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Article

An empirical study on the relationships and impacts of leadership styles, organizational learning, and organizational competitiveness

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Abstract: This study dwells into the relationships and the impact of Leadership Styles (LS) and Organizational Learning (OL) practices on Organizational Competitiveness (OC) of the organizations in the Republic of North Macedonia. Correlation and regression are employed for data analysis. The data analysis is conducted by using Excel and SPSS. The findings shed light on getting a more comprehensive understanding of organizational competitiveness. Shared Vision (SV) and Systems Thinking (ST) are found to have the strongest positive correlation with OC. The efficiency and effectiveness are also found to be affected by the Learning Organization Disciplines. Efficiency, especially, is found to be impacted when practicing Directive Leadership Style. However, the efficiency and quick and effective adjustment of changes are not affected when using cooperation as a coaching leadership approach, nor when explanation, demonstration, and verification are used in a mixed leadership approach. The limitation of this research study comes mainly from geographical concentration. However, the managerial implications from provided insights about the relationships and impacts are indeed diversified and plentiful which should help managers and leaders in adjusting their strategies and activities for their respective organizations. Scholars can consider these findings to tap into the complex nature of the phenomena of achieving and sustaining organizational competitiveness.

Keywords: leadership styles; organizational learning; organizational competitiveness; leadership; performance

1. Introduction

The implementation of organizational learning philosophy is considered to have a significant impact on the competitive advantage and most organizations experience difficulties to enable effective learning organization processes (Saqib and Arif, 2017). Likewise, organizations which struggle to implement practical approaches due to the lack of concrete prescriptions relating to the organizational learning practices (Basten and Haamann, 2018) have a more difficult time trying to stay ahead of competition.

The greater the competitiveness of the company, the more easily it may be recognized as a sustainable company, which may affect its reputation, and thus attract more investors to devote in operational improvements and subsequently impact its effectiveness (Dresch et al., 2018). Furthermore, significant market instability and numerous challenges including global competition confront industries in general in recent years and the value creation principles do not support sufficiently the required flexibility and sustainability of the business systems (Stojanović, 2022). Companies

are required to stay competitive also in the domain of green economy and sustainability (Gunay et al., 2022). On the other side, nowadays, the exploitations of AI technology can support the organizational adaptation by advancing organizational learning and gaining new knowledge for meeting the objectives more efficiently and effectively (Ali et al., 2023; Norena-Chavez and Thalassinos, 2023). And regrettably, especially the SMEs face difficulties in reaching relevant technologies due to lack of adequate finances or due to difficulties in accessing HR resources that are skilled to properly use the new technologies (Dias, 2022; El-Khoury and Arikan, 2021).

Therefore, Organizational Competitiveness (OC) naturally is expected to be significantly affected by Leadership Styles (LS) and their implementations. Leadership plays a critical role in enabling Organizational Learning (OL) and OC (Senge, 1990; Schein, 1993). OL sets the tone in the company and the organization follows this as they carry their daily tasks. Leadership is proven to have a very important effect on creating a viable environment for OL (Brown and Posner, 2001; Kurland et al., 2010; Saekoo and Yasamorn, 2013) which is a needed feature for competitiveness to thrive and to be sustainable.

Silverthorne and Wang (2001) assert that leaders must observe the maturity level of their subordinates/followers carefully and closely in order to determine which leadership style will best suit the needs and the motivations. Therefore, situational leadership styles are more than just a good fit between the leaders and his/her subordinates/followers, but rather a dynamic and iterative process by which leaders actively adjust and adapt.

Various approaches have been developed in the literature to better comprehend the competitiveness of the companies through adaptation of LS and OL. The remaining part of this paper will include first the relevant and contemporary literature review. Then, this will be followed by hypothesis development, methodology, results, discussion, and conclusion parts.

2. Literature review and hypothesis development

OC model conceptualizes and measures competitiveness and it does it by considering the capabilities of the firm (such as employees' skills and competencies, knowledge assets, managerial practices and management attitudes, corporate culture, ownership advantages and outsourcing capacities, marketing aptitudes and customer relationships, absorptive capacities, networks and external linkages) in order to link the potential to actual performance and to determine the ability to react to a dynamic environment (Arikan and Enginoglu, 2016; Blandinières et al., 2017). Another alternative to measure the competitiveness has been recently confirmed by Horvathova and Mokrisova (2020) which considers the internal and external influences given the financial and market data of the company. However, the influence of various routines on organizational activities and managerial decisions is discussed in many directions including OL (Arikan, 2023; Valieva, 2014). OL can be defined as and comprises of "organizational tasks and skills that authorize the organization to use its knowledge, experience, and information" (Krsteska et al., 2023). Yet, OL exists both at the group and organizational level, where the learning process happens through social interactions.

The necessary conditions for the strategic renewal that balances continuity and change at the level of organization are created by OL (Bratianu, 2015). Hammoud (2020) argued that the concept of OL focuses primarily on the knowledge acquiring processes and is based on the broad and multidisciplinary nature with three major topics: 1) the defensive routines as an impediment to learning, 2) the effect of the routine changes over the future behavior, and 3) experience as a factor to change the performance characteristics. Furthermore, another approach enhances our insight in this realm by proclaiming that single-loop learning is a correction of the error recognized as a deviation from already established sequences. In this regard, single-loop leaning is mostly associated with adaptive organizations and can potentially lead only to incremental changes. Whereas double-loop learning involves experiments, feedback, and reorganization of numerous instances and is therefore associated with generative organizations and institutionalization of changes into new routines (Ahmad et al., 2020). Thus single-loop learning is merely a correction mechanism. However, double loop-learning is actively involved in the re-thinking of how we define situations, how we construct our company's role, and ultimately how we can reach desirable outcomes in new ways. In these regards, both create causality of the outcomes but in totally different perspectives. Single-loop learning keeps the status quo way of thinking and controls the results whereas double-loop learning actively manages the process which leads to those outcomes. In this regard organizational learning procesess can potentialy be improved and supported by AI applications in both single and double-loop learning practices (Wilkens, 2020).

Paul Hersey and Kenneth Blanchard have helped integrate contingency theories which denote that leaders are more effective in their management practices depending on the particular situation (Arvidsson et al., 2007). In other words, the same leader may be more effective in a particular situation whereas he/she may not be effective at all in a different situation (Xing et al., 2024). In addition, Leavitt (2011) projected a more holistic model for integrated OL, which is based on experiential, adaptive and generative, and assimilation theories (the first two theories come from the "cognitive", and the last theory comes from the "behavioral" school). This holistic model depicts the requisite antecedents and/or conditions that promote OL, the players (beneficiaries), and key processes. Furthermore, Tohidi et al. (2012) deployed the concept of capability and suggested that the OL capability is essentially one of the organizational and managerial characteristics that facilitate the OL process. This attempt was followed by a multidimensional model of seven interrelated pillars of competitiveness including physical resources, administrative routines, innovation, demand conditions, supply conditions, human resources, and networking (Szerb, and Terjesen, 2010). Fanousse et al. (2021) developed a model and argued that organizational learning contributes to reducing innovation project failures, by reducing the innovation project uncertainty. Basten and Haamann (2018) suggested mapping guidance that should improve the long-term performance of the organizations through the design of their learning processes.

Other elements, such as relationships and social interaction, balanced power relations, and ethical questions are related to OL in learning health systems (Milligan and Berta, 2021) as well. In this sense, OL is associated with the processes that exist

in the organizations while learning organization is considered as a form of organization that is an ideal form (Örtenblad, 2001).

Leadership plays undeniably a pivotal role in shaping companies' abilities to gain and maintain competitive edges. Motivating and guiding the workforce emerges as crucial strategies for addressing organizational weaknesses and fostering employee engagement that cannot be easily copied by competitors. Contemporary leadership is particularly instrumental as it can unlock otherwise latent potential, devise innovative solutions, navigate turbulent times, and deliver results in a distinctive manner that is hard to duplicate by the competitors. Consequently, modern management places greater emphasis on leveraging the human element within organizations, which necessitates effective leadership. In the global business arena, while most resources can be replicated to some degree, human resources remain very unique. Therefore, leadership styles that effectively nurture and develop human capital can serve as a sustainable source of competitive advantage that rivals find challenging to replicate in this regard, this inimitable source of competitive advantage helps create and maintain high degrees of organizational commitment within companies (Arikan, 2023).

Leadership style has been shown to have a significant impact on organizational performance, both directly and indirectly. Additionally, employees' obedience to authority can sometimes lead to unethical behaviors, posing risks to individuals, organizations, and society. Therefore, the style of leadership adopted is quite crucial for an organization's success. Since leadership directly influences human capital and consequently corporate culture, it is undeniably a key driver of unique success or competency that is difficult to imitate. Based on previous reputable studies, four major styles of situational leadership have emerged as summarized below (Hersey et al., 2008; Krsteska et al., 2023).

Directing: This is merely a one-way communication where leaders just give the order which needs to be conducted by the subordinates/followers. In this leadership style, managers merely tell instructions and there is very little or no support at all provided. Effectiveness here depends on the clarity of instructions.

Coaching: In this style, the goals to be achieved are still determined by the leader, but there is a mechanism by which learners are integrated into the processes and they are enabled to understand the underpinnings of tasks. Here, managers engage subordinates actively.

Supporting: The critical point in this style of leadership is to make the subordinates/followers understand the significance of the issue and recognize their contribution. As such, these leaders make their subordinates/followers feel the importance of their job responsibility. These leaders commonly listen to the ideas and suggestions of their subordinates/followers.

Delegating: These subordinates/followers can be said to have developed a very high sense of job ownership. Delegating style leaders follow up with their subordinates/followers in a timely manner and encourage them to ask for further support.

Based upon above-mentioned studies, we posit the following hypotheses:

H1: There are existing relationships between the factors of OC with LS and OL.

H2: The factors of OC are impacted by the OL and LS.

3. Methodology

An e-survey of Google forms is used for this study. The sampling approach is a convenient sampling. Respondents were asked to indicate on a 5-point Likert scale how much they agreed or disagreed with the statement.

The factors are identified by pretest of 79 participants and the final test of 273 participants. Based on the pretest for OL, out of 51 indicators a reduction of 8 indicators resulted by considering the low factor weight and common variance involved in explaining common factors. The final test consisted of 76 items (43 items for OL, 24 items for LS and 9 items for OC) and the sample size of 273 responses, which is more than three times than the statements surveyed.

To ascertain the reliability and validity, well-renowned scales have been utilized. Five leadership styles are observed (Directing; Coaching; Facilitating; Delegating; Directing/Coach/Facilitator/Delegation and Mixed style) using the well-established Hersey and Blanchard's Situational Leadership scale to ensure reliability and validity (each sub-scale of each leadership style is consisted of 6 items). Five Learning Organization disciplines were observed using the adapted approach of Smilevski et al. (2021) (PM sub-scale consisted of 9 items, TL sub-scale consisted of 8 items, MM sub-scale consisted of 9 items, SV sub-scale consisted of 8 items, and ST sub-scale consisted of 9 items). Organizational Competitiveness was captured by well-established measures previously used by Mellat-Parast and Spillan, (2014) and by Sánchez-Hernández et al. (2016) to ensure reliability and validity. The list of factors used are presented in **Table 1** below together with the associated variable (Krsteska et al., 2023). Considering the three-part questionnaire (OL, LS, and OC) the lowest Cronbach's Alpha was found at sub-scale of D LS consisting of 6 items and 273 respondents ($\alpha = 0.67$).

The relationships between OC with OL and LS are determined by Pearson Correlation (PC) coefficient in the inter-correlational matrixes (0.10–0.29 weak relationship; 0.3–0.49 moderate relationship и ≥ 0.5 strong relationship). The impact of organizational learning and situational leadership on organizational competitiveness is determined by the Correlation Coefficient (CC) R, and the predictive coefficient (PrC) R2 in the regression analysis.

Table 1. List of factors.

	Variables
F1-With new practices and ways of learning to continuous development. F2-Personal and professional change in the direction of increased tolerance.	Personal Mastery (PM)
F1-Team decisions with feedback for the lessons learned. F2-Sharing successes and failures.	Team Learning (TL)
F1-Consensual decisions and conclusion. F2 -The importance and meaning of diversity/ diversity and mind.	Mental Models (MM)
F1-Shared and achieved vision.	Shared Vision (SV)
F1-Teamwork and responsible attitude of employees and management, the basis for creating positive feedback effects.	Systems Thinking (ST)

Table 1. (*Continued*).

	Variables
F1-Efficiency in the foreground. F2-Quick and effective adjustment of changes.	Organizational competitiveness (OC)
F1-Responsibilities, needs, decisions and goals of subordinates. F2-Awareness, respect and overcome problems and misunderstandings. F3-Verification and creation of working standards and information topics.	Directing (Dir) leadership
F1-Check, security and support for the arranged (subordinated employees). F2-Cooperation on the needs of the arranged (subordinated employees) and contracted work tasks and organizational strategies. F3-Awareness and notification of the activities taken and control in the transferred work competences.	Coaching (C) leadership
F1-Recognition in achievements, support for rule-making and control in work activists. F2-Transparency towards organizational policy and organizational strategy and mission and creation of goals and tasks with the supported. F3-Development of long-term plans, fulfillment of work goals and importance of quality. F4-Responsibility and caution in making decisions and conclusions. F5-Awareness, focus and avoidance of problems.	Facilitating (F) leadership
F1-Support, responsibility, trust and creativity in planning in the orderly (subordinated employees). F2-Awareness, teamwork and creation of standards and work goals with the subordinates. F3-Awareness, focus and co-operation with the subordinates.	Delegating (Del) leadership
F1-Explanation, demonstration and verification of work goals and tasks, in support of organizational policies. F2-Awareness and support of information systems and avoid problems.	Mixed (M) leadership

4. Results and discussion

4.1. Demographic data

Demographic data were collected in the following manner: Type of organization consisted of Micro (n = 52), Small (n = 49), Medium (n = 49), Local government public enterprise (n = 3), Local government administration (n = 6), State public enterprise (n = 18), State legislature or government body (n = 11), Public institution (n = 40) and Other not classified (n = 45). The second category covered Work/Job position/level (level 1 = 11, level 2 = 46, level 3 = 42, level 4 = 31, level 5 = 55, level 6 = 57 others not classified n = 31. And the last category was about the duration of the professional work experience, both in total and in that particular entity as free comment (open-ended answers).

4.2. Relationships between OC with and OL and LS

The list of factors with abbreviation and description are given in **Table 1**.

Correlations are generated for each of the two factors of OC with each of the factors of the:

OLD such as: SV OLD, PM OLD, TL OLD, ST OLD and MM OLD.

LS such as: Dir LS, Del LS, C LS, F LS and M LS.

According to **Table 2**, the strongest positive correlation is between the second factor of OC and the first factor of SV of OLD with a correlation factor of 0.557 (PC,

$r = 0.557$). The stronger positive correlation is between the first factor of OC and the first factor of SV of OLD with a correlation factor of 0.544 (PC, $r = 0.544$). There is a strong positive correlation between the second factor of OC and the first factor of ST of OLD with a correlation factor of 0.522 (PC, $r = 0.522$) and there is a strong positive correlation between the first factor of OC and the first factor of ST of OLD with a correlation factor of 0.501 (PC, $r = 0.501$). There is a strong positive correlation between the first factor of OC and the first factor of PM of OLD with a correlation factor of 0.552 (PC, $r = 0.552$). There is a strong positive correlation between the first factor of OC and the first factor of TL of OLD with a correlation factor of 0.521 (PC, $r = 0.521$).

Table 2. Correlation matrix.

1st correlation factor	2nd correlation factor	Pearson Correlation	Sig. (2-tailed)	N
F1-OC	F1-PM OLD	0.552**	0	192
F2-OC	F1-PM OLD	0.434**	0	192
F1-OC	F2-PM OLD	0.248**	0.001	192
F2-OC	F2-PM OLD	0.244**	0.001	192
F1-OC	F1-TL OLD	0.521**	0	192
F2-OC	F1-TL OLD	0.496**	0	192
F1-OC	F2-TL OLD	0.267**	0	192
F2-OC	F2-TL OLD	0.211**	0.003	192
F1-OC	F1-MM OLD	0.448**	0	192
F2-OC	F1-MM OLD	0.333**	0	192
F1-OC	F2-MM OLD	0.186**	0.01	192
F2-OC	F2-MM OLD	0.184*	0.011	192
F1-OC	F1-SV OLD	0.544**	0	192
F2-OC	F1-SV OLD	0.557**	0	192
F1-OC	F1-ST OLD	0.501**	0	192
F2-OC	F1-ST OLD	0.522**	0	192
F1-OC	F1-Dir LS	0.368*	0.016	42
F2-OC	F1-Dir LS	0.382*	0.012	42
F1-OC	F2-Dir LS	0.346*	0.025	42
F2-OC	F2-Dir LS	0.192	0.223	42
F1-OC	F3-Dir LS	0.242	0.122	42
F2-OC	F3-Dir LS	0.063	0.693	42
F1-OC	F1-LS C	0.151	0.276	54
F2-OC	F1-LS C	0.044	0.754	54
F1-OC	F2-LS C	–0.237	0.084	54
F2-OC	F2-LS C	–0.266	0.052	54
F1-OC	F3-LS C	0.043	0.76	54
F2-OC	F3-LS C	0.024	0.866	54
F1-OC	F1-LS F	–0.06	0.743	32
F2-OC	F1-LS F	–0.152	0.407	32
F1-OC	F2-LS F	–0.027	0.881	32

Table 2. (*Continued*).

1st correlation factor	2nd correlation factor	Pearson Correlation	Sig. (2-tailed)	N
F2-OC	F2-LS F	–0.023	0.9	32
F1-OC	F3-LS F	–0.044	0.811	32
F2-OC	F3-LS F	0.013	0.945	32
F1-OC	F4-LS F	0.121	0.508	32
F2-OC	F4-LS F	0.048	0.794	32
F1-OC	F5-LS F	–0.449**	0.01	32
F2-OC	F5-LS F	–0.430*	0.014	32
F1-OC	F1-LS Del	0.027	0.883	32
F2-OC	F1-LS Del	–0.154	0.399	32
F1-OC	F2-LS Del	–0.006	0.973	32
F2-OC	F2-LS Del	–0.106	0.563	32
F1-OC	F3-LS Del	–0.252	0.165	32
F2-OC	F3-LS Del	–0.257	0.156	32
F1-OC	F1-LS M	–0.246	0.175	32
F2-OC	F1-LS M	–0.317	0.077	32
F1-OC	F2-LS M	0.055	0.764	32
F2-OC	F2-LS M	–0.14	0.444	32

There is a weak and moderate positive correlation between OC and Dir LS. The highest moderate correlation is between the second factor of OC and the first factor of Dir LS, with a correlation factor of 0.382 (PC, $r = 0.382$). The first factor of OC higher moderate positive correlation, has also with the first factor of Dir LS, with a correlation factor of 0.368 (PC, $r = 0.368$).

There is a weak negative and positive correlation between OC and CLS. The highest weak negative correlation is between the second factor of OC with the second factor of C LS, with a correlation factor of –0.266 (PC, $r = -0.266$). The first factor of OC higher weak negative correlation has also with the second factor of C LS, with a correlation factor of −0.237 (PC, $r = -0.237$).

As given in **Table 2**, between OC with the F LS there is a moderate and weak negative and positive level. The highest level of moderate negative correlations is among the first factor of with the fifth factor of F LS, with a correlation factor of –0.449 (PC, $r = -0.449$). The second factor of higher level of moderate negative correlation has also with the fifth factor of F LS, with a correlation factor of –0.430 (PC, $r = -0.430$).

Between OC and Del LS, there is a weak negative correlation. The highest weak negative correlation is between the second factor of OC with the third factor of Del LS, with a correlation factor of –0.257 (PC, $r = -0.257$). The first factor of OC has ar weak negative correlation with the third factor of Del LS, with a correlation factor of −0.252 (PC, $r = -0.252$).

Between OC and M LS, there is a moderate and weak negative correlation. The highest moderate negative correlation is between the second factor of OC with the first factor of the M LS, with a correlation factor of −0.317 (PC, $r = -0.317$). The first factor of OC weak negative correlation has with the first factor of the M LS, with a

correlation factor of –0.246 (PC, $r = -0.246$).

4.3. The impact of OL and LS on OC

There are 2 models generated for each of the two factors of OC. Model 1 is considering the first OC factor and Model 2 considering the second OC factor. In particular, the generated model 1 and model 2 considers all of the factors of each of the:

OLD such as: SV OLD, PM OLD, TL OLD, ST OLD and MM OLD.

LS such as: Dir LS, Del LS, C LS, F LS and M LS.

There are generated six tables in this research to investigate the impact of the OL (one table) and SL (five tables) on OC as presented below. In **Table 3**, the Model 1 that considers the factors of OL disciplines (SV OLD, PM OLD, TL OLD, ST OLD and MM OLD), with the first factor of OC, has CC R = 0.603, and PrC R2 = 0.364, which means it explains the common variability by about 36%. Such relationship indicates statistical significance at the level of $p = 0.000$ (Sig. = 0.000), i.e. the applied system is a predictive, that OL significantly affects the first factor of OC. The remaining 64% in explaining total variability remains on some other factors that are not the subject of this analysis and research. In addition, an individual positive low statistically significant impact on the first factor of OC is noted on the first factor representing PM (BETA = 0.264, Sig. = 0.006).

Table 3. Impact of OL on OC.

		Unstandardized Coefficients		**Standardized Coefficients**	***t***	**Sig.**
		B	**Std. Error**	**Beta**		
Model 1 F1 of OC	F1 of Personal mastery	0.264	0.095	0.264	2.776	0.006
	F2 of Personal mastery	0.045	0.068	0.045	0.660	0.510
	F1 of Team learning	0.118	0.113	0.118	1.049	0.295
	F2 of Team learning	–0.005	0.069	–0.005	–0.072	0.943
	F1 of Mental models	0.025	0.098	0.025	0.259	0.796
	F2 of Mental models	–0.044	0.071	–0.044	–0.627	0.531
	F1 of Shared vision	0.206	0.108	0.206	1.910	0.058
	F1 of Systems thinking	0.063	0.105	0.063	0.597	0.552
Model 1	***R***	***R*²**	**Adjusted *R*²**	**Std. Error of the Estimate (SSE)**	***F***	**Sig.**
	0.603[a]	**0.364**	**0.336**	**0.81471**	**13.095**	**0.000[b]**
Model 2 F2 of OC	F1 of Personal mastery	0.022	0.096	0.022	0.235	0.815
	F2 of Personal mastery	0.083	0.069	0.083	1.205	0.230
	F1 of Team learning	0.236	0.114	0.236	2.081	0.039
	F2 of Team learning	–0.044	0.069	–0.044	–0.641	0.522
	F1 of Mental models	–0.185	0.098	–0.185	–1.884	0.061
	F2 of Mental models	–0.015	0.071	–0.015	–0.213	0.831
	F1 of Shared vision	0.293	0.109	0.293	2.689	0.008
	F1 of Systems thinking	0.226	0.106	0.226	2.136	0.034
Model 2	***R***	***R*²**	**Adjusted *R*²**	**SSE**	***F***	**Sig.**
	0.596[a]	**0.355**	**0.327**	**0.82058**	**12.582**	**0.000[b]**

In **Table 3**, Model 2 that considers the factors of OLD, with the second factor of OC, has CC r = 0.596 and PrC R2 = 0.355, which means it explains the common variability by about 35%. Such relationship indicates statistical significance at the level of p = 0.000 (Sig. = 0.000), i.e. the applied system is a predictive, that OL significantly affects the second factor of OC. The remaining 75% of the total variability explanation (TVE) remains on some other factors that are not the subject of this analysis and research. The individual positive, low, and statistically significant impact on the second factor of OC is noted on:

The first factor of Team learning (BETA = 0.236, Sig. = 0.039);

The first factor of Shared impact (BETA = 0.293, Sig. = 0.008) and

The first factor of Systems thinking (BETA = 0.226, Sig. = 0.034).

Furthermore, in **Table 4**, the Model 1 that considers factors of Dir LS and the first factor of OC, has CC R = 0.456, and PrC R2 = 0.208, which means it explains the common variability by about 21%. Such relationship indicates statistical significance at the level of p = 0.030 (Sig. = 0.030), i.e. the applied system is a predictive that the Dir LS significantly affects the first factor of (F1-Efficiency in the foreground) of OC. The remaining 79% of the TVE remains on some other factors that are not the subject of this analysis and research.

Table 4. Impact of Dir LS on OC.

		Unstandardized Coefficients		**Standardized Coefficients**	***t***	**Sig.**
		B	**Std. Error**	**Beta**		
Model 1 F1 of OC	F1 of Directing	0.260	0.157	0.260	1.655	0.106
	F2 of Directing	0.247	0.152	0.247	1.624	0.113
	F3 of Directing	0.109	0.153	0.109	0.709	0.482
Model 1	***R***	***R*²**	**Adj. *R*²**	**SSE**	***F***	**Sig.**
	0.456[a]	**0.208**	**0.145**	**0.92451**	**3.323**	**0.030[b]**
Model 2 F2 of OC	F1 of Directing	0.379	0.162	0.379	2.336	0.025
	F2 of Directing	0.096	0.157	0.096	0.610	0.546
	F3 of Directing	–0.077	0.158	–0.077	–0.490	0.627
Model 2	***R***	***R*²**	**Adjusted R²**	**SSE**	***F***	**Sig.**
	0.398[a]	**0.158**	**0.092**	**0.95299**	**2.382**	**0.085[b]**

In **Table 4**, in Model 2 that considers the factor of Dir LS, and the second factor of OC, has correlation factor R = 0.398, and PrC R2 = 0.158, which means it explains the common variability by about 16%. Such relationship indicates that there is no statistical significance at the level of p = 0.085 (Sig. = 0.085), i.e. the prediction that the Dir LC has no significant influence on the second factor of OC. The remaining 84% of the TVE remains on some other factors that are not the subject of this analysis and research. Although the applied system has no common statistically significant impact on the second factor on OC, the first factor of Dir LS has moderate positive statistically significant impact on the second factor on OC (BETA = 0.379, Sig. = 0.025).

In **Table 5**, the Model 1 that considers factors of C LS and the first factor of OC, has CC R = 0.246 and PrC R2 = 0.061, which means explains the common variability by about 6%. Such a relationship indicates that there is no statistical significance at

the level of $p = 0.367$ (Sig. = 0.367), i.e. the prediction that the C LS has, has no significant influence on the first factor of OC. The remaining 94% of the total variability explanation (TVE) remains on some other factors that are not the subject of this analysis and research.

In **Table 5**, Model 2 that considers the factors of C LS and the second factor of OC has CC $R = 0.275$, and predication coefficient R2 = 0.075, which means it explains the common variability by about 7%. Such a connection indicates that there is no statistical significance at the level of $p = 0.266$ (Sig. = 0.266), i.e. the prediction that the C LS has, has no significant influence on the second factor of OC. The remaining 93% of the TVE remains on some other factors that are not the subject of this analysis and research.

Table 5. Impact of C LS on OC.

		Unstandardized Coefficients		**Standardized Coefficients**	***t***	**Sig.**
		B	**Std. Error**	**Beta**		
Model 1 F1 of OC	F1 of Coaching	0.071	0.148	0.071	0.481	0.632
	F2 of Coaching	–0.212	0.151	–0.212	–1.410	0.165
	F3 of Coaching	–0.010	0.140	–0.010	–0.070	0.944
Model 1	***R***	***R*²**	**Adj. *R*²**	**SSE**	***F***	**Sig.**
	0.246[a]	**0.061**	**0.004**	**0.99780**	**1.078**	**0.367[b]**
Model 2 F2 of OC	F1 of Coaching	–0.066	0.147	–0.066	–0.447	0.657
	F2 of Coaching	–0.297	0.149	–0.297	–1.989	0.052
	F3 of Coaching	–0.031	0.139	–0.031	–0.225	0.823
Model 2	***R***	***R*²**	**Adj. *R*²**	**SSE**	***F***	**Sig.**
	0.275[a]	**0.075**	**0.020**	**0.98997**	**1.360**	**0.266[b]**

In **Table 6**, the Model 1 that considers the factors of F LS and the first factor of OC, has CC R = 0.464, and prediction coefficient (PrC) R2 = 0.215, which means it explains the common variability by about 21%. Such relationship indicates that there is no statistical significance at the level of $p = 0.248$ (Sig. = 0.248), i.e. the prediction that the F LS has, has no significant influence of the firs factor of OC. The remaining 79% of the TVE remains on some other factors that are not the subject of this analysis and research. Although the applied system has no common statistically significant impact on the first factor of OC, the fifth factor of F LS has seen a moderate negative statistically significant impact on the first factor of OC (BETA = –0.470, Sig. = 0.017).

Table 6. Impact of F LS on OC.

		Unstandardized Coefficients		**Standardized Coefficients**	***t***	**Sig.**
		B	**Std. Error**	**Beta**		
Model 1 F1 of OC	F1 (of Facilitating)	0.030	0.180	0.030	0.166	0.870
	F2 (of Facilitating)	0.073	0.184	0.073	0.397	0.695
	F3 (of Facilitating)	0.055	0.181	0.055	0.304	0.763
	F4 (of Facilitating)	0.083	0.182	0.083	0.456	0.652
	F5 (of Facilitating)	–0.470	0.184	–0.470	–2.556	0.017

Table 6. (*Continued*).

		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
		B	**Std. Error**	**Beta**		
Model	***R***	***R*²**	**Adj. *R*²**	**SSE**	***F***	**Sig.**
1	**0.464[a]**	**0.215**	**0.064**	**0.96735**	**1.426**	**0.248[b]**
Model 2 F2 of OC	F1 (of Facilitating)	–0.077	0.181	–0.077	–0.425	0.675
	F2 (of Facilitating)	0.063	0.185	0.063	0.340	0.736
	F3 (of Facilitating)	0.110	0.182	0.110	0.604	0.551
	F4 (of Facilitating)	0.011	0.183	0.011	0.059	0.954
	F5 (of Facilitating)	–0.448	0.185	–0.448	–2.421	0.023
Model	***R***	***R*²**	**Adj. *R*²**	**SSE**	***F***	**Sig.**
2	**0.453[a]**	**0.205**	**0.052**	**0.97359**	**1.341**	**0.279[b]**

In **Table 6**, Model 2 that considers the factors of the F LC and with the second factor of the OC, has CC R = 0.453, and PrC R2 = 0.205, which means it explains the common variability by about 20%. Such a relationship indicates that there is no statistical significance at the level of $p = 0.279$ (Sig. = 0.279), i.e. the prediction that F LS has, has no significant influence of the second factor of OC. The remaining 80% of the TVE remains on some other factors that are not the subject of this analysis and research. Although the applied system has no common statistically significant impact on the second factor of OC, the fifth factor of F LS has seen a moderate negative statistically significant impact on the second factor of OC (BETA = –0.448, Sig. = 0.023).

In **Table 7**, the Model 1 that considers the factors of Del LS and the first factor of OC, has CC (CC) R = 0.265 and PrC R2 = 0.070, which means it explains the common variability by about 7%. Such relationship indicates that there is no statistical significance at the level of $p = 0.557$ (Sig. = 0.557), i.e. the prediction that Del LS has, has no significant influence on the first factor of OC. The remaining 93% of the TVE remains on some other factors that are not the subject of this analysis and research.

Table 7. Impact of Del LS on OC.

		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
		B	**Std. Error**	**Beta**		
Model 1 F1 of OC	F1 of Delegating	0.078	0.194	0.078	0.399	0.693
	F2 of Delegating	0.020	0.193	0.020	0.103	0.919
	F3 of Delegating	–0.271	0.188	–0.271	–1.444	0.160
Model 1	***R***	***R*²**	**Adj. *R*²**	**SSE**	***F***	**Sig.**
	0.265[a]	**0.070**	0.029	1.01458	0.705	**0.557[b]**
Model 2 F2 of OC	F1 of Delegating	–0.096	0.194	–0.096	–0.494	0.625
	F2 of Delegating	–0.033	0.193	–0.033	–0.173	0.864
	F3 of Delegating	–0.231	0.187	–0.231	–1.233	0.228
Model 2	***R***	***R* Square**	**Adj. *R*²**	**SSE**	***F***	**Sig.**
	0.279[a]	**0.078**	**0.021**	**1.01054**	**0.786**	**0.512[b]**

In **Table 7**, the Model 2 that considers the factors of Del LS and the second factor of OC, has CC R = 0.279 and PrC R2 = 0.078, which means it explains the common variability by about 8%. Such relationship indicates that there is no statistical significance at the level of $p = 0.512$ (Sig. = 0.512), i.e. the prediction that Del LS has, has no significant influence on the second factor of OC. The remaining 92% of the TVE remains on some other factors that are not the subject of this analysis and research.

In **Table 8**, the Model 1 that considers the factors of M LS and the first factor of OC, has CC R = 0.347 and PrC R2 = 0.121, which means it explains the common variability by about 12%. Such relationship indicates that there is no statistical significance at the level of p = 0.155 (Sig. = 0.155), i.e. the prediction that M LS has, has no significant influence on the first factor of OC. The remaining 88% of the TVE remains on some other factors that are not the subject of this analysis and research.

In **Table 8**, the Model 2 that considers the factors of M LS and the second factor of OC, has CC R = 0.322 and PrC R2 = 0.104, which means it explains the common variability by about 10%. Such relationship indicates that there is no statistical significance at the level of $p = 0.205$ (Sig. = 0.205), i.e. the prediction that M LS has, has no significant influence on the second factor of OC. The remaining 90% of the TVE remains on some other factors that are not the subject of this analysis and research.

Table 8. Impact of M LS on OC.

		Unstandardized Coefficients		**Standardized Coefficients**	***t***	**Sig.**
		B	**Std. Error**	**Beta**		
Model 1 F1 of OC	F1 of Mixed style	–0.423	0.215	–0.423	–1.968	0.059
	F2 of Mixed style	0.302	0.215	0.302	1.409	0.170
Model 1	***R***	***R* Square**	**Adj. R^2**	**SSE**	***F***	**Sig.**
	0.347[a]	**0.121**	**0.060**	**0.96960**	**1.987**	**0.155[b]**
Model 2 F2 of OC)	F1 of Mixed style	–0.357	0.217	–0.357	–1.648	0.110
	F2 of Mixed style	0.069	0.217	0.069	0.317	0.754
Model 2	***R***	**R^2**	**Adj. R^2**	**SSE**	***F***	**Sig.**
	0.322[a]	**0.104**	**0.042**	**0.97890**	**1.676**	**0.205[b]**

5. Discussion and conclusion

This study aimed mainly two major objectives. Firstly, we wanted to know if there are existing relationships between the factors of OC, LS, and OL (Hypothesis 1). Secondly, we wanted to know if the factors of OC are impacted by OL and LS (Hypothesis 2). Our findings provide proof as to both of these hypotheses. The results indicate both hypotheses overall are partially supported and in each one there are various differences on the effects. Thus, below are detailed explanations for these major findings.

SV and ST from all the OLD are found to have the positive strongest correlation with both factors of OC. This means that quick and effective adjustment of changes and efficiency will keep increasing as the sharing and achieving of vision increases and on the other end as the teamwork and responsible attitude which create positive feedback increases. Also, efficiency will keep increasing as managers ensure an

improved team decision making and provide feedback to the employees for the lessons learned. Finally, concerning the OLD, efficiency will keep increasing as long as managers ensure new practices and ways of learning to continuous development. In addition, below are the discussion and conclusion for the impact of LS over the OC. Namely, concerning the Dir LS, as more successful management of responsibilities, needs, decisions, and goals of subordinates are evident the quicker and more effective adjustment of changes, and better efficiency will be achieved.

Unfortunately, there is insufficient evidence to conclude that there is a significant linear relationship between the first and the second factor of OC with the second factor of C LS. However, the existing weak negative correlation can be explained by spending time on cooperation related to the needs, tasks, and organizational strategies. Because of this, we can expect delay in the actual adjustment of changes and less attention to efficiency. Concerning the F LS, slower and less effective adjustment of changes and less efficiency will keep increasing as managers are ensuring better awareness, focus and avoidance of problems, which can be explained by the time consumption that managers and employees spend. Furthermore, unfortunately there is insufficient evidence to conclude that there is a significant linear relationship between the first and the second factor of OC and the third factor of Del LS. However, the weak negative correlation can be explained by spending more time on ensuring awareness, focus and co-operation with subordinates. Because of this, we can expect delay in actual adjustments of changes and less attention to efficiency.

Finally, unfortunately there is insufficient evidence to conclude that there is a significant linear relationship between the first and the second factor of OC and the first factor of M LS. However, the negative correlation can be explained by spending more time on explanation, demonstration, and verification of work goals and tasks in alignment with organizational policies. When managers are spending more time, delays in actual adjustments of changes and less attention to efficiency may be expected.

Furthermore, regarding the impact factors of OL on OC, we can say that the first factor is the efficiency which is affected by the OLD. The most positive impact is noted when new practices and ways of learning to continuous development are considered in the companies. However, even this impact is positive, but considerably low in range. Moreover, the second factor, which is the quick and effective adjustment of changes is impacted by the OLD. The most positive impact is noted when managers are ensuring: 1) team decisions with feedback for the lessons learned, 2) shared and achieved vision, and 3) teamwork and responsible attitude of employees and management and positive feedback effects. However, even though this impact is positive, but considerably low in range as well.

On the other hand, efficiency is impacted when having a Dir LS, but the quick and effective adjustment of changes is not impacted when there is a practice of Dir LS. However, when managers are successfully managing their responsibilities, needs, decisions, and goals of their employees, this moderately affects the quick effective adjustment of changes.

Moreover, effectiveness and quick and effective adjustment of changes is not impacted by the C LS. Efficiency and quick and effective adjustment of changes is not impacted by the F LS. However, when managers are aiming at awareness, focus and

avoidance of problems, then this is negatively affecting efficiency as well as the quick and effective adjustment of changes. This effect is moderate in range. Efficiency and quick and effective adjustment of changes is not impacted by the Del LS and Mixed LS.

Like all other significant research, ours also come with certain shortcomings. The major limitations of this research center on its nature of geographical concentration in Macedonia, the timing of data collection which did not take into consideration the effect of pandemic, and the focus on only three variables. Also, the sample size, even though is more than adequate for statistical purposes, is a limitation. Another limitation can be stated as the convenience sampling method which was deployed. Even though this method provided various industries and businesses, it limits the generalizability to a certain extent. Some factors may explain the remaining percentages, besides those that are outlined in our models. The first factor can be at the individual level of analysis. Personal factors may motivate employees and managers alike when it comes to how organizational learning takes place. Employees who are about to promote or leave the organization may be affected quite differently by the same leadership style that is prevalent in the company. Another factor can be more contextual. For example, a company expected to be acquired or to acquire may create a very different work atmosphere which can further enhance or impede expectations and hence organizational competitiveness. In such situations, leaders' roles may be secondary in explaining the reasons why certain outcomes are reached or not. The occupational stress and the mental workload might further explain the effectiveness of learning in the organization. Finally, another factor may be due to the fact that response bias may be significantly higher in certain organizations like especially smaller companies where employees may be more inclined towards reflecting more socially accepted responses.

Our findings support and complement the previous studies by Blandinières et al., (2017) and Arikan and Enginoglu, (2016) which claimed that managerial practices and attitudes affect performance. Our study findings confirm that efficiency, especially, is found to be impacted when practicing directive leadership.

A major idea in situational leadership is that a particular leader may be successful in a certain situation, whereas the same individual may not perform at the same level in another situation (Xing et al., 2024). Our findings contribute to the previous study by enriching the existing knowledge. This study found that coaching leadership is not contributing to efficiency and the quick and effective adjustment of changes. Also, our findings demonstrate that mixed leadership is not found to be contributing to efficiency.

This study augments previous works by enhancing our understanding with regards to Learning Organization Disciplines. These disciplines are shown to affect both efficiency and effectiveness. This is in consistency with various other studies by Arikan (2023) and Valieva (2014) with regards to organizational activities and managerial decisions towards Organizational Learning. Continuity and change of the organization are shown to be created by OL practices (Bratianu, 2015) while performance seems to be related to the concept of OL (Basten and Haamann, 2018; Hammoud, 2020). Our findings fortify the previous studies by suggesting that

continuity, change and performance can be more efficient and effective if learning organization disciplines are applied within the company.

Our study is relevant not only because it enhances previous knowledge and findings, but it also helps integrate the conjunction of three elements of OL, LS, and OC in a comprehensive manner. This may be seen as a continuation of the study by Szerb and Terjesen (2010) and Tohidi et al. (2012) which combined the organizational and managerial characteristics to facilitate the OL process in addition to other competitiveness elements. Our study is complementary to these previous studies, and it contributes towards revealing the complexity of the OC through introducing the mixed leadership phenomena, which is new in the literature and in this way it helps better explain the nature of LS.

For future research, due to the complex nature of the findings, we recommend path analysis which can provide a more insightful understanding of the phenomena. This can enhance managerial implications as model fit may present a more holistic perspective whereby practitioners and professionals alike can grasp an even clearer comprehension into their particular leadership styles. Also, following studies may incorporate more control variables such as demographic variables which can help achieve more specific findings that will be more useful for managerial implications. If certain mediating variables are included in future research, this can help reach more significant and rich findings that can further enhance the existing literature on these constructs.

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