

THE EFFECT OF ORGANIZATIONAL CULTURE, TEAMWORK AND ORGANIZATIONAL DEVELOPMENT ON ORGANIZATIONAL COMMITMENT: THE MEDIATING ROLE OF HUMAN CAPITAL

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Original scientific paper

The aim of this work is providing a model for determining impact of organizational culture, teamwork and organizational development on organizational commitment with emphasis on the mediating role of human capital. The 266 employees of SAFA Industrial Group were selected using random sampling and they responded research tools. Path analysis test was used for analysis of research data. Findings show that organizational culture, teamwork, and organizational development have direct and significant impact on human capital. In addition, human capital has a positive effect on organizational commitment. Organizational culture, teamwork and organizational development have direct and significant effect on organizational commitment. Finally findings show that human capital has mediating role between organizational culture, teamwork, organizational development and organizational commitment.

Keywords: human capital, organizational commitment, organizational culture, organizational development, teamwork

Utjecaj organizacijske kulture, timskog rada i razvoja organizacije na predani rad u organizaciji: posrednička uloga ljudskog kapitala

Izvorni znanstveni članak

Cilj je ovoga rada napraviti model za određivanje utjecaja organizacijske kulture, timskog rada i razvoja organizacije na predani rad u organizaciji s naglaskom na posredničku ulogu ljudskog kapitala (ljudstva, zaposlenika). Slučajnim je izborom odabrano 266 zaposlenih u Industrijskoj grupi SAFA i oni su odgovorili na pitanja postavljena u istraživanju. Analiza dobivenih podataka je izvršena testom analize načina ponašanja. Rezultati pokazuju da kultura organizacije, timski rad i razvoj organizacije imaju direktan i značajan utjecaj na ljudski kapital. Uz to, ljudski kapital pozitivno djeluje na predanost radu. Organizacijska kultura, timski rad i razvoj organizacije od direktnog su i značajnog utjecaja na predanost u radu. Konačno, rezultati pokazuju da ljudski kapital ima ulogu posrednika između organizacijske kulture, timskog rada, organizacijskog razvoja i predanosti u radu.

Ključne riječi: ljudski kapital, organizacijska kultura, organizacijski razvoj, predanost organizaciji, timski rad

1 Introduction

One of the superiority features of an organization over other organizations is having loyal and committed human forces. Commitment causes increased profitability and reduced service abandonment and leads to increased efficiency and improvement and increased service quality by influencing personnel performance [1]. Research works show that commitment influences staff performance, organizational outputs including service abandonment, sales, corporate profitability and employee absenteeism [2]. Organizational commitment refers to the employees emotional attachment which is comparable with other work related states and attitudes such as job satisfaction (feeling of employees toward the work) and organizational identity (Sense of unity and solidarity that employees have toward the organization). Organizational commitment is considered as mental and emotional dependence to the organization, based on which a highly committed person specifies his identity by the organization, participates in the organization and is involved in it and enjoys membership in organization [3]. Allen and Meyer [4] in their work on commitment provided a new classification which is more comprehensive compared to old organizational commitment dimensions.

1.1 Emotional commitment

Emotional commitment means employee's emotional attachment to the organization. This type of attachment is

emotional attachment, based on which a highly committed person specifies his identity by the organization, participates in the organization and is involved in it and enjoys membership in organization [3].

1.2 Continuous commitment

Continuous commitment refers to individual's commitment based on his perception of the costs related to organization abandonment. According to this definition, people remain in the organization not because they feel moral force, or because they have emotional attachment, but because if they leave the organization, they may lose some occupational advantages such as status and occupational position.

1.3 Normative commitment

Normative commitment means staying in the organization because of moral force. In other words, people stay in the organization because they have a sense of duty that they should not leave the organization. People experiences before (such as the cultural and familial socialization) and after (organizational socialization) entering the organization are its effective factors [4].

Without organizational, even the most complex and innovative plans of the senior executives would not be useful. Evidence shows that if the organization provides improvement, suitable career path, fair pay, fairness in the distribution of rewards, autonomy at work, professional identity and suitable image for the job and the

organization in the society, employees will show high commitment [5]. On the other hand, lack of research works investigating effect of organizational culture, teamwork, and organization development on organizational commitment is felt. In addition, mediating role of human capital between organizational culture, teamwork and organizational development and commitment has also been understudied [6]. Thus the aim of this work is investigating the impact of organizational culture, teamwork, and organizational development variables on employee commitment.

2. Research background

In the next sections, research background will be discussed.

2.1 Organizational commitment and organizational culture

Koontz defined organizational culture as general pattern behaviours, beliefs, collected and shared perception of values which are considered common in most of organization members [7]. Robbins [8] in his book entitled "Management" defined organizational culture as follows: organizational culture specifies the way of running affairs in the organization for the employees, it is a shared perception of the organization which is observed in all organizational members and reflects common and permanent characteristics that distinguish the organization from other organizations. In other words, organizational culture specifies social identity in each organization [8]. Reviewing definitions for organizational culture over two past decades by management experts and authors, gives the following common points:

1. Dominant behaviour pattern
2. Systemic or systematic nature
3. A set of values and beliefs and views
4. Joint and advocacy of these norms and values by organization members
5. Organizational culture distinguishes organizations [9].

Findings show that organizational culture provides job security for all employees and gives life-long or long term employment, and job security leads to promotion of organizational commitment in employees [10]. Studies show that the culture has positive effect on development of goals, strategy, individual behaviour, organizational performance, motivation and job satisfaction, innovation, decision making and organizational commitment of the employees [11, 12].

2.2. Teamwork and organizational commitment

Team is in fact a working group which has all conditions for a real team and its members are totally committed to each other's promotion and success. This commitment often leads to team development. A team with high executive power specifically performs all actions better than other teams and meets all logical expectations of the members. Teamwork is a mental and emotional preoccupation in individuals in group situations

which motivate them to help each other for achieving group goals and to participate in the work responsibility. Teamwork is a tool for increasing working creativity, which implicitly leads to consolidation of job satisfaction. Focus and attention to effectiveness and efficiency of working teams requires teamwork spirit [13, 14] so that members or elements of working teams are able to do team work and team activity. The way of interaction and activity of members is important and crucial in success or failure of the teams, thus teamwork culture should be institutionalized in the organization prior to formation and establishment of working teams. Considerable impact of team work culture and group work is such that management scientists regard it as a prerequisite for achieving stable key capabilities in competitive environment of today's world [15]. Working team institutionalization is achievable through promotion of team work culture. This would be realized by training and enhancing principles of team work. Thus having these principles and criteria and explaining and implementing them for institutionalization in the minds of employees, workers and executives of the organizations is the main way for achieving efficient and effective working team. Findings indicate that in organizations where team work conditions are provided, their employees have more commitment to their organizations [15]. In addition, findings in this work show that there is positive correlation between teamwork and organizational commitment of the employees [16].

2.3 Organizational development, human capital and organizational commitment

Organizational development refers to systemic application of behavioural science knowledge for planned development and promotion and emphasis on strategies, structures, and organizational processes in order to improve organization effectiveness. Organizational development strategy is related to planning and implementing plans which is designed for "increased effectiveness of organizational performance" [17]. This strategy includes strategies for designing organizational processes and organizational development plans for changing organizational shape and management of transition from current status to optimal one. Organizational development is recognized as a specific and comprehensive method for planned organizational change. Organizational development means application knowledge related to behavioural sciences in a wide-range and systematic attempt for improving organizational effectiveness. Common pattern of organizational development is divided into three levels: individual, group and organizational [18]. First, they are patterns designed for improving individual effectiveness. Second, they are patterns designed for improving group effectiveness. Human capital includes knowledge, creativity, experiences, and professional and occupational skills of the employees and individuals of the organization [18] and it refers to the value added created by the employees in the process of turning knowledge and experience to service and goods for the organization. Human capital is regarded as the basis of intellectual capital and basic element in implementing its tasks. This

type of capital is the ability and capacity of human forces for solving organizational problems. Human capital is essential part of the employees and it cannot be owned by the organization, thus it is lost when the employees leave the organization [19]. Human capital results from collection of professional knowledge of employees, leadership ability, risk-taking and problem-solving abilities. Human capital also reflects implicit knowledge of the individuals which is embedded in their mind. Human capital is an important resource of innovation and reconstruction of the strategy in each organization, and the organization can produce and identify the value based on the knowledge in the economy using this capital. Puhakainen and Siponen [19] maintain that employees create human capital through their competence, attitude and intellectual agility. Competence includes individual's skills and education, while attitude includes behavioural element. Intellectual agility enables one to change the thought about innovative solutions for problems. Jones et al. [20] believe that human capital as intellectual capital refers to such factors as knowledge, skill, capability and perception of the employees resulting in performance improvement so that customers tend to pay for it. In addition, it causes profitability for the organization. Knowledge and skill are embedded in the mind of employees; it means that their mind is the result of knowledge and skill. If intellectual employees are not utilized by the organization, the knowledge and skill in their mind may not be activated or may not be turned into market value. Findings show that promotion and improvement of skills, values, organizational structures and processes improve organizational commitment in employees [21]. On the other hand, findings suggest that human capital in organizations and institutions has

positive relationship with the commitment to organization [19].

3 Conceptual model

After reviewing theoretical and research works, a conceptual model was developed (Fig. 1). The literature indicated that committed human forces are one of the superiority features of an organization over other organizations. In this study, we expand this literature by recognizing some of the mechanisms that increase organizational commitment. Specifically, organizational culture is one of important variables that effect organizational commitment [10]. In organizations in which team work conditions are provided, their employees have more commitment [15]. In addition, organizational development is identified as a pervasive method for planned organizational variation. Therefore, we investigate the relationship between organizational development and organizational commitment. As is well shown in the literature of organizational commitment, human capital includes knowledge, creativity, experiences, and professional and occupational skills of the employees and individuals of the organization possessed are positively related to the organizational commitment [19, 21]. Thus, we examine the relationship between human capital and organizational commitment to recognize the conditions vital for managers to increase employee commitment in the organizations. Human capital results from structure organization and collection of professional knowledge of employees, leadership ability and problem-solving abilities. Thus, in this study human capital mediated the relationship between organizational culture, team work and organizational development with organizational commitment.

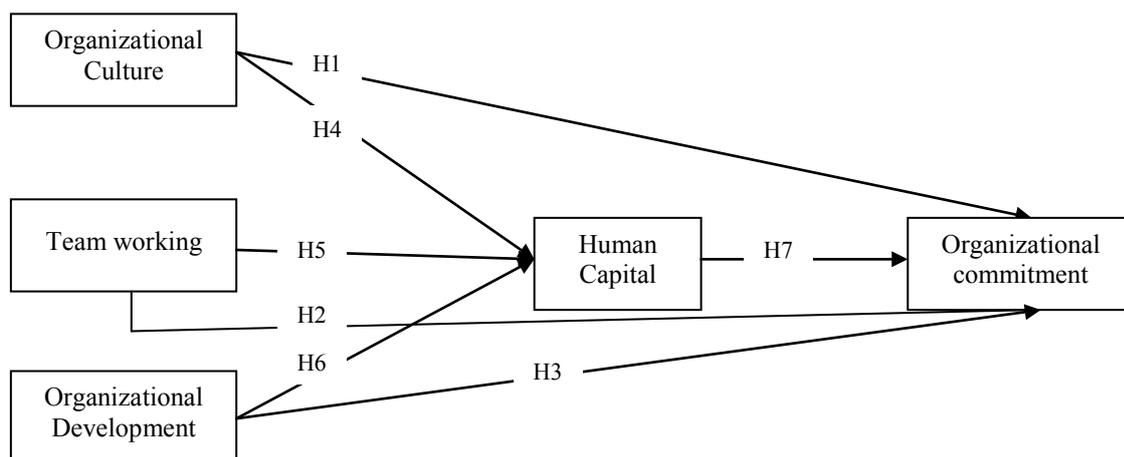


Figure 1 Research conceptual model

4 Research hypotheses

H1: According to results [10, 11, and 12] we hypothesize organizational culture positively influences organizational commitment.

H2: According to results [15 and 16] we hypothesize team working positively influences organizational commitment.

H3: According to perspective [17 and 18] we hypothesize organizational development positively influences organizational commitment.

H4: According to results [19 and 21] we hypothesize human capital mediated relationship between organizational culture, team work and organizational development with organizational commitment.

H7: According to results [19 and 21] we hypothesize human capital positively influences organizational commitment.

5 Research methodology

5.1 Population and sample

The population consisted of all employees of SAFA Industrial Group. 266 employees of SAFA Industrial Group were selected using random sampling and they responded research tools. Findings show that 64,3 % of the respondents were workers, 28,2 % were supervisors, 3,4 % were middle managers, and 1,1 % was top level managers (Tab. 1 and Fig. 2).

Table 1 Frequency distribution of respondents in terms of organizational class variable

Respondents	Frequency	Percent / %
Worker	171	64,3
Supervisor	75	28,2
Middle Manager	9	3,4
Top Level Manager	3	1,1
Others	8	3

5.2 Research tools

Questionnaire was used for data collection. Generally according to research conceptual model, questionnaires of organizational culture, teamwork, organizational development, human capital and organizational commitment were used. Confirmatory factor analysis was used to determine the validity of these tools and for determining the reliability; Cronbach's alpha test was used. The findings show that the validity and reliability of these tools are approved and have adequate reliability and validity.

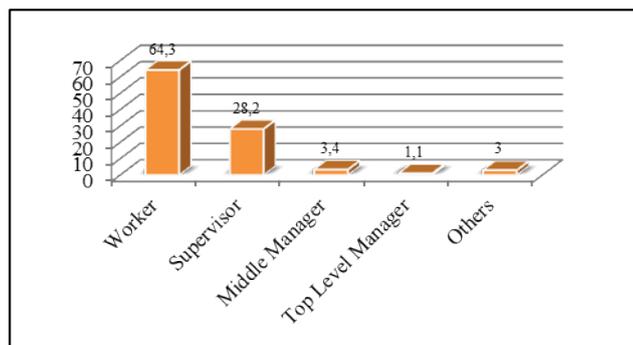


Figure 2 Respondents' demographics

5.3 Analysis method

Structural equation modelling (SEM) is used for investigating direct and indirect relationship between organizational culture, team work organizational development and human capital with organizational commitment. SEM is a causal modelling approach that combines cause-effect information with statistical data to provide a quantitative assessment of relationships among the studied variables. The abilities of SEM to study direct and indirect relationships between variables and to analyze relationships between latent variables without random error differentiate SEM from other simpler, relational modelling processes [25].

Confirmatory factor analysis (CFA) was performed to confirm validity of constructs included organizational commitment, organizational culture, team work, organizational development and human capital using the LISREL 8.5 statistical program. Confirmatory factor analysis includes the examination of a measurement model where many of the factors and the corresponding indicators are itemized a priori to uphold the structure of the measure [22]. Standardized coefficients in measurement models defined as factor loadings (λ_s) were examined to identify the ratio of variance in each indicator (item) that explained the construct [23]. The validity of each indicator was estimated acceptable when $\lambda_s \geq 0,50$ [24]. The goodness of fit indices was used to confirm the fitness of the measurement and path analysis models. We used most common indices to evaluate the confirmatory factor analysis models and path analysis model includes: χ^2/df , the Bentler comparative fit index (CFI), the root mean square error of approximation (RMSEA), the root mean square residual (RMR), the goodness of fit index (GFI), the adjusted goodness of fit index (AGFI) and the non-normative fit index (NNFI) [22]. According to Kline [22], χ^2/df statistic, with scores <5 , RMSEA $\leq 0,08$, the CFI, GFI, AGFI, CFI and NNFI with scores $\geq 0,90$, and RMR with scores $<0,1$ indicates good fit of the model to the data [22].

6 Results

Descriptive statistics including mean and standard deviation of variables and their correlation coefficients is presented in Tab. 2. As can be seen in Table 2, correlation coefficients between organizational culture ($r=0,83$), team work ($r=0,75$), organizational development ($r=0,73$) and human capital ($r=0,77$) with organizational commitment is significant ($P<0,01$) and positive. Moreover, results showed that organizational culture, team work and organizational development positively correlated with human capital. There are relatively high and positive correlations between the organizational variables. The highest correlations were between organizational culture and human capital ($r=0,83$; $P<0,01$) and organizational development and human capital ($r=0,81$; $P<0,01$), and the lowest was between teamwork and organizational culture ($r=0,068$; $P<0,01$). Correlation coefficients between other variables were higher than 0,7.

Table 2 Descriptive statistics and inter correlations of the research variables

	Parameter	M	SD	1	2	3	4
1	Organizational commitment	20,5	5,9	1			
2	Human capital	32,2	108	0,77**	1		
3	Organizational culture	17,9	6,6	0,76**	0,83**	1	
4	Teamwork	12,6	4,1	0,75**	0,75**	0,68**	1
5	Organizational development	24,9	7,9	0,73**	0,82**	0,73**	0,70**

** $P<0,01$

For clearer understanding of the relationship between the variables, and examining the mediating role of human resources in the relation with organizational culture, teamwork, and organizational development variables, a path analysis was run with organizational commitment. This model examined the direct and indirect relationships

between the independent variables and organizational commitment. Path diagram and standardized coefficients, together with primary goodness of fit indices are shown in Fig. 3. This figure shows tested model with standardized values on the paths. Findings indicate that respective path coefficients are significant and have positive impact on each other. Related hypotheses are examined in the following.

As can be seen in Fig. 3, the direct paths of organizational culture, teamwork, and organizational development to organizational commitment are statistically significant. In other words, in this model, these variables have direct influence on organizational commitment, and this influence takes place indirectly through human resources. Therefore, it may be concluded that independent variables increase the organizational commitment by affecting and increasing the level of human resources.

The first hypothesis indicated that organizational culture positively influences organizational commitment.

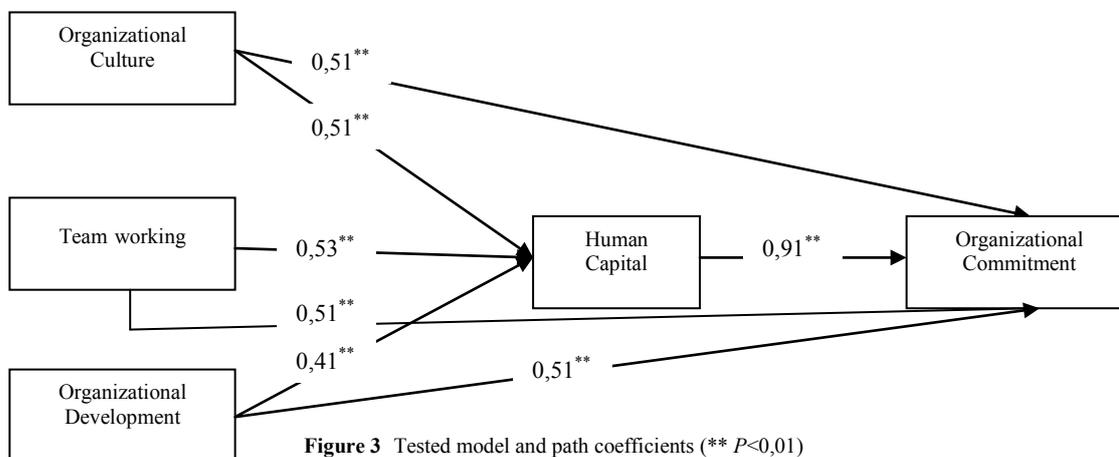


Figure 3 Tested model and path coefficients (** P<0,01)

Findings show that organizational culture with 0,51 influence coefficient has a positive significant impact on human capital. Hypothesis 5 suggested that team working positively influences human capital. Findings in Tab. 3 showed that coefficient of team working on human capital is $\beta = 0,53$ which is significant and positive at $p < 0,01$. Thus hypothesis 5 is supported. Another finding showed that organizational development positively influences human capital and Human capital positively influences organizational commitment. Thus hypotheses 6 and 7 are supported. In addition, in order to better fit the model the reciprocal path between the organizational commitment and human resources was estimated that indicates the organizational commitment increases with increasing human resources. The goodness- of- fit indices show that the model fits the data well. The chi-square value of 1,1 with degree of freedom of 1 is not statistically significant. The RMSEA value of 0,02 is less than the acceptable criteria (<2,0). Other fit indices such as Goodness of Fit Index (GFI), Comparative Fit Index (CFI), and Normed Fit Index (NFI) were also significant and equalled 0,99.

The determinant coefficient was also found $R^2=0,69$, which indicates that almost 70 % of organizational commitment variance can be explained through this model. The value of this coefficient was also found for human capital at $R^2=0,85$. In other word 70 % of

Findings in Tab. 3 showed that coefficient of organizational culture on organizational commitment is $\beta = 0,51$ which is significant and positive at $p < 0,01$. Thus hypothesis 1 is supported. Second hypothesis revealed that Team working positively influences organizational commitment. Findings show that Team working with 0,51 influence coefficient has positive significant impact on organizational commitment. Therefore, hypothesis 2 is also supported. Third hypothesis suggested that Organizational development positively influences organizational commitment. Findings in Tab. 3 showed that coefficient of organizational development on organizational commitment is $\beta = 0,51$ which is significant and positive at $p < 0,01$. Thus hypothesis 3 is supported.

Fourth hypothesis revealed that organizational culture positively influences human capital.

organizational commitment variance and 85 % of capital human variance was explained by model variables.

Table 3 Coefficients of direct, indirect and total effect

Paths	Direct effect	Indirect effect	Total effect
To organizational commitment from			
Human capital	0,91**	-	0,91**
Organizational culture	0,51**	0,46**	0,97**
Teamwork	0,51**	0,48**	0,99**
Organizational development	0,51**	0,37**	0,88**
To human capital from			
Organizational culture	0,51**	-	0,51**
Teamwork	0,51**	-	0,51**
Organizational development	0,41**	-	0,41**

** P < 0,01

7 Conclusion

A major contribution of the study was the empirical examination of the conceptual model shown in Fig. 2. Following reviewed theoretical and research works, the following conceptual model was developed. In this model, organizational culture, teamwork and organizational development were regarded as independent variables and human capital has a mediating role. Organizational commitment was also regarded as a

dependent variable. Findings show that organizational culture has a significant impact on human capital. In other words, cultural values and beliefs in organizations can improve organizational commitment. This finding indicated that organizational culture is an important factor in developing or changing values, attitudes, and creating appropriate behavioural patterns as well as organizational commitment of employees.

In addition, teamwork had direct and significant impact on human capital and organizational commitment. Its implication is that mobilization of actions, knowledge, skills and expertise of all employees in the form of team activities is very crucial in the organizations. Hence, team structures and organizing activities in the form of team cause commitment and support of the organization by employees. It was also found that organizational development has direct and significant effect on human capital and organizational commitment. Thus organizational development by helping members of organizations as well as improving working structures and process may lead to formation of human capital and improvement of organizational commitment. Organizational development by continuous improvement of beliefs and attitudes can increase employees' motivation and tendency to the organizational commitment. In addition, human capital has also a positive effect on organizational commitment. Organizational culture, teamwork, and organizational development have a direct and significant impact on organizational commitment. Finally findings indicated that human capital has a mediating role between organizational culture, teamwork, organizational development and organizational commitment. Therefore, in order to improve organizational commitment of the employees, the organizational culture should be improved by improving beliefs, norms and values of the organization and also improving teamwork and team conditions.

8 Implication

This study provided some guidelines to help managers to comprehend how to increase employee's organizational commitment. First, our research indicated the importance of organizational culture for increase and promoting organizational commitment. It suggests to organizations to promote general pattern of behaviours, beliefs, collected and shared perception of values which are considered common in most of organization members. Because organizational culture provides job security for all personnel and gives life-long or long term employment, and in turn leads to increase of organizational commitment in employees [10].

Second, this study shows that team work is an important determinant of organizational commitment. It appears managers' support for team work is necessary in organization. Thus, managers should provide team work conditions in order to foster organizational commitment.

Third, results of this study indicate that organizational development has a direct effect on organizational commitment. Organizational development includes strategies for designing organizational processes and organizational development plans for changing

organizational shape and transition from current status to optimal one. Therefore, organizational development is important in forming organization potential to generate organizational commitment.

Fourth, results of this study show that organizational culture, team work and organizational development positively and indirectly influence organizational commitment through human capital. Therefore, human capital plays a bridge role to connect organizational culture, team work and organizational development and organizational commitment. This finding indicated that organizations should concentrate on developing organizational human capital as guidelines for maintaining their organizational commitment.

9 Limitation and future research directions

There are several limitations that should be considered when interpreting these results. First, the data were cross-sectional in nature and this limitation blocks the presumption of causality. This study allows us to analyze only a specific situation in time of study, not their overall conduct over time. Thus, future research should focus on a longitudinal study. Third, we focused only on employees of SAFA Industrial Group. Thus, we propose a future research to investigate the relationships between these variables in other cultural and organizational settings.

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