

FACTORS AFFECTING THE PROCESS OF STRATEGY IMPLEMENTATION IN PUBLIC AND NON-PUBLIC SCHOOLS IN WROCLAW

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Purpose: This study aims at presenting a set of factors influencing the process of strategy implementation in Polish higher schools.

Approach: The pilot studies were carried out in higher schools based in Wrocław. 70% of public and non-public universities were analysed. A questionnaire was selected as the research method. On the basis of the results obtained, the authors offer some postulates and recommendations.

Findings: The survey shows that in the analysed (public and non-public) higher schools, it is possible to specify groups of factors which, in the opinion of the respondents, are common for both types of higher schools and which have a significant (key) impact on the process of strategy implementation. The analysis of the results also allows specifying the factors differentiating both types of higher education institutions.

Value: 70% of public and non-public higher schools were analysed.

Keywords: higher education institution, strategic management, strategy implementation factors.

Category of the paper: strategic management, higher education, strategy implementation factors.

1. Introduction

Zygmunt Bauman, an outstanding contemporary sociologist, in one of his studies, wrote that: “we live in a special era of great uncertainty. (...) The old institutions are gone or are just about to be gone. The new ones have not been created yet (...)” (Bauman, 2012). In his publication, the author repeatedly stresses the difficult situation of the organisations forced to operate in an uncertain, constantly changing environment. Undoubtedly, among these organisations are universities (Leja, 2013; Malara, 2006; Ryńca, 2014). For centuries, universities have operated in a stable environment. However, the last decades of the twentieth century and the first decade of the twenty-first century initiated a series of enormous transformations that have been continuing uninterruptedly until today. The changes include, among others, the way of functioning and decision-making processes. Universities, just like other business organisations operating in a competitive market, are influenced by economic, political, legal, socio-cultural, sociological, demographic and technological factors. The continually evolving environment of universities and uncertainty have become an integral part of the functioning of modern higher schools. Special attention should also be paid to contemporary paradigms shaping management systems in universities such as the impact of a knowledge-based economy or progressive European integration (Leja, 2013; Ryńca, 2014). For many years now, the theme of university management has invariably been the subject of studies conducted by many scholars. The discussion on the changing role of universities is already taking place not only on the local or national level but, more prominently, on the international level. It is also worth noting that “it is becoming challenging to study universities – the organisations which evolve, which multiply their goals and their structures as well as whose processes become increasingly complex” (Leja, 2013). As observed by Z. Malara, “contemporary organisations, including universities, are required to exploit new rules, principles and ways of functioning” (Malara, 2006). To meet the growing demands, universities should treat uncertainty as a driving force, making them seek the best possible solutions in the category of paradox management. Therefore, it seems necessary to define the factors that hinder the process of achieving the intended development goals, *i.e.* strategy implementation. Hence, this study aims at presenting a set of factors influencing the process of strategy implementation in Polish higher education schools. The pilot studies were carried out among higher schools based in Wrocław. 70% of public and non-public higher education institutions were analysed. A questionnaire was chosen as the research method. On the basis of the results, the authors offer some postulates and recommendations for action.

2. The state of strategic management in Polish higher schools

The changes taking place in the environment of higher schools force their managers to verify the existing management methods. As J. Sutz rightly points out, what can be seen is the transformation of higher education institutions. The two traditional roles of developing students and carrying out scientific research face a new challenge – creating mutual relationships with their environment. It should also be noted that the shrinking number of students as a result of the demographic decline, European integration as well as student and labour mobility have had a significant impact on increasing competition on the market of educational services. Tertiary education institutions compete not only for students who are known as their main clients but also for staff (qualified staff) as well as for financial resources. Taking into account the fact that the position of Polish universities on the European or international market is very weak, appropriate measures should be taken to improve this situation. According to K. Leja, “due to the complexity of its behaviours and expectations of its environment, the modern university ought to be characterised by the flexibility of goals, strategies as well as organisational structures and resources, and what follows, it should be an equifinal organisation which can achieve its goals in different ways” (Leja, 2017). Two essential aspects need special attention. The first one is the goal related to the functioning of higher schools while the second one is the expectations of various stakeholder groups towards a tertiary education school as an institution. In the light of the above, effective strategic management based on strategy planning, formulation, implementation and control seems to be the only right way to achieve the intended goal, which should be to maintain a competitive advantage on the market of educational services.

Strategic management in higher education is the subject of both theoretical and empirical studies (Leja, 2017; Rynca, 2014; Thieme, 2009; Wawak, 2012). Such high interest results, among others, from the fact that this field of scholarship has still some lacunae to be filled in. Despite many publications on the state of strategic management in Polish higher education institutions as well as numerous studies and recommendations, there are still significant discrepancies between the assumed and achieved strategic objectives. Kaplan and Norton, for example, indicate that “the process of strategy implementation fails in the case of 50-90% organisations” (Kaplan, Norton, 2005). The results of other studies indicate an increasing percentage of organisations having more difficulties with strategy implementation than with strategy formulation. J. Radomska holds that “it cannot be unambiguously predicted that only the strategy implementation phase is the source of failure of the organisations”. A number of studies conducted so far indicate, among others, that many of the organisation failures in the category of effective strategy implementation lie in the strategy itself, i.e. in incorrect development concepts. What is more, L. Alexander, based on his research, points out that the problem of effective strategy implementation lies in its interpretation by staff. Astonishingly,

91.3% of staff do not know the strategy implemented in the organisation and, therefore, they are not able to take an active part in its implementation. Some authors hold that “the current state is the crisis of the strategy” (Volberg, 2004). Following T. Wawak, who claims that “the management strategy of higher education institutions, apart from taking into account the conditions of the environment in which the higher education institution operates, should be adjusted to the strategy of the functioning of higher education and the legal regulations concerning higher education which are binding in a given country”. The studies conducted in the area of higher education by both academic community and state institutions confirm the fact that Polish higher education is characterised by no strategic management and no formulation of development missions (Ryńca, 2014; Wawak, 2012). The previous detailed literature review, pilot studies and experience have strengthened our conviction that the topic of strategic management in Polish tertiary education institutions is still relevant. However, the process itself requires continuous improvement. In our opinion, a comprehensive classification of the factors influencing the process of strategy implementation is one of the key tasks to be undertaken to this end. As stated by T. Wawak, “the implementation of higher school mission and objectives requires continuous improvement of the quality of management in the higher school since in this way the authorities will accelerate the development of the higher education institution and make it more competitive on the educational market”.

3. Study methodology

This study continues the previous study entitled “Factors affecting the process of strategy implementation in higher education institution”, in which we presented the classification of 113 factors influencing the process of strategy implementation in Polish higher education institutions. We classified the factors into three main categories: strategy, management and staff. Each category was analysed in the context of four stages of the strategy implementation process, *i.e.* planning, formulation, implementation and control (monitoring). The pilot studies covered 70% of public and non-public higher education institutions operating in the city of Wrocław. The survey was conducted employing a questionnaire. The data were provided by the respondents who were the representatives of Wrocław higher schools. What is particularly important, the respondents take an active part in the process of higher school strategy implementation. Taking into account the issues covered in this study, we asked the following research questions:

- Q1. Is there a group of factors identified as significant (key) for the process of strategy implementation characteristic of both public and non-public higher schools?
- Q2. Is there a group of factors identified as significant (key) for the process of strategy implementation characteristic only of public higher schools?
- Q3. Is there a group of factors identified as significant (key) for the process of strategy implementation characteristic only of non-public higher schools?

The study consisted of several stages. At the first stage, the respondents were asked to assign weights that determine the significance of a given category: strategy, management and staff. Based on the results obtained, we decided to focus on the two most essential categories enumerated by the respondents: strategy and management. At the second stage, the respondents were asked to assign weights determining the significance of a given factor in the strategy implementation process. This study allowed specifying the groups of important (key) factors from the point of view of strategy implementation shared by both public and non-public higher education institutions. At the third stage, we made a decision to focus on the factors differentiating public from non-public higher schools.

4. Study results

As already mentioned, at the first stage of the survey the respondents were asked to assign weights that determine the significance of a given category, i.e. strategy, management and staff in the process of strategy implementation. A three-stage scale was developed. In this scale, the value of “0” indicates an insignificant category and the value of “2” indicates a particularly significant (key) category. All respondents defined the category *strategy* as particularly significant (key). In the case of the category of *management*, 92% of those surveyed described it as particularly important (key) whereas only 8% indicated “1”, i.e. this category is slightly less important for strategy implementation. The results which we obtained are confirmed in the literature. Several studies are dedicated to the high level of significance which the categories *strategy* and *management* are characterised with (Radomska, 2014; Wołczek, 2016). In the case of the category *staff*, only 25% of the respondents indicated that this category is particularly important (key) while as many as 75% of them described it as insignificant for the strategy implementation process. The results may be surprising as a number of both theoretical and empirical studies indicate the significance of the category *staff* in the process of strategy implementation (Radomska, 2012). Rampersad’s studies also point to the significance of the category *staff*, which is reflected in the process of cascading the strategic scorecard to lower levels in the organisational structure (Rampersad, 2011). According to the authors, the results obtained for the category of *staff* should form the basis for further empirical studies. Two categories will, therefore, be analysed in this study: *strategy* and *management*.

At the second stage, the respondents were asked to assign weights determining the significance of a given factor in the strategy implementation process. A seven-stage scale was developed. It contains the following weights: 7 – significant (key), 6 – very large, 5 – large, 4 – no opinion/difficult to determine, 3 – small, 2 – very small, 1 – none. Table 1 presents the classification of the factors characteristic of the category *strategy* defined by the respondents as particularly significant in the process of strategy implementation. The factors were grouped according to the stage of their occurrence in the process of strategic management, i.e. planning, formulation, implementation and control (monitoring). For example, among the factors assessed as the most significant for the process of strategy implementation at the stage of formulation, the respondents indicated: strategy content, unclear or fuzzy strategy or objectives defined in isolation from reality. It should also be noted that in the course of the survey, 80% of the respondents indicated the factor of the excessive number of strategic objectives as being present in their organisation. The results obtained are also confirmed in many research papers. The confirmation of the above can be found in the works authored by M. Frigo, R. Martin, L. Hrebiniak or J. Skivington and R. Darf. Likewise, F. Okumus points out that the content of the strategy is the element which determines the success of the strategy implementation process. On the other hand, a defectively formulated strategy will effectively make it impossible to carry out the correct and effective implementation process mainly due to the inability to allocate resources effectively (Hrebiniak, 2008; Radomska, 2014). It is also worth pointing out that the factor of the unclear strategy is described in the literature as one of the six most essential implementation barriers (Cocks, 2010; Beer, Eisenstat, 2000; Hrebiniak, 2003). Among the factors which are particularly significant for the process of strategy implementation at the implementation stage, the respondents indicated, among other, the problem with explaining the strategy, no knowledge of the strategy at all levels of the organisation or no consistent implementation of strategic objectives (cf. Hrebiniak, 2003; Radomska, 2012a, 2014b; Wołczek 2014a, 2016b) Numerous studies carried out so far indicate that the stage of strategy implementation brings difficulties to many organisations. Thought-provoking information is provided, among others, by a survey conducted among a group of 400 managers, 75% of whom believe that their organisations have clearly defined and inspiring development visions. At the same time, 69% of them claim that the implemented strategies are unrealistic while 49% indicate the gaps between the ability to formulate the strategy and its implementation (Sabourin, 2012). Similar conclusions can be drawn on the basis of another survey conducted among 1,075 respondents. The respondents indicate that the most crucial barrier to strategy implementation in contemporary organisations is the problem of strategy explanation and transposition into implementation activities (Lepsinger, 2006). According to R. Lepsinger, the reason for such a situation should be sought in the combination of the structure, management systems and leaders' activities. As observed by J. Radomska, "it is still necessary to carry out studies on those elements which significantly contribute to the implementation problems". Apart from the category *strategy*, the survey also examined the

factors influencing the process of strategy implementation in the category *management*. Table 2 presents the classification of the factors characteristic of this category identified by the respondents as particularly significant in the process of effective strategy implementation. Like in the case of the first classification, the factors were grouped according to the stage of their occurrence in the process of strategic management, i.e. planning, formulation, implementation and control (monitoring). As T. Grundy aptly points out, “managers often have problems not only with the lack of the clarity of the strategy itself but also with the whole process of strategic management being unclear to them”. Among the factors having a significant impact on the process of strategy implementation at the stage of formulation, the respondents specified, among others, no engagement of managers in the process of strategy management, no skills in engaging staff, the inappropriate division of decision-making rights, the problem with delegating tasks or no adequate employee incentive and remuneration system. The confirmation of the results we obtained can be found in the studies carried out by M. Beer and R.A. Eisenstat, L.G. Hrebiniak or G.L. Neilson, K.L. Martin and E. Powers. For example, M. Beer and R. A. Eisenstat, based on the studies carried out in twelve organisations, listed the so-called six silent strategy killers. Among the factors mentioned by the authors, as many as five out of six concern the category *management*.

At the next stage of the studies (stage 3), we made an attempt to specify the factors or groups of factors defined as significant (key) which differentiate the respondents from public higher schools from those from non-public higher schools. The results of the analysis are presented in Tables 3 and 4. Due to significant differences in the answers received, in the category *strategy*, two stages of the strategic management process were compared, i.e. planning and formulation. Similar discrepancies also exist in the category *management* but due to the limitations of the volume of the article, their analysis will be published elsewhere. What was analysed were the factors classified in the category *strategy planning*, i.e. the internal inconsistency of the strategy with the vision, schedule and current objectives. The respondents representing non-public higher education institutions described each of the factors as particularly significant (key) for the effective process of strategy implementation. The results obtained are also confirmed by the literature on the subject, emphasising their importance in the process of the effective implementation of organisation strategy (M. Beer and R.A. Eisenstat, L.G. Hrebiniak or G.L. Neilson, K.L. Martin and E. Powers, P. Wolczek, J. Radomska). In the study conducted by the authors of the article, significant differences can be observed in the assessment made by the respondents working in public and non-public higher schools. As many as 55% of the respondents indicate a “small” impact of those factors on the strategy implementation process. At the stage of strategy formulation, visible differences were observed in the analysis of factors, i.e. strategy content, non-formalised strategy and no identification and definition of the impact of current projects on the strategy.

This can be accounted for by the fact that 60% of the respondents from non-public higher schools indicated that such factors as strategy content and the non-formalised strategy have a very large impact on the process of strategy implementation. On the other hand, 60% of them were of the opinion that the failure to identify and define the impact of current projects on the strategy has a significant (key) impact on the strategy implementation process. On the other hand, in the case of public higher schools, as many as 55% of the respondents believe that the strategy content factor (the objectives set out in the strategy) has very little influence while 55% indicate that the formalised strategy has no influence on the process of the effective implementation of the strategy. It seems that the results obtained after the analysis of the answers of the respondents from non-public higher schools are slightly more optimistic than those given by the representatives of public higher education institutions. In non-public higher schools, we can observe greater awareness of such processes as strategic management, the effective implementation of the strategy or activities on the competitive market of educational services. This may probably result from the fact that such schools are more experienced in this area as well as from the characteristics of the market on which they compete for the most important client – the student. In view of the above, we believe that there is evidence confirming Q1 – there is a group of factors identified as significant (key) for the process of strategy implementation, characteristic of both public and non-public higher education institutions. Moreover, there is evidence validating Q3, *i.e.* there is a group of factors identified as significant (key) for the process of strategy implementation, characteristic only of non-public higher schools.

The study results show that in the analysed (public and non-public) higher schools, it is possible to specify groups of factors which, in the opinion of the respondents, are common for both types of higher education institutions and which have a significant (key) impact on the process of strategy implementation. The analysis of the results obtained in the course of the study also allows specifying the factors differentiating both types of higher education institutions. An in-depth analysis of this issue will undoubtedly be the subject of further studies.

Table 1.

Factors influencing the strategy implementation process in the category “strategy”

	Planning	Formulation	Implementation	Control and monitoring
	No strategic plans	Wrong strategy formulation	Problem with strategy explanation	Inflexible strategy
Strategy	No links between tactical plans and strategy and strategic objectives	Unclear and fuzzy strategy	Inability to transpose ideas into the ready-made actions	
	No links between vision and operational activities	Strategic objectives defined in isolation from reality	No knowledge of the strategy at all levels of the organisation	
	No fundamental knowledge of the strategy	Excessive number of objectives	Interference with the relationship between the overall strategy and smaller strategies of minor units	
	Conflicting priorities	Excessive complexity of the strategy	Poor or insufficient communication between the entities responsible for strategy implementation	
	Internal inconsistency of the strategy with the budget	No schedule and no definition of “milestones”	No consistent implementation of strategic objectives	
	Inefficient system of information acquisition and selection	No communication of the strategy	Failure to report on the progress in strategy implementation	
	Incorrect calculation of funds for strategy implementation	Unnecessary bureaucracy		
	No additional sources of funding for strategy implementation			
	The strategy is in conflict with the existing organisational structure			
	Unrealistic, unclear and unfeasible development concepts			

Source: Authors’ own study based on: “Factors affecting the process of strategy implementation in higher education institution” by N. Piórkowska, R. Ryńca, 2020.

Table 2.

Factors influencing the strategy implementation process in the category of “management”

	Planning	Formulation	Implementation	Control and monitoring
	Hierarchical or liberal management style	Unclear course of the strategy management process	Management’s lack of experience in strategy implementation	No effective evaluation and control system
Management	Managers’ lack of knowledge and skills in strategy development	Manager’s lack of involvement in the strategy formulation process	No or underdeveloped leadership skills of managers	No strategic controlling
	Management’s lack of experience in strategy implementation	No ability to engage staff	No coordination	Failure to appoint a supervising controller
	No ability to prioritise tasks	No adequate employee incentive and remuneration system	No charismatic leaders among executives	
	No or mismatch of key indicators for the strategy implementation process	No or misallocation of resources	No action consistency	
	Short-term thinking	Incorrect allocation of decision-making rights	No stimulation of staff’s desired behaviours	
	No access to data and indicators	Incorrect allocation of tasks and responsibilities	Overloading management with current affairs	
	No capacity to manage change and overcome resistance to change	Problems with delegating tasks	No leaders effectively motivating staff to implement the strategy	
	No stakeholder orientation	No effective communication of strategy objectives	No coupling of strategic and operational activities	
	No intellectual flexibility of managers	Unclear communication of responsibilities	Prolonged decision-making time	
	Failure to define the supervisory and decision-making relations between the management board and lower-level managers	No assignment of economic measures and indicators to strategic objectives	Malfunctioning decision-making mechanism	

Source: Authors’ own study based on: “Factors affecting the process of strategy implementation in higher education institution” by N. Piórkowska, R. Ryńca, 2020.

Table 3.*Key factors in the process of strategy implementation in public and non-public higher schools – comparison*

THE STRATEGY FORMULATION PHASE	STRATEGY															
	FACTORS – PUBLIC HIGHER SCHOOLS	STUDY RESULTS							FACTORS – NON-PUBLIC HIGHER SCHOOLS	STUDY RESULTS						
		7	6	5	4	3	2	1		7	6	5	4	3	2	1
Internal inconsistency of strategy and vision	45%				55%			Internal inconsistency of strategy and vision	100%							
Internal inconsistency of strategy and schedule	45%				55%			Internal inconsistency of strategy and schedule	100%							
Internal inconsistency of strategy and objectives	45%				55%			Internal inconsistency of strategy and objectives	100%							

Table 4.*Key factors in the process of strategy implementation in public and non-public higher schools – comparison*

THE STRATEGY FORMULATION PHASE	STRATEGY															
	FACTORS – PUBLIC HIGHER SCHOOLS	STUDY RESULTS							FACTORS – NON-PUBLIC HIGHER SCHOOLS	STUDY RESULTS						
		7	6	5	4	3	2	1		7	6	5	4	3	2	1
Strategy content		45%				55%		Strategy content		60%	40%					
Non-formalised strategy	45%						55%	Non-formalised strategy		60%			40%			
No identification and definition of the impact of projects on the strategy		100%						No identification and definition of the impact of projects on the strategy	60%			40%				

7 – significant (key), 6 – very large, 5 – large, 4 – no opinion/difficult to determine, 3 – small, 2 – very small, 1 – no

5. Summary

The literature on the topic abounds in both theoretical and empirical studies concerning strategic management in organisations, including higher education institutions. The issue of strategic management in higher education is so important that it remains within the scope of interest not only for scholars but also for both state as well international organisations and institutions (Leja, 2017; Ryńca, 2014; Thieme, 2009; Wawak, 2012). Numerous studies confirm that the process of strategic management in Polish higher schools is at a relatively low level (Leja, 2017; Thieme 2009). Despite many studies, there is still a research gap in this field. This claim can be supported by the fact that there are no studies verifying the factors which have a significant impact on the process of strategy implementation in higher education institutions and which hinder the process of strategy implementation at different stages. However, there is evidence to believe that identifying and trying to eliminate such factors would be one of the critical actions in the area of effective strategic management in Polish higher education institutions. The pilot studies covering 70% of higher education schools based in Wrocław aimed at trying to identify the significant (key) factors influencing the strategy implementation process. The results obtained indicate that the investigated area still has a cognitive gap to bridge. In their further scholarly endeavours, the authors will continue their research in the field of the identification of the factors influencing the process of strategy implementation at different stages in different types of Polish higher education institutions.

References

1. Alharty, A., Rashid, H., Pagliari, R., Khan, F. (2017). Identification of Strategy Implementation Influencing Factors and Their Effects on the Performance, *International Journal of Business and Social Science*, Vol. 8, no. 1 January.
2. Antonowicz, D., Brdulak, J., Hulicka, M., Jędrzejewski, T., Kowalski, R., Kulczycki, E., Szadkowski, K., Szot, A., Wolszczak-Derlacz, J., Kwitek, M. (2016). Reformować? Nie reformować? Szerszy kontekst zmian w szkolnictwie wyższym. *Nauka*, 4, ISSN 1231-8515.
3. Beer, M., Eisenstat, R.A. (2000). The Silent Killers of Strategy Implementation and Learning. *Sloan Management Review*.
4. Cater, T., Pucko, D. (2010). Factors of effective strategy implementation: Empirical evidence from Slovenian business practice. *Journal for East European Management Studies*, vol. 15, no. 3.
5. De Wit, B., Meyer, R. (2007). *Synteza strategii*. Warszawa: PWE.

6. *Diagnoza stanu szkolnictwa wyższego w Polsce, Raport cząstkowy*. Warszawa: Ernst & Young oraz Instytut Badań nad Gospodarką Rynkową.
7. EUA (2018, 12.01). 3rd EUA Convention of European Higher Education Institutions. Retrieved from: <http://www.ehea.info/media.ehea.info>.
8. Hrebiniak, L.G. (2005). *Making strategy work. Leading effective execution and change*. Upper Saddle River: Pearson Education.
9. Hrebiniak, L.G. (2006). *Obstacles to effective strategy implementation*. Organizational Dynamics.
10. Konferencja Rektorów Akademickich Szkół Państwowych (2019, 02.01). Strategia rozwoju szkolnictwa wyższego 2010-2020 – Projekt środowiskowy. Retrieved from: <http://krasp.strony.uw.edu.pl>.
11. Koźmiński, A.K. (1999). Misje i strategie szkół wyższych. In: J. Woźnicki (ed.), *Model zarządzania publiczną instrukcją akademicką*. Warszawa: Instytut Spraw Publicznych.
12. Maraga, A. (2006). The cultural legitimacy of the European University. *Higher Education in Europe*, vol. 31(4), DOI 10.1080/03797720701303897.
13. Mintzberg, H., Ahlstrand, B., Lampel, J. (1989). *Strategy Safari: A Guided Tour Through the Wilds of Strategic Management*. New York: The Free Press.
14. Neilson, G.L., Martin, K.L., Powers, E. (2008). The secrets to successful strategy execution. *Harvard Business Review*.
15. Nowaczyk, G., Lisiecki, P. (2006). *Marketingowe zarządzanie szkołą wyższą [Marketing management of a higher education institution]*. Poznań: Wydawnictwo WSB.
16. Pawłowski, K. (2004). Przyszłość polskiego szkolnictwa wyższego w kontekście wyzwań postawionych przed uczelniami europejskimi przez Komisję Europejską. In: J. Woźnicki (ed.), *Model współdziałania uczelni publicznych i niepublicznych – stan obecny i perspektywy*. Warszawa: Instytut Społeczeństwa Wiedzy.
17. Pawłowski, K. (2004). *Społeczeństwo wiedzy szansa dla Polski [Society of knowledge a chance for Poland]*. Kraków: Wydawnictwo Znak.
18. Radomska, J. (2017). *Ryzyko operacyjne w procesie realizacji strategii*. Wrocław: PWN.
19. Ratajczak, Z. (1997). Jakość kształcenia jako przedmiot misji uniwersytetu. In: M. Wójcicka (ed.), *Zapewnienie jakości kształcenia. Wprowadzenie do samooceny*. Warszawa: Instytut Spraw Publicznych.
20. Ryńca, R. (2014). *Zastosowanie wybranych metod i narzędzi w ocenie działalności szkoły wyższej [The use of selected methods and tools in the assessment of activity of a higher education institution]*. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
21. *Strategia rozwoju szkolnictwa wyższego w Polsce do 2020 roku i diagnoza stanu szkolnictwa wyższego w Polsce, Raport cząstkowy*. Warszawa: Ernst & Young oraz Instytut Badań nad Gospodarką Rynkową.
22. *Szkolnictwo wyższe w Polsce (Raport nr 29718)*. Warszawa: Bank Światowy, Europejski Bank Inwestycyjny.

23. Tetenbaum, T.J (1998). *From Newton to Chaos*. Organizational Dynamics, DOI: 10.1016/S0090-2616(98)90003-1.
24. Wołczek, P. (2016). Problemy wdrażania strategii w małych przedsiębiorstwach – wyniki badań. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*.
25. Wołczek, P. (2017). Model wdrażania strategii – wnioski z badań empirycznych liderów biznesów. *Handel Wewnętrzny*. Warszawa, ISSN 0438-5403.