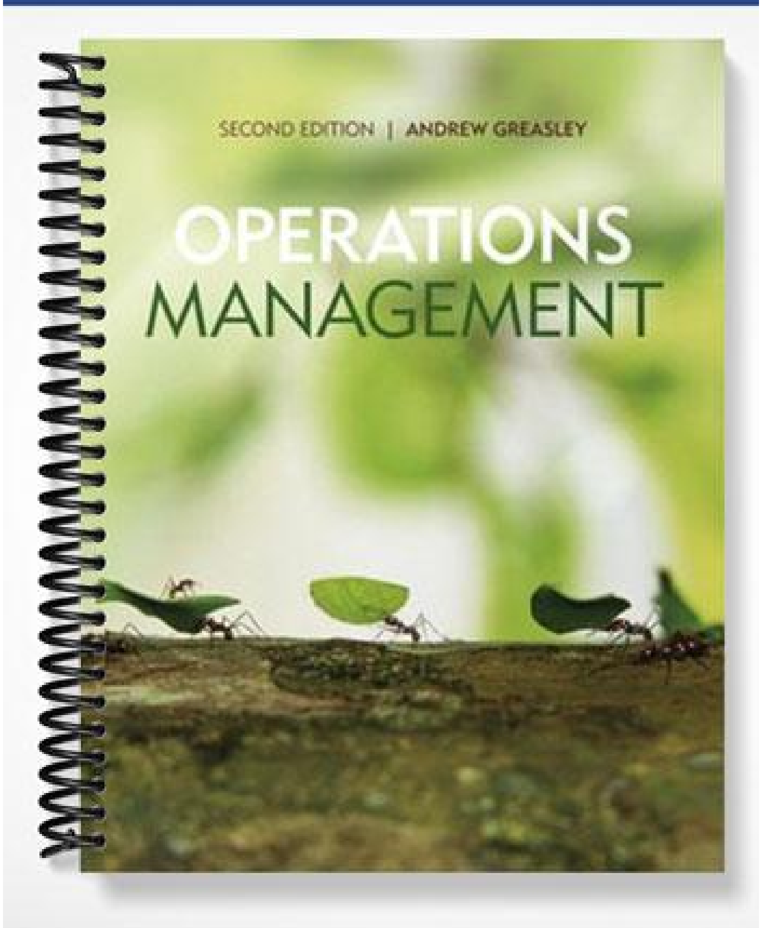
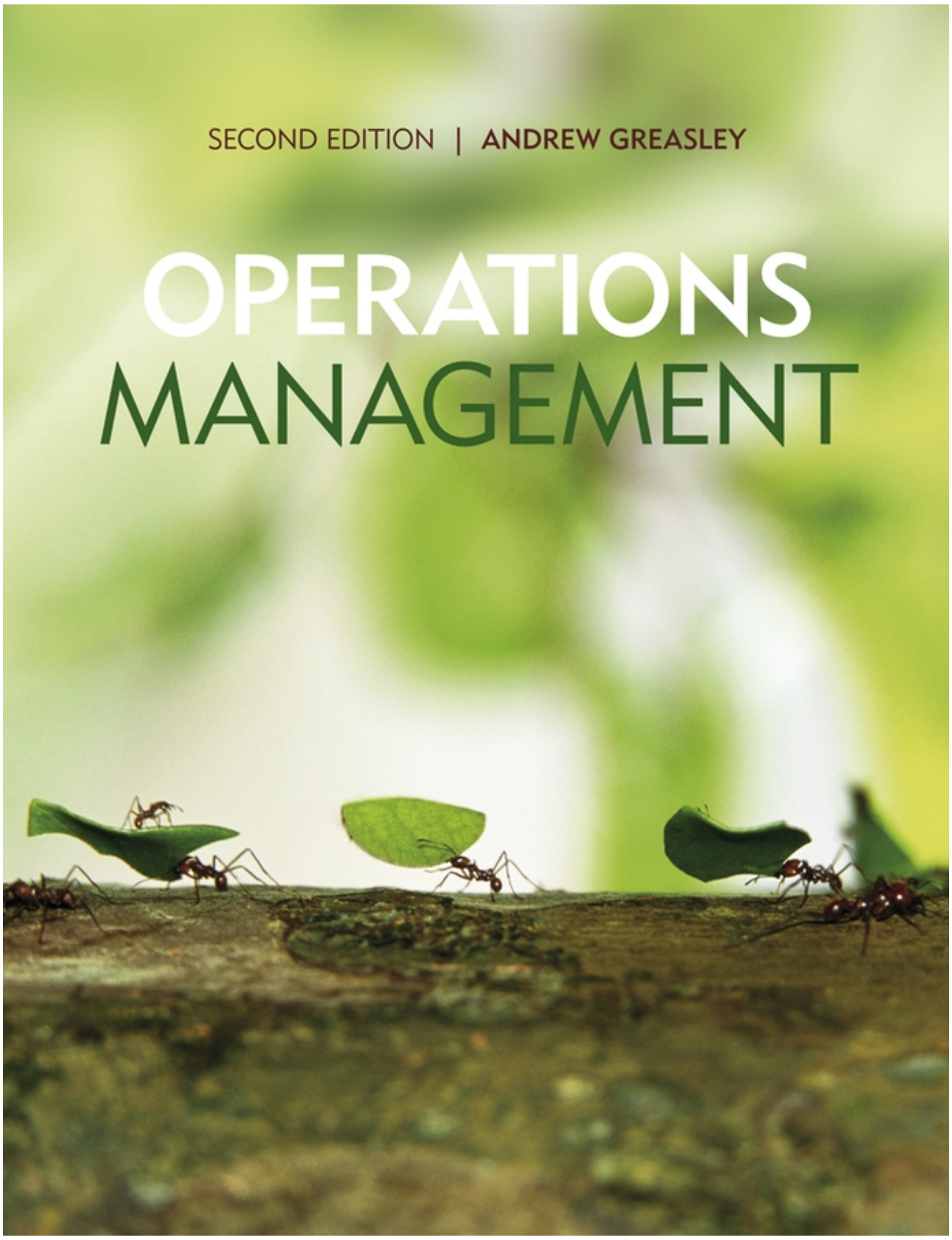
SOLUTIONS MANUAL





Instructor's Manual

Chapter 2

Operations Strategy

www.wileyeurope.com/college/greasley

Case Studies

2.1 Findus

Identify the stakeholders groups that are incorporated in the Findus vision statement.

Consumers
Suppliers
Employees
Food Industry

2.2 Gecko

How has Gecko used flexibility to compete?

Flexibility enables Gecko to provide the market with a customised product which higher volume producers cannot.

Gecko has *product flexibility* in that they can quickly offer new product designs in response to customer demand.
Gecko has *mix flexibility* in that it is able to offer a wide range of products to meet the needs of its customer base.

The combination of product and mix flexibility has meant Gecko can continually add new designs and offer a wide range of designs to meet the needs of a wide customer base (e.g. RNLI, bikers, surfers etc.). Overall demand is now a combination of the demand for these different customer bases and so provides a more reliable and 'smoothed' order book than relying one particular customer type.

Without flexibility the cost of producing a wide product range can make the organisation's product uncompetitive.

2.3 Operations Strategy in Action

1. Read the article and discuss how operations can provide strategic advantage.

1.4.1 Discuss the performance of the company in terms of the five performance objectives.

Q1
The article shows how operations can provide the basis for competitive advantage as asserted by Hayes and Wheelwright and their 4 stage model. They say that

organisations should move towards stage 4 – where operations is the long-term driver of strategy.

In the article Dell can be seen to have gained competitive advantages through its efficient operations capability. By enabling a fast and low cost service (in what is a commodity market) it has been able to meet strategic targets in terms of growth and market share.

Schefenacker has used an efficient and flexible operations capability to provide customised parts and to widen the product mix in response to customer demand. It has also undertaken activities, previously undertaken by its suppliers. If it can do these more efficiently than its suppliers then it will keep the profit for its own.

Q2.
The key to competitiveness through operations is to recognise the relationship between the performance objectives (quality -> dependability -> speed -> flexibility -> cost) and so to provide a system which provides capability and a low cost base.

1.5 TEXON

Relate market-based and resource-based strategy approaches to Texon.

Resource-based: using economies of scale to provide low-cost production

Market-based: using a strategy of global growth to limit competition, enabling a higher price to be secured. Move into related areas which require same product type.

2.5 Ryanair

1. How important is the role of operations in achieving competitive advantage at Ryanair?
2. What structural and infrastructural aspects are aligned with Ryanair's operations strategy?

Q1
Ryanair focuses on the competitive factor of price and so to ensure profitable operations must be able to excel at the performance objective of cost. This is achieved largely through the use of economies of scale. The scale of the operations helps the pooling of resources and maximises utilisation. Resources include aircraft but also staff in call centres, cabin crew and maintenance staff. The additional cost of adding a new service (route) is relatively low and so

destinations with relatively small demands can be offered profitably. Economies of scale are also a major factor when purchasing aircraft.

Q2

Structural	*Infrastructural*
Aircraft – same supplier leading to economies of scale, new aircraft leading to lower fuel costs and lower maintenance costs 'Mass service' process technology used for customers. Web-based with e-tickets and self check-in.	Fuel price hedging policy Scheduling using point-point rather than hub flight path network Scheduling at small, fast throughput, low cost airports Scheduling to minimise cabin crew costs Scheduling using yield management systems to maximise plane utilisation HR policies such as cheap staff and outsourcing of activities such as cleaning Centralised customer call centre pooling demand

Exercises

1. Evaluate strategy development at the corporate, business and functional levels of an organisation.

Strategy can be seen to exist at three main levels within the organisation.

Corporate Level Strategy
At the highest or corporate level the strategy provides very general long-range guidance for the whole organisation, often expressed as a statement of its mission. The mission statement should define the key stakeholders whom the corporation will seek to satisfy and describe the overall strategy it will pursue to meet their objectives. Stakeholders can be defined as anyone with a legitimate interest in the activities of the organisation. Using the stakeholder model the goal of the organisation should be to genuinely satisfy the needs of stakeholders which are necessary for the success of the organisation in the long term.

Business Level Strategy
The second level of strategy is termed a business strategy and may be for the organisation or at the strategic business unit (SBU) level in larger diversified companies. Here the concern is with the products and services that should be offered in the market defined at the corporate level. The SBU must develop a strategy at this level which defines a competitive advantage for its products or

services in the market. Competitive advantage may be achieved by strategies such as low cost, product innovation, or customisation of a service to a niche market.

Functional Level Strategy

The third level of strategy is termed the operational or functional strategy where the functions of the business (e.g. operations, marketing, finance) make long-range plans which support the competitive advantage being pursued by the business strategy.

This model implies a 'top-down' structured approach to strategy formulation in which corporate goals are communicated down to business and then functional areas. Although there has always been interaction within this hierarchy in both directions, the role of functional areas such as operations in setting the framework for how a company can compete from the 'bottom-up' is being recognised. The theory of emergent strategies outlines how the implementation of strategy, rather than following a structure determined by a long-term plan, emerges from day-to-day experience at an operational level.

2. Indicate how a major investment decision could be analysed in terms of its effect on the capability of the operations function.

Investments can be seen in terms of transforming resources such as the facilities and staff that do the work on the transformed resources that delivers the goods or services to the customer. However, even more important to the capability of an organisation may be its intangible resources such as brand loyalty, supplier relationships, technological skills, design skills and a detailed understanding of customer markets. What is important to consider regarding an organisation's intangible resources is that their value may not be recognised (they may not necessarily be included on the firm's balance sheet) and they are most likely to have been developed over time through experience and a process of learning.

This means investment decisions need to consider both the capability in terms of facilities which provide resources in the right areas (i.e. improve the performance of the relevant performance objectives), but also the effect on intangible resources which may not provide a measurable 'payback' on the company's balance sheet.

3. How can the relative significance of the 5 performance objectives be determined in the formulation of the organisation's strategic direction.

Using the Hill methodology the marketing strategy is translated into a range of competitive factors (e.g. price, quality, delivery speed) on which the product or service wins orders. These external competitive factors provide the most important indicator as to the relative importance of the internal operations performance.

Hill distinguishes between the following types of competitive factors which relate to securing customer orders in the marketplace.

- order-winning factors – These are factors which contribute to winning business from customers. They are key reasons for customers purchasing the goods or services and raising the performance of the order-winning factor may secure more business.
- qualifying factors – These are factors which are required in order to be considered for business from customers. Performance of qualifying factors must be at a certain level to gain business from customers, but performance above this level will not necessarily gain further competitive advantage.

From the descriptions above it can be seen that it is therefore essential to meet both qualifying and order-winning criteria in order to be considered and then win customer orders.

An alternative to the order-winning and qualifying competitive factors used by Hill is to use two dimensions – importance and performance – to help operations managers prioritise performance objectives. The relative *importance* of a competitive factor is assessed in terms of its importance to internal or external customers using a 9 point scale of degrees of order-winning, qualifying and less important customer viewed competitive factor.

4. Discuss the main types of flexibility

Flexibility is the ability of the organisation to change what it does quickly. This can mean the ability to offer a wide variety of products or services to the customer and to be able to change these products or services quickly. Flexibility is needed so the organisation can adapt to changing customer needs in terms of product range and varying demand and to cope with capacity shortfalls due to equipment breakdown or component shortage. The following types of flexibility can be identified:

product or service - to be able to act quickly in response to changing customer needs with new product or service designs
mix - to be able to provide a wide range of products or services
volume - to be able to decrease or increase output in response to changes in demand. Volume flexibility may be needed for seasonal changes in demand. Services may have to react to demand changes minute by minute.
delivery - this is the ability to react to changes in the timing of a delivery. This may involve the ability to change delivery priorities between orders and still deliver on time.

Flexibility can be measured in terms of range (the amount of the change) and response (the speed of the change). The table below outlines the range and response dimensions for the four flexibility types of product or service, mix, volume and delivery.

	Range flexibility	Response flexibility
Product or service flexibility	The range of products and services which the company has the capability to produce.	The time necessary to develop or modify the products and services and processes which produce them to the point where regular delivery can start.
Mix flexibility	The range of products and services which the company can deliver within a given time period.	The time necessary to adjust the mix of products and services being delivered.
Volume flexibility	The total output which the company can achieve for a given product and service mix.	The time taken to change the total level of output.
Delivery flexibility	The extent to which delivery dates can be changed.	The time taken to reorganise the delivery system for the new delivery date.

The range and response dimensions for the four system flexibility types

The range and response dimensions are connected in the sense that the more something is changed (range) the longer it will take (response). The relationship between the two can be observed by constructing range-response curves. In general the benefit of flexibility from the customer's point of view is that it speeds up response by being able to adapt to customer needs. The ability of the internal operation to react to changes will also help maintain the dependability objective.

5. Explain the significance for management of linking operations strategy, marketing strategy and corporate objectives.

The following approach to operations strategy provides useful guidance in dealing with the issue of aligning operations to competitive needs. The emphasis within the Hill methodology is that strategic decisions cannot be made based on information regarding customer and marketing opportunities addressed solely from a marketing function's perspective, but the operations capability must also be taken into account. Hill proposes that the issue of the degree of 'fit' between the proposed marketing strategy and the operation's ability to support it is resolved at the business level in terms of meeting corporate (i.e. strategic) objectives. Thus Hill provides an iterative framework that links together the corporate objectives; which provide the organisational direction, the marketing strategy; which defines how the organisation will compete in its chosen markets, and the operations strategy; which provides capability to compete in those markets. The framework consists of five steps:

1. Define corporate objectives
2. Determine marketing strategies to meet these objectives
3. Assess how different products win orders against competitors
4. Establish the most appropriate mode to deliver these sets of products
5. Provide the infrastructure required to support operations

In traditional strategy formulation the outcome of step 3 is 'passed on' to steps 4 and 5 and no further feedback occurs between steps in the process. The Hill methodology requires iteration between all five steps in order to link operations capability into decisions at a corporate level.

6. Evaluate the strategic role of the operations function.

Operations' main role is to produce goods and services demanded, but it must also:

Support strategy – ensure 'capability' to deliver goods/services through performance objectives

Help implement strategy – ensure deployment of resources – the design, management and improvement roles of operations

Drive strategy – provide competitive advantage – not just support role but use operations capability to provide competitive advantage (see Hayes and Wheelwright 4-stage model).

7. Evaluate the potential advantages and disadvantages of focused manufacturing.

Benefits of the focus approach include increased clarity in the day-to-day management of operations resources, the ability to focus processes and resources for a specific subset of operations. Process improvement initiatives can also be more successful within a focused operation. However the idea of focus, by definition, limits the scope of what the operations system can do and thus makes it vulnerable to shifts in the competitive environment. Focus also risks losing economy of scale advantages when resources that were once shared are now dedicated to separate departments (e.g. discounts on high volume purchasing may be lost).

8. Compare and contrast the concepts of trade-offs and agile operations.

The trade-off concept accepts that an organisation cannot be best at everything so that a trade-off between, for example, cost and quality is accepted. Thus the trade-off in operations is decided by the market. The idea of focus may be used to avoid trying to compete across too many trade-offs and concentrate where the company's capabilities lie.

Agile strategy tries to overcome trade-offs by building up an operational capability that can serve a wide variety of customer requirements. The approach of mass customisation is an example of an agile strategy. The idea of focus may help in achieving agility by helping the firm to concentrate on core areas of capability.

9. Does an improvement in one performance objective necessarily mean a reduction in the performance of others?

This question requires a discussion of trade-offs.

A characteristic of trade-offs is that if the operation is working well within its capability then one aspect of performance may be improved without a decrease in performance in its trade-off relationship. In effect the capabilities of the operation exceed the requirements of the markets and excess capability is being unused. Also the nature of the trade-off relationship will most likely be complex and step changes may occur within the trade-off relationship. For example the effect of adding an additional product to a product range may suddenly have a large trade-off effect on cost. Finally the whole nature of the trade-off relationship can be changed by how resources are deployed and processes organised with the operations system. One such change is the implementation of the idea of focus which is considered in the next section.

The idea of trade-offs is challenged however by the belief that actually performance can be improved simultaneously along multiple dimensions. Indeed figure 2.5 shows how improving in performance objectives can lead to both benefits from those improvements and a reduction in the cost performance objective also. Furthermore Ferdows and de Meyer (1990) state that operational excellence can be built in a cumulative fashion. Their sandcone theory maintains that there is an ideal sequence in which operational capabilities should be developed of quality, dependability, speed, flexibility and finally achieving excellence in cost. A cumulative effort to improve should begin with improvements in quality and when a minimum acceptable level of performance is reached improvements are pursued in both quality and dependability. The full sequence of improvement is:

1. Quality
2. Quality + Dependability
3. Quality + Dependability + Speed
4. Quality + Dependability + Speed + Flexibility
5. Quality + Dependability + Speed + Flexibility + Cost

This approach both highlights the need to only target reduction in costs after improvements in the other performance objectives have been secured and implies that certain operational capabilities enhance one another allowing improvements across multiple performance objectives.

Web Exercise

Visit the website containing the annual reports for Marks and Spencer PLC at http://annualreport.marksandspencer.com/group/group_finance.html What role has operations had in supporting the company's strategy?

From the statement presented on the web page the role of operations can be identified through such statements as:

- Increase of retail space, increasing sales by 5.1%
- Reducing costs, increasing profit growth by 4.3%
- Increased capacity in international markets
- Redesign of more centralised distribution network
- Introduction of process technology such as POS

Exam Questions

Discuss the main types of flexibility.

Start your answer to this question with a definition of flexibility and then explain the types of flexibility that are relevant to the operations manager. So flexibility can be defined as the ability of the organisation to change what it does quickly. This can mean the ability to offer a wide variety of products or services to the customer and to be able to change these products or services quickly. Flexibility is needed so the organisation can adapt to changing customer needs in terms of product range and varying demand and to cope with capacity shortfalls due to equipment breakdown or component shortage. The following types of flexibility can be identified:

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Flexibility can be measured in terms of range (the amount of the change) and response (the speed of the change). The range and response dimensions are connected in the sense that the more something is changed (range) the longer it will take (response). The relationship between the two can be observed by constructing range-response curves. In general the benefit of flexibility from the customer's point of view is that it speeds up response by being able to adapt to customer needs. The ability of the internal operation to react to changes will also help maintain the dependability objective.

Explain the significance for management of linking operations strategy, marketing strategy and corporate objectives.

The key to answering this question is to grasp that the question is asking you to provide an explanation for Hill's methodology for operation strategy. So explain that the emphasis within the Hill methodology is that strategic decisions cannot be made based on information regarding customer and marketing opportunities addressed solely from a marketing function's perspective, but the operations capability must also be taken into account. Hill proposes that the issue of the degree of 'fit' between the proposed marketing strategy and the operation's ability to support it is resolved at the business level in terms of meeting corporate (i.e. strategic) objectives. Thus Hill provides an iterative framework that links together the corporate objectives, which provide the organisational direction, the marketing strategy, which defines how the organisation will compete in its chosen markets, and the operations strategy, which provides capability to compete in those markets.

How can the relative significance of the 5 performance objectives be determined in formulating the organisation's strategic direction?

This question relates to step 3 of the Hill methodology which translates the marketing strategy into a range of competitive factors (e.g. price, quality, delivery speed) on which the product or service wins orders. These external competitive factors provide the most important indicator as to the relative importance of the internal operations performance.

There are however two other factors that indicate the relative importance of the internal operations performance. They are the activities of competitors – competitor actions (e.g. introduction of a new product innovation) can change the competitive factors and thus operations' performance objectives, e.g. a move to competing on delivery speed instead of price and secondly the stage of product life cycle – there are different performance objectives at different stages of PLC (introduction, growth, maturity, decline) for a product or service, e.g. flexibility in early stage, cost in decline stage.

Getting back to the competitive factors, Hill distinguishes between two types of competitive factors which relate to securing customer orders in the marketplace. Order-winning factors are factors which contribute to winning business from customers. They are key reasons for customers purchasing the goods or services and raising the performance of the order-winning factor may secure more business. Qualifying factors are factors which are required in order to be considered for business from customers. The performance of qualifying factors must be at a certain level to gain business from customers, but performance above this level will not necessarily gain further competitive advantage. From the descriptions above it can be seen that it is therefore essential to meet both qualifying and order-winning criteria in order to be considered and then win customer orders.

You could of course present a different model in your answer (or maybe both if you had time and the indicative marks made it worthwhile). One alternative to the order-winning and qualifying competitive factors used by Hill is a model by Slack that uses two dimensions – importance and performance – to help operations managers prioritise performance objectives. The relative *importance* of a competitive factor is assessed in terms of its importance to internal or external customers using a 9 point scale of degrees of order-winning, qualifying and less important customer viewed competitive factors.