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2. PRIJAVA TEME DOKTORSKE DISERTACIJE

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ŽIVOTOPIS DOKTORANDA/DOKTORANDICE

Appendix 1. Europass CV Jelena Uzelac Vasic

1. NASLOV PREDLOŽENE TEME

1.1. Hrvatski

N/A

1.2. Engleski

Understanding Business ecosystem context and its relationship with firm strategy and performance in the IT industry

1.3. Područje/polje

Social science/economics

1.4. Ključne riječi (minimalno pet riječi)

Business Ecosystem, strategy, Dynamic capabilities, IT industry, performance

2.1. Mentor/i Titula, ime i prezime Ustanova, država E-pošta Prof.dr.sc., redoviti profesor u trajnom zvanju Prof. Dr. Sc. Marija Kastelan Mrak E-pošta E-pošta Ekonomski fakultet, Sveučilište u Rijeci, Hrvatska Faculty of Economics and Business, University of Rijeka, Croatia marija.kastelan.mrak@efri.uniri.hr

Minimalni opći kriteriji za odabir mentora:

- mora imati doktorat znanosti i biti izabran u znanstveno zvanje;
- mora imati najmanje dvije godine poslijedoktorskog iskustva;
- mora biti voditelj (suvoditelj ili partner) domaćeg ili međunarodnog projekta ili biti na drugi način u mogućnosti osigurati podršku za provedbu znanstvenih istraživanja;

mora zadovoljavati minimalne kirterije izvrsnosti.

Ukoliko mentor nije zaposlenik Sveučilišta u Rijeci doktorandu se obavezno dodjeljuje komentor sa sastavnice Sveučilišta koja provodi doktorski studij.

2.2. Komentor

Titula, ime i prezime	Ustanova, država	E-pošta

3. OBRAZLOŽENJE TEME

3.1. Sažetak na hrvatskom jeziku (maksimalno 4000 znakova s praznim mjestima)

Jedna od najdinamičnijih i najuzbudljivijih tema u suvremenoj ekonomskoj literaturi je poslovna okolina (ekosustav) i njena evolucija u vremenima kompleksnih i nepredvidivih vanjskih pritisaka na održivost poslovanja. Iako istraživanje pomalo napreduje već 30 godina, definicija ekosustava, odrednice njegovih granica, struktura i procesa, još uvijek nisu jednoznačne i nužno je teoretsko usklađivanje. Svjedoci smo brojnih globalnih slučajeva koji pokazuju da je oblik poslovnog ekosustava naša sadašnjost, ali i izvjesna budućnost. Uz to, postoji značajna praznina u istraživanju u analizi konteksta poslovnog ekosustava na razini poduzeća, posebice kako kontekst percipiraju njegovi članovi, kako utječe na ponašanje i izvedbu poduzeća i koje bi kritične sposobnosti trebalo razviti u poslovanju konteksta ekosustava. Koliko znamo, ovo je prvo empirijsko istraživanje koje ima za cilj odgovoriti na prethodna pitanja integrativno i multidisciplinarno, pružajući konstrukte i varijable kombinirane na jedinstven način, u okviru IT industrije. Rezultati istraživanja doprinijet će na više razina, kako znanstvenih tako i praktičnih. Rezultati ove studije će rasvijetliti fenomen poslovnog ekosustava, kao i pridonijeti njegovoj standardizaciji u smislu definicije i primjene. Kao prva kvantitativna studija na razini poduzeća u ovom području u ovoj regiji, pružit će značajan uvid u korelaciju i međusobni utjecaj strukture poslovnog ekosustava, strategije poduzeća, sposobnosti i učinka, kao i identificirati kritične sposobnosti za uspjeh u ekosustavu. Govoreći o praksi, rezultati će utjecati na regulatore i institucionalne članove poslovnih ekosustava da poboljšaju svoje aktivnosti, kao i na menadžere i lidere u domenama strateškog menadžmenta i liderstva. Ova se studija može smatrati pionirom u sveobuhvatnim studijama poslovnih ekosustava u regiji i temeljem za buduća istraživanja u ovom području.

3.2. Sažetak na engleskom jeziku (maksimalno 4000 znakova s praznim mjestima)

One of the most dynamic and exciting topics in contemporary economic literature has been the business environment (ecosystem) and its evolution in times of complexity and unpredictable external pressures on business sustainability. Even though research on this concept has been progressing slowly for the last 30 years, determinants of its definition, boundaries, structure, and processes are still unambiguous and require theoretical alignment. We are witnessing numerous global cases that show that the business ecosystem is the present environment and the environment of the future. Furthermore, there is a significant research gap in firm-level analysis of a business ecosystem context, particularly how the context is perceived by its members, how it affects firms' conduct and performance, and what kind of critical capabilities should be developed in the business ecosystem context. To the best of our knowledge, this is the first empirical research that aims to answer the prior questions integratively and multidisciplinaryly, providing constructs and variables combined in a unique way in the IT industry. The research results will contribute to multiple levels, both scientific and practical. This study's results will shed light on the business ecosystem phenomenon, as well as contribute to its standardization in terms of definition and applications. As the

first quantitative firm-level study in this field in this region, it will provide significant insights into the correlation and mutual impact of business ecosystem structure, firm strategy, capabilities, and performance, as well as identify critical capabilities for success in the ecosystem environment. Speaking about the practical, the results will influence regulators and institutional members of business ecosystems to improve their activities, as well as managers and leaders in the strategic management and leadership domains. This study may be considered a pioneer in business ecosystems comprehensive studies in the region and a ground for future research in this field.

3.3. Uvod i pregled dosadašnjih istraživanja (preporučeno 7000 znakova s praznim miestima)

The business ecosystem (BE) topic is the subject of increasing scientific and practical research, especially with the rise of sustainability and ESG trends. Research by the BCG Henderson Institute found that in annual reports, the term "ecosystem" occurs 13 times more frequently now than it did a decade ago. While business ecosystems have always been with us, the managed BE organizational form grew up in the paradigmatic innovation industry of the late 20th century: the high-technology computer business (Moore, 2006). The phenomenon is critical in distinguishing between the old and the new economies. The old industrial economy was driven by economies of scale; the new information economy is driven by the economics of networks (Karhiniemi, 2009). Despite its essential importance, the BE concept still lacks a theoretical alignment regarding its definition and deeper meaning, members and their relations, and overall strategic importance. Similarly, many managers still struggle with the broad scope of the concept, unclear definitions, and the lack of practical advice. These gaps become more critical, considering that creating ecosystems or participating in them will become one of the main strategic tasks of businesses in the coming decades (Korovkin et al., 2021).

3.3.1 Systematic Literature Review (SLR) on Business Ecosystem

As indicated in Figure 1, BE research popularity has gradually increased in the last ten years. After Moore introduced the term "business ecosystem" in 1993, the concept has been researched from various perspectives: innovation, circular economy, ecology, sustainability, collaborative networks, open systems, platforms, and business models (Espina-Romero, Guerrero-Alcedo, and Ossio, 2023); grounded theory and definition (Moore, 1993; lansiti and Levien, 2004; Teece, 2007; Adner and Kapoor, 2010; Bogers et al. 2019); stakeholders and BE members' relation (Yu, Li and Zhao, 2011; Lu et al., 2014; Wieniger et al., 2020; Awano et al. 2022); strategy and performance (lansiti and Levien, 2004; den Hartigh et al., 2013; Saeed Fallah Tafti et al., 2015); capabilities and mindset needed for the BE (Attour and Barbaroux, 2016; Riquelme-Medina et al., 2022).

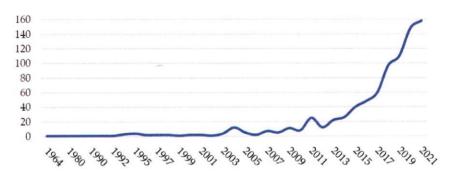


Figure 1. The increasing amount of research on the business ecosystem (Yoon, Moon, and Lee, 2022)

To take stock of empirical prior research on BE, a structured literature review (SLR) was conducted, guided by a multistep process. The choice of databases used for this research was guided by the frequency of concrete databases used in bibliometric studies in management and organization. Web of Science (WOS) is the most common source of bibliographic data and the most frequently used database in strategic management studies. Google Scholar has become the most widely used tool for searching scientific publications since it includes a broader range of publications than WOS and citations (Zupic and Čater, 2015), and Scopus was selected because it has wide coverage and regular updates (Espina-Romero et al., 2022). All publications from 2000-2023 were included to capture the latest development of the study, as well as articles from key authors from 1993-2000. The search was limited to articles containing business ecosystem in the title, abstract, or keywords. Such a list included 120 articles written in English only, mainly on strategic management, innovation, and technology. The articles that discuss biological and natural ecosystems, social ecosystems, the economy as an ecosystem, industrial ecosystems, and ecosystem models of technology evolution were excluded since they are out of the scope of this review and study. The abstracts and the first part of the articles were analyzed more thoroughly to identify the most relevant articles and authors. The main aspects of the BE concept were analyzed with the co-word content analysis method (Zupic and Čater, 2015) through the following dimensions: definition, structure, actors, relations-dynamics, results-performance, and future research areas. Appendix 2 and the following paragraph explain the review details.

Appendix 2. SLR conducted by the author of the research

Even though the research on this concept started 30 years ago, its definition still doesn't have theoretical alignment. More than 30 interpretations could be identified in the existing research literature, most on conceptual work, and empirical studies have only been conducted to a small extent (Wieninger et al., 2019). Moore (1993, 1996) and lansiti and Levien (2004) are the first and most cited authors regarding the concept's definition and most used meaning. Moore first introduced the concept of a BE in 1993; in 1996, he described it more precisely as follows. "An economic community supported by a foundation of interacting organizations and individuals - the organisms of the business world. The member organism includes suppliers, lead producers, competitors, customers, and other stakeholders. Over time, they coevolve their capabilities and roles and align themselves with the direction set by one or more central companies" (Moore J, 1996). Iansiti and Levien (2004) define BE as interconnected and interdependent business networks of suppliers, distributors, outsourcing firms, makers of related products or services, and technology providers organized around a keystone actor (lansiti and Levien, 2004). Other authors focus on core technology and interdependence (Den Hartigh, E. and Van Asseldonk, T, 2004), on dynamic structures of interconnected populations (Peltoniemi and Vuori, 2004), and introduce the BE as a third organizational form defined by mutual commitment to the future (Moore, 2006). The period after 2006 brought some new perspectives on the concept, introducing the focus on customer-facing solutions (Adner, 2006), value for customers, focal value proposition materialization (Adner, 2017), and open exchange for continuous innovation (Hou and Shi, 2021). However, what remains unclear is the form of the BE concept. From community and network, through dynamic structure and organizational form, to the arrangement, concept, and "pillar of modern business thinking" (Moore, 2006).

When it comes to **BE structure**, in the last 15 years, there have been many articles offering frameworks and defining the main aspects BE consists of (Fathi, 1+ and Harandi, 2012; Thomas and Autio, 2014; Adner, 2017). A sort of consensus has been made regarding the current and future importance of the ecosystem as a structured approach (Adner, 2017), which identifies actors, positions, activities, and links between actors as essential elements of BE.

Since the **BE actors** are one of the most researched angles in this field, theoretical alignment is identified regarding the various members of BE, with the only difference in naming the leading actor—the ecosystem leader. Moore (1996) and lansiti and Levian (2004) classified a focal firm or leader as a keystone player.

BE members approach their **relations** with other members, and those relations change and co-evolve along with the life cycle of the BE – birth, expansion, leadership, and self-renewal (Moore, 1993). Co-evolution has been identified as a central dynamic characteristic in the BE literature. In the last ten years, concrete capabilities and approaches needed to manage relations have been identified: collaborative learning and knowledge sharing (Williamson et al., 2012; Thomas and Autio, 2014; Wulf and Butel, 2017), coopetition (Wieninger et al., 2019; Riquelme-Medina et al., 2022), business ecosystem embeddedness (Riquelme-Medina et al., 2023) and dynamic capabilities (Teece, 2017; Foss, Schmidt and Teece, 2023). There are just a few papers addressing these concepts, particularly in an empirical way within a large population, even though they are of critical importance in answering the question of how BE functions, why, and what that means for each member.

SLR shows that the area of results and performance of BE is significantly understudied, except for the BE health measurement, which was defined by lansiti and Levien in 2004 and focused mainly on financial indicators. Considering the complexity of the ecosystem environment, rapid changes, and different and numerous actors included, there is a need for the firm's performance to be estimated by at least one indicator of the strategy besides the financial indicator (Taouab and Issor, 2019).

Regarding areas for future research, within the entire period analyzed by this SLR, there is an identified need to understand what a BE is and what it is not, its main elements, and their relations (Bogers, Sims, and West, 2019). Secondly, there is a lack of firm-level analysis of BE and more empirical studies using primary data that consider all important BE topics from the last ten years.

3.3.2 Business ecosystem and strategic management theoretical connection

Even though the systematic study of BE has moved to the forefront of literature in business strategy, marketing, research and development, and the design of products and services (Moore, 2006), this concept requires a more profound understanding when it comes to its influence on firm's strategy and competitive advantage. The traditional approach that describes strategy as a tool or set of processes to create sustainable competitive advantage is no longer adequate. These brought an explosion in new strategy frameworks – over 114 by 2012 (Martin Reeves, Knut Haanaes, and Janmejaya Sinha, 2015), trying to answer the critical question – of how to choose the right strategy approach and what kind of resources and capabilities are necessary for the strategy implementation. This is where the evolution of strategic management and BE literature meets the alignment among the critical theories (Teece, Pisano, and Shuen, 1997) and navigates the same topics for future research. As shown in Figure 2, the conducted review focused on three dominant theoretical strategy approaches relevant to environmental certainty and complexity and their main assumptions. In the dominant approach in the 1980s – The Five Forces model, which urged firms to focus on positioning their customers, suppliers, and existing or potential competitors, little guidance was provided to managers concerning what resources they needed to compete or how they stood regarding complementors in alliances and ecosystems (Teece, 2023). The resource-based view (RBV) took a static view of competitive advantage: the advantage was obtained by amassing the right resources (Peteraf, 1993) and offered little or no answer on acquiring and developing unique resources and managing them over time. The Dynamic capabilities approach started with a study from 1997 focused on a

firm's processes, positions, and paths (Teece, Pisano, and Shuen, 1997), one of the two most cited papers from the economy and business. The capabilities are "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (Teece, Pisano, and Shuen, 1997). This approach made the elements of knowledge and learning (processes) equally important as assets and resources (positions). It can be concluded that the dynamic capability approach is one of the most relevant factors in creating a sustainable competitive advantage in environments of rapid change and is the central theory for future BE research on a firm level. According to the study from 2023, dynamic capabilities are one of the five essential topics the BE navigates (Espina-Romero, Guerrero-Alcedo, and Ossio, 2023).

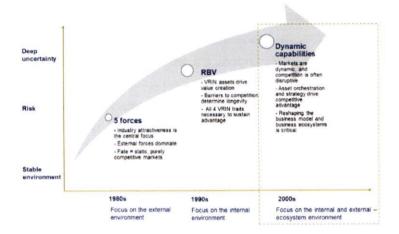


Figure 2. The evolution of strategic management; adaptation from (Teece, Peteraf, and Leih, 2016; Teece, 2023)

In conclusion, most BE studies mainly discussed concepts at a conceptual level - the features and roles of BE in the broader economy, and did not pay much attention to deeper and practical meaning, relationships between members, and the strategic importance of the BE for all firm members. These theoretical gaps are closely associated with the vital suggestion from a managerial perspective that the central research point should be a strategy, critical capabilities, and leadership role over and within the BE. Furthermore, most prior studies are based on literature review or secondary data analysis, so there is a huge need for more extensive empirical research with primary data (Shou, Shi, and Ren, 2022) in firm-level analysis of a BE context and performance (Awano and Tsujimoto, 2022). These conclusions open the large room for the author's dissertation topic – understanding the concept of the BE, particularly how the BE context is perceived by its firm members, the directions of its influence, and its relation with the firm strategic behavior, critical capabilities, and performance.

3.4. Cilj i hipoteze istraživanja (preporučeno 700 znakova s praznim mjestima)

Considering the significant need for further exploring the BE as a contemporary business context, this research will focus on conceptualizing known theoretical concepts in a unique and integrative way to answer the following research questions (RQ):

RQ1. How is the BE perceived and defined by its members? What are the main elements of contemporary BE structure?

RQ2. How does the BE affect an IT firm's strategy choice, capabilities building, and performance?

RQ3. How does the relation between strategy choice and dynamic capabilities affect an IT firm performance?

RQ4. What are the most critical capabilities for IT firms' success in the context of the BE?

To answer the research questions, this study focuses on the industry with the most experience and knowledge. Furthermore, to provide a relevant and valid research perspective on this topic, it is essential to analyze firms from one specific industry in which each firm (respondent) has its own perception and ecosystem form. Since it is considered the most dynamic and complex environment, with different and novel strategy approaches and capabilities that can be found in the Information Technology (IT) industry, the author defines IT firms as the primary research subjects. Since each firm has its own BE, significant diversification within an industry will be ensured. Considering that the most promising sector in the Balkan region is IT, and all-region countries have a similar history and macro environment but different development conditions in the last 30 years, differences among the countries may be expected. Guided by criteria of data capability and all resources available (time, financial resources, knowledge about the market), this study will focus on Serbia and IT firms from this market.

The first objective of this research is to provide an additional understanding of the critical strategic management construct, fill the theoretical gaps, and improve BE theory in an integrative way by studying and linking the constructs uniquely. The second objective is to conduct the first large quantitative study and acquire data from the Balkans region within the most promising industry in the region – IT. The third research objective is to motivate different BE stakeholders (regulators, NGOs, consultants, managers, etc.) to use the research's conclusions to improve their role and the entire ecosystem as an essential part of the business and our society.

The basic research framework, defined and presented in Figure 3, is used to understand the BE environment (a whole ecosystem analysis) and its relation to the firm's conduct and performance (firm-level analysis).



Figure 3: Research framework

The framework consists of the following:

- the primary construct that requires a deeper understanding through its structure (business ecosystem structure).
- the firm conduct as a second construct that explains the firm's behavior in adopting or adjusting to the given context,
- the firm performance as a third construct that explains the firm's overall results,
- the direct relations among the three primary constructs.

As a basis for the research framework, the industrial organization theory of the firm, a more precisely behavioral approach to industrial organization theory, has been adapted. The basic assumption of this theory is that market structure influences firm performance through the conduct of the firm, which has become known as the structure-conduct-performance paradigm (Den Hartigh, E. and Van Asseldonk, T., 2004). The adoption of the behavioralist approach to industrial organization theory implies that the focus of this study will be on firm performance rather than industry (BE) performance, that BE structure is considered to be unstable and dynamic, and that it is assumed that the firm can, by its conduct and choosing the right strategy, influence its performance (Den Hartigh, E. and Van Asseldonk, T., 2004). The right strategy in the BE environment is also considered a vital factor affecting firm performance (Gupta, Mejia, and Kajikawa, 2019). Since contemporary firms are influenced by their internal capabilities and complex interactions inside the ecosystem, their strategies should be designed in light of both the internal/external environment and the BE (Saeed Fallah Tafti et al., 2015). In the context of this research framework, the primary research constructs are described in the following paragraph.

The business ecosystem structure explains the given BE environment through its members and the patterns they conduct to operate. Ecosystem structure is reasonably defined as that minimal or parsimonious pattern of organization necessary for a function to operate (Myster, 2001). Firm conduct refers to specific actions taken by firms in adopting or adjusting to the environment in which they sell or buy (Boru and Kuhil, 2018). The research action concerning firm conduct has two dimensions. The first is the dimension of firm strategy, and the second is the dimension of relations management to achieve its strategy goals (Den Hartigh, E. and Van Asseldonk, T., 2004). For the purpose of this research and connection with BE terms, the first dimension is considered the strategy choice, and the second is the capabilities needed for the strategy implementation. The firm's performance construct is defined as the capability and ability of a firm to efficiently exploit the available resources to achieve accomplishments consistent with the set objectives of the company, as well as considering their relevance to its users (Peterson, Gijsbers, and Wilks, 2003). Since the conducted literature review suggests the theoretical alignment between the concept of strategy and Dynamic capabilities (DC), identifying DC as a strategy theory for business ecosystems (Hou and Shi, 2021), as well as DC being the novel concept that owns the assumptions and concepts needed for the ecosystem dynamic and predictable environment (Teece, Pisano and Shuen, 1997), this study adopts DC as a theoretical concept for considering the capabilities dimension of firm conduct.



Figure 4: Research framework and the primary constructs

As shown in Figure 4, the business ecosystem structure's influence (independent variable) on the IT firm is divided into its impact on strategy choice (dependent variable) and dynamic capabilities, which consequently affect the firm's performance (Den Hartigh, E. and Van Asseldonk, T., 2004). Following the structural study of ecosystems leads us to consider what we know about the ecosystem: its actors and other components and their relationships (Phillips and Ritala, 2019); this study operationalizes the business ecosystem structure through members, its role, their level of influence, and already developed measurement scales - ecosystem embeddedness and ecosystem coopetition. The firm's role defines whether the firm will choose a shaper strategy – keystone, physical dominator, or niche strategy (lansiti and Levien, 2004). The level of embeddedness of the firm is related directly to its ability to access the diverse knowledge of other members and gain more possibilities for growth (Wulf and Butel, 2017). Coopetition improves efficiency, increases innovativeness, and forces firms to jointly define their relation toward other members to enhance their positioning and improve overall performance. Considering that the core of the strategy choice is performing different activities from competitors or similar in a different way, it is assumed that coopetition level of the firm is related to its strategy choice. DC is defined as an independent variable since there are no theoretical determinations about the nature of its relation with the strategy (mutual dependency), even though they are addressed as a concept of how companies create and maintain competitive advantages in environments with fast technological change (Teece, Pisano and Shuen, 1997). Many studies assumed a direct relationship between DC and firm performance and

used the construct to explain firm-level competitive advantage, success, and failure (Fatoki Olawale, 2021). It was proved that in changing environmental conditions, a direct and positive relationship exists between DC and superior performance, the firm's survival (Fatoki Olawale, 2021), and its competitive advantage (De Meyer and Williamson, 2020). How the DC is affected by the BE environment is an unknown relation, as well as the identification of those DCs with the highest impact on firm performance (Samuel Njogu Kihara, Karanja Ngugi, and Ogollah, 2016). Furthermore, the last literature findings are aligned with the conclusion that management and leadership capabilities in a dynamic ecosystem environment are critical for a firm's sustainable competitive advantage and success (Foss, Schmidt, and Teece, 2023). The feedback relation between the firm's performance and the BE structure has not been researched. Even though additional conclusions and first insights are expected, this relation is not considered one of the core explored links.

Guided by the main research objectives and previously described constructs' relations, further hypotheses have been developed and explained in Figure 5:

H1. Business ecosystem structure is positively related to firm conduct.

H1a: Firm's ecosystem role is positively related to the strategy choice of the firm.

H1b: BE coopetition is positively related to the firm's strategy choice.

H1c: BE embeddedness is positively related to the critical DC of the firm.

H2. IT firm conduct is positively related to its performance.

H2a: IT firm strategy choice is positively related to its performance.

H2b: IT firm's critical DCs development level is positively related to its performance.

H3. If there is a strategic fit between strategy choice and DCs used for its realization, it improves IT firm performance.

H4. A firm's ecosystem leadership capabilities are positively related to the firm's performance.



Figure 5: Author's research framework and the main hypotheses

The research framework is designed to illustrate H1-H4 hypotheses, although control variables (firm size, firm age, firm's role in the ecosystem, the respondent's position, etc.) will allow for additional conclusions and understanding of the primary constructs.

3.5. Materijal, metodologija i plan istraživanja (preporučeno 6500 znakova s praznim mjestima)

The research design of this dissertation follows the main research objectives and research questions. A primary research methodology is required since the study acquires data that has been unavailable so far. Multilevel analysis of primary data will use a mixed-method approach combined with qualitative and quantitative research. By conducting a multilevel analysis, this study will explore the effects of interaction between different levels (business ecosystem level and firm level).

Research question	Research method
How is the business ecosystem perceived and defined by its members? What are the main elements of contemporary business ecosystem structure?	Qualitative research – 1-1 interviews
How does the business ecosystem affect an IT firm's strategy choice, capabilities building, and performance?	Quantitative research – survey
How does the relation between strategy choice and dynamic capabilities affect an IT firm performance?	Quantitative research – survey
What are the most critical capabilities for IT firms' success in the context of the business ecosystem?	Qualitative research – 1-1 interviews Quantitative research – survey

Figure 6: Research methods

The entire research process consists of three main phases:

- 1. Qualitative research: In-depth interviews with the selected top management and board members of IT firms, with the goal of a deeper understanding of the primary construct, as well as testing all constructs and variables formulations that will be part of the questionnaire;
- 2. Secondary data acquisition from Orbis database covering firms from the IT industry, to export the data about the firms' size, contacts, structure, ownership, revenue and profit, etc;
- 3. Quantitative research: Online survey based on the questionnaire for a sample that should count approximately 200-250 IT firms, considering the total number of IT firms in the country.

The research process, from in-depth interviews to statistical finalization of the acquired data, is expected to last 12 – 14 months.

3.5.1 Qualitative research – In-depth interviews

Following an explorative research design to understand a new phenomenon – BE and its structure, as well as the available researcher's resources in terms of time and number of potential respondents, in-depth interviews are the most suitable research technique. Since the researcher aims to deepen and understand new meanings of the BE concept and structure beyond the literature review findings and test the understanding of all constructs and variables from the research framework, a semi-structured interview will be conducted.

Target population and sample size

With IT firms defined as the primary research subject, management representatives of the firms are the targeted population. Since the right selection of sample participants impacts the second research phase (survey), selection will be done following the next criteria:

- Top management or board member representative of the IT firm, since the formation and operation in the BE environment is the strategic topic, not broadly communicated and decided through the entire firm;
- Representative of an IT firm that is a member of one or more BEs;
- Representatives of IT firms with different ecosystem roles (focal actors, complementators, suppliers, etc);
- Representatives of IT firms who will be willing to openly and honestly share information or "their story";

Representatives of IT firms willing to participate in the quantitative survey analysis.

The first step in the sampling process will be the secondary data analysis – acquiring data from the Orbis database to identify all IT firms representing the targeted population. The second step will analyze the key firms' data to determine a targeted sample of the convenient firms and concrete potential respondents. The first conducted respondents will be those who are familiar to the researcher, and after that, the principle of a "snowball" will be used.

The number of interviews and sample size depend directly on how many qualitative interviews are enough or when the process will reach the point of saturation. Since the researcher aims to understand better and improve the theory of business ecosystem concepts, it is essential to have as many interviews as possible, as interviewees provide new and diversified meanings and insights. Theoretical saturation generally occurs between 10 and 30 interviews. Considering the factors mentioned, the optimal sample size for this research is 15-20 interviews, distributed proportionally by IT firm size.

Research questions

Formulation of research questions in a semi-structured interview about a concept that is still not "mainstream" and theoretically aligned could be considered the most critical factor in the results' validity and relevance. Based on the theoretical recommendations and the research design of similar studies, the interview guideline for this research consists of four parts.

Theme I: Firm-o-graphics

(Firm name, Firm size, Firm age, Number of years spent in a current business ecosystem(s), Firm role in a BE, Respondent name, Respondent position)

Theme II: Business ecosystem perception, main actors, and relations

- How would you define the BE?
- How would you describe your BE? What is the key value it creates?
- What kind of actors are common within your ecosystem, and what are their roles? How are you connected? Do you
 manage or coordinate those relations differently than with partners before the ecosystem formed?
- · How do these relations affect your firm?
- How does the BE affect or doesn't affect your firm's strategy and actions?
- What type of resources and capabilities is your firm developing to generate competitive advantage and fill strategy objectives? Which of them will be critical in the near future?

Theme III: Understanding of research constructs and variables

What is your first association/what you think of, when I say...

(ecosystem embeddedness, coopetition, predictability degree of your environment, malleability of your environment, harshness degree of your environment, capabilities, agility, adaptability, resilience)

Theme IV: Other - interviewees' reflections and comments.

The questions are defined based on the literature review and adaptation from a similar study conducted in 2022 (Palmié et al., 2022). Considering the number of themes and questions, it's assumed that the interview will last around 60 minutes.

Interview protocol

At the beginning of the interview protocol and after the first contact with the respondent, the respondent will receive the informed consent letter since the ethical code has become more formalized over the past several years in all research on human subjects. In the next step, the respondent will be provided through e-mail with an explanation of what the interview will be about, what it will be for, and what the role of the interviewee will be. After that, the agreement on the place and time of the interview will be agreed upon. At the beginning of the interview, the respondent will fill out a fact sheet for demographic information (theme I) while the researcher prepares the recorder, pencil, backup pencil, and paper. However, participants must agree to be audio-recorded during the entire interview. After the respondent answers all the questions, the interview ends with follow—up questions that ensure that the interviewer correctly interprets everything the respondent says.

Data analysis

The final step in the interviewing process is data interpretation. The researcher analyzes the gathered data after making the transcripts of the entire interview conversation. Due to its popularity and relevance to the research question, a thematic coding approach will be conducted. It begins with the researcher making "sense" of what was uncovered and compiling the data into sections or groups of information, also known as themes or codes (Creswell, 2003, 2007). These themes or codes are consistent phrases, expressions, or ideas common among research participants (Kvale, 2007). In the next step, thematic networks are constructed, after which the networks are integrated and interpreted.

3.5.2 Quantitative research – Online survey

Testing the hypothesis about the relationship between the variables is required to answer most research questions. The first step of the quantitative research will be finalizing the questionnaire after the conclusions are gathered from the interviews. The questionnaire will cover all segments and variables that follow the hypotheses but are arranged in a different order so the model stays unpredictable to the respondents. The experts from the strategic management field will examine the final version of the questionnaire. The questionnaire segments will cover the following topics:

I Firm-o-graphics and demographics

(Firm name, age, size, operating revenue, number of markets in which the firm is present – local or international firm; the position of the respondent answering the questionnaire (CEO, TMT, Board, Owner)).

II Business ecosystem structure

This variable will be measured through:

- the number of ecosystem actors,
- roles of each actor and intensity of its influence on a seven-point Likert scale,
- ecosystem embeddedness an eight-item construct scale on a seven-point Likert scale (Riquelme-Medina et al.,
 2023). The overall score is measured as the weighted average of all items.
- ecosystem coopetition a six-item construct on a seven-point Likert scale (Riquelme-Medina et al., 2022). The overall
 score is measured as the weighted average of all items.

III Strategy choice

This variable will be measured through the Strategy pallet framework tool, relevant for dynamic and turbulent environments, using three main dimensions: predictability degree, malleability degree, and harshness (Martin Reeves, Knut Haanaes, and Janmejaya Sinha, 2015), on a high and low-level scale. As a result, the firm chooses one of the five possible strategy options.

IV Dynamic capabilities for strategy implementation

This variable will be measured using the selected list of the most important DCs for the given environment context and the IT firms (Teece, 2007a; Madsen, 2010; Teece and Brown, 2020; Foss, Schmidt, and Teece, 2023) and the strength level of each capability on a seven-point Likert scale. As a result, the ten most critical capabilities for chosen strategy implementation will be identified, along with the strength level for each capability.

V Firm performance

This variable will be measured through:

- operating revenue per employee a ratio that measures the total revenue of a firm divided by its current number of employees,
- market share the percentage of an IT industry's total revenue in the country that a particular firm earns,
- corporate reputation the collective judgment of a firm by observers based on financial, social, and environmental
 assessments made over time (Pires and Trez, 2018), assessed through six attributes on a seven-point Likert scale.

Data about firms will be drawn from the Orbis database, which covers various industries, firm sizes, and ages. A sample size of between 200 and 250 firms can be expected. An online questionnaire will be designed for firm owners, CEOs, board members, or top management members since they create and (or) hold a broad perspective of a firm's position in its ecosystem and of the firm's strategy and development, with guaranteed anonymity.

Data analysis and interpretation will be done using SPSS software. Factor analysis (FA) will be conducted to explore and potentially reduce many variables representing the same construct or the number of items in the entire measurement model. Hypotheses will be tested using a correlation analysis approach and regression analysis, if needed, to understand the direction of influence between two variables. Reliability, discriminatory validity, and convergent validity will also be analyzed.

3.6. Očekivani znanstveni doprinos predloženog istraživanja (preporučeno 500 znakova s praznim mjestima)

Considering the identified theoretical lacks and gaps, the main objectives of this study, and the author's practical experience and observation of the explored empirical phenomenon (BE), the primary contributions of this research are in the scientific field:

- Shedding the light on the understanding of the BE as a concept, its boundaries, actors, and their roles;
- Improving the knowledge of the novel BE theoretical approaches that still need to be standardized in terms of definitions and applications;
- A better understanding of the relation between the two most essential strategy elements in BE strategy choice and capabilities needed for strategy implementation (two sides of the same coin);
- Filling the gap in the lack of quantitative studies and a firm-level analysis in the fields of BE and DC;
- Enlightening and linking a firm performance to its role in a BE;

Stimulus for further researchers in the BE area.

In terms of managerial and implicative contributions, the author sees a two-fold contribution:

- Stimulus for regulators and other institutional members of the ecosystem to improve their impact and activities (by
 improving policies and laws, regulatory framework, launching education initiatives, etc.) in the ecosystem area as an
 essential part of the business and society;
- Numerous applied contributions for managers and leaders in the process of strategy planning and strategy
 execution.

Since this research aims to be the first of its kind in the region, its contribution will be significant for different stakeholders, improving the local and regional literature on these topics. As a pioneer regional study in this field, it will offer a primary ground for the author's future aspiration to research this topic in other regional countries, comparing and improving the methodology approaches in the coming period.

3.7. Popis citirane literature (maksimalno 30 referenci)

- Adner, R. (2017) 'Ecosystem as Structure: An Actionable Construct for Strategy', Journal of Management, 43(1), pp. 39–58. Available at: https://doi.org/10.1177/0149206316678451.
- Adner, R. and Kapoor, R. (2010) 'Value creation in innovation ecosystems: How the structure of technological interdependence affects firm performance in new technology generations', Strategic Management Journal, 31(3), pp. 306– 333. Available at: https://doi.org/10.1002/smj.821.
- Attour, A. and Barbaroux, P. (2016) 'The Role of Knowledge Processes in a Business Ecosystem's Lifecycle', Journal of the Knowledge Economy [Preprint]. Available at: http://eproofing.springer.com/journals/printpage.php?token=1Sx8MDhdTuG55gMfie16vh_90tkmsP2N7DalbuGbWl5wwAk0Pl_5gw
- 4. Awano, H. and Tsujimoto, M. (2022) 'Mechanisms for Business Ecosystem Members to Capture Value through the Strong Network Effect', *Sustainability* (*Switzerland*), 14(18). Available at: https://doi.org/10.3390/su141811595.
- Bogers, M., Sims, J. and West, J. (2019) 'What Is an Ecosystem? Incorporating 25 Years of Ecosystem Research', Academy of Management Proceedings, 2019(1), p. 11080. Available at: https://doi.org/10.5465/ambpp.2019.11080abstract.
- 6. Boru, T. and Kuhil, A.M. (2018) 'The Structure Conduct Performance Model and Competing Hypothesis a Review of Literature', *Journal of Financial Management and Analysis*, 8(2), pp. 11–25. Available at: www.iiste.org.
- 7. David Teece (2023) 'The Evolution of the Dynamic Capabilities Framework', in *Artificiality and Sustainability in Entrepreneurship*, pp. 113–130.
- 8. Den Hartigh, E. et al. (2013) 'Measuring the health of a business ecosystem', Software Ecosystems: Analyzing and Managing Business Networks in the Software Industry, pp. 221–246. Available at: https://doi.org/10.4337/9781781955628.00020.
- Den Hartigh and Van Asseldonk (2004) 'Business ecosystems: A research framework for investigating the relation between network structure, firm strategy, and the pattern of innovation diffusion', in F. van Eijnatten (ed.) ECCON 2004 annual meeting. Driebergen: Onbekend, pp. 1–38.
- 10. Espina-Romero, L. et al. (2022) 'What Are the Topics That Business Ecosystems Navigate? Updating of Scientific Activity and Future Research Agenda', Sustainability (Switzerland). MDPI. Available at: https://doi.org/10.3390/su142316224.
- 11. Fathi, M., 1+, B. and Harandi, A. (2012) 'A Conceptual Model for Business Ecosystem and Implications for Future Research', IPEDR, 52(17), pp. 82–86. Available at: https://doi.org/10.7763/IPEDR.
- Fatoki Olawale (2021) 'Dynamic capabilities and performance of hospitality firms in south africa: The mediating effect of innovation', Geojournal of Tourism and Geosites, 36, pp. 616–623. Available at: https://doi.org/10.30892/GTG.362SPL08-690.
- 13. Foss, N.J., Schmidt, J. and Teece, D.J. (2023) 'Ecosystem leadership as a dynamic capability', *Long Range Planning*, 56(1). Available at: https://doi.org/10.1016/j.lrp.2022.102270.
- 14. Hou, H. and Shi, Y. (2021) 'Ecosystem-as-structure and ecosystem-as-coevolution: A constructive examination', *Technovation*. Elsevier Ltd. Available at: https://doi.org/10.1016/j.technovation.2020.102193.

- 15. Iansiti, M. and Levien, R. (2004) 'Strategy as Ecology', Harward Business Review, 82(3), pp. 68-78.
- Lu, C. et al. (2014) 'Business ecosystem and stakeholders' role transformation: Evidence from Chinese emerging electric vehicle industry', Expert Systems with Applications, 41(10), pp. 4579–4595. Available at: https://doi.org/10.1016/j.eswa.2014.01.026.
- 17. De Meyer, A. and Williamson, P.J. (2020) 'STARTING UP AN ECOSYSTEM FOR INNOVATION', in 27th Innovation and Product Development Management Conference. Antwerp, Belgium.
- Moore, J.F. (1993) 'Predators and Prey: A New Ecology of Competition', Harward Business Review, 71(3), pp. 75–86.
- Moore J.F. (1996) The Death of Competition Leadership and Strategy in the Age of Business Ecosystems. New York, NY Wiley Harper Business.
- Moore, J.F. (2006) 'Business Ecosystems and the View from the Firm', Antitrust Bulletin, 51(1), pp. 31–75. Available at: https://doi.org/10.1177/0003603X0605100103.
- 21. Peltoniemi, M. and Vuori, E.K. (2004) 'Business ecosystem as the new approach to complex adaptive business environments', in M. Seppä et al. (eds) *Frontiers of E-Business Research*. Tampere: University of Tampere, pp. 267–281.
- 22. Peteraf, M.A. (1993) The Cornerstones of Competitive Advantage: A Resource-Based View, Strategic Management Journal. Available at: http://www.jstor.org/about/terms.html.
- 23. Phillips, M.A. and Ritala, P. (2019) 'A complex adaptive systems agenda for ecosystem research methodology', *Technological Forecasting and Social Change*, 148. Available at: https://doi.org/10.1016/j.techfore.2019.119739.
- 24. Pires, V. and Trez, G. (2018) 'Corporate reputation: A discussion on construct definition and measurement and its relation to performance', *Revista de Gestao*, 25(1), pp. 47–64. Available at: https://doi.org/10.1108/REGE-11-2017-005.
- Ramezani, J. and Camarinha-Matos, L.M. (2020) 'Approaches for resilience and antifragility in collaborative business ecosystems', Technological Forecasting and Social Change, 151. Available at: https://doi.org/10.1016/j.techfore.2019.119846.
- 26. Reeves Martin, Knut Haanaes and Janmejaya Sinha (2015) Your Strategy Needs a Strategy: How to Choose and Execute the Right Approach. Boston: Harvard Business School Press.
- 27. Riquelme-Medina, M. et al. (2022) 'Coopetition in business Ecosystems: The key role of absorptive capacity and supply chain agility', *Journal of Business Research*, 146, pp. 464–476. Available at: https://doi.org/10.1016/j.jbusres.2022.03.071.
- 28. Riquelme-Medina, M. *et al.* (2023) 'Business ecosystem embeddedness to enhance supply chain competence: the key role of external knowledge capacities', *Production Planning and Control*, 34(7), pp. 658–675. Available at: https://doi.org/10.1080/09537287.2021.1951389.
- 29. Saeed Fallah Tafti et al. (2015) 'Business Ecosystem as a New Approach in Strategy', Management and Administrative Sciences Review, 4(1), pp. 198–205.
- 30. Samuel Njogu Kihara, A., Karanja Ngugi, P. and Ogollah, K. (2016) 'Influence on Dynamic Capabilities on performance of large manufacturing firms in Kenya', *International Journal of Business Strategy*. Available at: www.ajpojournals.org.
- Shou, Y., Shi, Y. and Ren, G.J. (2022) 'Guest editorial: Deconstructing business ecosystems: complementarity, capabilities, co-creation and co-evolution', *Industrial Management and Data Systems*. Emerald Publishing, pp. 1977–1986. Available at: https://doi.org/10.1108/IMDS-09-2022-811.
- 32. Tan, C., Dhakal, S. and Ghale, B. (2020) 'Conceptualising Capabilities and Value Co-Creation in a Digital Business Ecosystem (DBE): A Systematic Literature Review', *Journal of Information Systems Engineering and Management*, 5(1). Available at: https://doi.org/10.29333/jisem/7826.
- 33. Taouab, O. and Issor, Z. (2019) 'Firm Performance: Definition and Measurement Models', *European Scientific Journal ESJ*, 15(1). Available at: https://doi.org/10.19044/esj.2019.v15n1p93.
- 34. Teece, D. and Brown, K. (2020) New Zealand Frontier Firms: A Capabilities-Based Perspective. Sydney. Available at: https://www.oecd.org/economy/surveys/new-zealand-2019-OECD-economic-survey-overview.pdf.
- 35. Teece, D.J. (2007) 'Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance', *Strategic Management Journal*, 28(13), pp. 1319–1350. Available at: https://doi.org/10.1002/smj.640.
- 36. Teece, D.J. (2017) 'Dynamic capabilities and (digital) platform lifecycles', *Advances in Strategic Management*, 37, pp. 211–225. Available at: https://doi.org/10.1108/S0742-332220170000037008.
- 37. Teece, D.J., Pisano, G. and Shuen, A. (1997) 'Dynamic Capabilities and Strategic Management', *Strategic Management Journal*, 18(7), pp. 509–533.
- 38. Teece, D., Peteraf, M. and Leih, S. (2016) 'Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy', *California Management Review*, 58(4), pp. 13–35. Available at: https://doi.org/10.1525/cmr.2016.58.4.13.
- Thomas, L.D.W. and Autio, E. (2014) 'The Fifth Facet: The Ecosystem as an Organizational Field', Academy of Management Proceedings, 2014(1), p. 10306. Available at: https://doi.org/10.5465/ambpp.2014.10306abstract.

- 40. Wieniger, S. et al. (2020) 'Framework for Business Ecosystem Roles', in 2020 IEEE European Technology and Engineering Management Summit (E-TEMS). Dortmund, Germany: Institute of Electrical and Electronics Engineers, pp. 1–9.
- 41. Wieninger, S. et al. (2019) 'The strategic analysis of business ecosystems: New conception and practical application of a research approach', in *Proceedings 2019 IEEE International Conference on Engineering, Technology and Innovation, ICE/ITMC* 2019. Institute of Electrical and Electronics Engineers Inc. Available at: https://doi.org/10.1109/ICE.2019.8792657.
- 42. Wulf, A. and Butel, L. (2017) 'Knowledge sharing & collaborative relationships in business ecosystems & networks: A definition & a demarcation', *Industrial Management and Data Systems*, 117(7), pp. 1407–1425. Available at: https://doi.org/10.1108/IMDS-09-2016-0408.
- 43. Yu, J., Li, Y. and Zhao, C. (2011) 'Analysis on structure and complexity characteristics of electronic business ecosystem', in *Procedia Engineering*, pp. 1400–1404. Available at: https://doi.org/10.1016/j.proeng.2011.08.259.
- 44. Zupic, I. and Čater, T. (2015) 'Bibliometric Methods in Management and Organization', *Organizational Research Methods*, 18(3), pp. 429–472. Available at: https://doi.org/10.1177/1094428114562629.

3.1. Procjena	ukupnih	troškova	predloženog	istraživanja
(u kunama)				

3 - 5.000 €

3.2. Predloženi izvori financiranja istraživanja

Vrsta financiranja	Naziv projekta	Voditelj projekta	Potpis
Nacionalno financiranje			
Međunarodno financiranje			
Ostale vrste projekata			
Samostalno financiranje	~		

3.3. Sjednica Etičkog povjerenstva na kojoj je odobren prijedlog istraživanja (po potrebi)

N/A

Potpis (titula ime i prezime mentora)
Potpis
(titula ime i prezime komentora)
IZJAVA
Izjavljujem da nisam prijavila/o doktorski rad s istovjetnom temom ni na jednom drugom sveučilištu.
U Rijeci,
01.04.2024. Potpis Uzelae Vasio

(ime i prezime doktoranda)

SUGLASNOST PREDLOŽENOG MENTORA I DOKTORANDA S PRIJAVOM TEME

Izjavljujem da sam suglasan s temom koja se prijavljuje.

M.P.

Appendix 2: SLR conducted by the author of the research

Future research areas	New authors, papers and understanding of the concept and its determinants (Moore 1996)	Ecosystem understanding and managing (arrett and Leven (2004)	More research and data on the company level to measure business company level to measure business consistent heaft on the company level (den Hartigh, E. Tol, M. and Vescher, W., 2006)	Firm-level analysis and new theoretical finameworks for Journess ecosystem analysis ((lag)tactorism analysis ((lag)tactorism analysis ((lag)tactorism analysis ((lag)tactorism analysis (lag)tactorism	Defining what a business ecceystem is and what in out, its main construct and their relation floopen. It is similar construct and their relation floopen. It is similar a floored to the relation floopen. Misself, and the relation to the relation floored the relation floored floo	More research on the success of business acceptation members (Awarro, H and Tsujmolo, M, 2021). Lack of a constructive disloque between the underlying becentical assumptions of the structure with and the volvelation view (Fou, H and Sh. Y., 2021). Coordinating and aligning actors is a core concern recent research tools, and practices (Spanics M.J. and Rowfann, N.J., 2022). More empirical studies on business (Shou, Y., Sh. Y and Ren, G.J., 2022). Dynamic capabilities for the performance of an enterprise acceptatem using performance of an enterprise acceptatem (Espina-Romen, L.C., Quereo-Aloxido, J.M. and Osso, C., 2021).
Results - Performance		The health of a business ecosystems: robustness, productivity and miche creation (langiti and Levien (2004)	The health of business ecosystem partner health and network health (den Hastigh, E., Tol, M. and Vissicher, W., 2006)		Resilience and antifragility (Ramezani, J. and Camarinha-Matos, L.M., 2020)	Shared logic and ecosystem leadership capabilities as a factor of ecosystem success (Vholaimen, N. Kryklaint, E. Autio, M., Poyhönen, J. and Toppinen, A., 2021). Service innovation (Liu, G., Arcean, L. and Ko, W.W., 2023).
Relations - Dynamics	Ecosystem life cycle with four co- evolutionary processes shown as both-economy, leadership, and self-menses (or death) (Moore, 1993)	between network structure, film extragy and the pattern of Innovation difflusion (Den Herligh, E. and Van Assectionk, T. 2004). The focal completely aspects are self-organization, emergence, co-evolution and subptation, emergence, to evolution of the control o	Establishing the broad vision and the future of the business doopsterin requires both cooperation and competition among their firms (Moore 2006). Coevelution, self-organization and emergence (Pettoniems, M. 2006). Coevelution cours in a business ecosystem when one notividual influences others to cooperate had carried to achieve an objective that carried to achieve an objective that carried to achieve an objective that carried to achieve and complete that carried to achieve and projective that carried to achieve and complete that carried to achieve and organize that carried to achieve and complete that carried to achieve and the carr	Collaborative learning, resource shafing data of knowledge transfer (Williamson and de Meyer, 2012) Collaborative learning (Thormas and Auto, 2014)	Collaboration and knowledge sharing unificately the ethnicular and richness of the network he adors' positions in the network, along a governed (Wulf and Butel 2017). Collaboration, cooperation, and knowledge sharing capability are crisical for competitive advantage (Wulf and Butel, 2017). Ecosystem strategy is defined by the way in which a focal firm approaches the alignment of personal processing contract and personal contractions and sources in rich an acompetitive acceptant, (Advar 2017). Dynamic capabilities for a four-stage model: Soft. Operation. Leukoships, and Self-Reneal (Texas 2017). The cooperation Leukoships, and Self-Reneal (Texas 2017). The cooperation index (Wenninger, S., Gozen, R., Gudergan, G., and Wenning, K.M., 2019).	Knowledge management (Atour, A. and Battaroux, P. 2021) Coopetition, sheorytive capacity and supply chain agility (Repetine-Medina, M. Stevenson, M. Barrisel-Molina, V. and Licens-Morten, F. J. 2022) Stevenson, D. Barrisel-Molina, V. and Licens-Morten, F. J. 2022, Three symbiosis types between keystone species and symbiosis: mutualism, commensalism, and parasitism (Youn C. Moon, S. and Clee, H. 2022) Business societystem embeddedness (Riqualien-Medina, M. Stevenson, M. Barrisel-Molina, V. and Licens-Morten, F. J. 2023) Business societystem embeddedness (Riqualien-Medina, M. Stevenson, M. Stev
Actors	The one adors of the planned business coopsine leader, complementators, added by customers, financies, competitors, regulators, research actors, consultants, coordinators, or or chestrators (Moore 1966)	Keystine and sc-called riche firms, dominators, but andlerders, and all other stakeholders general and even, 2004). Ecosystem strategies aligned with actors role keystions, physical dominator, or niche (lanst) and Leven, 2004).	An ecosystem consists of the supplier, a Pool film, a complementor, and the customer (Adhar and Kapoor, 2010)	Roles of ocoperating autors: Keystone player, Enlarged business, and Business ecosystem (Thomas and Autio, 2014). Functional roles: Opportunist: Participant, Dominator (Lu. C., Rong, K., You, J. and Shi, Y., 2014)	Bourness occryption diventify multiple types a prodes, cooperation, and data with the ecosystem (Numbers A. and white C., 2015). Technospecies are unique entities based on the chronizognizational routines, capacities, and use of technology (Weber, M. L. and Hen, M. J., 2015). Action include the end-easers or customers and user communities, developers and research organizations, competiture, complementary throughout the entitle value chain, and institutional actives (Narikoa-Sternoot, L. and Rissa, P. 2017).	The scoyyten leader (De Hyer, A and Williamon, P. J. 200) Solution integrators, developers, providers, research partners, orchestrator, customers, public finance, regulators, followers, public stakeholders, polential customers as co-developers and co-researches (Passt. J. Wilman, H. Apilo, T. and Valcokan, K. 2023)
Structure			Four man aspects the firm, the network, performance, and prevenance (Approximation of the Program of European Control of	Four layers. Contributors, Users, Leaders, and Environment (Baghbadoran and (Baghbadoran and Harnnd, 2012) Business ecosystem elements: network of participants, governance system and shared logic (Thomas and Auto. 2014) SC framework for business ecosystem analysis (Rong, K. Hu, G. Lin Y. Shi, Y. and Guo.	Ecosystem as a structure framework (Acther 2016). Activities, actors, positions, and transfer links between actors provide four basic elements of the business ecosystem (Acter 2017). Oc-evolutionary logic, boundaries, and compacition (Acribida Paris 2017). The structural study of ecosystems lead us to consider what we know about the ecosystem is actors and other components and their resistantships (Philips and Pitala, 2019).	Fire "On" of ecosystems: cross markets, co-evolution, complementar, coopetion, and conscious direction (Fiet. N. and Teor. D. 2020). Three elements of structure Actors, Properties, Enricomment and Outcomes (Plaza, J., Wimm, H., Aplo, T. and Valsckar, K., 2025).
Defintion	An economic community supported by a foundation of interacting organizations and individuals - the organization and individuals - the organization of the business world (Moore 1963). The business econystems are characterized by a large number of lossely interconnected participants who depend on each other for their mutual effectiveness and survival (Moore 1995).	Ecopystems are organized around a keystens species, and characterized by a large number of cosely reterronceded paraceparts who depend on each other for her musual effectiveness and survival" (lansiti and Levine 2004). A business ecopystem is a reterior of action account a core technology who depend on each other for success and survival (Dev Hartigh and van Assessions, 2004). A business ecopystem is a dynamic structure that consists of an interconnected opposition of organizations. These organizations can be small firms, large corporations universities, research certeins, public sector organizations and other parties that influence the system (Pelorivers, M. and Vuor, E. 2004).	BE refers to intentional communities of economic actors whose individual business activities share in some large measure the fast of the whole community - commitment to the future. Third organizational form, after market and herarchies (Moore 2008). The collaborative arrangements through which organizations (pagazitations from after market and herarchies (Moore 2008). The collaborative arrangements through which organizations combines their individual offerings into a coherent customer-facing solution (Adner (2008)). Community of organizations, institutions, and individuals that impact the enterprise and the enterprise accorpations are networks of fines which collectively produce a holistic, integrated technological system that creates value for customers (Agerfaik and Fitzperald, 2008).	L 2015i	The alignment structure of the multilateral set of partners that structure of the multilateral set of partners that must interact for a food value proposition to materialize (Achier 2017). The general overarring concept for distinct types of literalepsedent and co-evolving systems of active, facehologies, and institutions (Aerikas Sterroon, L. and Ritals, P. 2017). As set of actions with varying dispress of multilateral, morphisms of complementarities that are not thigh, Nerarchically controlled (Jacobide et al. 2018). A set of actions that contribute to the focal offer's user value proposition (Kupoor 2018). A new type of collective from for multiple, theretoperopeus stabulations (Concept of merging the views of the market (and users), regulations/structure), value chains (value creation process), and consistency (Levilkangsa, P. and Corn, R. 2020).	keep open exchange with environments for confination innovation. This distinction aligns with the consensus that BE studies are characterized by coevolution (Hou, H and Shi, Y., 2021)
Years	1993-2000	2001 - 2005	2006 - 2010	2011 - 2015	2016 - 2020	2021 - 2023

Europass Curriculum Vitae



Comprehensive business professional and consultant, with strong academic background and rich experience in business strategy, organizational culture and people development, and marketing. An author of specific "new age" methodology for business and personal growth - "What's Next?". A passionate lecturer, consultant, business executive coach, speaker and writer.

PERSONAL INFORMATION

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Date of birth Gender

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jelena.uzelac@whatsnext.rs 31.10.1987. Sibenik, Croatia

Female

WORK EXPERIENCE

Dates

Since February 2021

Occupation or position held Main activities and responsibilities

As a managing director, owner and chief consultant, I am in charge of 3 main processes: leading internal team and processes consulting and leading clients in the area of strategy, culture, leadership and innovation projects, and 1-1 executive coaching process. My dedication to people leadership and their development, has been realized in this role through responsibility for company employees, various teams from the client's side, and through process with individual leaders/top management members I'm working with.

Name and address of employer Type of business or sector

What's Next - Change Design Consultancy

Founder & Managing Director / Chief Change Consultant

Business and Organizational Consulting

Dates

Since October 2018

Occupation or position held Main activities and responsibilities

Professor

As a main professor for two business subjects (Strategic Marketing, Integrated marketing communications), I'm in charge of defining subject's syllabuses, key topics and methods of teaching, realization of a colloquium and exams, final assessments and marks, as well as mentoring and development of best students and my teaching assistants.

Name and address of employer Type of business or sector Faculty of Media and Communications, University of Singidunum

Universities / Higher education

Page 1/5 - Curriculum vitae of Jelena Uzelac Vasic Dates

April 2019 - February 2021

Occupation or position held Main activities and responsibilities

Chief Business Consultant

Name and address of employer
Type of business or sector

As a Chief Business Consultant, I was responsible for consulting different clients from different industries, in the area of business model transformation, strategy, culture and brand innovation. The main actitvites I have covered: research and deep dive assessment processes with clients, development of strategy in the area of business, culture and brand innovation, defining and realization of different workshops and planning sessions with the team and clients, project's presentation, supervising and leading internal team of 5-10 people, supervising and maintain relations with the clients.

New Startegy - Business Design Consultancy

Business and Organizational Consulting

Dates

December 2013 - April 2019

Strategic Development Director

Occupation or position held Main activities and responsibilities

Three most important areas of my responsibility were strategic marketing planning, new business development, and people leading and development. As a strategic marketing expert, I was in charge of research processes, brand strategy development and measurement, in accordance with precisely defined clients' business goals. These activities were realized through separate Strategy sector I was leading, consisted of 5-10 people and base on unique methodology approaches. I was also responsible for key business processes of the company: new business development process, including promotion and communication strategy, recruitment, orientation, people evaluation and development processes.

Name and address of employer Type of business or sector **DNA Communications consultancy**

Business and Marketing Consulting

Dates

May 2013 - December 2013

Occupation or position held

Main activities and responsibilities

Development Manager

As a Development Manager for Bakina Tajna brand, I worked for all aspects of an organization's daily business - brand development, production, sales marketing & PR, and retail management. I was primarily responsible for creating brand strategies such as positioning, scheduling, deciding on the production and selling platform, and creating product from the beginning – product recipe, packaging, label design, marketing & PR plan and promotion activities, in order to create and maintain strong Bakina Tajna brand, as a part of preparation for company acquisition made by Atlantic Grupa.

Name and address of employer

Type of business or sector

Foodland, member of Atlantic Grupa

FMCG

Dates

September 2010 - May 2013

Occupation or position held

Main activities and responsibilities

Marketing Account Manager

I primary had responsibility to b

I primary had responsibility to be the link between the client and the entire agency team. Along with my team, I act as both the salesperson for the agency and as the client's representative within the agency. While the main responsibility was working closely with the various business departments, it also entailed leading the agencies ideas presentation, ensuring the ideas remain faithful to the brief and that it is kept within the time frame and budget. As an manager, I was normally responsible for client budgets, for managing the work of account executives and performing a range of related administrative functions. On the other side, my role involved – managing and evaluating the work of all team in marketing sector (design, production, account executives, event), new business development and strategic planning.

Name and address of employer

Type of business or sector

Executive Group

Integrated marketing Consulting

EDUCATION AND TRAINING

Dates

Since 2023

PhD candidate

Title of qualification awarded Name and type of organisation providing education and training

Faculty of Economics and Business, University of Rijeka

Dates

2019 - 2020

Title of qualification awarded

Master Executive Coach

Name and type of organisation providing education and training

Academy of Executive Coaching, United Kingdom

Dates

2010 - 2013

Title of qualification awarded

Master of Economics

Name and type of organisation providing education and training

Faculty of Economics, University of Belgrade

Dates

2010

Title of qualification awarded Name and type of organisation providing education and training Summer school certification for Negotiation Techniques Faculty of Economics, University of Ljubljana

Dates

2006 - 2010

Title of qualification awarded Name and type of organisation **BSc in Economics**

Name and type of organisation providing education and training

Faculty of Economics, University of Belgrade

PERSONAL SKILLS AND COMPETENCES

Mother tongue(s)

Serbian and Croatian

Other language(s)
Self-assessment
European level (*)

English Spanish

Unders	tanding	Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
C1	C1	B2	B2	B2
B2	B2	B1	B1	B1

(*) Common European Framework of Reference for Languages

Social skills and competences

Strongly developed skills of leadership, emotional intelligence, easiness of building relationships, adapting styles of people management, motivation and development. Long-term experience as a leadership executive coach and mentor, many years of education in the field of human development psychology, coaching and leadership, contributed the most to these skills and competences. During her career, she led teams of 40+ members, while as a consultant she works with teams of different sizes.

Strongly developed skills of communication, written and oral, public presentations and speaking performance in different forms.

Organisational skills and competences

Key skills in the areas of: deep dive analyses and research, strategic thinking, system thinking, big picture and broad context view and ability to transform it into key focuses/pillars.

Particularly expressed strengths: hard conversation management and negotiation and growth mindset.

Change management skills and principles, in every aspect of change (based on own methodology What's Next).

Organizational management style based on **situational leadership**, **planning and focus orientations**, **action driven culture**, **feedback culture and growth mindset development**.

Technical skills and competences

Digital adaptable person and continuous learner of new systems, software, applications etc. Advanced user of Microsoft Office 365 programs and tools.

Artistic skills and competences

Inspired and passionate about research and observation of people and environment, and sharing those insights and conclusions through writings: expert articles and columns, as well as fiction – poetry and prose (1st book: "Lica i nalicja", 2023).

Other skills and competences

Development of different approaches and processes in children/youth development and motivation. Passionate basketball lover and practitioner.

Driving licence

В

ADDITIONAL INFORMATION AND FINAL CONCLUSION

Professional Associations

As an active member of professional associations and organizations (Serbian Association of Managers, Management Training Centre MNG, Alumni Club of Academy of Executive Coaching), actively involved in various long-term projects as a mentor and lecturer.

Mentor in SAM Mentorship program, since 2018 Lecturer, Modul Change & Mindset Shifting, SAM Leadership Academy, since 1st Generation – 2021

Professional Research Works

Author of unique methodology framework for Organizational and Personal Assessment and Change Strategy – What's Next©, 2021, The Intellectual Property Office of the Republic of Serbia.

Actively engaged in research work in the field of organizational strategy, culture, leadership and personal growth, within the Faculty of Media and Communications, professional associations and as a speaker at conferences and writer of numerous expert articles and columns.

Conferences and Columns

Some of the most relevant conferences and columns:

"What's Next in Legal industry?", keynote speaker, Multilaw global conference, 2023.

"The Future of work: Hybrid work?", IBA conference, 2023.

"Women in business", VoS and Chamber of Commerce Serbia, 2023.

"Emotional Intelligence in Leadership", Mokrogorska School of Management, Vivaldi CEO Forum, 2020

"What's Next in FMCG?", FMCG InStore Forum, 2020

"Employer Brand as a part of Strategy", IZAZOV Forum of Communication Leaders, 2016

"Business environment in 2023 - What's next?", Biznis Telegraf media, 2023

"The key issues for leaders in 2023", Nedeljnik magazine, 2023

"What's Next Methodology in business and life", Biznis Telegraf media, 2022

"Doing business in New Normal world", Sensa Mondo media, 2021

"What's Next in Leadership" column serial, Sensa Mondo media, 2021

"Business & world challenging brand philosophy", Media Marketing, 2019

"Strategic approach for your Brand", column serial, Media Marketing, 2015-2018

Seminars and Certifications

The most relevant certifications:

Executive Coaching Basic Principles for Practitioners, Academy of Executive Coaching, UK, 2018 Innovation Management Academy, USAID and ICT Hub, Belgrade, 2018 Neuromarketing Principles for Practitioners, Sales Brain, San Francisco, 2014

References

Available on request

Final Conclusion

Change as the only today's constant, is my key driver in a personal and professional aspects of life. I strongly believe that "What's Next?" question is a question to which every human being and every organization must have an answer, every day. That's the area of my purpose – provide useful academic and practical approach to as many people and organizations as possible and help them start and succeed in making changes and improvements.