Aleksandra Gaweł
Poznań University of Economics and Business
https://orcid.org/0000-0002-7426-3474
https://doi.org/10.35765/slowniki.150en

The attributes of entrepreneurship – entrepreneurial orientation, its construct and dimensions

Summary

DEFINITION OF THE TERM: Entrepreneurial orientation is the operationalisation of the entrepreneurship of companies, which means it is an expression of their attitudes, strategic processes, and decision-making methods.

HISTORICAL ANALYSIS OF THE TERM: Companies with entrepreneurial orientation are focused on rapid growth based on anticipating future trends and implementing market innovations.

DISCUSSION OF THE TERM: There are three primary dimensions to entrepreneurial orientation: innovativeness, proactiveness, and risk-taking. To these, two further dimensions have been added: autonomy and competitive aggressiveness. Researchers analyse the impact of entrepreneurial orientation on various aspects of the functioning of companies, including their financial performance, the introduction of new products, and their internationalisation.

SYSTEMATIC REFLECTION WITH CONCLUSIONS AND RECOMMENDATIONS: The ability to implement an entrepreneurial mindset is strongly dependent on the context in which a company operates, which is created by its external environment and its internal organisation, resources, and organisational culture.

Keywords: dimensions of entrepreneurial orientation, innovativeness, proactiveness, risk-taking, autonomy, competitive aggressiveness

Definition of the term

Depending on whether one adopts a narrow or a broad understanding of entrepreneurship (entrepreneurial companies or individuals) within any of the different theoretical traditions, the result is a multiplicity of approaches to understanding the essence of entrepreneurship, and this leads to cognitive misunderstandings. Furthermore, since some explanations of its essence refer to measurable and quantifiable concepts, this also leads to a diversity of approaches to measuring and operationalising entrepreneurship. For example, a narrow understanding of entrepreneurship equates it with self-employment, which can be measured by the share of entrepreneurs in the labour force or the share of start-ups in the total population of businesses. A broad understanding of entrepreneurship that indicates certain attitudes of individuals or businesses is a concept at a higher level of abstraction; therefore, its measurement is ambiguous, and researchers adopting this view take a more qualitative approach to operationalising entrepreneurship.

First developed in the 1980s, the concept of *entrepreneurial orientation* is a construct that allows the operationalisation of entrepreneurship. To a certain extent, through its dimensions, it reflects the main areas of research on entrepreneurship, which equate it with innovativeness, risk-taking, and proactiveness (i.e., noticing and exploiting market opportunities), all of which are of a general nature, while entrepreneurial orientation is treated as a reflection of various aspects of entrepreneurship that are investigated by researchers who focus on the practical operation of companies and individuals. In a broad sense, it can even be assumed that entrepreneurial orientation is the basis of entrepreneurship (Wach, Głodowska & Maciejewski, 2018). Entrepreneurial orientation reflects the degree of adaptation of the main aspects of entrepreneurship at the level of an individual company; researchers who created and developed this concept were motivated by the observation that an entrepreneurial company will often simultaneously adopt more than one of the entrepreneurial attitudes that have been identified in studies on entrepreneurship. In other words, a company that is an innovator is simultaneously willing to take risks and act in a proactive manner, and these three main dimensions of entrepreneurship are evident in a company's strategy, structure, and organisational culture, albeit to varying degrees.

Historical analysis of the term

Origins of entrepreneurial orientation

Some authors refer to the 1973 work of Mintzberg as a source of inspiration for the concept of entrepreneurial orientation because it mentions an entrepreneurial approach to decision-making that is directed towards actively seeking business opportunities under conditions of uncertainty (Covin & Wales, 2012; Gauthier, Cohen & Meyer, 2021). However, Miller's 1983 paper (Rudawska et al., 2021) is usually considered the forerunner of research on entrepreneurial orientation. In his work, Miller defined entrepreneurial companies as pioneering and proactive, although he did not use the term 'entrepreneurial orientation' itself. In his article from 2011, Miller explained that the inspiration for his observation was that the size and context of the environment in which a company operates determines which entrepreneurial dimension is of more or less importance for its business operation. Thus, for example, it may be the case that, in a particular context, innovativeness is more important for a given company, while proactivity or risk-taking may be more important in a different environment. Consequently, depending on their situation, companies may emphasise one particular aspect of entrepreneurship over another, whilst still behaving in an entrepreneurial way. Indeed, the entrepreneurial process is context-dependent (Miller, 2011).

Miller's 1983 concept was met with considerable interest from researchers and has been systematically developed since then. According to Google Scholar, by February 2022, this work had been cited more than 8,300 times, and Miller's works have been cited more than 92,000 times in total. The number of articles referring to this concept is systematically increasing, research areas are expanding, and perspectives from more countries and areas of business are being implemented.

The popularity of the concept of entrepreneurial orientation can be seen in several aspects. Most importantly, entrepreneurial orientation has allowed researchers to formulate a relatively precise definition of entrepreneurship. Entrepreneurial orientation generally refers to the modus operandi of an existing company (defined as an entrepreneurial company) and can therefore be precisely placed within the overall area of research. The development of this concept has led to the emergence of the idea of individual entrepreneurial orientation (more on this topic below), i.e., to the transition from the concept of an entrepreneurial company to the concept of an entrepreneurial person.

Furthermore, identifying the dimensions of entrepreneurial orientation is a vital element of this concept as this has allowed entrepreneurship to be measured and operationalised, which has significantly increased transparency in discussions and research.

Discussion of the term

Measuring the dimensions of entrepreneurial orientation

Entrepreneurial orientation is most often conceptualised through the lens of its dimensions, with two prevalent approaches to these dimensions in the literature (Saha et al., 2021). The first (and often still the only dimensions analysed) is the three primary dimensions: innovativeness, proactiveness, and risk-taking (e.g., Głodowska, Maciejewski, Wach, 2019; Ferreras-Mendez et al., 2021), which are operationalisations of the main areas of entrepreneurial thought. The literature reviews presented by Ferreras-Mendez et al. (2021) and Saha et al. (2021), indicate that these three dimensions of entrepreneurial orientation dominate in research, where they are either treated as independent constructs or integrated into a single dimension and analysed together as a representation of entrepreneurial orientation. The dimensions of entrepreneurial orientation quite clearly relate to the three main ways of understanding entrepreneurship: entrepreneurship as innovativeness, which is in line with the approach derived from the work of Schumpeter; as proactivity, which follows the Austrian School's definition of entrepreneurship as an ability to identify and exploit business opportunities; or as risk-taking, which derives from Knight's perspective, which sees the essence of entrepreneurship in acting under conditions of market uncertainty and in creating economic risk.

The second approach adds two more dimensions of entrepreneurial orientation to the three primary ones: autonomy and competitive aggressiveness, thus giving a total of five dimensions (e.g., Covin, Green, Slevin

& 2006; Frishammar & Horte, 2007; Bratnicki, 2008; Wach, Głodowska & Maciejewski, 2018; Betáková, Okręglicka & Haviernikova, 2021; Saha et al., 2021).

Some researchers postulate the existence of more dimensions of entrepreneurial orientation, but this article will discuss only these five as they are the most frequently analysed in the literature.

An unquestionable advantage of the concept of entrepreneurial orientation is that it can operationalise the broadly understood concept of entrepreneurship. However, in order for this advantage to be clearly translated into research it is also necessary to measure the dimensions of entrepreneurial orientation, preferably in such ways that allow comparisons of measurements. In research on entrepreneurial orientation, some dimensions can be measured using the economic indicators of a company. For example, the scale of its financial expenditure on research and development is considered to illustrate its level of innovativeness. However, entrepreneurial orientation is frequently measured by using questionnaires in which respondents are asked to answer statements relating to the dimensions of this orientation. The first set of statements was published by Covin and Slevin in 1989 and was based on a 7-point Likert scale (as quoted in Covin, Wales, 2012), and this now classic set has been used, developed, and modified many times (e.g., Głodowska, Maciejewski, Wach & 2019). A review of studies provided by Ferreras-Mendez et al. (2021) confirms that the Covin and Slevin scale is still the most frequently used scale in research on orientation. The advantage of using the same scale as the basis of research lies in its facilitating the comparison of the obtained results.

As a dimension of entrepreneurial orientation, innovativeness refers to the introduction of novelties into the operation of a company that have a potential impact on its economic performance (Betáková, Okręglicka & Haviernikova, 2021). Innovativeness was first analysed by Schumpeter, who drew attention to its significance for economic development by distinguishing between an innovator-entrepreneur, whose activity allows the introduction of new market solutions and leads to profit, and a capitalist, who, as the owner of capital, bears the risk of financial failure. The logic behind Schumpeter's considerations stemmed primarily from an entrepreneur's innovative behaviours, but then considered his impact on the profits of his company and the behaviours of his followers, then extending to their impact on business cycles and the level of economic development, thus combining the level of an entrepreneurial person and the macroeconomic level.

Understanding innovativeness as a dimension of entrepreneurial orientation is linked to the specific way a company behaves. An innovative company strives to develop new products or services or improve existing ones; it introduces new business and technological processes and seeks new markets (Frishammar & Horte, 2007); so, innovativeness may concern both a company's products or services and its processes. The innovativeness of a company can manifest in many ways: it can, for example, be the result of formalised action in the form of systematic and systemic research and development initiatives which have at their disposal a dedicated department, staff, and budget within an organisational structure. However, innovativeness can also have a broader dimension which is more difficult to measure: it can be a component of a company's organisational culture and internal procedures, within which employees are motivated to search for new ways of doing things and for innovative business ideas; moreover, an enterprise's innovativeness may also manifest in its cooperation with the environment in the search for new business solutions, especially in its cooperation with universities and research and development units, with other enterprises, with a range of business entities, local government units, and various social groups.

The importance of innovativeness as a dimension of entrepreneurial orientation stems from the fact that the source of a company's competitive advantage is constituted by its openness to new ideas, its creativity, and its propensity to experiment (Ferreras-Mendez et al., 2021), all of which should consequently contribute to its competitive processes and its position among its competitors.

From the operational perspective, in research on entrepreneurial orientation the level of innovativeness of a company is assessed in several ways. In questionnaire surveys, including those based on the scales developed by Covin and Slevin, companies are asked, for example, to state the extent to which the goods they produce are similar to those of their competitors and whether they have substitutes (Kowalik, Danik & Sikora, 2017), the extent to which a company is research and development oriented, or how many new products or product lines were implemented within the last three years (Ferreras-Mendez et al., 2021).

Thus, some of the statements in questionnaires are more subjective and strategic, while others are more outcome-based. Innovativeness is also a dimension that can be studied through a company's quantitative indicators, such as the number of people employed in research and development departments, budget expenditures for conducting research and development activities, or revenues from sales of new products and services launched within the last three years, etc.

Another dimension of entrepreneurial orientation is proactiveness, which means adopting a forward-looking, future-oriented perspective that gives a company the competitive advantage of being a market leader when it is able to meet customers' previously unrecognised needs (Frishammar, Horte & 2007; Betáková, Okręglicka & Haviernikovà, 2021). A first-mover strategy means that a company anticipates future market trends and future customer needs (Betáková, Okręglicka, Haviernikovà & 2021) rather than adjusting to past or current situations. Proactive companies tend to take the lead in competing with their market rivals (Ferreras-Mendez et al., 2021).

Proactivity is a dimension of entrepreneurial orientation that is related to the Austrian school of thought on entrepreneurship. This school sees the essence of entrepreneurship in the entrepreneurial ability to identify untapped business opportunities, assess their potential profitability, and implement them in the market.

When assessing proactivity using surveys based on Covin and Slevin's classic questionnaire, companies are asked to state the time needed to introduce new products or services as compared to their competitors, i.e., to state whether they implement innovations faster than their competitors, or whether they lag behind their competitors in testing the effectiveness of new solutions (Kowalik, Danik & Sikora, 2017). Companies' attitude towards competitors and the level of aggressive pressure they use are also assessed (Ferreras-Mendez et al., 2021). Thus, the extent to which a company's actions – being a response to the activity of market rivals – are proactive or reactive is also assessed.

The next dimension of entrepreneurial orientation is a company's attitude to market risk or even to acting under conditions of uncertainty, which is reflected in decisions and actions taken without knowledge of the possible results of these actions (Dess, Lumpkin & 2005). Risk-taking also implies that companies undertake activities with uncertain outcomes when there is significant risk of a costly failure (Betáková, Okręglicka & Havierniková, 2021) and, in doing so, they are committing valuable and risky resources to the endeavour (Frishammar, Horte, 2007; Ferreras-Mendez et al., 2021).

This dimension of entrepreneurial orientation derives from Knight, who equated entrepreneurship with operating under conditions of uncertainty and creating the risk of failure. Entrepreneurial companies undertake uncertain actions, even though the probability of success measured in the achievement of set goals cannot be estimated, which therefore generates a risk of failure.

In surveys based on Covin and Slevin's proposal, risk-taking as a dimension of entrepreneurial orientation is assessed by answering questions on, for example, aggressive decision-making when the market situation is uncertain, or the propensity to take high-risk actions if there is a chance of high returns (Ferreras-Mendez et al., 2021).

The three basic dimensions of entrepreneurial orientation are interlinked because in order to bring new solutions to the market (innovativeness) it is necessary to anticipate and adapt to future market trends (proactiveness), and this is always accompanied by uncertainty and a certain risk of failure (risk-taking). In addition, a company must be independent in its actions so that it can make decisions and undertake activities quickly and without fear of the activity of its market rivals. These points lie behind introducing two further dimensions of entrepreneurial orientation: autonomy and competitive aggressiveness.

Autonomy is understood as independence in the actions of individuals or teams, which allows the realisation of business visions and ideas (Dess, Lumpkin & 2005) and which can be observed at the level of an entire company and at the level of its employees (Betáková, Okręglicka & Havierniková, 2021). Autonomy implies that a company has an intrinsic tendency to give freedom to individual employees and encourage them to be independent, creative, and to take advantage of business opportunities or new ideas (Saha et al., 2021). Thus, independence is a reflection of both a company's structure and its organisational culture. A company's autonomy is not always a manifestation of its strategic approach alone but sometimes also depends on the formal and legal environment in which it operates, including the regulations to which a given branch of industry or related branches are subject, and the capital and ownership links between a company and other business entities.

Competitive aggressiveness, as the last dimension of entrepreneurial orientation discussed in this article, refers to the lengths to which companies are willing to go in their determination to beat their competitors by acting first in the market and by reacting to the actions of their competitors (Betáková, Okręglicka & Havierniková, 2021). This requires constantly tracking and assessing competitors' weaknesses and using their own strengths to outperform them (Saha et al., 2021). The goal of competitive aggressiveness is to improve a company's market position relative to its business rivals (Dess, Lumpkin & 2005); its measurable outcomes include increased market share or customer loyalty (Saha et al., 2021).

Entrepreneurial orientation and its dimensions initially referred only to companies, and this approach is still prevalent in the literature. However, this approach has been further developed by researchers, one of whose increasingly popular proposals is individual entrepreneurial orientation. This construct applies the dimensions of entrepreneurial orientation that are used in analysing the level of a company to the analysis of the level of the individual – in both attitude and behaviour.

The perspective of a company – entrepreneurial orientation as a strategic construct

Entrepreneurial orientation is a multidimensional construct, but it is one that has primarily developed on strategic grounds because it is considered to affect the construction or strategic orientation of a company (Covin, Green, Slevin & 2006). Thus, this orientation at the company level is considered a strategic management approach (Richard, Wu & Chadwick, 2009) aimed at achieving growth.

In a broad sense, entrepreneurial orientation consists of processes, practices, and ways of decision-making which lead to the development of new and innovative activities that enable a company to stand out in the market (Kowalik, Danik & Sikora, 2017). A strategy based on entrepreneurial orientation aims to build a competitive advantage and guarantee market success to a company that is strongly dependent on its environment (Betáková, Okręglicka & Havierniková, 2021).

Entrepreneurial orientation provides the basis for identifying a company's dynamic capabilities (Kowalik, Danik & Sikora, 2017) as it indicates its propensity to identify and exploit business opportunities, which influence a company's growth. The application of a strategy aimed at entrepreneurial orientation allows companies to strengthen their activity by implementing innovative products or new business processes, entering new markets, and transforming their systems (Bratnicki, 2008). Entrepreneurial orientation is an organisational construct which is an entrepreneurial mindset and perspective that are oriented towards continuous renewal, innovativeness, and risk-taking (Betáková, Okręglicka & Havierniková, 2021).

Entrepreneurial orientation in a company is demonstrated in the strategic attitudes of innovativeness, proactivity, risk-taking, autonomy, and competitive aggressiveness. Such companies are focused on rapid and above-normal growth; they are willing to accept the risk of failure and the possible losses resulting from this failure. They are often visionary and transcend current patterns of operating in the market.

In general, entrepreneurial orientation can be a strategic attitude of companies, regardless of their size or the industry in which they operate. Research points to several variants of entrepreneurial orientation, including network entrepreneurial orientation, which analyses the dimensions of orientation through the prism of companies operating in a network of business relations. Network entrepreneurial orientation can be understood as promoting the joint activities of companies in a network that offer them an opportunity to participate in proactive initiatives. These initiatives aim to generate innovativeness and encourage the pursuit of risky ventures through pooling and using the resources at the network's disposal. Thus, what differentiates the network approach from the traditional company-level approach is not the dimensions of entrepreneurial orientation per se but the fact that, in a network, the strengths and resources of its members are combined in proactive, innovative, and risky activities to obtain benefits for the network as a whole (Monferrer et al. 2021). Thanks to joint activity and collaboration within a network, innovativeness, proactivity, and risk-taking remain the dimensions of network entrepreneurial orientation, but autonomy and competitive pressures become less important.

Another variant is sustainable entrepreneurial orientation, the essence of which lies in combining aspects of sustainability and entrepreneurial orientation in such a way as to pursue material and environmental benefits in an innovative way and to reinforce the concept of social cohesion. This leads to a qualitative change of attitudes, which combines intangible benefits (environmental and social) with profitability and competitiveness (Nasser, 2021).

A personal perspective – entrepreneurial orientation as an individual construct

Although entrepreneurial orientation originated as an expression of corporate strategy, it is increasingly argued that its dimensions may also reflect the attitudes and behaviours of individuals (Rudawska et al., 2021). The broadening of this perspective stems from the observation that a company's performance is not only dependent on organisational factors but also on the behaviour of individuals, and that the behaviour of one entrepreneur can also affect the activities of an organisation. More often than not, the activities of individuals and organisations are simultaneous, and the entrepreneurial orientation of a company is linked to that of the individuals working in it (Ritala et al., 2021).

Thus, entrepreneurial orientation can be treated as an individual construct which indicates individuals' attitudes and personality traits that often equated with the concept of an 'entrepreneurial person'. Individual entrepreneurial orientation is considered a psychological construct that encompasses beliefs, values, and practices which shape the way an individual makes decisions and takes actions in response to change under conditions of ambiguity and complexity (Rudawska et al., 2021). Thus, it should be understood as an employee's personal propensity to take innovative action in a proactive and risk-accepting manner (Ritala et al., 2021).

The traits or attitudes attached to the entrepreneurial orientation of the individual are usually ascribed to three groups of individuals: active entrepreneurs, potential entrepreneurs, and employees (Ritala et al., 2021).

Researchers of individual entrepreneurial orientation have adapted scales and statements that are used for measurements at the company level by modifying their organisational aspects to a personal level

(Rudawska et al., 2021) or referring to life attitudes (Taatila, Down, 2012). So, for example, in terms of innovativeness, in the personal approach individuals are asked how much they tend to buy new products before their friends do so, or whether they prefer new or traditional products. Risk-taking is assessed through the prism of what individuals think is a better form of obtaining information about their environment – through either gradual and cautious or daring behaviours. In assessing proactivity, individuals are asked, for example, to state the extent to which they initiate new activities or respond to those of others (examples after Rudawska et al., 2021).

The association between entrepreneurial orientation and companies' activities and performance

The areas of research on entrepreneurial orientation stem, at least in the first stage of the development of this construct, from its very nature. As entrepreneurial orientation is the strategic construct of a company, research is conducted in order to discover the impact of the dimensions of entrepreneurial orientation (at the level of a company as a whole, or at the level of individual employees and managers) on the key attitudes and outcomes of a company's activities, including, for example, sales growth (Covin, Green & Slevin, 2006) and economic performance (Dess & Lumpkin, 2005).

The results of research on these relations do not lead to clear-cut conclusions. Entrepreneurial orientation is considered a resource-intensive strategic orientation, but its implementation can result in either a significant improvement or a deterioration in a company's performance, depending on its operating context (Saha et al., 2021). On the one hand, a proactive attitude and striving for innovativeness – if successful – can bring substantial market benefits; on the other hand, they are also high risk and often resource-intensive, so they can significantly worsen the economic situation if they fail. Theoretical considerations and observations therefore indicate that the possibility of implementing effective entrepreneurial orientation depends on both the environment in which a company operates and its organisation, strategy, and culture (Fayolle, Basso & Bouchard, 2010).

In general, a positive correlation between entrepreneurial orientation and a company's performance has been established in developed countries, while studies in developing countries have indicated a positive correlation between aggressiveness, autonomy, and to some extent innovativeness and a company's performance. However, no correlation has been found between proactiveness and a company's performance, and a negative correlation has been revealed between risk-taking and a company's performance (Saha et al., 2021).

Other studies indicate an indirect relationship (through moderating factors) between entrepreneurial orientation and financial performance. Innovativeness, proactiveness, and risk-taking affect the propensity to learn and to strategize, which are two factors that shape a company's performance. Thus, the impact of the dimensions of entrepreneurial orientation is moderated by a company's strategy and its propensity to learn (Meekaewkunchorn, et al., 2021).

Another key area of influence of entrepreneurial orientation is in the development of new products. Research findings support this theoretical relationship and indicate that higher levels of this orientation lead to more-developed innovative processes and to increased success in new product development (Ferreras-Mendez, et al., 2021).

The relationship between entrepreneurial orientation and internationalisation, understood as any foreign activity of a company, is yet another important area of research. The results suggest that higher levels of entrepreneurial orientation – in particular, risk-taking – increase the scale of a company's international activity through greater knowledge intensity (Wach, Głodowska & Maciejewski, 2018). Entrepreneurial orientation also affects how long it takes for a company to become internationalised: companies that internationalise early are characterised by higher innovativeness and risk-taking than exporters that enter international markets in stages; additionally, these dimensions of entrepreneurial orientation affect the performance of companies that internationalise early (Kowalik, Danik & Sikora, 2017).

The growing importance of sustainable development in the economic policies of many countries and the desire to integrate environmental and social issues into economic discourse has also influenced another area of consideration. Researchers examine the impact of companies' entrepreneurial orientation on their social value creation, and the results of their studies indicate that innovativeness and proactivity are dimensions that foster social value creation, while autonomy and competitive aggressiveness weaken entrepreneurs' ability to create social value by generating negative externalities (Gauthier, Cohen & Meyer, 2021).

Some researchers who adopt an individual perspective assume that entrepreneurial orientation, as a determinant of a company's situation, should be analysed from the point of view of the attitudes of its managers or employees rather than from the perspective of the entire organisation. From the level of potential entrepreneurs, an important research area is the impact of individual entrepreneurial orientation (as a person's individual attitude) on entrepreneurial intention, i.e., his openness to potentially running his own company in the future. Research results reveal that individuals that display more innovativeness, risk-taking, and proactiveness are more likely to want to start and run their own business in the future (Rudawska et al., 2021).

Systematic reflection with conclusions and recommendations

Entrepreneurial orientation, together with its dimensions, is a strategic attitude of companies, through which they can achieve relatively rapid development oriented towards the introduction of new business solutions and the conquest of new markets. The possibility of successful entrepreneurial orientation as the strategic attitude of a company is strongly dependent on the context in which a company operates, including its market environment, legal environment, and technological environment, as well as its internal structure, organisational culture, and resources.

In recent years, the public space has witnessed a shift of attention from rapid and sometimes even aggressive economic growth towards sustainable development, taking into account economic, social, and environmental aspects. Thus, in the future it is important to develop the concept of sustainable entrepreneurial orientation, which will allow the innovative, proactive, and risk-taking activities and attitudes of companies to bring not only economic benefits but also to take into account environmental benefits and social cohesion.

References

Bratnicki M. (2008). Konfiguracyjne ujęcie przedsiębiorczości organizacyjnej, *Ekonomika i Organizacja Przedsiębiorstw*, *6*(701), 17–22.

Covin J.G., Green K.M., & Slevin D.P. (2006). Strategic Process Effects on the Entrepreneurial Orientation-Sale Growth Rate Relationship, *Entrepreneurship: Theory and Practice*, *30*(1), 57–81. DOI: 10.1111/j.1540-6520.2006.00110.x.

Covin J.G., & Wales W.J. (2012). The Measurement of Entrepreneurial Orientation, *Entrepreneurship: Theory and Practice*, *36*(4), 677–702. DOI: 10.1111/j.1540-6520.2010.00432.x.

Dess G.C., & Lumpkin G.T. (2005). The Role of Entrepreneurial Orientation in Stimulating Effective Corporate Entrepreneurship, *Academy of Management Executive*, *19*(1), 147–156. https://doi.org/10.5465/ame.2005.15841975.

Fayolle A., Basso O., & Bouchard V. (2010). Three levels of culture and firms' entrepreneurial orientation: A research agenda, *Entrepreneurship and Regional Development*, *22*(7–8), 707–730. DOI: 10.1080/08985620903233952.

Ferreras-Mendez, J.L., Olmos-Penuela, J., Salas-Vallina, A., & Alegre, J. (2021). Entrepreneurial orientation and new product development performance in SMEs: The mediating role of business model innovativeness. *Technovation*, *108*. DOI: 10.1016/j.technovation.2021.102325.

Frishemmar J., & Horte S.A. (2007). The Role of Market Orientation and Entrepreneurial Orientation for New Product Development Performance in Manufacturing Firms, *Technology Analysis & Strategic Management*, *19*(6), 765–788. DOI: 10.1080/09537320701711231.

Gauthier, J., Cohen, D., & Meyer, Ch.R. (2021). Entrepreneurial orientation, externalities and social entrepreneurship. *Society and Business Review*, *16*(3), 476–489. DOI: 10.1108/SBR-01-2021-0006.

Gaweł, A. (2016). Wirtualne gry strategiczne – narzędzie edukacji przedsiębiorczej czy eksperymentalna metoda badawcza w badaniach nad przedsiębiorczością? *Przedsiębiorczość – Edukacja*, *12*, 340–351.

Głodowska, A., Maciejewski, M., & Wach, K. (2019). How Entrepreneurial Orientation Stimulates Different Types of Knowledge in the Internationalisation Process of Firms from Poland? *Entrepreneurial Business and Economics Review*, *7*(1), 61–73. DOI: 10.15678/EBER.2019.070104.

Kowalik, I., Danik, L., & Sikora, T. (2017). Entrepreneurial orientation elements in the Polish international new ventures. *Baltic Journal of Management*, *12*(2), 194–213. DOI: 10.1108/BJM-03-2016-0070.

Meekaewkunchorn, N., Szczepańska-Woszczyna K., Muangmee, C., Kassakorn, N., & Khalid, B. (2021). Entrepreneurial orientation and SME performance: The mediating role of learning orientation. *Economics and Sociology*, *14*(2), 294–312. DOI:10.14254/2071-789X.2021/14-2/16.

Miller D. (2011), Miller (1983). Revisited: A Reflection on EO Research and Some Suggestions for the Future, *Entrepreneurship: Theory and Practice*, *35*(5), 873–894. DOI: 10.1111/j.1540-6520.2011.00457.x.

Monferrer, D., Moliner, M.A., Irún, B., & Estrada, M. (2021). Network market and entrepreneurial orientations as facilitators of international performance in born globals. The mediating role of ambidextrous dynamic capabilities. *Journal of Business Research*, *137*, 430–443. DOI: 10.1016/j.jbusres.2021.08.058.

Nasser, W.H. (2021). Innovativeness capital, sustainable entrepreneurial orientation, and the moderating role of entrepreneurial resilience. *Entrepreneurial Business and Economics Review*, *9*(3), 73–85. DOI: 10.15678/EBER.2021.090305.

Richard, O.C., Wu, P., & Chadwick, K. (2009). The impact of entrepreneurial orientation on firm performance: the role of CEO position tenure and industry tenure, *The International Journal of Human Resource Management*, *20*(5), 1078–1095. DOI: 10.1080/09585190902850281.

Ritala, P., Baiyere, A., Hughes, M., & Kraus, S. (2021). Digital strategy implementation: The role of individual entrepreneurial orientation and relational capital. *Technological Forecasting & Social Change*. *171*, DOI: 10.1016/j.techfore.2021.120961.

Rudawska, J., Pavliv, D., & Boneva, M. (2021). Individual Entrepreneurial Orientation and Entrepreneurial Intention. Comparative Research on Polish and Bulgarian Students. *Scientific Papers of Silesian University of Technology. Organization and Management Series*, *153*, DOI: 10.29119/1641-3466.2021.153.28.

Saha, K., Kumar, R., Dutta, S.K., & Tiwari, P. (2021), Validating multidimensional entrepreneurial orientation in emerging economies, *European Business Review*, *33*(5), 79–817. DOI: 10.1108/EBR-07-2020-0184.

Taatila, V., & Down, S. (2012). Measuring entrepreneurial orientation of university students. *Education + Training*, *54*(8/9), 744–760. DOI: 10.1108/00400911211274864.

Wach, K., Głodowska, A., & Maciejewski, M. (2018). Entrepreneurial Orientation, Knowledge Utilization and Internationalization of Firms. *Sustainability*, *10*. DOI:10.3390/su10124711.