
ANALYZING SUPPLIER RISK AND RISK MANAGEMENT OF COCONUT SUPPLY CHAIN (A CASE STUDY OF SUPPLIERS IN PT ROYAL COCONUT KAWANGKOAN)

ANALISIS RESIKO PEMASOK DAN MANAJEMEN RESIKO DARI RANTAI PASOKAN KELAPA (STUDI KASUS PADA PEMASOK DI PT ROYAL COCONUT KAWANGKOAN)

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Abstract: Risk is the *possibility that an undesired outcome-or the absence of a desired outcome disrupts a business process*. Suppliers should be able to predict their possible risks that might be happened in their business. This study aims to identify supplier risk for coconut supplier and to give insights about the risk management. Identified perceived risks are classified as performance and relational risks managed by trust and control mechanisms. This is a qualitative study. Eight coconut suppliers had been interviewed for collecting data. Six supplier risks in performance risks and relational risks were identified. Relational risks include untrustworthy partner, unsatisfactory product quality, and delay in product delivery. Performance risks include vehicle damaged, lack of human resources, and shortage of raw materials. This research also identified trust-based mechanisms for supplier risks include farmer development and performance feedback. Control-based mechanisms for supplier risks include performance measurements and contractual agreement. The suppliers should try to implement the strategy of building trusts include goodwill trust and competence trust, and control such as output control, social control, and behavior control, simultaneously to help minimize relational and performance risks in the business.

Keywords: *supply chain management, supplier, risk, risk management.*

Abstrak: Risiko adalah kemungkinan bahwa hasil yang tidak diinginkan - atau tidak adanya hasil yang diinginkan mengganggu proses bisnis. Pemasok harus dapat memprediksi kemungkinan risiko yang mungkin terjadi dalam bisnis mereka. Penelitian ini bertujuan untuk mengidentifikasi risiko pemasok kelapa dan memberikan wawasan tentang manajemen risiko. Risiko yang teridentifikasi dikelola oleh kepercayaan dan control mekanisme. Penelitian ini adalah studi kualitatif. Delapan pemasok kelapa telah diwawancarai untuk mengumpulkan data. Enam risiko pemasok dalam risiko kinerja dan risiko relasional teridentifikasi. Hasil penelitian menunjukkan bahwa risiko relasional terdiri dari mitra yang tidak dapat dipercaya, kualitas produk yang tidak memuaskan, dan keterlambatan dalam pengiriman produk. Sedangkan risiko kinerja terdiri dari kendaraan yang rusak, kekurangan sumber daya manusia, dan kekurangan bahan baku. Penelitian ini juga mengidentifikasi mekanisme berbasis kepercayaan untuk risiko pemasok termasuk pengembangan petani dan masukan kinerja. Mekanisme berbasis kontrol untuk risiko pemasok termasuk pengukuran kinerja dan perjanjian kontraktual. Pemasok sebaiknya mencoba menerapkan strategi membangun kepercayaan, termasuk kepercayaan dan kontrol, secara bersamaan untuk membantu meminimalkan risiko relasional dan kinerja dalam bisnis.

Kata Kunci: *manajemen rantai pasokan, pemasok, resiko, manajemen resiko*

INTRODUCTION

Research Background

Supply chain management is very important to every company to achieve company success and customer satisfaction. It is a great tool for understanding and managing every activities needed to coordinate the flow of products being served to customer. Supplier as a part of supply chain plays an important role for company. A business process is a structured set of activities with specified business outcomes for customers (Davenport and Beers, 1995). It is a fundamental thing to understand that various outcomes of a specific undertaking are possible to happen in specific situations; this means that nothing is impossible and nothing is absolutely certain. Risk is something that cannot be ignored and that can threaten any business performance if there are any vulnerabilities. Supplier should be able to predict their possible risks that might be happened in their business. Every business has a possibility that it could have an operational disruption of some sort. So, in supply chain with many activities involve in there, there is an increasing chance that a risk could emerge. The longer the supply chain, the more partners exist. Knowing the risks of a disruption to supply continuity, knowing the likelihood of those risks and developing a suitable plan for reducing or eliminating those risks are the basic aspects of supply risk management.

Risk management is then simply the particular effort made by a given company to control its identified risks. It is a process of anticipating what possible outcomes may occur and what possible consequences can be met as a project or procedure is being perform. Thus, risk management in supplier risk is important because allows supplier to concerned with results, of which is highly unclear, and be prepared on how to react with such uncertainties.

In North Sulawesi, coconut is one of the main potential commodities. With a great value in it, as it in from the fruit, the husk, until the stem, coconut has become a prospective resources for business in commercial, industrial, and household use. PT. Royal Coconut, located in North Sulawesi, is one of the company in Sulawesi Utara that produce a coconut derived product which is coconut flour. Its raw materials are needed from coconut fruit, precisely coconut fruit without its husk. The supply chain in PT. Royal Coconut is started with obtaining coconut as raw material from coconut farmers. The coconut that has been skinned its husk are sold to the supplier in region. Supplier as individual that buy the coconut from the coconut farmer, sell the husked coconut to a company to be produced into a coconut derived products, which is coconut flour.

In being a supplier, operational activities and strategic decisions (concerning supply procurement, production, delivery, commercialization, demand management, planning, etc.) can be different than expected and so create uncertainties (Lavastre, Gunasekaran, and Spalanzani, 2012). Uncertainties, whether they are external or internal, impact business leading to increased supply chain risk. It is an open room for risk to emerge if there any vulnerabilities. Effective risk management on supplier risk is essential to a successful business. It is also a competence and capability many suppliers have yet to develop. It will act as the coordination of activities to direct and control, so that goods are produced and distributed in the right amount, the right location, the right time, and to minimize costs (Widyarto, 2012).

From the statement and phenomena that have been presented, the researcher is interested in to discover the supplier risk of coconut supply chain in PT. Royal Coconut and its management process.

Research Objectives

The objectives of this research are identify the risks for coconut suppliers in PT. Royal Coconut and explained the risk management process works in supplier risk.

THEORETICAL REVIEW

Supply Chain Management

According to Simchi-Levi, D., Kaminsky, and Simchi Levi, E (2008) supply chain management means managing of the series of activities concerning the planning, coordinating and controlling movements of materials, parts, and products from the supplier to the customer. This include the management of material, information, and financial flows in the supply chain.

Risk Management

According to Cooper et al., (2005) explained the risk management process “involves the systematic application of management policies, processes and procedures to the tasks of establishing the context,

identifying, analyzing, assessing, treating, monitoring and communicating risks. In ISO 31000, key processes in risk management are risk identification, risk analysis, risk evaluation, and risk treatment.

Risk

According to *Smith and Merritt (2002)*, the definition of risk is *the possibility that an undesired outcome-or the absence of a desired outcome disrupts a future work project.*

Relational Risk

According to *Das and Teng (1996)*, relational risk refers to the concern that firms may not work towards the mutual interests of the partners, hence, they may not cooperate in a manner specified in the alliance arrangement or as expected by their partners, and the motives of such discordant behavior can be either rational or irrational.

Performance Risk

Das and Teng (1996) explained that performance risk is concerned with those factors that may jeopardize the achievement of strategic objectives, given that the partners cooperate fully.

Previous Research

Kumar et al (2011) titled *Supplier Risk Management in Direct Sourcing from China*, identify supplier risk by perceived risk and classified it as performance and relational risks managed by trust and control mechanisms. An in-depth case study serves to identify the perceived risks in sourcing directly from China. The research found both trust and control mechanisms are simultaneously necessary to reduce the risk in sourcing directly from China.

Das and Teng (2001) titled *Trust, Control, and Risk In Strategic Alliances: An Integrated Framework*, contend that trust and control are the two principal antecedents of risks. Risk can be considered separately as relational risk and performance risk. The two dimension of trust are identified as goodwill trust and competence trust, and control is differentiated as behavior control, output control, and social control.

Matook, Lasch, and Tamaschke (2009) titled *Supplier Development with Benchmarking as part of a Comprehensive Supplier Risk Management Framework*, develop a supplier risk management framework with five stages, namely supplier risk identification, assessment of supplier risk, reporting and decision of supplier risk, supplier risk management responses, and supplier risk performance outcomes, in which all of that are focus on the development of suppliers into low risk performs.

Conceptual Framework

Conceptual framework explain about the relation between the variables in this research.

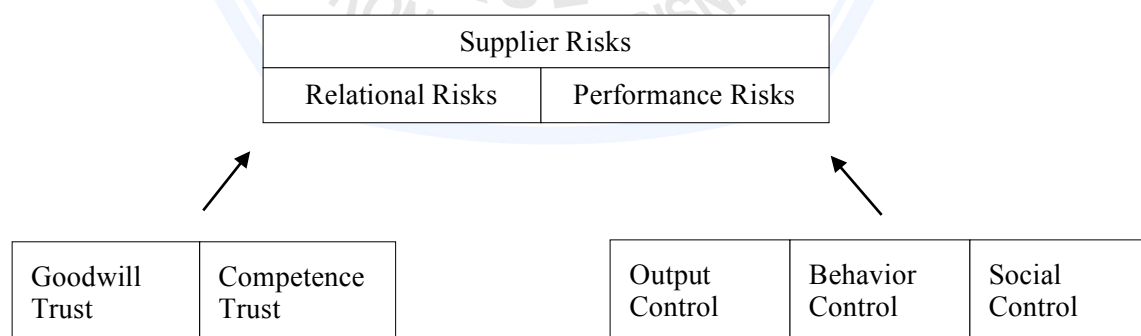


Figure 1. Conceptual Framework

Source: Adapted from Das and Teng (2001)

The figure 1 show supplier risks will be identified and managed by relational risks and performance risks. Relational risks and performance risks are based on trust and control. Trust includes goodwill trust and competence trust, while control includes output control, behavior control, and social control.

RESEARCH METHOD**Research Approach**

This research use qualitative methodology that identify supplier risk and its management process. According to Denzin and Lincoln (1994), qualitative method involves an interpretive and naturalistic approach, which means that the qualitative researcher study things in their natural setting, attempting to make sense of, or to interpret, and phenomena in terms of the meaning people bring to them.

Population, Sample and Sampling Technique

In this research, the population includes the coconut suppliers located in Minahasa Utara. Only the suppliers for PT Royal Coconut were chosen as the population. This research use saturation sampling. This method gather data until empirical saturation is reached (Bowen, 2008). For a small research, it will reach saturation more rapidly than a larger research. Data saturation is reached when there is enough information to replicate the study when the ability to obtain additional new information has been attained (Fusch and Ness, 2015).

Data Collection Method

In this research, the data will be collected from primary data by doing interview by asking questions to the informants which are the suppliers in PT Royal Coconut to get a point of supplier risk.

Operational Definition of Research Variables

There are two main variables, which are risk and risk management process. Risk as the potential for unwanted negative consequences to arise from business activities. Risk management process include risk identification, risk analysis, risk evaluation, and risk treatment. Risk identification involve a list of common risks. Risk analysis estimate the likelihood and consequence of risk. Risk evaluation is concerned with using the risk analysis results to consider risk treatment options. Once risk has identified and prioritized, it can devise risk treatment plans. This includes measures to protect the supplier from risks, plans to respond to events that these risks may cause, and plans to continue operations in the face of disruptions and fully recovering from them.

Instrument Testing

For this research, researcher will use triangulation of sources and theory/perspective triangulation methods to improve analyzing and understanding the data, and also to test the validity and reliability of this research.

Technical Analysis

In this research, the data will be analyzed with qualitative descriptive method that relies on inductive reasoning processes which is using the data obtained through in-depth interview to generate ideas. Kvale (1996) suggests several elements of an interview report: An introduction that includes the main themes and contents, an outline of the methodology and methods (from designing to interviewing, transcription and analysis), the results (the data analysis, interpretation and verification), and a discussion.

RESULT AND DISCUSSION**Result**

The researcher has interviewed eight coconut suppliers in PT. Royal Coconut located in North Minahasa.

Informant 1

Informant 1 lives in Mapanget. He has been working as a supplier in PT. Royal for eight years. He collects coconuts from Tetey, Paniki, up to Kima Atas. When needing money for self-interest, farmers often make a down payment to him even though their coconuts are not ready yet to be harvested. Based on his experience, there are farmers who have made a down payment but did not bring their coconut to him but to others. The quality of coconuts that are collected can be varied, depending on farmers. There are hybrid coconut and regular coconut. The hybrid coconut means a smaller form of regular coconut. That type of coconuts is often rejected by the factory. Only about 200-300 kg that factory can accept for hybrid coconuts. If the amount

is more than that, the factory will return the coconuts. Young coconut is also not accepted by the factory. The factory will sort the young coconuts that mixed with another coconut that was brought.

According to him, in collecting coconuts, shrinkage often occurs whether it is naturally shrinking or the coconut broke. When the number of coconuts is big, it is often that coconuts will be stuck in the factory for unloading until two or three days. When it is raining coconut can get wet. The factory will cut the price for wet coconut, while he does not cut the price of wet coconut from farmers.

He has 3 employees. His employees are taken from Sanger, and the problem is when they go to their hometown. As he often experienced, they did not return in the date they promised before.

Informant 2

The second informant lives in Dimembe. He collects coconuts from Tatelu, Tetey, Laikit and Dimembe. In his experiences, farmers also often take a down payment to him. There are dishonest farmers who have already taken a down payment but did not bring their coconuts to him. The quality of coconut from farmers are varied. He has 4 people working as a driver and for loading coconuts. His employees are all young people, but often they do not come to work consistently.

Informant 3

The third informant lives in Laikit. He has been working as a supplier in PT. Royal for around ten or eleven years. In his experiences, there is often a problem when at harvest time, the farmers do not want to pay off their down payment. There are difficulties in collecting coconut especially about the road to farmer's farm because not all road to farms is good or easy to pass by vehicle. The road to the farms are partly paved and there are that have not been paved yet, but since he got tied to farmers, he has to keep transporting coconut farmers by car although the road is not good. Sometimes some coconut from the farmer has a low quality. The low-quality coconuts will still be taken by the factory, but the price of that low-quality coconut will be lower than the coconut that has good quality.

Based on his experience, the coconut can be stuck in factory until the 2-3 days that can make coconut rot, or cracked on the car so eventually, the water inside the coconut will be wasted and lead to huge losses. The car is not directly unloaded happened as it is queued because there are many coconuts. He has some employees in running his business. Some are in charge at the shelter, there is a driver and there are some for helping in the shelter. He finds it hard when his employee did not come to work because it can disrupt the business. The coconuts from farmers who were supposed to be collected today were postponed tomorrow and it can make the farmers mad.

Informant 4

The fourth informant lives in Laikit. He collects coconuts from farmers in Laikit, Dimembe, and Matungkas. The problems he encountered in collecting coconuts from farmers' farm were roads, his employees absent, and weather. From his experience, there are farmers who have taken the down payment to him but bring their coconuts to others.

He has been working as a supplier in PT. Royal since 2007. In receiving coconuts at PT. Royal, especially when it is coconut harvest season, the number of coconuts will be great and it can take 2-3 days for the coconut to be unloaded. It can be a problem for the coconut quality. Because coconut also has a timeframe to expire which means the coconut can be rotten and cracked because of the weather. Sometimes the coconuts brought by farmers are still raw. It happens when the farmers want to pursue when the price is rising. So they force to harvest the coconuts that are still not ready to be harvested. The factory does not receive raw coconut, then the raw coconut that has been brought will be sent back by the factory and eventually used only as animals' food.

He has several employees who works as a driver, and others help in loading and weighing coconuts. For him, there is a standard salary for his employees, if there are only collected small amount of coconuts, they will be paid at standard payment, but if they collected big amount of coconuts then they will get an extra payment.

Informant 5

The fifth informant lives in Paniki atas. He has been working as a supplier in PT. Royal for eight years. According to him, until two years ago, the factory will make the payments immediately. But now, the payment is paid through bank account and the process will take about three days. While he manages this business by using his own capital. So, in fact, he hopes a payment just in time from the factory to run his business smoothly.

When it is coconut harvest season, there will be a long line queueing in the factory that makes the coconut rotten and cracked because of sunburned before being unloaded. Because it takes time for coconut to be unloaded in a factory, his vehicle also got stuck in there whereas he needs his vehicle to collect coconuts from the farmer at the same time.

He has a problem with manpower. It is difficult for him to find a manpower around his area. People in his area are no longer want to be a coconut climber or coconut peeler. Therefore, when it is harvest time, sometimes the coconut cannot be harvested because there is no manpower. Even though the farmers already took a down payment for that coconuts.

Informant 6

The sixth informant that lives in Paniki atas. His family works as a supplier for fifteen years or more. The only problem in collecting coconut is when the farmer's farm is hard to be reached especially when it is the rainy season. Sometimes the farmers did not bring their coconuts to him, even though they already took a down payment to him. Or sometimes he had to wait until a few months later until the coconut is ready to be harvested. The quality of coconuts also varies from low quality to good quality.

Based on his experience, when he brought coconut to the factory, the coconut can be stuck until few days which make the coconut rot or cracked on the car so eventually, the water inside the coconut will be wasted and decreased his profit. He has few employees that help him as a driver and loading coconuts. The problems that he finds in his employees are sometimes they did not come to work for unknown reasons that cause disruption in running his business daily.

Informant 7

The seventh informant lives in Kumersot. She has been working as a supplier in PT. Royal for five years. According to her, coconuts that are brought to factory often are not being unloaded directly until two or three days. The quality of coconut brought can be decreased if the coconuts were not directly unloaded. Sometimes in her experienced, when there were coconuts that need to be collected from farmers' farm, her vehicle was still stuck in the factory.

The farmers also often take a down payment to her even though their coconut will be harvested in three months later. In her experiences, there are farmers who have taken a down payment to her but did not bring their coconut to her, on the other hand, they bring it to others buyer. She also said that coconut was collected from farmers often have many rotten ones.

Coconuts often cracked when got stuck in the factory, as the result the water inside the coconut is wasted in the car. Coconut water can damage the structure of the car that was made of iron. So she always reminds her employees to regularly wash the car to prevent the car become damaged.

Informant 8

The eighth lives in Tatelu. He just works as a supplier in PT. Royal for two years. He collects coconut from farmers in Tatelu. According to him, sometimes when he met farmers accidentally, they will ask a down payment for him at that time and he had no time in making receipt at the same time. The problem is some of the farmers didn't want to acknowledge if they have any down payment to him. Another problem is when the price of coconut is low, the farmer will not harvest their coconuts because they find the cost will be higher to harvest their coconut than the profit that they will get. Even though they already took a down payment from him. At times, he lacks coconut stock caused by a lack of coconut workers around his area.

Coconuts from farmers are weighed without being sorted into his shelter, whereas when in the factory the coconuts will be sorted and for low-quality coconuts, the price will be decreased. The factory will also sort young coconuts type. Young coconut is not accepted by the factory. If there are young coconuts, the factory will return it to him.

Discussion

Supplier Risks and Risk Management

From the interview result, three relational risks were identified. They are the untrustworthy partner, unsatisfactory product quality, and delay in product delivery.

1. Untrustworthy partner

Goodwill trust is all about partner's good faith, good intentions, and integrity, and it is about whether a partner has a reputation for dealing fairly and caring about its partner's welfare in agreement. All the

suppliers have experienced with farmers that took down payment from them. There is a risk that the farmers did not keep their deals. When it is harvest season, the time for the farmers to bring their coconuts to suppliers, some of them did not bring their coconuts to the suppliers. They brought their coconuts to another buyer. Even some of them did not want to acknowledge if they already took a down payment from a certain supplier. It is caused by lack of partners' willing to try their best to make things work.

2. Unsatisfactory product quality

Types of coconuts that farmers brought to the suppliers are varied. It all mixed between good quality coconut and low-quality coconut. There is a risk that can lead suppliers to have profit loss. When the suppliers bought the coconuts from farmers, they weighed all the coconuts altogether without sorting it. While PT. Royal will sort the coconuts brought by suppliers, and reject certain types of coconuts, i.e., hybrid coconuts and young coconuts.

3. Delay in product delivery

Competence trust is based on the various resources and capabilities of a partner such as capital, human resources, physical equipment, transportation, technology, etc. The suppliers always meet delay in delivering coconuts to PT. Royal. Coconut has a timeframe to expire which means it can be rotten and cracked because of the weather. The risk is the coconuts that the suppliers brought will shrink before it can get unload and weighed. Which make the factory cut the price for coconuts that already rotten and cracked.

Three performance risks were also identified in the interview results. They are vehicle damaged, lack of human resources, and the shortage of raw materials.

1. Vehicle damaged

For securing successful execution of strategies, a supplier can be better trusted to accomplish its tasks when it is equipped with high level of resources and capabilities. Having vehicle is a great contributor to running a business as a coconut supplier. But for having and taking care of it, will require a great fund. It can become a risk. Vehicle's tire can be stuck in the road due to the rainy season. Coconut water can damage the structure of the car that was made of iron. In other words, competence trust increases the likelihood of success; hence it will also increases the level of performance risk.

2. Unsatisfactory employee behaviors

Employee behaviors will affect business performance. When collecting and delivering coconuts, if there are any employees absent, the business activities can get postponed because of running out of manpower. The reasons for employees' absence sometimes are nonsensical like got drunk at night or they went to their hometown overlong. Because of lack of human resources in the northern region, some of the suppliers have employees from another region and it can become a risk in running a business.

3. Shortage of raw materials

Lack of social control shown when the price of coconuts is high, sometimes farmers did not want to harvest their coconuts. It is caused by lacking of inconsistencies in goal preferences of partners through the establishment of common values. They find that the cost of harvesting the coconuts are bigger than the profit they will get. Based on the agreement after took a down payment, they should bring their coconuts to suppliers in the promised time. In social control, every partner should become more committed to their common deals and goals.

Table 1. Summary of risk management activities

No	Activities	1	2	3	4	5	6	7	8
1.	Farmers selection criteria	L	N	L	N	L	L	L	L
2.	Constant communication	Y	N	L	L	Y	Y	L	Y
3.	Product quality measurement	Y	Y	Y	Y	Y	Y	Y	Y

4. Clear definition of expectation	L	L	L	L	L	Y	Y	Y
5. Performance measures across production process	L	N	L	L	L	N	N	L
6. Long term association with the farmers	N	L	L	Y	Y	Y	L	Y
7. Contractual agreement	Y	Y	Y	Y	Y	Y	L	Y
8. Equipment maintenance	Y	Y	Y	Y	L	L	Y	Y
9. Define responsibilities of partners	L	L	Y	L	Y	L	L	Y
10. Coordination of the process	L	L	L	L	Y	Y	Y	Y
11. Product handling	Y	L	L	L	Y	Y	Y	L
12. Inventory control	Y	L	L	Y	Y	L	L	L
13. Organize resources	Y	L	L	Y	Y	L	L	Y
14. Delivery schedules	L	Y	L	L	Y	Y	Y	Y
15. Set duty roles and responsibilities	Y	Y	Y	L	Y	Y	L	Y

Notes: Y=yes and an explicit engagement, N=no explicit engagement, L-limited engagement.

Source: Research result

The antecedents facilitate both trust and control mechanisms to manage the identified risks. Empirical evidence has exhibited three antecedents: product quality measurement, contractual agreement, and set duty roles and responsibilities.

1. Product quality measurement: With product quality measurement, it can build a successful supplier that can deliver products that meet customers' expectation. It can decrease waste and increase level of productivity. It can also increase the morale of employees, and they feel that they are working in the concern producing better and higher quality products. This will affect both trust and control. For instance, supplier will feel satisfied by having alliance with the farmer and it will also make the employees to work better for achieving the requirements quality.
2. Contractual agreement: It is important to have a contractual agreement in running a business. It can be as simple as a plain-language document that outlines the general business among partners, especially between supplier and farmer. It can leads to joint problem solving and working towards mutual interests by increasing trust between supplier and farmer by caring each other welfare.
3. Set duty roles and responsibilities: By setting duty tasks and responsibilities, it can control the business process. Each employee will know and understand their own roles and obligations. The purpose is to clarify and agree on each member's roles and responsibilities on running business. So there will be no

misunderstandings between what the employees expect of one another should be doing. Through it, performance risk can be decrease.

Trust encompasses two broad mechanisms: farmer development, performance feedback. Control encompasses two broad mechanisms: performance measurement and contractual agreement.

Trust

1. Farmer development

The coconut farmer is generally considered to be dependent because of significant resource inequalities, or acting opportunistically. Supplier can take part in farmer development activities through performance feedback, improvement plans, engaging in supplier development projects, and investing in supplier resources. This increases the technical and ethical capabilities of the farmer. Being engaged in farmer development can increase long-term association and mutual shared value and goals, which in turn enforces being a prioritized buyer of their coconut. In instance, when farmer took a down payment from supplier, it requires trust and commitment.

2. Performance feedback

During the production and delivery phase, supplier often face poor delivery performance. With performance feedback, every partner in supply chain could develop their performance. Most companies use it to develop every partner based on performance measurement. Assessment and evaluation of performance of partner is necessary for ensuring that standards are continuously met. Through focusing on mutual benefits, it can increase the trust between farmer and supplier, and between supplier and the buying company.

Control

3. Performance measurement

Performance measures consist of measures for product quality and product delivery to check if all activities are achieving satisfactory performance. Performance measures are needed to control from output control, social control, until behavior control from partners and employees, and monitoring each stage of production process to achieve the satisfactory performance.

4. Contractual agreements

Contractual agreements are needed to reduce the probability of miscommunication occurrence and also to enhance clarification. These contractual agreements have dealing with social control as its reducing the discrepancies in goal preferences of supply chain partner through the establishment of common culture and values. It will construct a common understanding for farmers, suppliers, and buying company. Hence, in order to make the contractual agreements it is important to have the relationship and trust between partners. Contractual agreement also works for building agreements among employees that will outline their general role and responsibilities as it can monitors and assess the employee performances.

CONCLUSION AND RECOMMENDATION

Conclusion

Supplier risks in relational risks include the untrustworthy partner, unsatisfactory product quality, and delay in product delivery. Supplier risks in performances risks include vehicle damaged, lack of human resources, and the shortage of raw materials. Trust-based mechanisms for supplier risks include farmer development and performance feedback. Control-based mechanisms for supplier risks include performance measurements and contractual agreement.

Recommendation

1. The suppliers should try to implement the strategy of building trusts include goodwill trust and competence trust, and control such as output control, social control, and behavior control, simultaneously to help minimize relational and performance risks in the business.
2. By implementing trust and control based mechanisms, the farmers should increase their morale in having a partnership with the supplier by selling better and higher quality products. They also should follow the agreement on a contractual agreement with the supplier with reducing opportunistic behavior so it can lead to working towards mutual interests. The company should also improve their equipment and human resources as suppliers are giving their best in supplying raw materials to the company, with maintaining a good relationship with suppliers.

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