THESISES OF THE DOCTORAL (PhD) DISSERTATION

THE RELATIONSHIP BETWEEN LEADERSHIP STYLE, CHANGE MANAGEMENT AND ORGANIZATIONAL PERFORMANCE AMONG SMES IN THE NORTHERN GREAT PLAIN REGION

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1. BACKGROUND, OBJECTIVES AND PRESENTATION OF THE RESEARCH HYPOTHESES

Management and adaptation to changes are complex activities and can have an influence on the organization's performance. However, managing people and processes is not a self-explanatory activity. Scientific approaches can also help leaders and those who select them to learn more about people and their management, thus they can shape their behavior based on facts instead of intuition. ROBBINS – JUDGE (2018) highlights that, based on extensive empirical research, the majority of leaders (58%) were appointed to managerial positions without any training. It is no wonder that 25% of them stated that when they got the leadership role, they were not ready for it. Looking at the selection, they find that 82% of the organizations choose an unsuitable candidate for the management position. It is therefore not surprising that more than 50% of organizational changes are unsuccessful (KOTTER, 2008). It would be important for leaders not only to implement the changes relying on their own intuition, but to increase the success rate by relying on the literature, various training courses or the help of external consultants. ANDREASEN – GAMMELGAARD (2018) goes beyond these and sees the basis of a successful organization in the close cooperation of the leader and the followers, so it is important to coordinate the position of the leader and follower. Our fast-paced world requires a quick and correct response to changes, moreover, we live in turbulently changing decades, the economic crisis of 2008, the covid epidemic of 2020 and the war that started in 2022 force organizations to change. In this world under strong pressure, there is a need for stability, maintaining and increasing organizational performance, in which leadership style and a resilient attitude to changes can be the key. The above also supports the need to conduct research in these areas. The triad of leadership style, change management, and organizational performance are strongly researched areas in their own, and these topics are of interest to both researchers and practitioners. Examining their mutual influence and relationship is – I think – quite a big and interesting challenge for a PhD student. I believe it is particularly interesting and unique to examine this among SMEs, where money, steed, and weapons are usually not available, and thus the leader's personality and competencies are given a special role. As an employee of an organization performing financial activities, I worked with leaders of SMEs for more than ten years. Over

the years, in addition to countless negotiations and conversations, I conducted interviews as a precursor to this research in order to get to know the leaders' way of thinking and their awareness of the listed topics. My basic, starting research question was what kind of image they have of people and how they relate to changes, if they apply change management steps and if they use the knowledge material of the specialized literature. Within the framework of this research, I examine the influence of style and change management on each other and on organizational performance.

In recent decades, researchers have linked leadership style with many factors, such as entrepreneurial skills (ARHAM et al., 2013), with communication skills (MADLOCK, 2008) with commitment to the organization (LONG et al., 2016) with work engagement (GHADI et al., 2013; AMOR et al., 2020) and they usually found a relationship between the variables. Change management is also a heavily researched area, in the case of organizational changes, according to researchers, important steps must be taken in order for the change to be successful. Accordingly LUECKE (2003) 7-steps, KOTTER (1995) 8-steps, KANTER et al. (1992) created a 10-step model. Organizational performance has important practical significance. Leaders are under serious pressure to achieve the expected level of performance (FENYVES et al., 2018). Accordingly, change management is regularly included as one of the determining factors in models examining company-level competitiveness. According to the MNB (2019) publication, the key to the competitiveness of the Hungarian SME segment is to become more receptive to knowledge. Training in this area is much less common than in large companies. Only 11% of employees in small companies, 14% in medium-sized companies, and 28% in large companies attend further training. Several studies have already examined the relationship between leadership style and organizational performance with financial or non-financial indicators. MADLOCK's (2008) work compared style with employee satisfaction as a non-financial performance indicator, and ARSLAN – STAUB (2013) examined its effect on a financial performance indicator, sales revenue. However, there has been relatively little research analyzing the variable effect of a mediator between leadership style and organizational performance. One of these rare researches (OGBONNA – HARRIS 2000) examined the mediating role of culture, and other research on organizational politics (VIGODA – GADOT, 2007),

entrepreneurial skills (YANG, 2008; ARHAM – MUENJOHN, 2012) and the impact of different conflicts were studied (KAMMERHOFF et al., 2019). Based on my research, there is no work in the literature that includes the steps of change management as a mediator. However, it is an important variable, since adapting to changing environmental conditions has always been a major challenge for organizations (DAJNOKI – HÉDER, 2017).

The present work thus deals with topics that have been heavily researched in the literature, leadership style, change management and performance, but it fills a gap represented by the examination of their relationship. In the course of the research, I examine the possible correlations of the three areas among SMEs based in the Northern Great Plain region. I carry out the research work according to the research phases depicted in Table 1. Interviews conducted in 2017 are the background of the research. In the literature review between 2018-2022, I focus on transformational leadership in the case of leadership style, in the case of change management I focus on the role of the leader, on planned change management. In terms of performance, I examine style and change management effects on overall organizational performance and other financial and non-financial subjectively measured performance indicators. In addition to synthesizing the literature background, I am looking for answers to the research questions in the framework of an empirical study conducted in 2022.

Table 1: Research model

Research phases	Designation	Details
Literature review and Primary research (2017)	Research history: X/Y image of people, change management	Interviews N=17
Literature review (2018-2022)	Leadership style	focus is on transformational leadership
	Change management	leadership role, change management
	Organizational performance	overall organizational performance, financial and non-financial indicators; past, present and future orientation
Primary research (2022)	This research	Questionnaire N=100

Source: Own editing, 2022

For the sake of clarity, Figure 1 contains a graphic representation of the framework of these questions. I will place the graphic display supplemented with specific statistical tests in chapter 2 (table 4).

Research questions ('Q1-6' indicates the serial number of the research question, 'H 1-6' the serial number of the related hypothesis):

Q1a,b: Are leaders aware of which leadership practices or steps they would like to develop in relation to leadership style (a) and change management skills (b) (BASS, 1999; FILEP, 2018; SEIFERT, 2003)?

H1a: There is a statistically significant difference between the means of the answers given to the currently used and the ideal transformational leadership style, the respondents would like to strengthen the elements of the transformational style.

H1b: There is a statistically significant difference between the means of the answers given to the currently used and ideal change management habits, the respondents want to strengthen the change management habits.

Q2: Based on the gender of the respondent, the size and activity of the managed organization, is there a difference in the applied transformation style and change management habits (ARHAM – MUENJOHN, 2012 ; JONES – RUDD, 2008 ; CARLESS, 1998)?

H2a: The respondent's gender has an influence on the applied transformational style.

H2b: The gender of the respondent has an influence on the applied change management habits.

H2c: The SME category of the managed organization influences the applied transformation style.

H2d: SME category of the managed organization influences the applied change management habits.

H2e: The activities of the managed organization influence the applied transformational style.

H2f: The activities of the managed organization influence the applied change management habits.

Q3: Is there a connection between leadership style and change management habits (ARSLAN – STAUB, 2013; AUKEN et al., 2008; AVOLIO – BASS, 1991; DAJNOKI, 2015; DOBÁK, 2008; GARVIN – ROBERTO, 2005; KOTTER, 1995; LIU – HUANG, 2020; SHAFI et al., 2020 ; STOUTEN et al., 2018; YUE et al., 2019; YUKL, 2010, 2013; ZHANG et al., 2014)?

H3a: The more frequent use of the transformational leadership style is associated with the more frequent use of several change management steps (correlates).

H3b: A leader who uses a transformational style more often involves his/her employees in the management of changes (transformational substyles correlate with empowerment).

Q4: Is there a correlation between change management habits and organizational performance (STOUTEN et al., 2018; SZABÓ – VARJASI, 2018; VÁGÁNY – KÁRPÁTINÉ, 2013; WIMMER – ZOLTANYNÉ, 2006)?

H4: More frequent application of change management steps ties in with higher performance measured by Balanced Scorecard (hereinafter: BSC) (correlates).

Q5: Is there a relationship between leadership style and organizational performance (ARSLAN – STAUB, 2013; CHEN – WU, 2020; EBERLY et al., 2017; FENYVES et al., 2018; GAO et al., 2020; MADLOCK, 2008; ELIYANA et al., 2019; LUYTEN - BAZO, 2019; SUDIBJO - PRAMESWARI, 2021; VERESNÉ, 2013)?

H5: More frequent application of the transformational leadership style is associated with higher performance (BSC) (correlates).

Q6: What is the relationship between leadership style, change management and organizational performance (ARHAM – MUENJOHN, 2012; DAJNOKI – HÉDER, 2017; OGBONNA – HARRIS, 2000; YANG, 2008)?

H6a: Change management has a mediating role in the relationship between leadership style and performance (BSC), i.e. leadership style has a positive effect on organizational performance (BSC) through change management steps.

H6b: The latent, underlying variables (factors) of transformational leadership and change management are both related to the organization's performance (BSC).

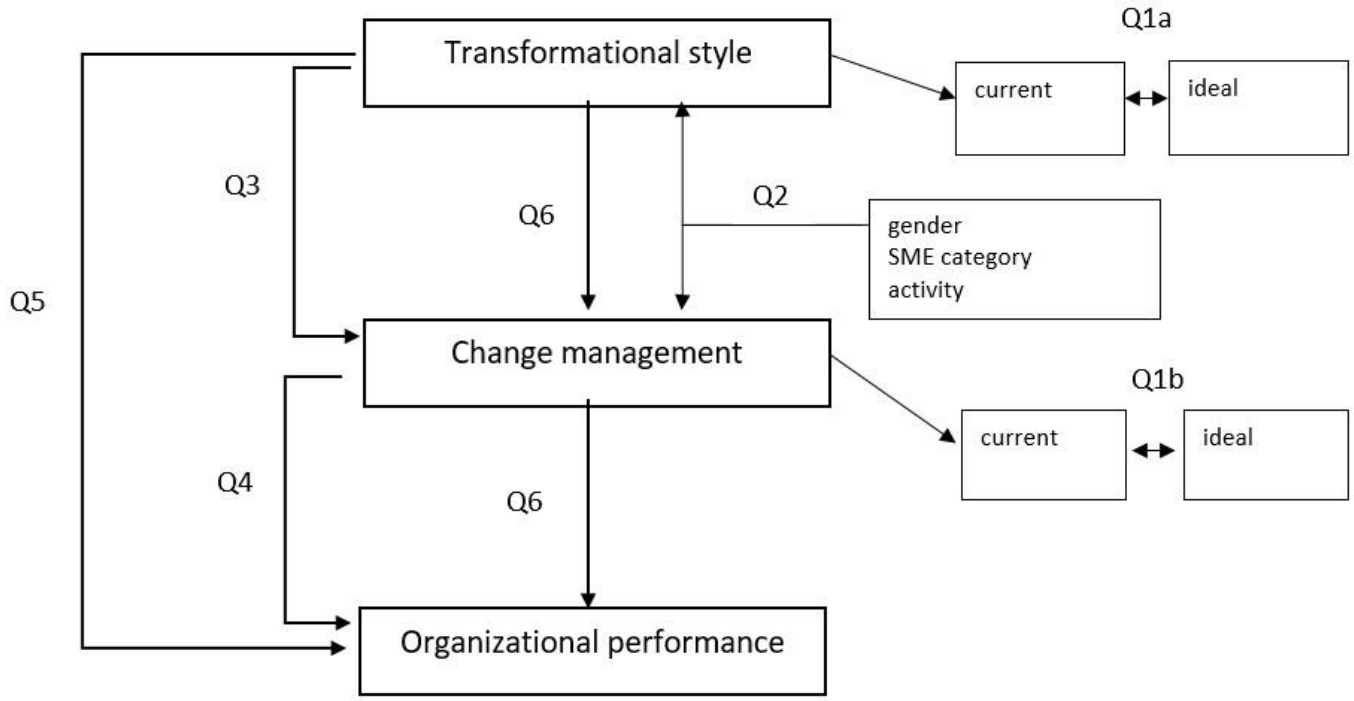


Figure 1: Framework of the research questions (Q1-Q6).

Source: Own editing, 2022

In the next chapter, I will present the database and the methods used, and then I continue my work by describing the main findings of the thesis. The conclusion of the research is the presentation of the new or novel results and their practical applicability, and finally the description of the publications.

2. MATERIAL AND METHODS

To examine the relationship between management style, change management and organizational performance, I conducted primary research among executives of SMEs. The data was collected using a self-completion questionnaire method, but the questionnaire also contained items that allowed the use of the qualitative method in addition to the quantitative analysis. So in addition to performing various statistical tests, I also had the opportunity to conceptualize a small part of the questions. Conceptual systematization enables the answers to be put into categories, an example question: what was the underlying reason for the score the respondent gave on adapting to covid. I used reachability sampling, the base population was represented by SMEs based in the Northern Great Plain region (Jász-Nagykun-Szolnok, Hajdu-Bihar and Szabolcs-Szatmár-Bereg counties).

When measuring performance, in addition to the objective data available from financial reports, researchers draw attention to the advantage of using subjective performance data that can be obtained through inquiries (DESS – ROBINSON, 1984; GRUBER et al., 2010). They emphasize that the correlation between the two measurement methods is strong, so the subjective method can be safely used. WIMMER – WALNUT (2021) also uses this method in her recent research.

Based on KIESER's (1995) grouping, the study belongs to micro-level research and is explanation-oriented, since it examines the relationship between groups of variables in areas considered important (leadership style, change management, organizational performance), which enables multivariate analyses to be performed through quantified properties.

KIESER (1995) distinguishes macro-, meso- and micro-level organizational theories. These theories respectively research the relationships between organizations, the structure of the entire organization and the behavior of organizational members. Research representing the position of explanation or understanding also represents a different approach. In the former, the researchers define some variables considered important, between which a relationship is likely, these are quantitative, explanation-oriented studies. In the case of the latter, the starting point is that the actions of individuals are subjective, which can change over time, so no laws can be assumed between them, they are considered qualitative, understanding-

oriented studies. According to VERESNÉ (2013), it is advisable to supplement quantitative studies with qualitative procedures. The advantage of these is that the possibility of answering the questions is not limited, the causes and course of events in time can be better explored, and it provides the opportunity to explore deeper connections.

The applied questionnaire consists of three professional parts:

1. Leadership style questionnaire - Global Transformational Leadership scale (hereinafter: GTL) created by CARLESS et al. (2000).
2. Change management questionnaire - was created from different change management models: YUKL (2010), KOTTER (1995), KANTER (1992), LUECKE (2003) and BOUCKENOOGHE et al. (2009).
3. Performance questionnaire – was created from KAPLAN – NORTON's (1996) model, as well as other authors measurement tools (ARHAM, 2014; DESS - ROBINSON, 1984; WIMMER – CSESZNÁK, 2021, SULAIMAN, 2016; ZULKIFFLI - PERERA, 2011).

The questionnaire can be considered valid, several researchers have previously used the GTL to measure transformational leadership (1.). One part of the change management questions (2.) was also adapted from a previously known tool, and the other part was compiled based on models found in the literature. The performance questionnaire (3.) was also compiled from other, already used questionnaires, supplemented with the indicators included in the BSC.

In the case of the three main sub-units of the questionnaire, I examined the reliability of the scales, which was shown in the Table 2. Cronbach's Alpha values indicate that all three scales are reliable.

Table 2: Reliability of scales

Name of the scale	**Cronbach's Alpha**	**Number of items**
Transformational leadership (1.)	0.831	7
Change management (2.)	0.894	16
Performance questionnaire (3.)	0.907	13

Source: Own investigation, 2022

For the questions of the questionnaire created from models, I used BRISLIN's (1970) translation-back-translation method. In other words, first I translated the original questionnaire in English into Hungarian, then the Hungarian version had to be translated back into English.

Regarding sample size, according to ROSCOE (1975), a sample size of between 30 and 500 is needed for a statistical study. HAIR et al. (2014) set this value at a minimum of 100. BABBIE - ROBERTS (2018), the number of elements in the sample does not have a decisive influence on the examination of covariance between variables. In the course of my investigation, the basic population was represented by SMEs based in the Northern Great Plain region. The sampling frame consisted of organizations with a website in the Google database. Between 1st January 2022 and 28th February 2022, I e-mailed my invitation letter containing the link for my online questionnaire to a total of 1,162 organizations. 103 completed questionnaires were returned, two organizations were excluded due to their headquarters, and one due to the low number of employees. The cleaned database was prepared on the basis of 100 questionnaires. The sample thus contains the responses of exactly 100 organizations, whose distribution based on the background variables can be seen in Table 3. The sample is not representative, the findings apply to the organizations listed in this table. I am going to compare my research results with other domestic and international results to shed light on similarities and differences.

Table 3: Distribution of the sample based on background variables

Designation		Sample distribution (%)
Gender of respondent	Female	23
	Male	77
Generation	1946 - 1965	22
	1966 - 1980	57
	1981 - 1994	21
Educational attainment	Elementary	1
	Intermediate	30
	College/University (Bsc)	32
	University (Msc)	34
	PhD/MBA	3

Designation		Sample distribution (%)
SME category	micro	38
	small	43
	medium	19
Activity	manufacturing	33
	commerce	29
	services	38

Source: Own investigation, 2022

The statistical methods used for each hypothesis (H1-H6) assigned to the research questions can be seen below. I mainly used guidelines of SAJTOS – MITEV (2007), HAYES (2018) and BABBIE – ROBERTS (2018) for the statistical tests. I detailed the research methodology on the following 3 pages. Table 4 shows the graphic representation of this.

Research questions and hypotheses:

Q1a, b: Are leaders aware of which leadership practices or steps they would like to develop in relation to leadership style (a) and change management skills (b)?

H1a: There is a statistically significant difference between the means of the answers given to the currently used and the ideal transformational leadership style, the respondents would like to strengthen the elements of the transformational style.

> **Applied statistical method:** For the statements of the Transformational leadership questionnaire (1.), the respondents must score both the current and the ideal behavior. In order to shed light on whether they want to move from the present to a direction considered ideal, I compare the current and ideal scores for each statement using a paired sample t-test. This shows whether the leader is aware of what behaviors would make him/her a 'better leader'.
>
> The answers related to transformational leadership can be evaluated not only separately for the various subcategories, but also in aggregate (BASS – RIGGIO, 2006; FELFE – SCHYNS, 2006). KAMMERHOFF et al. (2019) also uses it in aggregate in their empirical research.

H1b: There is a statistically significant difference between the means of the answers given to the currently used and ideal change management habits, the respondents want to strengthen the change management habits.

Applied statistical method: In the case of the Change Management questionnaire (2.) I will also conduct an examination similar to the 1. above with a paired-sample t-test, which will reveal whether the respondent is aware of what behavior would make him/her a 'better change leader'.

Q2: Based on the gender of the respondent and the size and activity of the managed organization, is there a difference in the applied transformation style and change management habits?

H2a: The respondent's gender has an influence on the applied transformational style.

H2b: The gender of the respondent has an influence on the applied change management habits.

H2c: The SME category of the managed organization influences the applied transformation style.

H2d: SME category of the managed organization influences the applied change management habits.

H2e: The activities of the managed organization influence the applied transformational style.

H2f: The activities of the managed organization influence the applied change management habits.

Applied statistical method: application of an independent sample t-test (ANOVA in the case of more than two groups) on a Likert-type evaluation scale, is the difference in the means given for leadership style, change management and (subjective) performance significant in the following cases:

- female / male
- micro / small / medium enterprise
- service / commerce / manufacturing.

Q3: Is there a connection between leadership style and change management habits?

H3a: The more frequent use of the transformational leadership style is associated with the more frequent use of several change management steps (correlates).

H3b: A leader who uses a transformational style more often involves his/her employees in the management of changes (transformational substyles correlate with empowerment).

> **Applied statistical method:** Examination of scores given on a Likert-type scale for leadership style and change management with correlation and regression. Based on the literature, a possible result is that there is a strong, positive relationship between the transformational leadership style and change management.

Q4: Is there a correlation between change management habits and organizational performance?

H4: More frequent application of change management steps ties in with higher performance (BSC) (correlates).

> **Applied statistical method:** Examination of scores given on a Likert-type scale for change management and performance with correlation and regression. Already WOODWARD (1965) and PUGH et al. (1969) also use this in similar studies. Based on the literature, a possible result is that there is a strong relationship between change management and performance.

Q5: Is there a relationship between leadership style and organizational performance?

H5: More frequent application of the transformational leadership style is associated with higher performance (BSC) (correlates).

> **Applied statistical method:** Examination of scores given on a Likert-type scale for leadership style and performance with correlation and regression. A possible result based on the literature is that there is a strong relationship between leadership style and performance.

Q6: What is the relationship between leadership style, change management and organizational performance?

H6a: Change management has a mediating role in the relationship between leadership style and performance (BSC), i.e. leadership style has a positive effect on organizational performance (BSC) through change management steps.

H6b: The latent, underlying variables (factors) of transformational leadership and change management are both related to the organization's performance (BSC).

Applied statistical method:

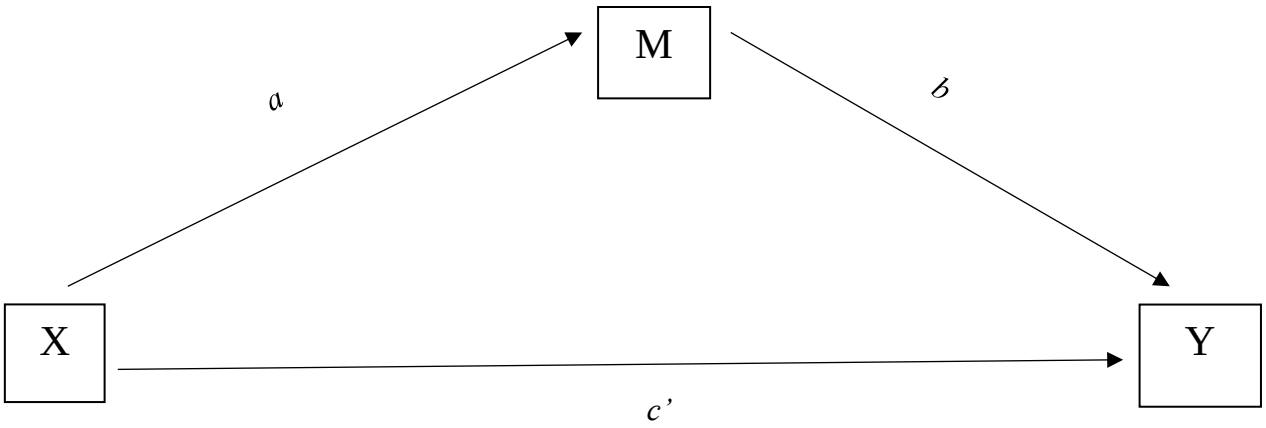
For H6a:

Special run of regression:

1. step: leadership style (independent variable), organizational performance (dependent variable)
2. step: leadership style (independent variable), change management as a mediator (dependent variable)
3. step: leadership style (independent variable), change management as a mediator (independent variable), with organizational performance (dependent variable)

HAYES (2018), mediating analysis is a statistical method used to test hypotheses about how a certain causal antecedent variable X is mediated by a mediating variable M on a consequence variable Y (Figure 2). That is, what is the emotional, cognitive, or other mechanism (M) by which X affects Y. There are two pathways through which X can influence Y. We find these routes by tracing how to get from X to Y while never going in the opposite direction of the arrow. One path (*c'*) leads from X to Y without passing through M and is called the direct effect from X to Y. The second path (*a*b*) from X to Y is the indirect effect of X on Y through M. First from the antecedent X to the next M, then from the antecedent M to the consequent Y. An indirect effect represents how X affects Y through a causal chain in which X affects M, which in turn affects Y. In the mediation model, M is usually referred to as the mediator or mediating variable, although in some fields the terms intermediate variable, proxy variable, and intermediate endpoint are used. The total effect

is given by the formula c = c' + a*b. We assume that the relationships in the system are causal and, importantly, that M is causally located between X and Y. It must be assumed, if not empirically supported, that X causes M, which in turn causes Y, possibly carrying the effect of X on Y if M is not causally located between X and Y. But HAYES (2018) see no problem in performing the analyses, even if the causal relationships rest on shaky empirical foundations. The shape of the sampling distribution does not affect the performance of the test.



2. Figure: Diagram of mediation analysis

Source: Own editing based on HAYES (2018)

For H6b:

Principal component analysis for all three scales and regression with the resulting factors.

Not all variables in the sample can be considered as having a normal distribution (the p value of the Kolmogorov – Smirnov test does not show a value above 0.01 for all variables), but the listed, applied test methods are sufficiently robust for application. The hypotheses related to the professional parts of the research and the description of the methodology used for them are contained in Table 4.

Table 4: Subunits and methodology of research detailed by hypothesis

Transformational leadership	**Change management**	**Organizational performance**	**Applied statistical method**
H1a Strengthening transformational style	H1b Strengthening change management		t-tests (paired sample)
H2a gender difference	H2b gender difference		t-tests (independent sample)
H2c, H2e SME category and activity difference	H2d, H2f SME category and activity difference		ANOVA tests
H3a correlation between transformational style and change management, H3b correlation between transformational style and empowerment			Pearson correlation, Multivariate linear regression
	H4 Correlation between change management and organizational performance		Pearson correlation, Multivariate linear regression
H5 correlation between transformation style and ...		H5 ...organizational performance	Pearson correlation, Multivariate linear regression
H6a correlation between transformational style, change management and organizational performance			Mediator analysis
H6b correlation between transformational style, change management and organizational performance			Principal component analysis, Multivariate linear regression

Source: Own editing, 2022

In the next chapter, I am going to present the main findings of the thesis.

3. MAIN FINDINGS OF THE THESIS

I am presenting the main findings of the thesis in the order of the formulated hypotheses.

3.1. Intention to develop

H1a: There is a statistically significant difference between the means of the answers given to the currently used and the ideal transformational leadership style, the respondents would like to strengthen the elements of the transformational style.

In Figure 3, we can see that in the case of all seven transformational styles the respondents consider to be ideal a stronger transformational leadership rather than the current level. Within the styles, the standard deviation values are almost the same for the current and the ideal.

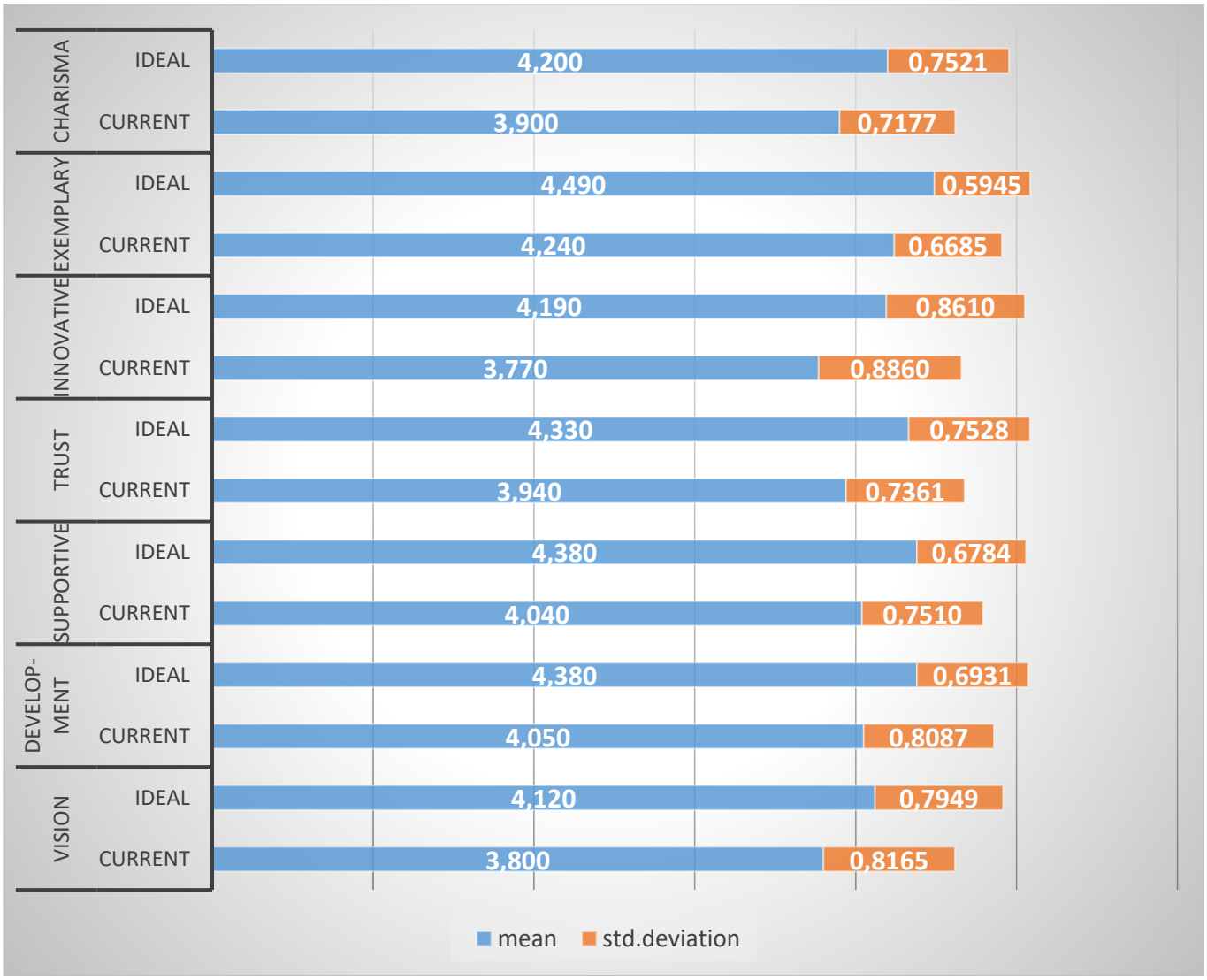


Figure 3: The ideal and current level of transformational leadership

Source: Own investigation, 2022

The difference between what was considered ideal and the current level was significant at 1% for each transformation style when examined with a paired sample t-test (Table 5). The degree of difference between the means was the largest in case of innovative thinking (0.420), it may vary from individual to individual, but on mean this is the are they would like to improve this to the greatest extent. The difference is the smallest in case of example indicator (0.250), which means that they feel the least need to change here, which may also be due to the fact that this style received the highest current value, so it is only possible to significantly increase it to a lesser extent than the others.

Table 5: Difference between the means of current and ideal transformational leadership styles

Leadership style	t	Difference between means
Vision	-5.480**	0.320
Staff development	-5.319**	0.330
Supportive leadership	-5.765**	0.340
Trust	-7.110**	0.390
Innovative thinking	-6.274**	0.420
Exemplary	-4.809**	0.250
Charisma	-5.543**	0.300

*** Significant at 1%*

Source: Own investigation, 2022

Based on previous empirical research (BASS, 1999 ; FILEP, 2018), managers want to use their transformational leadership style more often, ideal values receive higher scores. SEIFERT (2003) conducted research among teachers, and found a significant difference between the current and ideal transformational style of the school principal, they would like to increase the transformational style. In other words, the results show a picture similar to the empirical studies found in the literature.

I consider Hypothesis H1a justified, the respondents want to strengthen all transformational styles without exception.

H1b: There is a statistically significant difference between the means of the answers given to the currently used and ideal change management habits, the respondents want to strengthen the change management habits.

Based on the reviewed literature, this has not yet been tested, but I think it is appropriate to examine it on the current/ ideal model of transformational leadership, the investigation may provide novel results.

Table 6 shows that the ideal behavior received higher values for all sixteen change management steps. Within the steps, the deviation values are almost the same for the current and ideal cases. The difference between the ideal and the current level is significant at 1% in case of each step when examined with a paired sample t-test. The difference between the means was the largest for step 11, 'Helping people deal with stress and difficulties' (0.57), and the smallest for step 2, 'Creating a sense of urgency about change' (0.36). This shows that the respondents on mean want to change the former to the greatest extent, and the latter to the least extent.

Table 6: Difference between the current practice of change management steps and its level considered ideal

Change step		mean	standard deviation	t	deviation between means
1 Analysis of an organization, identification of problems	current	3,850	0.757	-7.396**	0.550
	ideal	4,400	0.667		
2 Creating a sense of urgency about the change	current	3,720	0.766	-5.460**	0.360
	ideal	4,080	0.720		
3 Communicating a clear vision of the benefits of the change	current	3,780	0.773	-8.852**	0.540
	ideal	4,320	0.737		
4 Determining whose support is required and whose resistance is expected	current	3,540	0.958	-5.291**	0.390
	ideal	3,930	0.956		
5 Building a broad coalition to support change	current	3,520	0.847	-6.477**	0.500
	ideal	4,020	0.816		
6 Creation of working groups to manage changes	current	3,370	0.950	-6.749**	0.620
	ideal	3,990	0.937		
7 Appointment of competent, change-managing leaders for key positions	current	3,590	0.933	-7.255**	0.540
	ideal	4,130	0.849		
8 Empowering competent colleagues for planning and implementation	current	3,740	0.691	-7.739**	0.510
	ideal	4,250	0.687		
9 Creating symbolic, dramatic changes regarding work	current	2,990	0.937	-6.011**	0.380
	ideal	3,370	1,051		
	current	3,870	0.720	-7.697**	0.470

Change step		mean	standard deviation	t	deviation between means
10 Explain to employees how the change will affect them	ideal	4,340	0.655		
11 Helping people deal with stress and difficulties	current	3,390	0.952		
	ideal	3,960	0.974	-7.980**	0.570
12 Providing opportunities for initial successes that increase self-confidence	current	3,440	0.967		
	ideal	3,970	0.926	-7.869**	0.530
13 Check the change process and take corrective steps	current	4,010	0.718		
	ideal	4,440	0.671	-6.413**	0.430
14 Informing people about progress	current	3,750	0.757		
	ideal	4,210	0.701	-7.541**	0.460
15 Optimistic attitude and continuous commitment to change	current	3,870	0.812		
	ideal	4,240	0.806	-6.379**	0.370
16 Rooting of new solutions	current	3,850	0.783		
	ideal	4,390	0.709	-8.408**	0.540

*** Significant at 1%*

Source: Own investigation, 2022

Hypothesis H1b confirmed, the respondents want to strengthen all change management habits without exception.

3.2. The influencing role of activity, size and the gender of the leader

According to previous empirical researches (ARHAM – MUENJOHN, 2012 ; JONES – RUDD, 2008; CARLESS, 1998) there is a difference in leadership style based on the gender of the respondent, the SME category and activity of the organization. When testing the following hypotheses H2a - H2f, I am examining whether their influencing role prevails within this sample as well. I am checking the differences in the case of the current (A) and ideal (B) answers.

H2a: The respondent's gender has an influence on the applied transformational style.

H2b: The gender of the respondent has an influence on the applied change management habits.

In the case of H2a and H2b, I am using an independent sample t-test to examine the possible influencing role of gender (Table 7). Based on the results of '5. I encourage workers to think about problems in a new way, to question assumptions' transformational leadership style, the means of male are significantly higher, both in terms of current and considered ideal

behavior. The opposite trend can be observed for two change management steps, '1. Organization analysis, problem identification' and '6. Creating working groups to manage changes' the means of female are significantly higher than male.

Table 7: Gender differences in transformational leadership and change management habits

Variables		mean	standard deviation	F	t
Transformational management					
5.A. I encourage workers to think about problems in a new way, to question assumptions (current)	male	3,870	0.878	0.073	2.103*
	female	3,435	0.843		
5.B. I encourage workers to think about problems in a new way, to question assumptions (ideal)	male	4,312	0.799	2.220	2.664**
	female	3,783	0.951		
Change management					
1.A. Analysis of organization, identification of problems (current)	male	3,766	0.759	0.682	-2.057*
	female	4,130	0.694		
6.A. Create workgroups to manage change (current)	male	3,260	0.992	2,647	-2.163*
	female	3,739	0.689		

**on 1% , * on 5% significant

'A' is the currently used behavior, 'B' is the behavior considered ideal

Source: Own investigation, 2022

I only partially accept hypotheses H2a and H2b, there is a significant difference between the gender in only a few items in case of both transformational style and change management.

H2c: The SME category of the managed organization influences the applied transformation style.

H2d: SME category of the managed organization influences the applied change management habits.

Table 8 shows the ANOVA results of micro, small and medium-sized enterprises within SMEs, where there is a significant difference in the means between at least two of the three groups. Among the transformational leadership styles, each style in the table contains the differences between micro and small enterprises, and in all cases the means of micro enterprises are significantly higher.

A similar trend confirmed in change management, with regard to micro and small companies, the means are higher for each step in relation to the previous company size. 6B,

'Establishing working groups to manage changes', 7A, 'Appointing competent change management leaders for key positions ', 8A, 'Empowering competent colleagues to plan and implement', 8B, 'Empowering competent colleagues to plan and implement' there is a difference between small and medium-sized enterprises, in each case the values are significantly higher than the latter. Due to their size, these steps are surprisingly similar between micro and medium-sized enterprises.

Table 8: Influencing role of the SME category

Variables	SME category	mean	standard deviation	Difference between means
Transformational leadership				
2.A. I deal with colleagues and individuals, support and encourage their development (current)	micro	4,289	0.732	
	small	3,837	0.871	0.452**
3.A. I express my appreciation to the team and encourage them (current)	micro	4,289	0.768	
	small	3,837	0.721	0.452**
4.A. I promote trust, participation and cooperation among team members (current)	micro	4,263	0.724	
	small	3,674	0.606	0.589**
5.A. I encourage workers to think about problems in a new way, to question assumptions (current)	micro	4,000	0.930	
	small	3,512	0.798	0.488**
6.B. I am aware of my values and do what I say (ideal)	micro	4,658	0.534	
	small	4,302	0.638	0.357**
Change management				
4.B. Determine whose support is needed and whose resistance is expected (ideal)	micro	4,211	0.905	
	small	3,581	0.982	0.629**
5.B. Building a broad coalition to support change (ideal)	micro	4,263	0.760	
	small	3,767	0.841	0.496**
6.B. Create working groups to manage changes (ideal)	micro	4,237	0.9425	
	small	3,628	0.900	0.609**
6.B. Create working groups to manage changes (ideal)	small	3,628	0.900	
	middle	4,316	0.749	-0.688**
7.A. Appointment of competent, change-managing leaders for key positions (current)	small	3,419	0.906	
	middle	4,053	0.524	-0.634**
8.A. Empowering competent colleagues for planning and implementation (current)	small	3,558	0.548	
	middle	4,053	0.524	-0.495**
8.B. Empowering competent colleagues for planning and implementation (ideal)	micro	4,474	0.647	0.520**
	small	3,953	0.689	
8.B. Empowering competent colleagues for planning and implementation (ideal)	small	3,953	0.689	-0.520**
	middle	4,474	0.513	
11.A. Helping people cope with stress and difficulties (current)	micro	3,789	0.935	0.790**
	small	3,000	0.900	
11.B. Helping people deal with stress and difficulties (ideal)	micro	4,368	0.750	0.741**
	small	3,628	1,070	

Variables	SME category	mean	standard deviation	Difference between means
12.A. Providing opportunities for confidence-building initial successes (current)	micro	4,000	0.805	1.070**
	small	2,930	0.884	
12.B. Providing opportunities for self-confidence-boosting initial successes (ideal)	micro	4,447	0.645	0.889**
	small	3,558	0.881	
15.A. Optimistic attitude and continuous commitment to change (current)	micro	4.105	0.727	0.501**
	small	3,605	0.821	
15.B. Optimistic attitude and continuous commitment to change (ideal)	micro	4,474	0.762	0.497**
	small	3,977	0.771	

** significant at 1% , * significant at 5%
'A' is the currently used behavior, 'B' is the behavior considered ideal

Source: Own investigation, 2022

Hypotheses H2c and H2d are only partially confirmed, there is no significant difference for each item in terms of transformational style and change management according to the SME category.

H2e: The activities of the managed organization influence the applied transformational style.

H2f: The activities of the managed organization influence the applied change management habits.

According to the ANOVA, the application of the transformational style is not influenced by the activities of the organizations, there are no significant differences between the groups. In the case of change management steps, there is only a single - but according to KOTTER (1995) one of the most important - currently used step (Creating a sense of urgency regarding the change) and a single step considered ideal (Creating working groups to manage the changes) (Table 9). The former difference is between service and trade, and the latter between trade and manufacturing.

Table 9: Difference between the mean values of the application of change management steps depending on the organization's activities

Variables	Activity	Mean	Standard deviation	Difference between means
Change management				
2. A. Creating a sense of urgency about the change (current)	service	3.525	0.751	-,510*
	commerce	4,034	0.681	
6.B. Create working groups to manage changes (ideal)	commerce	3,724	1,066	-.598*
	manufacturing	4,323	0.653	

* Significant at 5%

'A' is the currently used behavior, 'B' is the behavior considered ideal

Source: Own investigation, 2022

Figure 4 shows that trade organizations have the highest mean value for the 'creating a sense of urgency' step, followed by manufacturing and finally service. Based on KOTTER's (1995) eight-step model, one of the most common mistakes in change management is if the manager does not involve the employees in the process, which according to GARVIN – ROBERTO (2005), it also leads to failure.

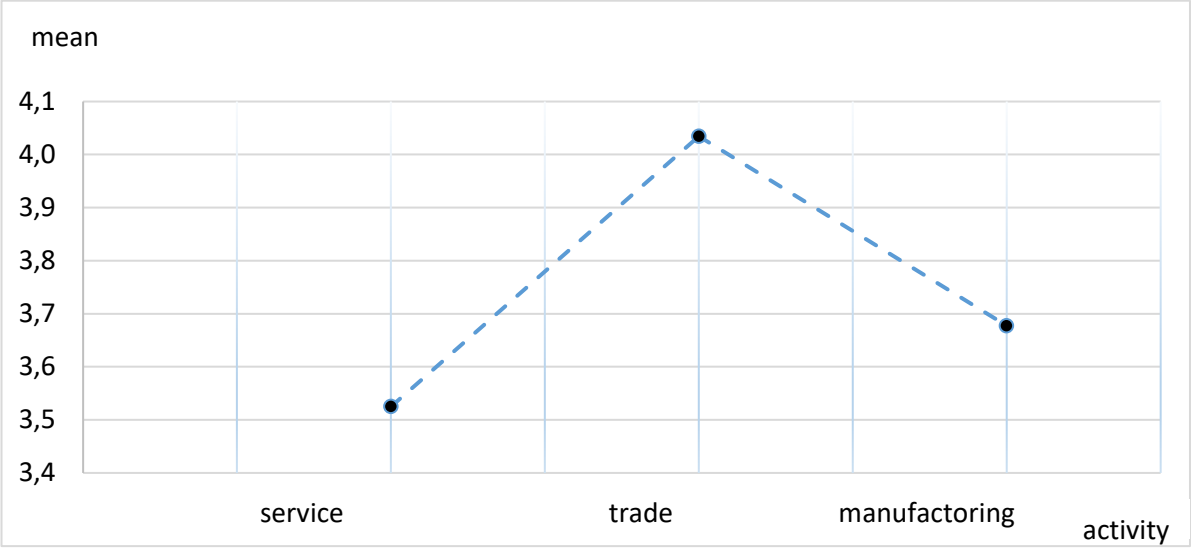


Figure 4: Mean values of the application of the 'Creating a sense of urgency about the change' step depending on the organization's activities

Source: Own investigation, 2022

Hypotheses H2e and H2f are only partially confirmed, there are some styles/steps that show a significant difference in relation to the activity.

3.3. Relationships between leadership style and change management

H3a: The more frequent use of the transformational leadership style is associated with the more frequent use of several change management steps (correlates).

Table 10 shows the relationship between transformational leadership and change management habits. Due to the size limitations of the table, the columns denote the transformation styles with abbreviated names, the rows only have the row numbers of the change management steps. Based on correlation coefficients, the relationship between several variables is significant. It is no coincidence that we can see such close correlations between transformational styles and change management steps. According to ZHANG (2014), transformational leaders are agents of change. The transformational leadership style can help the organization to overcome obstacles more successfully in a turbulent, changing environment. Even within the transformational styles, the idealized influence (in the table: exemplary and charismatic styles) characterizes extraordinary leaders and usually arises in the context of a crisis or significant change (YUKL, 2013). We can see in table 10 that the two styles are related to several steps, but they do not show the closest relationship. Except for the following steps out of 16, 1. 'Analysis of the organization, identification of problems', 4. 'Determining whose support is required and whose resistance is expected', 6. 'Creating work groups to manage changes', 7. 'Appointing competent change management managers to key positions' and 9. 'Creating symbolic, dramatic changes regarding work', the other change management steps are significantly related to all seven transformational styles. In the table, the light gray markings show a moderately strong relationship, and the dark gray markings show an even stronger relationship. The latter strong relationship demonstrated between the variables is trust. 4. 'I promote trust, participation and cooperation between team members' and stress management, 11. 'Helping people deal with stress and difficulties'.

Table 10: Relationships between transformational leadership and change management

C.m. step	**Correlation coefficient value per transformation style**						
	Vision	Development	Supportive	Trust	Innovative	Exemplary	Charisma
1	0.245 *	0.441 **	0.295 **	0.274 **	0.189	0.291 **	0.270 **
2	0.313 **	0.398 **	0.318 **	0.292 **	0.276 **	0.211 *	0.316 **

C.m. step	Correlation coefficient value per transformation style						
	Vision	Development	Supportive	Trust	Innovative	Exemplary	Charisma
3	0.442 **	0.389 **	0.450 **	0.367 **	0.427 **	0.260 **	0.306 **
4	0.294 **	0.134	0.307 **	0.190	0.314 **	0.174	0.344 **
5	0.386 **	0.257 **	0.269 **	0.310 **	0.484 **	0.206 *	0.253 *
6	0.135	0.094	-0.021	0.061	0.090	0.081	0.099
7	0.156	0.215 *	0.067	0.170	0.178	0.176	0.210 *
8	0.355 **	0.385 **	0.390 **	0.386 **	0.446 **	0.224 *	0.273 **
9	0.116	0.147	0.072	0.072	0.216 *	0.068	0.059
10	0.471 **	0.428 **	0.402 **	0.424 **	0.428 **	0.275 **	0.209 *
11	0.413 **	0.473 **	0.543 **	0.653 **	0.431 **	0.359 **	0.205 *
12	0.407 **	0.462 **	0.546 **	0.577 **	0.461 **	0.335 **	0.340 **
13	0.296 **	0.382 **	0.393 **	0.345 **	0.385 **	0.332 **	0.394 **
14	0.376 **	0.532 **	0.533 **	0.553 **	0.471 **	0.479 **	0.325 **
15	0.524 **	0.517 **	0.439 **	0.511 **	0.407 **	0.300 **	0.359 **
16	0.411 **	0.411 **	0.457 **	0.492 **	0.517 **	0.417 **	0.332 **

** Significant at 5%*
*** Significant at 1%*

Source: Own investigation, 2022

Hypothesis H3a is only partially confirmed, with a few exceptions, almost all transformational styles have a significant correlation with change management steps.

Based on YUE et al. (2019) 's research results, transformational leadership has a positive relationship with employees' trust in the organization, which positively affects employees' openness to change. According to SHAFI et al. 's (2020) research, transformational leadership also encourages the creativity of employees, which increases innovation opportunities. Other research findings (LIU – HUANG, 2020) also report that there is a strong relationship between transformational leadership and creativity.

In DOBÁK's (2008) paper, change management appears as one of the most important tasks of management. In order to achieve optimal performance for the manager, it is advisable to implement organizational changes by adapting to the challenges of the environment. According to YUKL (2010), it requires effective work from the manager to be able to provide adequate support in the implementation of the change. The leader's style according

to several researchers (DAJNOKI, 2015; ARSLAN – STAUB, 2013; AUKEN et al., 2008; AVOLIO – BASS, 1991) also plays an important role in adapting to changes and in efficiency.

H3b: A leader who uses a transformational style more often involves his/her employees in the management of changes (transformational substyles correlate with empowerment).

The correlation between the empowerment of colleagues and each transformational leadership style is significant (Table 11). This relationship is shown to be the closest to the value of the Innovative style marked in gray (0.446), which can be considered moderately strong, but the Supportive attitude (0.390) and Trust (0.386) also indicate a closer relationship. Based on the writings of AVOLIO - BASS (1991), transformational managers listen to the opinions of employees when solving problems, look for different solutions, and based on this, propose new aspects for completing tasks.

Table 11: Correlation between employee empowerment and transformational leadership

Transformational leadership style	Competent co-workers authorization to design and for implementation - correlational coefficient
Vision	0.355 **
Development	0.385 **
Supportive	0.390 **
Trust	0.386 **
Innovative	0.446 **
Exemplary	0.224 *
Charisma	0.273 **

** Significant at 5%*
*** Significant at 1%*

Source: Own investigation, 2022

Hypothesis H3b is confirmed, every transformational substyle is related to empowerment.

3.4. The relationship between change management and performance

H4: More frequent application of change management steps goes with higher performance (BSC) (correlates).

In the case of performance measurement, it is advisable to use a complex indicator system instead of just financial indicators. According to VERESNÉ (2013), in fact, in addition to external factors, internal factors such as abilities determine performance, because it is difficult for competitors to imitate them, so learning and knowledge sharing are of particular importance. In the correlations of the BSC indicators, the ability to change shows the closest correlation with the other variables (Table 12). In order, individual and organizational learning (0.673), customer satisfaction (0.635), work process optimization (0.634), employee satisfaction (0.611), product development time (0.603), employees' development needs (0.543) and profit growth rate (0.509) also indicates at least a moderately strong relationship. The closest relationship is between the growth rate of sales and the growth rate of profit (0.756).

Table 12: Balanced Scorecard correlations of items

	Sales growth pace	Profit	Profit growth pace	Customer satisfaction	Employee satisfaction	Product development time	Apprenticeship time	Staff development	Optimizing work processes	Individual and organizat. learning	Ability to change
Sales revenue	.685 **	.633 **	.566 **	.273 **	0.180	.295 **	.274 **	.222 *	.287 **	0.113	.342 **
Sales growth rate		.662 **	.756 **	.473 **	.359 **	.463 **	.215 *	.309 **	.443 **	.387 **	.499 **
Profit			.682 **	,383 **	.274 **	.483 **	0.189	.326 **	.278 **	.276 **	.436 **
Profit growth rate				.466 **	.335 **	.542 **	.220 *	,308 **	.357 **	.378 **	.509 **
Customer satisfaction					.560 **	,461 **	.325 **	,391 **	.499 **	,404 **	.635 **
Employee satisfaction						,440 **	.270 **	.475 **	.589 **	.566 **	,611 **
Product development time							,306 **	.439 **	.515 **	.574 **	,603 **
Apprenticeship time								,511 **	.354 **	.294 **	,430 **
Development needs of workers									.488 **	.586 **	.543 **

	Sales growth pace	Profit	Profit growth pace	Customer satisfaction	Employee satisfaction	Product development time	Apprenticeship time	Staff development	Optimizing work processes	Individual and organizat. learning	Ability to change
Optimizing work processes										.583 **	.634 **
Individual and organizational learning											.673 **

Each value starts with 0, meaning it contains 'thousand' values

** significant at 5% , ** significant at 1 %*
Source: Own investigation, 2022

Table 13 shows that the correlation between the mean of the total score of change management and the mean of the total score of the BSC is strongly positive, the value of the correlation coefficient is 0.75, which is significant at 1% .

Table 13: Correlation between change management and BSC

Variable	Balanced Scorecard (BSC) overall mean
Change management overall mean	0.745 **

*** Significant at 1%*

Source: Own investigation, 2022

It is worth examining which of the 16 change management steps can have an impact on performance and which ones are included in the regression model.

With stepwise regression, the statistical program runs several times and always adds the best correlating variable to the next model. Table 14 contains the variables entered into the regression model.

Table 14: Added variables of regression model

Model number	Added new variable	Variables included in the model
1.	Providing opportunities for confidence-building initial successes	1. Providing opportunities for confidence-building initial successes
2.	Empowering competent colleagues for planning and implementation	1. Providing opportunities for confidence-building initial successes 2. Empowering competent colleagues for planning and implementation

Model number	Added new variable	Variables included in the model
3.	Analysis of an organization, identification of problems	1. Providing opportunities for confidence-building initial successes 2. Empowering competent colleagues for planning and implementation 3. Analysis of an organization, identification of problems
4.	Communicating a clear vision of the benefits of change	1. Providing opportunities is confidence for increasing initial success 2. Empowering competent colleagues for planning and implementation 3. Analysis of an organization, identification of problems 4. Communicating a clear vision of the benefits of change

Source: Own investigation, 2022

In Table 15, based on the 4th model can be determined that the difference between R^2 and the adjusted R^2 is 0.06, that is, the model can be considered stable. The model explains approx 61.2% of the BSC score, this explanatory power is significant at 1%.

Table 15: Regression model summary table

Model number	R	R^2	Adjusted R^2	Standard error
1.	0.660	0.435	0.429	0.452
2.	0.736	0.542	0.532	0.409
3.	0.777	0.604	0.592	0.382
4.	0.792	0.628	0.612	0.373

Source: Own investigation, 2022

Table 16 contains only the results of the test for model 4, the VIF value (Variance Inflation Factor) for all variables is smaller than a value of 2, so the multicollinearity is weak, so the study can be performed without reducing it. Based on the 'B' values, each variable has a positive relationship with the BSC. Applying the step 'Empower competent colleagues to plan and implement' increases the BSC score by 0.262 points, with all other variables unchanged. This variable has the greatest impact on the BSC. The step 'Providing opportunities for confidence-increasing initial successes' increases the value of the BSC score by 0.245, 'Analysis of the organization, identification of problems' by 0.179, and 'Communicating a clear vision of the benefits of change' by 0.144.

Table 16: B and t values of final model variables

Variables	B	t	VIF
Empowering competent colleagues for planning and implementation	0.262	4.376**	1,219
Providing opportunities for confidence-building initial successes	0.245	5.254**	1,457
Analysis of an organization, identification of problems	0.179	3.438**	1.103
Communicating a clear vision of the benefits of change	0.144	2.465*	1.455

*** significant at 1% , * significant at 5%*

Source: Own investigation, 2022

Hypothesis H4 is confirmed, there is a strong relationship between change management and performance.

3.5. The relationship between leadership style and performance

H5: More frequent application of the transformational leadership style is associated with higher performance (BSC) (correlates).

The correlation between transformational leadership and BSC is moderately positive, the value of the correlation coefficient is 0.68, which is significant at 1% (Table 17).

Table 17: Correlation between transformational leadership and BSC

Variable	**Balanced Scorecard (BSC) overall mean**
Transformational management overall mean	0.680**

*** Significant at 1%*

Source: Own investigation, 2022

As with change management, it can be an interesting result here to determine which of the 7 transformation styles can have an impact on performance and which ones are included in the regression model. Table 18 contains the variables entered into the regression model created using the stepwise procedure.

Table 18: Added variables of regression model

Model number	**Added new variable**	**Variables included in the model**
1.	I promote trust, participation and cooperation among team members	1. I promote trust, participation and cooperation among team members
2.	I am talking about a clear and positive vision	1. I promote trust, participation and cooperation among team members

Model number	Added new variable	Variables included in the model
		2. I am talking about a clear and positive vision
3.	I encourage workers to think about problems in a new way, to question assumptions	1. I promote trust, participation and cooperation among team members 2. I am talking about a clear and positive vision 3. I encourage workers to think about problems in a new way, to question assumptions
4.	I inspire pride and respect from others, it inspires me to be considered competent	1. I promote trust, participation and cooperation among team members 2. I am talking about a clear and positive vision 3. I encourage workers to think about problems in a new way, to question assumptions 4. I inspire pride and respect from others, it inspires me to be considered competent

Source: Own investigation, 2022

In Table 19, based on the 4th model it can be determined that the difference between R^2 and the adjusted R^2 is 0.022, therefore the model can be considered stable. The model explains approx 45.5% of the BSC score, this explanatory power is significant at 1%.

Table 19: Regression model summary table

Model number	R	R^2	Adjusted R^2	Standard error
1.	0.557	0.311	0.304	0.499
2.	0.632	0.399	0.387	0.409
3.	0.670	0.449	0.432	0.451
4.	0.691	0.477	0.455	0.373

Source: Own investigation, 2022

Table 20 only contains the results of the final test for model 4, the VIF value for all variables is lower than the value of 2, so the multicollinearity is weak, which means that the test can be performed without reducing it. Based on the 'B' values, each variable has a positive relationship with the BSC. Using the style 'I promote trust, participation and cooperation among team members' increases the BSC score by 0.252 points, holding all other variables constant. This variable has the greatest impact on the BSC. The step 'I talk about a bright and positive vision of the future' with 0.173, the step 'I encourage us to think about problems in a new way, question assumptions' with 0.163, the step 'I inspire pride and respect from

others, inspires them to be competent and they hold' increases the value of the BSC score by 0.148.

Table 20: B and t values of final model variables

Variables	B	t	VIF
I promote trust, participation and cooperation among team members	0.252	3.491**	1,432
I am talking about a clear and positive vision	0.173	2.856**	1,247
I encourage workers to think about problems in a new way, to question assumptions	0.163	2.742**	1,412
I inspire pride and respect from others, it inspires me to be considered competent	0.148	2.262*	1.144

*** significant at 1% , * significant at 5%*

Source: Own investigation, 2022

Hypothesis H5 is confirmed, there is a moderately positive relationship between transformational leadership and performance.

Examining the effect on financial indicators only (sales revenue, sales growth rate, profit, profit growth rate), the explanatory power of the model is 19.2% , 'I am talking about a bright and positive vision of the future' and 'I inspire pride and respect in others, I am inspired to be seen as competent' variables are included, which are also listed above. Examining only the impact on non-financial indicators, the explanatory power of the model is 45.5%, and the same variables as the original model are included.

Managers are expected to ensure that the organization achieves the desired performance goal (FENYVES et al., 2018). As a result, several studies have already examined the relationship between leadership style and organizational performance with financial or non-financial performance indicators, among which there is one that compares style with employee satisfaction (MADLOCK, 2008), as well as one that compares sales revenue (ARSLAN – STAUB, 2013), both studies found a correlation between the variables. Examining non-financial indicators, CHEN – WU (2020) based on his empirical results, the more frequent use of the transformational leadership style improves the performance of new employees, because they feel that they receive significant support in their work. In addition, it was found that it has a positive effect on the motivation and loyalty of employees.

EBERLY et al. (2017) also obtained similar results, their research among soldiers shows that transformational leadership increases loyalty and improves performance. GAO et al. 's (2020) gap-filling work among salespeople reports that transformational leadership has a direct impact on salespeople's abilities and effectiveness. The feeling of empowerment provided by the application of the leadership style increases the productivity of the employees.

3.6. The relationship between leadership style, change management and performance

H6a: Change management has a mediating role in the relationship between leadership style and performance (BSC), i.e. leadership style has a positive effect on organizational performance (BSC) through change management steps.

During the previous hypothesis tests, we saw that there is a correlation between transformational leadership and performance, as well as change management and performance. Transformational leadership can also be interpreted as a single aggregated variable (BASS - RIGGIO, 2006; FELFE - SCHYNS, 2006; KAMMERHOFF et al., 2019). Based on this, it is possible to perform a mediator analysis by forming one variable from the change management steps and the performance indicators.

To explore the possible relationship between the three variables, I have performed a mediator analysis using a process macro (Figure 5).

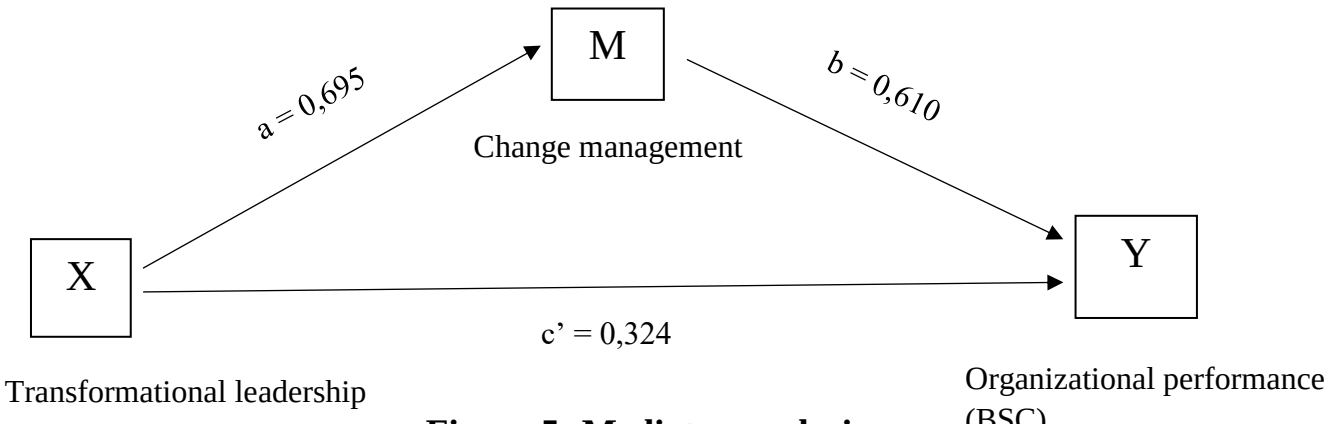


Figure 5: Mediator analysis

Source: Own investigation, 2022

The direct effect between transformational leadership (X) and organizational performance (Y) is shown by the c' value (Table 21). Based on the results, a leader who differs from another leader by one unit in his/her transformational style, but does not differ in his/her change management habits, is expected to achieve a 0.324 higher BSC score. This direct effect is statistically different from zero, as indicated by the 95% also shows a bootstrap confidence interval which is entirely above zero (0.119 – 0.528).

The indirect effect between transformational leadership (X) and performance (Y) through change management (M) is shown by the a*b value. Based on the results, two leaders who differ by 1 unit in transformational leadership style differ by 0.424 in BSC score due to the more frequent use of change management steps. This indirect effect is statistically different from zero, at 95% bootstrap confidence interval is above zero (0.263 – 0.613).

The total effect is given by the value c, which is obtained through the formula c = c' + a*b. Based on the results, two leaders who differ by 1 unit in their transformational style differ by 0.748 units in BSC score. This total effect is statistically different from zero, at 95% bootstrap confidence interval is above zero (0.587 – 0.910).

The explanatory power of the model with the effect of M (change management) is 59.7%, without its effect it is 46.3%, so more than 10% higher in the first case.

Table 21: B and t values of final model variables

	M (change management)				**Y (performance)**			
	variable	coeff .	SE	p	variable	coeff .	SE	p
X (transformational leadership)	*a*	0.695	0.266	0.0012	*c'*	0.324	0.103	0.002
M (change management)	-	-	-	-	*b*	0.610	0.108	<0.001
	R^2 =0.527				**R^2 =0.597**			
	F(1.98) = 109.132			< 0.001	F(2, 259) = 84.498			< 0.001

Source: Own investigation, 2022

Hypothesis H6a is confirmed, transformational leadership (X) leads to better performance of the organization (Y) through the implementation of the more frequent change management steps triggered by it (M).

There has been relatively little research analyzing the presence of a mediator variable between leadership style and organizational performance. OGBONNA – HARRIS, (2000) studied the role of culture, and other research (YANG, 2008; ARHAM – MUENJOHN, 2012) examined the effect of entrepreneurial skills. Based on my research, there is no work in the literature that examines the role of change management skills, even though it is an important variable. Only change is constant, adapting to changing environmental conditions is a very important factor in the life of an organization (DAJNOKI – HÉDER, 2017) .

H6b: The latent, underlying variables (factors) of transformational leadership and change management are both related to the organization's performance (BSC).

So far, I have performed calculations with the values of the items belonging to the three main professional parts of the questionnaire (transformational leadership, change management, balanced scorecard) and the mean values for each professional part. In the next part, I will carry out a principal component analysis for each professional unit and conduct an investigation with the factors obtained in this way.

Based on the Kaiser-Meyer-Olkin test (0.834) and Bartlett's test (251.390, $p < 0.001$), the principal component analysis can be performed. A single factor was generated from the items of Transformational leadership (Table 22).

Table 22: Transformational leadership questionnaire factors

Variable	1
1. I am talking about a clear and positive vision	0.567
2. I deal with colleagues and individuals, support and encourage their development	0.828
3. I express my appreciation to the team and encourage them	0.830
4. I promote trust, participation and cooperation among team members	0.786
5. I encourage workers to think about problems in a new way, to question assumptions	0.649
6. I am aware of my values and I do what I say	0.683
7. I inspire pride and respect from others, it inspires me to be considered competent	0.597

Source: Own investigation, 2022

When several factors are generated, they are typically named, but based on the results, only one factor, that is, the principal component, was formed, the name of which remains transformational leadership.

Based on the Kaiser-Meyer- Olkin test (0.841) and Bartlett's test (755.116, $p<0.001$) of the Change management items, the principal component analysis can be performed, five factors were generated (Table 23).

23. table: Change management questionnaire factors

Variable	1	2	3	4	5
1. Organization analysis, problem identification	0.061	0.205	**0.754**	0.122	0.117
2. Creating a sense of urgency about the change	-0.028	0.050	0.286	**0.644**	0.390
3. Communicating a clear vision of the benefits of the change	0.341	0.085	0.156	0.234	**0.729**
4. To determine whose support is needed and whose resistance is expected	0.139	0.201	0.090	0.041	**0.785**
Building a broad coalition to support change	0.135	0.309	0.219	0.362	**0.619**
6. Creation of working groups to manage changes	0.004	**0.789**	0.219	0.051	0.290
7. Appointment of competent, change-managing managers for key positions	0.027	**0.773**	0.197	0.382	-0.003
8. Authorizing competent colleagues for planning and implementation	0.301	0.255	-0.055	**0.799**	0.075
9. Creating symbolic , dramatic changes regarding the work	0.337	**0.723**	-0.082	-0.028	0.229
10. Explain to employees how the change will affect them	**0.686**	0.316	0.222	0.174	0.059
11. Helping people deal with stress and difficulties	**0.868**	0.021	0.082	0.047	0.147
12. Providing opportunities for initial successes that increase self-confidence	**0.794**	0.052	0.073	0.196	0.331
13. Check the change process and take corrective steps	0.252	0.011	**0.831**	0.002	0.159
14. Informing people about progress	**0.654**	0.116	0.433	0.211	0.062
15. Optimistic attitude and continuous commitment to change	0.527	0.009	0.205	**0.622**	0.211
16. Rooting of new solutions	0.317	0.113	**0.562**	0.455	0.144

Source: Own investigation, 2022

The names of the five factors are as follows:

1. Factor: Support the workers (10, 11, 12, 14)
2. Factor: Management of working groups (6, 7, 9)

3. Factor: Control, control (1, 13, 16)
4. Factor: Authority, urgency (2, 8, 15)
5. Factor: Coalition for Vision (3, 4, 5)

Based on the Kaiser-Meyer-Olkin test (0.881) and Bartlett's test (663.796, p< 0.001) of the BSC items, the principal component analysis can be performed. Two factors are generated from the BSC items (Table 24). The statistical program classifies non-financial indicators in factor 1 and financial indicators in factor 2.

Table 24: Performance (BSC) questionnaire factors

Variable	1	2
1. The organization sales revenue	0.069	**0.840**
2. Sales revenue growth rate	0.301	**0.840**
3. Profit	0.202	**0.837**
4. For his profit growth rate	0.304	**0.815**
5. Customers satisfaction	**0.629**	0.348
6. Employees satisfaction	**0.766**	0.131
7. One new product / service for its introduction / development required time	**0.624**	0.409
8. Training period for a new or transferred employee	**0.538**	0.120
9. The workers developmental (and growth) demand	**0.740**	0.128
10. Work processes optimization	**0.761**	0.208
11. That individual and organizational learning	**0.811**	0.114
12. The ability to change	**0.799**	0.341

Source: Own investigation, 2022

The names of the two factors are as follows:

1. Factor: Non-financial indicators (5, 6, 7, 8, 9, 10, 11, 12)
2. Factor: Financial indicators (1, 2, 3, 4)

By carrying out a regression analysis with transformational leadership and change management factors, we can find out what percentage of BSC 1 (non-financial indicators) and BSC 2 (financial indicators) factors are explained by factors related to transformational leadership and change management.

Table 25 contains the factors entered into the regression model describing the effect on BSC factor 1, which was run using the stepwise procedure.

Table 25: Added variables of regression model

Model number	Added new variable	Variables included in the model
1.	FAC_Transformation_leadership	1. FAC_Transformation_leadership
2.	FAC4_Change Management_ Authorization_urgency	1. FAC_Transformation_leadership 2. FAC_Change management _ Authorization_urgency
3.	FAC1_Change Management_ Support_the_workers	1. FAC_Transformation_leadership 2. FAC4_Change Management_ Authorization_urgency 3. FAC1_Change Management_ Support_the_workers

Source: Own investigation, 2022

In Table 26, based on the 3th model can be determined that the difference between R^2 and the adjusted R^2 is 0.016 so the model can be considered stable. The model explains approx 46.6% of the BSC_1_non_financial indicators, this explanatory power is significant at 1%.

Table 26: Added variables of regression model

Model number	R	R^2	Adjusted R^2	Standard error
1.	0.623	0.388	0.382	0.782
2.	0.663	0.440	0.429	0.752
3.	0.695	0.482	0.466	0.727

Source: Own investigation, 2022

Table 27 only contains the results of the final test for model 3, the VIF value for all variables is lower than the value of 2, so the multicollinearity is weak, therefore the test can be performed without reducing it. Based on the 'B' values, each variable has a positive relationship with the BSC_1_non_financial indicators. Application of ' FAC_Transformation_leadership' increases the score of non-financial indicators by 0.350 points, with all other variables unchanged. This variable has the greatest impact on BSC_1. The factor 'FAC4_Change management_Empowerment_urgency' increases the value of the BSC_ score by 0.314 and 'FAC1_Change management_Support_the_workers' by 0.266.

Table 27: B and t values of final model variables

Factors	B	t	VIF
FAC_Transformation_leadership	0.350	3.436**	1,939
FAC4_Change management_ Authorization_urgency	0.314	3.801**	1,277
FAC1_Change Management_	0.266	2.819**	1,662

Factors	B	t	VIF
Support_the_workers			

*** significant at 1% , * significant at 5%*

Source: Own investigation, 2022

When examining the effect of the factors on BSC 2, during the stepwise regression, only the factor 'FAC5_Change management_Coalition_a_vision' is selected into the model, so I will not continue the analysis.

Hypothesis H6b is confirmed, the latent, underlying variables of transformational leadership and change management are related to the organization's performance.

4. MAIN FINDINGS OF THE DISSERTATION, NEW AND NOVEL RESULTS

Below is my summary of the new and innovative results in seven points:

1. The change management habits of the examined organizations' leaders were revealed, and it was also revealed which steps in the models they would most like to strengthen (H1b)
2. More frequent use of transformational leadership is related to more frequent use of change management steps (H3a).
3. More frequent use of change management steps leads to better performance (H4)
4. Transformational leadership leads to the organization' s better performance through the implementation of more frequent change management steps triggered by it, that is change management appears as a mediating variable in the relationship (H6a)
5. In the case of SMEs, it is also advisable to use future-oriented, non-financial performance indicators, as this has revealed that transformational leadership has a positive effect on employee and customer satisfaction as well as on other BSC indicators (H6b)
6. Conclusions were made on the positive relationship between transformational leadership, the application of change management steps and organizational performance
7. Development of a measurement tool to examine the relationship between transformational leadership style, change management and organizational performance

5. PRACTICAL / THEORETICAL APPLICABILITY OF THE RESULTS

1. Actors in practical life realized that the implementation of certain steps based on their experience can help in more successful change management and can be useful for other managers as well.
2. There is a connection between transformational leadership and change management, it is suggested that actors in practical life increase the frequency of transformational style and steps
3. If managers are more aware of change management, performance can improve, training is worth it
4. Transformational style leads to improved performance through more frequent change management, so far this mediating role has not been demonstrated in the literature
5. SMEs should also use non-financial indicators, because past financial performance can be maintained and increased by improving current and future non-financial performance
6. If practitioners recognize this relationship, they can make their organization more successful because they can use transformational leadership styles and change management practices more consciously.
7. It becomes possible to measure the relationship between transformational leadership style, change management practice and organizational performance in other companies as well.

6. LIST OF PUBLICATIONS RELATED TO THE DISSERTATION

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Registry number: DEENK/361/2022.PL
Subject: PhD Publication List

Candidate: Roland Filep
Doctoral School: Károly Ihrig Doctoral School of Management and Business
MTMT ID: 10066680

List of publications related to the dissertation

Articles, studies (7)

1. Dajnoki, K., **Filep, R.**: A teljesítménymérés módszerei a KKV szektorban.
   Jelenkori társadalmi és gazdasági folyamatok. 15 (3-4), 2020. ISSN: 1788-7593.
   DOI: http://dx.doi.org/10.14232/jtgf.2020.3-4.55-64
2. **Filep, R.**: Menedzsment módszerek az Ipar 4.0 tükrében.
   International Journal of Engineering and Management Sciences. 5 (1), 1-8, 2020. EISSN: 2498-700X.
   DOI: http://dx.doi.org/10.21791/IJEMS.2020.1.41
3. **Filep, R.**: X/Y emberkép hatása a teljesítményre változó környezetben.
   International Journal of Engineering and Management Sciences. 5 (1), 1-12, 2020. EISSN: 2498-700X.
   DOI: http://dx.doi.org/10.21791/IJEMS.2020.1.36
4. Ujhelyi, M., **Filep, R.**: Szervezeti változások vezetése.
   In: Vezető és menedzser : Emlékkötet Farkas Ferenc születésének 70. évfordulójára. Szerk.: László Gyula, Németh Julianna, Sipos Norbert, Pécsi Tudományegyetem Közgazdaságtudományi Kar, Pécs, 230-237, 2019. ISBN: 9789634294412
5. **Filep, R.**: "Csak a változás állandó": Változásmenedzsment a Szabolcs-Szatmár-Bereg megyei kisvállalkozások körében.
   Gazdálkodástudományi Közlemények. 7 (1), 47-53, 2018. ISSN: 2061-2443.
6. **Filep, R.**: Vezetési stílus vizsgálata MLQ segítségével a szabolcs-szatmár-bereg megyei kisvállalkozások körében.
   International Journal of Engineering and Management Sciences. 3 (4), 36-47, 2018. EISSN: 2498-700X.
   DOI: http://dx.doi.org/10.21791/IJEMS.2018.4.5.
7. Ujhelyi, M., **Filep, R.**: Változás-vezetés.
   Metszetek. 6 (4), 5-21, 2017. EISSN: 2063-6415.

Conference presentations (3)

8. **Filep, R.**, Barizsné Hadházi, E., Ujhelyi, M.: Változtatás vezetői és dolgozói szemszögből.
In: 3. Farkas Ferenc Nemzetközi Tudományos Konferencia: "Menedzsment forradalmak": Konferenciakötet. Szerk.: Benke Mariann, Schmuck Roland, Riedelmayer Bernadett, Schmuck Roland, Riedelmayer Bernadett, Pécsi Tudományegyetem Közgazdaságtudományi Kar Vezetés- és Szervezéstudományi Intézet, Pécs, 265-275, 2022, (VSZI kötetek, ISSN 2786-3891 ; 3) ISBN: 9789634299950

9. **Filep, R.**, Ujhelyi, M., Barizsné Hadházi, E.: Az ideális vezetői tulajdonságok hallgatói vélemények alapján.
In: Farkas Ferenc II. Nemzetközi Tudományos Konferencia 2020. Szerk.: Balogh Gábor, László Gyula, Sipos Norbert, Pécsi Tudományegyetem Közgazdaságtudományi Kar Vezetés- és Szervezéstudományi Intézet, Pécs, 442-456, 2020. ISBN: 9789634295860

10. **Filep, R.**: Menedzsment módszerek változó környezetben.
In: Interdiszciplinaritás a régiókutatásban IX." nemzetközi konferencia IV és "A jog tudománya, a mindennapok joga III." Tudományos konferencia : rezümé kötet. Szerk.: Dajnoki Krisztina, Pierog Anita, Szűcs Lászlóné, Siska Katalin, Debreceni Egyetem Gazdaságtudományi Kar, Debrecen, 20, 2019. ISBN: 9789634901518

List of other publications

Articles, studies (10)

11. Szondi, R., Héder, M., **Filep, R.**, Fenyves, L.: Emlékek az egykori 107-es szoba lakóinak tollából.
In: Tanulmányok Berde Csaba tiszteletére : tanulmánykötet. Szerk.: Dajnoki Krisztina, Boros József, Debreceni Egyetem Gazdaságtudományi Kar Vezetés- és Szervezéstudományi Intézet, Debrecen, 44-48, 2022. ISBN: 9789634904502

12. Barizsné Hadházi, E., **Filep, R.**: Mennyire vagyunk etikusak? és mások?
In: Tanulmányok Berde Csaba tiszteletére : tanulmánykötet. Szerk.: Dajnoki Krisztina, Boros József, Debreceni Egyetem Gazdaságtudományi Kar Vezetés- és Szervezéstudományi Intézet, Debrecen, 77-83, 2022. ISBN: 9789634904502

13. **Filep, R.**, Ujhelyi, M.: "Maradj otthon" - Áttérés Home Office-ra az Észak-Alföld Régióban.
Régiókutatás szemle. 6 (1), 37-47, 2021. EISSN: 2559-9941.
DOI: http://dx.doi.org/10.30716/RSZ/21/1/3

14. Dajnoki, K., **Filep, R.**, Mándy, Z.: Agilis vezetés és megtartás-menedzsment: A Schaeffler Debrecen válasza a koronavírus válság által okozott kihívásokra.
In: Koronavírus-válság kihívások és HR-válaszok - hazai és nemzetközi tapasztalatok 2020. Szerk.: Kőműves Zsolt Sándor, Szabó Katalin, Szabó-Szentgróti Gábor, Poór József, Wolters Kluwer Hungary Kft., Budapest, 318, 2021.

15. Barizsné Hadházi, E., Ujhelyi, M., **Filep, R.**: Foglalkoztatás Koronavírus-válság idején, tapasztalatok az Észak-Alföld Régióból.
Régiókutatás szemle. 6 (1), 48-57, 2021. EISSN: 2559-9941.
DOI: http://dx.doi.org/10.30716/RSZ/21/1/4

16. Dajnoki, K., Ujhelyi, M., **Filep, R.**: Motiváció vizsgálata Herzberg kétténye zős modellje és az öndeterminációs elmélet alapján.
Studia Mundi - Economica. 8 (2), 2-12, 2021. EISSN: 2415-9395.
DOI: http://dx.doi.org/10.18531/Studia.Mundi.2021.08.02.2-12

17. Dajnoki, K., Szondi, R., **Filep, R.**: The role of career and knowledge management in retention.
Studia Mundi - Economica. 8 (1), 65-76, 2021. EISSN: 2415-9395.

18. **Filep, R.**: Examining organizational culture with OCAI among employees of a service company.
The Annals of the University of Oradea. Economic Sciences. 28 (2), 272-279, 2019. ISSN: 1222-569X.

19. Ujhelyi, M., **Filep, R.**, Barizsné Hadházi, E.: We would like to be liked: strategies used to control the impression others form of us.
The Annals of the University of Oradea, Economic Sciences. 28 (1), 389-396, 2019. ISSN: 1222-569X.

20. Barizsné Hadházi, E., **Filep, R.**, Ujhelyi, M.: Business students' attitudes toward corporate social responsibility.
The Annals of the University of Oradea. Economic Sciences. 27 (1), 377-385, 2018. ISSN: 1222-569X.

Conference presentations (1)

21. Kun, A. I., **Filep, R.**, Horváth, A., Kiss, M.: Personality types and academic success of higher education business students.
In: Book of Abstracts: The 5th International Conference on Future of Education 2022 (Future of Education 2022). Ed.: Brian D. Beitzel, The International Institute of Knowledge Management (TIIKM), Sri Lanka, 18-18, 2022. ISBN: 9786245746194

The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of the Journal Citation Report (Impact Factor) database.

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11 July, 2022

Bibliography

1. Andreasen, P. H. – Gammelgaard, B. (2018): Change within purchasing and supply management organisations – Assessing the claims from maturity models. *Journal of Purchasing and Supply Management*, 24(2), 151–163. https://doi.org/10.1016/j.pursup.2017.11.005
2. Arham, A. – Boucher, C. – Muenjohn, N. (2013): Leadership and entrepreneurial success: a study of SMEs in Malaysia. *World Journal of Social Sciences*, Volume *3*(5), 117–130.
3. Arham, A. F. (2014): The Relationship Between Leadership Behaviour, Entrepreneurial Orientation and Organisational Performance in Malaysian Small and Medium Enterprises. (February), 431.
4. Arham, A. – Muenjohn, N. (2012): Leadership and organisational performance in Malaysian SMEs: The mediating role of entrepreneurial orientation. *Proceedings of Business and Information*, 31–41.
5. Arslan, A. – Staub, S. (2013): Theory X and Theory Y Type Leadership Behavior and its Impact on Organizational Performance: Small Business Owners in the Şishane Lighting and Chandelier District. *Procedia - Social and Behavioral Sciences*, Volume *75*, 102–111. https://doi.org/10.1016/J.SBSPRO.2013.04.012
6. Auken, H. Van – Madrid-Guijarro, A. – Garcia-Perez-De-Lema, D. – Van Auken, H. – García-Pérez-De-Lema, D. (2008): Innovation and SME Performance in Spanish Manufacturing Firms Value, fair value and ethic View project Financiación a la PYME mexicana View project Innovation and performance in Spanish manufacturing SMEs. *Article in International Journal of Entrepreneurship and Innovation Management*, Volume *8*(1), 36–56. https://doi.org/10.1504/IJEIM.2008.018611
7. Avolio, B. J. – Bass, B. M. (1991): The full range of leadership development: Basic and advanced manuals (NY: Bass,): Binghamton.
8. Babbie, E. – Roberts, L. W. (2018): Fundamentals of Social Research. Toronto: Nelson Education.
9. Bass, B. M. – Riggio, R. E. (2006): Transformational Leadership. Mahwah, NJ: Psychology Press.
10. Bass, Bernard M. (1999): Two Decades of Research and Development in Transformational Leadership. *European Journal of Work and Organizational Psychology*, Volume *8*(1), 9–32. https://doi.org/10.1080/135943299398410
11. Brislin, R. W. (1970): Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, *Volume 1*(3), 185–216. https://doi.org/10.1177/135910457000100301
12. Carless, S. A. (1998): Gender differences in transformational leadership: An examination of superior, leader, and subordinate perspectives. Sex Roles, Volume *39*(11–12), 887–902. https://doi.org/10.1023/A:1018880706172
13. Carless, S. A. – Wearing, A. J. – Mann, L. (2000): A short measure of transformational leadership. *Journal of Business and Psychology*, Volume *14*(3), 389–405. https://doi.org/10.1023/A:1022991115523
14. Chen, T. J. – Wu, C. M. (2020): Can newcomers perform better at hotels? Examining the roles of transformational leadership, supervisor-triggered positive affect, and perceived supervisor support. *Tourism Management Perspectives*, Volume *33*(529), 100587.

https://doi.org/10.1016/j.tmp.2019.100587
15. Dajnoki, K. (2015): A vezetési stílus, mint a hatékony vezetés alapjai In: Bácsné B. É., Berde Cs., Dajnoki K.: A vezetés alapjai. Debreceni Egyetem, Volume *ISBN: 9786*, 83–96.
16. Dajnoki, K. – Héder, M. (2017): „Új szelek fújnak" – a HR válasza a globalizáció és a változás kihívásaira. *Hadtudomány: A Magyar Hadtudományi Társaság Folyóirata*, Volume *27*(E-szám), 84–93. https://doi.org/10.17047/HADTUD.2017.27.E.84
17. Dess, G. G. – Robinson Jr., R. B. (1984): Measuring Organizational Performance in the Absence of Objective Measures : The Case of the Privately-Held Firm and Conglomerate Business Unit Author (s): Gregory G . Dess , Richard B . Robinson and Jr . Published by : Wiley Stable URL : http://www.jsto. *Strategic Management Journal*, Volume *5*(3), 265–273. https://doi.org/10.1002/smj.4250050306
18. Dobák, M. (2008): Szervezeti formák és vezetés. Retrieved January 5, 2020, from Akadémia Kiadó
19. Eberly, M. B. – Bluhm, D. J. – Guarana, C. – Avolio, B. J. – Hannah, S. T. (2017): Staying after the storm: How transformational leadership relates to follower turnover intentions in extreme contexts. *Journal of Vocational Behavior*, Volume *102*(July), 72–85. https://doi.org/10.1016/j.jvb.2017.07.004
20. Eliyana, A. – Ma"arif, S. – Muzakki. (2019): Job satisfaction and organizational commitment effect in the transformational leadership towards employee performance. *European Research on Management and Business Economics*, Volume *25*(3), 144–150. https://doi.org/10.1016/j.iedeen.2019.05.001
21. Felfe, J. – Schyns, B. (2006): Personality and the perception of transformational leadership: The impact of extraversion, neuroticism, personal need for structure, and occupational self-efficacy. *Journal of Applied Social Psychology*, Volume *36*(3), 708–739. https://doi.org/10.1111/j.0021-9029.2006.00026.x
22. Fenyves, V. – Bács, Z. – Karnai, L. – Nagy, A. – Tarnóczi, T. (2018): Financial performance measurement of hungarian retail food companies. *Contemporary Economics*, Volume *12*(4 Special Issue), 459–472. https://doi.org/10.5709/ce.1897-9254.290
23. Filep, R. (2018): Vezetési stílus vizsgálata MLQ segítségével a szabolcs-szatmár-bereg megyei kisvállalkozások körében. *International Journal of Engineering and Management Sciences (IJEMS)*, Volume *3*(4): https://doi.org/10.21791/IJEMS.2018.4.5
24. Gao, R. (Chuang R.) – Murphy, W. H. – Anderson, R. E. (2020): Transformational leadership effects on salespeople's attitudes, striving, and performance. *Journal of Business Research*, Volume *110*(January), 237–245. https://doi.org/10.1016/j.jbusres.2020.01.023
25. Garvin, D. A. – Roberto, M. A. (2005): Change throught Persuasion. *Harvard Business Review*, (83 (2)), 104–112.
26. Ghadi, M. Y. – Fernando, M. – Caputi, P. (2013): Transformational leadership and work engagement: The mediating effect of meaning in work. *Leadership and Organization Development Journal*, Volume *34*(6), 532–550. https://doi.org/10.1108/LODJ-10-2011-0110
27. Hair, J. F. – Black, W. C. – Babin, B. J. – Anderson, R. E. (2014): Multivariate Data Analysis (7th Edition)
28. Hayes, A. F. (2018): Introduction to mediation - A regression based approach. Guilford

Publications.
29. Jones, D. – Rudd, R. (2008): Transactional, Transformational, or Laissez-Faire Leadership: An Assessment of College of Agriculture Academic Program Leaders' (Deans) Leadership Styles. *Journal of Agricultural Education*, Volume *49*(2), 88–97. https://doi.org/10.5032/jae.2008.02088
30. Kammerhoff, J. – Lauenstein, O. – Schütz, A. (2019): Leading toward harmony – Different types of conflict mediate how followers' perceptions of transformational leadership are related to job satisfaction and performance. *European Management Journal*, Volume *37*(2), 210–221. https://doi.org/10.1016/j.emj.2018.06.003
31. Kanter, R. M. – Stein, B. – Jick, T. D. (1992): The Challenge of Organizational Change: How Companies Experience It and Leaders Guide It. *Free Press.*
32. Kaplan, R. S. – Norton, D. P. (1996): Translating Strategy into Action - The Balanced Scorecard. Boston: *Harvard Business Review Press*.
33. Kieser, A. (1995): Szervezetelméletek. Budapest: AULA Kiadó.
34. Kotter, J. P. (1995): Leading Change. Why Transformational efforts fail? *Harvard Business Review. 59–67.*
35. Kotter, J. P. (2008). A Sense of Urgency. Boston: Harvard Business School Press.
36. Liu, C. H. S. – Huang, Y. C. (2020): The influence of transformational leadership on subordinate creative behaviour development process. *Tourism Management Perspectives*, Volume *36*(February), 100742. https://doi.org/10.1016/j.tmp.2020.100742
37. Luecke, R. (2003): Managing change and transition. *Harvard Business Review Press* (1 edition):
38. Luyten, H. – Bazo, M. (2019): Transformational leadership, professional learning communities, teacher learning and learner centred teaching practices; Evidence on their interrelations in Mozambican primary education. *Studies in Educational Evaluation*, Volume *60*(November 2018), 14–31. https://doi.org/10.1016/j.stueduc.2018.11.002
39. Madlock, P. E. (2008): The Link Between Leadership Style, Communicator Competence, and Employee Satisfaction. *Journal of Business Communication*, Volume *45*(1), 61–78. https://doi.org/10.1177/0021943607309351
40. Mahmudova, L. – Katonáné Kovács, J. (2018): Definitining the Performance of Small and Medium Enterprises. *Network Intelligence Studies*, *VI*(12 (2/2018)), 111–120.
41. MNB. (2019): Versenyképességi program 330 pontban. Budapest: Magyar Nemzeti Bank.
42. Monje Amor, A. – Abeal Vázquez, J. P. – Faíña, J. A. (2020): Transformational leadership and work engagement: Exploring the mediating role of structural empowerment. *European Management Journal*, Volume *38*(1), 169–178. https://doi.org/10.1016/j.emj.2019.06.007
43. Ogbonna, E. – Harris, L. C. (2000): Leadership style, organizational culture and performance: empirical evidence from UK companies. *International Journal of Human Resource Management*, Volume *11*(4), 766–788. https://doi.org/10.1080/09585190050075114
44. Pugh, D. S. – Hickson, D. J. – Hinings, C. R. – Turner, C. (1969): The Context of Organization Structures. *Administrative Science Quarterly*, Volume *14*(1), 91–114.
45. Robbins, S. P. – Judge, T. A. (2018): Essential of Organizational Behaviour. In *Pearson*.
46. Rodney Turner, J. – Ledwith, A. – Kelly, J. (2009): Project management in small to medium-sized enterprises: A comparison between firms by size and industry.

International Journal of Managing Projects in Business, 2(2), 282–296. https://doi.org/10.1108/17538370910949301
47. Roscoe, J. T. (1975): Fundamental research statistics for the behavioural sciences, New York.
48. Sajtos, L. – Mitev, A. (2007): SPSS Kutatási és Adatelemzési Kézikönyv. Budapest: Alinea Kiadó.
49. Sang Long, C. – Zhi Yong, L. – Wee Chuen, T. (2016): Analysis of the Relationship between Leadership Styles and Affective Organizational Commitment. *International Journal of Management*, Accounting and Economics, Volume *3*(10)
50. Seifert, D. F. (2003): Teacher perceptions of the transformational leadership style of female principals in independent schools as measured by the multifactor leadership questionnaire. Melbourne: Melbourne Graduate School of Education.
51. Shafi, M. – Zoya – Lei, Z. – Song, X. – Sarker, M. N. I. (2020): The effects of transformational leadership on employee creativity: Moderating role of intrinsic motivation. *Asia Pacific Management Review, Volume 25*(3), 166–176. https://doi.org/10.1016/j.apmrv.2019.12.002
52. Stouten, J. – Rousseau, D. M. – De Cremer, D. (2018): Successful organizational change: Integrating the management practice and scholarly literatures. *Academy of Management Annals*, Volume *12*(2), 752–788. https://doi.org/10.5465/annals.2016.0095
53. Sudibjo, N. – Prameswari, R. K. (2021): The effects of knowledge sharing and person–organization fit on the relationship between transformational leadership on innovative work behavior. Heliyon, Volume *7*(6), e07334. https://doi.org/10.1016/j.heliyon.2021.e07334
54. Sulaiman, N. (2016): The Impact of Financial Knowledge and Capabilities on SME Firm Performance in Australia. RMIT University: PhD thesis.
55. Szabó, S. – Varjasi, G. (2018). Integrált változásmenedzsment a gyakorlatban a Lewin-modell alapján. Tudásmenedzsment, Volume *19*(1), 9–14.
56. Vágány, J. – Kárpátiné, D. J. (2013): A KKV vezetők képzési szokásai. BGF KVIK - *Multidiszciplináris Kihívások, Sokszínű Válaszok*, Volume *2*, 102–110.
57. Veresné, S. M. (2013): Teljesítményalapú szervezetátalakítás elmélete és módszertana. Miskolci Egyetemi Kiadó.
58. Vigoda-Gadot, E. (2007): Leadership style, organizational politics, and employees' performance: An empirical examination of two competing models. *Personnel Review*, Volume *36*(5), 661–683. https://doi.org/10.1108/00483480710773981
59. Wimmer, Á. – Csesznák, A. (2021): A hazai vállalatok versenyképességi jellemzői a negyedik ipari forradalom idején. Budapest: Alinea Kiadó.
60. Wimmer, Á. – Zoltanyné, P. Z. (2006): A vezetés és a döntéshozatal szerepének elemzése az üzleti szféra szem- pontjából (Projektzáró-tanulmány): *Versenyképesség Kutatás Műhelytanulmány-Sorozat*, Volume *45*, 46–48.
61. Woodward, J. (1965): Industrial Organization. London: Oxford University Press.
62. Yang, C.-W. (2008): The Relationships Among Leadership Styles, Entrepreneurial Orientation, and Business Performance. *Managing Global Transitions International Research Journal*, Volume *6*(3), 257–275.
63. Yue, C. A. – Men, L. R. – Ferguson, M. A. (2019): Bridging transformational leadership, transparent communication, and employee openness to change: The mediating role of trust. Public Relations Review, Volume *45*(3), 101779.

https://doi.org/10.1016/j.pubrev.2019.04.012
64. Yukl, G. A. (2010): Leadership in organizations. Prentice Hall.
65. Yukl, G. A. (2013): Leadership in organizations. Pearson.
66. Zhang, W. – Wang, H. – Pearce, C. L. (2014): Consideration for future consequences as an antecedent of transformational leadership behavior: The moderating effects of perceived dynamic work environment. *Leadership Quarterly, Volume 25*(2), 329–343. https://doi.org/10.1016/j.leaqua.2013.09.002
67. Zulkiffli, S. N. 'Atikah – Perera, N. (2011): A Literature Analysis on Business Performance for SMEs: Subjective or Objective Measures? *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1867874