

**The 6<sup>th</sup> International Conference on Economics and Social Sciences  
Geopolitical Perspectives and Technological Challenges  
for Sustainable Growth in the 21<sup>st</sup> Century  
June 15-16, 2023  
Bucharest University of Economic Studies, Romania**

**Achieving Strategic Agility in the IT Industry  
through Scenario Planning**

Miruna Florina LUNGU<sup>1\*</sup>, Ruxandra ARGATU<sup>2</sup>, Ioana Alexandra ONEA<sup>3</sup>

DOI: 10.24789788367405546-048

**Abstract**

*Today we live in a highly connected world, where change is unstoppable and unpredictable. Companies must navigate continuous challenges, explore future avenues, and survive in a highly competitive business environment. Taking into account the framework of turbulent changes, strategic agility has become an attractive opportunity for companies. Strategic agility represents the ability of a company to sense and respond to external change, providing a relevant response in a timely manner. In this respect, we aim to explore the use of scenario planning through the three dimensions of strategic agility: strategic sensitivity, leadership unity, and resource fluidity. Focusing on the IT industry in Romania, the paper outlines how strategic agility dimensions are applied with the help of the scenario planning method. The research questions follow a threefold approach, the paper aiming to determine what is strategic agility, the existence of a relationship between strategic agility and scenario planning, and how is strategic agility applied through scenario planning. The outcome aims to add valuable insights to the literature on the topic of strategic agility, its three dimensions, with application to IT through the support of scenario planning method. Thus, the paper's findings can be a guiding point for management teams in their decision-making endeavour, both in strategic and operational terms, fostering a wide view angle on possible opportunities to explore.*

**Keywords:** strategic agility, scenario planning, IT industry, decision making, Romania.

**JEL Classification:** M10, O14.

---

<sup>1</sup> Bucharest University of Economic Studies, Bucharest, Romania, lungu.miruna@gmail.com.

\* Corresponding author.

<sup>2</sup> Exiger Diligence Tech SRL, Bucharest, Romania, argatu.ruxandra@gmail.com.

<sup>3</sup> Bucharest University of Economic Studies, Bucharest, Romania, ioana\_alexandra\_o@yahoo.com.

## **1. Introduction**

In the context of continuous change, the business environment is highly volatile, and companies face numerous uncertainties. To properly manage market dynamics, companies must adopt a strategic approach in how they interact and respond to change. Additionally, research by Păunescu and Argatu (2020) underlines that the identification of risks and weaknesses, along with the appropriate communication of the efforts undertaken to stakeholders, can bring an increase in the financial performance of an organisation and protect its business value and the accumulation of competitive advantage.

In this respect, strategic agility enables companies to deal with such changes by sensing and responding quickly to them in an effective way. Kale et al. (2019) agree that agility is crucial for enterprises, especially when faced with changes, market risk, and uncertainties. Agility provides the relevant structure for managers and leaders to continue to maintain a flexible approach and adapt to internal and external environments. In addition, Tsilionis and Wautelet (2022) define agility as a multifaceted concept that encompasses both top-down and the bottom-up collaboration and is based on initiatives that can provide a rapid response when faced with organisational challenges. Moreover, agility is frequently associated with dynamic capabilities, meaning the abilities required to develop competitive advantages and expand through innovation.

Shams et al. (2021) highlight that dynamic capabilities encompass the main three attributes usually associated with strategic agility, namely strategic sensitivity, collective commitment, and resource fluidity. The authors acknowledge that organisations should be able to operate in a challenging environment and make decisions quickly, while being aware of internal dynamics in the firm and having the ability to reconfigure business structures and resource configuration. Furthermore, Adomako et al. (2022) reveal that dynamic capabilities do not refer only to improved firm performance, but also to organisational learning, as the ability to exploit opportunities is founded on the business response when faced with changing market circumstances. Leaders play a key role in understanding the challenges faced by the company and building the internal knowledge base through technological and networking capabilities, internal organisational culture, and its values as vital for improving the capabilities of strategic agility. In this sense, providing a clear direction on how the organisation configures internal and external knowledge is crucial. This is an important competency in management skills and an expression of overall organisation performance (Shams et al., 2021). Chan and Muthuveloo (2020) highlight that human capital development and high- performance systems, as well as the organisational culture, are major attributes of organisational capabilities. Having strong and firm organisational capabilities can help organisations better face a dynamic and challenging environment. Knowledge is the foundation of the organisational capabilities processes; therefore, organisations that are focused on the dissemination and interpretation of knowledge usually result in being more innovative and agile.

The capacity to adapt to market changes and identify opportunities in times of ambiguity is an important component of agility called strategic sensitivity. In order to develop competitive advantage, companies must prepare to participate in both local, national, and international markets. Agility is a concept usually defined related to the development of competitive advantage, as companies act in an agile manner when faced with a “variable and unpredictable environment”. When looking to ensure agility adoption, companies should consider several factors, amongst which strategic partnerships, high quality, flexibility, and adaptation to change (Kale et al., 2019). Technological capabilities are crucial for the competitive advantage achieved by the organisation. Firms that have good performance in this sense can better foster innovation and perform several internal activities more efficiently. In addition, the networking capability provides an advantage for companies to gain access to more resources and achieve better communication with different partners. Furthermore, the authors agree that having strong networks is beneficial for organisations when faced with challenging market contexts. Having fruitful relationships with suppliers and customers can help companies overcome market difficulties and better exploit market opportunities (Adomako et al., 2022).

Arsawan et al. (2022) describe several indicators used to measure organisational agility. These include having the capacity to take advantage of opportunities in the market, ‘exhibit sensitivity to environmental changes’, and increase the speed of decision-making. All of these metrics are connected to dynamic capabilities that have resulted from managerial competencies and the implementation of internal collaborative processes. Strategic flexibility is deeply based on dynamic perceptions of the market and the ability to influence resources. Resources are in turn influenced by the knowledge flow existing within the organisation, and scholars agree that the companies that manage to increase the value of organisational knowledge can achieve stability and become more innovative faster. Strategic partnerships provide a series of benefits to companies by helping them meet early customer expectations and introduce new products in a timely manner. Several scholars acknowledge that agility is directly correlated to human performance, the technologies, and processes within the firm. In this sense, three metaskills are identified, namely strategic sensitivity, leadership unity, and resource fluidity. Strategic sensitivity encompasses a thorough understanding of the environment, and this concept ensures that agility is correlated to firm performance. By being aware of the changes within the market and being able to assess information quickly, businesses ‘can gain competitive advantage and improve their performance’ (Kale et al., 2019).

Doz and Kosonen (2008) also introduced strategic agility as an ability of the company to sense and react to changes taking place within the business environment. The authors advise that strategic agility is a generic concept, which can be enhanced through three key dimensions: strategic sensitivity, resource fluidity, and leadership unity.

As companies aim to stay ahead of competitors, it is critical to ensure consistency and capture market opportunities, including during turbulent times. The current paper focuses on the first dimensions of strategic agility, strategic sensitivity,

which in the acceptance of Doz and Kosonen (2010) allows companies to sense change through superior anticipation approach. Given this, scenario planning represents a way to achieve strategic agility by providing an outlook on various decision-making options.

The purpose of this paper is to answer the following research questions: (1) What is strategic agility? (2) Is strategic agility related to scenario planning? (3) How is strategic agility applied through scenario planning? The paper opens with an overview of the literature, emphasising key theoretical insights about the topic, followed by methodology which describes the research method used and its implications. Next, the paper outlines the findings of the analysis and main takeaways in the conclusion section.

## **2. Problem Statement**

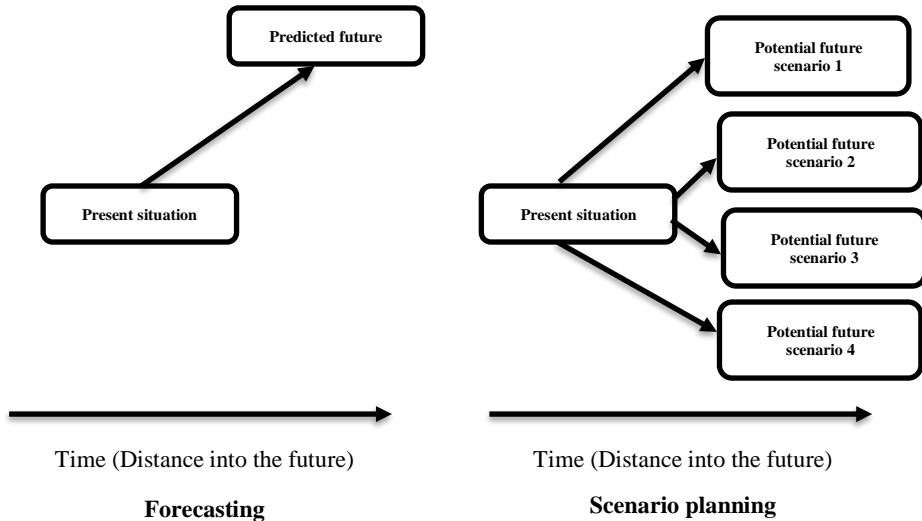
As companies experience various changes over their life cycle, they need to acknowledge the impact of change and how they can mitigate its generated risks and turn unexpected change into opportunities while staying relevant and competitive within the business environment. Christofi et al. (2021) advise that strategic agility represents a concept that is used cross-industry, but considering it is widespread, there are still gaps to be covered by the literature. However, the authors indicate that in recent years there has been increased interest in the topic. The same view is supported by Elali (2021) who argue that recent worldwide events such as the global pandemic or the global financial crisis from 2008 have provided evidence that anytime the business environment can face unexpected change. The author advises that strategic agility represents a tool to successfully manage change, help companies navigate across uncertainty, and extract value from unexpected situations. The current paper aims to fill the gap of using strategic agility through scenario planning for IT companies. At the same time, Varum and Melo (2010) advise that there is a gap in research when it comes to scenario planning application in business, hence the authors encourage researchers to explore the topic and recommend its use mostly to corporate environments.

Doz and Kosonen (2008) note that strategic agility embeds three dimensions: strategic sensitivity, resource fluidity, and leadership unity. According to the authors, strategic sensitivity represents a company's ability to sensing opportunities and risks and frame them in a strategic manner as a response to change. When it comes to resource fluidity, Doz and Kosonen (2008) indicate that it is an ability of the company to mobilise and reshuffle resources to secure efficient reaction to change. Furthermore, the authors advise that leadership unity, the third dimension of strategic agility, complements strategic sensitivity and resource fluidity, and represents the ability of the company to secure collective commitment through the contribution of leadership teams.

Further on, scenario planning is regarded by Doz (2020) as a way to enable strategic sensitivity and achieve strategic agility. The author indicates that scenario planning, together with anticipation and experimentation, allows companies to have a wider perspective on how to approach upcoming changes and properly assess

decision making. Dean (2019) makes a clear distinction between scenario planning and forecasting. This difference between the two approaches is reflected in Figure 1:

**Figure 1. Distinction between forecasting and scenario planning**



Source: Authors' own representation adapted from Dean (2019).

As outlined in Figure 1, Dean (2019) advises that forecasting and scenario planning should not be confused, as forecasts provide a single-point perspective of the future, while scenario planning provides multiple angles of potential future outcomes. The same view is supported by Peterson et al. (2003), who indicate that forecasting focuses on a particular perspective, while scenario planning is a more complex method, which encourages creativity and broadens the perspectives over a situation.

It is significant to note that valuable pivotal research on the topic of scenario planning was brought about by Schoemaker (1995). The author's work continues to remain relevant and timeless, as his research mixes theoretical and practical perspectives on scenario planning. In the view of Schoemaker (1995), scenario planning represents a creative tool to explore the future, opening opportunity for strategic thinking and rational decision making. The author advises that scenario planning can help companies during both regular business decision times, but it can make a significant difference when prepared in anticipation of crisis situations. According to the author, scenario planning provides key alternatives for exploration, which can consider both favourable and more challenging times for a company. As a result, Schoemaker (1995) considers that scenario planning enables strategic preparation and unlocks proactive thinking for managerial teams.

### 3. Research Questions / Aims of the Research

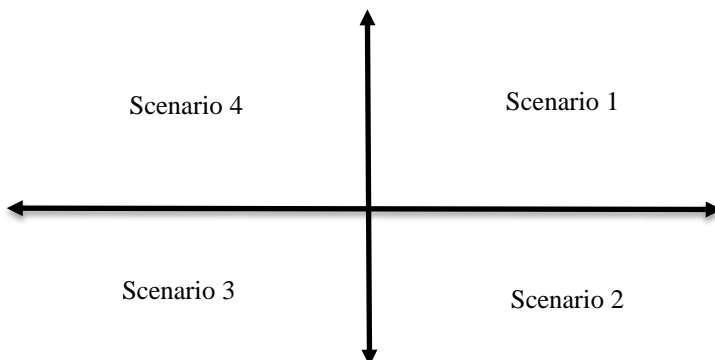
According to the valuable research insights summarised previously, the paper aims to provide an answer to three research questions: (1) What is strategic agility? (2) Is strategic agility related to scenario planning? and (3) How is strategic agility applied through scenario planning?

The research questions are formulated by referring to research by Dean (2019), who underlines a differentiation between forecasting and scenario planning. In addition, the paper's aim is constructed based on Arsawan et al. (2022), who argue that the organisations which can boost the utility of their organisational knowledge can attain innovation at a faster pace. A supplementary basis for research questions' formulation is provided by research on the conceptualisation of strategic agility, scenario planning, and the utility of scenario planning in the fulfilment of strategic agility (Christofi et al., 2021; Doz, 2020; Doz, Kosonen, 2008; Doz, Kosonen, 2010; Schoemaker, 1995).

### 4. Research Methods

For the current paper, the author has used Dean (2019) to apply scenario planning as a research method. The first step of the scenario planning method is *Scoping*, where certain assumptions must be developed to serve as a scope of work in analysing what potential scenario might occur. Secondly, the *Information search* step helps to identify additional data and details about the assumption defined under the first step of scenario planning, which may be coupled with identifying certain *Trends or uncertainties* step while conducting the analysis. As per Dean (2019), the key stage of scenario planning process is represented by the *Scenario building* step. Under this milestone, the author advises that scenario planning can encompass up to eight or more scenarios, but the most recommended number of scenario planning is four, also known as two-axes scenario planning. The below Figure 2 outlines this model of scenario planning.

**Figure 2. Scenario building with two-axes scenario planning**



Source: Authors' own representation adapted from Dean (2019).

It is significant to note that Dean (2019) encourages the use of two-axes scenario planning to limit the number of scenarios developed and to provide a more concise and focused approach on possible alternatives in securing a relevant decision. The last two steps of scenario planning process as per Dean (2019) represent *Strategy definition* and *Monitoring* steps. Through these two steps, one may ensure that the scenarios developed contribute as actual input to strategy development. At the same time, monitoring the evolution of defined scenarios over time is critical in securing a proper wrap-up of this research method.

As per Weigel and Ruecker (2017) an area where scenario planning is applied is represented by the procurement process. Nielsen and Saha (2018) confirm the applicability of scenario planning in the case of the procurement process. In this respect, for the current paper, using Dean (2019), the authors aim to outline the use of scenario planning as a way of to achieve strategic agility in the case of a potential procurement investment of a large IT company operating in Romania. For clarity, the procurement process proposed by Weigel and Ruecker (2017) is summarised in Figure 3:

**Figure 3. Procurement process**



*Source:* Authors' own representation adapted from Weigel and Ruecker (2017).

According to Weigel and Ruecker (2017) the procurement process is founded with identification of a need or demand of the company. The next steps of the process, tendering, and evaluation of tendering seek to gather input from external vendor, which is analysed based on evaluation criteria developed by the company to secure best decisions for business award to vendors. Further on, Weigel and Ruecker (2017) claim the following steps of the procurement process refer to the actual execution of the selection decided within award step. Under these milestones, purchase orders are created and sent to selected vendor, then followed up bilaterally by the company and vendors, which receive these purchase order requests.

A similar view is shared by Varum and Melo (2010), who indicate that scenario planning represents an approach embraced by managerial teams in developing strategy across business processes. According to the authors, applying scenario planning on a business process may provide a pre-experience of the impact of a potential change and a key business decision. Despite its wide usage across various situations, Varum and Melo (2010) advise that in business, scenario planning can represent a support in analysing various options to ensure best decision. Peterson et al. (2003) agree with Varum and Melo (2010) and indicate that scenario planning represents a useful tool to managers, leaders, and in general to key decision makers, helping them to balance on various options before selecting a final direction for their challenge.

Tapinos (2013) argues that scenario planning represents a method that is embraced by corporate companies, as it simplifies complex decision making. As advised by the author, this method enables managerial teams to have a clear overview on potential outcome decisions. It provides leaders with the possibility to strategize without any commitment and understand opportunities and risks available for each option. A similar view is shared by Chermack et al. (2001) who advise that scenario planning is used by large companies to manage uncertainty. According to the authors, scenario planning is used by corporate companies as an opportunity to learn and explore, which contributes to enhanced competitive advantage.

## 5. Findings

To begin with, under *Scoping*, following the first step of scenario planning as per Dean (2019), the author introduces a scope of work, summarised in the below Table 1. According to Weigel and Ruecker (2017), in procurement, this step is also known as assessment of demand.

**Table 1. Assumption for Scoping step**

<b>Scope of work</b>
Company needs: An IT multinational company operating in Bucharest, Romania, intends to renew by May 2024 all the laptop devices used by its employees through a consolidated investment.
Volume: 4,500 laptops
Countries in-scope: 35 countries
Timeline: May 2023-December 2023
Models' distribution: Standard performance=1500 High performance=2500 Premium performance=500
Decision forum: IT Department, Procurement Department, Executive Management
Objectives and wanted position: Commercial: a) Secure standard price for all devices across locations. b) Reduce the allocated budget through consolidated investment. c) Signed contract with selected vendors. Technical: d) Level 3 support across all locations.
Candidates: Invite top five suppliers in the market.

*Source:* Authors' own representation.

Next, Dean (2019) recommends the use of *Information search* step for scenario planning, while Weigel and Ruecker (2017) recommend the use of *Tendering* for procurement. Starting with the above assumption of the scope of work, multiple vendors can be invited to provide their proposals to these requirements. To help in projecting the best possible alternatives, both Dean (2019) and Weigel and Ruecker (2017) recommend having an analysis step. It may be *Trends and uncertainty* step



or *Tender evaluation* as per Weigel and Ruecker (2017). The authors recommend the use of a generic and objective evaluation matrix based on the requirements defined under the *Scoping* step. In the case of the current paper, an evaluation matrix may be developed as follows, per Table 2:

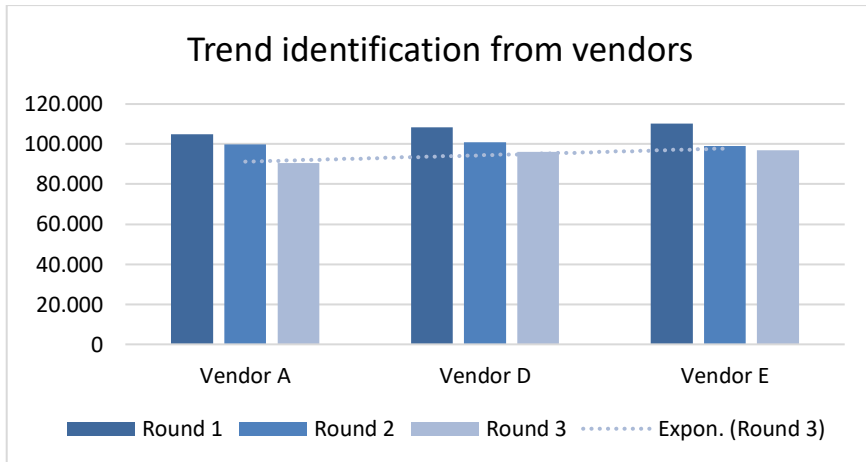
**Table 2. Evaluation matrix**

Criteria		Vendor				
		A	B	C	D	E
Price	Round 1	105,000	116,250	116,250	108,500	110,250
	Round 2	99,750	113,500	113,500	101,000	99,000
	Round 3	90,500	113,500	113,500	96,000	97,000
Budget		Yes	Yes	Yes	Yes	Yes
Contract		Yes	No	No	Yes	Yes
Support		Yes	No	No	Yes	Yes

Source: Authors’ own representation.

As advised by Dean (2019), building on the work of *Scoping* and *Information search* steps, the below trends may be observed in the tendering behaviour of the vendors. Figure 4 outlines that in round 3, vendor A provided the lowest proposal, followed by vendor D and E, which have close proposals.

**Figure 4. Trend identification in scenario planning**

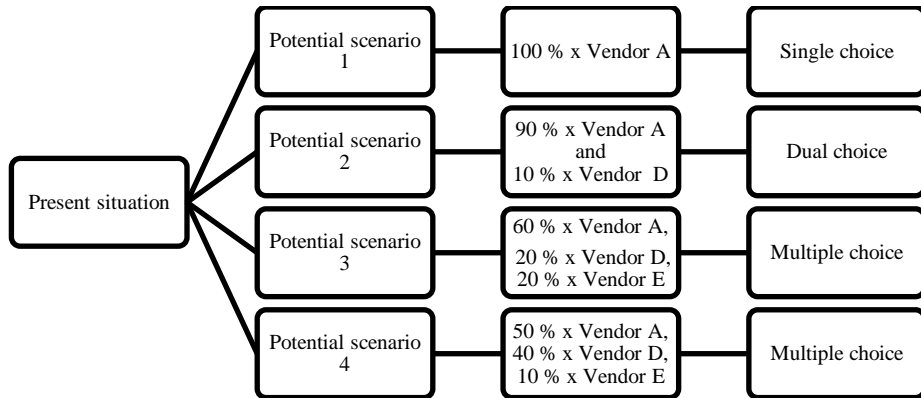


Source: Authors’ own representation.

Based on the above data, as per Dean (2019), one can develop *Scenario building* step, and according to Weigel and Ruecker (2017) the *Awarding* step may be decided based on the available options defined as potential future scenarios. In this respect, multiple award options may be considered. It is significant to note that some vendors, such as vendor B and vendor C, do not meet all the criteria of the evaluation matrix, and hence they will be excluded from the scenario planning analysis due to the lack

of compliance with the company's requirements. The building of scenario planning has been shown in Figure 5:

**Figure 5. Scenario planning building**



Source: Authors' own representation.

As outlined above, starting from a defined assumption, scenario planning enables the development of multiple perspectives. In this case, the company may select either a single vendor to invest from or follow a dual and multiple source strategy. In line with Dean (2019), scenario planning provides various commercial alternatives which may be generally explored by any company which is looking to secure efficient decision making for financial investments. These options for commercial decision in the case of an IT company may serve as guidance for other leaders faced with similar decisions about their investment in technology and not only.

Weigel and Ruecker (2017) argue that through negotiations, tendering can be improved and contribute to a more cost-effective investment. Coupled with scenario planning, the company may assess the costs incurred for each potential future scenario, together with evaluating other selection criteria defined in-house. Nielsen and Saha (2018) confirm that mapping scenario planning in procurement can outline to managers the opportunity of a potential unexploited choice, and it can be carefully reviewed without bringing any risks to the business.

Depicting the utilization of scenario planning in an IT organisation operating in Romania and conducting a procurement process for laptop device renewal, the paper confirms previous research (Christofi et al., 2021; Elali, 2021; Varum, Melo, 2010), who claim that organisations may be subject to unexpected modifications anytime and that research on strategic agility and the applicability of scenario planning in business presents gaps to be filled. Secondly, the paper's findings are in line with studies recognising the high utility of organisational knowledge, strategic agility, scenario planning and the identification of risks and weaknesses in learning and reaching competitive advantage (Arsawan et al., 2022; Chermack et al., 2001; Dean, 2019; Doz, 2020; Doz, Kosonen, 2008; Doz, Kosonen, 2010; Kale et al., 2019; Păunescu, Argatu, 2020; Schoemaker, 1995; Tapinos, 2013).

## 6. Conclusions

Navigating in conditions of uncertainty demands organisations to assess all possible outcomes of a strategy and choose the one with the highest added value. Research holds that displaying continuous concern in this sense is a differentiator between proactive organisations and slow-paced ones. Firstly, the paper aimed to outline what strategic agility represents. With the help of Doz and Kosonen (2010), the authors introduced the definition of strategic agility, together with its key dimensions: strategic sensitivity, resource fluidity, and leadership unity. At the same time, scenario planning has been presented as a method to achieve strategic agility. Based on Dean (2019), the authors presented how scenario planning can be used in combination under the assumption of an IT company investment driven through the procurement process. This approach shows that scenario planning is a versatile method that offers multiple perspectives for a given situation and allows decision making.

The authors recommend that the scenario planning proposal introduced through the current paper can serve as a reference for managerial teams facing decision making on both strategic and operational decisions, especially in the IT industry. Using scenario planning, one can sharpen its awareness on potential opportunities and risks, having a wider view on multiple potential cases which can be explored prior to execution.

At the same time, the current paper aims to contribute to the literature gap on the topic of scenario planning identified by Varum and Melo (2010), who highlighted the insufficiency of research on the applicability of this instrument in the business context. The findings of the paper indicate the potential effects of scenario planning in procurement as a business process. Furthermore, this approach may introduce a greater understanding of the potential contribution of the scenario planning method in the development of a sustainable strategy and the addition of confidence in decision-making.

A research limitation of the paper is the sole focus on the procurement process of the IT organisation that was the subject of the research, and the non-inclusion of other processes performed by the organisation.

Further research may explore the implementation of the scenario planning tool in procurement activities conducted by other organisations operating in the IT field in Romania.

## References

---

- [1] Adomako, S., Amankwah-Amoah, J., Donbesuur, F., Ahsan, M., Danso, A., Uddin, M. (2022). Strategic agility of SMEs in emerging economies: Antecedents, consequences and boundary conditions, *International Business Review*, 31(6), 102032.
- [2] Arsawan, W.E., Hariyanti, N.D.K., Atmaja, M.A.D.S., Suhartanto, D., Koval, V. (2022). Developing Organizational Agility in SMEs: An Investigation of Innovation's Roles and Strategic Flexibility, *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 149.

- [3] Chan, J.I.L., Muthuveloo, R. (2020). Vital organisational capabilities for strategic agility: an empirical study, *Asia-Pacific Journal of Business Administration*, 12(3/4), 223-236.
- [4] Christofi, M., Pereira, V., Vrontis, D., Tarba, S., Thrassou, A. (2021). Agility and flexibility in international business research: A comprehensive review and future research directions, *Journal of World Business*, 56(3), 101194.
- [5] Chermack, T.J., Lynham, S.A., Ruona, W.E. (2001). A review of scenario planning literature, *Futures Research Quarterly*, 17(2), 7-32.
- [6] Dean, M. (2019). Scenario planning: A literature review. A report of project, Multi-modal Optimisation of Roadspace in Europe) Project - Work Package 3 (Future Scenarios: New Technologies, Demographics and Patterns of Demand), Project 769276-2, 1-25.
- [7] Doz, Y., Kosonen, M. (2008). *Fast strategy: How strategic agility will help you stay ahead of the game*, New York, Pearson Education.
- [8] Doz, Y.L., Kosonen, M. (2010). Embedding strategic agility: A leadership agenda for accelerating business model renewal, *Long Range Planning*, 43(2), 370-382.
- [9] Doz, Y. (2020). Fostering strategic agility: How individual executives and human resource practices contribute, *Human Resource Management Review*, 30(1), 1-14.
- [10] Elali, W. (2021). The importance of strategic agility to business survival during corona crisis and beyond, *International Journal of Business Ethics and Governance*, 4(2), 1-8.
- [11] Kale, E., Aknar, A., Basar, O. (2019). Absorptive capacity and firm performance: The mediating role of strategic agility, *International Journal of Hospitality Management*, 78, 276-283.
- [12] Nielsen, I.E., Saha, S. (2018). Procurement planning in a multi-period supply chain: An epiphany, *Operations Research Perspectives*, 5, 383-398.
- [13] Păunescu, C., Argatu, R. (2020). Critical functions in ensuring effective business continuity management. Evidence from Romanian companies. *Journal of Business Economics and Management*, 21(2), 497-520.
- [14] Peterson, G.D., Cumming, G.S., Carpenter, S.R. (2003). Scenario planning: a tool for conservation in an uncertain world, *Conservation Biology*, 17(2), 358-366.
- [15] Schoemaker, P.J.H. (1995). Scenario planning: a tool for strategic thinking, *Sloan Management Review*, 36(2), 25-40.
- [16] Shams, R., Vrontis, D., Belyaeva, Z., Ferraris, A., Czinkota, M.R. (2021). Strategic agility in international business: A conceptual framework for “agile” multinationals, *Journal of International Management*, 27, 100737.
- [17] Tapinos, E. (2013). Scenario planning at business unit level, *Futures*, 47, 17-27.
- [18] Tsilionis, K., Wautelet, Y. (2022). A model-driven framework to support strategic agility: Value-added perspective, *Information and Software Technology*, 141, 106734.
- [19] Varum, C.A., Melo, C. (2010). Directions in scenario planning literature – A review of the past decades, *Futures*, 42(4), 355-369.
- [20] Weigel, U., Ruecker, M. (2017). The strategic procurement practice guide, *Springer*, 10, 978-973.