AGATA AUSTEN*, MONIKA RUTKOWSKA**

CONDITIONS FOR THE DEVELOPMENT OF RESEARCHERS' ABSORPTIVE CAPACITY

Introduction

The changing political, social, economic, technological and cultural environment requires science to work closely with business. As Satell [40] stated "innovative companies get their best ideas from academic research". Thus, the potential of scientific research cannot be overestimated. The role of the university has expanded from traditional research and education to actively seeking opportunities to develop applications and commercialize research results [18]. Establishment of start-ups is one of the possible ways to transfer university research into industry, however it is difficult to start a new venture based on university technology and most of those ventures do not generate wealth to universities [29].

Innovations became the main trend for the development of global economy. It can be defined as: (1) a new idea or behavior [17], (2) as changes in the knowledge, ability and techniques required to produce goods and services of higher or better quality [33], or as (3) a complex activity converting new knowledge to the commercial outputs [11]. Therefore, researchers are required to be competent in Open access, Open data, Open Science Politics including the European Code of Conduct for Research Integrity (hereinafter – 3 Ops) performance as well as to work in similar manner and style as entrepreneurs.

In the context, when academic research is taken "as valuable assets for economies in the EU" [46, p. 1] and researchers are expected to provide more innovative ideas and products for the market or decisions for business, individual absorptive capacity

* **Agata Austen, Ph.D., Associate Professor** – University of Economics in Katowice.
** **Monika Rutkowska**, **Ph.D.** – University of Economics in Katowice.

of researchers becomes the key issue for understanding and developing R&I processes. We posit that absorptive capacity is the crucial factor for developing the innovativeness [20], because it helps to accelerate the speed, frequency and magnitude of innovation [22; 45]. To date, micro-level approach towards ACAP remains under-researched [11; 47]. Instead, most has been studied at the country, inter-organizational, intra-organizational and group level of analysis [25; 47]. In particular, only few studies relate to the absorptive capacity of (academic) researchers and those few, which were made, are focused on the understanding of links between ACAP and scientific productivity (publications, patents) or their competencies just to be employed [7; 46; 37]. Thus, the aim of the article is to discuss factors that may influence researchers'absorptive capacity, which is necessary to create or identify radical new ideas, which may become opportunities, as well as challenge them to evaluate and tackle customer problems in unconventional and creative ways.

1. Individual absorptive capacity

There is little doubt that ACAP has been one of the most cited and used – and in this sense, one of the most important – constructs to emerge in the management literature in the last two decades. Cohen and Levinthal [5] in their seminal work defined ACAP as a person's ability to recognize the value of new information, assimilate it, and apply it to commercial ends. Later, researchers [48; 25; 31; 47; 30; 19, etc.] developed this concept, identifying its application to organizational, interorganizational, group, regional and country level of analysis.

In this article, we follow the concept of individual ACAP that is an individual's activities to recognize, assimilate, transform, and exploit new external knowledge [30]. Referring to the specificity of academia, we propose the following working definition of researchers' ACAP: "a dynamic person's ability to recognize the value of new external information, get the access to it, to assimilate it and anchor to internal knowledge base, transform and exploit (apply) it to commercial ends and to disseminate new knowledge for the wider economy".

Among different conceptualizations of ACAP, Zahra and George [48] propose to consider potential absorptive capacity (PACAP), which relates to recognition and assimilation of knowledge and realized absorptive capacity (RACAP), that includes transformation and exploitation of knowledge. PACAP (according to Zahra and George) refers to an organization's ability to identify, acquire, to analyze, process, interpret, and understand external sources of knowledge. With respect to research setting, potential absorptive capacity of researchers would be an individual's ability to acquire and assimilate information that is useful for research scholarship [7]. Individuals' recognition activities concern searching for new knowledge, identifying it,

and evaluating it as opportunities for potential beneficial use. Through assimilation activities, individually recognized and acquired knowledge is adapted to the organizational context by making it understandable and transferable to other members [29]. At the organizational level RACAP, includes knowledge transformation and exploitation. It denotes a firm's capability to develop and refine the routines that facilitate combining existing knowledge and the newly acquired and assimilated knowledge, refine, extend, and leverage existing competencies or to create new ones by incorporating acquired and transformed knowledge into its operations [48, p. 190]. At the individual level, during knowledge transformation processes, the new assimilated knowledge is combined and integrated with existing knowledge in order to create new ideas for products, services, and processes. Finally, exploitation at the individual level concerns the internalization of the new knowledge in own work routines [29]. Zahra and George [48] claim that PACAP influences RACAP. Thus, why we propose that:
H1: Researchers' PACAP influences their RACAP.

2. Absorptive capacity – implications for innovation

During the last decade, the nature of innovation has shifted: from being driven by individuals working within the well-defined boundaries of corporate or university labs, innovation increasingly emerges from the distributed intelligence of a global crowd [15]. The concept of technology transfer has become too narrow and it has evolved into the concept of knowledge transfer [21]. Among many institutions responsible for the transfer of knowledge to economics in recent times there are, among others, universities. Undoubtedly, the economy is a beneficiary of scientific discoveries and their commercialization in the field of technical sciences and information technology. The industry can also make use of the input from social sciences and humanities (e.g., the knowledge how to market a product in different cultural and linguistic contexts, how to develop efficient organization and organizational routines, etc.) [21]. McAfee and Brynjolfsson [32] identify this as one of three major trends, along with the move from product to platform and from brain to machine. Human capital shapes innovation in a number of ways. The deficiency in human capital is one of the main issues hindering growth of economy. In particular, lack of skilled researchers generating the knowledge that can be used to create and implement innovations. Skills supply and demand mismatch is strongly felt in R&I area. Research indicates that in technology field, mismatch is increasing. One third of companies in manufacturing industries agree that they lack technology designers, etc. for their R&I activities [35].

Innovation can be defined as changes in the knowledge, ability and techniques required to produce goods and services of higher or better quality per unit price,

while technology represents the cumulative stock of these innovations [33]. Therefore, innovation is a complex activity converting new knowledge to the commercial outputs [11]. The literature regarding innovation widely indicates that innovation is a new idea or behavior [17]. For example, while Oke et al. [34] define innovation as researching to find the new ways of the new things, Van de Ven states that innovation is about identifying and utilizing the opportunities to build new products, services or business applications [44]. Absorptive capacity increases the speed, frequency and magnitude of innovation, which in turn produces knowledge which becomes part of the firm's absorptive capacity [22; 14; 45].

Also research findings presented by Fakhrorazi et al. [10] suggest that the innovative behavior of workers is somewhat affected by their capability to absorb knowledge. Individual absorptive capacity had partially influenced the behavior of opportunity exploration. While prior literature has made substantial advancement into the performance consequences of absorptive capacity, few studies have addressed what actually constitutes ACAP on a micro level. Tian and Soo [42], examining 125 employees in a large Chinese automotive organization found that employee realized ACAP mediates the positive relationship between employee potential ACAP and creativity, which underlies innovativeness. Lowik et al. [29] in their study of 147 employees in a medium-sized Dutch industrial firm found support that individual absorptive capacity mediates between its antecedents and individual innovation performance. Zahra and George propose that despite the importance of PACAP (potential AC), RACAP (realized AC) is the primary source of performance improvements [48, p. 191]. Consequently, we hypothesize that:
H2: Researchers' RACAP influence the level of innovation.

3. Researchers' networks and ACAP

Adopting an absorptive capacity approach to academia suggests that a focal way in which individuals are able to develop research ideas is to exploit others' research ideas. Researchers need to interact with other researchers, formally or informally to help generate new ideas. Formally, a researcher may be able to exploit others' research ideas by reading their articles and attending their conference presentations. Informally, a researcher could benefit from others' ideas by having some connection or relationship with other researchers [7].

A key assumption in the ACAP literature is that the place where the knowledge is recognized and acquired is distant from the place where it is transformed and exploited [5]. This is why social integration mechanisms are central to understanding ACAP processes. These organizational arrangements build connectedness and shared meanings, facilitating communication and knowledge exchanges [16; 43; 48]. At the

individual level, social integration mechanisms' effectiveness depends on individuals' social capital, which has several dimensions, such as network diversity, network size, and network density [25; 36].

Research at the organizational level highlights the importance of networks. Gaining knowledge from external sources and learning from partners are critical parts of the interorganizational antecedents of ACAP [47]. Research that examines absorptive capacity in the context of interorganizational relationships can be divided into two main categories. The first focuses on dyadic alliance relationships and how the construct enables inter-organizational learning and positive alliance outcomes such as innovation (e.g., [26; 24; 1; 39; 9]). The second focuses on networks of relationships and argues that firms which are well located in that network are most likely to form more alliances and are also most likely to innovate [41]. Fullan [13] points out the significance of partnership networks, as one of the sources of absorptive capacity. It can be noticed that innovation of SMEs is positively associated with personal networks of entrepreneurs and that this relationship is strengthened by SMEs absorptive capacity (potential and actual). Collaboration between related organizations (scientific, educational, production enterprises, etc.) helps to achieve common aims. Such collaboration often develops into project activity and exceeds national boundaries. Project activity stimulates individuals' initiative, creativity, empowers them to recognize novelties, to identify their advantages that might be successfully used in their own or their schools activity. Therefore, project activity stimulates individuals' absorptive capacity, as they feel free to act and the final aim of the project makes them responsible for the project process and results.

Some studies have indicated that a vast proportion of the transfer from university to companies or society happens through more or less informal contacts and meetings [8, pp. 1295–1313]. Issues of internal informal networks are also important for the identification and assimilation of new knowledge. Social embeddedness is important for transferring tacit and explicit knowledge. Thus, networks of individuals influence what knowledge is shared or assimilated [47]. At the individual level external network diversity explains differences in individual absorptive capacity. Heterogeneous individual networks positively contribute to individual innovative performance (e.g. [3; 6]). In the study conducted by Christensen and Jansen [4], networking which can be defined as the extent to which participants communicated with faculty at other institutions regarding research-related activities, was the only factor that was significantly related to research productivity. In our opinion individual networks of researchers should underlie both their PACAP and RACAP. Hence, we assume that: *H3: Researchers networks influence their PACAP and RACAP. The more wide and heterogeneous the network, the higher the level of PACAP and RACAP.*

4. Activation triggers of ACAP

Zahra and George [48] claim there is a need for some type of activation trigger to encourage the individual to generate new ideas. They posit that internal triggers could be in the form of organizational crises, such as performance failure, or important events that redefine a firm's strategy. External triggers are events that may influence the future of the company's environment. They include e.g., radical innovations, technological shifts, changes in government policy. In the academic setting, faculties who do not perceive research scholarship as important for their tenure and promotion may not be motivated to engage in research activity. In this case external demands (such as law regulations), may serve as an external motivator for generating new ideas. We find requirements for individual career development that are imposed by law as one of the activation triggers. The second are the requirements imposed by the university, which result from the need to carry out its mission, including the willingness to place itself high in university rankings and the possibility of obtaining funds from the ministry. Thus:

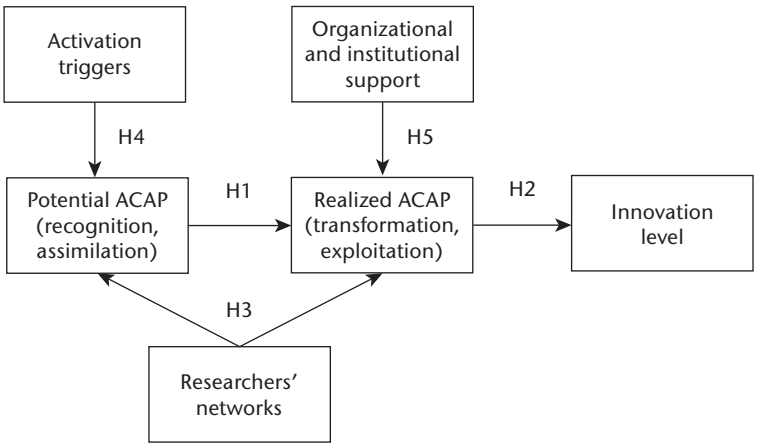
H5: Activation triggers in the form of legal requirements and university requirements influence PACAP. Specifically, the greater the number of requirements for research scholarship, the higher level of PACAP.

5. Organizational and institutional support of ACAP

ACAP is influenced also by some organizational factors e.g., by a signaling effect that the organization values learning [40]. Organizational learning theory suggests that firms with strong commitment to learn encourage and value employees' continuous effort to identify and acquire valuable external knowledge, and share and utilize obtained knowledge to improve performance [2; 40]. According to Sinkula et al. [40], organizational commitment to learning, which refers to the degree to which an organization values and promotes learning, fosters a learning climate which influences the degree to which firms are likely to promote generative learning as a long-lasting core competency. In relation to academia setting such factors as the granting of advanced degrees, salary and hours spent weekly on teaching, university status may matter [7]. On the other hand, Lenart [27] in her research about absorptive capacity of schools found that lack of funding and complicated procedures of grant submissions were major obstacles for the respondents. In our opinion these factors, which can be called organizational and institutional support, influence not the potential ACAP, but the realized one. Thus, we propose:

H4: Organizational and institutional support influences RACAP. Specifically, the greater the support, the higher level of RACAP.

Below we present the preliminary research model that constitutes starting point for future empirical investigations.



Conclusions

This paper refers to models proposed by Zahra and George [48] and Davis and Da Silva [7]. It deals with the issue of absorption capacity at the micro level of analysis, presenting individual, organizational and institutional determinants of researchers' ACAP. The authors' intention was to emphasize the importance of assimilation, innovation and commercial application of knowledge by researchers. Researchers' absorptive capacity has been so far understudied. Due to the importance of researchers' absorption capacity for the development of their capacity for innovation and commercialization of empirical research results, we believe it is necessary to explore this phenomenon through empirical research. Considering the above, we take into account the empirical verification of the research model described in this article, and within the basic assumptions of further research we assume that:

- researchers' ACAP is a valuable approach providing the breakthrough of thinking and enabling the analysis of possibilities that increase researchers' innovativeness. The low level of individual researcher absorptive capacity interferes with innovativeness of research outcomes required for performance within the 3 Ops area;
- the construct of researcher's individual absorptive capacity is a complex phenomenon that refers to individual competencies (research knowledge, capabilities, innovative research performance), capability to accelerate the absorption process, and personal traits;

- researchers' individual absorptive capacity might be accelerated by expanding them with competencies, capabilities and traits, that are characteristic for innovators of spinoffs, start-up businesses and SME CEOs.

We are aware of the limitations of the presented considerations. In our opinion the first step that should be taken is to define researchers ACAP. The question arises, how to extend the concept using the competencies, capabilities and traits of entrepreneurs. Another issue concerns the final result which are innovations. How to measure them so as not to equate science with simply working on "products"? This also raises the question of whether these innovations are visible in all disciplines or whether they are such (e.g., biochemistry), where they are natural and desirable, and in others where the innovations should not or cannot take place.

References

[1] Ahuja G., Katila R., *Technological acquisitions and the innovation performance of acquiring firms: a longitudinal study*, "Strategic Management Journal" 2001, Vol. 22, No. 3, pp. 197–220.

[2] Baker W.E., Sinkula J.M., *The synergistic effect of market orientation and learning orientation on organizational performance*, "Academy of Marketing Science Journal" 1999, Vol. 27, p. 411.

[3] Baron R.A., *Opportunity recognition as pattern recognition: how entrepreneurs "connect the dots" to identify new business opportunities*, "The Academy of Management Perspectives" 2006, Vol. 20, No. 1, pp. 104–119.

[4] Christensen K.W., Jansen D.G., *Correlates of research productivity for industrial education faculty*, "Journal of Industrial Teacher Education" 1992, Vol. 29, No. 4, pp. 23–40.

[5] Cohen W.M., Levinthal D.A., *Absorptive capacity: a new perspective on learning and innovation*, "Administrative Science Quarterly" 1990, Vol. 35, No. 1, pp. 128–152.

[6] Cross R., Cummings J.N., *Tie and network correlates of individual performance in knowledge-intensive work*, "Academy of Management Journal" 2004, Vol. 47, No. 6, pp. 928–937.

[7] Davis A.R., Da Silva N., *Absorptive capacity at the individual level: linking creativity to innovation in academia*, "The Review of Higher Education" 2011, Vol. 34, No. 3, pp. 355–379.

[8] D'Este P., Patel P., *University-industry linkages in the UK: What are the factors underlying the variety of interactions with industry?* "Research Policy" 2007, Vol. 36, No. 9, pp. 1295–1313.

[9] Dyer J.H., Singh H., *The relational view: cooperative strategy and sources of interorganizational competitive advantage*, "Academy of Management Review" 1998, Vol. 23, No. 4, pp. 660–679.

[10] Fakhrorazi A., Osman M., Hazril I., *Absorptive capacity and innovative behavior among engineers in Malaysia*, "Management Arts" 2013, Vol. 56, pp. 13496–13504.

[11] Fosfuri A., Tribo J.A., *Exploring the antecedents of potential absorptive capacity and its impact on innovation performance*, "Omega" 2008, Vol. 36, No. 2, pp. 173–187.

[12] Foss N.J., Husted K., Michailova S., *Governing knowledge sharing in organizations: levels of analysis, governance mechanisms, and research directions*, "Journal of Management Studies" 2010, Vol. 47, No. 3, pp. 455–482.

[13] Fullan M.G., *The meaning of educational change*, in: Fullan M.G. (ed.), *The new meaning of educational change*, Teachers College Press, New York 1991, pp. 30–46.

[14] Helfat C.E., *Know-how and asset complementarity and dynamic capability accumulation: the case of R&D*, "Strategic Management Journal" 1997, Vol. 18, No. 5, pp. 339–360.

[15] Ito J., Howe J., *Whiplash: How to survive our faster future*, Grand Central Publishing, New York 2016.

[16] Jansen J.J.P., Van den Bosch F.A.J., Volbreda H.W., *Managing potential and realized absorptive capacity: How do organizational antecedents matter?* "The Academy of Management Journal" 2005, Vol. 48, No. 6, pp. 999–1015.

[17] Jiménez-Jiménez D., Sanz-Valle R., *Innovation, organizational learning, and performance*, "Journal of Business Research" 2011, Vol. 64, No. 4, pp. 408–417.

[18] Juanola-Feliu E., Colomer-Farrarons J., Miribel-Catala P., Samitier J., Valls-Pasola J., *Market challenges facing academic research in commercializing nano-enabled implantable devices for in-vivo biomedical analysis*, "Technovation" 2012, Vol. 32, pp. 193–204.

[19] Jucevičius R., Juknevičienė V., Mikolaitytė J., Šaparnienė D., *Assessing the regional innovation system's absorptive capacity: the approach of a smart region in a small country*, "Systems" 2017, Vol. 5, No. 2, p. 27.

[20] Juknevičienė V., Bersėnaitė J., *Empowerment of innovativeness for regional development: the case of Šiauliai region*, "Research for Rural Development. International Scientific Conference Proceedings (Latvia)" 2016, No. 2, pp. 158–165.

[21] Kelli A., Jonsson L., Mets T., Pisuke H., *The changing approach in academia-industry collaboration: from profit orientation to innovation support in Trames*, "Journal of the Humanities and Social Sciences" 2013, Vol. 17, No. 3, pp. 215–241.

[22] Kim D.J., Kogut B., *Technological platforms and diversification*, "Organization Science" 1996, Vol. 7, No. 3, pp. 283–301.

[23] Koka B.R., Prescott J.E., *Strategic alliances as social capital: a multidimensional view*, "Strategic Management Journal" 2002, Vol. 23, No. 9, pp. 795–816.

[24] Koza M.P., Lewin A.Y., *The co-evolution of strategic alliances*, "Organization Science" 1998, Vol. 9, No. 3, pp. 255–264.

[25] Lane P.J., Koka B.R., Pathak S., *The reification of absorptive capacity: a critical review and rejuvenation of the construct*, "Academy of Management Review" 2006, Vol. 31, No. 4, pp. 833–863.

[26] Lane P.J., Lubatkin M., *Relative absorptive capacity and interorganizational learning*, "Strategic Management Journal" 1998, Vol. 19, No. 5, pp. 461–477.

[27] Lenart R., *Absorptive capacity of schools*, in: Nalepka A., Ujwary-Gil A. (eds.), *Business and non-profit organizations facing increased competition and growing customers' demands*, Wyższa Szkoła Biznesu – National-Louis University, Nowy Sącz 2012, pp. 97–109.

[28] Lerner J., *The university and the start-up: lessons from the past two decades*, "Journal of Technology Transfer" 2005, Vol. 30, No. 1–2, pp. 49–56.

[29] Lowik S., Kraaijenbrink J., Groen A.J., *Antecedents and effects of individual absorptive capacity: a micro-foundational perspective on open innovation*, "Journal of Knowledge Management" 2017, Vol. 21, No. 6, pp. 1319–1341.

[30] Mahroum S., Alsaleh Y., *Measuring innovation efficacy: an operational framework for mapping and measuring innovation capacity and performance of countries*, Faculty & Research Working Paper, INSEAD, Abu Dhabi 2012.

[31] Mahroum S., Huggins R., Clayton N., Pain K., Taylor P., *Innovation by adoption. Measuring and mapping absorptive capacity in UK nations and regions*, Research Report, NESTA, 2008, ISBN 978-1-84875-029-6.

[32] McAfee A., Brynjolfsson E., *Machine, platform, crowd: harnessing our digital future*, W.W. Norton and Company, New York 2017.

[33] Narula R., *Understanding absorptive capacity in an 'innovation system' context: consequences for economic and employment growth*, "DRUID Working Paper" 2004, No. 04–02, Danish Research Unit for Industrial Dynamics, ISBN 87-7873-152-6.

[34] Oke A., *The influence of leadership on innovation processes and activities*, "Organizational Dynamics" 2009, Vol. 38, No. 1, pp. 64–72.

[35] Paliokaitė A., González Verdesoto E., *RIO country report 2016: Lithuania 2016*, *Research and Innovation Observatory Country Reports Series*, JRC Science for Policy Report, European Commission, Luxembourg 2017.

[36] Reagans R., Zuckerman E.W., *Networks, diversity, and productivity: the social capital of corporate R&D teams*, "Organization Science" 2001, Vol. 12, No. 4, pp. 502–517.

[37] Rosinaitė V., *Lietuvos aukštųjų mokyklų studentų kompetencijos: subjektyvus jų įsisavinimo lygio ir ugdymo poreikio įvertinimas*, "Filosofija, Sociologija" 2008, Vol. 19, No. 4, pp. 62–71.

[38] Satell G., *How innovative companies get their best ideas from academic research*, Innovation Excellence, 2016, http://innovationexcellence.com/blog/2016/10/06 (20.11.2018).

[39] Simonin B.L., *Transfer of marketing know-how in international strategic alliances: an empirical investigation of the role and antecedents of knowledge ambiguity*, "Journal of International Business Studies" 1999, Vol. 30, No. 3, pp. 463–490.

[40] Sinkula J.M., Baker W.E., Noordewier T., *A framework for market-based organizational learning: linking values, knowledge, and behavior*, "Journal of the Academy of Marketing Science" 1997, Vol. 25, No. 4, pp. 305–318.

[41] Stuart T.E., *Network positions and propensities to collaborate: an investigation of strategic alliance formation in a high-technology industry*, "Administrative Science Quarterly" 1998, Vol. 43, pp. 668–698.

[42] Tian A.W., Soo Ch., *Enriching individual absorptive capacity*, "Personnel Review" 2018, Vol. 47, No. 5, pp. 1116–1132

[43] Todorova G., Durisin B., *Absorptive capacity: valuing a reconceptualization*, "Academy of Management Review" 2007, Vol. 32, No. 3, pp. 774–786.

[44] Van de Ven A.H., *Central problems in the management of innovation*, "Management Science" 1986, Vol 3, No. 5, pp. 590–607.

[45] Van Den Bosch F.A., Volberda H.W., De Boer M., *Coevolution of firm absorptive capacity and knowledge environment: organizational forms and combinative capabilities*, "Organization Science" 1999, Vol. 10, No. 5, pp. 551–568.

[46] Veugelers R., *The contribution of academic research to innovation and growth*, "WWW for Europe Working Paper" 2014, No. 71, http://www.foreurope.eu/fileadmin/documents/pdf/Workingpapers/WWWforEurope_WPS_no071_MS65.pdf (10.11.2018).

[47] Volberda H.W., Foss N.J., Lyles M.A., *Perspective – absorbing the concept of absorptive capacity: how to realize its potential in the organization field*, "Organization Science" 2010, Vol. 21, No. 4, pp. 931–951.

[48] Zahra S.A., George G., *Absorptive capacity: a review, reconceptualization, and extension*, "Academy of Management Review" 2002, Vol. 27, No. 2, pp. 185–203.

CONDITIONS FOR THE DEVELOPMENT OF RESEARCHERS' ABSORPTIVE CAPACITY

Abstract

The aim of the paper is to discuss factors that may influence researchers' absorptive capacity. A review of literature indicates that traditional role of universities, limited to education and undertaking research activities focused primarily on the development of scientific theories, has evolved towards the requirement of innovation and active search for opportunities to commercialize research results. Among many factors determining the innovativeness of researchers and their ability to commercially exploit research results, the importance of researchers'

absorptive capacity (ACAP) has been increasingly stressed. Understanding of ACAP at the individual level has been limited so far, as most of the research focus on the organizational level. Having examined the literature on both ACAP and the specificity of researcher's job and organizations that employ them, we propose a research model and formulate hypotheses about individual, organizational and institutional determinants of researchers' ACAP. We propose to consider the construct of researcher's ACAP as a complex phenomenon that refers to individual competencies (research knowledge, capabilities, innovative research performance), capability to accelerate the absorption process, and personal traits. We claim that the low level of individual researchers' absorptive capacity interferes with innovativeness of research outcomes and that it can be enhanced through development of competencies, capabilities and traits, that are characteristic for innovators of spinoffs or start-up businesses and managers of SMEs.

Keywords: absorptive capacity, individual perspective, commercialization of research results

JEL classification codes: J24, M50

UWARUNKOWANIA ROZWOJU ZDOLNOŚCI ABSORPCYJNYCH PRACOWNIKÓW NAUKI

Streszczenie

Celem artykułu jest omówienie czynników, które mogą wpływać na zdolność absorpcyjną pracowników nauki. Przegląd literatury wskazuje, że tradycyjna rola uniwersytetów, ograniczona do edukacji i podejmowania działalności badawczej skoncentrowanej przede wszystkim na rozwoju teorii naukowych, ewoluowała w kierunku wymogu innowacji i aktywnego poszukiwania możliwości komercjalizacji wyników badań. Wśród wielu czynników decydujących o innowacyjności badaczy i ich zdolności do komercjalizacji wyników badań coraz częściej podkreśla się znaczenie zdolności absorpcyjnej badaczy (ACAP). Zrozumienie ACAP na poziomie indywidualnym było jak dotąd ograniczone, ponieważ większość badań koncentruje się na poziomie organizacyjnym. W wyniku analizy literatury przedmiotu dotyczącej zarówno ACAP, jak i specyfiki pracy pracowników nauki oraz zatrudniających ich organizacji, przedstawiamy model badawczy i formułujemy hipotezy o indywidualnych, organizacyjnych i instytucjonalnych determinantach zdolności absorpcyjnych. Proponujemy rozważyć ACAP pracowników nauki jako złożone zjawisko, które odnosi się do indywidualnych kompetencji (wiedza badawcza, możliwości, wyniki innowacyjnych badań), zdolności do przyspieszenia

procesu absorpcji i cech osobowych. Sugerujemy, że niski poziom zdolności absorpcyjnych pracowników nauki jest powiązany negatywnie z innowacyjnością wyników badań i że można go wzmocnić poprzez rozwój kompetencji, zdolności i cech charakterystycznych dla innowatorów spin-offów i start-upów oraz menedżerów MŚP.

Słowa kluczowe: zdolności absorpcyjne, perspektywa indywidualna, komercjalizacja wyników badań

Kody klasyfikacji JEL: J24, M50