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THE ANALYSIS OF POTATO CHIPS PRODUCT DAMAGED RISK IN WIDURI JOINT VENTURE GROUP

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ABSTRACT

The purpose of this research is to identify the risks of potato chips product damaged, to measure and map the risk and formulating an effective risk mitigation strategy for Widuri joint venture group. This research uses qualitative approach. The method of risk management with Enterprise Risk Management (ERM). The location of the research is in Kijang City, Bintan, Kepulauan Riau. Data research obtained by interview, observation and documentation. The results showed that there are several factors that can cause the failure of the production process and the product itself which was an error in the selection of raw materials, passing the process of soaking potatoes, a mistake in the provision of lime paste, errors at uncontrolled fire, and neglect of human resources that have impact for entity. The impact of arising from risk was product destroyed, potatoes become scorched, and the potato chips would be easy to catch cold. The amount of risk experienced by Widuri joint venture group were reflected in the risk map formed on the measurement of risk based on probability and impact. Widuri joint venture group certainly have to develop a strategy for an effective risk mitigation were prioritized addressing the highest risk first to a lower risk so that the risk of product damaged can be minimized.

KeyWords: ERM, Product Damaged, Joint Venture

1. INTRODUCTION

Any activity that is performed whether it is by individuals or companies not in spite of the existence of such a risk. As an example of operational risk as a work accident, mistake of human resources, the risk of product damaged, and many other risks. But any risk certainly have different impact and disadvantage between levels of one company with another company. This is a thing that should be noted and taken into account by any company or trade. In order for any losses and impact posed can be minimised. Risk is commonly associated with uncertainty, as the event may or may not occur (Fadun, 2013). Risk implies exposure to

uncertainty or threat (Kannan and Thangavel, 2008); and 'a decision to do nothing explicitly avoids the opportunities that exist and leaving the threats unmanaged' (Hillson and Murray-Webster, 2007:26) (Fadun, 2013).

Each incident may cause and result in the occurrence of risk although in a very small percentage. Thus required an action or risk identification techniques and proper risk handling in accordance with the type of risk that occurs.

Businessmen must have good management in order to run the business so that the company can minimize that can occur. This means that the companies have estimate the risk of

anything that will be faced and arranged how to anticipate and who should run it.

The same thing can also occur on a joint venture group called Widuri joint venture group. A group of joint ventures that produce various kinds of processed potato chips that located in Kampung Kolam Renang at Kijang. Widuri joint venture group is established since 2000 that was formed and founded by Mrs. Sumiati along with member of the group of about 6 people who mostly are member of her family. Initially the establishment of objectives is to support family economy of the owners and members. This joint business group engaged in home industry.

As time went on, it became one of the centers of public attention in Bintan Regency. Especially in Kijang Kota Urban Village. Because the venue is often used as a place of the gift shop either by the local community as well as by tourists who are visiting Bintan Regency. In addition to gift shop products from Widuri Joint Venture Group, can also serve as a snack or a complementary dish on special events such as wedding receptions.

In conducting the activities of production, Widuri Joint Venture Group cannot be spared from risk of one of these the risk of product damaged. Such chips are destroyed, potatoes become scorched, and the potato chips would be easy to catch cold. Therefore the workers as well as the founder should pay attention to every detail of various aspects of its production to minimize the loss.

Product damaged is a condition in which the resulting product are incompatible with the standards to be achieved by the consumer and the company, of course.

This research was conducted with the following goals: 1) identify the risks of potato chips product failures, 2) to measure and map the risk, and 3) formulating an effective risk mitigation

strategy for Widuri joint venture group. This research will be divided into 5 sections, where section 1 is for introduction, part 2 for literature review, part 3 for research methods, part 4 for results research and part 5 for conclusion research that has been funded.

2. LITERATURE REVIEW

For literature pertaining to this study, the authors use as the basis of the literature as a basis for understanding the use of modeling in research methods that will be in use. One of them performed by Fadun (2013), Ahmed, I., et. al. (2016), and Wiryani, H., et. al. (2013). Related research using the approach to ERM and support the research, such as Chitakornkijasil (2010) are researching about ERM. This study describe an overview of ERM at the organization in general, ranging from the definition of ERM, to the proces control and implementation of ERM (Wiryani, Achسانی, & Baga, 2013).

2.1 Risk: Definition, Types and Risk Management Process

According to Miller (1992), the term "risk" has conventionally been used to refer to any sort of unpredictability associated with the outcomes of an organisation (Luppino, Hosseini, & Rameezdeen, 2014).

Risk permeates firm's economic activities, because risk is the lifeblood of every organisation (Shimpi, 2001) in (Fadun, 2013). According to Skipper (1997) define risk has no universal definition; hence, variability of outcomes is a common way of expressing risk. Although definitions risk varies; risk has two dimensions or components: uncertainty and consequences (Fadun, 2013). Consequently, risk can be described in terms of its effect (positive or negative) on objective (Hillson and Murray-Webster, 2004; Damodaran, 2008;

Kannan and Thangavel, 2008) in (Fadun, 2013).

Risk management aims to manage risk so that we can obtain the most optimal results. In the context of the Organization, the Organization will also face many risks. If the organization can't manage risk properly, then the organization can experience significant losses. Therefore the risk faced by the Organization should also be maintained, so that the Organization can survive, or perhaps to optimize risk. The company often deliberately take certain risks, because see potential benefits behind those risks (Hanafi, 2014).

Risk management is essentially done through the following processes (Hanafi, 2014):

a. Risk Identification

The process of risk identification performed i.e. aims to identify all types of risk inherent in every functional activity that can potentially harm the company.

b. Evaluation and risk measurement

The next step is the risk measure and evaluate those risks. The purpose of the risk evaluation is to understand the characteristics of the risk better. If we gain the better understanding, then the risks will be more easily controlled. A more systematic evaluation was conducted to "measure" the risk.

c. The Management of Risk

After analysis and evaluation of risks, the next step is manage risk. The risks should be managed. If organization fail to manage risks, the consequences are received can be quite serious, such a great loss. The risk can be managed in various way, such as avoidance, retention, diversification, or to transferred to other parties. Closely related to risk management is risk control and risk financing.

2.2Product Quality

According to Kotler and Armstrong (2012;283) product quality is the ability of a product to perform its functions which include durability, reliability, accuracy, ease to operation and repair, as well as other attributes. While according to Goetsch and Davis (1994) in Tjiptono and Chandra (2012;152) that the product quality is dynamic condition related to goods, services, people, products and environment that meet or exceed expectations. When the product has been able to run its functions can be described as a product that has good quality.

According to Kotler (2008;330), most of the product are provided on one of four quality levels; low quality, medium average quality, good quality and very good quality. Some of the above attributes can be measured objectively.

2.3Joint Venture

A contractual agreement joining together two or more parties for the purpose of executing a particular business undertaking all parties grant to share in the profits and losses of the enterprise (Zirape & Warudkar, 2016).

- a. Shared contribution of equity
- b. Shared authority, control and responsibilities
- c. Shared Revenues & Losses
- d. Shared Assets

There are many benefits of forming a Joint Venture over the conventional form of carrying on business, like providing companies with the favourable circumstances to gain access to greater resources, new capacity and expertise, and capital particularly in terms of staff and technology, sharing of risks with the venture entities and the limited life span of joint ventures (Tangri, 2013).

3.RESEARCH METHODOLOGY

This is a qualitative research. Case study approach is used in the study. This

research was conducted with interviews and observation directly in the field. This research consists of primary and secondary data. Primary data obtained through interviews, while secondary data obtained through internal data Widuri Joint Venture Group, library, journals, and the internet.

Using a purposive sampling technique. The result using this technique, the selected respondent have the knowledge, skills, and competence in the areas examined. About 3 respondents were interviewed. They are Mrs. Sumiati as the founder and manager of Widuri Joint Venture Group, Mr. Subandi as person in charge and Mrs. Sudarti as one of members and employee at the production.

They are very understanding about the scope of operational activities even associated with the performance of the employees involved in Widuri Joint Venture Group. They are very painstaking and careful about any specific and production process also the distribution.

A semi-structured questionnaire was utilized as a guideline for the interview, where the questions solicited information about potato chips product damaged.

Research on mapping method of risk using ERM beginning with the collection of primary data and data secondary. After the data is collected, performed the risk identification at each stage of the business process and the risks are analyzed probability and its impact. After that, the risk evaluated and determined the level of risk, and mapped the risk. When those risk are acceptable by the company only carried out surveillance and monitoring the risk. However, if the risk is not acceptable the company then prepared the risk mitigation strategies and the implication of managerial in the form of supervision and monitoring by the company.

4. RESULT AND DISCUSSION

The first phase in the implementation of this research was conducted by describing the profile of Widuri Joint Venture Group. Based on the first three components of the COSO standards of Enterprise Risk Management Framework internal environment, objective settings, and event identification. After that the whole identification can be obtained potential risk involved in every stage of the business cycle of the company

4.1 Internal Environment

This research was conducted at Widuri Joint Venture Group engaged in the home industry at Bintan Regency. Widuri Joint Venture Group was founded in the year 2000 and was founded by Mrs. Sumiati. Widuri Joint Venture Group has 6 members at that time.

Establishment of Widuri Joint Venture Group is aimed at supporting the family economy and also the community particularly the Bintan, situated on Kampung Kolam Renang, Kelurahan Kijang Kota, where the Widuri Joint Venture Group is located. In addition to profit or gain in terms of sheer material, it is also beneficial to the creation of employment.

Widuri Joint Venture Group produce potato chips, sweet potato chips, banana chips, and coconut root (akar kelapa) that has many variants. Widuri Joint Venture Group is also selling other kind of product from many producers. Widuri Joint Venture Group is currently used as the gift shop center for tourists.

For other manufacturers of products sold by Widuri, it doesn't mean that every producer can deposits their product Widuri Joint Venture Group prioritizes the quality of those products. It's not about the benefits that will be gained from it, much of that effort is to keep the brand image of Widuri.

4.1.1 Production Capacity

The production process of potato chips is done every 3 days with production capacity of 30 kilograms of potatoes from Medan. It can produce as much as 11 kilograms.

The selling price for each 1 kilo of spicy potato chips is IDR 100.000. if in 1 time production then gross profit was IDR 100.000 x 11 kilograms = IDR 1.100.000. while the net profit earned is 50% x IDR 1.100.000 = IDR 550.000. in a month the net profit gained from the production of potato chips is IDR 550.000 x 10 = IDR 5.500.000.

4.1.2 Production Process

Sequence of potato chips production process is as follows:

- a. The purchase of raw material and other supporting materials.
- b. Peeling the potatoes.
- c. Cutting potatoes with electrical grated modified for potato.
- d. Washing potatoes already cut or shredded.
- e. Soaking overnight by adding lime.
- f. Potatoes are drained from the marinade.
- g. After the drained, potatoes will enter the process of frying. In this stage the sorting process for the potatoes which still wet to then fried back.
- h. Finished fried, then cooled and stored in a closed container.
- i. Process of adding the sauce seasoning with traditional techniques.
- j. After given the sauce seasoning and then chill for a moment.
- k. Potato chips are ready packed and labeled.
- l. Potato chips are ready to be sold and distributed to customers.

4.2 Objective Setting

Objective setting reflected in the four sides of corporate objective by taking into account the potential risk. Objective setting of Widuri Joint Venture Group are as follows:

- a. Strategic objective: maintain product quality and improve the local economy.
- b. Operating objective: continuously make improvements to both the technical aspects as well as managerial system.
- c. Reporting objective: Transparent and accurate report for members of Widuri Joint Venture Group.
- d. Compliance objective: comply with local government regulations.

4.3 Event Identification

Talking about risk, none of the activities or jobs that do not have risk in it. So does in business run out in Widuri Joint Venture Group. Various possibilities can occur and pose a risk in doing the production process of potato chips.

4.3.1 The Impact of The Risk Occur

The impact arising from the risk that occur are:

- a. The product is destroyed
- b. Potato chips become charred
- c. The product will be easy to catch cold.

Based on the above explanation, to make it easier for authors to do the discussion and to draw conclusions, the authors make a risk identification table by calculating the frequency of how often the occurrence and extent of the impact caused (Table 1). For frequency range number 1-5, calculations based on the amount of production in 1 year. For impact range number 1-5, assuming experienced loss percentage.

Table 4.1 Categories of Risk Probability and Risk Impact on Widuri Joint Venture Group

Category of Risk Probability		
Scale	Probability	Frequency
1	Very Rare	< 5 times
2	Rare	5-10 times
3	Quite Often	10-20 times
4	Often	20-30 times
5	Very Often	> 30 times
Risk Impact Categories		
Scale	Impact	Indicator
1	Very High	100%
2	High	60%
3	Moderat	40%
4	Low	10%
5	Very Low	5%

Source: Proceed Data

Following is the table that contains the of occurrence and the impact. identification of risk and their frequency

Table 4.2 Risk Identification

No	Risk Identification	Frequency	Impact
R1	Error in the selection of raw materials	2	5
R2	Passing the process of soaking potatoes	2	5
R3	A mistake in the provision of lime paste	2	4
R4	Errors at uncontrolled fire	5	2
R5	Human error	3	4

Source: Self Proceed

4.3.2 Risk Mapping

After getting the result of the identification of risk and their frequency of occurrence and the impact caused, then we can make likelihood-impact

matrix. This matrix aimed to ease the company so they may perform the anticipation or prevention. A risk with a high level will get a major concern which must be anticipated and prevented

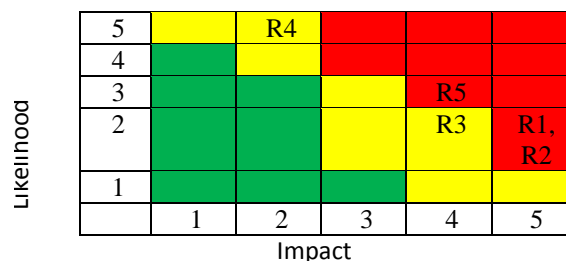


Figure 4.1 Likelihood Impact Matrix

Source: Data Proceed

Based on the matrix above, there are some explanation:

- Color green means that the risk are on the severity of low.
- Color yellow means that the risk are on the severity of medium.
- Color red means that the risk are on the severity of high.

Based on the above matrix can also be noted that:

- a. R1 (Error in the selection of raw materials), is a risk with high severity. Even though the frequency of occurrence is rare, if the risk occurs will give a huge impact. For Widuri Joint Venture Group, if an error occurs in the purchase of raw material that are not derived from Medan or Bukittinggi, so a product produce is product failed. Because the whole potato chips is not crisp and not appropriate the quality standard of potato chip of Widuri Joint Venture Group.
- b. R2 (passing the process of soaking potatoes), is a risk with high severity. Even though the frequency of occurrence is rare, if the risk occurs will give a huge impact. As if in 1 chips production time does not pass through the process soaking overnight, of course the result is not appropriate.
- c. R3(A mistake in the provision of lime paste), is the risk with moderate severity.
- d. R4 (errors at uncontrolled fire), is the risk with moderate severity. In this case only a small portion of the potato

chips product fail due to a large fire causes make easily scorched. While most of the others are still in expected quality standard of Widuri Joint Venture Group.

- e. R5 (Human error), is the risk with high severity. Because it happens in a frequency quite often and giving a high impact. Negligence on employees can happen when store the potato chips into jar or container, neglect can also occur while saving the potato chips into a jar, but the chips has not been properly prepared for the process storage because it is still somewhat hot, so that when they fully in jar it will be easy to catch cold, and negligence can also occur because of the lack of thoroughness of employee when sorting process. Of course this can lead to damaged product, and it cannot be sold and so raises a very big loss for Widuri Joint Venture Group.

4.3.3 Risk Response and Recommendation

After risk identification and risk mapping, next is doing the response to risk encountered. This is the following explanation:

Table 4.3 Risk Response and Recommendation

Risk	Level	Response	Recommendation
R1	High	Minimize the risk	Carefully inspection at any raw materials when purchasing the raw material.
R2	High	Minimize the risk	Make an auto reminder alert or alarms that systematically as a reminder flag of soaking process to be done.
R3	Medium	Minimize the risk	Create a measure or standard size composition of lime. In accordance with the amount of production. For example, 1 ounce lime for 5 kilos of potatoes.
R4	Medium	Minimize the risk	Modify the stove with cover around its axis so that its not exposed to the wind and the fire remains stable.

R5	High	Minimize the risk	Providing in depth training and knowledge about production process and procedures. If possible give a sanction over the negligence committed.
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Source: Data Proceed

5. CONCLUSION

The results showed that there are several factors that can cause product damaged which was an error in the selection of raw materials, passing the process of soaking potatoes, a mistake in the provision of lime paste, errors at uncontrolled fire, and human error that have impact for entity. The impact of arising from risk was product destroyed, potatoes become scorched, and the potato chips would be easy to catch cold. The amount of risk experienced by Widuri joint venture group were reflected in the risk map formed on the measurement of risk based on probability and impact (likelihood-impact matrix). Widuri joint venture group certainly have to develop a strategy for an effective risk mitigation were prioritized addressing the highest risk first to a lower risk so that the risk of product damaged can be minimized.

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