

Development indicators and performance in small business life-cycle: statics and dynamics (S&D) model

The aim

The aim of the poster is the presentation of theoretical foundations and the structure of original, 8-stage statics and dynamics (S&D) model in the small business life cycle, as well as identification and assessment the impact of dynamic and static nature of this model on selected development indicators and performance of SMEs.

Literature review

Organizational life cycle (OLC) models:

- are defined as consequence (course) of successive forms of organization's development, which demonstrate certain quantitative and qualitative differences, stimulated by various internal and external forces (factors),
- derived from the theory of biological determinism (Samuel, 2012) allow a metaphorical comparison of organizations to living organisms that are born, grow, develop, go through certain changes in life, and then die

Many OLC models in management sciences:

- S. Tam and D. Gray (2016) synthesize the existing OLC models into four major periods: primitive (1950s-1960s), contextual (1970s), enhanced (1980s), and validated (1990s and beyond). In each of these periods, both the number and complexity of the proposed OLC models increased,
- J. Levie and B. Lichtenstein (2010) identify 104 OLC models, covering from 2 to 11 stages ($m = 4.3$).

Some of the proposed OLC models take into account the specificity of small business:

- 125 million of SMEs play a significant social and economic role in most developed and developing countries (Kushnir, Mirmulstein & Ramalho, 2010) including European Union (Lukács, 2005; Autio, 2016)

This specificity should include (Lester, Parnell & Carraher, 2003):

- complementing and expanding the small business start-up stage through the inclusion of the conceptual stage (Felsenstein & Swartz, 1993),
- emphasizing the role of entrepreneurship and the business owner's attitude as key determinants of success in the small business life cycle (Adizes, 1988),
- accepting a non-linear course of the stages in SMEs that assumes the return to the initial stages (Churchil & Lewis, 1983),
- acknowledging the possibility of the use of renewal stages to allow an effective continuation of business activity (Belussi & Sedita, 2009),
- taking into account the possibility of leaving the SMEs population aimed at further expansion already in the population of LEs (Jones, 2009).

Hypotheses

H1: SMEs operating in the dynamic stages of the S&D life cycle model are characterized by higher levels of the potential of internal development indicators and more positively perceive the potential of their business environment.

H2: SMEs operating in the dynamic stages of the S&D life cycle model achieve higher business performance than SMEs operating in the static stages.

Methodology

- Quantitative study using the survey method. The research technique: Computerized Self-Administered Questionnaire (CSAQ).
- The research tool: self-designed survey questionnaire on www.questionpro.com.
- Research conducted in 22 selected EU countries on the random sample of 1741 SMEs: 1,183 (68%) micro companies, 399 (23%) small companies and 159 (9%) medium companies.
- The size of the companies is based on the uniform, formal definition of SMEs in EU.
- The study covered an area of over 4 million km² (representing over 95% of the EU total area), inhabited by nearly 500 million people (over 98% of the EU population).
- The companies: operate primarily as individual companies (45%) or limited liability companies (35%). They are mostly entities active in the services sector (60%), operating primarily in the national markets (39%). Mainly mature entities (36%), active for more than 20 years.
- The respondents: owners (74%), senior managers (19%), or employees authorized by the management to participate in the survey (7%).

Variables

The following areas were chosen for the analysis of SMEs development indicators and performance (items assessed using VAS scale from 0 to 100). Operationalization of all variables was performed on the basis of relevant literature (Matejun & Mikoláš, 2017):

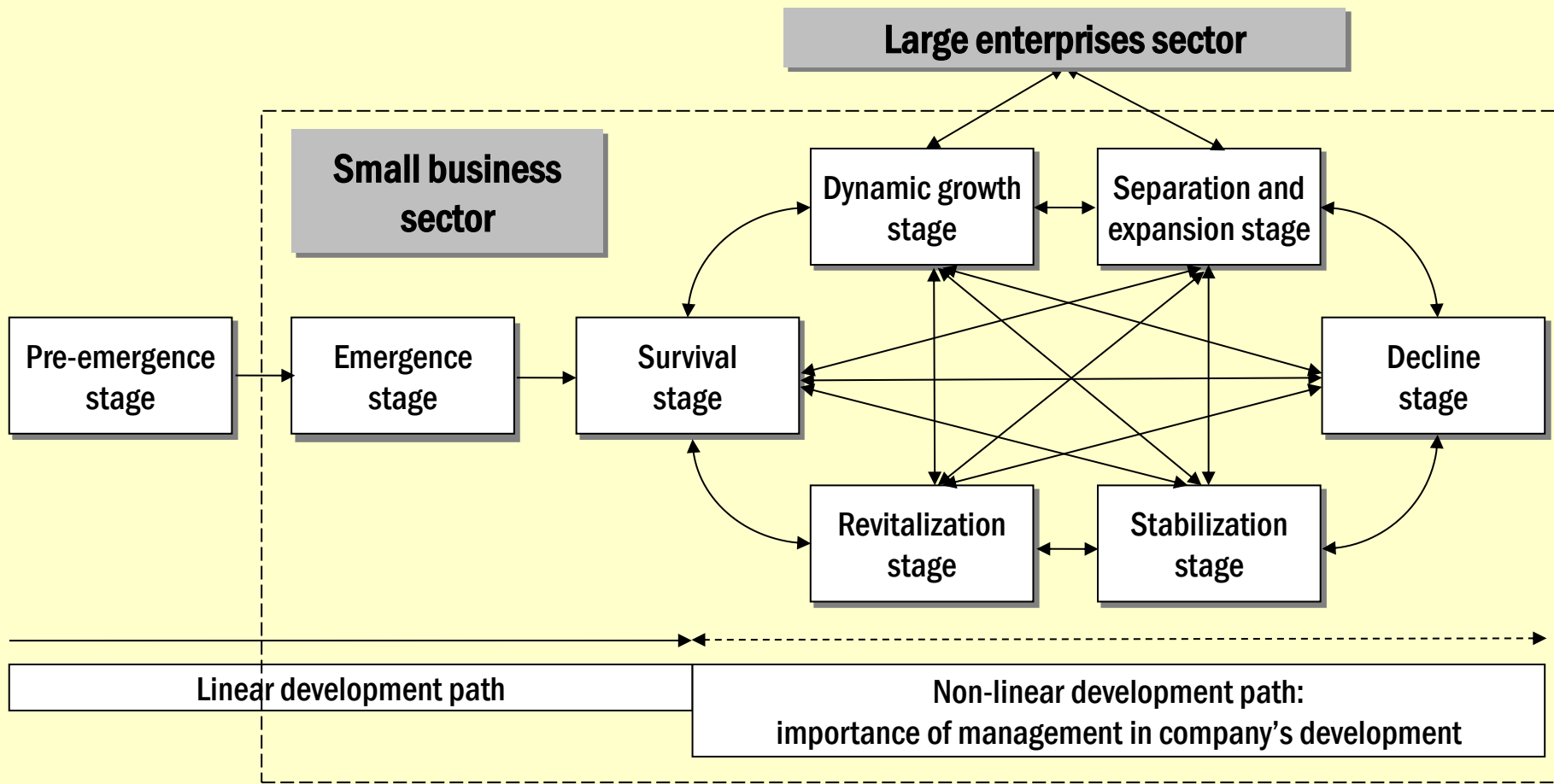
- the business owner's entrepreneurship, expressed by synthetic index (4 items). Cr. Alpha = 0.868, Mean (sample) = 71,
- organizational flexibility, expressed by synthetic index (4 items). Cr. Alpha = 0.829, Mean (sample) = 52
- Involvement in innovative activities, expressed by synthetic index (3 items). Cr. Alpha = 0.754, Mean (sample) = 55,
- perceived conditions of the small business environment, described by two simple indicators: (1) intensity of competition in the industry ($M = 74$), and (2) prospects of the industry development ($M = 62$),
- competition arena in which the company operates including (1) a market niche (39%) or (2) a wide arena of competition (61%),
- small business performance, expressed by synthetic index (8 items) assuming the inclusion of 2 dimensions: quantitative and qualitative performance. Cr. Alpha = 0.798, Mean (sample) = 61, Quantitative $M = 49$, Qualitative $M = 68$.

The S&D model

Based on the existing OLC models and taking into account criticisms formulated against these models (Phelps, Adams & Bessant, 2007) I propose an original **statics and dynamics (S&D) model** of small business life-cycle consists of 8 phases, divided into 2 groups according to development processes' dynamics (Matejun & Mikoláš, 2017):

- the dynamic phases - active approach towards the enterprises' operations, investment, development and growth processes,
- the static phases - more stable, less risky and are focused more on the current operations.

Phase name	Type	Short description of phase
Pre-emergence	Static	concept phase aimed at making a decision about setting up the company.
Emergence	Dynamic	first investments and introducing product to the market.
Survival	Static	market verification, challenge related to ensuring the required level of profitability and cash flow.
Dynamic growth	Dynamic	dynamic growth of quantitative indicators accompanied by qualitative changes in the company.
Separation and expansion	Dynamic	strategic decisions in the areas of market expansion and/or separation of ownership and management.
Stabilization	Static	reduced dynamics of growth, maturity, reduction in investment and growth of the organization.
Revitalization	Dynamic	dynamic approach to growth based on significant proactive and strategic changes.
Decline	Static	permanently reduced efficiency and declined financial ratios.



The nature of S&D model:

- concentrates more on similarities and differences between stages than on passage from one stage to another.
- doesn't assume deterministic development path: only first 3 phases have deterministic (linear) course.
- emphasizes the importance of company's management: managers can create the expected development path according to strategic aims and taking into account various internal and external determinants (usually: SWOT).
- there is no universal development path: each enterprise has its own specific life cycle.
- includes specificity of small business but assumes possibility to transit to a large enterprises sector. Further growth: as consequence of dynamic growth and/or separation and expansion stage.

Results & Conclusions

- Static and dynamic stages of the life cycle in the studied sample were identified on the basis of indications (declarations) of the respondents. Because the study involved only functioning companies, the range of the S&D life cycle model was narrowed down to 7 stages (without pre-emergence stage).
- Most of the respondents declared operating in the static stages (53%), but small and medium companies more often indicated operating in the dynamic stages.
- The respondents frequently pointed out that the companies surveyed were in the stabilization stage (29%) or the dynamic growth stage (26%).
- The existence of differences in the assessment of individual development indicators and performance of the companies surveyed from the point of view of dynamics of the life cycle stages was analyzed:

Variable	t-test for equality of means				
	t	df	Mean for stages:		Mean difference
			static	dynamic	
Owner's entrepreneurship	-9.50**	1737	66.52	77.06	-10.54
Organizational flexibility	-12.58**	1739	45.18	60.32	-15.14
Involvement in innovative activities	-14.16**	1739	47.83	63.49	-15.66
Intensity of competition in the industry	2.52*	1739	75.11	72.18	2.92
Prospects of industry development	-12.03**	1737	55.82	69.59	-13.77
Competition arena	2.86**	1700	1.64	1.57	0.07
Business performance	-10.81**	1739	57.70	65.53	-7.82
Quantitative business performance	-10.47**	1739	45.06	54.28	-9.23
Qualitative business performance	-8.33**	1739	65.19	72.17	-6.98

* significant at 0.05; ** significant at 0.01. Student's t-test for equality of means; Levene's test.

Conclusions:

- In the area of internal development indicators: companies operating in the dynamic life-cycle stages are run by more enterprising owners, show a higher level of organizational flexibility and greater involvement in innovative activities,
- In the area of external development indicators: companies operating in the dynamic stages of the life cycle more often exploit the potential resulting from activities in market niches, thus limiting the intensity of competition in the industry. Entrepreneurs from such companies also more positively assess the potential of the business environment,
- In the area of business performance: companies operating in the dynamic stages of the life cycle achieve better/higher business performance in terms of qualitative as well as quantitative results.
- Results fully confirm hypotheses H1 and H2.

References

- Adizes, I. (1988). *Corporate lifecycles. How and why corporations grow and what to do about it*. Englewood Cliffs: Prentice-Hall.
- Autio, E. (2016). *Entrepreneurship support in Europe: Trends and challenges for EU policy*. London: Imperial College Business School.
- Belussi, F., & Sedita, S.R. (2009). Life cycle vs. multiple path dependency in industrial districts. *European Planning Studies*, 17(4), 505-528.
- Churchill, N., & Lewis, V. (1983). The five stages of small business growth. *Harvard Business Review*, 61(3), 30-50.
- Felsenstein, D., & Swartz, D. (1993). *Constraints to small business development across the life cycle: Some evidence from peripheral areas in Israel*. Jerusalem: Hebrew University of Jerusalem.
- Jones, N. (2009). SME's life cycle - steps to failure or success?. *AU-GSB e-Journal*, 2(2), 3-14.
- Kushnir, K., Mirmulstein, M.L., & Ramalho, R. (2010). *Micro, small, and medium enterprises around the world: how many are there, and what affects the count?*. MSME Country Indicators, World Bank, International Finance Corporation.
- Lester, D.L., Parnell, J.A., & Carraher, S. (2003). Organizational life cycle: A five-stage empirical scale. *International Journal of Organizational Analysis*, 11(4), 339-354.
- Levie, J.D., & Lichtenstein, B.B. (2010). A terminal assessment of stages theory: Introducing a dynamic states approach to entrepreneurship. *Entrepreneurship Theory and Practice*, 34(2), 317-350.
- Lukács, E. (2005). The economic role of SMEs in world economy, Especially In Europe. *European Integration Studies*, 4(1), 3-12.
- Matejun, M., & Mikoláš, Z. (2017). Small business life cycle: statics and dynamics (S&D) model. *Engineering Management in Production and Services*, 9(4), 48-58.
- Phelps, R., Adams, R. & 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.
- Samuel, Y. (2012). *Organizational pathology: Life and death of organizations*. New Brunswick: Transaction Publishers.
- Tam, S., & Gray, D.E. (2016). What can we learn from the organizational life cycle theory? A conceptualization for the practice of workplace learning. *Journal of Management Research*, 8(2), 18-29.

The Author

Marek Matejun is an Associate Professor at the Faculty of Management and Production Engineering, Lodz University of Technology, Poland. His research interests focus on entrepreneurship and small business management, modern concepts and methods of management, strategic management as well as research methodology in management sciences. He is the author or co-author of over 170 scientific publications. He has participated in many research projects and also in research fellowships at universities in China (2017), the United Kingdom (2016), Belgium (2013) and the Czech Republic (2013). He is an associate editor in the *World Journal of Management* (Australia), *PEOPLE: International Journal of Social Sciences* (India) and *Economic Sciences Review* (Poland). He closely cooperates with Eurasia Research and holds the position of the President of Social Science and Humanities Research Association (SSHRA). He is also a member of the Academy of Management (USA) and the Polish Economic Society (Poland). He gave keynote speeches at international conferences in Paris (2017), London (2018) and Prague (2019). For his research activity he has earned many Polish and international scientific awards. For more information visit: www.matejun.com.

