Achieving Organisational Effectiveness: A Leadership Framework Based on the Complexity Perspective*

*Ana Kićanović, Miloš Jevtić, Milica Maričić***

Abstract

This paper aims to provide insights into the daunting task leaders face towards achieving organisational effectiveness in the changing and demanding business environment. We propose a leadership framework to explore the effects of different leadership roles on the organisations' outcomes. In the proposed framework, organisations were observed as complex adaptive systems (CAS). A survey was conducted among private sector employees from companies operating in Serbia to verify the proposed framework. Answers from 277 respondents were analysed using Structural Equation Modelling (SEM). The applied framework provides valuable insights into the influences of different leadership roles - operational, entrepreneurial, and enabling - on organisational effectiveness. Organisational effectiveness was observed through the lens of business-related performance outcomes, organisational units' outcomes, and individual outcomes, all together reflecting innovation, adaptability, quality, cooperation, employees' motivation, job satisfaction, work stress level, and job insecurity. Research analysis provides evidence on the influence of complexity leadership on companies' outcomes. Additional insights are provided, having in mind that differences in the impact have been detected based on the managerial and non-managerial positions held.

Keywords: organisational effectiveness; complexity leadership; outcomes; conceptual model, Structural Equation Modelling (SEM)
JEL Codes: L25, M19, C38

Introduction

Changing and demanding environments of organisations are forcing them to develop mechanisms to react to changes and adapt their business to the new surroundings in an effective way. Achieving organisational effectiveness to accomplish valuable outcomes is relevant in leadership studies. There are various organisational effectiveness determinants (Angle/Perry 1981), and they depend on, among others, the adaptation to the changing environment (Yukl 2008). Uhl-Bien and Arena (2018) recognised adaptability as an important outcome for organisations and enabling leadership as a mechanism for organisations' ability to adapt to the needs of an external environment (Rosing/Frese/Bausch

* Received: 05.05.23, accepted: 04.02.24. 1 revision.

** *Ana Kićanović,* PhD, Associate Professor, University of Belgrade, Faculty of Organizational Sciences, Email: ana.kicanovic@fon.bg.ac.rs. Main research interests: leadership, quality management and standardisation.
Miloš Jevtić, PhD, Associate Professor, University of Belgrade, Faculty of Organizational Sciences, Email: milos.jevtic@fon.bg.ac.rs. Main research interests: organisational design, leadership, and organisational culture.
Milica Maričić, PhD, Assistant Professor, University of Belgrade, Faculty of Organizational Sciences, Email: milica.maricic@fon.bg.ac.rs. Main research interests: Computational Statistics and Multivariate Analysis with special interest in structural equation modelling.

 DOI: 10.5771/0949-6181-2024-3-461

2011). Hughes and coauthors (2018) pointed out that leadership can enhance or inhibit innovation (Fischer/Dietz/Antonakis 2017; Jovičić Vuković et al. 2018). Further, according to Mone and coauthors (1998) innovation is one of the most important determinants of organisational performance. Empirical research conducted by Herre and coauthors (2019) showed that leadership behaviour impacts group outcomes such as productivity and originality. Relevant studies revealed the relationship between leadership theories and organisational effectiveness (O'Reilly/Tushman 2013; Seah/Hsieh/Huang 2014). We intended to explain this relationship differently and provide empirical evidence of how complexity leadership influences organisations' outcomes. The complexity perspective involves a different approach from traditional leadership theories (Uhl-Bien/Arena 2018) and discusses the adaptive process, dynamic nature of organisations, and emergence to enable organisational effectiveness. It involves leadership that enables an adaptive process for creating space for ideas that arise from the tension between exploitation and exploration to generate innovation. It focuses on how leaders "position organisations and the people within them to be adaptive in the face of complex challenges" (Uhl-Bien/Arena 2018:89).

In previous years, we have all witnessed the crisis caused by the COVID-19 (coronavirus) pandemic and the current crisis caused by war in Ukraine and tensions in the Middle East. These unexpected events raise the need for leaders to be better prepared to manage these crisis-driven contexts on the market because organisations rarely work in a stable environment. A recent study mentioned that some leadership behaviours in crisis conditions are more important than others for managing these conditions (Eichenauer/Ryan/Alanis 2022). Also, being prepared for every unexpected event on the market is rarely possible. Instead, the "crises require a distinctive leadership response that often includes being flexible and adaptable, making good decisions quickly, and mustering resources on short notice" (Riggio/Newstead 2023:202). Therefore, this research aims to explore the influence of complexity leadership on achieving organisational effectiveness in changing and demanding environments. To explore that influence, we adopt a perspective that conceptualises the organisations as complex adaptive systems (CAS) (Lindberg/Schneider 2013; Sarriot/Kouletio 2015), and we embrace the three forms of leadership: operational, entrepreneurial, and enabling leadership from complexity leadership theory (CLT) (Uhl-Bien/Marion/McKelvey 2007; Uhl-Bien/Arena 2018). In the early 1990s, researchers utilised the core principles of complexity theory in organisations (Stacey 1992; Eve/Horsfall/Lee 1997), and later complexity theorists established the concept of CAS (Lindberg/Schneider 2013; Holland 2014). However, traditional leadership theories are linear and do not adequately represent the dynamic feature of leadership in complex organisations (Marion/Uhl-Bien 2001). Complexity theory gives the fundamentals for acknowledging the organisations as CAS consists of agents that mutually affect one another through interaction and create new behaviour in

the overall system (Marion/Uhl-Bien 2001). CLT is a leadership theory based on complexity and is about leadership "in and of complex adaptive systems" (Uhl-Bien et al. 2007:302). Uhl-Bien and Arena (2018:98) defined entrepreneurial leadership as "leadership that works to create new knowledge, skills, products, and processes to sustain the future viability of the firm (i.e., exploration)". Operational leadership is leadership in the formal structure of the organisation based on exploitation (Uhl-Bien/Arena 2018), and enabling leadership endorses the process of adaptability (Uhl-Bien/Arena 2017) through the emergence of "adaptive space" in organisations (Uhl-Bien/Arena 2018:96). We used CLT as a suitable framework that links innovation and adaptability to explore the influence of complexity leadership roles on organisational effectiveness. Namely, our intent in undertaking this research was to explore different leadership roles and their impact on organisation outcomes. To our knowledge, there is a lack of empirical research on the relationship between complexity leadership and desired organisational outcomes, and with this study, we are trying to fulfil the identified gap. Thus, we conducted research to analyse the impact of leadership on organisational effectiveness through the lens of business-related performance outcomes, organisational unit outcomes, and individual outcomes, all together reflecting innovation, adaptability, quality, cooperation, employee motivation, job satisfaction, work stress level, and job insecurity. So, our main research question is: Do complexity leadership roles impact organisational effectiveness?

Literature review

Defining and measuring organisational effectiveness

Organisations need emergent and adaptive leadership to survive in today's turbulent environment (Uhl-Bien/Arena 2018). The literature on organisational culture, human resources and leadership provides evidence about the impact of leadership on organisational effectiveness. Undoubtedly, effective leadership has one of the most significant impacts on organisational outcomes (Denison/Hooijberg/Quinn 1995; Yukl 2008). Leadership is considered effective when leaders influence employees in a way that they do their activities with positive results (Dhar/Mishra 2001). Though, the determination of how leadership effectiveness increases organisational outcomes is complex. Some authors have investigated leaders' effectiveness through subordinates' assessment of leadership outcomes (Bennis/Burt 2003; Kouzes/Posner 2017). If there are positive outcomes in the organisation based on activities and the impact of leaders on subordinates, then we could define that leadership as effective (Madanchian/Hussein/Noordin/Taherdoost 2017).

Daft (2008:20) defined effectiveness as "the degree to which an organisation achieves its goals". Many different approaches to measuring organisational effectiveness have been acknowledged. In relevant studies, authors (Lee/Choi

2003; Zheng/Yang/McLean 2010) measured effectiveness by the organisation's subordinates' perception. The measurement of leadership effectiveness could be managed in different ways through the measurement of specific outcomes. First, there is the assumption that effectiveness could be measured through the influence of leaders on "group performance" and "success of group goals" (Madanchian/Hussein/Noordin/Taherdoost 2017:1045). Such outcomes include revenue, profit and profit margin, increase in sales, market share, return on investment, productivity, etc. (Gilley/McMillan/Gilley 2009; Madanchian et al. 2017).

This study explores the impact of leadership roles on organisational effectiveness by measuring their impact on different outcomes. Many recent and relevant studies used employee perceptions to measure various aspects of leadership (Cunha/Lúcio Martins 2023; Ghamrawi/Al-Thani 2023; Seijts/de Clercy/Miller 2023). We measured effectiveness by the organisations' leaders' and subordinates' perceptions regarding outcomes achieved. These respondents' perceptions include items they have experienced in relations with their managers and during the realisation of the work processes. Namely, in our study, we gave the statements in our questionnaire regarding the behaviours of managers, how work processes are done in the organisation and statements regarding outcomes related to organisational effectiveness from a complexity perspective. We measured effectiveness through the process of self-assessment for two primary reasons. First, employees are valuable sources of information and are often in the best position to assess the needs, aims, and outcomes achieved in the organisation. Second, an opportunity to measure outcomes through standardised indicators in different organisations is minimal.

Taking all the above mentioned into account, we propose the following main research hypothesis:

Research Hypothesis: *Complexity leadership is positively related to organisational effectiveness.*

Outcomes related to organisational effectiveness

In this study we observed the outcomes related to organisational effectiveness through three aspects: business-related performance outcomes (adaptability, innovation, and product/service quality); organisational unit outcomes (cooperation within organisational units and cooperation between organisational units); and individual outcomes (employee motivation, job satisfaction, work stress level, and job insecurity). In the sections that follow we present a literature review on each of them, how they are defined and observed.

Business-related performance outcomes: adaptability, innovation, and product/service quality

Yukl (2008:709) highlights that organisational effectiveness depends on, among others, "adaptation to the external environment". Seah and coauthors (2014) revealed in their study that leadership could influence organisational adaptability by creating an appropriate context to provide a mechanism for emerging adaptability. Organisational adaptability could be defined as a "firm's ability to alter or modify its components to match the changes in their external environment" (Seah/Hsieh/Huang 2014:1410). Basadur and coauthors (2014) defined organisational adaptability as a proactive and dynamic problem-solving process that allows organisations to adapt and change with new requirements. Further, the findings of Alpay and coauthors (2008) indicated that adaptability influences qualitative organisational performance (i.e., quality of goods/services), while it does not impact quantitative organisational performance (i.e., return on investment and sales growth). On the other hand, Yukl (2008) recognised adaptation as one of the key determinants of financial effectiveness. However, despite their importance, financial measures do not seem to consider all effectiveness aspects (Hitt/Hitt 1988).

O'Reilly and Tushman (2013:4) suggest that ambidextrous leadership is crucial for organisational adaptability through balancing tensions between exploration and exploitation or between "the need to innovate" and "the need to produce" (O'Reilly/Tushman 1996:11; Uhl-Bien/Arena 2018:96). Dynamic capabilities theory, besides the operational capabilities of an organisation, points out the importance of dynamic capabilities (Dixon/Meyer/Day 2014; Teece/Pisano/Shuen 1997), which refer to the adaptability of an organisation. Further, Benner and Tushman (2015:8) suggest that "ambidextrous designs are a form of organisation architecture that permitted a single business unit (or corporation) to simultaneously explore and exploit". Regarding the relationship between ambidexterity and complexity leadership, Diesel and Scheepers (2019) discussed that complexity leadership could initiate a proper environment that enables ambidexterity for innovation. Further, they suggested complexity leadership as a prerequisite for an "innovation climate" in the organisation (Diesel/Scheepers 2019:1796). In their review paper, Hughes and coauthors (2018:3) gave the following definition of innovation: "workplace innovation concerns the processes applied when attempting to implement new ideas. Specifically, innovation involves some combination of problem/opportunity identification, the introduction, adoption, or modification of new ideas germane to organisational needs, the promotion of these ideas, and the practical implementation of these ideas."

Regarding product/service quality as outcome measurement, it is a measurement of an organisation's ability to use existing knowledge, skills, and processes efficacy to achieve desired outcomes (Winter 2003; Dixon et al. 2014). Research

by Chang and coauthors (2021) pointed out that transformational leadership positively influences service quality through innovative behaviour.

Taking all the above mentioned into account, we defined adaptability, innovation, and product/service quality as business-related performance outcomes that represent measures for organisational effectiveness, so we proposed the following hypothesis and the related sub-hypotheses:

Hypothesis 1: Complexity leadership is positively related to business-related performance outcomes.

Hypothesis 1a: Operational leadership is positively related to business-related performance outcomes.

Hypothesis 1b: Entrepreneurial leadership is positively related to business-related performance outcomes.

Hypothesis 1c: Enabling leadership is positively related to business-related performance outcomes.

Organisational unit outcomes: cooperation within organisational units and cooperation between organisational units

One of the biggest challenges facing leaders today is the need to position and enable organisations and people for adaptability. In order to achieve that, organisations need leaders who can work horizontally in tandem as averse to "silos" (Chambers/Kirkland 2016). Leaders should support and generate initiative taking and cooperation (Uhl-Bien/Arena 2018) by linking the activities between organisational units (Jansen/Tempelaar/van den Bosch/Volberda 2009) to enable the emergence of adaptability. Cooperation is an important process that enhances organisational effectiveness (Smith/Carroll/Ashford 1995; Chen/Chen/Meindl 1998; Schalk/Curşeu 2010). A review given by Smith and coauthors (1995) suggests that most authors define cooperation as a process in which individuals, groups, and organisations collaborate and interact from relationships for mutual benefit (Schalk/Curşeu 2010). Research conducted by Tortoriello and coauthors (2012) highlights that knowledge transfer between organisational units through learning from each other is important for performance outcomes. Research carried out by Zahra and George (2002:194) suggests that the exploitation of knowledge in the organisation needs the emergence of a "social integration mechanism".

Further, leadership could influence group members' cooperation, leading to better group performance (Knorr/Mittermeir/Aichholzer/Waller 1979). Jones and coauthors (2019:409) emphasise that "work groups that function better internally will likely be more successful". Research by Vidyarthi and coauthors

(2014:238) suggests that the impact of leaders' emotional perceptions on subordinates' job performance relies on "within-group task interdependence". Also, Fong and Snape (2015) found that empowering leadership within and between groups is associated with employee outcomes.

Accordingly, taking the literature review into account, we defined the second hypothesis and the related sub-hypotheses:

Hypothesis 2: Complexity leadership is positively related to organisational unit outcomes.

Hypothesis 2a: Operational leadership is positively related to organisational unit outcomes.

Hypothesis 2b: Entrepreneurial leadership is positively related to organisational unit outcomes.

Hypothesis 2c: Enabling leadership is positively related to organisational unit outcomes.

Individual outcomes: employees' motivation, job satisfaction, work stress level, and the job insecurity

Carroll and Gillen (1987) and Yammarino and Bass (1990) pointed out that effective leaders are positively related to subordinate job satisfaction. Madanchian and coauthors (2017) explore how a leader's effectiveness is measured based on organisational outcomes and found that leadership influences group performance and job satisfaction (Schyns/Croon 2006). Campbell and coauthors (1974) recognised employee satisfaction as one measure of effectiveness, assessed by self-report questionnaires. Research by Schyns and Croon (2006) suggests that employee job satisfaction is an important factor in achieving good organisational performance. Also, Amundsen and Martinsen (2014) point out that how leadership affects job satisfaction is one of the important constructs for measuring aspects of leadership in the organisation.

Further, Lee and coauthors (2011) believe that the job satisfaction of the leader, a person who influences others in the organisation with his actions, is more important than subordinates' job satisfaction. On the other hand, satisfied employees are more devoted to their activities, and satisfied frontline employees provide quality service to customers with empathy (Singh 2000). Ostroff (1992) found that employee satisfaction was positively related to organisational performance at the organisational level of analysis.

Manzoor (2012) found a positive relationship between employee motivation and organisational effectiveness, keeping in mind that motivated and satisfied employees will better perform their activities. Further, they suggest that employ-

ee performance depends on factors such as employee motivation, satisfaction, job security, and others. Joshi and coauthors (2009) found a positive relationship between charismatic forms of leadership and employee motivation in geographically dispersed teams, and they suggest that this relationship could foster team effectiveness. Research carried out by Lin and coauthors (2022) suggest that certain leadership styles influence team performance. Finally, Ovidiu-Iliuta (2013) pointed out that proper leadership could empower employee motivation. Saeed and coauthors (2019) found that transformational leadership has a strong positive relationship with employees' innovative and creative work behaviour when they are highly motivated.

Banerjee and Mehta (2016) determined that employee stress leads to job avoidance and job dissatisfaction, consequently decreasing job performance. Motowidlo and coauthors (1986) have indicated that work-related stress is associated with decreased organisational effectiveness and individual performance. Research carried out by Steinhardt and coauthors (2003) suggests that supervisor support and group cohesion are related to decreased job stress and that the relationship between job stress and job satisfaction is inverse. Jacobs (2019) indicated that ineffective leadership causes increased occupational stress for employees (Westerlund et al. 2010) that leads to decreased organisational and individual outcomes such as decreased job performance, decreased job satisfaction, and diminished motivation (Skakon et al. 2010).

Safaria (2014) indicated that leadership practices are associated with job insecurity, which increases job stress. Westerlund and coauthors (2010) suggest that leadership is associated with employee stress, which impacts employees' negative behaviour (Yao/Fan/Guo/Li 2014). Schreurs and coauthors (2012) indicated that employees will feel less job insecurity if they receive more support from their supervisors. Research by Olaniyan and Hystad (2016) shows that employees are more satisfied with their job and perceive less job insecurity and intentions to leave the organisation if they perceive their leader as more authentic.

In our research, we explore the employees' motivation, job satisfaction, work stress level, and job insecurity as outcomes related to the achievement of organisational effectiveness. Thus, we defined the third hypothesis and the related sub-hypotheses:

Hypothesis 3: Complexity leadership is positively related to individual outcomes.

Hypothesis 3a: Operational leadership is positively related to individual outcomes.

Hypothesis 3b: Entrepreneurial leadership is positively related to individual outcomes.

Hypothesis 3c: Enabling leadership is positively related to individual outcomes.

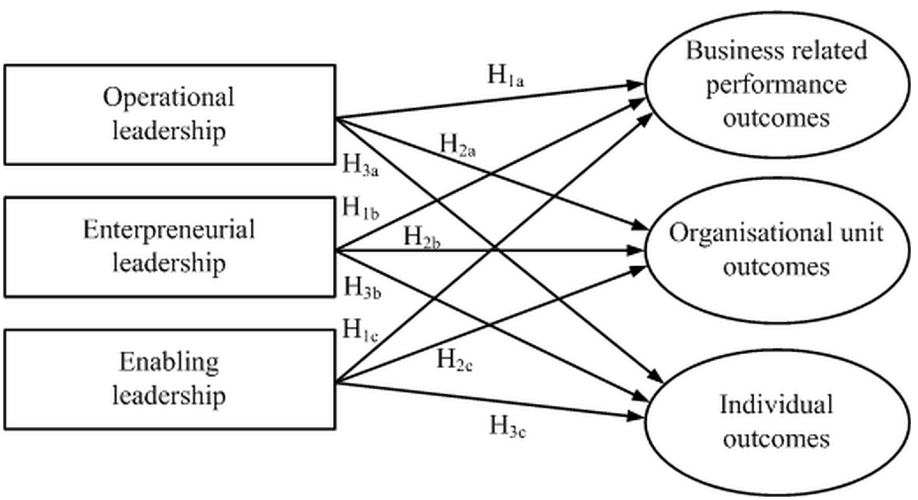
Proposed conceptual model

The proposed conceptual model is a set of unique attributes regarding complexity leadership roles that will enhance the relevant outcomes for achieving organisational effectiveness.

Complexity leadership is a valuable determinant for modern organisations, and this research highlights the necessity for analysing the complexity leadership roles to achieve organisational effectiveness. In addition, some research on leadership empirically and theoretically connects leadership and outcomes of the organisation (Cole/Bedeian/Bruch 2011; Seah et al. 2014; Fong/Snape 2015).

Herein we propose a conceptual model based on the complexity perspective to analyse the influence of leadership on organisational effectiveness, considering the three constructs of outcomes: business-related performance outcomes, organisational unit outcomes, and individual outcomes. The model is given in Figure 1.

Figure 1. Proposed leadership framework



Research methodology

Measures

Complexity leadership

There is little empirical evidence on adopting complexity leadership theory in practice (Rosenhead/Franco/Grint/Friedland 2019). It is no easy task to find evidence of the application of CLT, namely, that the behaviour of managers is influenced by complexity. However, relevant studies still apply complexity to show how organisations respond to changing and demanding environments (Plsek/Wilson 2001; Gerpott/Lehmann-Willenbrock/Voelpel/van Vugt 2019). In our research, leadership roles were measured by a 36-item questionnaire. These items were related to the core characteristics of complexity leadership reviewed from the theoretical background (Plowman et al. 2007; Lichtenstein/Plowman 2009; Hazy/Uhl-Bien 2015; Uhl-Bien/Arena 2017; Horvat/Filipovic 2018). Uhl-Bien (2021:2) acknowledges the process of "generative emergence, the process through which new order is created in dynamic systems", and that the CLT adaptive process follows the phases of generative emergence. These phases are "dis-equilibrium, amplificaying actions, recombination/self-organisation, and stabilising feedback" (Lichtenstein/Plowman, 2009:619). So, in our questionnaire, we gave the statements from a complexity perspective, acknowledging the process of generative emergence, regarding the behaviours of managers, on how work processes are done in the organisation and statements regarding outcomes related to organisational effectiveness. We used the existing questionnaire given by Horvat and Filipovic (2018) and modified it in accordance with recent and relevant questionnaires regarding the organisation's outcomes. At first, this questionnaire was applied to health organisations, and now it has been modified for business organisations. The aforementioned questionnaire was used for the 14 statements on operational leadership for conventional behaviour, representation of top-down communication and organisational power. A sample statement is: "You adhere to procedures, rules and established practices." Further, we used 10 statements on entrepreneurial leadership for the involvement of people, representation of down-top communication, personal power, and the impact of people on one another. A sample statement in this construct is: "All employees are actively involved in improving the work of the organisation." Also, 12 statements were used to measure enabling leadership through interaction, identification of tasks, interdependence, internal tension, and external tension. A sample statement within this construct is: "Employees must share information with others in the organisation in order to perform activities related to their work."

The questions were in a form of rating, where the respondents indicated their level of agreement with the defined statements. The initial scale was a four-point Likert scale, ranging from *I strongly disagree* to *I strongly agree*. Also, respon-

dents had the option to mark the answer *I do not have attitude*. The answers were later coded numerically from 1 to 5 in the following manner: 1 – Strongly disagree, 2 – Disagree, 3 – No attitude, 4 – Agree, and 5 – Strongly agree.

Outcomes of the organisation reflecting organisational effectiveness

In this research, we wanted to determine whether there is an association between leadership and organisational outcomes reflecting organisational effectiveness. We limited our research to nine organisational outcomes reflecting organisational effectiveness taking into account the literature background. First, we analysed business-related organisational outcomes: adaptability, innovation, and product/service quality. Second, we explored the following organisational units' outcomes: cooperation within and between organisational units. Ultimately, we observed individual outcomes: employees' motivation, job satisfaction, work stress level, and job insecurity.

Three items regarding adaptability were defined using research carried out by Seah and coauthors (2014), in which they refer to adaptability as the ability of the organisation to cope with a changing external environment. A sample statement is: "The organisation proactively identifies changes in its business environment and adapts to them." The questionnaire given in the research carried out by Pallas and coauthors (2013) was used for two statements on organisational innovativeness. One of the statements from this construct is: "Innovativeness in our organisation is at a satisfactory level compared to the industry's innovativeness." Product/service quality was measured using a questionnaire developed by Robert Cooke (1997). A sample statement is:" The quality of the organisation's products/services meets customer requirements. "

Four items regarding group outcomes were developed using research by Burningham and West (1995) and Tsai (2002). One of the statements within this segment is: "There is good cooperation between organisational units in the organisation." The research carried out by Vander Elst and coauthors (2014) was used for the two items considering job insecurity, which we defined as the outcome on the individual level. A sample statement is: "I am sure I will keep my job." We measured motivation, job satisfaction, and stress levels using a questionnaire developed by Robert Cooke (1997) for the purpose of assessing individual-level outcomes. One of the statements was: "You are pleased to be a member of this organisation".

The answering scale and coding procedure was the same as for the measurement of complexity leadership.

Statistical Analysis

We verified the proposed conceptual model using Structural Equation Modelling (SEM) analysis to accept or reject the defined hypothesis. SEM analysis is a statistical multivariate analysis which lies on the principles of factor analysis and multiple linear regression (Kline 2023). Therefore, the analysis allows the creation of latent variables and exploring the relationship between them. SEM focuses on estimating a set of model parameters so that the difference between the theoretical covariance matrix and the estimated covariance matrix is minimised (Hair/Ringle/Sarstedt 2011). Having in mind the analysis properties, it allows for testing complete theories, concepts, and conceptual models.

Besides being used to test the validity of conceptual models, the SEM analysis is broadly used for analysing the impact of different factors on organisations' outcomes, such as work stress, and turnover intention (Jovanovic/Ivanovic/Maricic/Ivancevic 2022; Komazec/Maricic/Djuric 2023). As we investigated the impacts of operational, entrepreneurial, and enabling leadership on the business-related performance outcomes, organisational unit outcomes, and individual outcomes, we also opted for the application of SEM analysis.

The SEM analysis was conducted using AMOS software after taking into account the model complexity (three latent variables), sample size, and the 5:1 ratio between the number of observations and the number of estimates (Kline 2023). Descriptive statistics of the sample was done in SPSS.

Conducted survey and sampling

The target population of this research were individuals employed in companies operating in Serbia in the private sector. The sampling method that we applied was convenience sampling. This type of sampling, often termed as haphazard or accidental sampling, operates as a nonrandom and nonprobability sampling method. This approach entails the inclusion of individuals from the target population based on practical criteria, including factors like accessibility, geographical proximity, availability, or their willingness to participate in the study (Dörnyei 2007). Convenience samples are occasionally labelled as 'accidental samples' due to the possibility of elements being chosen based on their proximity, either spatially or administratively, to the location or network where the researcher conducts data collection (Etikan/Musa/Alkassim 2016). Although this sampling method is convenient for the researcher, an important disadvantage of convenience sampling is that it is likely to be biased and may not accurately reflect the broader population. Therefore, generalisations based on the results striving from convenience sampling are not recommended (Emerson 2015).

The devised questionnaire was distributed online to members of the author’s networks on the LinkedIn platform based on their current work positions and the

company they work for. This sampling method was used to reach the employed respondents who occupy managerial and non-managerial positions. Participation was voluntary and anonymous. Also, respondents were informed that the data would be used for research purposes only.

The questionnaire consisted of three parts. The first part included biographical information about respondents, such as questions about gender, age and information about the organisation where he/she works and management position held. The second part consisted of questions regarding roles of complexity leadership, and finally, the third group of questions regarded the respondents' perception on different organisational practices that could influence organisational outcomes.

The higher position of respondents in the hierarchy, whether they are in a managerial position in the organisation or not, was a control variable that influenced the respondent's opinion. The respondents in management positions had to rate their actions in the complex context and rate different organisational practices that could influence outcomes. The rest of the respondents had to share their perceptions of how their managers act in the complex context and rate different practices in their organisations that could influence outcomes.

Results

Sample Characteristics

In total, we collected responses from 277 respondents, of which the percentage of male respondents is 55.2%, while there are slightly fewer female respondents, 44.8%. The mean age of the respondents is 30.68, with a standard deviation of 5.119. The youngest respondent was 21 years old, while the oldest was 56. After analysis, it can be concluded that most of our respondents work in the IT sector (11.48%), followed by those working in food production and distribution insurance and banking (9.20%), and insurance and banking sector (7.40%). Respondents came from different size organisations: micro-organisations – less than 10 employees (12.6%), small organisations – between 11 and 50 employees (14.4%), medium-sized organisations – between 51 and 249 employees (26.0%), and large organisations – more than 250 employees (46.9%).

We further present the analysis of the mean values of three observed leadership roles and three outcomes constructs (Table 1). Looking closely at the mean leadership values, we observed that enabling leadership has the highest mean, 3.884. The same leadership has the smallest standard deviation and interquartile range, indicating that the responses are the most consistent regarding this leadership. On the other hand, the agreement of the respondents regarding entrepreneurial leadership is the lowest, as the standard variance is the highest, 0.768, indicating some variability in the answers. Looking at the mean outcome values, the organisational unit outcomes have the highest mean and median, thus indicating that

agreement is the highest and most consistent with these statements. However, the same does not apply to individual outcomes, as this construct had the smallest mean, 3.641.

Table 1. Descriptive statistics of mean values of three observed leadership styles and three outcomes

Construct	Mean	Standard deviation	Median	Interquartile range
Operational leadership	3.065	0.554	3.071	0.860
Entrepreneurial leadership	3.691	0.768	3.900	1.100
Enabling leadership	3.884	0.486	4.000	0.580
Business-related performance outcomes	3.894	0.847	4.125	1.130
Organisational unit outcomes	4.001	0.877	4.333	1.000
Individual outcomes	3.641	0.548	3.750	0.630

We also asked the respondents if they were in a managerial position. Namely, 43.7% of them were in a managerial position.

Application of Structural Equation Modelling (SEM)

Before conducting the SEM analysis, we tested the internal consistency of the proposed scales. The obtained metrics are provided in Table 2. To do so, we used Cronbach's alpha. This coefficient measures the extent to which all items quantify the same concept (Tavakol/Dennick 2011). It takes values between 0 and 1, where 0 indicates no internal consistency and 1 indicates perfect consistency. The internal consistency of constructs ranged from 0.577 individual outcomes to 0.864 organisational outcomes. The internal consistency of two constructs (enabling leadership and individual outcomes) is below the cut-off of 0.7 (Peterson 1994), which indicates that it should be more closely observed. However, one should have in mind that Cronbach's alpha is very sensitive to the sample size, model complexity, and the number of items in the scale. Therefore, the fewer items in the scale, the more sensitive Cronbach's alpha is (Gliem/Gliem 2003). We also obtained the Average Variance Extracted (AVE) and Composite Reliability (CR) for the three latent constructs that we observed. The closer these indices are to 1, the better the internal consistency is, thus showing that the scale is more reliable. The threshold for the acceptable level for AVE is above 0.5, while for Composite Reliability is above 0.7 (Fornell/Larcker 1981). All three constructs have values close to or above the threshold.

All presented reliability and validity results indicate that the data is suitable for SEM analysis.

Table 2. Cronbach alpha, AVE, CR and number of items in constructs

	Leadership			Outcomes		
	Operational	Entrepreneurial	Enabling	Business-related performance	Organisational unit	Individual
No. of items	14	10	12	8	3	8
Alpha	0.691	0.839	0.580	0.864	0.710	0.577
AVE				0.520	0.636	0.414
CR				0.896	0.840	0.707

Herein our goal was to investigate the impacts of Mean operational, entrepreneurial, and enabling leadership on business-related performance outcomes, organisational unit outcomes, and individual outcomes using the SEM analysis. To measure leadership roles, we used mean values of variables which are used to quantify each function. Such an approach to measuring leadership roles was used by Horvat and Filipovic (2018). The initial model had a relatively poor fit to the data (Chi-square=836.115, df=183, p<0.000, RMSEA=0.104, CFI=0.750, TLI=0.713). The results indicated that Operational leadership has no statistically significant impact on organisational unit outcomes (C.R.=-0.839, p>0.05). Also, Mean enabling leadership proved not to impact on individual outcomes (C.R.=1.187, p>0.05). Besides that, we redefined the model by excluding the non-significant variable, which referred to the individual outcomes construct, more precisely on work stress, and we used the modification indices. When the final model was estimated, the model had a better fit to the collected data (Chi-square=598.459, df=173, p<0.000, RMSEA=0.084, CFI=0.837, TLI=0.803). The obtained coefficients alongside C.R. and R square are presented in Table 3.

Table 3. Final model on the impact of leadership roles of outcomes

Latent Construct	Determinant(s)	Standardised Regression Coefficient	C.R.	R^2
Business-related performance outcomes	Mean entrepreneurial leadership	0.685**	10.267	0.523
	Mean operational leadership	-0.173**	-3.553	
	Mean enabling leadership	0.156	3.220	
Organisational unit outcomes	Mean entrepreneurial leadership	0.613**	8.061	0.482
	Mean enabling leadership	0.323**	5.106	
Individual outcomes	Mean entrepreneurial leadership	0.703**	13.834	0.537
	Mean operational leadership	-0.047**	-4.007	

Note: ** p<0.01.

As can be observed, the obtained models are of medium quality. In the business-related performance outcomes model, 52.3 percent of variability is

explained through all three types of leadership. Next, the organisational unit outcomes model explains 48.2% of its variability through entrepreneurial leadership and enabling leadership. Regarding the individual outcomes, only Mean entrepreneurial and operational leadership have a statistically significant impact and create a model of medium quality as 53.7% of the variability is explained.

When proposed models are observed more closely, we can note that Mean entrepreneurial leadership positively impacted all three outcomes models. If the Mean entrepreneurial leadership function increases, the outcomes will also increase. Contrarily, if the Mean operational leadership function increases, all individual and business-related performance outcomes will decrease. Accordingly, when it comes to the relationship between Mean entrepreneurial and enabling leadership, Mean enabling leadership has a statistically significant positive impact on entrepreneurial leadership. All described regression coefficients are statistically significant at level 0.01.

Table 4. Final model on the impact of mean leadership roles of outcomes for respondents on managerial positions

Latent Construct	Determinant(s)	Standardised Regression Coefficient	C.R.	R^2
Business-related performance outcomes	Mean entrepreneurial leadership	0.573**	5.879	0.468
	Mean enabling leadership	0.360**	4.201	
Organisational unit outcomes	Mean entrepreneurial leadership	0.489**	4.845	0.461
	Mean enabling leadership	0.467**	4.687	
Individual outcomes	Mean entrepreneurial leadership	0.812**	10.573	0.662

Note: ** $p<0.01$.

We further wanted to explore the same models for respondents in managerial and non-managerial positions. In the model for respondents in managerial positions, the initial model had a relatively poor fit to the data (Chi-square=466.179, df=182, p<0.000, RMSEA=0.112, CFI=0.757, TLI=0.720). The results indicate that Mean operational leadership has no statistically significant impact on either outcome (p>0.05). Therefore, it was removed from the model. Also, Mean enabling leadership has no statistically significant impact on individual outcomes (C.R.=0.142, p>0.05). Besides removing Mean operational leadership from the model, we redefined the model using the modification indices. When the final model was estimated, the model had a better fit to the collected data (Chi-square=333.757, df=171, p<0.000, RMSEA=0.087, CFI=0.864, TLI=0.835). Therefore, the proposed model can be regarded as acceptable as the RMSEA is on the recommended cut-off criterion of 0.08, and CFI and TLI are close to

0.9 (Kline 2023). The obtained coefficients alongside C.R. and R square are presented in Table 4.

As can be observed, the models of individual outcomes are of medium quality, and indicates that 66.2% of its variability can be explained by mean entrepreneurial leadership. The other two models, of business-related performance outcomes and organisational unit outcomes, are of somewhat lower quality as around 46% of their variability can be explained. Also, it can also be concluded that entrepreneurial leadership positively affects all three types of outcomes. However, at the same time, the same does not account for enabling leadership, as it does not affect individual outcomes.

In the model for respondents in non-managerial positions, the initial model had a relatively poor fit to the data (Chi-square=600.520, df=183, p<0.000, RMSEA=0.112, CFI=0.712, TLI=0.700). The results indicate that Mean operational leadership has no statistically significant impact on organisational unit outcomes (C.R.=-1.163, p>0.05). Interestingly, in this model, Mean enabling leadership has no statistically significant impact on either outcome: individual outcomes (C.R.=0.383, p>0.05), organisational unit outcomes (C.R.=1.212, p>0.05), and business-related performance outcomes (C.R.=-0.035, p>0.05). Therefore, mean enabling leadership was removed from the model. Besides that, we redefined the model by using the modification indices and removing insignificant variables. The analysis indicated removing the variable which referred to the Individual outcomes construct, more precisely, on work stress. When the final model was estimated, the model had a better fit to the collected data (Chi-square=289.344, df=151, p<0.000, RMSEA=0.077, CFI=0.897, TLI=0.870). Therefore, proposed model can be regarded as acceptable (Kline 2023). The obtained coefficients alongside C.R. and R square are presented in Table 5.

Table 5. Final model on the impact of mean leadership roles of outcomes for respondents on non-managerial positions

Latent Construct	Determinant(s)	Standardised Regression Coefficient	C.R.	R^2
Business-related performance outcomes	Mean entrepreneurial leadership	0.738**	8.735	0.658
	Mean operational leadership	-0.167**	-3.385	
Organisational unit outcomes	Mean entrepreneurial leadership	0.781**	7.780	0.638
Individual outcomes	Mean entrepreneurial leadership	0.689**	9.846	0.452
	Mean operational leadership	-0.203**	-3.230	

Note: ** p<0.01.

As observed, the business-related performance outcomes and organisational unit outcomes models are of medium quality as the R^2 is close to or above 0.6. The latter model, model of Individual outcomes is of somewhat lower quality, as Mean entrepreneurial and Mean operational leadership explain 45.2% of its variability. Looking at the detected statistically significant impacts, it can be concluded that entrepreneurial leadership positively affects all three types of outcomes. However, the same does not account for operational leadership, which negatively affects individual and business-related performance outcomes.

It is of interest to compare the two obtained models for different positions. In both models, Mean entrepreneurial leadership has a positive statistically significant effect on all three types of outcomes. In the model based on the perceptions of managers, mean enabling leadership was a statistically significant element in the model, while the same did not occur in the model based on opinions of those in non-managerial positions. Another difference between the models is the importance of Mean operational leadership. For those in non-managerial positions, Mean operational leadership is a statistically significant predictor of outcomes, while the same is not valid for those in managerial positions.

Table 6: Aggregated results of the conducted hypothesis testing

Hypothesis	Managerial positions	Non-managerial positions	Overall sample
Hypothesis 1a: Operational leadership is positively related to business-related performance outcomes	Accepted	Rejected	Accepted
Hypothesis 1b: Entrepreneurial leadership is positively related to business-related performance outcomes	Accepted	Accepted	Accepted
Hypothesis 1c: Enabling leadership is positively related to business-related performance outcomes	Rejected	Accepted	Accepted
Hypothesis 2a: Operational leadership is positively related to organisational unit outcomes.	Rejected	Rejected	Rejected
Hypothesis 2b: Entrepreneurial leadership is positively related to organisational unit outcomes.	Accepted	Accepted	Accepted
Hypothesis 2c: Enabling leadership is positively related to organisational unit outcomes.	Rejected	Accepted	Accepted
Hypothesis 3a: Operational leadership is positively related to individual outcomes.	Accepted	Rejected	Accepted
Hypothesis 3b: Entrepreneurial leadership is positively related to individual outcomes.	Accepted	Accepted	Accepted
Hypothesis 3c: Enabling leadership is positively related to individual outcomes.	Rejected	Rejected	Rejected

Finally, the quality of models differs as well. Within the model for managers, the individual outcomes are the construct which has been explained the most

(66.2%), while in the model for non-managers, the construct business-related performance outcomes is explained the most (65.8%).

To summarise the obtained results, we present a summarised table of results on the nine hypotheses which we have tested within our study. The aggregated results are presented in Table 6.

Discussion

Our research analysis highlights that influence of leadership on the outcomes of companies reflecting organisational effectiveness could be observed through the lens of complexity leadership theory. The proposed leadership framework indicates that different roles of complexity leadership could influence organisational outcomes. The proposed framework involves leadership that enables a mechanism for creating context for ideas arising from the tension between exploitation and exploration to generate innovation, resulting from interrelation of leaders and followers (Uhl-Bien 2021). Observation of achieving organisational effectiveness through a complexity perspective recognises the importance of enabling the adaptive process to achieve desired outcomes. Our findings align with prior research on the influence of leadership on organisational effectiveness (Yukl 2008; O'Reilly/Tushman 2013; Madanchian et al. 2017), viewing it from perspective of complexity leadership's influence on outcomes regarding effectiveness through recognising complexity mechanisms that emerge desired outcomes. By acknowledging entrepreneurial leadership and enabling leadership as potentially valuable for achieving organisational effectiveness, the proposed framework underlines the need to analyse the adaptive process, dynamic capabilities of organisations, and emergence to enable organisational effectiveness.

When we explored the proposed leadership framework for all respondents, the results of our study suggested the positive and negative impacts of different complexity leadership roles in achieving organisational effectiveness. Research findings showed that entrepreneurial leadership positively impacts business-related performance outcomes, organisational unit outcomes, and individual outcomes. Additionally, if leaders in organisations increase their actions towards the involvement of people, representation of down-top communication, personal power, and the impact of people on one another, this could enable the context for generating innovations and achieving increased organisational effectiveness. When we compared the same framework for respondents on managerial and non-managerial positions, the results also showed a positive impact of entrepreneurial leadership on business-related performance outcomes, organisational unit outcomes, and individual outcomes.

In the final model for all respondents on the impact of leadership roles on outcomes, the results suggested that enabling leadership has a positive impact on business-related performance outcomes and organisational unit outcomes,

so if leaders manage their actions in accordance with enabling the adaptive process to emerge ideas, this could induct increasing of adaptability, innovation, product/service quality, cooperation within organisational units and cooperation between organisational units. However, when we explored the same framework for respondents on managerial and non-managerial positions, we noticed the difference in impact related to enabling leadership on outcomes. Namely, managers, if they manage their actions to enable the adaptive responses of an organisation to the environment demands, such as innovation and product/service quality, which can be applied as new adaptive order into operational routines, they could facilitate organisational effectiveness. Also, these leaders' actions could encourage increased cooperation within and between organisational units. Interestingly, this is not the case with respondents in non-managerial positions, as they seem not to recognise this leader's role as important for observed outcomes.

Regarding operational leadership, which is organising and making decisions, in the final framework, results suggest that there is a negative impact on analysed business-related performance outcomes and individual outcomes, employees' motivation, job satisfaction, work stress level, and job insecurity. When leaders manage their activities to exploit operational routines and facilitate efficient and effective use of resources, they could cause decreased business-related performance outcomes and individual outcomes. Nevertheless, when we explored the models for respondents on managerial and non-managerial positions, for managers, there was no impact of operational leadership on either of the outcomes. On the contrary, for respondents in non-managerial positions, operational leadership negatively impacted both business-related performance outcomes and individual outcomes. Namely, when it comes to operational routines, managers' perception is that they successfully use the formal system in an organisation to achieve results through exploitation. On the contrary, their subordinates saw these formal structures and processes as an unmotivating factor that decreases individual outcomes such as employee motivation, job satisfaction, work stress level, and job insecurity and decreases the business-related performance outcomes.

Furthermore, when we analysed the results, in the case of all respondents together, the respondents in managerial positions, and respondents in non-managerial positions, in all these cases results suggested that entrepreneurial leadership has a positive impact on outcomes which are related to organisational effectiveness. Namely, leaders recognise the need to manage the tension between exploitation and exploration to achieve effective outcomes in an organisation.

Limitations and future research

While our study gives insights into the impacts of complexity leadership on the organisations' outcomes, the research results should be interpreted in the light of its limitations. First, we focused our research on defining the leadership framework for organisational effectiveness on complexity leadership and outcomes that refer to organisational effectiveness. However, other outcomes could be integrated in the framework. Future research could study the impact of complexity leadership roles on individual determinants of outcomes instead of business-related performance outcomes, organisational unit outcomes, and individual constructs of outcomes.

Second, the analysed sample consists of just 277 respondents. To provide more generalisable results, the sample should be extended. The options for sample extension are to conduct a large-scale survey in Serbia or even to extend the research in the neighbouring countries (for example in Croatia, Bosnia, or Montenegro). Also, the current sample focuses only on respondents coming from the private sector. It would be of interest to observe opinions and perceptions of respondents coming from the public sector and even compare the impacts of complexity leadership between public and private sector.

Besides taking into account the position of the respondent held, the size of the companies where the respondents work could be taken into account. The company size impacts majorly the relations between managers and non-managers and their perceptions (Psychogios/Garev 2012). Therefore, a future direction of the work could be to examine in more detail are there statistically significant differences in leadership effectiveness based on the company size.

A future direction of the study could include the application of Confirmatory Factor Analysis on the leadership measures to additionally validate the scales and add moderating variables to the model to increase its complexity. Further, the future application of the study could be the application of agent-based simulation (abs) as in the study of Živojinović and Zornić (2022). Also, leaders could be segmented using clustering and biclustering algorithms (Nikolic/Kostic-Stankovic/Jeremic 2022), and the differences in the achieved outcomes between them could be analysed. Finally, the sampling method is a limitation of the study that should be considered in future studies. Herein we used convenience sampling through the LinkedIn network of authors. In future research, stratified sampling could be employed to ensure that the sample will consist of a percentage of respondents from different industries.

Conclusions

Leaders have a constant task of achieving organisational effectiveness and sustainable business. This topic is relevant in an environment characterised by great

competitiveness and dynamism. The aim of this research was to explore the potential influence of complexity leadership roles on organisational effectiveness. In particular, we investigated how operational, entrepreneurial, and enabling roles (complexity leadership roles – CLR) influence outcomes reflecting organisational effectiveness. Also, we observed whether there is a difference in the results analysed for respondents who are in management positions and those who are not.

In the analysis, we used the SEM model to determine the impact. Findings have shown that the entrepreneurial role influences all outcomes, while the enabling and operational roles influence particular outcomes. The results indicate the importance of integrating all three leadership roles into a single leadership framework to achieve the organisation's effectiveness.

The operationalisation of the results of our research is in accordance with previous relevant studies on CLT (Marion/Uhl-Bien 2001; Uhl-Bien/Marion 2009). Respondents in management positions, who are recognised as operational leaders, should work on their mindset to establish structure and processes which enable the development of enabling and entrepreneurial leadership to achieve increased business-related performance outcomes. This mindset and actions derived from it could lead to increased organisational effectiveness. Accordingly, leaders could create an environment in which employees feel more satisfied and have better motivation with a decreased feeling of insecurity and stress. Such ambient leads to greater involvement and reduced resistance to changes at lower hierarchical levels.

The knowledge gained from this research indicates the potential effects of the appropriate complexity leadership role on the organisational outcomes reflecting organisational effectiveness. Therefore, the proposed leadership framework could have practical implications when used by leaders and help them cope with the demanding and changing environment. Also, the proposed framework provides some theoretical contribution by showing empirical evidence of the complexity leadership roles on organisational effectiveness.

Acknowledgments

We thank the University of Belgrade – Faculty of Organizational Sciences for the support in writing and publishing this paper. We also thank the two anonymous reviewers for their comments and suggestions.

References

Alpay, G./Bodur, M./Yilmaz, C./Çetinkaya, S./Arikan, L. (2008): Performance implications of institutionalization process in family-owned businesses: Evidence from an emerging economy, in: Journal of World Business, 43, 4, 435-448.

Angle, H. L./Perry, James L. (1981): An Empirical Assessment of Organizational Commitment and Organizational Effectiveness, in: Administrative Science Quarterly, 26, 1, 1–14.

Banerjee, S./Mehta, P. (2016): Determining the Antecedents of Job Stress and Their Impact on Job Performance: A Study Among Faculty Members, in: IUP Journal of Organisational Behavior, 15, 2, 7–24.

Basadur, M./Gelade, G./Basadur, T. (2014): Creative Problem-Solving Process Styles, Cognitive Work Demands, and Organizational Adaptability, in: Journal of Applied Behavioral Science, 50, 1, 80-115.

Benner, M. J./Tushman, M. L. (2015): Reflections on the 2013 Decade Award - "Exploitation, Exploration, and Process Management: The Productivity Dilemma Revisited" Ten Years Later, in: Academy of Management Review, 40, 4.

Bennis, W. G./Burt, N. (2003): Leaders: The Strategies for Taking Charge. New York: HarperCollins Publishers Inc.

Burningham, C./West, M. A. (1995): Individual, Climate, and Group Interaction Processes as Predictors of Work Team Innovation, in: Small Group Research, 26, 1, 106–117.

Campbell, J. P./Bownas, D. A./Peterson, N. G./Dunnette, M. D. (1974): The Measurement of Organizational Effectiveness: A Review of Relevant Research and Opinion. Minneapolis: Personnel Decisions, Inc.

Carroll, S. J./Gillen, D. J. (1987): Are the Classical Management Functions Useful in Describing Managerial Work?, in: Academy of Management Review, 12, 1, 38-51.

Chambers, J./Kirkland, R. (2016): Cisco' s John Chambers on the digital era. In: *McKinsey*, Interview: https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/ciscos-john-chambers-on-the-digital-era#.

Chang, H.-T./Chou, Y.-J./Miao, M.-C./Liou, J.-W. (2021): The effects of leadership style on service quality: enrichment or depletion of innovation behaviour and job standardisation, in: Total Quality Management & Business Excellence, 32, 5–6, 676–692.

Chen, C. C./Chen, X. P./Meindl, J. R. (1998): How can cooperation be fostered? The cultural effects of individualism-collectivism, in: Academy of Management Review, 23, 2, 285–304.

Cole, M. S./Bedeian, A. G./Bruch, H. (2011): Linking leader behavior and leadership consensus to team performance: Integrating direct consensus and dispersion models of group composition, in: The Leadership Quarterly, 22, 2, 383–398.

Cunha, M. J./Lúcio Martins, R. (2023): Female journalists who have reached the top: perceptions on communication, leadership, and gender bias, in: The Portuguese press. Corporate Communications: An International Journal, 28, 7, 84–100.

Daft, L. R. (2008): Organization Theory and Design - 10th edition. Mason: South-Western Cengage Learning.

Denison, D. R./Hooijberg, R./Quinn, R. E. (1995): Paradox and Performance: Toward a Theory of Behavioral Complexity in Managerial Leadership, in: Organization Science, 6, 5, 524–540.

Dhar, U./Mishra, P. (2001): Leadership Effectiveness: A Study of Constituent Factors, in: Journal of Management Research, 1, 4, 254-266.

Diesel, R./Scheepers, C. B. (2019): Innovation climate mediating complexity leadership and ambidexterity, in: Personnel Review, 48, 7, 1782-1808.

Dixon, S./Meyer, K./Day, M. (2014): Building dynamic capabilities of adaptation and innovation: A study of micro-foundations in a transition economy, in: Long Range Planning, 47, 4, 186–205.

Dörnyei, Z. (2007): Research methods in applied linguistics. New York: Oxford University Press.

Kilmann, R. H./Pondy, L. R./Slevin, D. P. (1976): The management of organization design - Strategies and Implementation. New York: North Holland.

Vander Elst, T./De Witte, H./De Cuyper, N. (2014): The Job Insecurity Scale: A psychometric evaluation across five European countries, in: European Journal of Work & Organizational Psychology, 23, 3, 364–380.

Emerson, R. W. (2015). Convenience sampling, random sampling, and snowball sampling: How does sampling affect the validity of research?, in: Journal of Visual Impairment & Blindness, 109, 2, 164-168.

Etikan, I./Musa, S. A./Alkassim, R. S. (2016): Comparison of convenience sampling and purposive sampling, in: American journal of theoretical and applied statistics, 5, 1, 1-4.

Eve, R. E./Horsfall, S./Lee, M. E. (1997): Chaos, Complexity, and Sociology: Myths, Models, and Theories. Thousand Oaks: SAGE Publication, Inc.

Fischer, T./Dietz, J./Antonakis, J. (2017): Leadership Process Models: A Review and Synthesis, in: Journal of Management, 43, 6, 1726–1753.

Fong, K. H./Snape, E. (2015): Empowering leadership, psychological empowerment and employee outcomes: Testing a multi-level mediating model, in: British Journal of Management, 26, 1, 126-138.

Gilley, A./McMillan, H. S./Gilley, J. W. (2009): Organizational Change and Characteristics of Leadership Effectiveness, in: Journal of Leadership & Organizational Studies, 16, 1, 38–47.

Gliem, J./Gliem, R. (2003): Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales. Präsentiert auf: 2003, 2003 Midwest Research to Practice Conference in Adult, Continuing, and Community Education, Columbus, USA, 82–88.

Gerpott, F. H./Lehmann-Willenbrock, N./Voelpel, S. C./van Vugt, M. (2019): It's Not Just What is Said, but When it's Said: A Temporal Account of Verbal Behaviors and Emergent Leadership in Self-Managed Teams, in: Academy of Management Journal, 62, 3, 717–738.

Ghamrawi, N./Al-Thani, H. (2023): Wellbeing leadership: Perceptions of pre-service school leaders, in: Heliyon, 9, 11, e21706.

Hair, J. F./Ringle, C. M./Sarstedt, M. (2011): PLS-SEM: Indeed a silver bullet, in: Journal of Marketing theory and Practice, 19, 2, 139-152.

Hazy, J. K./Uhl-Bien, M. (2015): Towards operationalizing complexity leadership: How generative, administrative and community-building leadership practices enact organizational outcomes, in: Leadership, 11, 1, 79–104.

Herre, C./Klumb, P./Schaffner, J. (2019): One Best Way? Leader Behavior and Different Aspects of Team Performance, in: Zeitschrift für Arbeits- und Organisationspsychologie A&O, 63, 1, 32–47.

Hitt, M. A. (1988): The Measuring of Organizational Effectiveness: Multiple Domains and Constituencies, in: Management International Review, 28, 2, 28-40.

Holland, J. H. (2014): Complexity: A Very Short Introduction, in: Journal of Chemical Information and Modeling, 53, 9, 1689-1699.

Horvat, A./Filipovic, J. (2018): Service quality and maturity of health care organizations through the lens of Complexity Leadership Theory, in: Journal of Evaluation in Clinical Practice, 24, 1, 301–307.

Hughes, D. J./Lee, A./Tian, A. W./Newman, A./Legood, A. (2018): Leadership, creativity, and innovation: A critical review and practical recommendations, in: Leadership Quarterly, 29, 5, 549-569.

Jacobs, C. M. (2019): Ineffective-Leader-Induced Occupational Stress, in: SAGE Open, 9, 2.

Jansen, J. J. P./Tempelaar, M. P./van den Bosch, F. A. J./Volberda, H. W. (2009): Structural differentiation and ambidexterity: The mediating role of integration mechanisms, in: Organization Science, 20, 4, 797–811.

Jones, G. D./Cumberland, D. M./Alagaraja, M. (2019): Social value orientation and work group outcomes, in: Team Performance Management: An International Journal, 25, 7/8, 402–418.

Joshi, A./Lazarova, M. B./Liao, H. (2009): Getting Everyone on Board: The Role of Inspirational Leadership in Geographically Dispersed Teams, in: Organization Science, 20, 1, 240–252.

Jovanovic, P./Ivanovic, T./Maricic, M./Ivancevic, S. (2022): Public Procurement Employees' Perception on Legal Changes, Perceived Red Tape and Job Stress: Evidence from Serbia, in: Engineering Economics, 33, 5, 507–520.

Jovičić Vuković, A./Damnjanović, J./Papić-Blagojević, N./Jošanov-Vrgović, I./Gagić, S. (2018): Impact of Leadership on Innovation: Evidence from the Hotel Industry, in: Management:Journal of Sustainable Business and Management Solutions in Emerging Economies, 23, 3, 57-66.

Kline, R B (2023): Principles and practice of structural equation modeling. Principles and Practice of Strucutral Equation Modeling 5th Ed. New York: The Guilford Press.

Knorr, K. D./Mittermeir, R./Aichholzer, G./Waller, G. (1979): Leadership and group performance: a positive relationship in academic research units. In: Andrews, Frank M. (Hrsg.), Scientific productivity: the effectiveness of research groups in six countries. Cambridge:University Press, 95–120.

Komazec, S./Maričić, M./Đurić, M. (2023): Exploring the Effects of the Procedural Justice of Downsizing on Survivors' Behaviour, in: Engineering Economics, 34, 3, 293-307.

Kouzes, J. M./Posner, B. Z. (2017): The leadership challenge: How to Make Extraordinary Things Happen in Organizations. New Jersey: John Whiley & Sons Inc.

Lee, H./Choi, B. (2003): Knowledge management enablers, processes, and organizational performance: An integrative view and empirical examination, in: Journal of Management Information Systems, 20, 1, 179-228.

Lichtenstein, B. B./Plowman, D. A. (2009): The leadership of emergence: A complex systems leadership theory of emergence at successive organizational levels, in: The Leadership Quarterly, 20, 4, 617–630.

Lin, C. P./Liu, C. M./Joe, S. W./Chen, K. J./Tsai, C. C. (2022): Modelling leadership and team performance: the moderation of politics and leadership self-efficacy, in: Total Quality Management & Business Excellence, 33, 1–2, 73–91.

Lindberg, C/Schneider, M (2013): Combating infections at Maine Medical Center: Insights into complexity-informed leadership from positive deviance, in: Leadership, 9, 2, 229–253.

Madanchian, M./Hussein, N./Noordin, F./Taherdoost, H. (2017): Leadership Effectiveness Measurement and Its Effect on Organization Outcomes, in: Procedia Engineering, 181, 1043–1048.

Manzoor, Q.A. (2012): Impact of Employees Motivation on Organizational Effectiveness, in: Business Management and Strategy, 3, 1, 1–12.

Marion, R./Uhl-Bien, M. (2001): Leadership in complex organizations, in: Leadership Quarterly, 12, 4, 389–418.

Mone, M. A./Mckinley, W./Barker, V. L. (1998): Organizational decline and innovation: A contingency framework, in: Academy of Management Review, 23, 1, 115-132.

Motowidlo, S. J./Packard, J. S./Manning, M. R. (1986): Occupational Stress. Its Causes and Consequences for Job Performance, in: Journal of Applied Psychology, 71, 4, 618–629.

Nikolic, D./Kostic-Stankovic, M./Jeremic, V. (2022): Market segmentation in the film industry based on genre preference: The case of millennials, in: Inzinerine Ekonomika-Engineering Economics, 33, 2, 215-228.

O'Reilly, C. A./Tushman, M. L. (1996): Ambidextrous organizations: managing evolutionary and revolutionary change, in: California Management Review, 38, 4, 8-29.

O'Reilly, C. A./Tushman, M. L. (2013): Organizational ambidexterity: Past, present, and future, in: Academy of Management Perspectives, 27, 4, 324–338.

Olaniyan, O. S./Hystad, S. W. (2016): Employees' psychological capital, job satisfaction, insecurity, and intentions to quit: The direct and indirect effects of authentic leadership, in: Revista de Psicología del Trabajo y de las Organizaciones, 32, 3, 163–171.

Ostroff, C. (1992): The Relationship Between Satisfaction, Attitudes, and Performance: An Organizational Level Analysis, in: Journal of Applied Psychology, 77, 6, 963–974.

Ovidiu-Iliuta, D. (2013): Employee motivation and organizational performance, in: Review of Applied Socio-Economic Research, 5, 1, 53-60.

Pallas, F./Bockermann, F./Goetz, O./Tecklenburg, K. (2013): Investigating Organisational Innovativeness: Developing a Multidimensional Formative Measure, in: International Journal of Innovation Management, 17, 4, 1-41.

Peterson, R. A. (1994): A Meta-Analysis of Cronbach's Coefficient Alpha, in: Journal of Consumer Research, 21, 2, 381–391.

Plowman, D. A./Solansky, S./Beck, T. E./Baker, L./Kulkarni, M./Travis, D. V. (2007): The role of leadership in emergent, self-organization, in: The Leadership Quarterly, 18, 4, 341–356.

Plsek, P. E./Wilson, T. (2001): Complexity, leadership, and management in healthcare organisations, in: British Medical Journal, 323, 7315, 746–749.

Psychogios, A. G./Garev, S. (2012). Understanding Complexity Leadership Behaviour In SMEs: Lessons From A Turbulent Business Environment, in: Emergence: Complexity & Organization, 14, 3, 1-22.

Riggio, R. E./Newstead, T. (2023): Crisis Leadership, in: Annual Review of Organizational Psychology and Organizational Behavior, 10, 201–224.

Rosenhead, J./Franco, L. A./Grint, K./Friedland, B. (2019): Complexity theory and leadership practice: A review, a critique, and some recommendations, in: The Leadership Quarterly, 30, 5, 101304.

Rosing, K./Frese, M./Bausch, A. (2011): Explaining the heterogeneity of the leadership-innovation relationship: Ambidextrous leadership, in: Leadership Quarterly, 22, 5, 956-974.

Saeed, Bilal Bin; Afsar Bilal; Shahjehan, Asad; Shah Syed Imad (2019): Does transformational leadership foster innovative work behavior? The roles of psychological empowerment, intrinsic motivation, and creative process engagement, in: Economic Research-Ekonomska Istraživanja, 32, 1, 254–281.

Safaria, T. (2014): Are leadership practices, role stressor, religious coping, and job insecurity predictors of job stress among university teachers? A moderated-mediated model, in: International Journal of Research Studies in Psychology, 3, 3, 87-99.

Sarriot, E./Kouletio, M. (2015): Community Health Systems as Complex Adaptive Systems: Ontology and Praxis Lessons from an Urban Health Experience with Demonstrated Sustainability, in: Systemic Practice and Action Research, 28, 3, 255–272.

Seah, M./Hsieh, M. H./Huang, H. Y. (2014): Leader driven organizational adaptation, in: Management Decision, 52, 8, 1410-1432.

Seijts, G./de Clercy, C./Miller, R. (2023): Character and Trust in Crisis Leadership: Probing the Relationships Among Character, Identification-Based Trust, and Perceptions of Effectiveness in Political Leadership During the COVID-19 Pandemic, in: The Journal of Applied Behavioral Science, 59, 1, 127-154.

Schalk, R./Curşeu, P. L. (2010): Cooperation in organizations, in: Journal of Managerial Psychology, 25, 5, 453 - 459.

Schreurs, B. H. J./Hetty van Emmerik, I. J./Günter, H./Germeys, F. (2012): A weekly diary study on the buffering role of social support in the relationship between job insecurity and employee performance, in: Human Resource Management, 51, 2, 259–279.

Schyns, B./Croon, M. A. (2006): A model of task demands, social structure, and leader-member exchange and their relationship to job satisfaction, in: International Journal of Human Resource Management, 17, 4, 602-615.

Singh, J. (2000): Performance Productivity and Quality of Frontline Employees in Service Organizations, in: Journal of Marketing, 64, 2, 15-34.

Skakon, J./Nielsen, K./Borg, V./Guzman, J. (2010): Are leaders' well-being, behaviours and style associated with the affective well-being of their employees? A systematic review of three decades of research, in: Work & Stress, 24, 2, 107–139.

Smith, K. G./Carroll, S. J./Ashford, S. J. (1995): Intra- and Interorganizational Cooperation: Toward a Research Agenda, in: Academy of Management Journal, 38, 1, 7–23.

Stacey, R. D. (1992): Managing the unknowable: Strategic boundaries between order and chaos in organizations. San Francisco: Jossey-Bass.

Steinhardt, M. A./Dolbier, C. L./Gottlieb, N. H./McCalister, K. T. (2003): The Relationship between Hardiness, Supervisor Support, Group Cohesion, and Job Stress as Predictors of Job Satisfaction, in: American Journal of Health Promotion, 17, 6, 382–389.

Tavakol, M./Dennick, R. (2011): Making sense of Cronbach's alpha, in: International Journal of Medical Education, 2, 53–55.

Teece, D. J./Pisano, G./Shuen, A. (1997): Dynamic capabilities and strategic management, in: Strategic Management Journal, 18, 7, 509–533.

Tortoriello, M./Reagans, R./McEvily, B. (2012): Bridging the knowledge gap: The influence of strong ties, network cohesion, and network range on the transfer of knowledge between organizational units, in: Organization Science, 23, 4, 1024–1039.

Tsai, W. (2002): Social Structure of "Coopetition" Within a Multiunit Organization: Coordination, Competition, and Intraorganizational Knowledge Sharing, in: Organization Science, 13, 2, 179–190.

Uhl-Bien, M. (2021): Complexity Leadership and Followership: Changed Leadership in a Changed World, in: Journal of Change Management, 21, 2, 144–162.

Uhl-Bien, M./Arena, M. (2017): Complexity leadership: Enabling people and organizations for adaptability, in: Organizational Dynamics, 46, 1, 9–20.

Uhl-Bien, M./Arena, M. (2018): Leadership for organizational adaptability: A theoretical synthesis and integrative framework, in: The Leadership Quarterly, 29, 1, 89–104.

Uhl-Bien, M./Marion, R. (2009): Complexity leadership in bureaucratic forms of organizing: A meso model, in: Leadership Quarterly, 20, 4, 631–650.

Uhl-Bien, M./Marion, R./McKelvey, B. (2007): Complexity Leadership Theory: Shifting leadership from the industrial age to the knowledge era, in: The Leadership Quarterly, 18, 4, 298–318.

Vidyarthi, P. R./Anand, S./Liden, R. C. (2014): Do emotionally perceptive leaders motivate higher employee performance? The moderating role of task interdependence and power distance, in: The Leadership Quarterly, 25, 2, 232–244.

Westerlund, H./Nyberg, A./Bernin, P./Hyde, M./Oxenstierna, G./Jäppinen, P./Väänänen, A./Theorell, T. (2010): Managerial leadership is associated with employee stress, health, and sickness absence independently of the demand-control-support model, in: Work, 37, 1, 71–79.

Winter, S. G. (2003): Understanding dynamic capabilities, in: Strategic Management Journal, 24, 10, 991–995.

Yammarino, F. J./Bass, B. M. (1990): Transformational Leadership and Multiple Levels of Analysis, in: Human Relations, *43*, 10, 975-995..

Yao, Y.-H./Fan, Y.-Y/Guo, Y.-X./Li, Y. (2014): Leadership, work stress and employee behavior. In: Song Lin and Professor David Lamond, Professor (Hrsg.), Chinese Management Studies, 8, 1, 109–126.

Yukl, G. (2008): How leaders influence organizational effectiveness, in: Leadership Quarterly, 19, 6, 708-722.

Zahra, S. A./George, G. (2002): Absorptive capacity: A review, reconceptualization, and extension, in: Academy of Management Review, 27, 2, 185-203.

Zheng, W./Yang, B./McLean, G. N. (2010): Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management, in: Journal of Business Research, 63, 7, 763-771.

Živojinović, T./Zornić, N. (2022): Anticipating the impact of sharing economy drivers on consumer intention for using a sharing economy service, in: Journal of East European Management Studies, 27, 2, 233–258.