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INNOVATION AS A FACTOR OF DEVELOPMENT OF THE FIRM

1. The firm's environment

The speed and character of changes in the firm's environment have a fundamental influence on the development of the firm. R. Hall [9, p. 30] was the first among many to distinguish different types of environment. He makes a distinction between **direct** and **indirect** environment. The **direct environment** is created by organisations with which the company has direct relations during its operations. The **indirect environment** is made up of political, legal, economic, technical, social, and cultural conditions. J.E. Dittrich [3, p. 372] divides this second type of environment into *general environment* and *branch specific environment*. The *general environment* describes the state of economic development of a country. In other words the position of an industry within society, the character and quality of the banking system, the level of development of telecommunication and transport, the level of education, and other similar socio-economic features. The *branch specific environment*, however, concerns the different conditions for operating in a given branch. Every branch in an industry has its own historical heritage, advocates and critics, characteristic production technology, characteristic structure and circle of competitors, potential entrants, customers, credit suppliers (lenders), and unique branch specific possibilities to influence the market.

The presented division of the indirect environment departs from the received view in the literature about the subject. Usually the indirect environment is exclusively associated with the general environment, while the branch specific environment is included in the direct environment. In this case the latter make up the technical, market, ecological, and institutional conditions. The author of this article considers such a division

not transparent enough and difficult to use in practice. Elements with a similar character and degree of generality are included in two different types of environment. On the other hand, the adoption of a criterion according to which the environment – company relations having an indirect character are included in the indirect environment, while interactions of a direct nature are included in the direct environment, as a result assures a precise selection of the elements of the environment and positively influences the quality of its analysis.

For the activities of a firm the full picture of the environment is important, regardless whether the elements belong to the direct or indirect environment. Therefore every firm should have an exact idea in which environment it is situated or may be situated. In order to do this, it is necessary to identify precisely the whole environment, i.e. its main elements, the scope of these elements, and the way they influence current and future activities. In this identification process one should first identify the indirect environment, which is a fundamental determinant of the survival and development of the firm. Figure 1 presents an attempt to depict the most important elements of the indirect environment of the



Fig. 1. The most important elements of the indirect environment of the firm with a subdivision for the general and branch specific environment

Source: Based on [16, p. 24].

firm with a subdivision for the general environment and branch specific environment.

Figure 1 shows that the activities of a firm are determined by different elements of its environment ranging from political and legal to ecological conditions. Some of these conditions may directly refer to a specific institution, however, most of them have a non-institutional character. All of them can create opportunities or threats for the development of a company. In order to assess these, one should create a detailed picture of the character of each element of the environment, identify their development trend, and estimate the consequences for the activities of the firm.

The extensiveness of the general environment gives an impression of the intensity of the pressure of external factors that a firm faces. For that reason individual firms try to shape their interactions with the environment to be as beneficial as possible. This type of environment, as mentioned before takes the form of the institutional environment, because it leads to direct contacts of the firm with other elements of the environment. Figure 2 presents the main subjects of the direct environment.

Relationships of firms with elements of the environment come into being as a result of agreements and contracts. The hitherto existing consid-

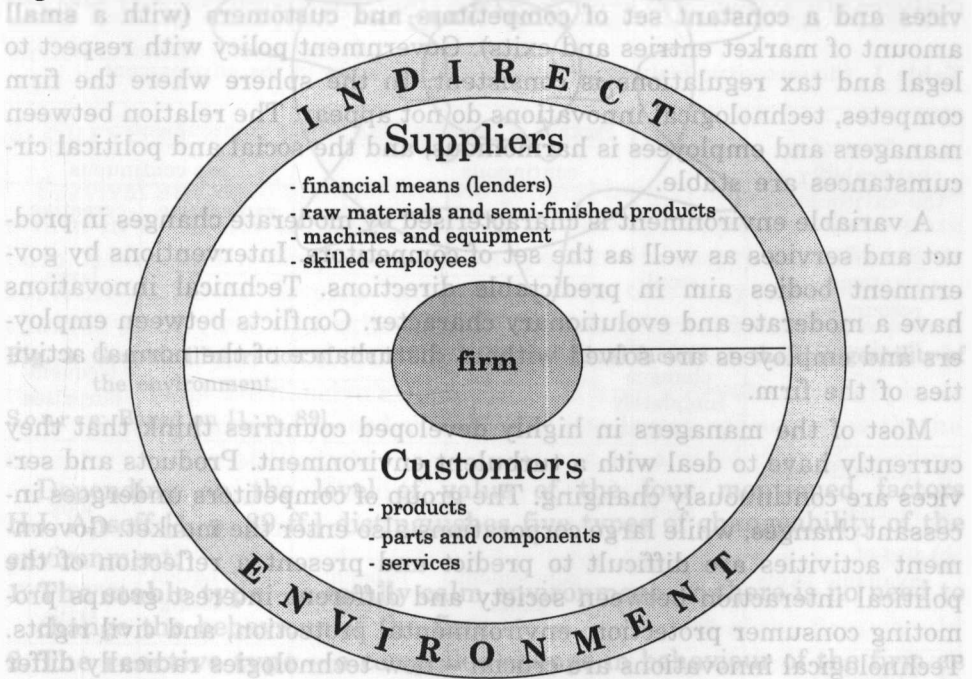


Fig. 2. Main elements of the direct environment of the firm

Source: Based on [16, p. 25].

erations with respect to the environment of the firm show the influence of the environment on the firm, and pass over the influence of the firm on the environment. Thus when identifying the environment of the firm it is necessary to take into consideration the processes and institutions that determine current and future operations of the firm, as well as those institutions and processes which are influenced and created by the firm. M. Marchesnay [12, p. 82 ff.] has developed this idea further. He states that a firm can influence the market structure and conditions of competition by way of its *competition strategy*, thus modifying the conditions of its competitive environment. The author believes that focussing on the competitive environment is especially desirable today, due to the increasing complexity and changeability of the environment.

Most authors hold the view that with respect to the character of occurring changes three types of environment can be distinguished [16, s. 27]:

1. fixed environment (stable);
2. variable environment;
3. turbulent environment.

A fixed environment is characterised by unchanging products and services and a constant set of competitors and customers (with a small amount of market entries and exits). Government policy with respect to legal and tax regulations is consistent. In the sphere where the firm competes, technological innovations do not appear. The relation between managers and employees is harmonious, and the social and political circumstances are stable.

A variable environment is characterised by moderate changes in product and services as well as the set of competitors. Interventions by government bodies aim in predictable directions. Technical innovations have a moderate and evolutionary character. Conflicts between employers and employees are solved without disturbance of the normal activities of the firm.

Most of the managers in highly developed countries think that they currently have to deal with a turbulent environment. Products and services are continuously changing. The group of competitors undergoes incessant changes, while large corporations also enter the market. Government activities are difficult to predict and present a reflection of the political interaction between society and different interest groups promoting consumer protection, environmental protection, and civil rights. Technological innovations are crucial – new technologies radically differ from the previous ones, which become obsolete. Impetuous changes take place in the society's values, which causes changes in the behaviour of large groups of citizens.

H.I. Ansoff [1, p. 88 ff.] presents an original approach to issues of a variable environment. He lists four factors determining the changeability of the environment:

1. the level of the strategic budget;
2. the unpredictability of changes;
3. the innovativeness of change;
4. the frequency of change.

Figure 3 gives a graphical presentation of the influence of these factors. The orbits express the state of turbulence in the environment and the radii depict the strategic budget. The frequency of oscillation on each orbit expresses the frequency of changes at a given level of turbulence. However, the amplitude of oscillation constitutes a measurement of the innovativeness of change in the appropriate orbits.

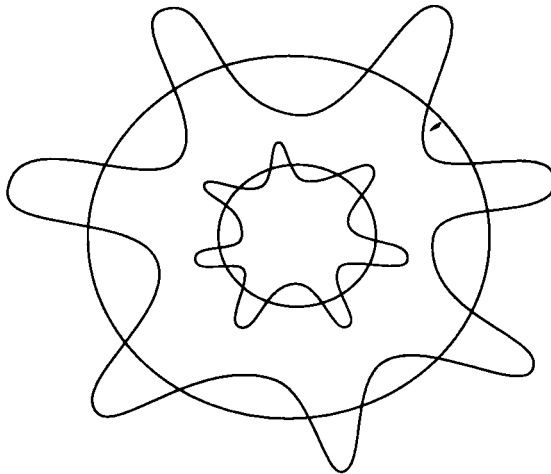


Fig. 3. Graphic illustration of the influence of individual factors on the changeability of the environment.

Source: Based on [1, p. 89].

Depending on the level of value of the four mentioned factors H.I. Ansoff [1, p. 89 ff.] distinguishes five types of changeability of the environment:

1. **The stable type** – a totally calm environment, so there is no need to change the behaviour of the firm.
2. **The reactive type** – a compelled change in behaviour of the firm as a response to an arising change in the environment.
3. **The anticipatory type** – demanding changes in the behaviour of the firm as a reaction to an expected change in the environment.

- 4. The explorative type** – forcing the firm to develop the desired changes in the environment by using innovative methods of behaviour that are known to the firm.
- 5. The creative type** – creating the necessity of developing the desired changes in the environment by way of completely new methods of behaviour of the firm.

The first three types of environment are characterised by continuous changes; the two remaining by lack of such a continuity. The individual characteristics of each type are put together in Table 1. According to the author, in countries with a stabilised market economy the turbulent type of environment mainly appears in the company's own trading environment. The reason for this is strong competition, high innovativeness in production, and large social pressure to tighten up norms for environmental protection and restoration of the environment to its original state. Fluctuations in the general environment are basically limited to macroeconomic factors. The interest rate is most susceptible to changes. Improvement or deterioration of the economic situation influences the rate of inflation and unemployment. The political and legal, social, and cultural environment in general do not show large changeability and are

Table 1. Characteristic features of types of changeability in the environment

Type of changeability in the environment	Factors of changeability in the environment				
	continuous			not-continuous	
	stable	reactive	anticipatory	explorative	creative
1. Size of strategic resources	small				large
2. Predictability	most of changes completely predictable				frequent surprises
3. Innovativeness:					
a) reaction time	short				long
b) use of available skills	sufficient skills available	supplement skills	expand skills	innovative combination of existing skills	need for innovative skills
4. Frequency	low				high

Source: Author's own elaboration based on [1, p. 90].

close to the steady type. The level of changeability of the direct environment depends on the range of changes that arose earlier in the trade environment and the macroeconomic environment.

The author's research shows that in Poland (currently finding itself in a period of system transformation) the layout of changeability of the environment differs fundamentally. The turbulent type first appears in the general environment. Crucial changes have been taking place in the political-legal system (e.g. the change of the constitution). Furthermore, fundamental re-assessments have been taking place regarding the social position, while market and work ethics are changing. Unemployment has appeared on a hitherto unparalleled scale, productivity is changing, and new investment opportunities are appearing. A fast cultural change is taking place in the sphere of behavioural patterns and professional ethics. The relationships of firms with contracting partners are unstable and undergo frequent changes because the producer market is being transformed into a consumer market. This means that the direct environment is also characterised by turbulence. Competition is increasing, but has not yet achieved the level of countries with an established market economy, while the speed of innovation is also slower. Because of the lower level of social organisation the influence of tightening norms for environmental protection is weaker.

2. Survival and development of the firm

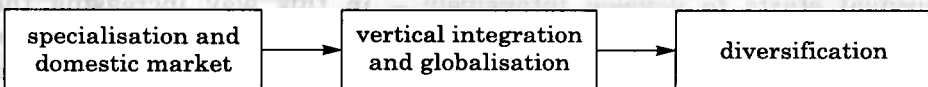
Survival and development are two general behavioural orientations of a firm in a market economy. They do not always appear in their pure form. Sometimes it happens that in a specific situation a firm aiming at survival starts to develop intensively – in this way increasing the chances of survival. The other way is when a firm experiencing a phase of development can be forced – due to unexpected threats of the environment – to adopt a defensive attitude and go from a developmental phase to a phase of survival in order to reduce the losses connected with the necessary choice of the new direction. It can be argued that, depending on the factual situation in which the firm finds itself, it will aim only at development or survival. Under unfavourable circumstances greater emphasis is put on survival, while under more favourable circumstances the interest of the firm is directed more towards development.

Many authors claim that the basic object of interest of the firm should be survival, not development. H.W. Starbueck [16, p. 34] states that organisations may choose many objectives, but first of all they have to survive. A similar opinion has been expressed by W.G. Scott [16, p. 34] who counts survival, besides growth and integration, as the three main tasks

of a firm. The emphasis on survival as the main task of a firm very likely results from identifying survival with the existence of the firm itself. If such a premise would be accepted, one could also completely agree with the statement that a firm has to exist in order to operate. K. Obłój takes a similar stand by unambiguously asserting that "an organisation must exist in order to realise any aim" [14, p. 32]. In the view of these authors survival is connected with the existence of the firm itself as well as with the maintenance of this existence.

The survival phase cannot be excluded from the life of a firm. In many cases it is a necessary phase. However, it should be treated as a temporary phase because it does not assure success for the firm. Only development can assure success. Research by G.L Lippitt and W.H. Schmidt [19, p. 38] shows that survival, as a rule is accompanied by passiveness and stagnation. Hence P.F. Drucker [4, p. 54] writes that "the main task of an organisation is to learn how to use opportunities to change and avoid stagnation." However, J. Gościński [8, p. 37] attributes the derivative ability to adjust only to deliberate and intentional systems. Often these are systems whose norms which create the conditions for development are determined by the environment. These systems aim at a bundle of targets and choose the ways of achieving those targets. However, an intentional system – to be distinguished from a deliberate system – does not have the right to choose and modify operational targets. Production firms belong to the class of deliberate systems in which they shape their bundle of targets themselves, choosing with consideration the areas of activity in which they want to achieve the desired results.

In the opinion of many Polish authors the sequence of directions of development of a typical firm can be described as follows:



This opinion appears to be very disputable. It differs fundamentally from the typical directions of development of well-known Western corporations, where the strengthening of the position on the market took place by way of diversification, not globalisation. Besides, the current development tendencies do not aim at diversification, but rather focus on maximum utilisation of the "core of skills" of the company. I consider the development of production firms not only to be a simple answer to the increasing demands of the environment, but also to be a result of the internal, natural needs of the firm itself. Every firm that is established is established with a thought about its development. In the first stage this

is to be understood in terms of quantity, while in the longer term qualitative development also comes into play. R.B. Kemball-Cook accurately points out that "organisations in which there does not exist the organic conviction that they should exist and continue to operate are a rarity. Usually there is the ambition to enlarge and to increase power." [16, p. 35] A.M. Zawislak makes similar observations [16, p. 35], asserting that all economic subjects show one common feature – the aspiration survive and expand. J. Kortan is even more frank by stating that "every firm not only tries to keep on existing as long as possible, but incessantly aims at development and expansion in size and structure of its activities" [16, p. 35]. Thus, development of a firm has to happen due to the external conditions, connected with the necessity to face the challenges of the environment, as well as the natural and internal needs of the firm itself. The forces of influence of these two different but closely connected areas push the firm to develop from the moment of inception.

With respect to the notion of 'development' it can be asserted that both in theory and practice it has different meanings. In the literature the notion is broadly interpreted and tends to treat development as a process of change. Independent of whether change refers to natural and social realities or to relatively isolated arrangements, it can be maintained that **development in the broadest sense is a process of changes**. Thus changes are the basis of all development, even in the development of firms. Firms belong to the class of so-called intentional organisations, which by their nature are executing conscious and genuine changes in the existing state of things in order to improve the efficiency of their activities and to consolidate their market position. Change is an inseparable attribute of the activities of every firm. However, change is not a synonym for development. Some changes may not bring anything needed for development. **Development is more than just change; it is change taking place along established lines bringing defined effects**.

Development proceeds through time. Time connects the development of the past to its present and its future. In this respect development has a long-term dimension. It gradually proceeds and is a process of accumulating changes. The assertion that development is a process seems inadequate. Development is not only a prolonged process of change, but also a process of directed changes in which phases of transformation following one another can be distinguished. B. Olszewska considers development to be a prolonged process of directed qualitative and quantitative changes. This opinion seems to be correct when the development takes place in a stable environment. Currently, however, we are mostly faced with a turbulent environment. In this case, according to W. Kirsch, a firm is only

able to develop when it is characterised by the ability to undertake action, when it is sensitive, and able to recognise changes [16, p. 36].

Disagreement between authors regarding the type of changes making up the development process and the legitimacy of their evaluation can be observed. W. Gabrusewicz [7, p. 24], for example, considers the distinction between development and progress, and regression to be justified. He argues that, depending on the degree of intensity of the change in the actual development process, three fundamental stages can be distinguished: progress, regression, and stagnation. In other words, the development of a firm consists of positive and expected changes, as well as changes having a negative character. The author of this paper does not agree with this opinion. The development of a firm should only be connected with positive changes, identifying development with progress. K. Fabiańska and J. Rokita correctly observe that "with respect to firms, it is expected that they would function and develop in terms of progress" [6, p. 96]. The reason for this is that a firm is established in order to fulfil certain useful functions for serving its environment.

Most often accepted as the main distinguishing features of a firm [16, s. 37] are:

- the growth of turnover, revenue, profit, and profitability;
- local, regional, or global market share;
- quantitative growth of employment;
- technological advance and modernity of equipment;
- differentiation of production;
- complexity of the organisational structure;
- complexity of problems solved in the organisation.

Development does not necessarily mean attaining positive values for all coefficients simultaneously. Some firms develop thanks to modernising their technology, improving profitability and market position, while at the same time limiting the number of employees. An example of this is General Electric, which in the 1980s increased its revenues by about 48% while at the same time reducing employment by 100 thousand workers. During the same period Henkel developed by limiting the assortment of items produced. In the course of several years the concern sold off 19 firms whose production profile was considered to be too far from Henkel's core specialisation. The company specialised in washing powder, cosmetics, and glues. On the other hand, another chemical concern, Bayer developed by producing a wide range of chemical products at the same time (paint, pharmaceutical products, herbicides, glues, veterinary products, etc.) [16, p. 33 ff.].

Not all the listed distinguishing features of development are equally significant. Most reliable are considered the indicators concerning

growth of turnover, revenue, profit, and profitability. They are used to describe the so-called **developmental gap**. The difference between the development possibility and the actual achievements. Independent of the level of organisation of the firm, it always finds itself below the development possibility frontier. Levelling out the development gaps concerns the search for, and elimination of all kinds of factors constraining the development process. These constraints can have a subjective character (the error of idealisation, the error of inadequacy, the error of limited horizons) or an objective character (structural constraints, competence, motivation, innovation) [11, p. 15]. The following developmental gaps can be distinguished (Fig. 4):

- operating gap;
- tactical gap;
- strategic gap.

The **operating gap** results from under-utilisation of available resources (i.e. financial resources, workers, machines and equipment, ma-

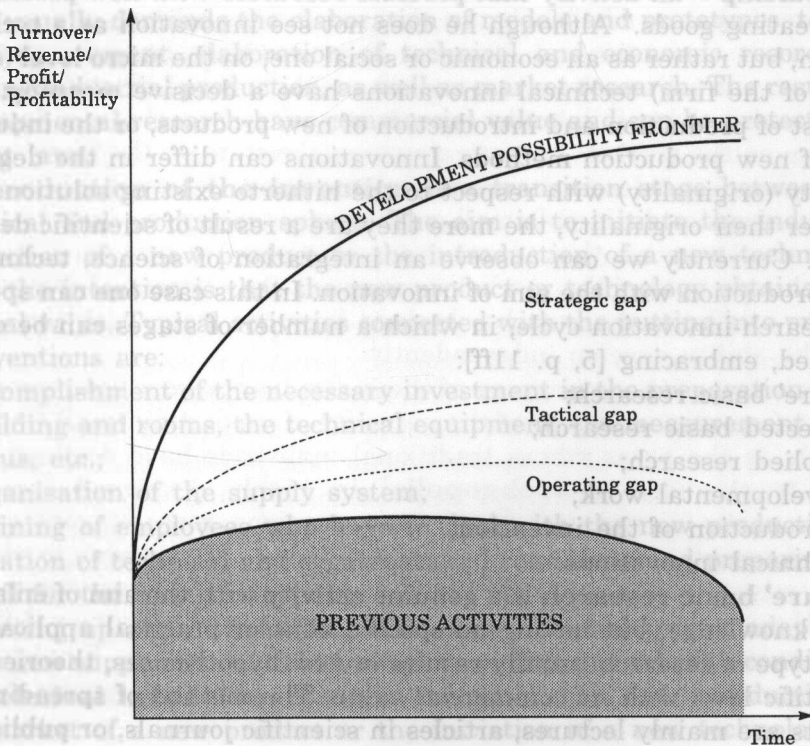


Fig. 4. The gap between previous activities and the development possibility function
 Source: Author's own elaboration.

materials, etc.). The **tactical gap** is a result of unused opportunities of obtaining the best resources on the most favourable conditions (i.e. the most inexpensive creditors, workers with the most suitable skills, finding suppliers fulfilling demands with respect to deliveries of materials, machines and equipment, etc.). The **strategic gap** is created by the opportunities lying in the undertaking of innovative and creative activities that differ clearly from the hitherto existing activities.

The utilisation of the opportunities lying in the strategic gap creates the conditions for achieving success in the short term. The chance for success in the medium term lies in the tactical gap. The strategic gap contains the possibility of obtaining success in the long term due to innovation, which is crucial for the operations of the firm.

3. Sources of Innovation

P. Drucker [4, p. 39] argues that "innovation is a specific tool of entrepreneurship – an activity that provides resources with new possibilities for creating goods." Although he does not see innovation as a technical notion, but rather as an economic or social one, on the micro level (on the level of the firm) technical innovations have a decisive meaning. They consist of production and introduction of new products, or the industrial use of new production methods. Innovations can differ in the degree of novelty (originality) with respect to the hitherto existing solutions. The greater their originality, the more they are a result of scientific development. Currently we can observe an integration of science, technology, and production with the aim of innovation. In this case one can speak of a research-innovation cycle, in which a number of stages can be distinguished, embracing [5, p. 11ff]:

1. 'pure' basic research;
2. directed basic research;
3. applied research;
4. developmental work;
5. introduction of the invention;
6. technical innovations.

'Pure' basic research is a genuine activity with the aim of enlarging pure knowledge, but having no specific aims or practical applicability. This type of research usually results in new hypotheses, theories, and scientific laws with no commercial value. The method of spreading the results are mainly lectures, articles in scientific journals, or publication of books.

Directed basic research aims at researching more deeply specific areas of knowledge with possibilities for practical application. Contrary

to 'pure' basic research this type of research is steered by institutions outside of the academic world. As in the case of 'pure' basic research, the results of directed basic research also do not represent commercial value and are no object of protection by patent laws.

Applied research means the process of finding practical applications for the findings of directed basic research and concern a specific problem. This is a kind of bridge between the scientific and technical spheres, materialising the results of the directed basic research. Applied research is supposed to lead to specific technical solutions. In most cases research leading to the construction of a new product creates the need for the introduction of new materials and new technological methods, which brings up the necessity of further research connected with these problems. The results of applied research can have commercial value and can be protected by patent laws.

Developmental work makes the experimental production of new products and technologies possible. In other words, it concerns the connection of technical knowledge with practical experience. Developmental work usually demands the elaboration of models and prototypes, testing and improvement, elaboration of technical and economic records for starting industrial production, as well as market research. The results of developmental research have commercial value and can be protected by patent laws.

Introduction of the invention is a transition stage between the technical and production sphere. The aim is to initiate the industrial production of a new product or the introduction of a new technology. Thus the intention is that the new product or technology obtains commercial value. Typical activities connected with the putting into practice of inventions are:

- accomplishment of the necessary investment in the preparation of the building and rooms, the technical equipment, the measurement apparatus, etc.;
- organisation of the supply system;
- training of employees who have to deal with the new production;
- creation of technical and organisational conditions and preparing the staff for the new production;
- drawing up and introduction of an organisational system adapted to the new supply, production, transport conditions, and sales conditions.

Technical innovation concerns the production and introduction on the market of a new product or the initiation of a new technology.

In the realisation of the scientific-innovative cycle different subjects usually participate. 'Pure' basic research and directed basic research are carried out in scientific institutions financed by the state. In Poland this

is the domain of the Polish Academy of Sciences (PAN – *Polska Akademia Nauk*) and universities. The remaining stages of the cycle can be realised in scientific research centres or in firms. The minimal part of the cycle that should be carried out in firms is the participation of their workers in initiating activities and the starting up of production on an industrial scale. However, the research activities carried out in individual firms can be within a wide range – embracing four stages, or only one while participating in a second. This depends on the possibilities of financing research as well as the uniqueness of the applied technology. Usually large firms have more financial resources and they can afford to realise a greater number of stages, which enlarges the probability of inventing a new technology resulting in a competitive advantage. The technology they apply does not necessarily have an innovative character because there can be gains from economies of scale. This strong position of large firms, when not balanced by a large number of small enterprises, leads to monopolisation of the economy. Small firms can compete with help of innovative activities and by operating in market niches. In order to make use of this chance they must have modern, unique technologies at their disposal. Usually, however, their financial situation does not allow them to generate such technologies. Left to themselves they are doomed to failure. As a result large firms can obtain a dominant position on the market. In many countries the state, in the framework of economic policy tries to create special conditions for establishing, functioning, and developing of small enterprises in order to counteract such processes. However, those legal and administrative protective barriers limit the working of the market mechanism. An element of competition become privileges that can be obtained from the state; with time firms lose the ability develop independently.

Awareness of the occurrence of these disadvantageous phenomena resulting from the conviction of the necessity of supporting small firms, especially in the areas where traditional industries have declined, gave birth to the idea of **technopolis**¹ in highly developed countries. A technopolis is a team of academic institutions, research centres, and production enterprises which are located in one compact area in order to create advantageous conditions for the realisation of the innovation cycle [15]. Here a symbiosis takes place of activities carried out by different subjects in the field of science, research, and production. Employees of firms have the possibility to participate in research work, giving the pos-

¹The term *technopolis* connects the word *technology* (*techno-*) and *polis* (the greek city-state). Other descriptions that are used are *science park*, *technological park*, or *innovation centre*.

sibility to become acquainted with new solutions while in the stage of creation, and not just during introduction. This allows a faster and more efficient introduction of the innovation. Furthermore, for scientific research workers it is easier to come into contact with the production sphere, which contributes to solutions that are adapted to future conditions for their realisation. Thus firms have not only the opportunity to gain permanently new solutions, but also to introduce them quickly for production purposes.

Innovations resulting from the above can be the effect of a firm's own research work or can be obtained from outside the firm. In other words, there are internal and external sources of innovation.

The use of internal sources of innovation is limited by the existence of a research and development unit in the organisational structure of the firm. An effective realisation of the research-innovative cycle in such a unit can lead to new, genuine products, increasing the advantage over competitors for a period. However, this usually demands considerable outlays, while the realisation can take much time. Furthermore, there exists technical risk (not always the product with the expected technical parameters results) and commercial risk (the product may not be well received by the customers). These shortcomings of internal sources of innovation are an incentive for the firm to look for sources of innovation outside the firm – for example a licence contract or franchising.

Contracts for manufacturing under licence can be divided into two groups:

1. licence contracts concerning legally protected inventions (patented inventions, legally protected production methods);
2. contracts of the 'know-how' type.

Contracts concerning legally protected applications can take the form of so-called negative or positive contracts. Negative contracts give the licensee only the right to use the invention or the production method. This type of contract is rarely used in practice. Positive contracts are more often used, adding services and means necessary to start up production under licence (materials, machines and equipment, the installation of machines, help with starting up production) to the rights given by a negative contract. The value of the supplies and services can be much higher than the payment for using the patent. Licence contracts of the 'know-how' type most often (but not always) refer to innovations that are not legally protected. This type of contract concerns the supply of experience, construction, and technological secrets, and usually the organisational 'know-how' – the methods applied in practice and the experience in production. Contracts of the 'know-how' type considerably accelerate the turnover of innovations (legal protection procedures usually take a lot of time).

Licence contracts should cover the following matters [17, p. 191 ff.]:

- the range of the licence contract;
- deadlines and means of delivery and receipt of technical documentation;
- licence payments;
- an export clause (markets to which the licence taker is allowed to export the products);
- the possibility of selling the products through the sales network of the licensor;
- conditions for quality control from the side of the licensor;
- the possibility for the licensee giving sub-licences;
- duration of the licence;
- contractual penalties;
- means of settling disputes.

The conclusion of licence contracts is preceded by sending a so-called *inquiry proposal* to potential licensors who are the market leaders. When a positive answer is obtained negotiations can begin. As a rule the conclusion of the contract is preceded by a period of mutual inquiry into the economic and technical opportunities, as well as the aspects of the qualification of personnel and the organisational culture of both firms. Only when the assessment of the partner is positive will the licence contract be concluded. The expected advantages of acquiring the innovation are:

- introduction of changes, guaranteeing that the actual results will be in concordance with plans;
- shortening of the cycle for preparing and starting new production;
- utilisation of the application used under licence for the modernisation of other products;
- utilisation of the experience in the range of organisation of production;
- entrance onto markets controlled by the seller of the license.

However, the advantages of the acquirement of an innovation for producing under licence can be limited by, for example:

- contractual clauses restricting access to markets;
- use of the application only for products specified in the contract;
- restrictions placed on production;
- lack of independence in the introduction of technical changes;
- use of only those products and raw materials which are mentioned in the contract;
- the requirement to start the manufacturing under licence within a certain time and to produce a minimum amount of goods;
- the requirement to put the trademark with the caveat 'under licence' on all products manufactured under licence;
- sales of the product under licence for not less than an agreed price;

- disclosure of all information about perceived possibilities of improvement of the application under licence.

The effectiveness of using manufacturing under licence as a source of innovation depends on the degree of novelty of the application and the time needed to put it into practice. This time includes the decision-making process of choosing the provider of the license, negotiations concerning contractual and technical matters, investment and organisational preparation of production, as well as production start-up time and the time necessary to master the production process.

Since the beginning of the 1990s it has been possible in Poland to obtain innovations with help of franchising [13]. A franchising contract is a contract with a well-established firm, allowing the production and sale of products using technology, the name, and the trademark of that company. As a rule franchise licences are given by companies which already have achieved success on the market, built a reputation, and earned consumer confidence. These well-known firms (franchisers) grant given firms (franchisees) well-defined privileges (franchises). The franchiser also guarantees extensive help with the running of the business of the franchisee. This help consists of [13, p. 14 ff.]:

1. a complete concept of the firm;
2. introduction of the franchisee to the business activity and provision of full training in the range of firm operation in accordance with the established concept;
3. permanent assistance and guidance.

The complete firm concept is a way of running a business that gives prospects for achieving success. The franchiser works out a so-called franchising package which should:

- eliminate to the greatest extent the risk inherently connected with the opening of new firms;
- make it possible for a person who never possessed or ran a firm to start a business, not only according to a previously tested model, but also with the support of the franchiser organisation;
- explain in detail the way in which the firm should be run.

Introduction of the franchisee to the business activity and the full training provided by the franchiser include methods which are indispensable for running the firm in accordance with the requirements of the **package**. Training can concern the production process, principles of exploitation of equipment, sales methods, etc.

Permanent assistance and guidance can consist of:

- regular visits by employees of the franchiser to help the franchisee with correcting and preventing deviations from the package model;

- assurance of contact between the franchiser, the franchisee in question, and the remaining franchisees with the aim of sharing ideas and experience;
- market research;
- local and nation-wide promotion and publicity;
- the possibility of mass purchases;
- advice and services in the range of management and accountancy;
- the publication of bulletins;
- carrying out research and development.

The premise of the choice of franchising as a source of innovation is minimisation of technical risk and market risk. Research shows that the probability of bankruptcy of new firms is 9 times greater for firms not working within a franchising network. Furthermore, franchising firms have lower initial costs as well as lower operating costs. These firms mainly experience lower costs due to training, help, and guidance provided by the experienced franchiser. Another reason is that the franchiser bears the expenses connected with research and development and the location of new forms of economic activity.

Disadvantages of franchising as a source of innovation are the loss of full independence regarding decision-making and having to be under strict control of the franchiser. Furthermore, there are costs connected with franchising – the so-called ‘admission payments’ (a non-recurring expense for making available the rights agreed upon in the franchise package) as well as regular payments (mostly as a percentage of gross turnover).

There are possibilities for the creation of an innovative development strategy connected with the sources of innovation described above.

4. Innovative development strategies

Among innovative strategies three main types can be distinguished [5, p. 71 ff.]:

1. offensive strategies;
2. defensive strategies;
3. imitating strategies.

Research and development carried out in house by a firm makes it possible to apply the offensive strategy. This strategy aims at achieving the position of market leader in production and the introduction of new products onto the market or the application of new technologies. This strategy is very risky, but promises the acquisition of a decisive competitive advantage. An in-house research centre is very costly, and these costs can usually only be covered in a longer term by the sales of new products. This

makes it necessary to make long-term calculations in order to direct the innovation process. Research work carried out in the framework of an offensive strategy sometimes has to go beyond applied research and include directed basic research. This makes it possible to keep up with developments in the knowledge of certain areas and to find the most suitable scientific information for solving problems in a given innovative venture.

In the long-term only a few firms are in the position to use an offensive strategy. Unquestionably most firms use strategies requiring less research and development, such as the defensive strategy. This strategy relies on limiting risk and costs by following the market leader. The firm pursues innovations and aims at a leading position, but wants to achieve this partly at the cost of firms applying an offensive strategy. This is done by the firm trying to get to know as soon as possible the results of the market leader's research and development activities in order to use these for its own products. An advantage over the leader can be obtained thanks to lower costs and a range of products not much different from the leader.

Patents play an essential role in both offensive and defensive systems, although they are used for different goals. The producer which is the first to produce a new product or to introduce a new technology will apply for a patent in order to assure itself a monopolistic position. The firm applying a defensive strategy will try to undermine the monopoly of the leader by patenting its own version of the product or technology. Applying a defensive strategy demands high skills in the range of developmental work and in putting new products or technologies into practice.

The imitating strategy relies on following the firm using an offensive (or defensive) strategy, without the intention to deprive it of the effects of its research and development. Following the leader takes the form of taking advantage of external sources of innovation (production under licence, franchising) or from in-house developmental work. In both cases this must lead to lower costs than when using an offensive or defensive strategy. This main source of competitive advantage takes different forms. The firm using the imitating strategy does not invent products, but perfects them and appropriately places them on the market. The imitator does not squeeze the leader out of the market. It serves those segments that came into being due to activities of the leader, but did not come under its control. This type of strategy is less risky than the strategies discussed before, but demands elasticity and a good knowledge of the market. The imitating strategy can also rely on skilfully using the mistakes or negligence of the leader in assessing and using an invention. Sources of such incorrect assessment can be:

1. underestimation of the significance of the invention;
2. concentration only on the most profitable applications of the invention;

3. assessment of the quality of the product in terms of the technical level of the application, and not the needs of consumers;
4. the pursuit of significantly above average profits by setting high prices, which works as a magnet for competitors;
5. the development of products relying on a maximisation of the number of applications, thus making the product more expensive, more difficult to use and maintain, therefore, failing to satisfy the consumer interested in optimal application of the product for specific uses.

The source of superiority of the imitator can also be lower production costs and higher quality of workmanship of the product. Lower costs can, for example, be obtained by paying lower wages and by lower expenditures on investment, material, energy, and environmental protection. Usually the imitator will also have lower costs because it does not have to bear the costs of research and development, technical services, staff training, etc.

The necessity of lowering the production costs gives the imitator an incentive to be more effective in the production process itself. Especially the development of design, productive engineering, and quality control. The imitator cannot afford to 'copy' the costs of the pioneer. Effective information can facilitate the introduction of economising innovations in the production process.

5. Concluding remarks

Innovations have become a more and more important factor in the development of the firm. Under conditions of strong competitive pressures and crucial technological changes marketing strategies fail. Innovative strategies turn out to be most effective in obtaining a competitive advantage. For this reason, currently an increase in interest in innovations can be observed, while also the knowledge about the nature of innovative processes deepens. Innovative activities provide firms with a permanent stream of development possibilities. The utilisation of these possibilities depends on their entrepreneurship. P. Drucker [4, p. 29] assures that innovations should be a special tool for entrepreneurs. With the help of innovations changes become an opportunity for taking up new activities.

Today every entrepreneur should systematically take advantage of sources of innovation, and search for changes and symptoms of those changes that indicate opportunities for innovation, which can become the main factors of development for his firm.

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