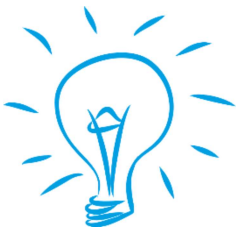
6. OUTSOURCING



This chapter is devoted to the most important issues related to outsourcing and make-or-buy analysis used in the outsourcing decision-making process. It contains:

- basic definitions,
- types of outsourcing,
- advantages and disadvantages of outsourcing,
- description of make-or-buy analysis,
- logistics outsourcing.

6.1. Introduction

In today's market conditions, logistics processes, which include the flow of products, materials and information within the company and between organizations, largely influence the fulfillment of consumers' expectations and requests. Logistics determines the creation and maintenance of competitive dominance of current economic entities. Logistics processes are performed within a logistics system that each company has set up in a different way. In order to meet the changing and growing expectations and preferences of customers, companies are currently building very complex logistics systems based on the cooperation of many enterprises from different countries. Logistics processes are becoming more and more complex, burdened with uncertainty and requiring large financial outlays. Companies should not only try to guarantee appropriate customer service and minimize costs, but also reduce the impact of disruptions in logistics processes. (König & Spinler, 2016). The company's logistics system should be adapted to the external and internal conditions of a given organization and should guarantee the effective and efficient implementation of its goals. An inappropriate arrangement of logistics processes may lead to increasing financial outlays of logistics activities and a decline in the quality of consumer service, which results in a decline in the competitive position of the organization (Brzeziński, 2015).

Modern companies are increasingly introducing changes within their organization, especially in the area of management, due to the pursuit of high efficiency of their activities and to achieve goals and market success, because efficiency is a tool for creating their competitive advantage. Constantly increasing market pressure together with the competitiveness of other companies make it impossible for business entities to integrate all resources at all levels of their activity. Therefore, the question arises whether it is necessary to perform all activities in-house for a given organization and consider using outsourcing, that is the services of an external company specialized in a given industry, in order to focus on its fundamental activities?

Henry Ford said that "If there's something we can't do more efficiently, cheaper, and better than our competitors, there's no point in us doing it, and we should hire someone to do that job who can do it better than we can" (Ford, 1923).

6.2. The essence of outsourcing

Generally speaking, **outsourcing** is a management method (concept) that consists in limiting the scope of activities performed directly by a given company (referred to as the parent company) and outsourcing them for permanent implementation by external enterprises (referred to as service companies) (Trocki, 2001).

The concept of outsourcing assumes that for almost every process, area or function that could be performed within the company's typical organizational structure, there is an alternative in the form of services offered by external suppliers (partners) specializing in a given industry. For this reason, outsourcing is defined as a method of permanent external service by specialized enterprises, externalization, external management, or even deconcentration of the functioning of the organization.

Areas that can be successfully outsourced to external companies are presented in Table 6.1.

Table 6.1. Examples of areas that can be transferred to a service company as part of outsourcing

Area	Examples of outsourcing tasks, functions or processes
Production and supply	production of components, semi-finished products and even finished products, product assembly, packaging, design,
Transport and logistics	transport and distribution of products, courier services, warehousing,
Research and development	research and development work, scientific research, implementation work,
Computer science and information technologies	computer network support, data center support, IT infrastructure maintenance services, IT application support, end-user support, security services or internet services,
Finance, accounting and tax and accounting services	accounting, debt management, controlling, audit, financial and analytical services, development of business plans, tax consultancy, taxpayer representation before tax authorities,
Legal suport	legal advice in various fields, or representation in legal matters,
Customer service	telemarketing, running a reception, secretariat, hotline or call center,
Marketing	monitoring changes taking place on the market, researching customer expectations, creating concepts for new products, defining promotional, advertising and distribution strategies, and shaping the public relations sphere,
Staff and human resources,	recruitment and selection of candidates, employee training, creation of motivational systems, personnel management, administration of HR documentation, temporary employment, and payroll settlements,
Management and administration	maintaining buildings and cleanliness, keeping archives, protection of people and property, managerial services..

Source: (Matejun, 2007)

According to another definition, "**outsourcing** is a method of organization and management consisting in a relatively permanent, long-term, contract-based transfer of responsibility for the implementation of specific areas of business activity (tasks, functions or processes) to a specialized external partner, taking into account the dynamic, interactive and partnership nature of cooperation aimed at obtaining economic and qualitative benefits and at the same time the possibility of developing the key competences of the parent company,

which allows strengthening its key activities, building a competitive advantage and developing the company" (Matejun, 2015).

The diagram of the evolution and increase in the importance of outsourcing for modern enterprises is presented in Figure 6.1.

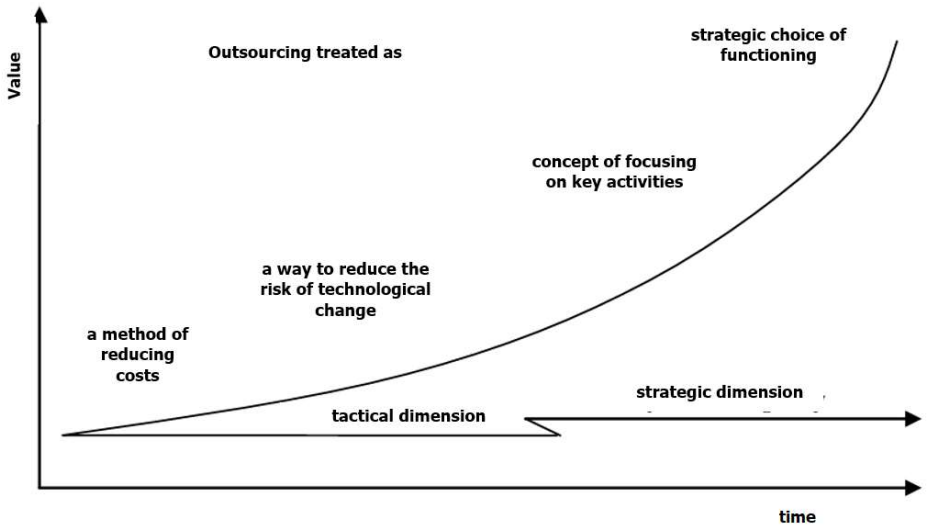


Figure 6.1. Evolution of the outsourcing concept

Source: (Matejun, 2015)

6.3. Basic types of outsourcing

Outsourcing in business practice can take place in two main forms: separation or commission. **Separation** refers to the situation when a given sphere of activity (process, task, function) is performed within the organizational structure of the enterprise, but does not belong to the main competences of the organization, and analyzes related to the costs of its maintenance and the quality, coordination and timeliness of activities show that it does not participate in the process of creating the value of services or products. It is then possible to remove a given area of activity from the organizational structure and outsource its implementation to a service company (Matejun, 2015).

Commission occurs when a specific field of activity has not yet been performed within the company's organizational structure, and the analysis shows that it would be needed due to

certain strategic benefits. This area does not include the company's key competencies, and its direct addition to the organizational structure would result the involvement of significant resources that could be allocated to strengthen the basic sphere of operation. This will enable cooperation with an external supplier that provides the desired outsourcing services (Matejun, 2015).

Table 6.2.Variants of capital and contract outsourcing depending on the form of transfer of activities to a service company

Outsourcing / Form of transfer of business activity	**Capital outsourcing**	**Contract outsourcing**
	permanent cooperation with an entity related by capital and ownership	permanent cooperation with an entity that is independent in terms of capital
Area separation	**Capital separation** creation of a new subsidiary on the resource base, which begins its independent market existence; it provides services to the parent company as well as to external entities.	**Contractual separation** liquidation of the previously performed function in the enterprise and establishment of formal cooperation with an external, independent supplier who ensures the implementation of tasks; possibility of partial transfer of staff and other resources to the supplier.
Commission an area	**Capital commission** purchase of shares or stocks in a company that provides the required services or performs specific tasks; as a result, a capital takeover takes place and a subsidiary is established	**Contract commission** establishing cooperation with a supplier that is independent in terms of capital and ownership, which begins the implementation of a specific function.

Source: (Matejun, 2015)

It is also possible to separate and commission services in the contract or capital variant. In the **contract variant**, the external supplier, that is the service company, is a capital-independent, specialized enterprise with ties to the parent company only on the basis of a contract. The assumption of the capital variant is to enter into cooperation with a company dependent on ownership and capital. This may be done by creating a new organization (daughter

company) or by purchasing shares in an enterprise that already operates on the market and carries out activities needed by the parent company. As a result of the combination of capital and contract outsourcing with two basic methods of outsourcing services to an external service company, four basic variants of this method can be obtained, as presented in Table 6.2.

Table 6.3. Basic types of outsourcing

Division criterion	Types of outsourcing
Type of separated functions	▪ outsourcing of auxiliary functions, ▪ outsourcing of management functions, ▪ outsourcing of basic functions
Type of separated activity	▪ outsourcing of side activities, ▪ outsourcing of auxiliary activities, ▪ outsourcing of core activities.
Type of outsourcing by function	▪ outsourcing of IT services, ▪ financial services outsourcing, ▪ logistics outsourcing, ▪ human resources outsourcing and others
Complexity of separated functions	▪ outsourcing of individual functions, ▪ process outsourcing (BPO), ▪ outsourcing of functional areas.
Purpose of the separation	▪ repair outsourcing, ▪ customization outsourcing, ▪ development outsourcing
Persistence of separation	▪ strategic outsourcing, ▪ tactical outsourcing.
Place of performance of the outsourcing service	▪ services provided centrally, ▪ services provided locally.
Scope of separation	▪ total outsourcing, ▪ partial (selective) outsourcing.

Source: (Matejun, 2006)

In addition to the types of outsourcing presented above, there are many other types of outsourcing in business practice, depending on the adopted criterion, which are presented in Table 6.3.

6.4. Benefits and risks of using outsourcing in modern enterprises

Although the benefits obtained as a result of outsourcing cooperation are often determined by factors related to the size of the enterprise, its industry, the type of outsourced activity or the scale of operations, attention should be paid to many positive aspects for the parent company that

can be seen after the implementation of outsourcing, regardless of the above. mentioned factors. The following advantages of outsourcing are most often presented, considered on many levels (Trocki, 2001; Lachiewicz & Matejun, 2012).

I. Direct benefits

1. Legal benefits
   - sense of security resulting from constant cooperation with an external company,
   - sharing the risk between the service company and the parent company,
   - transfer of responsibility for providing services to the supplier.
2. Motivational benefits
   - greater market orientation of management and employees,
   - increased satisfaction and psychological comfort in managing the organization,
   - increasing the motivation of management and employees.
3. Technical and technological benefits
   - Establishing cooperation with partner companies with appropriate qualifications confirmed by certificates,
   - increase in the level of use of enterprise resources,
   - availability of external technological resources (know how),
   - improvement of performance parameters of the spheres of operation outsourced to an external company (their implementation, costs, resource input, quality, time, etc.).
4. Organizational and human resources benefits
   - simplification of the organizational structure and organizational procedures applicable in the company,
   - faster information flow and better communication within the organization,
   - freeing internal resources and saving management time, which can be spent on the development of key activities,
   - reducing the need to engage your own employees to perform certain tasks.
5. Economic and financial benefits
   - increasing financial discipline and increasing control of costs and revenues,

- minimizing financial outlays for the implementation of tasks (primarily by reducing employment and other resources needed to perform them),
- better structure of company expenses,
- transformation of fixed costs into variable costs thanks to payment only for the service provided by an external company, without the need to incur fixed costs for its implementation.

6. Operational benefits
   - improving the quality and efficiency of operational processes in the company,
   - reducing operational problems.
7. Strategic benefits
   - increased strategic flexibility of operations,
   - development of certain areas of the organization without the need to invest - the service provider makes investments on its own in technology and resources necessary to perform specific functions,
   - access to resources or qualifications that the company does not have in its structure or is unable to finance,
   - the economic entity's focus on its core business and the development of key competences (areas of activity).

II. Indirect benefits
   - diversification or enrichment of the company's market offer,
   - increase in market share,
   - acquiring new consumers,
   - greater satisfaction and contentment of existing customers,
   - better competitive position.

However, outsourcing is not without risks. The most common risks associated with implementing outsourcing according to (Clements et al., 2004; Click & Duening, 2005) include risks:

- human capital management – relate both to the motivation of employees moving to external companies and their ability to adapt quickly to new conditions, and to the loss of their knowledge, competences and potential;
- customer relationship control – outsourcing of business processes can lead to temporary disruptions in customer relationships, especially when the changes involve key service areas;
- in selecting and evaluating service providers – include the difficulty in selecting appropriate external companies, assessing their competence and the need to adapt their resources to the needs of the organization;
- related to quality and timeliness of services – there may be difficulties in ensuring that products and services delivered meet required standards and that agreed deadlines are met;
- limited supplier flexibility – problems may arise from difficulties in adapting the activities of external parties to changes in the parent organization;
- a decline in the quality of customer service – in the short term there may be a reduction in the speed and efficiency with which customer needs are met;
- associated with differences in the goals of the organisation and the supplier – there may be a mismatch between the company's strategy and ambitions and those of the outsourcing partner;
- associated with process reorganisation – refers to the need to adapt organisational structures accordingly to avoid loss of efficiency and productivity;
- loss of effective information exchange – outsourcing can slow down the flow of information and hinder its wide dissemination;
- increased costs in the short term – althoughugh outsourcing is often intended to reduce expenses, it may initially generate additional costs associated with implementing changes;
- legal – arising from potential contractual inaccuracies, regulatory problems and legal disputes.

6.5. Make-or-Buy analysis

One of the most important concepts that justify the use of outsourcing is the concept of **make or buy** dilemmas, which is related to the fundamental problems of the functioning of every enterprise: to make, to do it on its own (make), or to buy, to outsource the work to an external company (buy), but also, whether to carry out a given project alone or together with other organizations (Perechuda, 2000)?

Make (production) – allows the organization to control its activities. It is especially recommended when the company has proprietary products or processes. It is recommended when (www_6.1):

- the product is valuable and not easily replicated,
- the supplier market is not very well developed,
- the environment is stable.

Buy (purchase) – purchasing services and products from external companies in the supply chain contributes to the increase in the company's flexibility and provides it with access to the most modern products. This concept is recommended when (www_6.1):

- environmental instability causes high risk of internal investments,
- we are dealing with competition on the supplier market,
- the product is not treated as strategically important.

Make-or-buy is a key company strategy, which includes, among others:

- introducing a new product to the market,
- production control,
- quality systems,
- human resources,
- production process,
- size of the enterprise and its location,
- measuring efficiency.

The starting point of make-or-buy is the total production and purchase costs calculated for comparable product batches. The basic economic premise is provided by a simple

comparison of the unit purchase price with the unit variable production cost. If it is determined that the unit variable cost of production exceeds or is equal to the price of the purchased product, the decision to produce is not economically justified (www_6.1).

In the overall analysis, apart from variable production costs, it is also necessary to analyze what part of the company's fixed costs should be added to the settlement of total production costs? A comparative analysis is presented below, constituting the premise for making the decision "to produce" or "to buy"? (www_6.1).

The calculations of production costs show that:

$$K_p = K_s + X * k_v$$

where:

K_p – total cost of producing x units of goods,

K_s – fixed costs of production,

X – expected production volume,

k_v – unit variable costs.

For purchases:

$$K_z = c * x$$

where:

K_z - cost of purchase,

c - unit price,

x - purchase (production) volume.

X_k is defined as the critical production volume for which the purchase cost is equal to the cost of own production. This is the value below which it is not profitable to undertake production. Only when the X_k value is exceeded is the decision to start production justified. The above calculations were based on the assumption that only the product price is important for the purchase option. However, if the purchase is accompanied by additional financial outlays (e.g. transport costs), then the pattern must be modified by expanding it with appropriate components (Fig. 6.2).

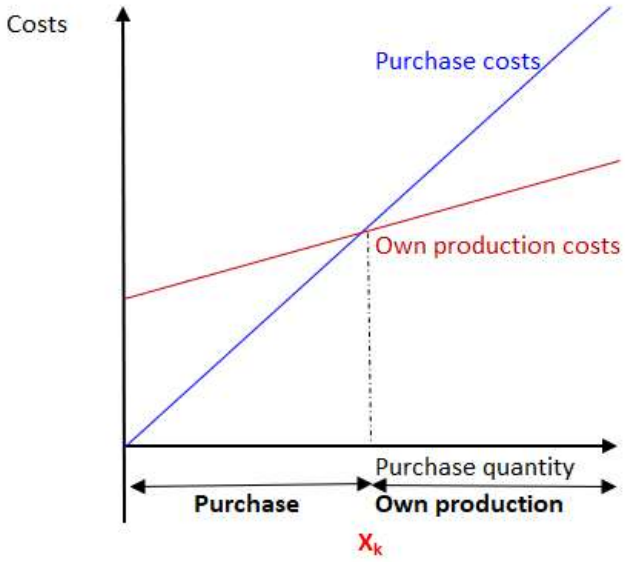


Figure 6.2. Critical production volume

Source: (www_6.1)

You may also face a dilemma: is it worth investing in the production process with production capacity? In this matter, after taking into account all substantive premises that support the investment and do not eliminate the reasonableness of the purchase – the cost analysis should include the components of the investment account (www_6.1).

$$k_i = \frac{r * (1+r)^m + k_d}{(1+r)^m - 1}$$

where:

a_0 – volume of investment expenditure,

r – Interest rate,

m – period of use of the investment,

k_d – additional annual costs related to investment management,

k_i – investment costs,

K_p – production cost.

Therefore, the production cost will be calculated according to the formula:

$$K_p = k_i + x + k_v$$

and the purchase cost

$$K_z = c * x$$

If the inequality $K_z < K_p$ is met, there are grounds for making a decision to purchase a given product.

Due to the possibility of changing both the demand volume x and the market price, it is recommended to determine the **critical price** c_k and the **critical production volume** X_k as the values at which the cost of own production and the cost of purchase are equal.

$$c_k = \frac{k_i + x * k_v}{x}$$

In a situation where the initial calculations suggested the advisability of a purchase, the value of the critical price is an indicator to what level the market price can increase without undermining the purchase decision.

$$X_k = \frac{k_i}{C - k_v}$$

Make-or-Buy analysis can be divided into four stages, which are illustrated in Figure 6.3.

Figure 6.3. Outsourcing stages

Source: (www_6.2)

Step 1: Preparation (www_6.2)

First, you should define logistics processes, areas of the company that will be subject to observation in the make-or-buy analysis, as well as aspects that should be particularly focused on in this analysis. There are standard logistics processes, such as transport, storage,

shipping, import, export and customs clearance, and supporting logistics processes, which include, for example, preparation, commissioning, packaging, returns and inventory. This division is necessary to decide on the scope of outsourcing as well as the operating model.

When selecting a project team, you should also take into account – apart from the management staff, specialists in the field of operational logistics, as well as issues related to valuations – employees from neighboring departments, such as production or the human resources department, and even the works council, because the decision to outsource will be had a key impact on the functioning of the company. Next, during the kick-off meeting, goals and benefits will be discussed and a project concept will be prepared.

Step 2: Data collection (www_6.2)

The quality of the subsequent analysis results depends only on the correctness of the data. For this reason, it is necessary to collect or store in the company all the necessary data regarding staff and those answering the question whether logistics systems, e.g. industrial trucks or warehouse management, must be transferred or performed by external entities. A catalog of questions that can be divided into important ones can certainly be helpful when making a decision about outsourcing and explaining the logistical situation of a given organization, e.g. how much are the gross employment costs and what exactly do they consist of? What is the weekly working time? etc. and for information questions, e.g. is there a system for employees to submit improvement proposals?

Step 3: Analysis (www_6.2)

In the next stage, the data is assessed and analyzed. The results of make-or-buy analysis are most often carried out using a set of indicator values from comparative analysis (benchmark), which are collected during the operational execution of orders for clients.

Step 4: Comparison of total costs (www_6.2)

Finally, a clear comparison is made between the logistics costs within the company and the logistics costs of the external service provider. In terms of employees, for example, the organization's total personnel costs are compared with the total staff costs of an external entity.

Typically, service provider costs are lower due to more flexible working time regulations. An outsourcing company has the ability to complete the same task with fewer staff. Her expert knowledge also contributes to process optimization, which reduces personnel costs. However, the goal of outsourcing should not be based on the pursuit of savings on employees. In times of shortage of qualified staff, it is more important to effectively assign appropriate positions to employees or increase productivity while maintaining the same number of staff.

When calculating the total costs, it must be taken into account that the decision to outsource usually involves the transfer of part of the organization. This means that selected staff of the parent company will transfer to the external entity's team within a designated period of time. This may be related to severance pay or other conversion costs. This fact should also be taken into account in the comparison of total costs. After obtaining the entire calculation and analysis, you can make a decision for or against outsourcing.

	A	B	C	D	E	F	G
1	Production (Sales)	92	pcs				
2	Unit price:	10480	$		Break-even point:	31,5	Mg
3	Variable costs:	5600	$			(0+B4)/(B2-B3)	
4	Fixed costs:	153600	$				
5							
6		=$B$1*A8	=B8*$B$2	=B8*$B$3	=$B$4	=D8+E8	=C8-F8
7	Coefficient	Production / Sales	Turnover	Variable costs	Fixed costs	Total costs	Profit
8	0,00	0,0	0,0	0,0	153600,0	153600,0	-153600,0
9	0,09	8,3	86774,4	46368,0	153600,0	199968,0	-113193,6
10	0,18	16,6	173548,8	92736,0	153600,0	246336,0	-72787,2
11	0,27	24,8	260323,2	139104,0	153600,0	292704,0	-32380,8
12	0,36	33,1	347097,6	185472,0	153600,0	339072,0	8025,6
13	0,45	41,4	433872,0	231840,0	153600,0	385440,0	48432,0
14	0,54	49,7	520646,4	278208,0	153600,0	431808,0	88838,4
15	0,63	58,0	607420,8	324576,0	153600,0	478176,0	129244,8
16	0,72	66,2	694195,2	370944,0	153600,0	524544,0	169651,2
17	0,81	74,5	780969,6	417312,0	153600,0	570912,0	210057,6
18	0,90	82,8	867744,0	463680,0	153600,0	617280,0	250464,0
19	0,99	91,1	954518,4	510048,0	153600,0	663648,0	290870,4
20	1,08	99,4	1041292,8	556416,0	153600,0	710016,0	331276,8
21	1,17	107,6	1128067,2	602784,0	153600,0	756384,0	371683,2
22	1,26	115,9	1214841,6	649152,0	153600,0	802752,0	412089,6
23	1,35	124,2	1301616,0	695520,0	153600,0	849120,0	452496,0
24	1,44	132,5	1388390,4	741888,0	153600,0	895488,0	492902,4
25	1,53	140,8	1475164,8	788256,0	153600,0	941856,0	533308,8
26	1,62	149,0	1561939,2	834624,0	153600,0	988224,0	573715,2
27	1,71	157,3	1648713,6	880992,0	153600,0	1034592,0	614121,6
28	1,80	165,6	1735488,0	927360,0	153600,0	1080960,0	654528,0
29							

Figure 6.4. Calculation of data for graphical determination of break-even point

Source: own study

An MS Excel spreadsheet is a tool to support outsourcing decisions in Make-or-Buy analysis. In the case study of a natural cosmetics company, two approaches are presented. The first concerns the determination of the **Break-even Point** using graphical and analytical methods. This point indicates the minimum level of production to cover costs (Fig. 6.4).

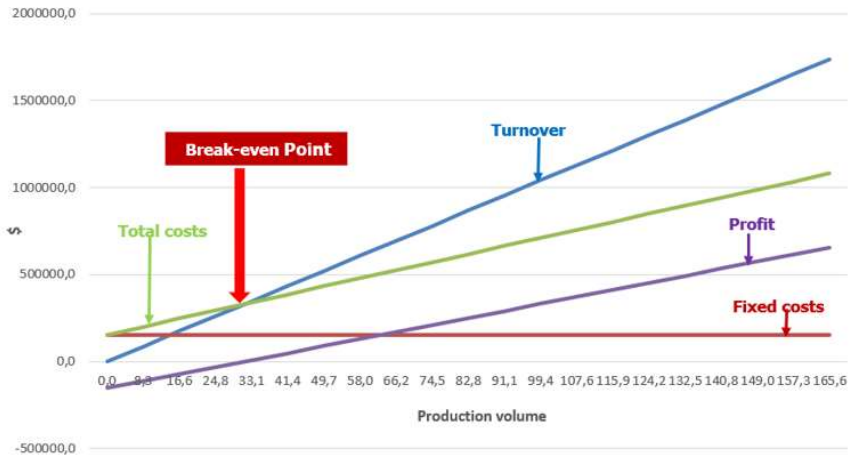


Figure 6.5. Break-even Point Chart

Source: own study

Using the data, a graph of the dependence of fixed costs, total costs, turnover and profit on production volume should be created. The analysis of the profit line reveals the point of intersection, and the analytical determination of the break-even point consists in determining the point of intersection of the turnover and total cost lines (Fig. 6.5), which defines the break-even point.

Based on the results, it can be assessed whether the business is economically viable at current production levels? Changes in parameters such as sales volume (x), price (c), fixed costs (K_s) and unit variable costs (k_v) can then be determined to achieve break-even or planned profit, using the formula:

$$z = x\,(c - k_v) - K_s,$$

where:

x - production level,

c – price,

k_v – unit variable costs,

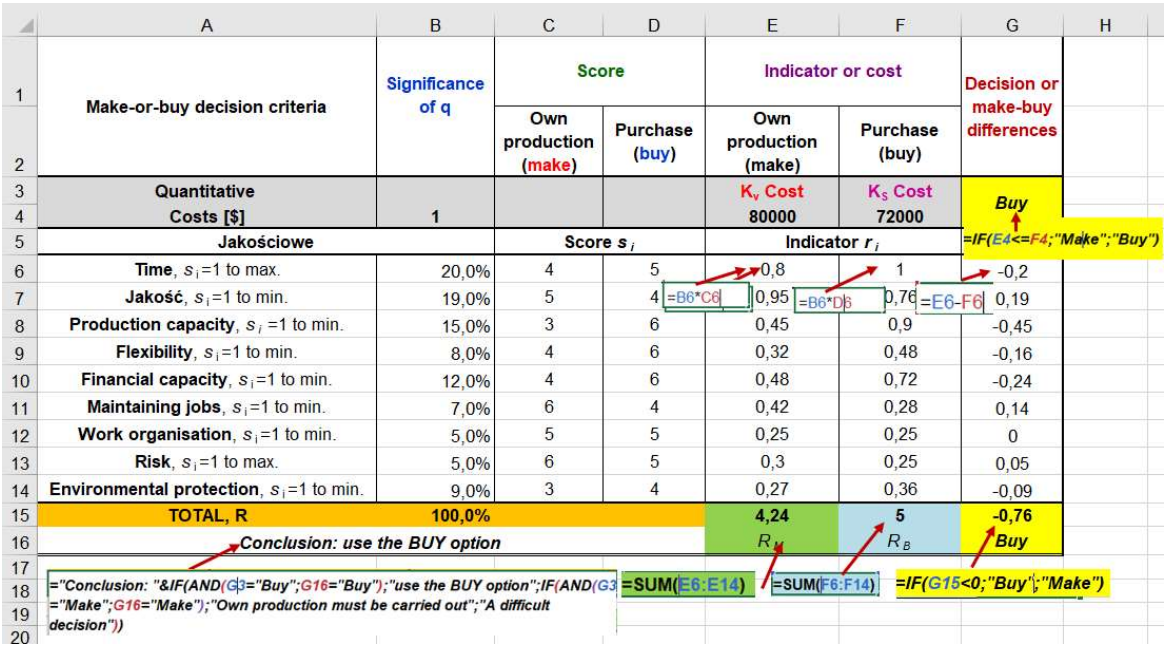
K_s – fixed costs.

The second mode of analysis concerns the Make or Buy decision. Management considered the production of natural essential oils to be too costly, which affects the price of cosmetics. In order to decide whether to continue in-house production or to outsource it, an additional analysis taking into account quantitative and qualitative criteria was carried out.

Key criteria were identified (Fig. 6.6, column A) and assigned weights (q_i, column B). Value judgements (s_i) were made for both options (Make and Buy) using a six-point scale (columns C and D). Relative importance indices were calculated: for in-house production (R_M = 4.24) and for external purchase (R_B = 5.0). A negative final difference of -0.76 confirmed the superiority of the buy option (*Buy*).

For the sake of clarity of the analysis, logical conditions were applied:

- If the costs of in-house production are lower than the costs of purchasing an external service ($K_M < K_B$) and at the same time the importance index of the quality criteria is lower for in-house production ($R_M < R_B$), the *Buy* option should be selected,
- If the in-house production costs are higher than the purchase costs ($K_M > K_B$) and the importance index of the quality criteria is higher for in-house production ($R_M > R_B$), the manufacturing option (*Make*)
- otherwise the decision requires further analysis.



	A	B	C	D	E	F	G	H
1	Make-or-buy decision criteria	Significance of q	Score		Indicator or cost		Decision or make-buy differences	
2			Own production (make)	Purchase (buy)	Own production (make)	Purchase (buy)		
3	Quantitative				K_V Cost	K_S Cost	Buy	
4	Costs [$]	1			80000	72000	=IF(E4<=F4;"Make";"Buy")	
5	Jakościowe		Score s_i		Indicator r_i			
6	Time, s_i=1 to max.	20,0%	4	5	=B6*C6 0,8	1	-0,2	
7	Jakość, s_i=1 to min.	19,0%	5	4	0,95	=B6*D6 0,76	=E6-F6 0,19	
8	Production capacity, s_i =1 to min.	15,0%	3	6	0,45	0,9	-0,45	
9	Flexibility, s_i=1 to min.	8,0%	4	6	0,32	0,48	-0,16	
10	Financial capacity, s_i=1 to min.	12,0%	4	6	0,48	0,72	-0,24	
11	Maintaining jobs, s_i=1 to min.	7,0%	6	4	0,42	0,28	0,14	
12	Work organisation, s_i=1 to min.	5,0%	5	5	0,25	0,25	0	
13	Risk, s_i=1 to max.	5,0%	6	5	0,3	0,25	0,05	
14	Environmental protection, s_i=1 to min.	9,0%	3	4	0,27	0,36	-0,09	
15	TOTAL, R	100,0%			4,24	5	-0,76	
16	Conclusion: use the BUY option				R_V	R_B	Buy	
17								
18	="Conclusion: "&IF(AND(G3="Buy";G16="Buy");"use the BUY option";IF(AND(G3				=SUM(E6:E14)	=SUM(F6:F14)	=IF(G15<0;"Buy";"Make")	
19	="Make";G16="Make");"Own production must be carried out";"A difficult							
20	decision"))							

Figure 6.6. Assessment of the Make-or-Buy problem taking into account quantitative and qualitative factors

Source: own study

As the above analysis shows, make-or-buy decisions may turn out to be strategic decisions related to the business and even the future fate of the company. Nowadays, in times of high competition, when companies fight for customers, they strive to produce very good quality products as cheaply as possible. This means that large corporations often stop producing semi-finished products for small companies (www_6.1).

The approach to the issue of make-or-buy is based on qualitative as well as economic and financial factors and is related to the answer to the question whether another business entity can carry out a given task at a lower cost and/or better than the parent company. An incorrectly made decision in this matter may contribute to an increase in operating and production costs, loss of operating efficiency, as well as inefficient use of resources (Platts, Probert & Canez, 2002).

6.6. Outsourcing in Logistics

As part of outsourcing, the most frequently outsourced areas are areas that are not the key competencies of a given company, but only support it. If logistics is not a fundamental activity of the company, then delegating the organization and/or execution of all or part of the logistics processes to competent suppliers specializing in the provision of logistics services may significantly increase the efficiency of logistics processes, which is reflected in the increase in the efficiency of the organization. The idea of logistics outsourcing is to separate resources and use logistics services provided by qualified external companies, which, taking their own risk and usually using their own resources, assume managerial and executive functions. Logistics outsourcing also includes the purchase of various logistics services from external suppliers without meeting the condition of transferring resources (Witkowski, 2008).

The first and most important task for a company before deciding to choose logistics outsourcing is to define the main goals that it plans to achieve by transferring logistics outside the company. Most often, the first and key desired goal is to reduce costs (www_6.3). The decision regarding the scope of logistics outsourcing largely depends on the prices of logistics services, which in turn determine the logistics costs of the economic entity and the prices of products produced and/or sold. As a result of cooperation between the organization and the logistics operator, it is possible to achieve the following goals (Gąsowska, 2016):

- improving the quality of customer service,
- shorter order cycle execution time,
- better quality and delivery guarantee,
- faster flow and increased transparency of information,
- more efficient use of assets.

Outsourcing of logistics processes is also related to the spheres of the company's key logistics activities. Enterprises commission logistics service providers to create a logistics system, model logistics processes, create and implement a logistics strategy. Referring to a logistics entity as a strategic partner may contribute to obtaining and stabilizing a competitive advantage (Jeszka, 2013).

The strategy of the parent company influences the modeling of logistics processes of the logistics service provider. The guarantee of effective cooperation between an organization and an external company specializing in logistics services is communication between the cooperating enterprises. IT systems are increasingly used to support decisions related to flows in the enterprise's logistics system and supply chains. This leads to quick actions that lead to the optimization or transformation of logistics processes, and as a result, to the elimination of the associated risks, minimization of costs, shorter implementation time of logistics processes, increased flexibility and efficiency of the company (Gąsowska, 2016; Liu, Huo, Liu & Zhao, 2015).

Logistics outsourcing improves the company's efficiency if logistics services create the expected correlation of costs with the results of logistics services. The key determinant in the process of deciding on logistics outsourcing should be a precise assessment of this outsourcing in terms of financial savings, non-cost benefits, and risk assessment (Gąsowska, 2016).

Four categories of indicators are used to assess the effectiveness of logistics outsourcing (Szukalski, 2016):

- changes in costs – comparing their changes allows you to assess savings in the area of operating costs that result from logistics outsourcing,
- changes in profitability – their analysis allows you to assess the impact of logistics outsourcing on the profit generated by the business entity,
- changes in turnover – enable the evaluation of the effectiveness of logistics outsourcing, if the separation of logistics processes results in a change in the value of assets,
- changes in the break-even point – analyzing them before and after logistics outsourcing allows you to assess the profitability of outsourcing. A profitable change is to reduce the break-even point.

Risk analysis for logistics outsourcing should be carried out in the following areas (Gąsowska, 2016):

- operational risk, which results from the fear of losing control over logistics processes or an external company's access to confidential information,
- risks associated with selecting a logistics service provider,

- risk regarding the quality of logistics services and the consequences of irregularities in separate logistics processes,
- risks associated with securing confidential company's information,
- risk associated with introducing organizational changes in the enterprise.

The outsourcing process can generally be divided into three phases (www_6.3):

1. **Internal preparations** of the company – the purpose of this stage is to initiate discussions with logistics service providers. It depends primarily on whether the company planning to transfer warehouse functions to a service company is able to collect all information on its warehouse inventory for a period of at least several months and whether the decision-making processes applicable in the organization are defined, as well as the conditions for selecting a logistics service provider. Depending on the level of complexity of logistics processes and the size of the enterprise, it should be assumed that the time of internal preparations to initiate negotiations with logistics specialists may range from one to six months. This phase should end with a tender for logistics services along with all the necessary data, entrusted to a designated group of logistics suppliers.
2. **Inviting external companies** to submit their proposals for logistics services, trade negotiations and selecting the organization that will ultimately take over logistics services. The second part of the process, including conversations and negotiations with selected logistics service providers, may last from three months to about half a year. This is the period needed to develop offers and all other activities accompanying this task: commercial discussions, phased narrowing of the group of service providers in subsequent stages of the tender, until the winner is selected.
3. **Implementation**, i.e. working with the selected business entity to implement the project and physical transfer of warehouse stocks under the operator's management. The third phase usually lasts four to six months. Of course, the implementation period of the operation is the result of many factors and in multi-aspect projects the implementation may take much longer. It is always worth taking into account some time in case of unforeseen circumstances.

Table 6.4. Basic types of outsourcing

Advantages of logistics outsourcing	Disadvantages of logistics outsourcing
Optimizing expenses and reducing investment risk	Employees' fear of dismissal and demotivation
Ability to focus on the right business	Partial loss of control over order execution.
Improving the flow of processes and division of responsibilities	Choosing a partner with a lack of competence
Improving the quality of consumer service	Becoming dependent on a service provider
Increasing competitiveness	Possible problems with coordination and internal communication

Source: (www_6.4)

The increase in the efficiency of logistics processes obtained thanks to logistics outsourcing affects the efficiency of management in the enterprise and the supply chain (Kowalska, 2011). Cooperation of an enterprise with companies providing logistics services may contribute to cost reduction, improvement of financial liquidity, increase in sales profitability, return on assets, return on equity, improvement of indicators (Gąsowska, 2016).

Chapter Questions

1. What are the potential risks associated with outsourcing processes in a company?
2. What are the main factors influencing the decision to choose a "make" or "buy" strategy in the context of the company's operation?
3. What is the key data that should be collected to correctly assess the need for outsourcing logistics systems?

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