








“Impact of transformational leadership on employees’ affective commitment and intention to support change: Mediation role of innovative behavior”

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IMPACT OF TRANSFORMATIONAL LEADERSHIP ON EMPLOYEES' AFFECTIVE COMMITMENT AND INTENTION TO SUPPORT CHANGE: MEDIATION ROLE OF INNOVATIVE BEHAVIOR

Abstract

Given the dynamic business world and influential trends shaping how companies function, resulting in resistance, anxiety, and confusion, thereby affecting employees' performance and well-being, it is crucial to adopt an effective leadership approach. This study aims to explore how transformational leadership impacts employees' affective commitment and their intentions to support change, considering the role that innovative behavior can play in this relationship. A quantitative approach was used based on an online survey of 401 employees working in marketing consulting, business consulting, transportation, and IT service companies in Hungary. These employees had to go through different organizational changes, such as transformation in structure and emergence of new technology innovation. The hypotheses were tested using structural equation modeling.

The study unveiled that transformational leadership significantly and positively impacts employees' affective commitment toward organizational change but does not have any significant relationship with their intention to support it. However, overall, transformational leadership is a catalyst for employees' responses to change situations. In addition, the intermediary role of employees' innovative behavior in the association between transformational leadership and employees' responses to change was confirmed as transformational leadership positively affects employees' innovative behavior, affective commitment, and intentions to support change. With innovative behavior, the significant positive relationship between leadership and employees' reactions to change remained effective. Transformational leadership and active team member engagement in innovation can facilitate the acceptance of change initiatives, alleviate business complexity, and foster collective efforts for individual and organizational success.

Keywords

transformational leadership, change management, commitment, change support, innovative behavior

JEL Classification

M12, D23, O31

INTRODUCTION

Technological advancement has drastically changed all the different markets and made them more complex and globalized. Hence, numerous companies had to revise their processes and structures to maintain competitiveness within the market (Verhoef et al., 2021). However, the non-success rate of executing change could reach 70% due to the poor readiness of change initiatives and the lack of employee behavior control, such as resistance and turnovers (Beer & Nohria, 2000). In addition, because of poor change management, some Hungarian companies generated annual turnovers ranging from 50 million to 16 billion forints (Növekedés.hu, 2021). Consequently, before executing

some changes, managers and leaders needed to consider the extent of the change's influence on employees' responses and behaviors, thoroughly examining its psychological dimensions.

In situations of change, employees tend to adopt two different reactions. The first one is adapting their behaviors to the circumstances, creating social relations, and showing positive attitudes. The second reaction is resisting change, which is considered a negative attitude toward transformations. That is why the positive role of leadership on employees' reactions to change was highly investigated (Saleem & Naveed, 2017). Proper leadership helps companies avoid these negative behaviors. This confirms that leaders are the ones who can coach employees to reach openness and adaptability and present organizational changes as challenges for better career goals by showing the right paths to follow and providing the best innovative solutions to solve complex problems. Following this line, several leadership styles were linked to employees' reactions to change, such as the authoritarian leadership style (Du et al., 2020), the charismatic leadership (Bakari et al., 2019), and the change leadership (Onyeneke & Abe, 2021). Finally, transformational leadership (Peng et al., 2021) has recently garnered significant attention from scholars (Hamza et al., 2022), but not that much from the Hungarian business context.

Few studies have prioritized investigating the correlation between transformational leadership and the two facets of employees' responses to change: affective commitment and intention to support change. They considered the mediating influence of employees' innovative behavior, despite their importance in heartening employees' motivation, performance, working capacity toward innovation and increasing the quality of change communication (Gilley et al., 2008), and the caliber of relationships with leaders (Oreg et al., 2011; Levay, 2010). This has created a huge theoretical and empirical gap in the scientific research. Given the variations in research findings compared to prior and current theoretical studies, it becomes crucial to unearth additional evidence, particularly concerning some specific service companies based in Hungary, which have been relatively underexplored.

1. LITERATURE REVIEW

Historical and contemporary research has recognized transformational leadership as a significant theme in business management studies. Such leaders tend to foster open and transparent communication, cultivate new abilities, and continuously seek fresh opportunities to drive the organization's expansion (Son et al., 2020). Furthermore, transformational leaders always motivate, inspire their team members, and nurture their development to boost their innovative initiatives and adaptability. According to Bass (1985), this concept surpasses the idea that leaders merely meet their followers' requirements through dependent deals and trades. Instead, it is more about heightening consciousness, self-assurance, and faith during times of organizational transition.

The definition of organizational change is unclear because researchers' opinions were divided into two streams: planned and emergent change (Quattrone & Hopper, 2001). However, the two theories agree that organizational change is about

moving from one status to another. It is absurd that embracing and maintaining organizational change is not that easy. Most organizations cannot effectively adapt their strategies, be flexible, and ensure their employees' positive reactions and attitudes (Beer & Nohria, 2000). Indeed, employees' reactions to change were explained as "a way to respond to a change needed for a successful firm's management" (Hamza et al., 2022, p. 523). It also explained how employees accept or refuse to change situations, strategies, methods, or structures in the organization and how they deal with it (Wang & Kebede, 2020). Oreg et al. (2011) selected various aspects to examine employees' responses to change, proposing key factors such as "readiness for change," "cynicism," "openness to change," and "resistance to change." The subsequent research focused on two critical elements aligned with two prominent theories: the social learning theory (Bandura, 1977) and the social exchange theory (Blau, 1964). These elements encompass employees' affective commitment to change (Herscovitch & Meyer, 2002), regarded as a psychological factor facilitating decision-making

ing, action for successful change implementation (Mangundjaya & Amir, 2021), employees' intention to support change, and a behavioral manifestation of their acceptance and endorsement of the change (Fedor et al., 2006; Hamza et al., 2022). These dimensions were specifically chosen due to their positive nature and significant relevance as reactions in a change scenario, particularly when the change involves introducing innovation, prompting employees to exhibit their innovative behaviors.

In today's world, organizations are compelled to view their employees as their most crucial and valuable resources, necessitating the adoption and enhancement of their commitment through the selection of an appropriate leadership style. Transformational leadership has been proven to foster collective interactions among the members of an organization; it plays a pivotal role in enhancing their well-being (Gyensare et al., 2016). Transformational leadership can heighten employees' emotional engagement and participation in the organization's operations and decision-making processes (Ribeiro et al., 2018). In line with the social exchange theory (Blau, 1964), Leroy et al. (2012) asserted that transformational leadership promotes reciprocity, trust, and ongoing communication, facilitating the exchange of values and knowledge, thereby augmenting employees' emotional commitment (Gyensare et al., 2016; Ribeiro et al., 2018). Transformational leadership can also enhance social interaction between employees and their supervisors, foster additional efforts from collaborators in times of change (Hogg, 2001), and ensure a connection between them and their organizational roles (Kark et al., 2003). In periods of change, transformational leadership decreases hard and stressful situations and encourages teamwork and spirit. This results in development opportunities, which lead to showing some positive innovative behaviors from the employees' side helping the organization's success and change acceptance.

With the frequent changes, stimulating employees' innovative behavior has become a key element in the organizations' development and increase, and a way to expand performance and productivity (Cozzarin, 2017; Shih & Susanto, 2010). The idea was grounded in Janssen's (2000) model of inno-

vative work behavior. It is characterized by employees intentionally generating, initiating, and executing novel ideas within the scope of their job, team, or organization, as described by Amankwaa et al. (2022, p. 507). In addition, Jung (2001) explained that employees' innovative behavior refers to their efforts to combine existing and new ideas to suggest other methods and strategies for solving problems. Previous studies have emphasized the significance of innovation for organizations to thrive and succeed in an ever-evolving and demanding business environment (Amankwaa et al., 2022; Kraft & Bausch, 2016; Omri, 2015). Besides its importance, there are many boosters of innovative behavior (Pieterse et al., 2010), such as leadership, the most effective key element in driving innovative behavior (Kraft & Bausch, 2016). Leaders have the ability and the power to influence employees' work and behaviors (De Jong & Den Hartog, 2010). They help employees overcome significant challenges during innovation processes (Kodama & Ito, 2005). Choi et al. (2016) validated that transformational leadership could boost employees' creativity and innovation (Berraies & Zine El Abidine, 2019) by facilitating the reshaping of their norms and values, promoting their performance (Jung & Avolio, 2000), increasing their competencies in problems-solving (Dackert et al., 2004), generating new ideas, and cultivating self-efficacy and autonomy.

Affective commitment could be highly impacted by employees' innovative behavior as it develops their feeling of ownership and boosts learning and communication between them and the organization (Locke & Latham, 1990). Usually, employees tend to show their intentions to be innovative when they believe that their job and what they are doing is as important to the organization and society as it is important to them (Lee, 2008). In addition, innovative behavior increases productivity, employees' self-improvement, and their development, which comes from their willingness to be highly committed to the organization. In other words, employees' innovative behavior and affective commitment are positively related. Thompson and Heron (2006) found that employees dedicated to organizational changes are more inclined to disseminate knowledge and exhibit innovation. Chughtai (2013) further contributed to this discussion by suggesting that employees' affective

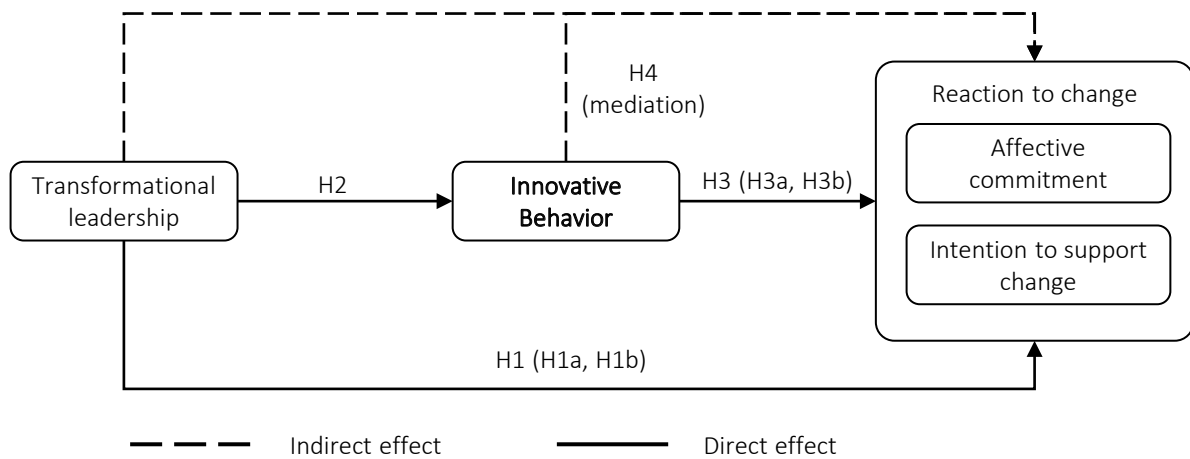


Figure 1. Research model

commitment can be amplified by their learning, involvement in work, and creativity during instances of change.

Employees tend to stimulate positive responses to cope when they perceive high effort-reward fairness and when they adopt some innovative behaviors. Alshebami (2021) emphasized that, as per the positive psychology theory (Seligman & Csikszentmihalyi, 2000), during a period of change, the innovative actions of employees not only greatly influence the growth, evolution, and longevity of the organization but also considerably affect their self-confidence, positivity, and resilience. It was also confirmed that employees tend to have higher confidence levels when they participate in challenging tasks that affects their intentions to support change (Luthans et al., 2007).

Accordingly, employees' support for change depends on their ability to adopt innovative behaviors thanks to their supervisor's positive support. This means that innovative behavior favored by the superiors' positive support when adopting communication, flexibility, trust, education, and training highly influences employees' change support.

The present study aims to comprehend the significance of transformational leadership in positively enhancing employees' responses to change. This encompasses two pivotal dimensions, employees' affective commitment and intentions to support change, with the mediating

role of employees' innovative behavior in the relationship between transformational leadership and the two dimensions of employees' reactions to change. Drawing conclusions from the literature review, the following hypotheses were formulated:

- H1: Transformational leadership has a significant positive effect on employees' reactions to change.*
- H1a: Transformational leadership has a significant positive effect on employees' affective commitment.*
- H1b: Transformational leadership has a significant positive effect on employees' intention to support change.*
- H2: Transformational leadership has a significant positive effect on employees' innovative behavior.*
- H3a: Employees' innovative behavior has a significant positive effect on their affective commitment to change.*
- H3b: Employees' innovative behavior has a significant positive effect on their intention to support change.*
- H4: Employees' innovative behavior mediates the positive relationship between transformational leadership and employees' reactions to change.*

2. METHODS

A group of workers employed by marketing consulting, business consulting, transportation, and IT service-oriented firms located in Hungary was selected, mirroring the sample utilized by Hamza et al. (2022). This choice was entrenched according to some reports dedicated to the service sector in Hungary, which show that the majority of the Hungarian and international service business sectors in the country represented 64% of the country's GDP in 2020 (Marciniak & Ránki, 2020).

For data gathering, a systematic snowball sampling method was employed, utilizing a self-administered online survey distributed through email and various social media channels to various employees working in service companies that specialize in marketing, business consulting, transportation, and telecommunication, and who had to go through different organization changes, such as transformation in structure and emergence of new technology innovation.

Participants were asked to designate their previous work experience in the service sector, and those without relevant experience were excluded from the study. Out of 800 collected responses, only 550 were deemed suitable for the study's targeted community. However, after sorting out the responses and checking the answers' validity, just 401 responses were validated and accepted for analysis. The rate of valid responses is 72%, which is acceptable, according to Baruch and Holtom (2008).

To comprehend the research comprehensively, Table 1 provides a thorough breakdown of demographic characteristics from various perspectives.

Table 1. Sample characteristics

Traits	Item	Number	%
Gender	Male	240	59.9
	Female	161	40.1
Educational level	Undergraduate	141	35.2
	Graduate	81	20.2
	Postgraduate	179	44.6
Age	Less than 25 years old	80	20
	25-40 years old	204	50.9
	40-55 years old	100	24.9
	Above 55 years old	17	4.2

Traits	Item	Number	%
Company size	Less than 50 employees	16	4
	Between 50 to 500 employees	180	44.9
	Above 500 employees	205	51.1

According to Table 1, males exceeded females by nearly 10%. Postgraduates and undergraduates were close to each other by percentage from an educational level perspective. Employees within the age range of 25 and 40 years were the prevailing group, presenting 51%, which indicates the reliability of the sample (Marciniak & Ránki, 2020). In addition, most of the sample respondents mentioned that they work in medium and large companies.

Employees completed a standard online questionnaire consisting of four sections to assess their levels of transformational leadership, innovative behavior, intention to support change, and affective commitment toward change. Each section contains items designed to capture different aspects of the constructs that are being assessed.

A scale based on the framework proposed by Podsakoff et al. (1990) was employed to assess transformational leadership. This scale consists of twenty-three items distributed across six distinct factors: articulating vision (five items), providing a role model (three items), fostering acceptance of goals (four items), setting high-performance expectations (three items), individual support (four items), and intellectual stimulation (four items), as outlined by Schwegler and Good (2013).

A measurement tool created by Herscovitch and Meyer (2002), comprising six items, was employed to measure employees' affective commitment toward change. Regarding employees' intention to support the change, a four-item scale was utilized, as outlined by Fedor et al. (2006). Finally, a scale consisting of ten items was taken from the research conducted by De Jong and Den Hartog (2010) to assess employees' innovative behavior variable.

These measurement instruments underwent independent validation in prior research, affirming their validity. Each of the mentioned scale employed a five-point Likert scale (one = strongly

disagree; five = strongly agree). Table 2 shows the descriptions of the indicators, presented as individual items, aligning with the factors mentioned and corresponding to the constructs.

Table 2. Convergent validity, measurement models, and reliability

Construct	Outer loading	VIF	Model type
Transformational leadership (AVE = 0.665, CA = 0.89, CR = 0.92, rho_A = 0.91)			
AV	0.746	1.736	Reflective
FAG	0.813	2.309	
IS	0.889	3.034	
SHPE	0.856	2.124	
IDS	0.812	2.124	
INNS	0.768	1.901	
Innovative behavior (AVE = 0.615, CA = 0.84, CR = 0.89, rho_A = 0.85)			
IB1	0.745	1.676	Reflective
IB2	0.639*	3.555	
IB3	0.828	2.757	
IB4	0.761	2.406	
IB5	0.795	1.997	
IB6	0.790	2.111	
IB7	0.595*	1.998	
IB8	0.853	1.901	
IB9	0.799	2.878	
IB10	0.699*	2.223	
Affective commitment to change (AVE = 0.628, CA = 0.80, CR = 0.87, rho_A = 0.81)			
AC1	0.871	1.963	Reflective
AC2	0.887	2.214	
AC3	0.616*	2.114	
AC4	0.863	1.966	
AC5	0.581*	3.256	
AC6	0.867	1.960	
Intention to support change (AVE = 0.776, CA = 0.90, CR = 0.93, rho_A = 0.91)			
Ins1	0.873	2.571	Reflective
Ins2	0.893	2.812	
Ins3	0.837	2.167	
Ins4	0.918	3.565	

Note: TRL = transformational leadership; IB = innovative behavior; AC = affective commitment toward change; INS = intention to support change; AV = articulating vision; FAG = fostering acceptance of goals; IS = intellectual stimulation; SHPE = setting high-performance expectations; IDS = individual support; INNS = intellectual stimulation. AVE = average of variance extracted; CA = Cronbach's alpha; CR = composite reliability; rho_A = reliability indices for each construct; VIF = variance inflation factor in item level. * Item deleted.

3. RESULTS

The model was examined using the PLS-SEM (partial least squares structural equation modeling) approach, chosen for its effectiveness in handling

complex models, non-normal data, and smaller sample sizes, as Hair et al. (2019) noted. Data analysis was carried out using PLS-SEM (version 3.3.3, SmartPLS GmbH, Germany), according to Ringle et al. (2020).

Partial least squares structural equation modeling (PLS-SEM) involves two distinct phases: the initial stage involves examining the measurement model, while the subsequent stage involves assessing the structural model. This characteristic is recognized as a notable advantage of PLS-SEM, setting it apart from alternative statistical approaches, as highlighted by Hair et al. (2019). PLS-SEM methodology can accommodate both reflective and formative measurement models, as indicated by Hair et al. (2019). The current study employs both types of models. Therefore, these models are utilized in the evaluations. Should the *p*-value for *A* exceed 0.05, the CTA analysis affirms the validity of the former. Furthermore, the latter examines the overall impact of the structural model on a predictor variable in relation to the average latent variable scores of numerous predictors, according to Ringle et al. (2020).

The data reveal a notable discrepancy in the constructs of transformational leadership (*M* = 3.44, *SD* = 0.570), innovative behavior (*M* = 3.45, *SD* = 0.683), affective commitment to change (*M* = 3.283, *SD* = 0.610), and intention to support change (*M* = 3.71, *SD* = 0.768). This sample is appropriate for testing the hypotheses.

As per the evaluation of the study's model, the findings are displayed in Table 2. The results indicate that Cronbach's alpha, CR, and rho A (Dillon-Goldstein's rho) values surpass the 0.70 threshold, suggesting internal reliability. Following Hair et al. (2017) suggestion that external loadings for each item should exceed 0.70, these results are presented accordingly. Consistent with the recommendations by Hair et al. (2017), indicators with outer loadings below 0.70 were excluded. Consequently, as shown in Table 2, specific items were removed from the analysis.

The internal consistency of the study's model is evident, as indicated by AVE values surpassing the 0.50 threshold, as suggested by Hair et al. (2017). The convergent validity of the model was estab-

lished by examining outer loadings and average variance extracted (AVE) values. It is essential to address the collinearity issue before conducting the analysis, as emphasized by Hair et al. (2019). The results reveal that all variance inflation factor (VIF) values are below five, confirming the absence of collinearity. Notably, values below three are considered optimal, according to Hair et al. (2019).

Ensuring the discriminant validity of constructs is crucial, necessitating validation and establishing their distinctiveness from other constructs, as highlighted by Hair et al. (2019). The Fornell-Larcker criterion (Fornell & Larcker, 1981) and the Heterotrait-Monotrait ratio are commonly used methods for assessing discriminant validity (Henseler et al., 2015). According to Fornell and Larcker (1981), a valid research instrument should have a “square root of AVE” value greater than the construct correlation values. Therefore, the obtained outcomes are presented in Table 3.

Table 3. Discriminant validity (Fornell-Larcker criterion)

	AC	INS	TRL	IB
AC	0.874			
INS	0.513	0.881		
TRL	0.404	0.141	0.816	
IB	0.295	0.456	0.174	0.783

Note: AC = affective commitment toward change; INS = intention to support change; TRL = transformational leadership; IB = innovative behavior.

Table 4 presents the criteria outlined by Henseler et al. (2015), showing that all HTMT ratios are below 0.85, indicating the discriminant validity of the measurement model.

Table 4. Heterotrait-monotrait ratios (HTMT)

	AC	INS	TRL	IB
AC	–			
INS	0.588	–		
TRL	0.460	0.150	–	
IB	0.345	0.520	0.190	–

Note: AC = affective commitment toward change; INS = intention to support change; TRL = transformational leadership; IB = innovative behavior.

Before proceeding with the assumptions, outlier data were assessed to ensure accurate results. The FIMIX method was employed to explore the unobserved heterogeneity within the statistical population and assess the robustness of the PLS-SEM

method. FIMIX-PLS aims to determine the model selection criteria and the number of divisions that could be maintained from the data, as described by Ringle and Sarstedt (2016). To achieve this objective, the entropy statistic normed (EN) was utilized, and in this study, its value of 0.70 was deemed satisfactory and acceptable, following the standards set by Hair et al. (2017) and Adel and Younis (2023). It was confirmed that the EN method is one of the most effective approaches for achieving this objective. The structural model evaluates the causal relationships between the constructs.

To assess the statistical significance of the hypotheses, this study adopts the bootstrapping method with resampling (1,000 resamples), as proposed by Hair et al. (2017). The model results are presented in Table 5. The outcomes indicate a direct positive relationship between transformational leadership and employees’ reactions to change (H1: $\beta = 0.258$, $P < 0.001$, LL: 0.110, UL: 0.322), confirming H1 (Hamza et al., 2022). Examining each dimension of reactions to change separately, the study finds that transformational leadership has a significant positive direct effect on affective commitment toward change (H1a: $\beta = 0.408$, $P < 0.001$, LL: 0.255, UL: 0.470) and does not have a significant direct influence on employees’ intention to support change (H1b: $\beta = 0.064$, $P > 0.05$, LL: -0.026, UL: 0.162). This leads to the rejection of H1b and the acceptance of H1a.

Furthermore, the results show a strong positive influence of transformational leadership on innovative behavior (H2: $\beta = 0.174$, $P < 0.001$, LL: 0.073, UL: 0.276), confirming H2. Moreover, innovative behavior is positively associated with employees’ reactions to change and its two dimensions (H3: $\beta = 0.397$, $P < 0.001$, LL: 0.312, UL: 0.501; H3a: $\beta = 0.223$, $P < 0.001$, LL: 0.140, UL: 0.330; H3b: $\beta = 0.447$, $P < 0.001$, LL: 0.343, UL: 0.540), thus confirming H3a and H3b.

Using the suggested mediating procedures by Hair et al. (2017), H4 was also tested. The results in Table 5 indicate that innovative behavior plays a significant mediating role between transformational leadership and employees’ reactions to change (H4: $\beta = 0.078$, CI [0.032; 0.120]), and the mediation is considered full based on Hair et al. (2017).

Table 5. Model analysis

	Path	β	SD	T-value	P-value	Low CI	High CI	Result
Direct effect								
H1	Transformational Leadership → Reactions to change	0.258	0.058	4.429***	0.000	0.110	0.322	Accepted
H1a	Transformational leadership → Affective commitment toward change	0.408	0.051	7.996***	0.000	0.255	0.470	Accepted
H1b	Transformational leadership → Intention to support change	0.064	0.050	1.271	0.204	-0.026	0.162	Rejected
H2	Transformational Leadership → Innovative behavior	0.174	0.176	3.567***	0.000	0.073	0.276	Accepted
H3	Innovative behavior → Reactions to change	0.397	0.052	7.645***	0.000	0.312	0.501	Accepted
H3a	Innovative behavior → Affective commitment	0.223	0.047	4.670***	0.000	0.140	0.330	Accepted
H3b	Innovative behavior → Intention to support change	0.447	0.047	9.365***	0.000	0.343	0.540	Accepted
Indirect effect								
H4	Transformational leadership → Innovative behavior → Reactions to change	0.078	0.023	3.138**	0.002	0.032	0.120	Accepted
Model fit		R²		R² adjusted		Q²		
IB		30.1%		29%		0.101		
RC		24.4%		24%		0.140		
INS		28.1%		27%		0.208		
AC		21.2%		20.8%		0.160		

Note: TRL = transformational leadership; IB = innovative behavior; AC = affective commitment toward change; INS = intention to support change; RC = reactions to change. ** p < 0.01; *** p < 0.001.

All the results are visually represented in Figure 2, while the general mediation model is illustrated in Figure 3.

Table 5 presents the model fit indices, offering insights into the goodness of fit for the model. The coefficient of determination (R²) was computed to assess how well the model fits the sample, revealing that the model can account for 28.1% of

the variation in employees' intention to support change and 21.2% in employees' affective commitment toward change. Additionally, to evaluate the model's predictive power beyond the sample, the study utilized ten repetitions and ten folds of the PLS prediction method (Shmueli et al., 2019). By examining the Q² predict value for the intention to support change construct and noting its value surpassing zero, it can be concluded that the

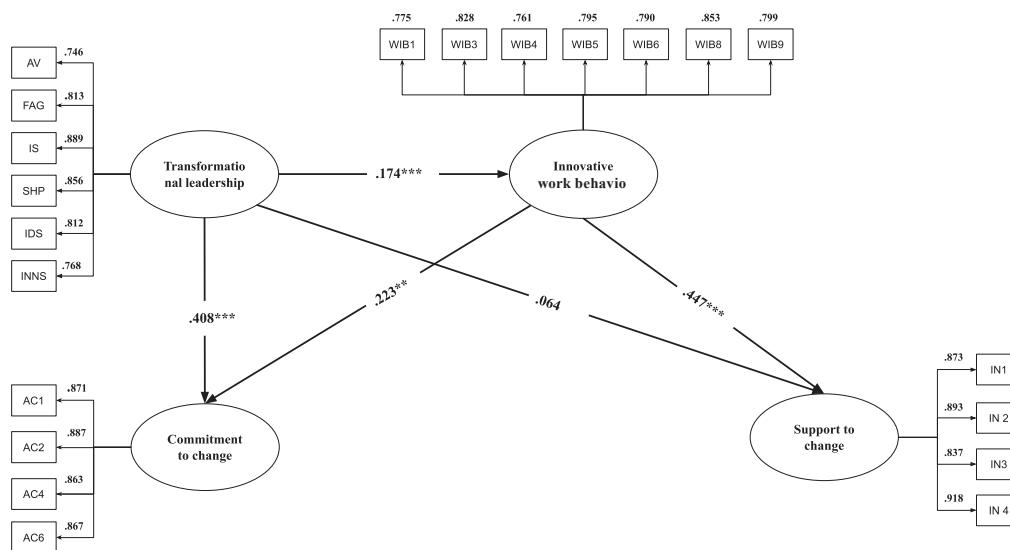


Figure 2. Model estimations

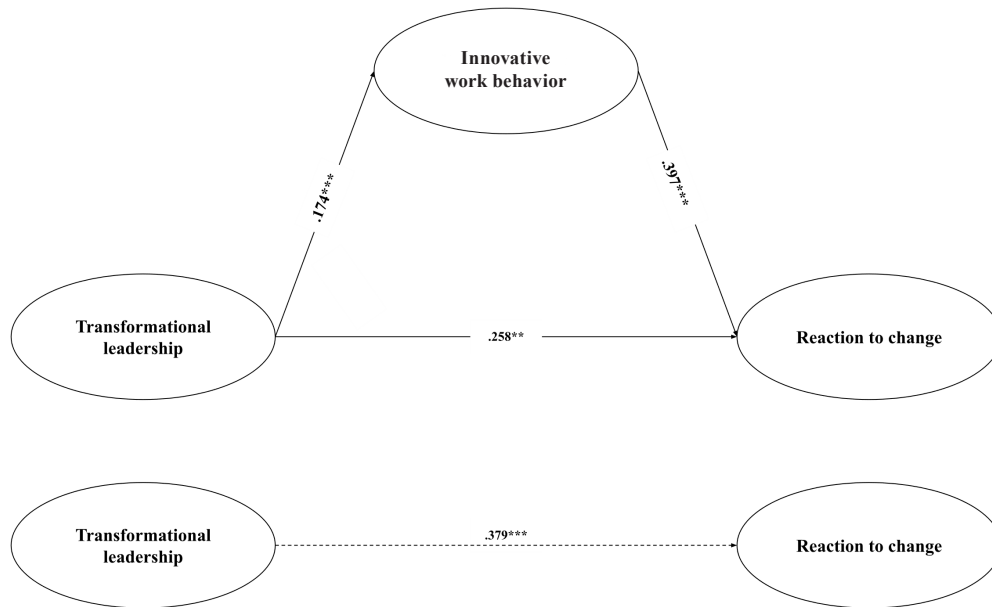


Figure 3. Direct relationships

model demonstrates predictive validity. This assessment is particularly relevant as innovative behavior and affective commitment to change were considered as the target constructs in the analysis.

The applied model exhibits satisfactory fit measures, as evidenced by a standardized root mean square residual (SRMR) value of 0.057 and a normed fit index (NFI) value of 0.849. In accordance with Hair et al. (2017), a good model fit is typically characterized by an SRMR value below 0.08 and an NFI value closer to one, indicating high predictive power of the model.

4. DISCUSSION

After careful analysis, transformational leadership has a considerable and direct positive impact on affective commitment toward change. This aligns with Gyensare et al. (2016), who asserted that transformational leadership enhances employees' emotional connection and engagement in organizational activities and decision-making. They authenticated that transformational leadership ensures reciprocity, trust, and continuous communication that facilitates sharing of values and knowledge, which results in increasing employees' affective commitment. This result validates that transformational leader, who can elevate their employees' dedication to change, are the ones adept at fostering a sense of

urgency, offering support, building alliances, and establishing emotional connections. They inspire and motivate their followers to pursue objectives greater than individual accomplishments.

The outcomes have also displayed that transformational leadership does not have a significant direct effect on employees' intention to support change. This conclusion contradicts Chou (2015) and Bandura (1977), who approved that transformational leadership could increase social interactions between employees and their supervisors and be able to develop the collaborators' extra efforts in changing situations and ensure the connection between them and their missions in the organization. Consequently, it ensures high levels of accomplishments and goals as well as employees' personal commitment by sharing information related to the company vision, goals, and mission. They further stated that transformational leaders can align their followers to accept organizational change in a positive way and enhance their supportive behavior. The conflicting outcome derived from this study could be clarified by acknowledging that while transformational leaders can stimulate employees to be more creative, they might also establish excessively high and stressful goals, leading to fatigue and diminished effort.

Leaders persuade workers to put the organization's interests above their own, but leaders can

also make them feel more controlled and reliant on the leader. However, the comprehensive investigation affirms the substantial positive impact of transformational leadership on employees' responses to change. This can be attributed to several factors inherent in transformational leadership. Firstly, transformational leaders excel in inspiring and motivating their team members by instilling a clear sense of purpose and vision. This cultivates a forward-thinking mindset among employees, fostering a favorable disposition toward organizational changes. Secondly, transformational leaders actively promote a culture of innovation and creativity within the organizational framework. By encouraging employees to think innovatively and embrace creative solutions, these leaders create an atmosphere where change is perceived as an opportunity for advancement rather than a disruptive force. This proactive approach significantly contributes to a positive and adaptive response to various change initiatives. Moreover, when leaders visibly endorse and embody the proposed changes, it generates a ripple effect throughout the organization, motivating employees to align with the evolving vision.

In addition, the results demonstrate that transformational leadership significantly enhances innovative behaviors. Choi et al. (2016), Hansen and Pihl-Thingvad (2019), and Rafique et al. (2022) affirm that transformational leadership can enhance employees' creativity and innovation (Berraies & Zine El Abidine, 2019). This can be achieved by fostering a reshaping of their norms and values, promoting their performance, increasing their efficacy and motivation toward goal accomplishment, bracing their intellectual thinking, skills, and problem-solving capabilities, promoting opportunities for new ideas generation and finally cultivating self-efficacy and autonomy. The results are grounded on the base that transformational leadership can significantly influence employees' innovative behavior by fostering trust and engagement, which foster taking creative risks. It also creates an environment that promotes continuous learning and personal development, stimulating innovative thinking and problem-solving. Moreover, by challenging employees to think critically and question the status quo, transformational leaders can inspire the generation of new ideas and innovative solutions.

Moreover, the study affirmed the substantial direct positive impact of innovative behavior on employees' emotional commitment and their willingness to endorse change. Battistelli et al. (2014) approved that organizational changes are very risky and challenging, which could lead to employees' frustration, anxiety, and stress. However, if in this situation, the organization boots different innovation opportunities to engage their employees, they will automatically see all employees' concerns about the change, and this would help them to adapt their behaviors and increase their affective commitment. On top of that, the results corroborate Alshebami (2021), who emphasized that during periods of change, the innovative actions of employees not only greatly contribute to the growth, evolution, and sustainability of the organization, but also significantly boost their self-assurance, positivity, and resilience. This, in turn, encourages a high level of confidence among employees when they engage in demanding tasks, subsequently influencing their propensity to back up future changes. Accordingly, employees' support for change is highly dependent on their ability to adopt innovative behaviors thanks to their supervisor's positive support, who clearly share the necessity of innovation, the future state of the organization, and the vision of imposing loyalty, trust, and respect with members. This means that innovative behavior favored by the superiors' positive support when adopting communication, flexibility, trust, education, and training highly influences employees' change support.

Finally, the findings also validate the mediation hypothesis: innovative behavior when linking transformational leadership and employees' reactions toward change does not affect the nature of their relationship, which was proved to be direct, positive, and significant. This result could be interpreted by the fact that innovative behavior is a booster of employees' positive reactions toward change when transformational leaders encourage employees' creativity, participation in sharing innovative ideas, and adopting innovative behavior.

While the study has made substantial contributions, it also recognizes its own limitations and challenges. The decision to investigate a causal relationship between variables using a statistical method brought about a risk of bias, which was

challenging to eliminate, particularly when trying to estimate collinearity and validate the relationships between variables derived from the literature review. To address this issue, longitudinal research should be utilized to verify the relationships between the variables and validate the findings. Another limitation was the context of the study, as it only concentrated on service-providing companies in Hungary, restricting the paper's generalizability. Future research could employ a probabilistic method and examine the variables in a more generalized way across various contexts, fields, and countries. Future studies could include

additional mediating and moderating variables to enhance the relationship between transformational leadership and employees' responses to change. For example, effective communication is a vital aspect of transformational leadership. Leaders adept at explaining the reasons behind changes and ensuring that employees clearly understand that the changes can reduce uncertainty and resistance. Emotional support is another potential variable worth investigating, as providing emotional support and encouragement during times of change can help employees navigate challenges and commit to change.

CONCLUSION

The objective of the study is to examine the influence of transformational leadership on employees' responses to change, specifically focusing on affective commitment and employees' intentions to support change as dimensions of their reaction to change. Additionally, the study aims to assess the effect of innovative behavior on employees' reactions to change and investigate the role of innovative behavior as a mediator in this relationship.

The findings affirm the significant impact of transformational leadership on employees' reactions to change and their propensity for innovative behaviors. While transformational leadership fosters positive affective commitment toward change, it paradoxically leads to a decrease in intentions to support it. Moreover, the study emphasizes on the mediating role of employees' innovative behaviors in the complex relationship between transformational leadership and reactions to change.

The study underscores the critical role of transformational leadership in guiding teams through periods of change. These leaders excel in instilling organizational values, fostering acceptance of change, and nurturing innovation. By inspiring a sense of purpose and encouraging creativity, they empower employees to contribute meaningfully to organizational success. This, in turn, enhances commitment and support for change, ultimately facilitating organizational evolution and success amidst dynamic environments.

AUTHOR CONTRIBUTIONS

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REFERENCES

1. Adel, H., & Younis, R. (2023). Interplay among blockchain technology adoption strategy, e-supply chain management diffusion, entrepreneurial orientation, and human resources information system in banking. *International Journal of Emerging Markets*, 18(10), 3588-3615. <https://doi.org/10.1108/IJOEM-02-2021-0165>
2. Alshebami, A. S. (2021). The influence of psychological capital on employees' innovative behavior: Mediating role of employees' innovative intention and employees' job satisfaction. *Sage Open*, 11(3). <https://doi.org/10.1177/21582440211040809>
3. Amankwaa, A., Susomrith, P., & Seet, P.S. (2022). Innovative behavior among service workers and the importance of leadership: Evidence from an emerging economy. *The Journal of Technology Transfer*, 47, 506-530. <https://doi.org/10.1007/s10961-021-09853-6>
4. Bakari, H., Hunjra, A.I., Jaros, S., & Khoso, I. (2019). Moderating role of cynicism about organizational change between authentic leadership and commitment to change in Pakistani public sector hospitals. *Leadership in Health Services*, 32(3), 387-404. <https://doi.org/10.1108/LHS-01-2018-0006>
5. Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. <https://doi.org/10.1037/0033-295X.84.2.191>
6. Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 61(8), 1139-1160. <https://doi.org/10.1177/0018726708094863>
7. Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press.
8. Battistelli, A., Montani, F., Odoardi, C., Vandenbergh, C., & Picci, P. (2014). Employees' concerns about change and commitment to change among Italian organizations: The moderating role of innovative work behavior. *The International Journal of Human Resource Management*, 25(7), 951-978. <https://doi.org/10.1080/09585192.2013.809012>
9. Beer, M., & Nohria, N. (2000). *Breaking the code of change*. Boston: Harvard Business School Press.
10. Berraies, S., & Zine El Abidine, S. (2019). Do leadership styles promote ambidextrous innovation? Case of knowledge-intensive firms. *Journal of Knowledge Management*, 23(5), 836-859. <https://doi.org/10.1108/JKM-09-2018-0566>
11. Blau, P. M. (1964). Justice in social exchange. *Sociological Inquiry*, 34(2), 193-206. <https://doi.org/10.1111/j.1475-682X.1964.tb00583.x>
12. Burns, J. M. G. (1978). *Leadership*. New York: Harper & Row.
13. Choi, S. L., Goh, C. F. Adam, M. B. H., & Tan, O. K. (2016). Transformational leadership, empowerment, and job satisfaction: The mediating role of employee empowerment. *Human Resources for Health*, 14, 73. <https://doi.org/10.1186/s12960-016-0171-2>
14. Chou, C. C. (2015). Two-dimensional reactive scattering with transmitted quantum trajectories. *International Journal of Quantum Chemistry*, 115(7), 419-425. <https://doi.org/10.1002/qua.24828>
15. Chughtai, A. A. (2013). Linking affective commitment to supervisor to work outcomes. *Journal of Managerial Psychology*, 28(6), 606-627. <https://doi.org/10.1108/JMP-09-2011-0050>
16. Cozzarin, B. P. (2017). Impact of organizational innovation on product and process innovation. *Economics of Innovation and New Technology*, 26(5), 405-417. <https://doi.org/10.1080/10438599.2016.1204779>
17. Dackert, I., Lööv, L. Å., & Mårtensson, M. (2004). Leadership and climate for innovation in teams. *Economic and Industrial Democracy*, 25(2), 301-318. <https://doi.org/10.1177/0143831X04042488>
18. De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, 19(1), 23-36. <https://doi.org/10.1111/j.1467-8691.2010.00547.x>
19. Du, J., Li, N. N., & Luo, Y. J. (2020). Authoritarian leadership in organizational change and employees' active reactions: Have-to and willing-to perspectives. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.03076>
20. Fedor, D. B., Caldwell, S., & Herold, D. M. (2006). The effects of organizational changes on employee commitment: A multilevel investigation. *Personnel Psychology*, 59(1), 1-29. <https://doi.org/10.1111/j.1744-6570.2006.00852.x>
21. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.2307/3151312>
22. Gilley, A., Dixon, P., & Gilley, J. W. (2008). Characteristics of leadership effectiveness: Implementing change and driving innovation in organizations. *Human Resource Development Quarterly*, 19(2), 153-169. <http://dx.doi.org/10.1002/hrdq.1232>
23. Gyensare, M. A., Anku-Tsede, O., Sanda, M. A., & Okpoti, C. A. (2016). Transformational leadership and employee turnover intention. *World Journal of Entrepreneurship, Management and Sustainable Development*, 12(3), 243-266. <https://doi.org/10.1108/WJEMSD-02-2016-0008>
24. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
25. Hair, J., Sarstedt, M., Ringle, C., & Gudergan, S. (2017). *Advanced issues in partial least squares struc-*

- tural equation modeling*. Thousand Oaks, CA: Sage.
26. Hamza, K. A., Alshaabani, A., Salameh, N., & Rudnak, I. (2022). Impact of transformational leadership on employees' reactions to change and mediating role of organizational trust: Evidence from service companies in Hungary. *Problems and Perspectives in Management*, 20(2), 522-535. [http://dx.doi.org/10.21511/ppm.20\(2\).2022.43](http://dx.doi.org/10.21511/ppm.20(2).2022.43)
 27. Hansen, J. A., & Pihl-Thingvad, S. (2019). Managing employee innovative behaviour through transformational and transactional leadership styles. *Public Management Review*, 21(6), 918-944. <https://doi.org/10.1080/14719037.2018.1544272>
 28. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
 29. Herscovitch, L., & Meyer, J. P. (2002). Commitment to organizational change: Extension of a three-component model. *Journal of Applied Psychology*, 87(3), 474-487. <https://doi.org/10.1037/0021-9010.87.3.474>
 30. Hogg, M. A. (2001). A social identity theory of leadership. *Personality and Social Psychology Review*, 5(3), 184-200. https://doi.org/10.1207/S15327957PSPR0503_1
 31. Janssen, O. (2000). Job demands, perceptions of effort, reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, 73(3), 287-302. <https://doi.org/10.1348/096317900167038>
 32. Jung, D. I. (2001). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal*, 13(2), 185-195. https://doi.org/10.1207/S15326934CRJ1302_6
 33. Jung, D. I., & Avolio, B. J. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of Organizational Behavior*, 21(8), 949-964. [https://doi.org/10.1002/1099-1379\(200012\)21:8<949::AID-JOB64>3.0.CO;2-F](https://doi.org/10.1002/1099-1379(200012)21:8<949::AID-JOB64>3.0.CO;2-F)
 34. Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology*, 88(2), 246-255. <http://dx.doi.org/10.1037/0021-9010.88.2.246>
 35. Kodama, M., & Ito, M. (2005). Sense of authenticity, self-esteem, and subjective and psychological well-being. *Japanese Journal of Educational Psychology*, 53(1), 74-85. https://doi.org/10.5926/jjep1953.53.1_74
 36. Kraft, P. S., & Bausch, A. (2016). How do transformational leaders promote exploratory and exploitative innovation? Examining the black box through MASEM. *Journal of Product Innovation Management*, 33(6), 687-707. <https://doi.org/10.1111/jpim.12335>
 37. Lee, M. D. P. (2008). A review of the theories of corporate social responsibility: Its evolutionary path and the road ahead. *International Journal of Management Reviews*, 10(1), 53-73. <https://doi.org/10.1111/j.1468-2370.2007.00226.x>
 38. Leroy, H., Palanski, M. E., & Simons, T. (2012). Authentic leadership and behavioral integrity as drivers of follower commitment and performance. *Journal of Business Ethics*, 107(3), 255-264. <https://doi.org/10.1007/s10551-011-1036-1>
 39. Levay, C. (2010). Charismatic leadership in resistance to change. *The Leadership Quarterly*, 21(1), 127-143. <https://doi.org/10.1016/j.leaqua.2009.10.010>
 40. Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting & task performance*. Prentice-Hall, Inc.
 41. Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60(3), 541-572. <https://doi.org/10.1111/j.1744-6570.2007.00083.x>
 42. Mangundjaya, W. L., & Amir, M. T. (2021). Testing resilience and work ethics as mediators between charismatic leadership and affective commitment to change. *Journal of Asian Finance, Economics and Business*, 8(2), 401-410. <https://doi.org/10.13106/jafeb.2021.vol8.no2.0401>
 43. Marciniak, R., & Ránki, R. (2020). *Business services sector Hungary*. Hungarian Service and Outsourcing Association. Retrieved from https://www.researchgate.net/profile/Robert-Marciniak-2/publication/349605730_Business_Services_Sector_Hungary_-_GBS_Report_Hungary_2020/links/6037d679299bf1cc26ef97dc/Business-Services-Sector-Hungary-GBS-Report-Hungary-2020.pdf
 44. Növekedés.hu. (2021, March 16). *Thousands of Hungarian companies may go out of business because owner retires*. Retrieved from <https://novekedes.hu/english/thousands-of-hungarian-companies-may-go-out-of-business-because-owner-retires>
 45. Omri, W. (2015). Innovative behavior and venture performance of SMEs: The moderating effect of environmental dynamism. *European Journal of Innovation Management*, 18(2), 195-217. <https://doi.org/10.1108/EJIM-02-2013-0015>
 46. Onyeneke, G. B., & Abe, T. (2021). The effect of change leadership on employee attitudinal support for planned organizational change. *Journal of Organizational Change Management*, 34(2), 403-415. <https://doi.org/10.1108/JOCM-08-2020-0244>
 47. Oreg, S., Vakola, M., & Armenakis, A. (2011). Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *The Journal of Applied Behavioral Science*, 47(4), 461-524. <https://doi.org/10.1177/0021886310396550>

48. Peng, J., Li, M., Wang, Z., & Lin, Y. (2021). Transformational leadership and employees' reactions to organizational change: Evidence from a meta-analysis. *The Journal of Applied Behavioral Science*, 57(3), 369-397. <https://doi.org/10.1177/0021886320920366>
49. Pieterse, A. N., van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior*, 31(4), 609-623. <https://doi.org/10.1002/job.650>
50. Podsakoff, P. M., Mackenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly*, 1(2), 107-142. [https://doi.org/10.1016/1048-9843\(90\)90009-7](https://doi.org/10.1016/1048-9843(90)90009-7)
51. Quattrone, P., & Hopper, T. (2001). What does organizational change mean? Speculations on a taken for granted category. *Management Accounting Research*, 12(4), 403-435. <https://doi.org/10.1006/mare.2001.0176>
52. Rafique, N., Alkaltham, G. K. I., Almulhim, L. A. A., Al-Asoom, L. I., AlSunni, A. A., Latif, R., AlSheikh, M. H., Yar, T., Al Ghamdi, K. S., Alabdulhadi, A. S., Saudagar, F. N., & Wasi, S. (2022). Association between time spent on electronic devices and body mass index in young adults. *Journal of Multidisciplinary Healthcare*, 15, 2169-2176. <https://doi.org/10.2147/JMDH.S376689>
53. Ribeiro, N., Yücel, İ., & Gomes, D. (2018). How transformational leadership predicts employees' affective commitment and performance. *International Journal of Productivity and Performance Management*, 67(9), 1901-1917. <https://doi.org/10.1108/IJPPM-09-2017-0229>
54. Ringle, C. M., & Sarstedt, M. (2016). Gain more insight from your PLS-SEM results: The importance-performance map analysis. *Industrial Management & Data Systems*, 116(9), 1865-1886. <https://doi.org/10.1108/IMDS-10-2015-0449>
55. Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2020). Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management*, 31(12), 1617-1643. <https://doi.org/10.1080/09585192.2017.1416655>
56. Saleem, A., & Naveed, S. (2017). Leadership and employee's reaction towards change: Role of leaders' personal attributes and transformational leadership. *Pakistan Administrative Review*, 1(1), 61-83. Retrieved from <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-51871-3>
57. Schwepker, C. H., & Good, D. J. (2013). Improving salespeople's trust in the organization, moral judgment and performance through transformational leadership. *Journal of Business & Industrial Marketing*, 28(7), 535-546. <https://doi.org/10.1108/JBIM-06-2011-0077>
58. Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14. <https://doi.org/10.1037/0003-066X.55.1.5>
59. Shih, H., & Susanto, E. (2010). Conflict management styles, emotional intelligence, and job performance in public organizations. *International Journal of Conflict Management*, 21(2), 147-168. <https://doi.org/10.1108/10444061011037387>
60. Shin, J., Seo, M.-G., Shapiro, D. L., & Taylor, M. S. (2015). Maintaining employees' commitment to organizational change: The role of leaders' informational justice and transformational leadership. *The Journal of Applied Behavioral Science*, 51(4), 501-528. <https://doi.org/10.1177/0021886315603123>
61. Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*, 53(11), 2322-2347. <https://doi.org/10.1108/EJM-02-2019-0189>
62. Son, T. T., Phong, L. B., & Loan, B. T. T. (2020). Transformational leadership and knowledge sharing: Determinants of firm's operational and financial performance. *Sage Open*, 10(2). <https://doi.org/10.1177/2158244020927426>
63. Thompson, M., & Heron, P. (2006). Relational quality and innovative performance in R&D based science and technology firms. *Human Resource Management Journal*, 16(1), 28-47. <https://doi.org/10.1111/j.1748-8583.2006.00003.x>
64. Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business*, 122, 889-901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
65. Wang, A., & Kebede, S. (2020). Assessing employees' reactions to organizational change. *Journal of Human Resource and Sustainability Studies*, 8(3), 274-293. <https://doi.org/10.4236/jhrss.2020.83016>