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The effect of green organizational culture on organizational commitment: The mediating role of job satisfaction

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ABSTRACT

This article is based on an innovative idea that in addition to environmental benefits, the use of green approaches in organizations can also bring internal benefits to companies. Today, people have many concerns about the environment. They like to perform a job that complies with general environmental principles. Therefore, working in a green culture increases their satisfaction and commitment levels. So, by creating a green culture, companies can increase employees' job satisfaction levels and improve their organizational commitment. The study aims to develop an original framework of green organizational culture and investigates its effect on organizational commitment through the mediating role of job satisfaction. Partial least squares structural equation modeling was performed in SmartPLS to analyze the data. Based on the results, there is a direct relationship between green organizational culture and organizational commitment, mediated by job satisfaction.

Introduction

Urban expansion, population growth, and improper use of natural resources have brought our planet to the verge of destruction. Human concerns about the depletion of natural resources and the imbalance of the Earth's life cycle have prompted researchers to focus more on this issue than ever before and work to address it (Mannan et al., 2018). Scholars are highly concerned about the impact of manufacturing organizations on the environment; therefore, sustainable approaches are required in order to fulfill environmental, economic, and social needs (Diabat et al., 2013; Pham et al., 2019). The first step in reducing environmental damage is identifying and implementing eco-friendly processes (Wong et al., 2020). In this regard, identifying effective factors (such as management) is crucially important. Green management is defined as planning, organizing, and adopting strategies to produce green and eco-friendly products and minimize environmental impacts (Raut et al., 2019). Today, researchers pay more attention to the impact of green management on supply chains and companies. Besides their positive effects on the environment, green management strategies also benefit organizations (Aykan, 2017). Many studies have investigated the effects of green management strategies on various organizational variables (Chang, 2015; Ren et al., 2020; Tahir et al., 2019; Z. Yang et al., 2016).

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Culture is a system of beliefs, values, ideas, and attitudes that form organizational behavior (Zhang & Cao, 2018). Organizational culture is defined as a set of values, assumptions, perceptions, and norms shared among members of an organization and are taught to newcomers (Lane, 2005; Shahriari & Allameh, 2020). Green management builds a culture among employees. Green organizational culture is a new area of research. There is no clear definition; however, researchers argue that the definitions of organizational culture agree with those provided for green organizational culture. Components of organizational culture can be integrated into green approaches in order to specify the indicators of green organizational culture (Parr, 2012; Schein, 1990). Today, many organizations are updating their management methods, strategies, and practices to reduce environmental pollution; however, such measures do not ensure sustainable development on many levels (Gürlek & Tuna, 2018). In discussing common environmental management goals, Linnenluecke and Griffiths (2010) stated that organizations must promote their cultural standards to reduce existing environmental damages and improve their green performance. Green organizational culture supports the effective implementation of green policies; therefore, all green development efforts would be in vain if organizational elements do not try to achieve common goals. An organization's cultural structure reflects its environmental practices (Newton & Harte, 1997). Culture forces people to behave under defined values; thus, management can shift organizational processes toward eco-friendly processes through sharing green values and beliefs (Parr, 2012). Green organizational culture is defined as a model of common assumptions associated with environmental management and environmental problems (Chen, 2011; Marshall et al., 2015; Schein, 2010). In fact, green organizational culture includes common symbols, beliefs, values, and norms about environmental management that shape standard eco behaviors (Schein, 2010; L. Yang et al., 2019). Green organizational culture is a symbolic context for environmental protection and management that shapes employee behavior and perception. According to Fergusson and Langford (2006), companies which are concerned about environmental issues are more likely to adopt a green strategy.

Today, companies face the challenge of retaining employees in their organizations. Employees are one of the influential inputs in any organization, and to achieve their goals, organizations must use the characteristics and skills of employees to achieve these goals. Committed and enduring forces succeed in the competition (Mousa & Othman, 2020). Organizational commitment is an important organizational success factor. It manifests some reliance on the organization that helps it achieve its predetermined goals. Organizational commitment reflects the desire of staff to strive for the realization of organizational goals (Cheng et al., 2019; S. H. Lee et al., 2008). Due to environmental changes and the importance of sustainability issues, the ability and effort of organizations to change are considered one of the important organizational issues. However, change initiatives often fail due to employee lack of commitment (Olafsen et al., 2020). Successful change is rooted in the commitment of the participants in the process. Therefore, it is important to identify the factors that enable and motivate employees to support new changes (Herscovitch & Meyer, 2002). This research focuses on an innovative idea that companies can effectively address the lack of organizational commitment of employees by taking actions related to social responsibility and green management. Organizational commitment is defined as reflecting the relationship between employees and organizations. The quality of this relationship depends on the degree to which an employee is committed to his/her organization (Pentareddy &

Suganthi, 2015). If the organization cares about green issues, it treats employees with a high level of ethics and pays more attention to its employees. Considering the needs of employees and their health, comfort, and excellence in their job and life, increasing employee satisfaction (Denison & Mishra, 1995; Ismail & Razak, 2016). People who are satisfied with their job are committed to doing their tasks properly (J. Y. Lee et al., 2018; Riyanto & Panggabean, 2020). So, this study innovatively investigated the effect of green organizational culture on organizational commitment through the mediating role of job satisfaction.

Research background and hypotheses

Green organization

Modern societies are nowadays obliged to meet much environmental protection, energy preservation, raw materials usage, construction, and health and safety standards (Alshuwaikhat & Abubakar,2008 Petkevičiūtė & Balčiūnaitienė, ; Richbell & Minchin, 2012). Green organization is a pre requisite for sustainable development and an integral part of the green economy (Skackauskiene & Kunskaja, 2019). Modern businesses that have historically focused merely on their profits must consider environmental sustainability issues and social interests as well, as they are pillars of business success, and without them, no business would survive (Šimanskienė & Petrulis, 2014). Although long-term sustainable changes accompany green organizations, sustainability is not the only aspect of green organizations (Yeganeh, 2008). The green organization is defined as a learning environment where members work together to achieve green business, establish effective relationships and collaboration, and create a shared vision based on modern environmental technologies. On the other hand, sustainable organization offers suggestions and initiatives for the analysis of environmental footprints, provides reports on sustainable development, gives suggestions for changing a policy or method, and provides recommendations for mitigating environmental impacts. Green organization aims to produce green products using innovative eco-friendly business solutions, and tries to satisfy consumers and society (Skackauskiene & Kunskaja, 2019). In addition, the use of certain hazardous substances, industrial wastes, and electronic equipment has been restricted by strict regulations included in environmental conventions such as the Montreal Convention. The intense competitions in various industries and the increasing importance of environmental issues have forced companies and organizations to gain new competitive advantages. Companies have to make improvements in their practices, managerial methods, and business models in order to adapt to these drastic changes (Chen, 2011). Environmental concerns have increased as societies have expanded and populations have grown. Today's organizations are increasingly trying to reduce the environmental impact of their activities (Shrivastava & Hart, 1992); therefore, based on the concept of green practices, organizational processes and activities must be designed in a way to preserve the environment and minimize relevant damages. Managers always make decisions to turn activities into green ones (Georg & Füssel, 2000).

Green organizational culture and job satisfaction

Research suggests that a dynamic and productive work environment promotes organizational culture and job satisfaction. This reveals the relationship between organizational culture and job satisfaction (Schneider & Snyder, 1975). Job satisfaction also increases as employees improve

their occupational skills and competencies (Corbin, 1977). According to Hutcheson (1996), job satisfaction can be used to evaluate organizational culture. Koustelios (1991) examined several aspects of job satisfaction and organizational culture and concluded that employees in different firms enjoy different levels of job satisfaction. Employees who adapted to their current culture and desired position feel better about their job. Kline and Boyd (1991) stated that different work factors influence staff at different organizational levels and that environmental dimensions should be considered when evaluating job satisfaction levels. Kerego and Mthupha (1997) argued that organizational culture and climate explain an organization's activities, while job satisfaction assesses organizational context. Other researchers have also investigated the relationship between employee job satisfaction and organizational culture (Jiang & Klein, 2002; Mansor & Tayib, 2010; Meku, 2013). Many researchers have highlighted the significant role of some dimensions of these variables in this relationship. The most important dimensions of organizational culture include stability, teamwork, individual orientation (individual work), and competitive spirit (aggressiveness). Major dimensions of job satisfaction include working conditions (assigned tasks) and reward (compensation) system (Riyanto & Panggabean, 2020; Spector, 1997). Finally, Ooi and Arumugam (2006) claimed that four dimensions, including training and development, teamwork, reward and recognition, and communication, can be used for measuring organizational culture. Management stimulates environmentally friendly processes to minimize environmental concerns. These processes have direct effects on two dimensions of organizational culture, namely individual orientation and teamwork. In fact, management decides to do the processes in a greenway. In addition, green organizations carry out processes under environmental guidelines (stability). This dimension emphasizes maintaining the status quo. Innovation is another important aspect of organizational culture in environmental issues (Shahriari et al., 2018). In another dimension, management motivates employees' competitive spirit to adopt a green approach in performing organizational activities. To this end, the reward system is established in organizations, which results in higher job satisfaction levels. The compensation system also affects levels of employee satisfaction. A very important environmental concern is to reduce pollution caused by organizational processes and operations. By carrying out green processes and establishing green organizational culture, management improves the working conditions of employees, and working in a safe environment increases job satisfaction levels. Training and development also create a sense of satisfaction in employees and help them realize environmental goals, because trained individuals enjoy performing their duties (Leidner et al., 2019). Regardless of their goals and orientation, training and development lead to higher levels of job satisfaction (Ooi & Arumugam, 2006) Therefore, the first hypothesis is proposed based on the research literature:

Hypothesis 1 (H1): Green organizational culture has a positive effect on job satisfaction.

Green organizational culture and organizational commitment

Organizational culture includes a set of criteria and norms that describe how employees should behave within an organization. Therefore, researchers define green organizational culture as the degree of employees' attachment to environmentally responsible norms and behaviors (Mokhtar et al., 2016). Scholars have found a significant relationship between organizational culture and job commitment because strong organizational culture provokes commitment to

the job and organization (Nystrom, 1993). There is also a relationship between organizational culture and organizational commitment. So far, no researcher has precisely investigated the relationship between green organizational culture and organizational commitment; however, Mokhtar et al. (2016) argued that due to the positive effect of green culture on employees, individuals who are committed to green organizational culture are also highly committed to their job and organization. Recardo and Jolly (1997) introduced eight basic dimensions for organizational culture, among which four dimensions (including training and development, teamwork, reward and recognition, and communication) were selected by Ooi and Arumugam (2006) for investigating the impact of organizational culture on organizational commitment. Organizational culture was found to have a positive effect on organizational commitment. Training and development is defined as the process of teaching employees specific skills or correcting deficiencies in their performance (Poh & Abd Hamid, 2001). Poh and Abd Hamid (2001) found that training and its social effects, as well as learning motivation and perceived benefits of training, are positively related to organizational commitment. Rewards and perceptual activities increase job satisfaction and ensure high organizational commitment (Zhang, 2001). Anderson and Martin (1995) and Brunetto and Farr-Wharton (2002) argued that the role of employees in achieving organizational goals and their communication within organization positively affect organizational commitment. The last dimension of organizational culture is teamwork, according to which organizational commitment is higher in organizations that put high emphasis on teamwork (Karia & Ahmad, 2000). The above factors can promote green organizational culture if they are employed in accordance with organizational goals. Therefore, the second hypothesis is provided as follows:

Hypothesis 2 (H2): *Green organizational culture has a positive effect on organizational commitment.*

Job satisfaction and organizational commitment

Studies indicate that job satisfaction and organizational commitment are highly correlated (Afshari et al., 2019; Mathieu et al., 2016; Meyer et al., 2002). According to Kovach (1977), job satisfaction is part of organizational commitment and helps individuals achieve it Porter et al. (1979), Price (1977), and Spector (1997) believed that job satisfaction could lead to organizational commitment. In addition, nine basic dimensions have been proposed for satisfaction. Five criteria used for measuring job satisfaction include assignment, salary (compensation), opportunity for progress, monitoring, and colleagues. These items are used to assess satisfaction levels (Sopiah, 2008). Higher job satisfaction levels lead to higher levels of organizational commitment. Feinstein Feinstein and Vondrasek (2001) claimed that organizations could measure their employees' commitment levels based on their job satisfaction levels. In a similar study, Meyer et al. (2002) found that organizational commitment is directly and strongly related to job satisfaction and organizational commitment variables. According to Meyer and Allen (1984), Meyer et al. (1990), and Chen et al. (2012) organizational commitment includes affective, normative, and continuance dimensions. The affective dimension reflects an individual's attachment to and dependence on his/her organization. The normative dimension indicates a legal obligation for performing tasks within an organization. Finally, continuance commitment indicates a compulsion to stay within an organization in order to maintain the current job.

Aizzat et al. (2003), observed a direct relationship between dimensions of job satisfaction and organizational commitment. In their study, job satisfaction promotion system had the greatest impact on organizational commitment. Roodt and Kotze (2005) found greater degrees of organizational commitment in people experiencing higher job satisfaction levels. Mathieu (1991) developed a non-recursive model to investigate the reciprocal relationship between satisfaction and commitment. Based on this study, these two factors have significant reciprocal effects on each other. In addition, the effect of satisfaction on commitment was greater than that of commitment on satisfaction. Fisher et al. (1992), showed that the affective dimension of organizational commitment is strongly related to job satisfaction, and concluded that the achievement of an employee depends on his/her expectations from the job. Okpara (2004) argued that job satisfaction and organizational commitment are two major factors affecting employee efficiency and productivity. Job satisfaction and organizational commitment motivate employees and affect organizational productivity and organizational goals. This is in line with the study of Baron and Greenberg (2005). Gunlu et al. (2010) investigated the effect of job satisfaction on various dimensions of sustainability. They concluded that job satisfaction significantly affects normative (legal) and affective (attitude) commitment. These two dimensions of commitment were also found to have significant effects on each other. Furthermore, Ismail and Razak (2016) found a significant positive relationship between job satisfaction and organizational commitment. Based on the research literature, the following hypothesis can be proposed:

Hypothesis 3 (H3): Job satisfaction has a positive effect on organizational commitment.

With regard to the hypotheses mentioned above, the structural research model is presented in Figure 1 as shown in the model, green organizational culture is both directly and indirectly (through the mediating role of job satisfaction) related to organizational commitment. The dimensions of green organizational culture, organizational commitment, and job satisfaction were determined based on the studies of Ooi and Arumugam (2006), Meyer et al. (1990), Meyer and Allen (1984), and Sopiah (2008), respectively. This model focuses on providing an innovative approach to strengthen organizational commitment in organizations through the implementation of green policies.

Research method

Sampling and data collection

The study population consisted of employees of Iranian manufacturing companies located in Isfahan Province. Manufacturing organizations and factories can play a major role in creating environmental pollution in different fields. To collect the necessary data, a total of 249 standard questionnaires were distributed among the participants, of which 201 questionnaires (about 81%) were completed.

Research constructs

All questionnaire items were scored on a five-point Likert scale ranging from strongly disagree (score 1) to strongly agree (score 5). The items are presented and discussed in the following paragraphs.
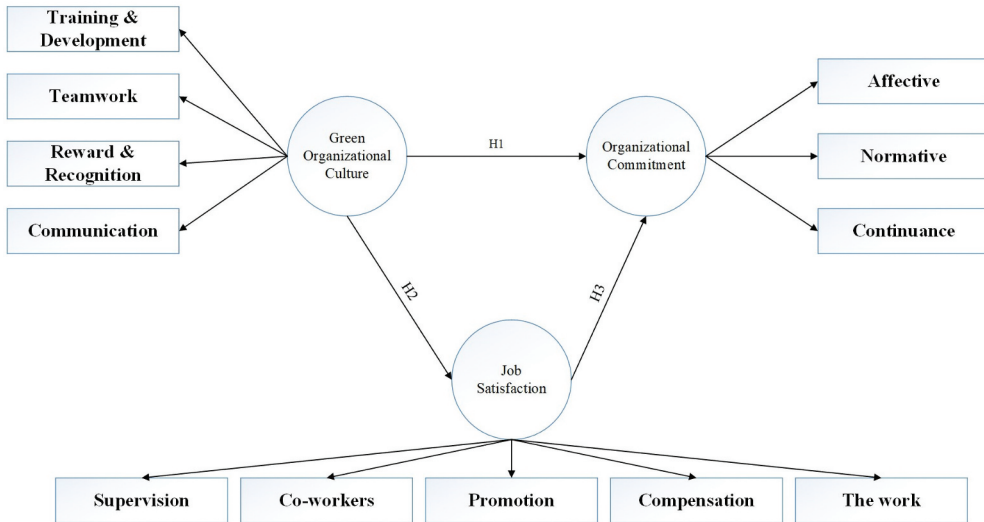
Figure 1. Structural model.

Green organizational culture

Six items adaptations of Denison and Mishra (1995) have been used to measure green organizational culture variable. These items include:

(a) The company I'm working for has many environmental concerns.
(b) The company I'm working for is striving to protect the environment.
(c) The company I'm working for observes relevant environmental laws and regulations.
(d) The company I'm working for makes some changes in its management practices to protect the environment.
(e) The company I'm working for is environmentally accountable.
(f) The company I'm working for has a vision for protecting the environment.

Job satisfaction

Job satisfaction was measured using the following items extracted from the study of Wright and Cropanzano (2000):

(a) I am satisfied with my job.
(b) I feel satisfied to work with my colleagues.
(c) I am satisfied with the way my activities are monitored.
(d) I am satisfied with my salary.
(e) I am satisfied with the opportunities my company provides for employee promotion.

Organizational commitment

The following four items used to measure the variable of organizational commitment have been designed and validated by Meyer et al. (1990):

(a) I intend to continue working for the company.

(b) I like talking about the company with outsiders.
(c) I have a sense of belonging to the company as if it is my own company.
(d) The reputation of the company is of great importance to me.

Results

The structural equation modeling was performed in SmartPLS 3.2.8 to test the hypotheses. Sections 4.1 and 4.2 present results on the analysis of the conceptual model and the structural research model.

Conceptual research model

The number of the participants and their demographic characteristics (including gender, educational qualifications, age, Company experience, number of employees, and field of the company) are presented in Table 1.

Table 2 shows the research variables' mean, standard deviation, and Pearson correlation coefficient. Studies show that the correlation coefficient should be smaller than 90% to avoid multicollinearity of independent variables. The results of Table 2 demonstrate absence of multicollinearity in the research variables (Henry, 2014).

Composite reliability, Cronbach's alpha coefficient, and average variance extracted (AVE) were calculated to validate the variables. Values obtained for the first two indicators must be greater than 0.7, and AVE must be greater than 0.5 (Afshan & Sharif, 2016; Fornell & Larcker, 1981; Henseler et al., 2015; Kigpiboon, 2013; Zomorrodi & Zhou, 2017). Factor loadings were calculated to assess the reliability of the research items. According to Gefen and Straub (2005), factor loadings ≥0.6 are acceptable in confirmatory factor analysis. Based on Table 3, the obtained factor loadings, Cronbach's alpha coefficients, Composite reliability, and AVE values for all research variables were accepted.

The Fornell-Larcker criterion was used to assess the discriminant validity of each variable. In fact, the square root of each AVE along the diagonal should be greater than other elements in the same column. For example, in Table 4, the value obtained for green organizational cultural (0.845) is larger than those of job satisfaction (0.493) and organizational commitment (0.520; Abdul Hadi et al., 2018; Gideon, 2014).

Cross loadings were also calculated to assess the discriminant validity of each item. In this method, the numerical value of an item obtained for a variable must be greater than the numerical value of the same item for other variables. As shown in Table 5, the discriminant validity of all research items was confirmed (Henseler et al., 2015).

The Heterotrait-Monotrait ratio of correlations (HTMT) was also used to assess discriminant validity of the variables. The acceptable range for this criterion is "0.85 to 0.9" (Henseler et al., 2015). According to Table 6, all values obtained for this criterion fell in the acceptable range.

Structural research model

After analyzing the validity and reliability of the conceptual model, the structural model was assessed. Path coefficients (β) were calculated to assess the structural model and to test the hypotheses. Bootstrapping was used by calculating T-statistics in PLS with 500 subsamples

Table 1. Descriptive statistics.

	Characteristics	Frequency	Percent
Age	18–25	28	13.9
	More than 25–40	135	67.2
	More than 40	38	18.9
Gender	Male	41	20.4
	Female	160	79.6
Education	Diploma & Under Diploma	53	26.4
	Associate	17	8.5
	Bachelor	93	46.3
	Master	31	15.4
	Ph. D	7	3.4
Number of employment	1–10	19	9.5
	More than 10–100	109	54.2
	More than 100–500	62	30.8
	More than 500	11	5.5
Field of company	Machinery & equipment	19	9.5
	Metal & mineral	28	13.9
	Food & agriculture	75	37.3
	Medical & pharmaceutical	61	30.3
	Other	18	9.0
Company experience	1–5	48	23.9
	More than 5–10	50	24.9
	More than 10–20	66	32.8
	More than 20	37	18.4

N = 201.

Table 2. Means, standard deviations, Pearson correlations.

	Mean	SD	Green organizational culture	Job satisfaction	Organizational commitment
Green organizational culture	3.702	0.804	1		
Job satisfaction	3.796	0.719	0.493	1	
Organizational commitment	4.066	0.700	0.520	0.741	1

Table 3. Measurement model results.

		Factor Loading	Cronbach's Alpha	CR	AVE
Green organizational culture	GOC1	0.804	0.919	0.937	0.713
	GOC2	0.899			
	GOC3	0.896			
	GOC4	0.874			
	GOC5	0.792			
	GOC6	0.793			
Job satisfaction	JS1	0.853	0.854	0.895	0.613
	JS2	0.722			
	JS3	0.850			
	JS4	0.763			
	JS5	0.776			
Organizational commitment	OC1	0.718	0.817	0.879	0.645
	OC2	0.777			
	OC3	0.847			
	OC4	0.863			

to measure the significance of the path coefficients. According to Chin (1998), values of 0.67, 0.33, and 0.19 indicate significant, moderate, and poor relationships, respectively. Table 7 lists each hypothesis's obtained path coefficients, T statistics, and P-values. As shown in Table 7, the first hypothesis (H1) was confirmed ($\beta = 0.439$; $P < .000$); therefore, green organizational culture has a significant effect on job satisfaction. The second

Table 4. Discriminant validity Fornell-Larcker criterion.

	Green organizational culture	Job satisfaction	Organizational commitment
Green organizational culture	0.845		
Job satisfaction	0.493	0.795	
Organizational commitment	0.520	0.741	0.803

Table 5. Results of loadings and cross loadings.

		Green organizational culture	Job satisfaction	Organizational commitment
Green organizational culture	GOC1	**0.804**	0.438	0.505
	GOC2	**0.899**	0.414	0.374
	GOC3	**0.896**	0.400	0.404
	GOC4	**0.874**	0.492	0.435
	GOC5	**0.792**	0.353	0.497
	GOC6	**0.793**	0.384	0.398
Job satisfaction	JS1	0.411	**0.853**	0.818
	JS2	0.240	**0.722**	0.550
	JS3	0.519	**0.850**	0.603
	JS4	0.380	**0.763**	0.437
	JS5	0.377	**0.776**	0.447
Organizational commitment	OC1	0.507	0.494	**0.718**
	OC2	0.492	0.471	**0.777**
	OC3	0.345	0.565	**0.747**
	OC4	0.408	0.784	**0.863**

Table 6. Results of HTMT ratio of correlations.

	Green organizational culture	Job satisfaction	Organizational commitment
Green organizational culture			
Job satisfaction	0.544		
Organizational commitment	0.602	0.832	

Table 7. Results of path coefficients.

Hypothesized Path			β	T	P-Value	Remarks
H1	GOC	JS	0.493	8.616	.000	Supported
H2	GOC	OC	0.204	3.483	.001	Supported
H3	JS	OC	0.641	13.011	.000	Supported

hypothesis (H2) was also confirmed ($\beta = 0.204$; P < .001), meaning that green organizational culture significantly affects organizational commitment. Finally, the third hypothesis (H3) was confirmed ($\beta = 0.641$; P < .000), and job satisfaction was found to affect organizational commitment.

Figure 2 shows the structural research model. A goodness of fit indicator (GOF) with a range of 0–1 was used to assess the adequacy of the data. The data would better fit the structural model if the obtained value is closer to 1 (Vinzi et al., 2010). The calculated GOF value was acceptable (0.44).

Discussion and conclusion

The development of societies has made human beings think more about the scarcity of natural resources so that today more research is needed in this field. Researchers have consistently paid special attention to the effects of manufacturing organizations on the
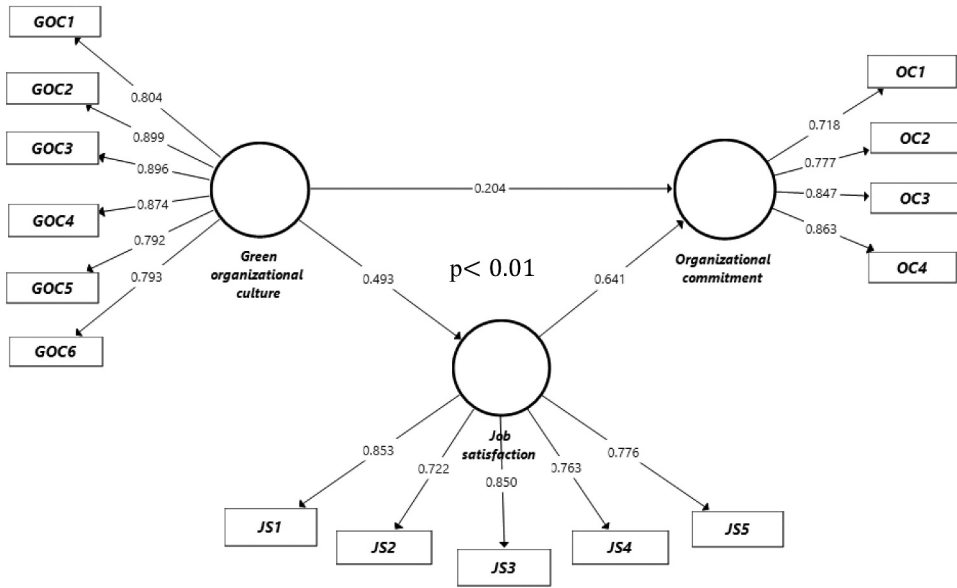
Figure 2. Structural research model.

environment and claim that sustainable approaches are an important factor in social, economic, and environmental needs (Pham et al., 2019). The use of environmentally friendly activities and the subsequent implementation of green management in the organization, in addition to the positive effects on the environment, will also bring many benefits to the organization. Research by (Ren et al., 2020) and (Tahir et al., 2019) are examples that express these benefits. The present study research another aspect of implementing green policies in organizational culture and its impact on employee commitment and job satisfaction in the organization. Today, companies face the challenge of retaining employees in their organizations. Therefore, this study helps organizations challenge the lack of employee commitment by considering social responsibility and green management.

The atmosphere of an organization describes its activities (Kerego & Mthupha, 1997). Schneider and Snyder (1975) argue that organizational culture and job satisfaction are significantly related to each other and create a dynamic work environment. Many researchers have investigated the relationship between organizational culture and job satisfaction (Jiang & Klein, 2002; Mansor & Tayib, 2010; Meku, 2013). To build a green culture, organizations must observe environmental laws and take necessary preventive measures. Green organizational culture motivates employees to undertake eco-friendly initiatives and increases their competitive spirit to carry out green activities and receive more rewards. In the present study, green organizational culture was significantly associated with job satisfaction and proves that this leads to higher job satisfaction levels.

Research reveals a high correlation between job satisfaction and organizational commitment. Job satisfaction helps employees achieve higher commitment levels (Cherif, 2020; Meyer et al., 2002). The present study also confirmed the relationship between these two variables. The research literature also proved the relationship between organizational

culture and organizational commitment because people working in an environment with a strong culture are more committed to their job and organization (Nystrom, 1993). With regard to the positive effect of green culture on employees, Mokhtar et al. (2016) found higher commitment rates among employees working in organizations with a green culture. It can be concluded that teaching specific skills to employees along with the social impact of these teachings can motivate employees and improve their organizational commitment levels (Bartlett, 2001; Poh & Abd Hamid, 2001). Rewards and motivating activities increase job satisfaction levels and ensure high levels of organizational commitment (Zhang, 2001). Organizational culture and organizational commitment are significantly related to each other; however, this study found a significant relationship between green organizational culture and organizational commitment.

After testing the research hypotheses and analyzing the structural model, four basic conclusions were made. **First**, Environmental sustainability is not the only advantage of green organizations. Companies can increase the level of job satisfaction of their employees by developing their green activities in order to implement a green organizational culture. This will, in turn, improve employee commitment as well. **Second**, Organizations can also create an indirect relationship between their green culture and organizational commitment through job satisfaction. Today, people have many concerns about the environment. They like to perform a job that complies with available environmental laws and regulations. Therefore, working in a green organization increases their satisfaction and commitment levels. **Third**, Green organizational culture is both directly and indirectly (through the mediating role of job satisfaction) associated with organizational commitment. **Fourth**, the indirect effect of green organizational culture on organizational commitment (through job satisfaction) is stronger than its direct effect on this variable. Therefore, by creating a green culture, companies can increase employees' job satisfaction levels and thereby improve their organizational commitment.

Limitation and future studies

The current human environment is always exposed to various pollutants due to human activities. It can be said that factories have a large share in environmental pollution by producing harmful and dangerous pollutants such as gases, suspended particles, industrial effluents, etc. (Le et al., 2021; Pellecchia & Negri, 2018; Shamsuzzaman et al., 2021; Soheili-Fard et al., 2018). Although the data used in this study are extracted from companies with environmental pollution, it is necessary to study future research, expand the statistical community and consider different types of companies, especially service companies. In addition, repeating surveys in other companies allows us to generalize the model and compare the results of countries and cultures.

Another suggestion for future research can be considered the role of job satisfaction mediation. This variable can indeed bring good results to the organization through organizational commitment, but to achieve more comprehensive results, other variables such as perceived organizational support or social responsibility can replace this variable.

In this study, the concept of job satisfaction and organizational commitment is used through cognitive and emotional questions that may be influenced by a specific bias called self-report and affect the results. Self-report refers to a concept in which people exaggerate

in answering questions. In this case, social desirability bias may have impacted responses (consciously or subconsciously) to present their organization in a better light . . . The effect of self-reporting bias is more evident in organizational behavior variables (Donaldson & Grant-Vallone, 2002). Study and replication in different industries, countries, and cultural populations can identify and reduce the effects of this bias in future research.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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