**Topic 3: The Global Environment and Operations Strategy**

Overview

The operations manager must have a global view of operations strategy. The development of the organisation is dependent on the ability to adapt to the situations in the environment. This is to achieve strategy-environment fit in order to attain competitive advantage. Therefore it is imperative to attain economic integration with other countries to reach the stage of globalization.

Learning Outcomes

By the end of this topic, you will be able to:

1. demonstrate the ability to have customers, talent and suppliers worldwide to reach the level of globalization.
2. explain the reasons for change from domestic business to global business.
3. establish the mission and strategies for global business to gain competitive advantage.
4. integrate operations management with other activities in the organisation to attain competitive advantage.
5. identify the key success factors and core competencies in the organisation to meet the challenges of the global strategies.

Introduction

3.1 The global competitiveness and its effects on the company

3.2 The reasons attributed to the change from domestic business operation to international

 operation.

3.3 The mission and strategies to attain the purpose for the existence of a business in a

 global economy.

3.4 The Strategy development and implementation - key success factors and core

 competencies and outsourcing and the theory of comparative advantage.

3.5 Integrating operations management and other activities in the organisation including the

 supply chain.

3.6 Understanding the global strategy options

**Lecture Notes**

**3. The Global Environment and Operations Strategy**

**Globalisation of Developing Countries**

An operations manager must have a global view of operations strategy. The developing countries have become players on the global economic stage. At the same time, they have made advances in technology, reliable shipping and cheap communication. They have attained growth in their world trade, global capital markets and the international movement of people. They have increased their economic integration and interdependent of countries i.e. they have reached the stage of globalization. (i.e. Developing countries are moving into global market.)

**Global Competitiveness and its Effects on Companies**

1. Globalization means customers, talent and suppliers are worldwide.
2. The new standards of global competitiveness have impact on: (a) quality, (b) variety,

(c) customization, (d) convenience, (e) timeliness and (f) cost.

1. Globalization strategies contribute: (1) efficiency, (2) adding value to products and services, but they also complicate the operations manager’s job.
2. Globalization brings (a) increasing intensity in terms of (i) complexity, (ii) risk and (iii) competition and (b) forcing companies to adjust for a shrinking world.
3. Globalization also signifies the necessity to compete in the global market. *The domestic production and exporting is no longer a viable business.\**
4. Global strategy is needed to create efficiency and add values to products and services.

\*These six reasons encouraged the change from domestic business operation to international operation such as having facilities established in foreign countries:

1. Improve the supply chain – by allocating facilities in countries where unique resources (HR expertise, low-cost labour, or raw materials) are available.
2. Reduce costs and exchange rate risk - many international operations seek to reduce risks associated with changing currency values as well as to take advantage of tangible opportunities to reduce their direct costs. Less stringent regulations of government on a wide variety of operations practices (e.g. environmental control, health and safety) can also reduce indirect costs.

(Shifting low-skilled to another country has following advantages:

1. Reduce cost
2. Frees higher-cost workers for more valuable tasks.
3. Reduce wage costs allows the savings to be invested in improved products and facilities at the home location.
4. Having facilities in countries with different currencies can allow firms to finesse i.e. reduce currency risk as economic conditions dictate.)
5. Improve operations

 i. Through learning of management operations in different countries e.g. from Japan one can learn about improved inventory management, from Germany about the use of robots and from Scandinavians about improved ergonomics (i.e. the working conditions of people) throughout the world.

ii. Having international operations in different countries help to reduce response time to meet customer’ changing product and service requirements.

1. Understand markets – having interactions with foreign customers, suppliers and other competitors enable the firms to learn about opportunities for new products and services. It also provides opportunity to extend the life cycles of existing products.
2. Improve products – firms can jointly conduct research to improve their products
3. Attract and retain global talent – global organisations can attract and retain better employees by offering more employment opportunities. They need people in all functional areas and areas of expertise worldwide.

7) Cultural and Ethical Issues in Globalization

Countries have different cultures and ethical issues. These are issues that operations managers must take into consideration when developing missions and strategies.

**Missions and Strategies**

Mission is actually about the purpose for the existence of a business. It also determines the functions of the various departments. Each functional area has to develop the strategy (a plan of actions) to support the organisation’s mission.

A strategy is evolved from the mission (objective). A strategy is actually the *action plan* of the organisation. It normally exploits the opportunities and strengths, neutralises threats and avoids weaknesses.

Strategies are implemented to achieve the mission in three possible ways:

1. By differentiation strategy

2. By cost leadership strategy and

3. By response – means three things:

1. flexibility in terms of product development and delivery;
2. reliability of scheduling; and
3. quickness in terms of design, production and delivery.

Operations managers translate these three strategy concepts into tangible tasks to be accomplished. The operations managers deliver goods and services that are (1) better or at least differentiated, (2) cheaper and (3) more responsive e.g. to customer’s needs. They can use one or a combination of the three strategic concepts to come out with a system that is better than the competitors i.e. to gain competitive advantage.

Competitive Advantage means two things:

1. To be better than the competitors (e.g. the operating system has a unique advantage over

 the competitors) and

2. To gain a profit that is better than the average profit of the industry in which the business

 is in.

It is not just competitive advantage that an organisation looks for but sustainable competitive advantage. In practice, differentiation, low cost and response are used by organisations to gain sustainable competitive advantages. These three strategies can be achieved when managers make effective decisions in ***10 areas of OM*** which are collectively known as ***operations decisions***. They not only support the mission but implement the strategies.

**\*The ten strategic OM decisions:**

1. Goods and service design – at the transformation process; costs, quality and HR decisions determined by design decisions.
2. Quality – related to customer’s expectation.
3. Process and capacity design – specific technology, quality, HR use and maintenance.
4. Location selection – facility location for manufacturing and service organisations determine firm’s ultimate success.
5. Layout design – material flows, capacity needs, personnel levels, technology decisions and inventory requirements influence layout.
6. Human resources and job design (job description and job specification) – most important asset of a firm, skill and career development available to retain workers.
7. Supply-chain management – what to be purchased from other suppliers to the advantage of the firm in terms of quality, delivery and innovation; very much based on mutual trust.
8. Inventory – optimal way to maintain the supply of raw materials, production schedules and HR planning.
9. Scheduling – feasible and efficient schedules for production, demands of HR and facilities to be determined and controlled.
10. Maintenance – upkeep of facilities to the desired level of reliability and stability.

Operations managers implement these 10 decisions by identifying key tasks and the staffing needed to achieve them. The 10 decisions are for both goods and services. But their relative importance and method of implementation depend on the ratio of goods and services. Note that these 10 strategic OM decisions are implemented in ways that provide competitive advantage.

The differences between goods and services influence how the 10 Operations Management Decisions are applied.

|  |  |  |
| --- | --- | --- |
| Operations decisions | Goods | Services |
| 1. Goods and service  design | Product is usually tangible | Product is not tangible |
| 2. Quality | Many objective quality standards  | Many subjective quality stands |
| 3. Process and  capacity design | Customer is not involved in most of the process (auto assembly) | Customer may be directly involved in the process (a haircut)Capacity must match demand to avoid lost sale (customers often avoid waiting) |
| 4. Location selection | May need to be near raw materials or labour force (steel plant near ore). | May need to be near customer (car rental) |
| 5. Layout design | Layout can enhance production efficiency (assembly line). | Can enhance product as well as production (layout of a classroom or a fine-dining restaurant). |
| 6. Human resource and  job design | Workforce focused on technical skills (stone mason). Labour standards can be consistent (assembly line employee). Output-based wage system possible (garment sewing). | Direct workforce usually needs to be able to interact well with customer (bank teller); labour standards vary depending on customer requirements (legal cases). |
| 7. Supply-chain  management | Supply chain relationships critical in final product. | Supply chain relationships important but may not be critical. |
| 8. Inventory | Raw materials, work-in process, and finished goods may be inventoried (beer). | Most services cannot be stored; so other ways must be found to accommodate fluctuations in demand (cannot store haircuts, but even the barber shop has an inventory of supplies). |
| 9. Scheduling | Ability to inventory may allow levelling of production rates (lawn mowers). | Often concerned with meeting the customer’s immediate schedule with human resources. |
| 10. Maintenance | Maintenance is often preventive and takes place at the production site. | Maintenance is often “repair” and takes place at the customer’s site. |

***Issues to consider in the development of Operations Strategy***

Before establishing and implementing a strategy, there are issues to be examined in the development of the strategy. These issues are related to the alternatives available in the planning of the strategy. The tools that are available to enable the study and evaluation of the alternatives are:

1. The resource-based theory – a view that the managers evaluate the resources at their disposal and manage or alter them to achieve competitive advantage.
2. Value-chain analysis – a way to identify the elements in the product/service chain that uniquely add value.
3. Porter’s Five Forces Analysis – a way to analyse the five forces in the competitive environment.
4. The Product Life Cycle – the way in which the product moves through 4 stages: introduction, growth, maturity and decline. The internal changes as responses to external changes must be well integrated to achieve competitiveness.
5. The SWOT analysis – a means to identify the strengths to capture the opportunities, to neutralise the threat and to improve the weaknesses.

It is absolutely necessary to carry out a thorough analysis and understanding of the external and internal factors to enable a firm to make optimal use of its resources and to place its strategic position in a more advantageous level over its competitors.

An example: The value of the analysis of the Product life cycle:

 Introduction Growth Maturity Decline

 Best period to Practical to change Poor time to change Cost control critical

 increase market price or quality image image, price or quality

 R & D engineering Strengthen niche Competitive costs

 is critical becomes critical

 Defend market position

 Product design and Forecasting critical Standardization Little product

 development critical differentiation

 Product and process Fewer rapid product

 Frequent product and reliability changes, more minor Cost minimization

 process design

 changes Competitive product Overcapacity in

 improvements and Optimal capacity the industry

 Short production runs options

 Increasing stability Prune line to

 High production costs Increase capacity of process eliminate items

 not returning

 Limited models Shift toward product Long production runs good margin

 focus

 Attention to quality Product improvement Reduce capacity

 Enhance distribution and cost cutting

**Strategy Development and Implementation**

A SWOT analysis is applied to review the internal strengths and weaknesses and the external opportunities and threats. Then the firm is in a position to place itself through its strategy to have competitive advantage. The firm must have identified its excellent skills or great talent to maximise the opportunities and minimizing threats in the external environment. After having done the SWOT analysis, a strategy is developed to achieve the mission.

The process is as follows:

 Analyse the environment

 Determine the Corporate Mission

 Form a Strategy

**Key Success Factors and Core Competencies**

In the process of developing the strategy, the firm looks for its key success factors (KSFs) and its core competencies (CCs).

KSFs are activities or factors that are necessary for a firm to achieve its goals and to attain competitive advantage. E.g. a KSF for McDonald’s is its layout. Without its drive through and an efficient kitchen, it would not be successful.

However, KSFs alone are not enough for the firm to achieve CA. It needs to have core competencies (CCs) such as unique skills, expertise, talents and capabilities that can help to set the firm apart from its competitors in order to attain CA. E.g. in MacDonald’s its KSF is the layout, its CCs may be its consistency and quality. The CC may be the ability to perform the KSFs or a combination of KSFs.

*The 10 strategic decisions of OM are typically the KSFs.* These decisions plus major decision areas for marketing and finance are shown in Figure 1.

Figure 1: Implementing Strategy by identifying and executing KSFs that support core

 competencies

 Support a Core Competency and Implement Strategy by identifying and executing the KSFs

 in the Functional Areas

 **Marketing Finance/Accounting Operations**

 Service Leverage

 Distribution Cost of capital

 Promotion Working capital

 Price Receivables

 Channels of distribution Payables

 Product positioning Financial control

 (image, functions) Lines of credit

 **10 OM Decisions Sample Options**

 Product Customised or standardized; sustainability

 Quality Define customer quality expectations and

 how to achieve them.

 Process Facility design, capacity, how much automation

 Location Near supplier or near customer

 Layout Work cells or assembly line

 Human resources Specialised or enriched jobs

 Supply chain Single or multiple suppliers

 Inventory When to reorder; how much to keep on hand

 Schedule Stable or fluctuating production rate

 Maintenance Repair as required or preventive maintenance

CCs are the skills, talents and activities in which a firm is particularly strong. CCs are derived from the combination of the firm’s skills, expertise or experience and the tangible resources (or KSFs) to create the capabilities. If the capabilities are rare and valuable then the resulting CCs are not sustainable over time. However in addition to these two aspects, the capabilities cannot be copied or imitate and cannot be substituted, then the CCs are sustainable over time. Therefore it is imperative that the firm must identify its KSFs and CCs in order to achieve sustainable competitive advantage.

***Integrating OM with other Activities in the Organisation***

Whatever the KSFs and CCs, they must be supported by the related activities. These can be identified by an ***activity map***. This activity map shows the links among competitive advantage, KSFs and supporting activities. An example of an activity map is taken from Southwest Airlines and is shown in Figure 2.

 No seat arrangements Bags fly free, and no

 baggage transfers

 Automated

 ticketing machines Courteous but No meals

 Empowered limited passenger

 employees service Lower gate costs

High at secondary

employee airports

compensation Lean, productive Short haul, point-to-

 employees point routes, often to

Hire for attitude secondary airports

than train High number

 of flights

High level of **Competitive Advantage**: reduces

 stock ownership **Low Cost**  employee idle

 time between

 High aircraft Frequent, reliable flights

20 minutes gate utilization schedules

 turnaround

 Standardized fleet

Maintenance personnel of Boeing 737 Saturate a city

trained on only one type aircrafts with flights,

of aircraft Pilot training lowering

 Flexible employees/unions required on only administrative

 and standard planes aid one type of aircraft costs per

 scheduling passenger for

 that city

 Excellent supplier Reduced maintenance

 relations with inventory required

 Boeing have aided because only one

 financing type of aircraft is used

Figure 2: Activity Mapping of Southwest Airlines’ Low-Cost Competitive Advantage

The Southwest Airlines’ core competency is operations. It has built a set of integrated activities to support its low-cost CA. The KSFs support operations and in turn are supported by other activities. The activities fit together and reinforce each other. In this way, all of the areas support the company’s objectives.

E.g. the short term scheduling in the airline industry is subjected to the volatile customer travel patterns. Airline scheduling is an OM activity it is tied to marketing. Effective scheduling of the airline is integrated to all its activities.

The operation function can only be successful if it is integrated with the other functions of the firm such as marketing, finance, information technology and human resources. All of them are supporting the organisation’s objective/mission.

The operations manager transforms inputs into outputs (goods and services). His job is to implement an OM strategy, provides competitive advantage, and increase productivity.

***Building and Staffing the Organisation***

Once a strategy and KSFs are identified the operations manager then starts to group the necessary activities into an organisational structure. This is then followed by putting the people in the different positions to get the job done i.e. to implement the strategy.

***Implementing the 10 strategic OM Decisions***

The implementation of the 10 OM decisions is influenced by many issues – from mission and strategy to KSFs and CCs – while addressing such issues as product mix, product life cycle, and competitive environment. The implementation of each of the 10 OM decisions can vary because each product has its own mix of attributes and the importance and method of implementation. Table 2 shows how the 10 OM decisions are implemented in two operations strategies of two drug companies.

Table 2: Operations Strategies of two drug companies

|  |  |  |
| --- | --- | --- |
|  | Brande Name Drugs, Inc. | Generic Drug Corp. |
| Competitive Advantage | Product Differentiation | Low Cost |
| 1. Goods and service  design | Heavy R & D investment; extensive labs; focus on development in a broad range of drug categories. | Low R & D investment; focus on development of generic drugs. |
| 2. Quality | Quality is major priority, standards exceed regulatory requirements. | Meets regulatory requirements on a country-by-country basis, as necessary. |
| 3. Process and  capacity design | Product and modular production process; tries to have long product runs in specialized facilities, build capacity ahead of demand. | Process focused,; general production processes; “job shop” approach, short-run production; focus on high utilization. |
| 4. Location selection | Still located in city where it was founded. | Recently moved to low-tax, low labour cost environment. |
| 5. Layout design | Layout supports automated product-focused production. | Layout supports process-focused “job shop” practices. |
| 6. Human resource and  job design | Hire the best; nationwide searches | Very experienced top executives provide direction; other personnel paid below industry average. |
| 7. Supply-chain  management | Long-term supplier relationships | Tends to purchase competitively to find bargain. |
| 8. Inventory | Maintains high finished goods inventory primarily to ensure all demands are met. | Process focus drives up work-in-progress inventory; finished goods inventory tends to be low. |
| 9. Scheduling | Centralised production planning | Many short-run products complicate scheduling.  |
| 10. Maintenance | Highly trained staff; extensive parts inventory. | Highly trained staff to meet changing demands. |

**Strategic Planning, Core Competencies and Outsourcing**

As organisations develop their missions, goals and strategies, they identify their strengths and core competencies. As for their non-core activities, there are possibilities of outsourcing them instead of being done within the organisations. Outsourcing is the transfer of activities that have been done traditionally within the organisation to external suppliers**.** This leads to the creation of the supply chain. Outsourcing is a complex issue as it involves risks. However it has positive implication for the firms and this is shown by the fact that outsourcing has continued to expand. Three global trends have strongly supported the importance of outsourcing to firms:

1. Increased technological expertise.
2. More reliable and cheaper transportation.
3. The rapid development and deployment of advancements in telecommunications and computers.

These three aspects of advances have led to lowering of costs and increasing specialization. As a consequence, more firms are opting for outsourcing of non-core activities. The firms make contractual arrangement with the external firms to supply the products to form the basis for outsourcing.

**The Theory of Comparative Advantage**

It is an economic concept that if an external source can provide products more economically than what the firm can do, then it is external provider should do the job. It is better for the firm to buy the product from the external provider and allow the firm to concentrate on what it can do better – its core competencies. Consistent with this comparative theory, outsourcing continues to grow. However outsourcing the wrong activities can be a disaster. There are also risks involved in outsourcing. Its success depends on adequate planning and analysis. This is supported by the fact that 50% of outsourcing agreements have failed. If outsourcing is overseas, then more care must be given. On the other hand, it has created issues such as:

 1. the loss of jobs;

 2. change in facility requirements;

 3. potential adjustments to quality control systems and manufacturing processes; and

 4. expanded logistics issues, including insurances, tariffs, customs and timing.

Outsourcing should be done that can provide a competitive advantage.

***Rating Outsource Providers***

Failure of outsourcing agreements are due to insufficient analysis.

The factor-rating method is applied to evaluate outsource providers.

An example from National Architects, Inc. a San Francisco based designer of high-rise office building.

|  |  |  |
| --- | --- | --- |
| Factor (criterion) | Importance Weight |  Outsource Providers |
| BIM (US) | SPC (India) | TELCO (Israel) |
| 1. Can reduce operating cost | 2 | 2 x 3 = 6 | 2 x 3 = 6 | 2 x 5 = 10 |
| 2. Can reduce capital investment | 2 | 2 x 4 = 8 | 2 x 3 = 6 | 2 x 3 = 6 |
| 3. Skilled personnel | 2 | 2 x 5 = 10 | 2 x 4 = 8 | 2 x 3 = 6 |
| 4. Can improve quality | 1 | 1 x 4 = 4 | 1 x 5 = 5 | 1 x 2 = 2 |
| 5. Can gain excess to technology  not in company | 1 | 1 x 5 = 5 | 1 x 3 = 3 | 1 x 5 = 5 |
| 6. Can create additional capacity | 1 | 1 x 4 = 4 | 1 x 2 = 2 | 1 x 4 = 4 |
| 7. Aligns with policy, culture or  philosophy  | 1 | 1 x2 = 2 | 1 x 3 = 3 | 1 x 5 = 5 |
| Total weighted score |  | 39 | 33 | 38 |

**Global Operations Strategy Options**

Firms are operating in many places around the world. They are involving in international business. They engage in international trade or investment, going beyond their domestic business. These firms are known as Multinational Corporations (MNCs). MNCs buy resources, create goods or services and sell them in a variety of countries.

Operations managers of international and multinational firms approach global opportunities with one of four operations strategies: international, multidomestic, global and transnational. These are derived from two factors: cost reduction and local adaptation.

 High

 Global strategy Transnational Strategy

 Cost

 Reduction

 International Strategy Multidomestic Strategy

 Low

 Low High

 Local Adaptation/Responsiveness

International strategy – uses exports and licenses to penetrate the global arena. This strategy is the least advantageous, with little local adaption (responsiveness) and little cost advantage. The firm is just exporting or licensing goods from the home country.

Multidomestic strategy – operating decisions are decentralised to each country to enhance local responsiveness i.e. adapting to local needs. The advantage is maximising a competitive response for the local market but it has little or no cost advantage. Examples: McDonald’s, KFC.

Global strategy – there is high degree of centralization with headquarters coordinating the organisation to seek out standardization and learning between plants, thus generating economies of scale. This strategy is for cost reduction and learning within each facility. The same product is sold everywhere. There is no or little response to local adaptation. Examples: Caterpillar and Texas Instruments.

Transnational strategy – exploits the economies of scale and learning and local adaptation and that core competencies exist anywhere in the organisation. Material, people and ideas move around the countries the business exists. These firms have the potential to pursue all three operations strategies – differentiation, low cost and response. It places interdependent network of worldwide operations more important than country identity. Key activities are neither centralized in the parent company nor decentralized so that each subsidiary can carry out its own tasks on a local basis. The resources and activities are dispersed but specialised, so as to be both efficient and flexible in an interdependent network. Examples: Nestle, Reuters (a news agency) and Citicorp (a banking corporation).