SPIN OFF AS AN INSTRUMENT OF UTILISING ENTREPRENEURSHIP OF COMPANY EMPLOYEES – STRATEGIC DETERMINANTS

1. INTRODUCTION

In literature, the term “spin-off enterprises” refers to a large extent to the concept of academic entrepreneurship and academic firms. They are often presented as an important instrument in the economic development. The hopes that they have a positive impact on the Polish economy are connected, among others, with the experience derived from development processes in such significant areas of economic and academic activity as Silicon Valley or Route 128. Their creation and growth are closely linked to their relations with the leading universities such as Stanford University or Massachusetts Institute of Technology. In fact, academic spin-offs have been an important part of American entrepreneurial activity in the academic community for years.

In the European context, significant interest in academic spin-offs and their role in the economy arose at the end of 1990’s. After the year 2000, a number of studies and important publications concentrated on this category of firms. In the recent years, an enormous growth of interest in the subject of spin-off companies has been recorded in Poland. It is particularly noticeable in reference to the issues connected with the scientific policy in its broad sense as well as technology commercialisation. The amended Higher Education Act refers directly to commercialisation of knowledge created at universities in the form of spin-off companies. The Act also provides for specific organisational solutions concerning their creation at universities. Article 86a paragraph 1 of the Act stipulates: “In order to commercialise findings of research and development work, university...
shall found a limited liability company or a joint stock company, hereinafter referred to as a special purpose vehicle. The special purpose vehicle shall be established by the rector after consultation with the senate or other university collegial bodies. The task of the special purpose vehicle shall be acquiring equity stakes in limited liability companies or creation of joint stock companies established in order to implement findings of research and development work conducted at university”. This element refers directly to procedures and forms of spin-off creation by means of special entities.

Academic spin-offs were also noticed as an important factor in the context of the economic policy in the broad sense of the word. They emerged for the first time in the framework of support instruments from public funds in the Financial Perspective 2007–2013. Their creation can be promoted and supported to a certain extent within the framework of Human Capital Operational Programme, Measure 8.2.1 Support to cooperation of scientific environment and enterprises.

The interest in academic spin-off companies is accompanied by the almost complete lack of attention paid to spin-off companies from the enterprise sector. Thus, it can be assumed that some of the authors do not notice their existence and treat the concepts of “academic spin off” and “spin off” as identical. Similarly, in the premises of the Human Capital OP, the term “spin off” (and the related “spin-out”) refers only and exclusively to entities founded by academic staff of research facilities. Thus, all non-university initiatives were excluded from this concept.

The aim of the paper is to characterise the fundamental determinants of spin-off use as an instrument for business development of enterprises in terms of opportunities and potential threats. This issue will be analysed in particular in the context of business management structures and in terms of determinants connected with management of new products.

2. COMPONENTS OF SPIN OFF DEFINITIONS

The term spin off is widely used in scientific literature, business and other aspects of life. It originates from the English language and its basic meaning is a “by-
product”, “additional advantage/extra profit”. In other words, the term defines certain additional benefits created in the course of realisation of the mainstream activity or the main project. This definition leaves room for wide interpretations as well as applications in different areas that encompass economic issues (relations existing in capital markets) as well as, for instance, the area of show business.

In a broader sense concerning business matters, the term “spin off” refers to an entity created by separating/splitting from the parent organisation in order to start activity that would be difficult or impossible to conduct in the framework of the existing organisation. This process is similar in character to the creation of a new business venture though not, in all cases, from scratch. It is possible to establish a new business venture based on assets separated from the existing entity or even on an organisationally separate part of the company. Thus, the important role of the parent organisation, i.e. the institution from which the knowledge originates and from which come the staff who to a large extent create the competitive position of the new entity, is clearly visible. The multitude of options used cause certain problems in the precise terminology for individual phenomena.

In order to expand the boundaries of the term “spin off” in business, it should be assumed that at least three elements ought to be fulfilled to define an entity as a spin off (compare: Tab. 1):

1) new business creation,
2) knowledge transfer from the parent institution which constitutes an important element of the competitive advantage of the new enterprise,
3) personal relationships with the parent institution.

Component 1: new business creation. The process of spin-off creation should encompass the process of establishing a new business venture in the form of a new, separate legal entity, which constitutes a legally independent business. This factor raises no fundamental objections in reference to academic spin-offs. In this case, business activity should in principle be separate from the main activity of academic institutions since business activity within the structure of scientific entities is to a large extent limited. In reference to enterprises, however, this issue acquires a new meaning. It is possible to establish new business ventures in a number of different forms in the framework of an enterprise, hence the choice of the new business form may result from the possibility of implementing employee ideas based on the existing enterprise structures. Regardless of the fact whether the final choice is the result of the conscious policy of using corporate entrepreneurship (intrapreneurship) in the framework of the parent company or of an independent

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8 Compare: P. Głodek, op. cit.
decision made by an entrepreneur or entrepreneurs who resign from the current career to set up a new company.

Component 2: knowledge transfer from the parent institution is the factor which distinguishes spin offs from other start ups. It is connected with the use of different forms of knowledge created in the parent institution to establish a new business venture. The form of knowledge transfer and the manner in which this knowledge is used is the subject of discussion. The key factor, however, is the assumption that this knowledge plays and important, even crucial, role in achieving the competitive advantage by the new entity. It is questionable whether the given company can be defined as a spin-off company in the situation when this knowledge is used to a small degree or not at all.

Component 3: personal relationships with the university. The people who hitherto have worked in the parent institution play an important role in spin offs. They are the people who play the key role in knowledge transfer to the new entity, particularly in the area of know-how and specific knowledge relating to detailed solutions. This knowledge is not easily transferable in the official form – specifications, diagrams, etc., hence, as a rule, their involvement in the technical side of the venture reduces the risk and the costs of this undertaking. Moreover, in the case of spin offs, it is not knowledge transfer in itself which is important but commercialisation of its creative development. Thus, spin-off founders can be seen not only as vehicles of knowledge transfer but as vehicles of transfer and development of the knowledge resulting from the work done by the parent institution and its improvement/change carried out by the future entrepreneur.

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<th>Components of a wide spin-off definition – summary</th>
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<td>Start up</td>
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Source: the author’s compilation.

The analysis points to the fact that the fourth area may also be included in the discussion – the existence of a capital or contractual relationship between the parent institution and the new company. For the purpose of this paper, it is does
not refer to the issue of spin-off definition but to the issue of determining its type. From the perspective of the parent institution, the possibility of benefiting from the implemented solution (this subject will be examined more comprehensively in the further part of the paper) is important. The situation when the university, as the parent institution, has shares (stocks) in the new venture or there is an agreement between the two entities as to the possibilities of lawful use of the knowledge generated in the academic institution (e.g.: in the form of licences) indicates regulated legal relations. Thus, it can be assumed that the new entity was created with the knowledge and consent of the parent institution.

In the case of no formal relations existing, there are three possible solutions. The spin off was set up:

- against the wishes of the parent institution,
- without the knowledge of the parent institution,
- with the knowledge of the parent institution but without its involvement.

3. THE ROLE OF SPIN OFFS IN THE Ekonomnic DEVELOPMENT

Literature indicates quite widespread awareness concerning the significant role of spin-off companies in the economic development connected in particular with their capacity for commercialisation of new knowledge and new business concepts based on the knowledge created in the parent institution\(^\text{11}\). This process to a large degree contributes to the spread of new technologies in the economy. Analyses indicate that in some cases a breakthrough discovery in one research organisation may cause a true avalanche of new companies. Such a phenomenon can be seen, for example, in the role played by Bell Labs, Shockley Transistor and Fairchild Semiconductor Company in the promotion and development of the electronic industry\(^\text{12}\). It turns out that most key enterprises founded during the first stage of life cycle of this sector have personal relations (not capital ones!) with Shockley Transistor which was set up by one of the transistor inventors – Prof. William Bradford Shockley. They triggered a chain reaction connected with the creation of new companies established by former employees and former co-owners of the previously existing companies (Fig. 1). Some of them collapsed quickly but some managed to achieve key positions in global markets. These include, among others: Intel Corporation, the current leader of this sector, founded

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by Robert Noyce and Gordon E. Moore, former employees of Shockley Transistor and Fairchild Semiconductor.

Fig. 1. “The chain” of spin-off companies connected with transistor-based technologies


Comprehensive light on the participation of new enterprises in the processes of knowledge spillover and commercialisation is shed by Acs and Audretsch et al. They propose an approach which allows to incorporate factors connected with

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13 The general differentiation relates to the view that commercialisation is intentional process which is managed by the organisation, while knowledge spillover is economic, non-intentional process which is an effect of economic activity of one of multiple organisations.
knowledge spillover to the economic growth models. They point to the importance of not only knowledge creation but also the determinants of its transfer between entities, including business entities. They criticised economic models that analyse knowledge only in terms of R&D and human resources with the exclusion of knowledge accumulated in processes and products. It forms the foundations for their concept of entrepreneurship based on knowledge spillover\textsuperscript{14}. According to this theory, entrepreneurship constitutes one of the key mechanisms in which knowledge created in one organisation is commercialised in a new organisation. Thus, the entrepreneur is an instrument effectively transferring knowledge onto the market, which enables economic return on investments made to create this knowledge\textsuperscript{15}.

4. ENTERPRISE-DERIVED SPIN OFF – CORPORATE ENTREPRENEURSHIP AND CORPORATE VENTURING

The use of new knowledge is a significant, potential source of competitive advantage for enterprises. At the same time, knowledge management, in particular knowledge creation, identification and assessment, poses a particularly difficult challenge. Intangible and often unpredictable character of knowledge is a fundamental difficulty factor. Knowledge is created in an organised manner, as a team effort in the framework of formal research processes as well as in an unorganised and individual manner connected with acquiring experience by particular employees.

Knowledge as a phenomenon is only a starting point for a new business venture which is based on knowledge commercialisation prompted by a market opportunity. Technical knowledge enables the identification of its practical applications whereas market and business knowledge enables the assessment of the business potential presented by a market opportunity and the identification of the manner it is used.

From this point of view, knowledge (of different type) enables the identification of market opportunities connected with knowledge commercialisation and their assessment. It is a process, however, which often refers to the employees and not to the system of the existing enterprise. In this setup, company employees do not have to share their ideas concerning new or current knowledge with their employer. Although from the perspective of the whole economy the processes


of spontaneous creation of spin-offs, independent from their parent institutions/entities, are particularly beneficial, the example of the “transistor” technologies quoted in the previous part of the paper shows that an individual company perspective may lead to different conclusions regarding the phenomenon. Uncontrolled creation of spin-offs based on the knowledge created in the parent company constitutes an obvious loss for this enterprise in at least two areas:

- the strategic area referring to the loss of areas of potential expansion and growth,
- the human resources area connected with the loss of employees who are capable of recognising, assessing and attempting to avail of market opportunities.

From this perspective, creating instruments which will allow retaining entrepreneurial employees in the company and making use of their potential for the company’s benefit is a challenge for procedures and the whole management system of an enterprise. The wider approach indicates the existence of different types of system that avail of corporate entrepreneurship. M. N. Morris, D. Kuratko

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*S Figure 2. Typology of corporate entrepreneurship

and J. G. Covin\textsuperscript{16} divide the issues of corporate entrepreneurship into two basic areas (Fig. 2): corporate venturing and strategic corporate entrepreneurship. The issues connected with utilising the entrepreneurial capacity of employees in the form of new business ventures comprise the area of corporate venturing.

In the context of an enterprise, new business ventures can be realised in various forms. Strategic determinants of an enterprise and a new product/service should be taken into account. J. Tidd, J. Bessant and K. Pavitt\textsuperscript{17} classified different types of situations that refer to the implementation by an enterprise of the results of innovative projects created by its employees. They analyse different strategic options connected with a various degree of unification of the new venture with the structures of the existing company. At the same time, they acknowledge that some ventures need to be removed from the enterprise and point to the usefulness of different types of spin-offs\textsuperscript{18} in the context of implementing the results of corporate venturing type activity. Thus, according to their approach, a spin-off is one of the instruments used to implement projects that aim to avail of the innovation and entrepreneurial capacity of company employees, in particular technical and scientific personnel. They also assume the existence of entrepreneurial attitudes. At the same time, they concentrate on strategies for their support and use rather than on the process itself. Personal relationships between the parent company and the spin-off are assumed although Tidd, Bessant and Pavitt conduct no detailed analysis of this issue. Instead, they emphasise capital relations and strategic inter-dependence. They distinguish the following types of entities that generally possess spin-off character:

– special business unit – an enterprise which is legally and organisationally separate though in terms of capital belongs wholly to the parent company. This fact determines complete subordination to the corporate strategy and the necessity to meet the exact targets concerning medium-term return on the capital invested.

– independent business unit – an enterprise in which the parent company retains partial equity stake differentiated according to the cohesion/complementarity of the implemented project with the main activity of this entity. Maintaining a significant stake in the new company may be also motivated by the possible intention of expanding the activity of the parent company onto the given area. In this case, the spin-off activity is treated as a sort of “testing ground” for the new kind of activity.

– nurtured divestment – a type of spin-off connected with implementing projects outside the main areas of interest of the parent organisation. In some


\textsuperscript{18} Types distinguished by different strength of the relationship between the parent company and its spin-off.
cases, capital relations may not occur at all and relations between entities may be maintained via licence agreements or long-term contracts.

– complete spin off – is used, among others, when there is no market or technological relationship between the new business venture and the current activity of the parent organisation. In this case, both entities eventually lose the capital and strategic relationship. Sometimes, however, the equity stake (often viewed as capital investment) in the new venture is retained by the shareholders/owners of the parent organisation.

Various difficulties connected with a new business venture and its compatibility with the current activity profile and the existing management structures are the reasons why the new activity is split off in the spin-off form. According to the previously presented definition, these are ventures connected with the activity that was difficult or even impossible to undertake by the parent institution.

These difficulties may be connected with the requirements of new venture management system and the lack of adaptation to the elements effective for the current activity. In other words, the management system for structures and procedures necessary for daily operations of the enterprise differs significantly from the one needed to manage innovations. The combination of long-term corporate planning, on the one hand, and short-term oriented financial audit usually results in the corporate environment which favours a steady growth planned in detail based on incremental process and product innovations. Radical innovations are rarely compatible with this type of structures. The following are the main related problems:

1) The corporate financial system which favours short-term return – compatible mostly with incremental innovations.

2) Manufacturing activity which favours efficiency over innovations.

3) Sales and marketing organised according to and rewarded mostly based on the existing products and services.

Thus, it can be said that basing the new activity in the framework of a new business venture enables the freedom from the existing structures and procedures which may constitute a significant obstacle to operational activity in a large corporation. It also enables the creation of new structures, adapted to the requirements of the particular project.

Another area of difficulty which could be overcome by establishing a spin-off company by a large enterprise is the introduction onto the market certain types of innovative solutions, in particular, the ones that are not connected with the current range of products and markets. It creates a situation when the introduction of new solutions requires from the existing entity building new market and production competencies. Thus, non-capital possibilities of support for the new venture are

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small and the integration of the new activity will not result in synergistic effects for the current activity (compare: Fig. 3).

Fig. 3. Matrix of corporate growth based on Ansoff’s concept

Source: the author’s compilation.

Figure 4 presents in a wider perspective the place of the new business venture in the corporate strategy in terms of the product/market dimension. The darkened areas represent potential application of one of the forms of the new, legally and organisationally separate enterprise in the process of introducing the new venture into the market.

Fig. 4. Domain of new business creation


Such an approach is in accordance with the point of view that knowledge commercialisation by means of spin-offs refers to technologies that form a certain market whole which can be differentiated as a separate product that
can be offered by an independent enterprise. Shane\textsuperscript{21} points out that radical/breakthrough technologies which may cause a leap/shift in the current market setup or fundamental changes in the way products and services are created have a significantly greater potential for establishing spin offs. The introduction of innovations destroys the existing market/competition setups or leads to the creation of new markets. Since it is also accompanied by the destruction of mature markets, the existing enterprises may be unwilling to invest in radical technologies\textsuperscript{22}.

5. CONCLUSION

For enterprises, the creation of spin offs is one of the available instruments to utilise the entrepreneurial capacity of their employees. This potential may provide an important opportunity to reap benefits from markets and products that extend beyond the main business activity of the enterprise. At the same time, ignoring entrepreneurial attitudes of employees may lead not only to wasting interesting business opportunities but also to the creation of new entities that directly or indirectly compete with the parent enterprise. Particularly in the case of enterprises that create and use new knowledge, the introduction of systemic solutions may limit the threat connected with wasting the existing knowledge and qualifications as well as with hoarding knowledge by employees and their defection from the company in order to set up their own enterprises.

The creation of instruments that in a conscious manner and in accordance with the company’s strategy support and supervise this process is undoubtedly an important challenge for the management system. Although making use of some of the new knowledge is difficult or even impossible within the framework of the existing enterprises, certain entities are unable to meet the challenge of establishing spin-off companies. It requires a comprehensive approach to, among others, the employee motivation system, processes of new product implementation or the issue of finance management and controlling. The situation is not helped by the fact that knowledge commercialisation by means of creating a new entity is seen as activity which is burdened by greater risk than other commercialisation strategies.


REFERENCES


Morris M. H., Kuratko D., Covin J. G., Corporate Entrepreneurship & Innovation, South-Western College Publication, Mason (OH) 2008.


Artykuł jest poświęcony uwarunkowaniom tworzenia firm spin off w kontekście wykorzystania potencjału przedsiębiorczego pracowników firmy. Wskazano, iż przedsiębiorczość pracowników i osobowy transfer wiedzy pełni ważną rolę w rozwoju gospodarczym, jednocześnie z punktu widzenia konkretnego przedsiębiorstwa może stanowić zarówno szansę, jak i znaczące zagrożenie dla potencjału firmy oraz możliwości zachowania jej przewag konkurencyjnych. Dlatego też spin off został poddany analizie w odniesieniu do strategicznych elementów projektów realizowanych w przedsiębiorstwach. Wskazano ogólną charakterystykę projektów, w ramach których może zostać on wykorzystany w praktyce zarządzania.