INFORMATION SYSTEMS

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Information Systems

Information systems entail interrelated components that work together to collect, process, store, and disseminate useful information that enhances decision making, coordination, analysis, control, and visualization in the company (Altamony Alshurideh, Masa'deh, and Obeidat, 2012). Efficient information systems incorporate the use of appropriate technology, people, and processes. Companies use information systems such as the Porter's competitive forces model, and the Value Chain model to gain a competitive advantage when they create more economic value than their rivals (Hemmatfar, Salehi, and Bayat, 2010). The paper analyses how one or more competitive strategies via using information systems such as the Porter's Competitive Forces model and the Value Chain model can be applied in the real world.

Porter's Competitive Forces Model

This information system model allows for the strategic positioning of a firm. The strategies are determined by analysing a company's competition, and the four forces shaping the industry's environment, i.e., the new market entrants, customers, substitute products, and suppliers. The real-world application of the model involves the analysis of five competitive forces that shape the fate of a company (Bruijl, 2018).

a. Traditional competitors: These include the number and ability of competitors in the industry. The more the competitors providing the same products or services, the lower the attractiveness in the market (Bruijl, 2018).

b. The threat of new entrants: Profitable markets are prone to new entrants, which later erodes profitability. However, any existing barriers of entry, i.e., economies of scale, patents, government policies, and capital requirements would help to control the threat (Bruijl, 2018).

c. Substitute products and services: These are alternative products or services that the customers might opt to use should the company's prices go too high (Gregory, 2018). The more the substitute products or services in the industry, the lower the ability of the company to control prices or raise the profit margins.

d. Customers/buyer power: This component analyses the ease for buyers to drive the prices down. It is measured by looking at the number of customers in the market; the importance of each customer to the company; and the cost of customer switching to alternative suppliers (Hemmatfar, Salehi, and Bayat, 2010). The buyer power increases if they can easily switch to a competitor's products and services.

e. Supplier Power: This is an analysis of how easy it is for suppliers to control supplies' prices. It is measured by the number of suppliers for each crucial input; the uniqueness of their products or services; the supplier's relative strengths; and the business cost of switching from one supplier to another (Bruijl, 2018). The more the suppliers a firm has, the greater its control over the terms of quality, price, and delivery processes.

The Five-Forces analysis model provides insights to companies on the factors that affect the profitability in a specific industry. This will help to make decisions as to whether the company should venture into a specific industry, whether or not to increase its capacity, or develop further competitive strategies. Competitive strategies will be attained using the model through low-cost leadership processes, product differentiation, and strengthened customer and supplier interactions.

An example is McDonald's whose Five-Forces analysis shows that:

a. Competitive rivalry- Strong force
b. Newmarket entry- Moderate force
c. Product or service substitute- Strong force
d. Consumer power- Strong force
e. Supplier power- Weak force (Gregory, 2018)

From McDonald's Five-Forces analysis, the company can prioritize on the strategic issues that focus on competition, substitutes, and consumers, since all of them exert a strong on the company and its external environment.

The Value Chain Model

This model specifies the activities where competitive strategies can be appropriately applied in the business, and where information systems have the most significant strategic impact. The model views the company as a chain of fundamental activities that add a margin of value to its products or services (Jurevicius, 2013). The model enables a company to add value to a process and sell its product or service at a cost higher than that of adding the value, hence increasing the profit margins. The activities are categorized as either primary or support activities.

The primary activities relate to the production and distribution of the company's products and services, and how they create value to the customer. They include operations, inbound logistics, sales and marketing, outbound logistics, and service (Jurevicius, 2013). Support activities, that make it possible to deliver the primary activities. They include human resources (staff hiring, recruiting, and training), organization infrastructure (management and administration), procurement (purchasing input), and technology (to improve the products and production processes).

The value chain model provides the cost and differentiation competitive advantages. The real-world application of the information system, therefore, depends on the type of advantage that a company wants to create.

Cost Advantages

The process to gain cost advantages involves five analytical steps:

a. Identification of the primary and support activities of the firm. All the activities involved in the production of goods and services are identified and significantly differentiated from each other.
b. Highlight the relative importance of each activity to the cost of the service or product. This step involves a breakdown of the total cost of production which is assigned to each activity (Jurevicius, 2013). The activity-based costing can be incorporated when calculating the costs for each process, and any inefficiencies addressed first.
c. Identify each activity's cost drivers. This step involves an understanding of the factors that drive the costs, to improve them. The labor-intensive activities will be driven by work speed, work hours, wage rate, etc. Different production activities have varied cost drivers.

d. Identifying the links between the activities. A reduction in the costs of one activity may result in additional cost reductions in successive activities, i.e., reducing the product design components may result in less faulty parts and consequently lower service costs (Bajpai, 2020). The linkage helps to better understand the impact of cost improvements on the whole value chain

e. Identifying the opportunities for cost reductions. A company that clearly understands its inefficient activities and their associated cost drivers can plan on improving them to lower their production costs, i.e., high wage rates can be reduced by using more automated processes, increasing the speed of production, or outsourcing manufacturing to low wage countries.

Differentiation Advantage

This entails establishing superior products, adding more features, and satisfying any changing customer needs. The real-world application involves the following steps:

a. Identifying the activities that create value to the customers and focusing on them.

b. Assessing the differentiation strategies that improve customer value, i.e., adding more product features, focusing on customer service, increasing customization, and offering complementary products (Jurevicius, 2013).

c. Identifying the most sustainable differentiation. Generally, efficient customer value and differentiation results from various strategies and interrelated activities.

An example is the application of value chain analysis in Starbucks Corporation

Starbucks' Primary Activities

i. Inbound logistics. These refer to the company's appointed coffee buyers who select the finest quality coffee beans from suppliers in Asia, Africa, and Latin America. Value is added to the beans via the company's roasting and packaging processes.

ii. Operations: Starbucks' operations are in more than 80 markets through owned or licensed stores with more than 32,000 stores globally (Bajpai, 2020).

iii. Outbound logistics: There are little to no intermediaries when selling Starbucks products since the majority of them are stored in stores.

iv. Marketing and Sales: Starbucks invests a lot in high-quality products and quality customer service as opposed to aggressive marketing. However, it performs marketing activities that are based on the needs of the market for new product launches (Bajpai, 2020).

v. Service: Starbucks builds customer loyalty through its in-store customer service and its unique Starbucks experience.

Starbucks' Support Activities

i. Infrastructure: These entail departments such as legal, finance, management, etc., that keep the company's stores operational, and the managers in the corporate offices.

ii. Human Resource Management: The employees in Starbucks are motivated by generous incentives and benefits. The company also takes care of its workforce, hence the low turnover of its staff.

iii. Technology development: Starbucks uses technology for coffee-related processes, and connection to its customers through platforms that enable them to ask questions, give suggestions, share experiences, and express opinions (Bajpai, 2020).

iv. Procurement: Starbucks handles all the procurement processes for its coffee beans as one of its competitive advantages. This enables it to establish stronger requirements, terms, and standards for dealings in procurements.

Conclusion

Various information systems can be applied in the real world to achieve one or more competitive strategies. The Five Forces and the Value Chain model are a few examples of information systems that play a significant role in ensuring that organizations meet their competitive strategies. The Five Forces model helps to understand whether products or services are potentially profitable. It highlights where power lies, the areas of strength, and the improvements that have to be made to avoid mistakes as it was the case for McDonalds Company. The value chain analysis on the other side potentially identifies the opportunities for value improvement through its various steps of the business cycle. It also improves the margin efficiencies as in the case of Starbucks Corporation.

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