

Production-operation management. The chosen aspects

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Editor



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1.

THE NATURE OF THE INDUSTRIAL ENTERPRISE



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Abstract: This chapter presents basic information about the nature and essence of the enterprise. The first subchapter shows both the well-known and less popular definitions of an enterprise and an industrial enterprise. They have been shown through the prism of various approaches, including definitions from various countries. The second part discusses the features of an industrial enterprise, with particular emphasis on: organizational separateness, economic separateness, legal separateness (legal personality), territorial separateness and technical and production separateness. The next part focuses on the goals and tasks of an industrial enterprise, with particular emphasis on the way they are formulated. Both strategic, tactical and operational goals were discussed. The subject of the considerations in the fourth part were the functions of an industrial enterprise, including a detailed description of the production, technical, organizational and personnel functions. The division of enterprises according to various criteria is presented in the next section. It focuses on such criteria as business profile, the size of the enterprise, form of ownership, production type, type of production process and market legal form. The last part discusses the market on which an industrial enterprise operates. Its features were presented, as well as the type of industrial products, types of customers and differences between industrial and consumer marketing. Particular attention was also paid to OEM (Original Equipment Manufacturer) and MRO (Maintenance Repair and Overhaul).

Keywords: division of enterprises, enterprises and industrial enterprises, features and functions of the enterprises, industrial and consumer market, industry.

1.1. Introduction

The development of the industry requires constant changes and continuous improvement of management methods. The basis are new conditions for business activity, which are related to the evolution of the business environment. It is indicated that this environment is shaped by new challenges related to climate changes, technological progress and innovations, state policy, and the industrial revolution 4.0. Moreover, new relations both inside and outside the industry change the nature of exchange, the way of competing and building a competitive advantage. The approach to cooperation is also changing, with existing strategies aimed at fighting with contractors being replaced by a proactive approach to joint achievement of goals. The dynamic change of the environment makes that the nature of the enterprise is also changing, including goals, strategy, management, etc. It should be understood as the way the enterprise operates, including the way of formulating strategic and operational goals, the approach to the implementation of tasks, as well as its policy in the field of finance, employment, quality, etc. The functions of enterprises and their features are also subject to evolutionary changes. Entrepreneurship which is seen as one of the main driving forces of the company has become extremely important. Flexibility becomes more and more important, both in production and management. The first concerns production programs, products and manufacturing technologies, the second is related to the decentralization of power, matrix organizational structure and approach to working time. It can therefore be emphasized that the management of a modern enterprise is becoming more and more complicated.

By analysing the complex and multifaceted nature of the enterprise, this section tries to familiarize the reader with its essence and nature. First, both the popular and the less known definitions of an enterprise and an industrial enterprise are presented. Then, its features, functions and the way of formulating goals in strategic, tactical and operational terms are discussed. An integral part of the chapter is also the presentation of the company according to various criteria, such as the domain of activity, the nature of work or the technology used. The first part ends with the characteristics of the markets in which the companies operate. Both the features of the industrial and consumption markets are discussed in detail, pointing to their essence and importance in economic development.

1.2. Concept of an industrial enterprise

Industry plays a very important role in any economy. It influences the development of regions, creates new place of works, contributes to the development of infrastructure, as well as improving the living conditions of people. It is associated

with the exploitation of natural resources and their processing in order to meet the needs generated by both consumer and industrial markets. Industry generally consists of manufacturing companies which domain of activity is related to production or service. It is characterized by durability, repeatability of production processes, large scale of activity with an appropriate division of labour, with the use of machinery and technical devices, and cooperation of means of work and people (Janasz, 2000, p. 65). The author points out that the main characteristics of the industry are (Janasz, 2000, p. 66):

- exploitation of natural resources,
- supply production tools and equipment as well as industrial services to other sectors of the economy,
- control of environmental processes and concentration of production,
- production continuity, taking into account the division of labour and cooperation of machines, devices and people,
- mass production and sales markets.

The industry can be defined as “a set of economic and other units that produce and prepare for the production of similar for economic purposes and used raw materials and products with the help of specialized equipment, typical technology and specially trained personnel” (Nikolov & Marinova, 1996, pp. 84–85; Deneva, 2013, pp. 29–30).

One of the most important entities that play a very important role in every economy are enterprises. On one hand, they provide the state with income and reduce unemployment, whilst on the other hand, they are a place for creating innovation, implementing new solutions and technical progress. Moreover, they enable investors to invest capital and at the same time obtain a return on the invested funds. The standard of living of a given society depends on their effectiveness and efficiency. Focusing on innovative and modern products or services, based on pioneering technologies, ensures development and a highly competitive position in the international arena.

Enterprises deal with various activities, including production and service. Some of them deal with both manufacture and provide manufacturing services. The subject of their activity can be very wide, from the provision of standard services and the production of simple products, to offering comprehensive, complex and complicated solutions that can be used in other enterprises. They can operate in a variety of markets, meeting local, regional, national, international and even global needs. They pursue their goals using a variety of strategies, ranging from price and quality, through the niche, mixed and follower strategy, to a diversified one conditioned by the market served. Enterprises direct their offer towards institutional or individual buyers, they can also satisfy the needs of all market participants by offering a dual product or service. Their basic activity should be related to the ability

to perceive changes in the market environment and adaptation to new realities, which may be evolutionary or radical.

Despite the great importance of enterprises and their growing role in the economy of each country, both the literature on the subject and the scientific discourse lacks an unambiguous definition that would simply explain their essence and nature. Definitional difficulties result primarily from the multithreading and universal concept of an enterprise as well as attempts to define it by scientists representing various scientific disciplines, such as: sociology, psychology, political and social sciences, legal, organizational behaviour, organization theory or strategic management. In the context of a wide range of concepts related to the enterprise, the attempts to define the essence of an industrial enterprise are of particular interest.

Semantically, the term “enterprise” derives from the personality of the entrepreneur who undertakes an initiative, invests capital, organizes the production unit (enterprise) and assumes entrepreneurial risk, regardless of the economic sector (production, services, etc.). Factories, plants, mills, conglomerates, hotels, restaurants, cinemas, cafes, etc. can be considered as enterprises.

Key features that characterize the essence of contemporary enterprise are the following: economic organization; financial and economic and managerial independence guaranteeing its economic freedom; relations with the market; use of own and foreign funds as capital of the enterprise; presence of entrepreneurial (economic) risk, pursuit of survival and profits, etc.

The **enterprise** is a formal organization. It has a structure, rules, goals, management, etc., but not every formal organization is an enterprise. A branch organization, e.g., is a formal organization with a chairman, a board of directors, a supervisory board, statutes, goals, and so on. However, it is not an enterprise. It was created to represent, protect and support its members. Its purpose is not to make a profit. The status of other formal organizations (church, foundations, etc.) is similar. Similar to enterprises, in households (as primary economic units) input resources are transformed into final products. Although it produces products, the household is not an enterprise. The created goods are used for own (personal) consumption. As with branch organizations, foundations, etc., the activities of households also lack a purposeful effort to make a profit. It is the goal of making a profit that distinguishes the formal organization “enterprise” from other formal organizations as well as the household from the enterprise (Varamezov, Naidenov, Panteleeva, Nikolov, & Ivanova, 2015, p. 3).

In the simplest terms, an enterprise is an entity that conducts business activity, the purpose of which is to identify and then satisfy specific consumer needs, i.e. to provide products or services desired on the market at a specified time and to the required standard (Bittnerowa, 1995).

An enterprise can be viewed through the prism of various approaches. In terms of the market, an enterprise is equated with an economic entity running a service

or production activity on its own account in order to achieve specific benefits. The enterprise defined in this way, operates with the use of production factors which include labour, capital and land. In a broader sense, an enterprise pursuing its goals, must have specific resources, including raw materials, materials, technical equipment, human resources, information, know-how, structure, etc. Moreover, conducting an economic activity it has to collaborate with other market participants from whom it acquires the resources needed for production, and provides produced goods or services rendered (Lichtarski, 2003). Thus, it is a link of a typical Porterian value chain, constituting a sequential system of interdependence. This chain in the company includes basic and support activities. The basic activities include (Porter, 2006, p. 77):

- internal logistics associated with the processes of receiving, depositing, warehousing, storing and distributing raw materials and materials that are necessary in production processes,
- operational activities related to the basic activity of the enterprise which involve the conversion of production factors into a finished product; these activities include many processes, such as: processing, assembly, shaping, cutting, grinding, packaging, renovation, maintenance, etc.,
- external logistics, primarily regarding the depositing and storage of finished products, resulting from the conversion process, i.e. the transformation of the input vector (power) into the output vector (effects), referred to in an industrial enterprise as a production process, and their delivery to buyers,
- marketing and sales, i.e. the activity of persuading a potential buyer to purchase a product or service; these activities can use a number of instruments, such as: advertising, promotional activities, direct sales, fairs and exhibitions, folders and catalogues, etc.,
- service, the task of which is to maintain the functioning of the company at a high level and ensure the appropriate quality of the offered product or service; includes both activities for the benefit of the machine park and the increase in employee competences.

Supporting activities, defined as supportive or assisting include four categories, including (Porter, 2006, p. 78):

- supplies, including all activities that must be performed to ensure the delivery of specific products, machinery and equipment, raw materials, materials or parts for which a demand has been submitted; these activities include processes such as identification of needs, identification and selection of co-operators, negotiating terms of cooperation, organization of deliveries, control, evaluation, etc.,
- technological development related to technical progress applies to both product development and the methods of its production; in the enterprise must be purposeful, rational, economically beneficial and lead to labour savings or improvement of its conditions, which is manifested in changes in production volume, improvement of quality, assortment variety, saving human labour, using new raw

- materials, increasing efficiency and productivity, as well lower cost of products; is directly reflected in the improvement of the company's competitive position,
- human resources management, within which all activities related to the recruitment process, hiring and dismissing, remuneration and motivating, improving qualifications, acquiring new competences should be analysed; in practice, it is believed that the rank of human resources in an organization is higher than the rank of fixed assets because it is man who decides about their use, application, replacement or withdrawal, and
 - the company infrastructure which covers all activities related to the organization of work, including management, planning, financing of activities, compliance with the law and applicable standards as well as quality management.

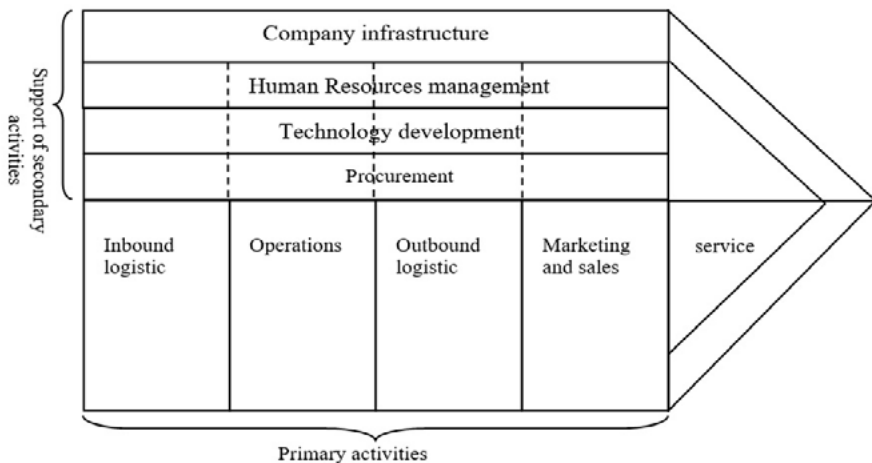


Figure 1.1. Porter's value chain analysis

Source: (Porter, 2006, p. 74).

Building a value chain is one of the basic conditions for cooperation and collaboration, under which two or more entities pursue their complex goals. The correct selection of contractors, both suppliers and recipients, will make the manufactured products and services available in the right place, for the right buyer and at the right price.

Value chain segment. This refers to the steps across the value chain that a product goes through from conception to creation and delivery to customers. These steps include research and development, design and development, inbound logistics, intermediate goods, supporting services, manufacturing, outbound logistics, marketing and after-sale services (Leurent & Shook, 2018, p. 4).

From the point of view of management sciences, an enterprise should be considered in the organizational category which means that it is an organized unit,

and its activity is based on a rational organization (Blinska-Reformat, 2009). This means that a given unit works towards the set and intended goals with maximum efficiency, when efficiency means completing the task in a correct manner, relating to the ratio between inputs and outputs (Zieleniewski, 1969; Krzakiewicz, 2006).

Value-added activities. This includes all activities that add value to a product, in the form of physical value (assembly and other fabrication) or product design and development (Leurent & Shook, 2018, p. 4).

Supernat (2020) indicates that an enterprise has three basic meanings: subjective, objective and functional ones. In terms of the subject, an enterprise is equated with an entrepreneur, i.e. “a natural person, a legal person and an organizational unit that is not a legal person, the legal capacity of which is granted by a separate act, performing an economic activity” (Law of Entrepreneurs, 2018, art. 4.1). The above definition indicates that the economic activity performed by the indicated persons and organizational units must be legally independent, and the entrepreneur bears full responsibility for the established legal relations. In terms of the subject matter, the enterprise has been defined in Art. 55 of the Civil Code (Act of 23 April 1964, Journal of Laws No. 16, item 93, as amended). According to the code, it is “an organized group of intangible and tangible assets intended for business activities. It includes in particular:

1. Designation individualizing the enterprise or its separate parts (name of the enterprise).
2. Ownership of real estate or movable property, including equipment, materials, goods and products, and other rights in rem to real estate or movable property.
3. Rights arising from rental and lease agreements for real estate or movable property and the right to use real estate or movable property arising from other legal relationships.
4. Claims, rights in securities and cash.
5. Concessions, licenses and permits.
6. Patents and other industrial property rights.
7. Copyrights and property rights related to property.
8. Business secrets.
9. Books and documents related to running a business”.

The functional approach is related to the permanent running of a specific economic activity for profit. It is indicated that in this sense it is only a definition of a specific economic activity conducted in accordance with the category specified in the Polish Classification of Activities (Firlit, 2018, p. 33).

An enterprise can also be defined in terms of sociology, in which it is treated as a social category. Basińska points out (2012, p. 23) that in “symbolic interaction the enterprise is considered as a field of interaction between employees and superiors”. From this perspective, the focus is on social groups formed by various employees

as well as the relationships between them, their motivations and behaviour. It is emphasized that in such an organization a specific culture is created, at the base of which there is the process of joint determination of meanings. The enterprise is a network of relations between specific individuals in which the subject of the game is social position (Bourdieu, 2005). Psychology deals with a similar scope, including interpersonal relations in an enterprise.

The **enterprise** is the main structural unit of any economy in which the various types of production processes take place. In practice, the term is used with different meanings, the most common of which are the following:

- organizational form for carrying out entrepreneurial activity,
- a place for deployment of various machines, equipment and technology in order to perform certain production processes,
- a private business unit for the production of goods or services for profit,
- state-owned enterprise producing a strictly defined type of production to meet the needs of the population.

When analysing various types of attempts to define the essence of an enterprise, it is worth paying attention to **the industrial approach**. Industry is one of the most important areas of business activity. It should be understood as the non-agricultural field of material production related to the extraction of resources created by the natural environment and their processing on a large scale, using machines and devices as well as the application of the division of labour in order to satisfy various human needs.

Table 1.1. Enterprise and industrial enterprise in terms of individual countries

Bulgaria	<p>An enterprise is an independent business unit that produces and sells various tangible and intangible goods (goods and services) in order to make or receive a profit. This is the smallest structural unit of the economy.</p> <p>An industrial enterprise is a legal, territorially organizational-technical and economically separate production-economic unit, which uses limited resources for production and sale of products and services, according to the market requirements and needs.</p>
Czech Republic	<p>An enterprise is an institution established to perform business activities. From a legal point of view, an enterprise is defined as a set of tangibles, personal and intangible components of a business.</p> <p>In general, an industrial enterprise is a complex social organism, composed of human and material elements, whose main function is to produce material goods.</p>
Hungary	<p>An enterprise is an economic unit which under their corporate names undertake business operations with their own liability in the interest of gaining profit and therefore also take risks. Although their activities (business operations) and properties separate from the other market participants, they are connected with them through the market.</p> <p>The industrial local unit is an enterprise, or a part of it, located on a site determined geographically. On this or from this site one or more persons carry out one or more, dominantly industrial activities (mining and quarrying; manufacturing; electricity, gas, steam and water supply) for the same enterprise.</p> <p>The industrial enterprise is an economic unit that carries out one or more, dominantly industrial activities (mining and quarrying; manufacturing; electricity, gas, steam and water supply)—according to the definition of “industrial local unit”.</p>

Poland	<p>An enterprise is an entity that conducts business activity, the purpose of which is to identify and then satisfy specific consumer needs, i.e. to provide products or services desired on the market at a specified time and to the required standard.</p> <p>An industrial enterprise should be understood as an economic organization manufacturing products or providing industrial services, economically and organizationally separated in the economy of a country, region and having legal personality.</p>
Slovakia	<p>An enterprise is a set of tangibles as well as personal and intangible components of a business. The enterprise includes things, rights and other assets that belong to the entrepreneur and are used to operate the enterprise or, due to their nature, are intended to serve this purpose.</p> <p>The indicator manufacturing of industrial products and industrial services includes products produced in the industrial enterprise intended:</p> <ul style="list-style-type: none"> – for sale outside the company and for own production consumption (internal consumption) and industrial services (modifications, repairs, maintenance, assembly—installation), including subcontracting, – finished products (wage work) and subcontracting of industrial services (work of a productive nature) which are intended for sale outside the enterprise.
Ukraine	<p>An enterprise is an independent economic entity established by a competent public authority or local government or other entities in order to meet social and personal needs through the systematic implementation of production, research, commercial and other economic activities in the manner specified in this code and other regulations.</p> <p>An industrial enterprise, defined in the Ukrainian jurisdiction, is identified with an enterprise that produces industrial products in certain quantities in accordance with a given technology. The term “industrial enterprise” includes all enterprises belonging to the following economic activities: mining, processing, construction, electricity, gas, water supply and sanitation, transport, storage and communication services. An integral part of an industrial enterprise is the production process, involving the use of specific resources: raw materials, equipment, labour and technological processes, etc.</p>

Source: Own study based on (Synek, 2010; Pytela, 1996; Act 513/1991, Výroba priemyselných výrobkov a priemyselné služby, 2013; Economic Code of Ukraine, 2003; Deneva, 2013; Lichtarski, 2003; Bittnerowa, 1995).

Therefore, it can be emphasized that an industrial enterprise should be understood as an economic organization manufacturing products or providing industrial services, economically and organizationally separated in the economy of a country, region and having legal personality. The essence of the separation is determined by the fact that the industrial enterprise is the owner, leaseholder or administrator of specific assets (land, buildings, machinery, equipment, energy infrastructure, materials, semi-finished products and products, bank capital). Thanks to possessing the legal personality, an enterprise may be an independent subject of rights and obligations in the field of economic transactions. Its core activity is manufacturing of goods or providing services. It renews its property resources on its own and by manufacturing products or providing services, it generates profit at its disposal in accordance with applicable legal regulations. In the activities of enterprises defined in this way, four phases can be distinguished (Janasz, 2000, p. 66):

- the first one is related to obtaining raw materials from the natural environment,
- the second one involves the processing of the obtained raw materials, their enrichment, removal of impurities, and similar processes,

- in the third one, the obtained ingredients are combined using various methods,
- the fourth one is related to the sale of manufactured goods.

An integral part of the industrial activity is the provision of production services which generate more than half of the revenues generated in the industrial goods markets (Strähle, Füllermann, & Bendig, 2012).

Contemporary industrial production combines and uses a set of diverse production factors (material resources, human resources, capital, technology, etc.) aimed at creating goods and services that meet specific groups of needs. Common to these resources is the following (Deneva, 2013, pp. 19–20):

- they create conditions for the production of other material resources, ensuring the normal functioning and reproduction of the labour force (furniture, clothes, food, drinks, appliances, etc.),
- they provide the necessary machinery and equipment for the production of these material resources,
- production of these material resources guarantees the prosperity and the national economy and security of each country.

Within the industry, there are many enterprises that invest certain resources, use certain technology and obtain homogeneous or heterogeneous end products. **Industrial enterprises** carry out similar or identical production activity, representing a combination in space and time of heterogeneous or functionally identical production operations and processes that lead to the creation of different types of industrial products. Their unification and inclusion in the industrial sector are based on the relative homogeneity of production and services (criteria for homogeneity: similarity in production technology; similarity in the raw materials used; similarity in the economic purpose of production; opportunities to combine production or vertical services, similarity in the quantity and quality of work performed).

All the characteristics of the enterprise in general are typical for the industrial enterprises. At the same time, they are characterized by some specific features arising from the specifics of the industry in which they operate and the industrial products and services which they create, i.e. the subject of their activity.

Industrial product is a product intended to be used in the production process as part of the fixed tangible assets of the enterprise, as a product for primary processing, finishing, assembly or installation, which the manufacturer offers for sale on the industrial market for money or counter-delivery (barter).

The subject of activity of the industrial enterprise is the organization and implementation of efficient production and sale of industrial products or services in order to meet the needs of the economy and the society and to make profit. Based on the definition of an industrial enterprise, from the positions of the subject of activity and the branch of operation, the following characteristics of the industrial enterprise can be indicated:

- Intensive use of fixed assets, with a dominant share in the economic valuation of the enterprise.
- High degree of mechanization and automation of production activities, including robotics, with a tendency to include artificial intelligence.
- Implementation and use of a significant number of heterogeneous machines, operating in spatial and temporal coordination.
- Production of products, which for the most part are intended for an unknown buyer or direct involvement of the buyer-guarantor in the process of defining and constructing the key parameters and functionalities.
- Dominated by the share of engaged persons who have long-term employment, i.e. there is a higher retention of staff in the company for a longer period of time.
- There is a clear organizational division between production and trade.
- Serial type of production prevails.
- A division of labour is applied, linked to a predefined, precisely fixed and predetermined course of production processes and activities (e.g. at the conveyor) etc.

The final products and services of industrial character created by the industrial enterprises are intended for realization on the industrial market.

1.3. The features of industrial enterprises

When analysing the definition of an industrial enterprise, one can point out its features which include:

- organizational separateness,
- economic separateness,
- legal separation (legal personality),
- territorial separateness,
- technical and production separateness.

Organizational separateness means that the enterprise is separated in technical and organizational terms which manifests itself in a specific organizational structure appropriate for a given entity (Marek & Białasiewicz, 2011, p. 46). Traditionally, this structure is a set of all organizational elements and connections between them (Krupski, 2004, p. 65), as well as relations of superiority and inferiority occurring in the enterprise. Its aim is to smoothly and competently manage each unit and to conduct business activities that will enable the achievement of the set goals while maintaining financial discipline. The essence of separateness is manifested in the hierarchy of power which is reflected in a separate board that makes independent decisions, sets goals and methods of their implementation, delegates powers to other members of the enterprise, and is responsible for the adopted direction of development. Organizational separateness, due to the detailed assignment of

tasks to individual identified units as well as precise responsibility, affects efficient and effective management. It can therefore be emphasized that a properly defined structure affects the effectiveness of the implementation of the company's goals and tasks and also proves its flexibility.

Economic separateness is related to the possession by an enterprise of certain resources that it can dispose of according to its own will, on its own, at its own risk and responsibility, according to the principles of economic settlement. This means that all expenses related to the current activity must be covered by the enterprise with the generated income, and the development, in the form of renewal of the possessed property, with the profit generated on the basic activity. It should be emphasized that if it is not possible to cover its liabilities from the generated income, the enterprise is subject to liquidation. This approach is related to the self-financing principle which is a natural verifier of business activity of enterprises. In practical terms, it is assumed that the use of resources at the company's disposal will be characterized by efficiency, manifesting in the difference between outlays and effects (Lichtarski, 2003, p. 58). The relationship between the effects and inputs in an enterprise's activity is defined as productivity which can be considered from the point of view of the whole (total productivity) and individual, specified elements (partial productivity). The productivity of technical equipment, labour, energy and capital is of particular importance in the company's operations. When analysing the economic distinctiveness, some authors identify another feature which is the risk of failure. It mainly concerns high competition from other entities, unsuccessful investments, inadequate production program, lack of sales, inappropriate asymmetric cooperation or poor management (Marcinkowski, 2017).

Legal separation means that the enterprise is an independent entity of rights and obligations in the field of economic transactions which means that it may incur various types of obligations, including loans, conclude purchase and sale contracts and transactions, and conduct settlements with other entities operating under its own responsibility on the market. The essence of separateness manifests itself in the enterprise's ability to enter into economic relations of a civil and legal nature. When running a business, an enterprise with legal personality must comply with specific, detailed legal regulations. It should also be emphasized that not all organizations conducting economic activity have legal separation.

Territorial separateness means that the enterprise conducts business activity in a specific, separated area or territory where buildings, structures, halls and other premises necessary for the conducting of business, are located. However, due to the progressive processes of globalization, unification and the emergence of large corporate companies, this feature is losing its importance, as enterprises conduct activities in diversified territories (e.g. by shifting production to countries with lower costs).

The technical and production separateness concerns the specific production equipment at the disposal of the enterprise as well as the technology and the ability

to use it, licenses, patents, know-how, production organization, etc. It is emphasized that there are no two identical units, even when they are equipped with exactly the same machine park. The distinctiveness is evidenced not only by the machines and equipment but also by production programs which can be identified with the company's offer aimed at the market, relationships, concluded contracts, production capacity, organization and work structure, etc.

The Commercial Companies Code (2000) considers the enterprise as the main object and subject of legal relations. According to it the enterprise is a set of rights, obligations and factual relations:

- the basic rights of the enterprise include: the right of ownership and other real rights, debenture rights, rights to intangible objects and various types of non-property rights,
- liabilities include liabilities arising from the conclusion of various contracts and liabilities on loans and other monetary liabilities,
- the actual relations are expressed in the established system for realization of the finished products, advertising activity, business contacts and the image of the individual enterprise.

According to the legal interpretation, the enterprise is an independent legal entity engaged in commercial activity. As such, it is a real existing structure that enters into relations with other economic entities and is subject to certain general rules and regulations for the implementation of economic activity.

From the point of view of the requirements of the Accounting Act, the term enterprise means a set of a number of economically separate natural persons and legal entities carrying out an activity permitted by law.

Therefore, the enterprise is a business unit in which a specific type of production activity is carried out. It is characterized by legislative, administrative and economic independence. Its legislative independence derives from its status as a legal entity. The administrative one is related to the construction of a certain organizational and managerial structure, and the economic one—is expressed in the final results of its activity.

Every enterprise, regardless of its size and industry affiliation, has an owner. As such, it can be an individual or a group of persons, a legal entity or the state as a whole.

In order to better understand the nature and characteristics of the enterprise, it is necessary to consider it from two different points of view—as an economic system and as an organization of people.

As an economic system, the enterprise is a complete set of interdependent elements for the realization of certain economic goals. The separate parts of this set form the main subsystems of the enterprise: the input, output and transform subsystem.

The main task of the input subsystem is to ensure the normal functioning of the system as a whole. It includes all machines, equipment, raw materials, materials,

labour and capital, which ensure the course of production processes. Their quantity depends entirely on the size and goals of the enterprise.

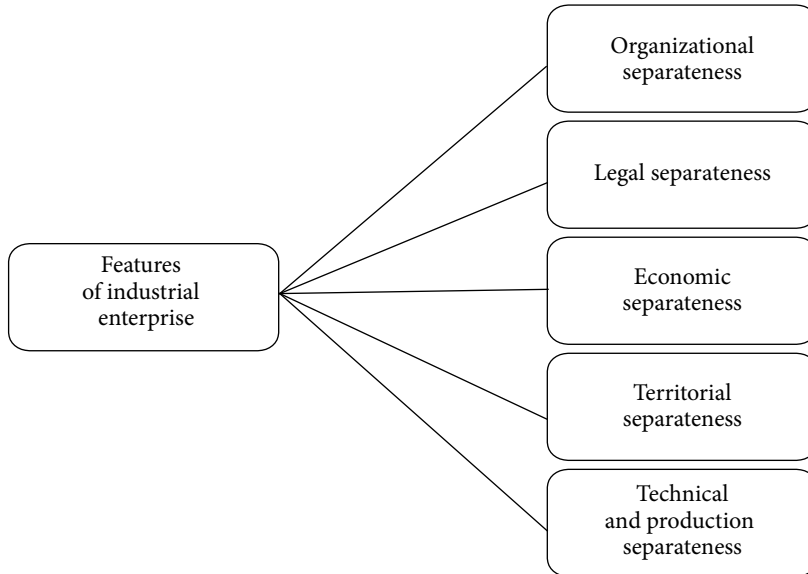


Figure 1.2. The basic features of industrial enterprises

Source: Own study.

In the transforming subsystem is the combination of the main factors of production. Here are the production processes for which the enterprise itself was created. The necessary condition for this is the presence of a certain technology.

The output subsystem includes the quantities of goods or services produced, in accordance with the objectives set in advance. Their realization provides the necessary funds for the existence of the business unit.

An obligatory condition for the normal functioning of the enterprise system is that its separate subsystems are interconnected and coordinated with each other, because each of them has strictly defined functions and tasks in the process of carrying out the production activity.

An enterprises can also be considered as an **organization of people**, which means that:

- it is an association of a certain number of individuals,
- it is created for the fulfilment of predetermined common goals.

In this case, as in any other organization, the main internal variables should be distinguished here, which to a large extent predetermines the results of the enterprise's activity.

1.4. Goals and tasks of an industrial enterprise

When analysing the definition of an industrial enterprise, it is often indicated that it must achieve a specific goal or objectives. In this approach, the goal should be understood as “the objectively and subjectively future, desired state or result of the organization’s operation, possible and planned to be achieved, within the period covered by the short-term or long-term action plan” (Krzyżanowski, 1985, p. 57). The indicated definition is only one of the approaches disseminated in the scientific discourse. According to Krzakiewicz and Cyfert, the goal is an ambiguous concept (2009, pp. 24–25).

The goal should be understood as “the objectively and subjectively future, desired state or result of the organization’s operation, possible and planned to be achieved, within the period covered by the short-term or long-term action plan” (Krzyżanowski, 1985, p. 57).

From the point of view of the company, the easiest way is to indicate what the goal is to specify what the company wants to achieve in the future and in how distant future, and what it must do to ensure the conditions of long-term existence and achieve these goals. There are two synonymous terms associated with the goal understood this way (Stabryła, 2012, p. 31):

- a task which should be understood as a spatially, objectively, subjectively and temporarily separated part of the goal to be performed within the set time limit, consistent with the time interval in which the goal should be achieved,
- mission which is equated with the concept of the company’s business, the idea of its development and message as well as a general promise expressed in terms of the market.

Goals in an enterprise can be classified according to the various criteria. In the simplest terms, they are divided into general (official) and specific ones. In general ones, this is the state that a given entity wants to achieve in the adopted time perspective. Most often they are indefinite, fuzzy, indicating a certain desired position or situation in which a specific subject wants to find itself. They provide a framework for the development of specific objectives which means that they apply to the entire organization. Due to their general nature, they can be precisely broken down by assigning tasks for each unit or division in the organization. The split process continues until each group in the enterprise is held accountable for a subset of goals. This approach is known as the “cascade of goals” (Hatch, 2002, p. 129).

Precise definition of goals is also related to the management levels. The general nature concerns **strategic goals** defined by the top management of the organization which determine the directions of the company’s development in the long term period. The length of this period depends to a large extent on the stability of the

external environment (e.g. political, legal and economic uncertainty shortens it). Due to the changes taking place in the environment, the goals at the strategic level should be formulated within a few or at most a dozen or so months, however, they look ahead for few or even several years. Strategic goals are set at higher levels of management as they relate to the effective use of the company's resources, including, among others, defining the company's mission and its prospects (e.g. entering new markets, including foreign markets, introducing a new product or service, improving the quality of the service provided whether the offered product or expansion of the company).

At the middle level of the organization, **tactical goals** are set that are related to the operationalization of activities necessary to achieve long-term goals. Their time horizon is much shorter and ranges from 6 to 18 months. They are mainly related to the functioning of the company from the technical, organizational, resource, financial and employee side in the medium and short term period. These types of decisions are usually taken at the medium level of management and translate the general objectives set at the higher levels of management into the technique and method of their implementation at the lower level. The goals formulated at the tactical level may concern selection of new varieties of already manufactured products, introduction of a new product, elimination of an existing product from the production program, selection of production organization variants corresponding to the existing production equipment, selection of new technologies, new forms of organization and adjustment of the type and level of production capacity in responses to the changing conditions of the company's operation.

Operational goals, also called current, are set at the lowest management level in enterprises. They are set almost only in weekly intervals but there can be found also a daily shot. They usually relate to areas such as: determining the type and structure of work activities, organization of the working day, allocation of tools and tasks to be performed by individual units, analysis of performance indicators, information flow, etc. Their role is especially important in situations involving uncertainty and risk. The ability to react quickly and appropriately to threats in the core business proves the flexibility of the company and in many situations gives it a competitive advantage.

The goals in the enterprise can also be economic, material and social. The economic ones are often defined as the main goal, as they constitute the measure of the economic effectiveness of the processes taking place in the enterprise. In the context of the group of economic goals, the financial result is particularly important, as it is reflected in the generated profit which is the most synthetic criterion of rational management. It must go under operationalization which consists in decomposing the main goal into specific tasks and assigning them to the specific cells.

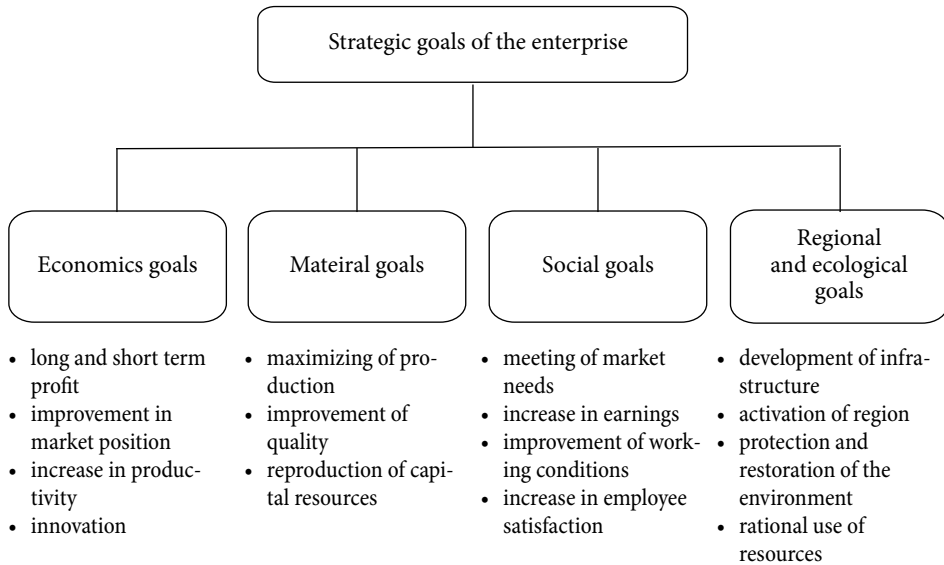


Figure 1.3. Company goals

Source: (Bieniok, 1997, p. 108).

It should be emphasized that the effectiveness of the company's operation is not determined only by the financial result but also the financial liquidity and should be treated as the economic and legal criterion for the company's survival. In practice, it is emphasized that the company's ability to settle its liabilities is periodic and result planning can be interpreted as an effective and anticipatory liquidity control tool (Nowak, 2013). Material objectives are shaped by the sales markets and mainly concern the quantitative and assortment structure of production and the dates of its implementation. This complicates production programming, time and space planning, and determines the achievement of other goals. The last group consists of social goals that concern:

- providing the employees with a workplace and personal income,
- fulfilment of aspirations regarding co-determination and co-responsibility for the fate of the enterprise,
- enabling employees to be promoted professionally, as well as ensuring job satisfaction and systematic improvement of working conditions.

These goals are limiting the implementation of economic and indirectly material goals due to the necessity to bear the costs of their implementation.

Objectives in the enterprise can also be classified according to the criterion of functional areas. Their essence is manifested in the necessity to meet a specific need within a specific time horizon. In particular, the functional goals relate to production, marketing, sales, human resources, finance, procurement, research

and development, etc. They must be compatible with each other, mutually agreed, coherent and consistent with the main goal. Summing up, it should be emphasized that there is no agreement to the number, nature and scope of goals in the enterprise. It is only indicated that they should be compatible with each other, consistent with the strategic goal and, above all, possible to implement.

When formulating goals for an enterprise, both in general and in detailed approach, it is important to respect certain conditions. In particular, attention should be paid to the necessity of:

- setting goals in a strategic perspective for the entire company and not for separate units or departments,
- specifying the goals separately, in operational terms,
- assigning a rank to individual goals and providing funds for their implementation,
- ensuring consistency between the goals set and the goals of employees and the principles of social coexistence,
- arranging goals according to the deadline for their implementation.

Following of the above guidelines will allow the company to set meaningful, consistent and logical goals that can be achieved within the set time horizon.

1.5. Company functions

Industrial enterprises, implementing their complicated and compound goals, simultaneously perform many specific functions that require, on the one hand general service related to the development of the enterprise and on the other hand the specialist service that relates to material and IT supplies. The following functions are particularly important (Krupski, 2004, p. 27):

- production function defined as supply, related to the core activity of the enterprise, technical and technological function related to product research and development as well as technical preparation of production, distribution function concerning the process of delivering manufactured products to the customer,
- supply function related to the acquisition of raw materials, materials and other means needed for production,
- organizational function based on the hierarchy of power,
- HR function viewed through the prism of people in the organization, social function identified with employee development and corporate social responsibility,
- financial function which manifests itself in taking care of the company's finances,
- the entrepreneurial function mainly related to innovative development.

The production (supply) function is considered to be basic and is related to the process of producing goods or rendering services. It is the basis of the company's

competitiveness, determines its current functioning, development and future. It is characterized by continuity and repeatability in strictly defined production cycles, whether dealing with unit, series or mass production. It is related to marketing activities, it is emphasized that it is justified when the enterprise generates sales revenues. It is very important to determine the production program in terms of quantity and assortment, production methods and defining the final recipient. Errors or mistakes in this regard will be reflected in serious perturbations which in extreme may lead to bankruptcy. Products and services are offered on various markets, alike local, national and international. It requires large investment expenditures, while carrying out the production process, the company must purchase the appropriate machinery, raw materials, materials, semi-finished products, parts, etc. The park must be monitored in terms of the degree of wear, use and suitability. In the event of any discrepancies with the adopted standards, the replacement or modernization investments should be carried out. The reconstruction defined as restitution, consists in the replacement of used parts or entire fixed assets with the new ones, without increasing the level of economic activity. The modernization is related to the development of the enterprise, which is manifested in the reduction of production costs, increase of production capacity, savings of materials and raw materials as well as energy, improvement of the environmental impact, better quality of manufactured products or services, etc. The production function is important both for the enterprise and its stakeholders as well as the immediate and further environment.

The technical and technological function is related to the preparation and implementation of the production processes. The technique concerns human activity that is related to the production of things or causes phenomena that do not occur naturally in nature, while the technology is related to activities in which the achievements of technology are used (Krawczyk-Dembicka, 2018). The technology covers the preparation and implementation of the production process which consists of research and development, construction, organization and preparation of production and the adoption of an appropriate production capacity strategy. It can be considered in terms of engineering, as a process of manufacturing a specific product or economically meaning a set of all production techniques or manufacturing methods that are available in a given enterprise (Krawczyk-Dembicka, 2018, p. 11). Thanks to this function, the company can correctly define its production profile as well as the means and actions needed to determine it. It is indicated that the technological function, due to technical progress, requires constant monitoring of the environment. A quick reaction to the changes taking place as well as taking them into account in the current activity, determines the current development and affects the future position. At the same time, it is emphasized that the correct choice of technology and its skilful production, influences the development

of core competences (Filipowicz, 2010) which can be a strong advantage in the competitive fight. From the point of view of a production company, this function is the basic instrument for shaping the possibilities, volume and effectiveness of sales of the manufactured products (Grzenkowicz, Kowalczyk, Kusak, Podgórski, & Ambroziak, 2008, p. 21).

The distribution function is related to the flow of products and services from the producer to the final buyer. It is related to other functions, including in particular sales planning, both in strategic and operational terms. In order to properly plan the distribution, the information on the quantitative forecasts of sales in individual time intervals and possible qualitative changes in customer service are required. The company can choose various distribution channels but must take into account their cost and planned benefits. The starting point is to identify customer preferences and requirements and then adopt one of the methods, i.e. indirect, direct and mixed distribution. In practice, the intermediary companies that specialize in serving a specific industry or market, are preferred. Direct sales are most often used in relations between large enterprises that cooperate in the production of a specific product. It is emphasized that thanks to distribution, there is a constant inflow of cash to the company. Therefore it is particularly important to take into account the cost accounting when planning it (Raport, 2014; *Business functions*, 2020).

The procurement function is closely related to the production function because the enterprise, in order to ensure an efficient and quick course of the production process, must ensure appropriate material and technical supplies. The analysis covers sources of supply, the method and conditions of transport, delivery time, availability, price, etc. When organizing the supply it should be taken into account to minimize costs while maintaining maximum inventory control. In practice, two opposing options are used. The first one is to maintain the maximum level of stocks in the company, the second one is related to shifting the costs onto the supplier who receives the appropriate remuneration for his work. In the first case, it is particularly important to define the size of the delivery batch, for which one of the following methods can be used: fixed order quantity solution, economic order quantity, lot for lot, period order quantity, least unit cost, least total cost and other. It is also important to determine the guarantee stock, which is calculated on the basis of the risk of running out of stock.

The organizational function concerns the enterprise considered as a system that is defined as a deliberately defined set of elements and interconnections between them which together define the features of the whole (Brzeziński, 2002, p. 17). Its essence is manifested in the organizational structure, i.e. the formal organization of the company, the sets of elements (organizational units, positions, departments, separated parts) and the links between them (information flows, formal division

of responsibilities, affiliations, etc.). Its task is to define formal relationships and dependencies between its participants (Jemielniak & Latusek-Jurczak, 2014, p. 89). In such a system, each employee has a role assigned to him which consists in performing assigned tasks, making decisions and taking responsibility. Thanks to the organizational function, it is also possible to properly shape resources, including material, financial and human resources as well as to develop their proper configuration which should contribute to the efficient implementation of the adopted challenges.

The personnel function, also referred to as personnel management, is related to the personnel policy of the company and concerns its staff, especially in the area of “human-work” (Piwowar-Sulej, 2013). It focuses on the characteristics and attributes of an employee, including the level of his education, experience, qualifications and competences as well as on issues related to the employment and dismissal, human resource management, assistance in professional development, etc. (Król & Ludwicyński, 2010). The authors indicate that the personnel function is shaped by the company’s structure, strategy, organizational culture as well as the external and internal environment. It is emphasized that it is carried out by all employees, including direct and indirect production, management and technical-engineering employees (Leśniewski & Morawska, 2012, p. 33). In the company, it is associated with two equal goals. The first one is of a business nature, considered to be basic, concerning the organization of work and increasing its efficiency which can be achieved thanks to the efficient management. The second one focuses on man, on satisfying his needs, both individually and in a group, expectations, aspirations (Marciniak, 2013, p. 15). As part of the personnel function, the following should be examined: reporting on human resources, liquidity and fluctuation of employee movement along with the analysis of causes and consequences, working time and the degree of its use as well as loss of working time, the level and changes in labour productivity, factors of labour productivity growth relations between labour costs and productivity in static and dynamic terms, size, dynamics and structure of labour costs, etc. (Muhlemann, Oakland, & Lockyer, 2001, pp. 455–467). It can therefore be emphasized that it is the entirety of activities related to the human resource of the enterprise, aimed at achieving the set goals while meeting the needs of employees (Walczak, 2013, p. 284).

The social function relates both to the company’s employees and to its immediate and further environment. In the first approach, it concerns providing the employee with a workplace and personal income, satisfying his aspirations regarding co-determination and co-responsibility for the fate of the enterprise, enabling the employee for professional promotion, job satisfaction and adequate conditions. In the second one, it is associated with corporate social responsibility. It is emphasized that the modern market, apart from its positive aspects, is also a source of injustice, threats, inequality, social unrest, etc. When implementing the social function, the

goal becomes to correct or limit economic rationality in areas where the market does not work perfectly or at least sufficiently (Grzegorzewska-Ramocka, 2009, p. 60).

In other words, the financial function is the company's financial policy which should be understood as the entity's activity consisting in striving to achieve previously set goals using financial tools (Gołębiowski, 2009, p. 13). It includes (MonitorFx, 2020):

- accounting related to bookkeeping, reporting, forecasting and internal control measures,
- capital structure, i.e. the relationship between equity capital and liabilities under which the appropriate level of debt and equity is sought, acquired and maintained,
- capital planning, including investment selection, project valuation and forecasting,
- financial liquidity management, i.e. analysis of the ability to settle current liabilities for purchased goods or services,
- tax planning, i.e. looking for solutions to minimize tax burdens thanks to the use of legal provisions and regulations.

The main goal of the financial function is self-financing and generating an appropriate level of profit. Therefore it is directly related to the production function within which decisions are made regarding the assortment and the quantity structure.

The entrepreneurial function is seen as one of the main driving forces of the enterprise. It can be defined as the process of planning and organizing business activity along with the acceptance of the associated risk (Griffin, 2004). In particular, it concerns the identification of opportunities and possibilities of operating on the market, developing an action plan, gathering the necessary resources and managing the enterprise in subsequent stages of development (Polowczyk, 2009). This function consists of subfunctions, including the following: personality, managerial activities, individual entrepreneur and market (Wach, 2015). Its analysis should always take place in the context of employees who acquire experience, new qualifications or skills and use them in practice through creative solving of the emerging problems. This function is related to the innovative projects that can be practically implemented in all areas of the economic activity (Grzenkowicz et al., 2008).

1.6. Typology of the industrial enterprises

Due to the complexity, ambiguity and multiform nature of the industrial enterprises, they can be classified using various criteria. The use of a specific division facilitates various types of analyses and statistical reports, while avoiding methodological errors (e.g. an attempt to compare two or more enterprises with a different business profile or the same profile but they vary in size).

Table 1.2. Enterprise according to various criteria

Criterion	Type of enterprise
business profile	production: producing material goods, mainly the processing and mining industries commercial: retail and wholesale companies service companies: companies providing services, including shipping and transport, warehousing, maintenance, financial, legal, marketing, etc.
the size of the enterprise	micro-enterprise: the average annual employment of employees is less than 10 people, and the net income or balance sheet total is less than or equal to eur 2 million small enterprise: average annual employment of employees is less than 50 people and the net income or balance sheet total is less than or equal to eur 10 million medium enterprise: the average annual employment of employees is less than 250 people, and the net income is less than or equal to eur 50 million or the balance sheet total is less than or equal to eur 43 million large enterprise: all the others that do not meet the above-mentioned criteria
form of ownership	private sector public sector
production type	unit production serial production mass production
type of production process	specialization diversification
market	industrial market – OEM (original equipment manufacturer) – MRO (maintenance repair and overhaul) consumer market dual market (operation both on the industrial and consumer market)
legal form	enterprises of natural person limited liability company public limited company partnership

Source: Own study.

The basic division is based on the business profile. From this point of view, they can be distinguished as production, service and production or service companies. The first ones deal with the orderly and conscious processing of the resources at their disposal, using a specific technology, in order to manufacture products supplied to other enterprises, wholesalers, retailers or end consumers. Production is considered to be one of the most important activities of the enterprise as it results in the creation of new utility values (Brzezinski, 2002, p. 22). It is indicated that “manufacturing processes requires a knowledge of many disciplines, including design, process planning, costing, marketing, sales, customer relations, purchasing, bookkeeping, inventory control, material handling, shopping and so on” (Halevi, 2001, p. vi).

Service companies are concerned with the provision of industrial services by which we understand “service to customers engaged primarily in a process which creates or changes raw or unfinished materials into another form or product including the generation of electric power”. One of the prevailing views is that industrial services are provided to industrial clients or clients with industrial production as opposed to consumer clients (Schmitz, Gitzel, Fromm, Setzer, & Isaksson, 2015).

Therefore, it can be emphasized that the basic criterion that distinguishes production services from non-production services is the type of recipient: an individual consumer or other enterprise running a production activity (Brax, 2005). An important criterion that distinguishes industrial services from non-industrial services is also the type and scope of cooperation. We deal with an industrial service when the recipient of manufactured products or other activities is another company with which a cooperation agreement has been concluded. In that contract all parameters, such as quality, type of raw material, technical data, quantity, price are strictly defined. Otherwise we are dealing with a manufacturer offering its products on the market. Moreover, it is pointed out that the element that distinguishes services from industrial services, is the scope of additional criteria. Apart from typical features such as: immateriality, impermanence, diversity and heterogeneity, the distinctiveness of industrial services is demonstrated by specialization, technology and consumption in irregular patterns (Schmitz et al., 2015). The typical production services include activities focused on: design, assembly, completion, processing, turning, milling, varnishing, painting, demolition, cutting and similar production-related services, which include transport, storage and warehousing, maintenance, current and scheduled repairs, etc. The production and service companies deal with both production and provision of specific services within their spare production capacity.

The enterprises can also be analyzed in terms of the nature of the work performed. The classification is based on the increasing technological complexity of modern products, the complicated manufacturing process and the need to shorten production cycles and deliver products to the market. The above changes led to the increased importance of specialization and concentration, disintegration of the value chain and globalization of enterprises operating in the industrial markets.

Specialization should be considered on two levels: social and technical ones. In social terms, it should be equated with the variety of collective actions taken, while in technical terms it is related to the development of a certain efficiency of action as a result of restricting certain works and repeating them (Smoliński, 1974).

As a result of specialization, the company focuses on those areas of activity to which it is best prepared in terms of resources, technology and skills (Janasz, 2000, p. 159). As part of the specialization, the enterprise dispose of areas of activity in which they achieve average or low results and focus on those in which the results are the best. The basis of specialization is the desire of enterprises to improve labour productivity while improving quality and increasing the volume of production. The

specialization allows to reduce the company own costs, improve the structure of using assets and resources, and build a competitive advantage and develop key competences.

The process opposite to the specialization of production is its universalization which takes place when there is an increase in the performance of various activities and operations carried out at individual workstations. As a result, the number of manufactured assortments and performed functions is most often extended.

Extremely different to specialization is diversification which should be equated with the extension of the scope of the company activity to multidirectional, often diametrically distant fields. This results in its functioning in various sectors (Urbanowska-Sojkin, 1998, p. 138). It is a conscious and deliberate policy of the company to expand the program of operations in order to achieve high effectiveness and efficiency using its resources and markets. It leads to the creation of a new quality in the product-market combination of the company, significantly exceeding the current processes included in the value chain (Rajzer, 2001, p. 63). A diversified portfolio of activities allows for more effective risk management and favours a wider exploration of new opportunities than specialization (Hagel & Brown, 2006, p. 84). It may consist in introducing new, not yet produced products or services that meet the new needs of buyers. Their production is based on the existing, new or modified technology. It means an increase in the level of production diversity with an increase in the degree of market diversity.

Another criterion is related to the type of market served. From this perspective, a company can offer products or services in the consumer or industrial goods market. In some cases, the offer is directed to both markets. In such situation we say that the product or service is dual. The typical examples of a dual product are the basic raw materials of the food industry, such as grains, flour, sugar, fruit, vegetables, etc. These products are used by both households and processing companies.

The consumer goods market is a place where the buyer “makes purchases for their own individual use and is characterized by their demographic, behavioural, psychographic and geographic aspects” (Ahmed, 2019). The sellers in these markets are usually producers operating through an indirect distribution system and the recipients are individual households.

The industrial goods market, also known as the business to business market, covers transactions involving the sale of goods and services between enterprises. The goods and services are offered by enterprises and the buyers are usually other enterprises, investors and the government (Janasz, 1997, p. 91). The specificity of the market is related to the type of goods or services which are divided according to the way they participate in the production process and their relative cost (Hutt & Speh, 1997, p. 45). Both the consumer and industrial goods market includes three types of transactions which in the first case concern: direct consumption, durable goods and services, and in the second case: trade in investment goods, raw materials and materials, and production services (Wojciechowski, 2016).

The goods offered on the industrial market can also be classified according to the criterion of their use in the production process. Then they take the form of entering goods, foundation goods and facilitating goods (Hutt & Speh, 1997, p. 45).

The entering goods are those that are processed in the production process and become a component of the finished product. They are divided into raw materials and industrial materials and parts. The raw materials are products of the extractive industries, agriculture, forestry or the processing of waste. The latter ones are particularly important and are described as the secondary raw materials, i.e. those production waste or used products suitable for reprocessing. They include (GUS, 2020):

- useful waste materials generated in production processes (post-production waste), in food processing companies, this product is defined as a by-product, because general waste cannot be further processed into human food,
- used products (post-consumer waste),
- pre-sorted (segregated) fractions of municipal waste (without their processing) not suitable for the direct use in the industrial processing.

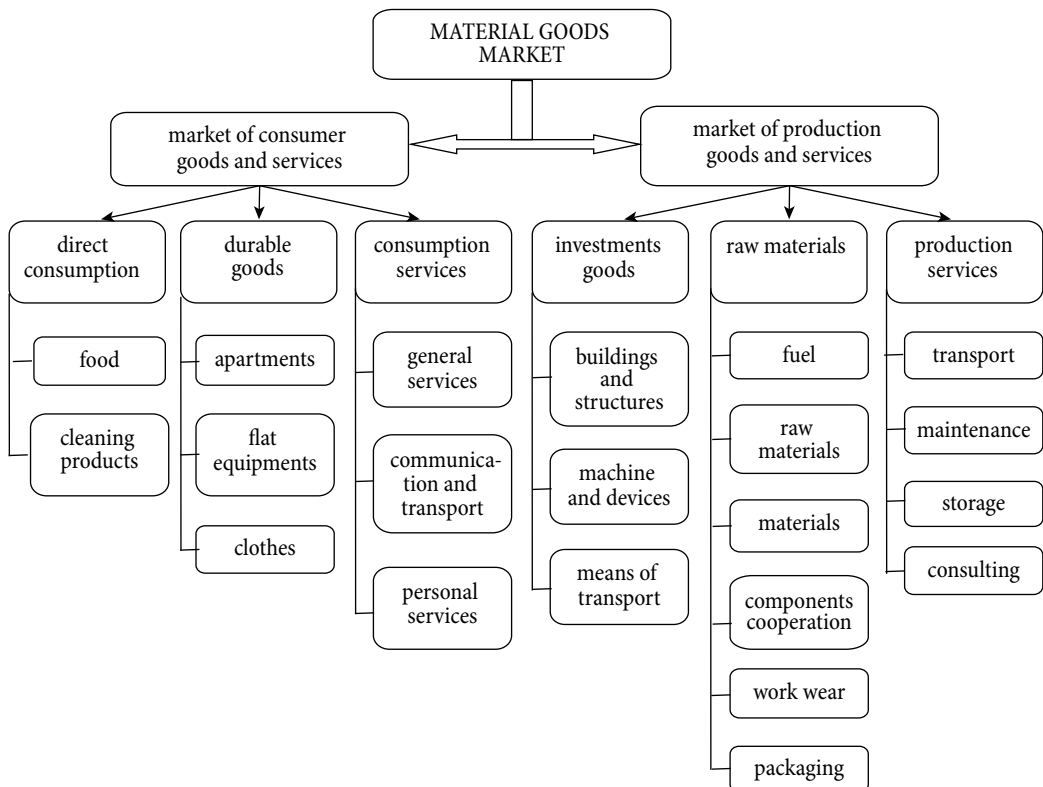


Figure 1.4. The material scope of the market

Source: (Wojciechowski, 2016, p. 15).

Industrial materials and parts, unlike raw materials, are subject to initial processing which is continued in the next enterprise. They also include semi-finished products, details, semi-finished products, fabrications and industrial standards, i.e. standardized, most often small elements that are widely used in industry. In particular, these are bolts, nuts, seals, bearings, belts, pulleys, etc. Their development took place thanks to the unification of production activities. The unification is a standardization method aimed at rationally reducing the variety of products or activities. It is obtained by standardizing the features of products—e.g. construction, shape, dimensions, quality parameters, functional features. The unification increases the versatility of machines, devices and products, enables the interchangeable use of various parts, facilitates the processes of production, transport and sales, enables concentration and specialization of production, allows for cost reduction (Smoliński, 1974, p. 235).

The foundation goods are capital goods which, when used in the production process, transfer their value to the manufactured goods or services in the form of depreciation. They include two types of goods, i.e. the devices and auxiliary equipment. The devices are quite broadly defined, apart from typical production equipment (machinery park), they include buildings and structures, means of transport, infrastructure, etc. The auxiliary equipment is small devices, machines or accessories, usually with low purchase costs which facilitate work or constitute a human work tool.

The facilitating goods mainly include supplies and services, the task of which is to support the operational activity of the enterprise. In a production company, the maintenance and repair articles that are used in the maintenance process are of particular importance. It applies to both the elimination of failures of machines and devices as well as their prevention through inspections and repair prophylaxis. In practice, it is believed that maintenance is one of the most important functions of a production company. A breakdown, inefficiency or a defect of the machine causes its downtime which is reflected in the increase in production costs, the inability to execute orders or delays, and even breaking cooperation ties (Hyla, 2018, p. 61). The services are related to the performance of work not directly related to the production of the product. They assume the nature of an order addressed to an entity that specializes in a given scope. The services may include repairs, renovations, cleaning, security as well as consulting, accounting, marketing, human resources, etc. Their development resulted from the search for savings in operating activities. Their use in operating activities influences flexibility, cost reduction, operational improvement, restructuring and even changing the domain of activity.

The industrial companies that manufacture goods or provide services can offer their products on the OEM (original equipment manufacturer), MRO (maintenance, repair and overhaul) market, or both ones.

The first one concerns the components of manufactured devices defined as: the first assembly equipment. The transactions concluded on this market are characterized by a very high value, a large number of elements in one assortment and direct cooperation, most often based on a formal agreement which specifies all the parameters of the agreement, including, e.g., the specific product features. In addition, the deliveries are successive and consists in the delivery of goods or the performance of services in smaller parts and at specified intervals (e.g. weekly, monthly, quarterly). The unit price of purchased products is usually much lower than in the spare parts market, the manufacturers usually use specific OEM price lists.

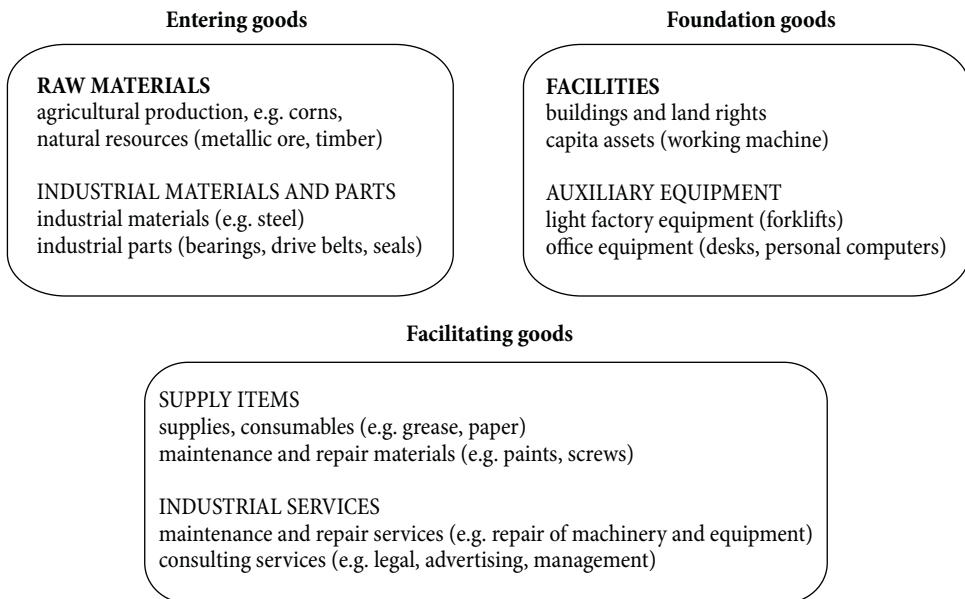


Figure 1.5. Classification of goods on the industrial market

Source: (Kotler, 1980, p. 172).

The second market is related to the repairs and renovations, also known as the after-market. It is emphasized that production activity causes wear and tear of the machine park which may be reflected in production downtime, deterioration of the quality of manufactured products, the increase in costs, or the inability to implement plans. The enterprises must therefore take measures to maintain their equipment in an appropriate condition which will allow (Muhlemann et al., 1992, p. 176):

- to enable product or service quality and customer satisfaction to be achieved through correctly adjusted, services and operated equipment,
- to maximize the useful life of the equipment,

- to keep equipment safe and prevent the development of safety hazards,
- to minimize the total production or operating costs directly attributable to equipment service and repair,
- to minimize the frequency and severity of interruptions to operating processes,
- to maximize production / operation capacity from the given equipment resources.

This market is characterized by much greater differentiation, higher price levels compared to OEMs and the activities of intermediaries who usually offer a full range of spare parts, including both original and replacement parts. This market is very sensitive to all kinds of turbulences and disturbances in the environment. In the first place, the investments related to planned repairs are abandoned or postponed. These renovations take the form of modernization (development) or replacement investments.

1.7. The features of industrial market

In general terms, industry is “the material production consisting in extracting natural resources from the earth and producing products in a mass manner using mechanical devices” (PWN, 2020). The industrial market, on the other hand, is a place where sales and communication go to other companies, not individual buyers. According to the Prospectus of the Institute for Industrial Markets Studies, the industrial market is “local or international market of products and services purchased by enterprises, government bodies as well as institutions (such as hospitals) used to manufacture new products (e.g. components or components), consumed (e.g. materials consumed in production, office supplies, consulting services), used (e.g. installations or equipment) or resold. The only markets that do not fall within the scope of this definition are those where traded products or services are these primarily aimed at personal use or consumption, such as packaged food products, household goods or consumer banking services. The factors that distinguish the market of industrial goods and services from the market of consumer goods and services are the nature of the customer and the way in which he uses the product. In the marketing of industrial goods and services, the clients are organizations, i.e. enterprises, government, institutions” (Hutt & Speh, 1997, p. 27).

Table 1.3. Type of industrial products

Raw materials	products that are sold in their natural state	coal, timber, metallic ores	cyclical market, regional supply sources, high transportation cost, bulky products,
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Processed materials	products that have been partially processed before reaching an ultimate producer	plastics, glass, chemical, steel, lumber	commodity products, lose their identity, incorporated into other products
Supplies	products that are used up during the manufacturing process or during the daily operation of a business	lubricants, office supplies, welding rods	stock items, of the self, availability is important
Components	products that either are ready for direct assembly into the finished product or require only minor processing	pumps, electric motors, diesel engines, lamps, microchips	require no further processing, perform a vital function
Equipment	capital goods that support a user's manufacturing or other business needs	machine tools, aircraft, computers	high-cost capital goods, assets, reliability is important, so too are first cost and operating costs
Systems	capital goods that support a user's manufacturing or other business needs	process equipment, paper mills, steel mills	perform two or more function, high financial risk, to seller but also offer high financial rewards
Services	activities, benefits, or satisfaction that are offered for sale	advertising, legal service, marketing research, transportation services	intangible services

Source: (Günay, 1999, p. 227).

The above definition indicates two basic features differentiating the consumer goods market from the institutional market. They are namely:

- strictly defined nature of the buyer (enterprise, government body, institution),
- the nature of the intended use of products and services (for the production of new products, used up, used and resold).

Table 1.4. Industrial customer type

Industrial customers type	Market segments	Organizational missions	Buying behaviour
Commercial enterprises	<ul style="list-style-type: none"> – raw material producers, – construction manufactures, – services and professions, – wholesalers and retailers, – transportation, – communication and other public utilities 	<ul style="list-style-type: none"> – serve a customer needs at a profit 	<ul style="list-style-type: none"> – multiple influencers – multiple buying motives – complex purchasing process
Government	<ul style="list-style-type: none"> – federal – state – local 	<ul style="list-style-type: none"> – provide for the welfare, defence, education, crime, prevention, transportation, infrastructure etc. need of its citizens 	<ul style="list-style-type: none"> – negotiated buying – precise specification – bid buying

Industrial customers type	Market segments	Organizational missions	Buying behaviour
Institutions	<ul style="list-style-type: none"> – hospitals nursing homes – school college and universities, religious organization, non-profit foundations 	<ul style="list-style-type: none"> – social concerns – charitable concerns 	<ul style="list-style-type: none"> – professional influencers

Source: (Günay 1999, p. 229).

According to Wojciechowski (1992, p. 21), “...the basis for the relative separation of the materials market is the type and purpose of the goods traded on this market, the nature of the entities participating in this turnover and the specific features of its structure—different than on the consumer goods market.” Also, the definition presented by the author indicates two basic features that distinguish the industrial goods market from consumer goods one. Additionally, apart from the intended use of the product and the type of buyer, its structure features are mentioned. The industrial goods market includes three types of transactions, including sales of processed goods, raw materials and services. It focuses only on those activities that result in the production of a separate end product. This process is conditioned by the acquisition of specific raw materials, materials, parts, energy and services that ensure, on the one hand, production safety, and on the other hand, the production of the product. This way defined market is characterized by specific features of which the most important are (Hass, 1986; Urbaniak, 1998; Wojciechowski 1999; Kuada, 2002; Mudambi, 2002; Vidovic, 2011; *Distinctive Features*, 2018):

- The intended use of the product: the industrial good is transformed into another product or is used in the production process to manufacture other products.
- The much higher value of turnover on the industrial goods markets and especially their concentration compared to the consumer goods markets where purchases are dispersed.
- The type, nature and scope of buyers, sellers offering goods on the industrial market cooperate with a much smaller number of buyers compared to the consumer goods market: usually these are production companies offering both final and less processed products, but these buyers are much larger, they concentrate significant transactions in their hands, especially in the case of industries such as mining, metallurgy, engineering, electromechanical, shipbuilding and automotive industries.
- The elimination of purchases in retail trade and focusing on direct trade or transit circulation (with the participation of agents—organizers): purchases directly from producers are based on long-term and formal contracts which are preceded by negotiations (they are comprehensive in nature, covering alike the type, technical features, quality, price, payment terms and delivery conditions, etc.).

- The dominance of purchases directly from producers: this applies in particular to those items that are technically complicated, or the cost of their purchase is very high.
- The existence of linked transactions which means that the buyer of production goods selects such suppliers who can also become his customers.
- The individual nature of the transaction, concerning in addition to specific contract terms, the supply of goods and services, created for a specific buyer, according to his preferences, requirements and often under his supervision.
- The formation of closed market segments that are usually inaccessible to other participants.
- Producers and buyers know each other because of the long-term nature of the cooperation.
- The derivative nature of demand for industrial goods in relation to consumer goods: it is usually larger and deeper, an increase or decrease in demand for consumer goods by one percent causes much larger changes in demand for industrial goods; they may lead to a sharp economic growth or a complete collapse of demand for investment goods; in bibliography this principle is referred to as the principle of acceleration (Blaug, 1994, pp. 184–185).
- Much lower price elasticity compared to the consumer goods market, especially over short periods: any upward and downward price movements have a minimal effect on the total demand for industrial goods and services; an increase in the prices of raw materials intended for production does not inhibit its purchases; in such cases the main task is to look for cheaper suppliers or substitutes; also a decrease in prices does not increase purchases due to the storage costs and concerns about lower quality of the products offered at a cheaper price; the reason for these things are also related to the production process which producers are not able to change in a given (short) period of time (Kotler & Dubois, 1989, p. 215).
- The purchasing professionalism, based on the skills and knowledge of the qualified employees of procurement departments: many employees of the company take part in the purchase process; their number depends on the nature of the purchase; in the case of important strategic decisions, the negotiations take place at the highest levels of the company; in the case of repetitive purchases, they are acquired automatically based on the procurement department.
- The dependence on imports of certain raw materials and materials that are not present in the territory.
- The existence of leasing, tenancy, rental and other agreements, enabling the improvement of efficiency and productivity of the use of production potential.
- The purchasing decision factors: more factors influence purchasing decisions on the industrial goods market than similar decisions on the consumer markets; the enterprises have special decision-making teams often consisting of a group

of experts, both technical and economic ones who make decisions about the purchase of a given good.

- The qualifications and skills of salespeople who must have the appropriate knowledge.
- The significant role of the personal sales (personal contacts) plays an incomparably greater role than advertising and promotion using standard media.
- Many participants take part in the purchase process: the initiator of the purchase, the person influencing the decision making process, the decision maker, the buyer, the user, the guard (Urbaniak, 1997, p. 27).
- The relatively high state intervention, especially in the case of raw materials and materials of strategic importance, e.g. military products, radioactive raw materials, etc.

The industrial goods market of course is not a hermetically closed, separate market segment. It is always an element of the global commodity market. It is governed by the same market laws which in certain situations may be different from the common rules of operation or may be based on completely different relations between market entities.

Table 1.5. Differences between industrial marketing and consumer marketing

	Characteristic	Industrial marketing	Consumer marketing
Market structure	competition demand demand levels reserve total marketing size size of buying market geography	oligopolistic derived levels more volatile frequent larger group concentrated	monopolistic direct less volatile infrequent smaller individual diffuses
Marketing philosophy	market segmentation investment requirement market perspective tactical marketing emphasis innovation transactional buyer / seller interaction reciprocity key accounts customer education	emporographics strategic global profit performance technology-push relationship frequent important strong	demographics tactical regional / national market share demand-pull rare non-existent weak
Buyer behaviour	customer / prospect mix order size and frequency purchasing motives and skills contractual penalties buying power vendor loyalty purchase involvement	small large, infrequent rational, professional common strong strong great	large small, frequent emotional, self-gratifying never weak weak smaller

	Characteristic	Industrial marketing	Consumer marketing
Purchasing decisions	decision making process accounting / tax consideration purchase risk	complex, lengthy important very high	simple, short unimportant low
Marketing research	orientation research approach questionnaire terminology precision of data cost of project	strategic empirical technical rough estimates low	tactical inferential nontechnical statistical precision high
Product / services mix	product life cycle product specification branding purchasing timing degree of fabrication type of packing services	shorter customized corporate family requirement planning value-adding stages required protective	longer standardized individual product immediate use mostly finished goods promotional less, point-of purchase
Promotion	promotional emphasis promotional objectives promotional themes role of salesperson sale promotion tools	personal selling preparing for sale call rational, factual problem solving specifications sheets, catalogues, direct mail, trade show	mass advertising positioning products and firm fanciful, imaginative persuasion coupons, samples, point-of purchase display
Distribution mix	channel length channel complexity product knowledge channel coverage delivery reliability	short direct complex strong direct, exclusive crucial	long, indirect simple weak intensive, selective not critical
Price	competitive bidding price negotiation leasing product life cycle cost and benefits discount structures promotional pricing	common common common important complex seldom used	rare rare rare usually ignored straightforward frequently used

Source: (Günay 1999, pp. 232–233).

Questions / tasks

1. How can you define an enterprise and an industrial enterprise?
2. What are the basic and support activities in Porter's value chains?
3. Explain the subjective, objective and functional meaning of the enterprise.
4. Give and discuss the features of an industrial enterprise.
5. What does the economic distinctiveness of an enterprise mean?
6. How can you define the purpose of an industrial enterprise?

7. List and discuss the operational goals of the industrial enterprise.
8. List and discuss the strategic goals of the industrial enterprise.
9. How important are social goals in the enterprise? Justify your answer.
10. How can the functions of an industrial company be defined?
11. What is a production function and what does it depend on?
12. The importance of the financial function in an industrial enterprise.
13. What is the difference between a manufacturing company and a service company operating on the industrial goods market?
14. What is the difference between specialization and diversification of production?
15. What are the dual products?
16. What is the industrial goods market?
17. What is the consumer goods market?
18. How can goods offered on the industrial market be classified?
19. What is the OEM market (original equipment manufacturer) and what is the MRO market (maintenance repair and overhaul). List the differences and features.
20. Characterize the features of the industrial market.

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