



STRATHMORE BUSINESS SCHOOL
BACHELOR OF SCIENCE IN SUPPLY CHAIN AND OPERATIONS MANAGEMENT
END OF SEMESTER EXAMINATION
SCM 4102: SUPPLY CHAIN AUDITING AND RISK MANAGEMENT

DATE: Mon, 29th July 2024

TIME: 10:30 – 12:30

Instructions

1. This examination consists of **FIVE** questions.
2. Answer Question **ONE (COMPULSORY)** and any other **TWO** questions.

Question One

a) **Use the case study below to answer the questions below:**

Case in point, a multinational corporation based in the United States and specializes in cosmetics and healthcare/beauty products was facing major supply chain issues. New products were constantly delayed beyond scheduled launch dates, global transportation costs were skyrocketing, in addition to increasing inventory costs. Customer service levels were declining and inventory costs were increasing as a direct result of poor inventory management systems in place. The company's performance metrics were indicating that things had to change for the company to function at its optimum levels. In such cases, one of the first things that need to be done to right the ship is to conduct a supply chain audit.

Requirement:

- (i) Explain the meaning of supply chain audit. **(2 marks)**
- (ii) Discuss **two** types of supply chain audit that can be used in this company for it to operate at optimal levels. **(4 marks)**
- (iii) Explain the benefits of supply chain audit that can be realized by this company. **(4 marks)**

b) **Use the case study below to answer the questions below:**

Telefon AB LM Ericsson

On 17 March 2000 there were thunderstorms in New Mexico, and lightning hit an electric power line (Latour, 2001). This caused a surge in power, which started a small fire in Philips' chip-making factory in Albuquerque. The automatic sprinkler system put this out within 10 minutes, and fire damage to the building was slight. Unfortunately, thousands of chips that were being processed were destroyed. But more importantly, the sprinklers caused water damage throughout

the factory and smoke particles got into the sterile area, contaminating millions of chips held in stock.

Four thousand miles away, Ericsson was Sweden's largest company with an annual revenue of \$30 billion, 30 per cent of which came from mobile telephones. For many years, Ericsson had worked on the efficiency of its supply chains, and single sourcing was a key element in its drive towards lower costs and faster deliveries. Now the Philips plant was its sole source of many radio frequency chips, including those used in an important new product.

At first, Philips thought that the plant would return to normal working within a week, so Ericsson was not too concerned when it heard about the fire. However, it soon became clear that there was more extensive damage. Philips actually shut the factory completely for three weeks, it took six months for production to return to half the previous level, and some equipment took years to replace. Ericsson had no alternative suppliers, and at a time of booming sales it was short of millions of chips.

In 2001 Ericsson said that the drastic reductions in production and sales caused by the fire cost it more than \$400 million. When this figure was published, its share price fell by 14 per cent in a few hours. For a variety of reasons, including problems with component supply, marketing mix, design, and the consequences of the fire, Ericsson's mobile phone division lost \$1.7 billion that year. It decided to withdraw from handset production and outsource manufacturing to Flextronics International. It changed its approach to procurement, moving away from single sourcing and ensuring that there were always backup suppliers. It also introduced systems for risk management to avoid similar problems in the future (Norman and Jansson, 2004).

Required:

- (i) Explain the meaning of supply chain risk. **(2 marks)**

 - (ii) Discuss the **four** sources of supply chain risk that Telefon AB LM Ericsson is exposed to. **(10 marks)**
 - (iii) Explain clearly how supply chain risk facing Telefon AB LM Ericsson can be solved. **(4 marks)**
 - (iv) What is your opinion on the future of supply chain risk management? **(4 marks)**
- (Total: 30 marks)**

Question Two

Auditing supply chains requires specialized knowledge in understanding of information and processes regarding accounting and auditing issues that relates to both a supplier and its major customer, regardless of industry commonalities, that is particularly useful for understanding complexities associated with the revenue cycle.

Required:

- a) Discuss the meaning of sustainability audit citing down the advantages of developing sustainable supply chains management. **(5 marks)**

- b) Explain clearly the objectives of a performance audit. **(5 marks)**

- c) Discuss why the value for money audits in supply chains has received great acceptance. (5 marks)
 - d) Distinguish between the benefits of internal audit and external audit in supply chains. (5 marks)
- (Total: 20 marks)**

Question Three

Risk management is the process for systematically identifying, analyzing and responding to risks throughout an organization. Supply chain risk management (SCRM) is the process of systematically identifying, analyzing and dealing with risks to supply chains.

Required:

- a) Discuss briefly where does audit and risks emanate from in supply chains. (5 marks)
 - b) Discuss how the management in supply chains can apply the risk strategy in making their companies well prepared for any eventuality. (5 marks)
 - c) Discuss how being proactive rather reactive can assists the management in preparing prudently in facing the threats of risks in supply chains. (5 marks)
 - d) Discuss how the application of agile strategy allows the supply chains to react to all kinds of unforeseen conditions, both internal and in the environment. (5 marks)
- (Total: 20 marks)**

Question Four

Use the case study below to answer the questions below:

The Problem

AutoBuild company, a renowned automotive OEM (original equipment manufacturer), was facing significant challenges with its supply chain management. The company's supply chain was characterized by long lead times, frequent stock-outs, and high inventory carrying costs. The root cause was a lack of real-time visibility into the supply chain and inefficient supplier management. For instance, the average lead time for parts was 60 days, causing production delays and missed delivery deadlines. This inefficiency led to a 15% decrease in customer satisfaction and an annual revenue loss of approximately \$30 million.

Required:

- a) Discuss how an operational turnaround strategy through operational audit can be implemented to solve the problems faced by the AutoBuild company. (14 marks)
 - b) Discuss the key considerations in supply chain audit. (6 marks)
- (Total: 20 marks)**

Question Five

- a) Explain the meaning of risk perception. **(3 marks)**
- b) Explain briefly the essential features of all decisions. **(6 marks)**
- c) Discuss why utility function is important in making decisions. **(3 marks)**
- d) A manager in supply chains is faced with a dilemma of making a decision faced with the following alternatives under the various circumstances. He has come to you seeking your advice.

		Events: Customer Reaction		
		Favourable	Neutral	Unfavourable
Alternatives	One	25	15	-10
	Two	28	14	-8
	Three	20	12	4

Required:

Assist the manager in coming up with the best alternative, considering that:

- (i) The manager is ambitious. **(4 marks)**
- (ii) The manager is preservative. **(4 marks)**

(Total: 20 marks)