parties (the government)

## **5. Management of the environment**

To answer the Environmental Management Analysis on Green Supply Chain Management (GSCM) on SMEs is done by obtaining data with question questions that can be obtained from 28 Informants in Palembang City. Questions include the following:

- 1.The role of Government in environmental management (environmental quality standards) in SMEs Pempek Palembang city in this case it can be concluded that there is no government support in environmental management (environmental quality standard)
- 2.The role of government by making regulations on environmental management related parties (the government) have not yet made regulations on environmental management, so many SMEs do not know how to manage the environment from pempek production that they are environment.
- 3.Pempempering pempek with eco products for Pempek Palembang from 28 SMEs there is only one SME that has SNI lany have not yet furniture.

## **D. CONCLUSIONS AND RECOMMENDATIONS**

### **1.**

### **Conclusion**

After doing direct research on 28 informants on Pempek Reverse Logistic Analysis (RI) Pempek Products, Green Practices, Eco Design and Packaging, Waste Management and Environmental Management, Against Green Supply Chain Management (GSCM) on PEMEK Culinary SME Palembang. From the indicators that have been made then obtained information that can be concluded that 28 SMEs culinary specialty pempek Palembang not apply the concept of GSCM make none of their SMEs are Green Supply Chain Management (GSCM)

### **2.**

### **Recommendations**

With a study entitled Reverse Logistic (RL) Analysis of Pempek Products, Green Practices, Eco Design and Packaging, Waste Management and Environmental Management to Green Supply Chain Management (GSCM) in SMEs Culinary Special Pempek Palembang. In this study based on the results obtained the authors provide advice that is, the average of the owners of SMEs do not apply the concept of GSCM due to lack of knowledge of the importance of the GSCM them. Therefore, to make SME owners aware of the dangers of their production without regard to the impact on the environment, the attention of related parties (the Government) should be in socializing the application of environmentally friendly ones.

## **E. ACKNOWLEDGMENTS**

We would like to thank Ministry of Research, Technology and Higher Education of the Republic of Indonesia that have funded this research so that the research can be completed well and the Institute of Research and Community Service (LPPM) of Bina Darma University who has given permission to obtain data at the Office of Cooperatives and SMEs Palembang City and thanks to the Department of Cooperatives and SMEs Palembang City that has given permission to conduct research/ retrieval of data directly.

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