

Research Article

The Influence of Transformational Leadership and Work Motivation Aspects on Pro-environmental Behavior

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Abstract.

Environmental problems seem endless, constantly impacting earth. One of the causes is humans who are reluctant to manage waste. The purpose of this research was to see the influence of transformational leadership and aspects of work motivation on pro-environmental behavior in employees. This research is a quantitative research with 145 subjects who are employees of the Gema Surya Kencana Cooperative and fall in the age group of 18–50 years. The scale used is the Pro Environmental Behavior Scale (PEB Scale), Multifactor Leadership Questionnaire (MLQ Scale), and Motivation at Work Scale (MAWS). Data analysis was done using multiple linear regression techniques. Results show that transformational leadership has a significant influence on pro-environmental behavior with a significance value of $P = 0.000 < 0.05$. The autonomous motivation aspect did significantly affect pro-environmental behavior with a significance of $0.025 > 0.05$ and the external motivation aspect did have a significant effect on pro-environmental behavior with a significance value of $0.024 > 0.05$.

Keywords: transformational leadership, employee motivation, pro-environment behavior PRATIWI, et.al

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1. Introduction

Environmental issues in Indonesia seem to have no end. The proof is that the environmental situation is getting worse day by day and various natural disasters seem to never fail to occur every year. As reported by the National Disaster Management Agency (BNBP), which is included in the Indonesian Disaster Information Data, there are around 3507 natural disasters that occurred in Indonesia during 2022 (BNBP, 2023). A situation like this is a signal issued by nature so that humans immediately become aware and look for solutions to revitalize nature so that it becomes friendly again for them to live in.

The quality of nature is very dependent on human behavior patterns. Much evidence shows that natural damage is caused by humans themselves (Grilli & Curtis, 2021). One phenomenon that is a problem is inappropriate waste disposal behavior. This behavior

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has been a problem in Indonesia for a long time. Continuing the data presented by the National Disaster Management Agency (BNPB) in 2022, floods were the most common disaster that occurred that year. BNPB explained that the total number of flood disasters during 2022 was 1504 cases out of 3507 total disasters. This data is much higher than disasters caused by extreme weather, which were only 1042 cases and landslides, which were only around 633 cases (BNBP, 2023).

With frequent flood disasters, people are not aware and continue to throw rubbish carelessly. This is proven by the fact that rubbish is still found piling up on the banks of rivers and making it easy for the water to overflow onto land (BBC Indonesia, 2020). Apart from causing floods, rubbish floating in rivers will later be carried by currents into the ocean. BBC Indonesia reported that in Jakarta in 2019 around 59% of plastic waste flowed into the sea. And the estimated estimate of trash found in the ocean per day is found to be around 8.32 tons. (BBC Indonesia, 2020).

The impact of careless waste disposal is also felt by living creatures in the sea. Reported by BBC Indonesia (2018), there are at least 180 species of marine creatures whose lives are threatened by human waste. Many marine life die because they accidentally eat plastic which they think is their food. Even a third of the stomach contents of sea creatures commonly consumed by humans contain plastic. This is all caused by a lack of waste processing in big cities which, if not immediately repaired, will threaten marine biota and marine ecosystems (Fleming et al., 2014).

One way to prevent or overcome natural disasters is to carry out pro-environmental behavior. Pro-environmental behavior itself is green behavior or human efforts to reduce negative impacts on nature (Dmitrieva and Adriasola., 2013). Pro-environmental behavior can actually be found and implemented easily because protecting the environment does not require a lot of effort. Unfortunately, most humans are reluctant to do so (Flemming et al., 2014).

Efforts to change behavior are based on the idea that most pro-environmental actions come from everyday life (Grilli & Curts, 2021). Examples such as using shopping bags, reducing the use of single-use items, carrying out environmental awareness campaigns, throwing rubbish in the right place are small examples of pro-environmental behavior that can be implemented. The application of this behavior can also be carried out in the workplace, considering that the industrial sector is a large producer of waste as a result of company operations (Althnayan et al., 2022).

The formation of behavior in humans is based on several things. The theory of behavior explained by psychology figure Bandura says that humans control their behavior based on internal and external factors. Internal factors include self-observation,

judgment processes, and self-reactions. Meanwhile, external factors include a person's physical and social environment (Feist, Feist & Robberts, 2017). Therefore, actions aimed at changing behavior must consider both internal and external factors and provide effective guidance for behavior change.

To modify a targeted behavior, motivation is needed as the basis for forming a behavior. The existence of motivation within each individual is the starting point for behavior to be formed. Motivation will grow when human behavior contributes directly to environmental problems (De Groot & Steg, 2010). From here it is increasingly recognized that pro-environmental action is very important to reduce the problems that occur and as a way to promote sustainable development.

Apart from coming from within the individual, motivation can also come from outside the individual, such as close friends and the social environment in which the individual lives. The work environment is one of the factors that creates pro-environmental behavior. Considering that most of an individual's time is spent at work, the work environment is one of the external factors that can generate motivation in individuals. This is reinforced by research conducted (Graves et al., 2013) which states that there is a positive relationship between external motivation and pro-environmental behavior.

External motivation referred to here is encouragement that comes from outside, especially leaders. This statement is strengthened by theory which states that leaders play a role in determining the impact of external rewards on employee experience (Elsenberge et al., in Gagne & Deci. 2005). A leader will direct the motivation of his employees by creating an organizational climate through establishing a culture of preserving the environment so that employees feel encouraged to carry out pro-environmental behavior. Leaders can make policies and appreciate employee performance that is in line with the company's vision.

Lussier & Achua explain that a leader holds a formal position in an organization (in Oberer & Erkollar, 2018) because they can play an important role within the stakeholder framework. Leaders have the responsibility to develop and implement appropriate strategies, obtain and develop effective resources so that all work towards the desired organizational achievements (Althnayan et al., 2022). In carrying out his position as a leader, a person must have good communication skills, the ability to motivate employees, be responsible, receive feedback from employees and have high levels of innovation in order to be able to bring the organization and its employees to prosperity (Guzmán et al., 2020). Leaders who have these abilities are much more effective at inspiring, motivating and stimulating their followers to realize how important it is to protect the environment and be involved in environmental conservation (Omarova &

Jo, 2022). Leaders must demonstrate sustainable ideas to activate employees' behavioral intentions towards environmental preservation thereby increasing environmentally friendly behavior in the workplace.

The leadership concept studied in this research is transformational leadership. This concept was present in the midst of the industrial revolution, now in its fourth revolution, which demands company management capacity with an organizational and humanistic vision. R. Kelly in (Guzmán et al., 2020) shows that the main characteristic of transformational leadership is focusing on the communication that exists between leaders and employees which is driven by a view of togetherness and unity (Bass in Althnayan et al., 2022).

Leadership in an organization not only influences attitudes, behavior, performance and finances, but also influences employee work behavior related to the environment (Li et al., 2020). Here it can be understood that the leader's way of creating a work environment with an environmental sustainability perspective will have a strong influence because employees tend to pay attention to the leader's attitude towards the environment (Omarova & Jo, 2022). This means that employees will show more environmentally friendly behavior when they have leaders who also care about the environment and explicitly state this in their work life.

Researchers see that there is an influence of transformational leadership and employee work motivation on pro-environmental behavior. As stated by Bono & Hakim (in Graves et al., 2013) the transformational leadership style internalizes organizational values and self-expression at work. Leadership that tends to talk about the importance of environmental sustainability and presents a vision of the future to employees means that employees will gradually accept and internalize the values conveyed by the leader and ultimately employees can personally have values and goals in pro-environmental behavior (Bono & Hakim in Graves et al., 2013).

Likewise with external motivation, external motivation appears together with leaders who set performance-based expectations and rewards so that this can be used by transformational leaders in fostering motivation for employee pro-environmental behavior by providing rewards and expectations as external motivation (Hakim & Piccolo in Graves et al., 2013). Leaders can also develop employee competency capabilities to facilitate increased external motivation. This means that employees who feel they are competent to carry out pro-environmental behavior will be more motivated by rewards because they feel confident they can achieve it.

Autonomous motivation can allegedly influence employee pro-environmental behavior. Employees who carry out pro-environmental behavior on the basis of their own volition or are motivated autonomously will be consistent with individual values, goals and interests (Hakim et al., 2005). As a result, employees who engage in pro-environmental behavior independently will do so spontaneously without expecting reward. On the basis of this consistent and voluntary nature, employees tend to create personal involvement that increases persistence and performance that pays attention to aspects of environmental sustainability.

Based on the explanation above, seeing how important the problems currently are, and based on various previous studies that have been conducted (Omarova & Jo, 2022; Li et al., 2020; Graves et al., 2013), researchers are interested in investigating whether transformational leadership and employee motivation influences the pro-environmental behavior of employees.

2. Methods

2.1. Research design

This research uses quantitative methods with a non-experimental design, namely correlational. According to Syaodih (2010), correlational research is used to determine the relationship between a variable and other variables and is measured based on the magnitude of the correlation coefficient.

2.2. Research subject

The subjects in the research were employees of the Surya Kencana consumer cooperative which has its head office in Lumajang Regency and several branches spread across East Java, namely Malang and Pasuruan, consisting of men and women aged 18 to 60 years.

In this study, researchers used as subjects employees of the Gema Surya Kencana Cooperative with a total number of employees of 145 which can be seen in the following table:

Table 2 shows that there were 145 subjects consisting of 119 men with a percentage of 82% and 26 women with a percentage of 18% of the total number of subjects in this study. In terms of employee placement, there are 58 Malang branch offices with a

TABLE 1: Subject Description (n=145).

	Frequency	Percentage (%)
Sex		
Male	119	82%
Female	26	18%
Total	145	100%
Placement		
Malang	58	40%
Lumajang	57	39%
Pasuruan	30	21%
Total	145	100%

percentage of 40%, 57 in Lumajang with a percentage of 39%, and 30 Pasuruan branch offices with a percentage of 21%.

2.3. Research Variables and Instruments

This research uses two types of variables, namely the independent variable (X) and the dependent variable (Y). Transformational leadership and employee motivation are the independent variables (X) in this research and pro-environmental behavior is the dependent variable (Y).

Pro environmental behavior (PEB) is an individual’s behavior in reducing negative impacts on nature as a result of sustainable use of natural resources. In measuring individual PEB, researchers used a PEB measuring instrument, researchers used the Pro Environmental Behavior Scale (PEB Scale) which was translated by researchers from Ones & Dilchert (2002) to measure people’s expectations for pro-environmental behavior in the workplace. This scale consists of 4 aspects (conserving, avoiding harm, influencing others, taking initiative) with a total of 13 items.

Transformational leadership is a type of leadership that not only inspires followers but also helps followers when they need support. In measuring transformational leadership, researchers used the Multifactor Leadership Questionnaire (MLQ Scale) which was translated by researchers. The measuring tool developed by Bass & Avolio (1990) is used to measure leadership in organizational settings. This scale consists of 4 aspects (charismatic leadership inspirational leadership individual consideration intellectual stimulation) with a total of 11 items.

Motivation is an encouragement from within or outside an individual to influence an individual to carry out a behavior. To measure motivation, researchers used the

Motivation at Work Scale (MAWS). The development of this measuring instrument is based on the conceptualization of Gagne et al., (2014) and Ryan Deci's (2008) self-determination theory. This scale was prepared in English which has been translated into Indonesian by researchers. The scale consists of 2 aspects (identified motivation, intrinsic motivation or autonomy and external motivation) with a total of 12 items.

TABLE 2: Instrument Indexes.

Name	Items	Item Correlation	Reliability
Multifactor Leadership Questionnaire (MLQ Scale)	11	0,201 – 0,563	0,741
Motivation at Work Scale (MAWS).	12	0,430 – 0,668	0,875
Pro Environmental Behavior Scale (PEB Scale)	13	0,249 – 0,491	0,782

2.4. Research Procedures and Data Analysis

The research uses three main stages in its implementation, namely research preparation, research implementation, and data analysis. In the first stage, namely preparation, the researcher creates a background regarding phenomena related to the research topic that occur in society today. This will be the background for the research to be carried out. After compiling the research background, the researcher developed a theoretical basis based on the variables tested regarding pro environmental behavior, transformational leadership and employee motivation. The next step is for the researcher to determine the research method that will be used by the researcher.

The second stage is the implementation stage, at this stage the researcher conducted a try out to test the validity and reliability of the adapted scale. The research instrument used was a Likert scale to measure the variables pro environmental behavior, transformational leadership and employee motivation. After carrying out the try out, the questionnaire was distributed to research subjects via online media via WhatsApp by including a Google Form link which is expected to make it easier for subjects to fill out the questionnaire.

The third stage is data analysis. This stage is the final stage in a series of research procedures. At this stage, the data obtained from filling out the questionnaire will be processed using SPSS and coding will be carried out using Microsoft Excel with the resulting data previously downloaded from Google Form which can simplify the data

analysis process. In the process of analyzing research data, researchers use multiple linear regression tests to find out whether the hypothesis has been fulfilled or not.

3. Results

TABLE 3: Descriptive Data.

Variable	Category	Frequency	Percentage
Pro-Environmental Behavior	High	139	95,9%
	Low	6	4,1%
Transformational Leadership	High	135	93,1%
	Low	10	6,9%
Autonomous Motivation	High	143	98,6%
	Low	2	1,4%
External Motivation	High	124	85,5%
	Low	21	14,5%

Based on table 2, there are four variables, each categorized into two, namely high and low. The pro-environmental behavior variable has a mean value of 45.02 where there are 118 subjects in the high category with a percentage of 81.4% and 27 subjects in the low category with a percentage of 18.6%. Then the transformational leadership variable has a mean value of 38.08, where 101 subjects fall into the high category with a percentage of 69.7% and 44 subjects in the low category with a percentage of 30.3%. Then the autonomous motivation aspect has a mean value of 21.05 where there are 97 subjects included in the high category with a percentage of 66.9% and 48 subjects in the low category with a percentage of 33.1%. The external motivation aspect has a mean value of 20.51 where there are 118 subjects included in the high category with a percentage of 81.4% and 27 subjects in the low category with a percentage of 18.6%

TABLE 4: Uji Regresi Berganda Kepemimpinan Transformasional dan Motivasi Karyawan terhadap Perilaku Pro Lingkungan.

ANOVA						
Model		Sum of Squares	df	Mean Square	f	Sig
1	Regression	1284.279	3	428.093	85.660	.000
	Residual	704.659	141	4.998		
	Total	1988.938	144			

It was found that the calculated F value was 85,660 and the significance value was 0.000. In table 3, the results show that the calculated F value is 85.660 and the significance value is <0.05, namely 0.000, this shows that there is an influence

between the transformational leadership variable and employee motivation aspects on pro-environmental behavior.

Based on the results of the multiple linear regression test that has been carried out, it shows that between aspects of transformational leadership and pro-environmental behavior there is a significant influence as evidenced by the sig value obtained at $0.000 < 0.05$. Then, the autonomous motivation aspect has a sig of $0.025 < 0.05$, which means that the autonomous motivation aspect has a significant effect on pro-environmental behavior. In the external motivation aspect, a sig value of $0.024 < 0.05$ is obtained, which means that the external motivation aspect has a significant effect on pro-environmental behavior.

4. Discussion

Based on the results of the multiple regression test that has been carried out, there is an influence between transformational leadership on the pro-environmental behavior of Gema Surya Kencana cooperative employees. Furthermore, this research also found an influence between motivational aspects, namely autonomous motivation and external motivation, with pro-environmental behavior. This is known through the results of the analysis that has been carried out on transformational leadership variables and motivational aspects which are able to predict pro-environmental behavior. It can be seen from the calculated F value of 85,660 with a significance value of 0.000.

The three variables provide an effective contribution to pro-environmental behavior of 64.6% with the effective contribution of each variable being 43.7% from transformational leadership, 10.8% from autonomous motivation, and 10% from external motivation. This is in line with research conducted by Graves et al. (2013) conducted in China that transformational leadership is positively related to pro-environmental behavior and increased motivation, namely autonomous motivation and external motivation in employees is also positively related to increased pro-environmental behavior.

The findings of this research state that the transformational leadership variable has a significant influence on pro-environmental behavior. These results are in line with several available empirical studies where transformational leadership positively influences pro-environmental behavior in the workplace (Kura, 2016; Saleem et al, 2018). Leaders can attract their employees to carry out pro-environmental behavior by showing their charisma in front of employees, being an inspiration to employees, articulating new ideas to employees such as aspects of transformational leadership as outlined in the

questionnaire items of this research. Thus the hypothesis regarding transformational leadership influencing pro-environmental behavior can be proven.

Whitmarsh & O'Neill (2010) state that leaders have the ability to encourage their followers by explaining to them the importance of protecting the environment and taking actions that encourage their followers to adopt this behavior. This action is considered effective because followers tend to listen more to their leaders. When leaders practice pro-environmental behavior in the workplace, employees imitate this behavior because the leader serves as a role model for them in various values, communicates clearly, and develops ideas to overcome the impact of environmental problems (Roberson & Barling, 2013).

Actions taken by leaders include conveying the idea of pro-environmental behavior to their subordinates, then portraying themselves as role models by placing a lot of emphasis on environmental values and taking necessary actions to encourage their employees to elaborate prospective work practices that support the environment. (Yusoff & Ismail, 2008).

When leaders are able to inspire their employees, they begin to invest their time and effort in learning more and doing more for their organizations. A person tends to be influenced when carrying out behavior carried out by other people. Through leaders, pro-environmental behavior can be encouraged in employees because the leader is seen as someone who can broaden and elevate the interests of his followers and persuade them to achieve the leader's expectations Graves et al., 2013)

The high level of pro-environmental behavior carried out by employees in this study indirectly had an overall positive impact on the environment and the reputation of the organization (Niu et al., 2018). When employees realize the seriousness of lurking environmental problems and therefore undertake appropriate environmental protection, the intuitive benefits are reduced resource waste and save operational costs and gain competitive advantage (Roberson & Barling, 2013). Thus, apart from increasing the organization's reputation in the eyes of the public, this action is also able to brand the organization and become a role model for other organizations in preserving the natural environment. Thus, it can be proven that transformational leadership influences pro-environmental behavior.

Then, the autonomous motivation aspect shows that autonomous motivation has a significant effect on pro-environmental behavior. This is in line with several empirical studies which state that autonomous motivation shows a significant and positive relationship with pro-environmental behavior (De Groot & Steg, 2010; Afsar et al., 2016). Motivation is an important determinant of individual behavior (Gagné et al., 2010;

Deci & Ryan, 2008). Meanwhile, autonomous motivation gives rise to behavior that is considered attractive to individuals so that they consciously do it (Pelletier et al., 1999).

When someone voluntarily engages in pro-environmental behavior, they are intrinsically motivated that this behavior is important to their personal self-concept (Afsar et al., 2016). Employees whose pro-environmental behavior comes from autonomous motivation will actively engage in environmental protection behavior. Gagne et al, (2019) also stated that the strength of a person's autonomous motivation can predict how much they engage in pro-environmental behavior.

In reality, autonomous motivation has a lot of influence on employees to carry out pro-environmental behavior. This shows that employees who carry out pro-environmental behavior act of their own volition. Employees consider carrying out pro-environmental activities to be fun and they do it voluntarily. Just as stated by Hakim et al (2005), employees are more easily involved in pro-environmental behavior because of the individual's own values, goals and interests.

It is proven from the results of questionnaires distributed to employees that they carry out pro-environmental behavior because it is something they can enjoy and in doing so it comes from their own desires. Many employees are aware of the importance of protecting the environment and care about environmental conservation efforts in the workplace, such as providing innovative ideas as a starting point for conservation efforts.

In the aspect of external motivation, the results show that external motivation has a significant effect on pro-environmental behavior. This is in line with several empirical studies which state that external motivation has a positive relationship with pro-environmental behavior (Omarova & Jo, 2022; Li et al., 2020; Graves et al., 2013)

In external motivation, individuals' actions result from the belief that they should do it (Deci & Ryan, 2000; Gagné & Deci, 2005). An individual carries out an activity because of external factors (salary, threats, punishment) and also carries out an activity to maintain the ego. Employees who are externally motivated to engage in pro-environmental behavior may be trying to fulfill job requirements, gain rewards, or to avoid sanctions. Externally motivated individuals are more likely to engage in some low-cost pro-environmental behaviors such as recycling. In contrast, individuals who show stronger autonomous motivation will carry out pro-environmental behavior that is more complex or has greater costs (Deci & Ryan, 2013)

However, in reality, external motivation does have a lot of influence on pro-environmental behavior in the workplace. This shows that employees act based on external factors and maintain their ego (Lindenberg & Steg, 2007). This can happen

due to several factors, namely the existence of awards given as a condition of work which makes employees feel challenged in doing it. Then there is pressure or threats that make employees feel that this pro-environmental behavior must be carried out.

As a result of pressure and rewards, employees need to maintain their ego and avoid sanctions that have been determined as triggers for employees to carry out pro-environmental behavior. It is shown by the results of filling out the questionnaire that employees carry out pro-environmental behavior based on the fact that they are paid or allow employees to make money from pro-environmental behavior. Employees also carry out pro-environmental behavior to maintain their reputation. Thus, hypothesis 3, namely that external motivational aspects can influence pro-environmental behavior, is proven.

5. Conclusion and Implication

Based on the results of the analysis that has been carried out, it is revealed that transformational leadership has a significant influence on pro-environmental behavior. Employees tend to carry out pro-environmental behavior because they are triggered by their leaders who serve as role models. When leaders practice pro-environmental behavior in the workplace, employees emulate that behavior. Then aspects of autonomous motivation and external motivation also have a significant influence on pro-environmental behavior.

The implications of this research for individuals, especially employees who work under the auspices of an organization, are to foster a sense of belonging to the environment. For example, by holding internal organizational seminars to examine the collective role in environmental preservation. For organizational leaders to better facilitate their employees to carry out pro-environmental behavior, for example by providing an award for carrying out pro-environmental behavior as one of the conditions that must be fulfilled in work, then giving sanctions to employees who do not carry out pro-environmental activities as much as has been mutually agreed upon. These environmentally friendly activities are not only beneficial for the environment, but are also beneficial for organizations in the eyes of the community and other organizations.



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