

Marek Matejun

Department of Management, Lodz University of Technology, Poland

Instruments Supporting Development in the Life Cycle of Small and Medium-Sized Enterprises

Abstract:

Small and medium-sized enterprises (SMEs) play an important economic and social role in most countries of the world. Despite the significant internal diversity of the SME sector, a considerable part of this group consists of entities oriented towards development and growth. Because of their characteristic features, they are often unable to achieve their developmental goals based exclusively on their own resources. There then exists the alternative of using external development-supporting instruments offered by commercial and non-commercial small-business-related organisations in various regions of the world.

Absorption of these instruments depends on many factors, in particular the needs and limitations characteristic of a specific stage in an organisation's life cycle. With this in mind, the goal of this paper is to identify and assess the scope of use and factors determining the use of development-supporting instruments in the life cycle of small and medium-sized enterprises. The study includes a review of international literature on the subject, as well as a presentation of the author's own model of the SME life cycle, composed of eight developmental stages. The work also includes empirical research conducted on a sample of 377 micro-, small-, and medium-sized enterprises operating in the European Union.

Keywords: Instruments Supporting Development, Small and Medium-Sized Enterprises, Business Life Cycles, Development, Growth, Entrepreneurship.

JEL classification: L26

Introduction

The development of small and medium-sized enterprises⁴ depends on a number of internal and external factors, as is manifested, among other things, by the phase models of the life cycle of such businesses presented in the literature. Enterprises going through different stages of their operation encounter specific problems and barriers; they are also affected in various ways by internal and external determinants of development. The common characteristics of small and medium-sized enterprises are a significant shortage of resources and the necessity of opening up to the outside environment, which offers many different instruments supporting

⁴ The category of "small and medium-sized enterprises" in this paper also includes the subcategory of micro-enterprises. Whenever the abbreviation "SME" is used, it also includes micro-businesses.

development. The need to make use of these instruments, their availability and conditions of application differ depending on the phase of the life cycle in which a firm finds itself.

With this in mind, **the goal of this paper** is to identify and assess the degree and scope of use of instruments supporting development in the life cycle of small and medium-sized businesses. The presented analysis includes a review of international literature on the subject and the author's own model of the SME life cycle, composed of the following stages: (1) pre-establishment, (2) emergence, (3) survival, (4) dynamic growth, (5) separation and expansion, (6) stabilisation, (7) revitalisation, and (8) decline (Matejun 2008). The goal of the paper was pursued and the proposed research hypotheses were verified through empirical studies conducted on a sample of 377 small and medium-sized enterprises operating in the European Union.

Literature Review and Hypotheses

Small and medium-sized enterprises (SMEs) play an important economic and social role in most developed and developing countries of the world. Despite different approaches to the definition of SMEs as a group, these entities significantly and favourably affect such macroeconomic parameters as employment, gross domestic product and foreign trade balance in many countries (Ayyagari, Beck, and Demirgüç-Kunt 2007). However, the beneficial influence of SMEs on the economic and social reality is dependent on the continuous development of those firms. Development, which is one of the most debated ideas in the social and economic sciences (Bazbauers 2012), is related to various changes occurring within economic entities, strongly connected to the external environment. It is usually of a qualitative nature, although it can also be related to quantitative growth of an organisation (Penrose, and Pitelis 2009). A business's development triggers various kinds of transformations leading to improvement in its profitability, effectiveness and competitiveness, enhancement of management systems and process improvement within a firm, as well as cultural, technological and structural renewal (Egan 2002).

A specific feature of the SME category is its considerable internal diversification, leading to the identification of many subcategories of these businesses, which is emphasised in the concepts of diversification and denaturing (Torrès 2003; Torrès, and Julien 2005). Within these trends, many subcategories of small and medium-sized enterprises can be identified, based on their **approach to development and growth**. A starting point for these categorisations is provided by the observations of D. Birch (1987) concerning the American economy, which identified a relatively small subgroup of small and medium-sized companies focused on fast development and growth, and generating a large number of new jobs. Another, much more numerous subgroup consists of stable firms, income substitution entities, focused primarily on current operations.

Heterogeneity in the approach to company development is already noticeable at the stage of the establishment of businesses. Based on the individual characteristics of an entrepreneur, structural and process-related properties of a company, and competitive conditions of the environment, W. Gartner, T. Mitchell and K. Vesper (1989) identified eight types of new business undertakings. This approach may be supplemented by the typology proposed by S. Kunkel (2001), taking into account the context of earlier approaches concerning both autonomous and corporate entrepreneurship (Weiss 1981). Here, ten types of new businesses were identified according to the use of entrepreneurial activities in growth processes in the context of future income.

In view of these considerations, it may be concluded that despite a considerable internal diversification of the SME sector, a significant part of this group consists of companies focusing on development and growth: entrepreneurial, innovative entities, internationalising

their businesses or operating in high-tech industries. They are often described as fast-growing companies (Smallbone, Leigh, and North 1995; Oakey, and Syeda-Masooda 1999), business gazelles (Mitusch K., and Schimke A. 2011) or other types of dynamic business ventures (Oakey, Rotwell, and Cooper 1988, Oviatt, and McDougall 2005).

Because of their specific features (Storey, and Greene 2010; Hankinson 2000), such enterprises are often unable to achieve their developmental goals using their own resources. In such situations, there exists the alternative of using **external instruments supporting development** (Smallbone, and Welter 2009), offered by commercial and non-commercial small-business-related organisations in various areas of the world (Harvie, and Lee 2002; Bossoutrot 2005; Acevedo, and Tan 2011; Dyson 2012; Xiao 2011).

Instruments supporting development have the nature of a market offer of various small-business-related institutions and may be defined (from the point of view of SMEs) as external, specific and formal streams of resource- or position-based values stimulating quantitative and qualitative changes leading to the development of an enterprise, taking into account desirable changes in the environment. The most important instruments, in terms of their influence on the developmental processes of small and medium-sized enterprises, include:

- **financial instruments**, including various sources of external financing, such as credits, loans, leasing, factoring, EU grants, financial grants and guarantees (Hernández-Cánovas, and Koëter-Kant 2011; McMahon 2001);
- **capital-based instruments**, e.g. the involvement of venture capital, business angels or other categories of investors (Warma 2011; Mason 2009);
- **consulting/training/information-related instruments**, e.g. courses, training and other instruments aimed at increasing the knowledge, skills and competences of personnel (Bennett, and Robson 2003; Gillingham 1984);
- **innovation-supporting instruments**, related to technological audit or transfer of technologies (Pueyo, Mendiluce, Sanchez Naranjo, and Lumbreras 2012; Bozeman 2000);
- **general business instruments**, e.g. those offered by business incubators, services related to assistance with business premises and access to the infrastructure used in business activity (Edwards, Sengupta, and Tsai 2010; Deakins 1993).

A considerable part of these instruments are of a **commercial nature**, and their basic role in developmental processes consists in supplementing the shortage of resources or competences of SMEs, and limiting the developmental gap. Other are offered by innovation and entrepreneurship centres, many of which are non-profit organisations, providing services on a **non-commercial basis**. In the context of European integration, various preference instruments are also of significance, many of which are granted as **public assistance** and combined with the implementation of the European policy on supporting SMEs (Kasemets, Kriisa, and Reiljan 2001; Lopriore 2009). In this situation, special importance is attached to the ability to implement European projects, which enables the acquisition of support in priority areas of development, such as innovative activities and investments, computerisation, environmental activity, development of human resources, and research and development activity.

The selection and use of instruments supporting development depends on many factors, important among which are the specific needs and limitations characteristic of a given stage of an organisation's life cycle (Phelps, Adams, and Bessant 2007; Davidsson, Achtenhagen, and Naldi 2010). Most phase models of the organisation life cycle are derived from the classic model of the social system development cycle according to the "S" curve, which includes three basic stages: emergence and growth, stabilisation and dynamic balance, and transformation or decline and dissolution (Jackson, and Morgan 1982). Phases of the organisation life cycle strongly depend on the phases of economic trends (Jaffar, Webb, and

Kumbirai 2012), and are also linked to the specific characteristics of the entity in question. For instance, many small and medium-sized companies are characterised by a shortened life cycle and a different nature of phases in comparison to generally recognised models. Thus publications contain various proposals for models of the SME life cycle. These proposals include the SME development model of V. Lewis and N. Churchill (1983), and the model devised by M. Scott and R. Bruce (1987). A model that might also apply to small companies to a significant degree is the PAEI model of I. Adizes (1979), in which development is presented as the change of dominating functions, some of which endanger the existence of an organisation.

Certain analogies regarding the development of small and medium-sized enterprises may also be made when analysing L.E. Greiner's model of evolution and revolution (1972). Important considerations of the issues occurring in different phases of development are also presented in the model of H.R. Dodge and J. E. Robbins (1992). These authors identified three groups of barriers to development, related to marketing, management, and finance, stating that incorrect solutions applied in order to overcome them may lead to the slowdown or stoppage of a company's growth. The concept of life cycle including analysis of barriers that appear in the different phases propose Felsenstein and Swartz (1993) also. More recent research on the topic of organisation life cycle includes the analyses conducted by such authors as Beverland and Lockshin (2001) and Lester, Parnell and Carraher (2003).

One of the goals of using phase models of the life cycle is the description of problems, barriers and challenges occurring at particular stages. This kind of knowledge is becoming one of the key factors determining the need to use various instruments supporting development. A description of these relationships has been given on the basis of the author's own model of the SME life cycle (Matejun 2008), which identifies the following eight phases: (1) pre-establishment, (2) emergence, (3) survival, (4) dynamic growth, (5) separation and expansion, (6) stabilisation, (7) revitalisation, and (8) decline. Each of the above stages is characterised by specific properties, as well as the occurrence of specific barriers and problems, which determine the use of instruments supporting development. This conception also assumes a departure from the deterministic approach, typical of phase models of the life cycle, according to which a business entity goes through consecutive phases in a linear manner. In the proposed model, the linear course of development concerns only the first three phases. Owners and/or managers of an enterprise may subsequently strongly manage its development, and this process is affected by both internal and external factors.

Within the group of external factors, a key role is played by instruments supporting development, which in the described model may be treated as:

1. Accelerators allowing transition to a subsequent stage of development pursued by the owners and/or managers.
2. Inhibitors delaying or preventing transition to a stage not desired by the owners and/or managers, particularly the decline stage.

The pre-establishment stage is the period when an entrepreneur is considering a decision to start a business. Especially important in this phase is the correct assessment of the market situation in the sector in question, as well as analysis and critical evaluation of personal predispositions and resources necessary for initiating economic activity. Particularly important at this time is access to instruments allowing the growth of knowledge, skills and competences in management, as well as those developing entrepreneurial attitudes. Access to financial and capital-based instruments, especially of a commercial nature, is difficult at this stage. The reason for this is the lack of formal registration of the business, and of the required credit record. An exception to this rule is grants from the structural funds of the European Union or public funds allocated in various countries for the support of entrepreneurship and

the creation of new businesses. The opportunity also exists at this stage to start consultations with business-supporting institutions about the use of general business instruments that might be useful in the first phases of the company's operation.

If the decision to initiate business activity is positive, a company begins its operation and enters the **pioneering period of activity**, composed of two phases: the shorter one – emergence, and the longer – survival. The completion of formal registration of the business initiates **the emergence phase** which includes the necessary steps related to the establishment of the company. It is when the first contracts with business partners are concluded, concerning e.g. the lease of facilities and cooperation in business-support services. Investments necessary for ensuring the proper operation of the organisation are implemented, and the first attempts are made at the development and commercialisation of innovative solutions offered by the company. The firm is characterised by optimism and high commitment in the performance of the first market tasks. This stage of operation presents an opportunity to make use of financial instruments offered to newly-established enterprises. Importance also attaches to consulting, training and information-related instruments, which enable the performance of market analyses and making of the right managerial decisions determining the further development of the entity. In the presence of a well-developed business-support infrastructure, there is the possibility of using instruments promoting innovation, through cooperation with technology parks or technology transfer centres.

The longer stage of the pioneering period is the **survival stage**. This is an important time which sees the first market verification of the products and services offered by the enterprise. In this phase, the goal of the business is to achieve the required level of profitability and financial liquidity. It is usually a difficult period for companies, and a point at which many of them collapse. Enterprises face many external barriers which include aggressive competition, import of substitutes, or difficulties with finding clients and distributors. It is also when financial barriers appear, such as problems with obtaining additional funds necessary for market expansion. As a rule, businesses have problems with acquiring financial instruments. Entrepreneurs also frequently fear incurring liabilities because of less optimistic forecasts of company development. What becomes important, however, is the adequate use of instruments related to the development of knowledge helping to make making correct developmental decisions, and general business-support instruments, particularly non-commercial ones, allowing the optimisation of operational costs.

The survival phase is usually longer than the emergence phase, and ends with the market's verification of what the company initially has to offer. If this is favourably received, the entity has a chance to move on to a subsequent, beneficial stage of development (most frequently the dynamic growth phase). However, if the offer is rejected by the market, the enterprise needs to change its direction of activity, and usually passes on to the stage of stabilisation or decline. Considerable psychological barriers may appear at this moment, arising from the entrepreneur's frustration and poor motivation for further development of the business. In the presence of sufficient resources or the use of adequate instruments supporting development, the entity may attempt a modification or change of the products it offers (revitalisation stage), but if these attempts fail, it might face decline and liquidation.

In the case of success in the pioneering period, the business usually enters the **dynamic growth period**. This period is characterised by rapid increases in such quantitative growth indicators as the revenue volume, employment, and number of business partners, with simultaneous introduction of qualitative changes to the organisational structure, management systems, personnel motivation policy, and control. At this point, the business already has a history, market recognition and frequently also a credit record, which often facilitates the search for commercial financial instruments. What becomes important at this stage is the

proper orchestration of various types of instruments supporting development, ensuring the maintenance of stable conditions for dynamic growth. Special significance is assumed by the use of innovation-supporting instruments, which help the company adjust the products it offers to the changing needs of clients.

A firm's development in this phase leads to material changes in its organisational structure and management systems. Very often, at this point, the entrepreneur no longer has enough creativity and skills to administer the developed market entity on his or her own. Therefore there is a need for decentralisation of management and a transfer of power to professional managers. Prospective investors may also appear, interested in participating in the firm's success while supporting its further growth with capital. These trends are symptomatic of the company's passage to another phase – **separation and expansion**.

At this stage there is an increased demand for financial and capital-based instruments. The company management often considers a change of legal status and public flotation. It requires support through the use of consulting, training and information-related instruments. In consequence of dynamic changes in the size and structure of the business occurring in the phases of dynamic growth and separation and expansion, the entity may exceed the parameters allowing it to be classified as an SME, and step up to the sector of large enterprises.

On the other hand, if the market becomes saturated with the company's products, the entity enters the **stage of stabilisation**. This is a time when the business owners need to answer important questions about the future form and directions of the company's activity. The dynamic of the firm's operations is reduced, as is the optimism of management and personnel. Stabilisation of financial performance, and limitation of investments and structural expansion, result in reduced demand for financial instruments, more so as the company is often able to generate enough funds of its own. In this period, other instruments supporting development are also used to a lesser extent. However, such an approach may be detrimental to the business, which by pursuing more static activity loses its natural dynamic, entrepreneurship and flexibility. Disuse of information-related or training instruments may lead to unpreparedness for further market changes and to the loss of potentially lucrative market opportunities.

The desire to limit the negative symptoms of a company's activity often results in the necessity of entering the **revitalisation phase**. This stage is characterised by a dynamic approach to the further development of the business, based on the introduction of material changes to the structure of products, organisation, management systems, corporate strategy, technical solutions applied, and other subsystems of the entity. A change-oriented approach requires significant engagement of financial instruments, as well as instruments ensuring access to relevant knowledge. The scope of use of these instruments depends on the current level of company development.

Bad managerial decisions, lack of market acceptance for the company's activity, and other failures in the previous phases of the life cycle may lead to the firm's entering the **decline stage**. This period is characterised by negative financial performance, negative cash flow, increasing liabilities, as well as unfavourable changes in the field of organisational culture, information bottlenecks within the company, and a general slump in efficiency and effectiveness of operation. This situation significantly obstructs access to financial instruments. Entrepreneurs often think about exiting the market or undertaking another business, which also results in reduction of the use of other instruments supporting development.

It needs to be emphasised that the model outlined above presents a life cycle of a company (defined as a business undertaking) in the SME category, rather than the cycle of an

entrepreneur's activity. Entrepreneurs may become involved in different economic initiatives characterised by specific phases. The phases occurring in the suggested model of a life cycle differ not only in their characteristic features and specific conditions governing the use of instruments supporting development. They can also be divided into two groups from the point of view of the dynamic of approach to developmental processes, as illustrated in Table 1.

Dynamic stages in the proposed model of the life cycle are characterised by an active attitude towards the company's operations and focus on investment and development processes. At these stages, one should expect increased demand for the use of instruments supporting development.

Table 1. Static and dynamic phases in the proposed model of the SME life cycle

Static phases	Dynamic phases
Pre-establishment	Emergence
Survival	Dynamic growth
Stabilisation	Separation and expansion
Decline	Revitalisation

Source: Own compilation.

On the other hand, **static phases** are characterised by more contained and stable behaviour, where efforts are directed towards current operations and the assurance of business continuity. At these stages, demand for instruments supporting development should be limited. However, this time can also be used as a period of "organisational rest" after dynamic stages. In this case, the entity may undertake preliminary actions aimed towards the use of necessary support instruments in the further phases of its life cycle.

On the basis of the above review of the literature and the proposed model of the life cycle of small and medium-sized enterprises, two research hypotheses were formed, corresponding directly to the pursued goal of the paper:

H1: The use of instruments supporting development by entities from the SME sector significantly varies depending on the phase of the life cycle, with the highest demand for such instruments occurring in dynamic phases of an organisation's life cycle.

H2: The scope of use of instruments supporting development in the life cycle of SMEs depends both on the size of the organisation and on external factors, mainly related to the political and economic environment.

The goal of the paper was pursued and the proposed research hypotheses tested through empirical studies conducted in the years 2008–2012. A report on these studies will be made in the further part of this paper.

Research Methodology and Characteristics of Surveyed Organisations and Respondents

In recent years, the Department of Management at Łódź University of Technology has carried out five research projects concerning the use of instruments supporting development by small and medium-sized enterprises in the European Union, as follows:

1. Research Project No. 1 was conducted in 2008 on a sample of 15 fully-functioning micro- and small businesses, in addition to a group of 15 people planning to start businesses. The study was carried out by K. Stachowska under the academic supervision of M. Matejun.
2. Projects No. 2 (2008), No. 3 (2009) and No. 4 (2010) were conducted on a total sample of 47 micro-enterprises. The studies were supervised by M. Matejun and carried out by W. Staron (No. 2), B. Pelka (No. 3) and K. Smigielska (No. 4).

3. Project No. 5 was conducted in 2012 on a sample of 300 small and medium-sized businesses. The studies were carried out by a research team headed by Professor S. Lachiewicz (the author was a member of the research team).

All of the projects employed the survey method and the technique of questionnaires distributed directly to respondents. The research tools were custom-designed questionnaires which offered the possibility of comparing the answers provided by the respondents. All five projects involved non-random sampling, selecting entities conforming to the uniform, formal definition of micro-, small, and medium-sized enterprises according to the European Commission Recommendation (2003) and the European Commission Regulation (2004). For maximum precision in the selection of entities, each meeting was preceded by a brief interview with a company representative. Detailed characteristics of the surveyed enterprises and respondents are shown in Table 2.

Table 2. Characteristics of surveyed enterprises and respondents

Enterprise category	Number	Percentage	Legal status	Number	Percentage
micro (0–9 employees)	56	16%	privately-held company	239	66%
small (10–49 employees)	207	57%	private partnership	36	10%
medium-sized (50–249 employees)	99	27%	limited liability company	66	18%
			joint-stock company	8	2%
Scope of operation	Number	Percentage	other types of companies, cooperatives, business associations	13	4%
local	144	40%			
regional	95	26%	Sector	Number	Percentage
national	74	20%	services	184	51%
international	49	14%	trade	25	7%
			production	153	42%
Category of respondents	Number	Percentage			
entrepreneurial candidates	15	4%	Gender of respondents	Number	Percentage
business owners	259	69%	women	157	42%
managers representing companies	103	27%	men	220	58%
Respondents' education	Number	Percentage	Age of respondents	Number	Percentage
higher	193	51%	30 and younger	42	11%
secondary	163	43%	31–40	116	31%
vocational	21	6%	41–50	113	30%
			over 50	106	28%

Source: Individual compilation based on study results.

In total, the survey covered 362 micro-, small, and medium-sized enterprises, and 15 individuals planning to start small businesses. Slightly over half of the sample consisted of small entities (55%), usually operating in the form of privately-held companies. Most of the surveyed entities operated in the service sector (51%), usually locally (40%). The respondents to the survey included business owners or managers representing enterprises. Respondents were primarily men, in the 30–50 age range, with higher or secondary education.

Results of Empirical Research

Through analysis of the answers provided by the respondents, the stages of the life cycle of the surveyed enterprises were determined. This was done on the basis of subjective statements (assessments) given by the respondents, as well as such factors as the term of operation, key business goals, employment volume, level of profit or loss, financial liquidity, and ability to react to external changes.

Enterprises at the **pre-establishment stage** were represented in the study by 15 people intending to start up in business. They had specific ideas for their businesses, and had already conducted preliminary market analyses. The surveyed companies at the **emergence stage** had been active in the market for a short time (up to 1 year). These entrepreneurs were focused on finalising the registration process, initiating investments, and seeking their first business partners. The fundamental objectives of companies at the **survival stage** were to withstand market competition and achieve positive and stable levels of profits and financial liquidity.

Enterprises categorised as going through the **dynamic growth stage** were characterised by relatively significant, and relatively fast, positive appreciation of such quantitative indicators as employment volume, investment expenditure, and economic and financial performance. Businesses at the **separation and expansion stage** were involved in activities connected with delegating administration to professional (hired) managers and opening to cooperation with new investors and capital market institutions. Entities classified as being at the **stabilisation stage** operated in a stable environment, keeping pace with changing market trends. Their economic and financial indicators remained at fixed and predictable levels. These businesses were also stable in terms of products, investments and organisation.

Surveyed enterprises at the **revitalisation stage** were oriented towards material changes in the area of their business. Their operation was based on creativity and introducing new products and organisational solutions in response to opportunities appearing around them. Many of these companies changed or expanded their scopes and areas of market activity (sector or line of business). Firms classified as being at the **decline stage** displayed delayed reactions to external changes, and were characterised by relatively permanent, negative economic and financial performance. Another important feature of these entities included negative assessments made by respondents regarding the possibility of improving their economic and financial situation in the short or medium term.

Based on the respondents' answers, the surveyed enterprises were assigned to particular stages of the life cycle according to the author's own model as proposed in the theoretical part of this paper. The results are presented in Table 3.

Over half of the surveyed companies (58%) were going through the **stabilisation stage**, which is characterised by time-specific maturity of solutions and business activities. The smallest number of entities under study (2%) were at the **decline stage**, which often leads to bankruptcy or the business being transferred to another investor.

Analysis of the results in terms of the size of companies assigned to particular development stages reveals that the **pioneering period of activity** included only micro- and small enterprises. However, though the emergence stage was dominated by micro-companies,

accounting for 96% of studied entities, there was a much higher proportion (39%) of small companies at the survival stage.

On the other hand, the stages of separation and expansion, and of revitalisation, featured exclusively small and medium-sized businesses. Moreover, medium-sized companies accounted for the majority (53%) of firms at the separation and expansion stage, which might suggest that they would soon join the category of large enterprises. Medium-sized enterprises also accounted for a considerable proportion (67%) of the entities at the decline stage. The other stages of the life cycle under analysis – the dynamic growth stage and the stabilisation stage – were dominated by small companies, although there was also a significant presence of medium-sized ones in these phases. The proportion of micro-enterprises was marginal in this case.

Analysing entities in particular size categories in terms of the organisation life cycle, it is found that:

1. A large majority of **micro-companies** (82%) were in the pioneering period of business activity (including the stages of emergence and survival), while 14% of such entities qualified as stable undertakings;
2. The analysed group of **small enterprises** was dominated (71%) by companies at the stabilisation stage; small businesses (unlike any of the other size categories) were present at each stage of development, except for the pre-establishment phase, which by definition could not include registered enterprises;
3. The majority of the studied **medium-sized enterprises** were also in the stabilisation stage, but in this case 26% of entities were in phases possibly leading to stepping up to the category of large enterprises (dynamic growth or separation and expansion).

Table 3. Assignment of the surveyed companies to SME life cycle stages, broken down according to entity size

Life-cycle stage / Entities by category	candidates	% of candidates at given stage	micro-enterprises	% of micro-enterprises at given stage	small enterprises	% of small enterprises at given stage	medium-sized enterprises	% of medium-sized enterprises at given stage	In total:	% of enterprises at given stage
Pre-establishment stage	15	100%							15	4%
% of enterprises at the pre-establishment stage	100%								100%	
Emergence stage			27	48%	1	1%			28	7%
% of enterprises at the emergence stage			96%		4%				100%	
Survival stage			19	34%	12	6%			31	8%
% of enterprises at the survival stage			61%		39%				100%	
Dynamic growth			1	2%	25	12%	18	18%	44	12%

stage										
% of enterprises at the dynamic growth stage			2%		57%		41%		100%	
Separation and expansion stage					7	3%	8	8%	15	4%
% of companies at the separation and expansion stage					47%		53%		100%	
Stabilisation-maturity stage			8	14%	147	71%	63	64%	218	58%
% of enterprises at the stabilisation-maturity stage			4%		67%		29%		100%	
Revitalisation stage					13	6%	4	4%	17	5%
% of enterprises at the revitalisation stage					76%		24%		100%	
Decline stage			1	2%	2	1%	6	6%	9	2%
% of enterprises at the decline stage			11%		22%		67%		100%	
In total:	15	100%	56	100%	207	100%	99	100%	377	100,00 %

Source: Individual compilation based on study results.

In the key part of the survey, respondents were asked to indicate the external instruments supporting development which they were using at the current development stage of their companies. The results are shown in Table 4.

The results reveal that among the studied group of companies, the most widely used instruments included financial, consulting, training, and information-related instruments. Use of financial instruments was reported by 157 surveyed entities (42% of respondents), and use of instruments connected with the development of knowledge, qualifications and competences was declared by 122 firms (32% of respondents). To a lesser extent, the surveyed businesses employed general business instruments (66 firms, 18%) and innovation-supporting instruments (13 firms, 3%). Note should be taken of the negligible use of capital-based instruments supporting development, which were employed by only one of the studied enterprises.

Table 4. Use of instruments supporting development by surveyed enterprises at different stages of the business life cycle

	Financial instruments	Capital-based instruments	Consulting and training instruments	Innovation-supporting instruments	General business instruments
Pre-establishment stage	20%		53%		7%
Emergence stage	61%		64%	11%	21%
Survival stage	48%		39%	3%	42%
Dynamic growth stage	59%	2%	41%	14%	30%
Separation and expansion stage	67%		67%		27%
Stabilisation stage	33%		24%	1%	11%
Revitalisation stage	76%		12%		18%
Decline stage	11%		11%		22%

Source: Individual compilation based on study results.

The results demonstrate a significant differentiation in the use of particular types of instruments supporting development in the successive phases of the life cycle. **Financial instruments** are used primarily at the emergence stage (as reported by 61% of entrepreneurs going through this stage), as well as stages related to important changes in the activity of business entities (namely the stages of dynamic growth, separation and expansion, and revitalisation). However, a more thorough analysis of the study results reveals that there is considerable differentiation in the types of financial instruments used in these two categories of life-cycle stages. The pioneering period of activity (including the stages of emergence and survival) was dominated by non-commercial sources of financing obtained from EU grants allotted for business start-up. To a lesser extent, the instruments also included preferential loans or credit guarantees. On the other hand, development phases requiring important and often radical changes in a company's activities were financed to a much greater degree from commercial sources, such as loans or leasing. In this group, financing from public sources, including EU structural funds, was received almost exclusively by companies at the dynamic growth stage.

Financial instruments were used much less by firms in the stabilisation phase (33%). They were least used by individuals planning to start their own business and enterprises in the decline phase. A significant barrier limiting the use of these instruments at the pre-establishment stage is the lack of formal registration of business entities. In this case, entrepreneurs can essentially only make investments using their own funds. At the other end of the life cycle, the decline phase is characterised by unfavourable economic and financial indicators, and often also by debt to public institutions, which considerably limits the access of enterprises to commercial sources of external financing.

Used very rarely, and to the smallest extent, by the surveyed entities were **capital-based instruments**. Only one, small firm at the dynamic growth phase reported having used financial support from a venture-capital institution. The identified reluctance towards capital-based instruments may stem from the pursuit of a high level of autonomy by the studied businesses. Both entrepreneurial candidates and representatives of companies in further phases of development indicated the need for independence as one of the main reasons for starting or having started their businesses.

The study results indicate the wide use of **consulting, training, and information-related instruments** by the entities under analysis. This mostly concerns companies in the pre-

establishment, emergence, and expansion phases. To a lesser degree, these instruments were used by firms at the survival and dynamic growth stages. Only 24% of the surveyed enterprises in the stabilisation phase made use of training, consulting or information services. Even scarcer use of these instruments (about 10%) was declared by companies in the phases of revitalisation and decline.

Innovation-supporting instruments were used almost exclusively by companies at the emergence stage and the dynamic growth stage. Despite some declarations concerning this group of development-supporting instruments from businesses at the survival and stabilisation stages, their use in these life-cycle phases was marginal.

Business support instruments connected with commercial or non-commercial access to infrastructural solutions necessary for company development were used primarily by enterprises in the pioneering period, particularly at the survival stage. Their use was also reported by businesses in the phases of dynamic growth and separation and expansion. In subsequent phases of development, access to business support instruments decreases in importance, though a relatively large proportion of companies at the decline stage (22%) reported use of this type of support in their operations.

The research process also included an analysis of the use of particular categories of instruments supporting development by companies assigned to different size categories. These results are shown in Table 5.

Table 5. Use of instruments supporting development by surveyed enterprises according to size

	Financial instruments	Capital instruments	Consulting and training instruments	Innovation-oriented instruments	General business instruments
Micro-enterprises	30%		57%	9%	27%
Small enterprises	38%	0.5%	25%	3%	16%
Medium-sized enterprises	46%		28%	3%	12%

Source: Individual compilation based on study results.

The study results revealed that the scope of use of **financial instruments** increased together with the size of entities under analysis. On the other hand, consulting, training, and information-related instruments were most frequently used by the smallest businesses. Small and medium-sized companies absorbed this type of development support to a much lesser degree. A similar relationship was noticeable in the case of business support and innovation-supporting instruments.

Discussion and Verification of Research Hypotheses

The research results indicated significant differentiation in the use of instruments supporting development in particular stages of the life cycle of the surveyed micro-, small and medium-sized enterprises. This concerns all categories of instruments apart from capital-based instruments, which were only used on an isolated basis in the analysed sample. With respect to other categories of instruments supporting development, Table 6 presents the basic measurable features characterising the dispersion of their use in particular phases of the life cycle.

Table 6. Measures of dispersion of the use of particular types of instruments supporting development in successive phases of the organisation life cycle.

Category of development-supporting instruments	Range	Standard deviation (SD)	Coefficient of variation (CV)
Financial instruments	65%	15.2%	36%
Consulting, training and information-related instruments	56%	14.9%	47%
Innovation-supporting instruments	13%	4.7%	157%
General business instruments	35%	10.1%	56%

Source: Individual compilation based on study results.

The strongest dispersion as measured by the coefficient of variation concerns the use of innovation-supporting instruments. This stems from the fact that these instruments are only used in certain phases of the organisation life cycle. On the other hand, the measures of range and standard deviation indicate the strongest dispersion in the case of financial instruments.

The highest degree of use of instruments supporting development is found in the **dynamic stages of the life cycle**, in which important and often radical changes are made, the effects of which will be of key significance to the further operation of the business. In dynamic phases, including the stages of emergence, dynamic growth, separation and expansion, and revitalisation, the average level of use of all categories of instruments supporting development is higher than in the static phases, as shown in Table 7.

Table 7. Degree of use of particular types of instruments supporting development in successive phases of the organisation life cycle

Category of development-supporting instruments	Degree of use in dynamic phases	Degree of use in static phases
Financial instruments	63%	33%
Capital instruments	1%	0%
Consulting and training instruments	46%	27%
Innovation-supporting instruments	9%	1%
General business instruments	25%	15%

Source: Individual compilation based on study results.

The greatest difference in the degree of use occurs in the case of financial and innovation-supporting instruments. This is related to the significant demand for investment capital and solutions in technological transfer and creation of innovation in dynamic phases of the life cycle. The role of these two groups of instruments is to support the quantitative growth of an organisation, primarily in the area of material, infrastructural and technological investments, or the generation of new jobs.

A slightly smaller dispersion of the degree of use of particular categories of instruments supporting development between dynamic and static phases of the life cycles of the studied enterprises is recorded for consulting, training, information-related, and general business instruments. The role of the first category is to support qualitative development by providing new knowledge and organisational solutions, while the functions of general business instruments primarily concern the assurance of operational continuity through access to

necessary business infrastructure. Demand for these development-supporting activities does not increase radically in dynamic phases, as enterprises regularly make use of the necessary infrastructure, and should also make continuous qualitative transformations of their business. However, the research results show that even these categories of instruments supporting development are more widely used by companies in dynamic phases of the life cycle.

The above reasoning leads to the adoption of **hypothesis H1**, which states that the use of instruments supporting development by SME companies is significantly dispersed depending on the life-cycle stage, with the highest demand for such instruments occurring in the dynamic phases.

It should be noted that the issue of the obtaining and use of instruments supporting development **may go beyond a single, specific stage of an organisation's life cycle**. For instance, this pertains to the use of loans or grants for investment purposes, which may be obtained during the dynamic stage of development, but accounted for and repaid in subsequent phases of the organisation's life cycle (e.g. the stabilisation stage or separation and expansion stage).

Therefore, firms geared towards the use of external instruments supporting development should, if possible, plan their life cycles taking into account the alternation of dynamic and static stages. This will allow the preservation of balance between obtaining support (defined as taking direct action aimed at obtaining access to an instrument supporting development), its use and subsequent accounting and control of the effects. Increased demand for support instruments occurring in dynamic phases of the life cycle may subsequently be unloaded in static phases, in preparation for the absorption of new categories of instruments supporting development.

The use of instruments supporting development in the life cycle of the surveyed enterprises is considerably affected by the **political and economic environment**. SMEs in the European Union operate under special conditions expressed in a number of preferences and support programmes addressed to the smallest business entities. The use of these opportunities is particularly noticeable at the pre-establishment stage, in the pioneering period of operation and in the phases of dynamic growth and revitalisation. In the first three phases of the life cycle, about 70% of the development-supporting instruments used were directly or indirectly financed from EU or national micro-enterprise support systems. In the phases of dynamic growth and revitalisation, companies used such instruments as grants from EU operational programmes for innovative economy or human capital, as well as training and consulting services and infrastructural services financed from EU sources.

On the other hand, access to commercial funds is positively correlated with the size of a company seeking support. The results of empirical studies show that larger enterprises use commercial financial support to a greater extent. This is connected both with the greater stability and resources of small and medium-sized companies, and with a certain reluctance of commercial financial institutions (e.g. banks, leasing companies, loan-offering institutions) towards supporting the smallest businesses. This stems from the high risk of such business undertakings, as well as the high transactional costs of low-value financial instruments.

On the other hand, the present results demonstrate that micro-companies make much broader use of consulting, training and information-related instruments, innovation-supporting instruments and general business instruments. The reason for such results may be found with reference to the role of instruments supporting development, namely making up the shortage of resources held by the smallest business entities. Low employment volume and relatively poorer resources force these companies to use the services offered by external business-environment institutions in almost every field. This also concerns training, development of IT systems, activity in the development of technology, and access to necessary business-support

infrastructure. Small and medium-sized enterprises, holding relatively richer resources, more often perform these activities on their own. They develop internal information systems, set up organisational units for personnel training, or R&D departments developing innovations and new technical solutions. Consequently, these firms are in greater need of the financial support necessary for releasing the potential embedded in more complex internal business structures. The study results and the above reasoning thus lead to the adoption of **hypothesis H2**, stating that the scope of use of instruments supporting development in the SME life cycle depends both on the company size and on external factors, mostly related to the political and economic environment.

Another important element of considerations concerning the use of development-supporting instruments by small and medium-sized businesses is the extent of changes to an entity's independence that may occur through the use of particular support instruments. Limitation of business autonomy occurs primarily through the use of capital-based instruments, such as the involvement of venture capital or business angels. The research results demonstrate that the studied companies made very scarce use of this category of instruments. The reason for this may be sought in respondents' answers stating that they treated ownership independence as a key component of their enterprises. On the other hand, this approach may significantly limit further directions of development. This is because increasing company size often leads to the loss of control over the business by its current owner and forces increasing management professionalisation, e.g. by the hiring of professional managers. The same concerns plans for obtaining financing by floating a company on the stock exchange and making public share issues. In such case the owners and managers of small and medium-sized enterprises planning to expand the scope of their business must often accept a limitation of the entity's previous autonomy, which usually allows the firm to leave the SME group and move up to the category of large enterprises.

Limitations and Future Directions of Research

Taking into account the individual stages and requirements of the research process (Rubin, and Babbie 2010), note should be taken of certain methodological limitations characterising the results presented in the paper and the reasoning based on them. These primarily arise from the relatively small sample size. In 2012, the number of non-financial micro-, small and medium-sized enterprises in the EU amounted to 20.7 million businesses, accounting for 99.8 per cent of non-financial enterprises (Wymenga, Spanikova, Barker, Konings, and Canton 2012). Thus a study conducted on a sample of 377 entities cannot be representative and does not permit generalisations. This limitation is also affected by the non-random selection of entities in the sample (Black 2002). These features limit the academic value of the study, as the conclusions reached may only refer to the surveyed entities, and describe certain causalities observed in the analysed sample only.

Another weakness of the research results is that information was collected from different samples of entities which were going through different stages of the life cycle at the moment of the study. These cross-sectional studies (Bryman, and Bell 2007) do not take into account the changes occurring over time in a given business entity. Neither do they consider the specific factors determining the tendency to use external support, such as sector, psychological characteristics of the owner, or economic and political environment. The answer to these charges might be longitudinal studies (Hedeker, and Gibbons 2006), particularly if they were carried out with reference to the same enterprises surveyed at different stages of the life cycle. Such an approach might free the research results of the influence of a number of interfering variables. However, this research perspective might have

a negative consequence – the research would take a much longer time. Moreover, many micro-, small, and medium-sized enterprises fail in the first few years of their operation, and thus do not experience all stages of the life cycle, which would considerably reduce the future study sample.

Attention might also be paid to substantive difficulties with studying specific theoretical concepts, such as the specific phases of development of micro-, small, or medium-sized companies. For this reason, the paper employed an approach integrating the subjective evaluation made by the respondents with certain indicators, e.g. connected with trends in employment, financial performance, or the occurrence of qualitative transformations of selected elements of management subsystems. Specifically, distortions may be caused by the subjectivism of respondents' answers, who – out of concern for the favourable image of their businesses – may report better business performance or describe the developmental prospects of the companies in a more positive manner than is actually the case. These distortions might be eliminated using the method of extensive verification lists for the identification of particular life-cycle stages (Pümpin, and Prange 1991). However, this method has its drawbacks in consuming a lot of time, making respondents reluctant to fill out the questionnaire, and often producing ambiguous assessments about the specific life-cycle stage in which a given business currently finds itself.

In recognition of the importance of the subject, further studies are planned on the subject of the use of instruments supporting development in the management of micro-, small and medium-sized enterprises. In the near future, surveys will be conducted on a larger sample of SMEs. Plans also include the supplementation of quantitative survey research with the results of qualitative research conducted in the form of case studies. This part of the research envisages the analysis of six companies, of which three will represent model solutions in the use of instruments supporting development, and the remaining three will be examples of poor managerial solutions employed in this field. Each group will consist of one micro-, one small, and one medium-sized entity. It is therefore hoped that further research will produce a number of new and more specific theoretical and applicable conclusions.

Conclusion

In the context of resource deficits of small and medium-sized enterprises, the use of external support instruments has become one of the key factors determining the developmental processes of these businesses. This particularly concerns such specific categories of SMEs as rapid-growing undertakings, advanced technology businesses, or entities undergoing internationalisation. Regardless of the sector or industry, however, businesses go through different phases in their life cycle, characterised by different characteristics and course considerations. Many of these stages are characterised by the occurrence of important and often radical changes, determining the future course of a company's developmental processes. This paper presents a model life cycle of an SME, composed of eight stages of operation. The model assumes a departure from the deterministic approach to the concept of an organisation life cycle which includes a dynamic element consisting in the limited capacity for shaping of the business life cycle by its decision-makers. Importantly, however, the model takes into account external factors which significantly determine the company's growth opportunities. The model also assumes the existence of two categories of life-cycle phases – dynamic and static. It suggests that the demand for external instruments supporting development should be particularly important in the dynamic phases of an SME's life cycle.

The model assumptions presented in the theoretical part were verified on the basis of survey-based research on a sample of 377 micro-, small, and medium-sized enterprises and

individuals planning to start businesses. Based on the study, the following conclusions were reached:

1. The studied group of companies most widely used financial, consulting, training, and information-related instruments. This was primarily connected with the making up of shortages of financial resources held by companies, as well as knowledge resources, which are necessary for the proper development of modern organisations. The least-used type of instruments was capital-based instruments, this being a result of the intentions of the surveyed entrepreneurs to preserve a high level of ownership autonomy of their businesses;
2. It was observed that the use of instruments supporting development by SMEs is highly diversified depending on the phase of the organisation's life cycle. The highest demand for development-supporting instruments occurs in dynamic phases, which, according to the model proposal, included the stages of emergence, dynamic growth, separation and expansion, and revitalisation. In static phases, the demand for all analysed categories of instruments supporting development was significantly lower;
3. Further analysis of the use of instruments supporting development demonstrated a diversification of their type in different phases of the life cycle. The pioneering period of activity (including the stages of emergence and survival) was dominated by non-commercial sources of financing obtained from EU grants allotted for business start-up. In further phases of development, the use of this category of instruments concerns almost exclusively companies experiencing dynamic growth, whereas businesses at other stages of development make much broader use of commercial instruments, which is noticeable in respect of financial instruments;
4. The study results indicate that the scope of use of instruments supporting development in the SME life cycle depends both on the company size and on external factors, mostly related to the political and economic environment.

There are plans for continued survey-based research, supplemented with in-depth case studies of enterprises serving as models and anti-models as regards the use of instruments supporting development. Hopefully, the combination of results of quantitative and qualitative analyses will allow a more thorough description of the complex issue of the use of instruments supporting development in the life cycle of small and medium-sized enterprises.

References

1. Acevedo G.L., and Tan H.W. (eds.) (2011). *Impact Evaluation of Small and Medium Enterprise Programs in Latin America and the Caribbean*, Washington, DC: World Bank Publications.
2. Adizes I. (1988). *Corporate Lifecycles. How and Why Corporations Grow and What to Do About It*, Englewood Cliffs, NJ.: Prentice-Hall.
3. Ayyagari M., Beck T., and Demirgüç-Kunt A. (2007). 'Small and Medium Enterprises Across the Globe,' *Small Business Economics*, 29(4): 415-434.
4. Bazbauers A.R. (2012). 'Leading the World Bank: The Wolfensohn, Wolfowitz, and Zoellick Presidencies,' *International Journal of Economic Sciences*, 1(1): 2-18.
5. Bennett R.J., and Robson P.J.A. (2003). 'Changing Use of External Business Advice and Government Supports by SMEs in the 1990s,' *Regional Studies*, 37(8): 795-811.
6. Beverland M., and Lockshin L.S. (2001). 'Organizational Life Cycles in Small New Zealand Wineries,' *Journal of Small Business Management*, 39(4): 354-362.

7. Birch D. (1987). *Job Creation in America, How our Smallest Companies Put the Most People to Work*, New York, NY: The Free Press.
8. Black T.R. (2002). *Understanding Social Science Research*, London: Sage.
9. Bossoutrot S.K. (2005). *Microfinance in Russia: Broadening Access to Finance for Micro And Small Entrepreneurs*, Washington, DC: World Bank Publications.
10. Bozeman B. (2000). 'Technology Transfer and Public Policy: a Review of Research and Theory,' *Research Policy*, 29: 627–655.
11. Bryman A., and Bell E. (2007). *Business Research Methods*, New York, NY.: Oxford University Press.
12. Churchill N., and Lewis V. (1983). 'The Five Stages of Small Business Growth,' *Harvard Business Review*, 61(3): 30-50.
13. Commission Recommendation (2003). 2003/361/EC of 6 May 2003 Concerning the Definition of Small and Medium-Sized Enterprises, *Official Journal of the European Union*, L 124, 20.5.2003.
14. Commission Regulation (2004). 364/2004 of 25 February 2004 amending Regulation (EC) No 70/2001 as regards the extension of its scope to include aid for research and development, *Official Journal of the European Union*, L 63/22, 28.2.2004.
15. Davidsson P., Achtenhagen L., and Naldi L. (2010). *Small Firm Growth*, Hanover, MA.: Now Publishers Inc.
16. Deakins D. (1993). 'What Role for Support Agencies? A Case Study of UK Enterprise Agencies,' *Local Economy: The Journal of the Local Economy Policy Unit*, 8: 57-68.
17. Dodge H.R., and Robbins J.E. (1992). 'An Empirical Investigation of the Organisational Life Cycle Model for Small Business Development and Survival,' *Journal of Small Business Management*, 30(1): 27-37.
18. Dyson K. (2012). *Small and Medium Sized Enterprises*, Spicers European Policy Reports, London: Routledge.
19. Edwards P., Sengupta S., and Tsai Ch. (2010). 'The Context-Dependent Nature of small firms' Relations with Support Agencies: A Three-Sector Study in the UK,' *International Small Business Journal*, 28(6): 543-565.
20. Egan T.M. (2002). 'Organizational Development: An Examination of Definitions and Dependent Variables,' *Organizational Development Journal*, 20(2): 59-71.
21. Felsenstein D., and Swartz D. (1993). *Constraints to Small Business Development Across the Life Cycle; Some Evidence from Peripheral Areas in Israel*, Jerusalem: Hebrew University of Jerusalem.
22. Gartner W.B., Mitchell T.R., and Vesper K.H. (1989). 'A Taxonomy of New Business Ventures,' *Journal of Business Venturing*, 4(3): 169-186.
23. Gillingham D. (1984). 'Attribute Modelling as a Consulting Aid to Small Business,' *International Small Business Journal*, 2(3): 51-58.
24. Greiner L. (1972). 'Evolution and Revolution as Organizations Grow,' *Harvard Business Review*, 50(4): 37-46.
25. Hankinson, A. (2000). 'The Key Factors in the Profiles of Small Firm Owner-Managers that Influence Business Performance. The South Coast Small Firms Survey, 1997-2000,' *Industrial and Commercial Training*, 32(3): 94-98.
26. Harvie Ch., and Lee B.C. (eds.) (2002). *The Role of SMEs in National Economies in East Asia*, Cheltenham: Edward Elgar Publishing.
27. Hedeker D., and Gibbons R.D. (2006). *Longitudinal Data Analysis*, Hoboken, NJ.: John Wiley & Sons.
28. Hernández-Cánovas G., and Koëter-Kant J. (2011). 'SME financing in Europe: Cross-Country Determinants of Bank Loan Maturity,' *International Small Business Journal*, 29(5): 489-507.
29. Jackson J.H., and Morgan C.P. (1982). *Organization Theory. A Macro Perspective for Management*, London: Prentice Hall.
30. Jaffar K., Webb R., and Kumbirai M. (2012). 'Major British Bank Performance over the Business Cycle,' *International Journal of Economic Sciences*, 1(2): 26-50.

31. Kasemets K., Kriisa R., and Reiljan A. (2001). 'SME Support Policy in European Union and Baltic States: Principles and Problems.' Paper provided by European Regional Science Association in its series ERSA conference papers.
32. Kunkel S.W. (2001). 'Toward a Typology of Entrepreneurial Activities,' *Academy of Entrepreneurship Journal*, 7(2): 75-90.
33. Lester D.L., Parnell J.A., and Carraher S. (2003). 'Organization Life Cycle: A Five-Stage Empirical Scale,' *The International Journal of Organizational Analysis*, 11(4): 339-354.
34. Lopriore M. (2009). 'Supporting Enterprise Development and SME in Europe,' *Eipascope*, 2: 31-36.
35. Mason C.M. (2009). 'Public Policy Support for the Informal Venture Capital Market in Europe: A Critical Review,' *International Small Business Journal*, 27(5): 536-556.
36. Matejun M. (2008). *Barriers to Development of High-Technology Small and Medium-Sized Enterprises*, Lodz: Technical University of Lodz Press.
37. McMahon R.G.P. (2001). 'Growth and Performance of Manufacturing SMEs: The Influence of Financial Management Characteristics,' *International Small Business Journal*, 19(3): 10-28.
38. Mitusch K., and Schimke A. (2011). *Gazelles-High-Growth Companies - Final Report*, Brussels: Consortium Europe Innova Sectoral Innovation Watch, European Commission.
39. Oakey R., Rotwell R., and Cooper S. (1988). *The Management of Innovation in High-Technology Small Firms*, London: Pinter Publishers Limited.
40. Oakey R.R., and Syeda-Masooda M. (1999). 'United Kingdom High-Technology Small Firms in Theory and Practice: A Review of Recent Trends,' *International Small Business Journal*, 17(2): 48-64.
41. Oviatt B.M., and McDougall P.P. (2005). 'Toward a Theory of International New Ventures,' *Journal of International Business Studies*, 36(1): 29-41.
42. Penrose E., and Pitelis Ch. (2009). *The Theory of the Growth of the Firm*, New York, NY.: Oxford University Press.
43. Phelps R., Adams R., and Bessant J. (2007). 'Life Cycles of Growing Organizations: A Review with Implications for Knowledge and Learning,' *International Journal of Management Reviews*, 9(1): 1-30.
44. Pueyo A., Mendiluce M., Sanchez Naranjo M., and Lumbreras J. (2012). 'How to Increase Technology Transfers to Developing Countries: a Synthesis of the Evidence,' *Climate Policy*, 12: 320-340.
45. Pümpin C., and Prange J. (1991). *Management der Unternehmensentwicklung. Phasengerechte Führung und der Umgang mit Krisen*, Frankfurt: Campus-Verlag.
46. Rubin A., and Babbie E.R. (2010). *Essential Research Methods for Social Work*, Belmont, CA.: Cengage Learning.
47. Scott M., and Bruce R. (1987). 'Five Stages of Growth in Small Business,' *Long Range Planning*, 20(3): 45-52.
48. Smallbone D., and Welter F. (2009). *Entrepreneurship and Small Business Development in Post-Socialist Economies*, New York, NY.: Routledge.
49. Smallbone, D., Leigh R., and North D. (1995). 'The Characteristics and Strategies of High Growth SMEs,' *International Journal of Entrepreneurial Behaviour & Research*, 1(3): 44-62.
50. Storey D.J., and Greene F.J. (2010). *Small Business and Entrepreneurship*, Essex: Pearson Education Limited.
51. Torrès O. (2003). 'Thirty Years of Research into SMEs: A Field of Trends and Counter-trend,' *Cahiers de recherche, EM Lyon*, 6: 17-53.
52. Torrès O., and Julien P.A. (2005). 'Specificity and Denaturing of Small Business,' *International Small Business Journal*, 23(4), 355-377.
53. Warma J. (2011). *Venture Capital Investment on SME: Potential of SME*, VDM Publishing.
54. Weiss L.A. (1981). 'Start-up Businesses: A Comparison of Performance,' *Sloan Management Review*, 23(1): 37-53.
55. Wymenga P., Spanikova V., Barker A., Konings J., and Canton E. (2012). *EU SMEs in 2012: at the Crossroads. Annual Report on Small and Medium-Sized Enterprises in the EU, 2011/12*, Rotterdam: Ecorys Nederland BV.

56. Xiao L. (2011). 'Financing High-Tech SMEs in China: A Three-Stage Model of Business Development,' *Entrepreneurship & Regional Development*, 23(3): 217-234.

Acknowledgement

The project was financed with funds from the Polish National Science Centre granted pursuant to decision no. DEC-2011/01/D/HS4/05894.