



## Research Article

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# The Effect of Green Transformational Leadership on Organizational Citizenship Behavior in Egypt

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DOI: <https://doi.org/10.36941/ajis-2020-0081>

## Abstract

*The purpose of this paper is to investigate the effect of Green Transformational Leadership (GTL) on Organizational Citizenship Behavior (OCB) of Information Technology (IT) employees in Egypt. Significant research has been conducted to understand the influence of transformational leadership on various, yet outdated, OCB constructs. Since Corporate Social Responsibility (CSR) is closely related to OCB, this research looks at the effect of transformational leadership style, from an environmental perspective on OCB. A simple random sample consisting of 378 IT employees working for Egyptian owned organizations was studied. Spearman's rank correlation coefficient and Multiple Linear Regression Analysis were used to test the research hypotheses. The research results show that all GTL dimensions had a significant effect on all OCB dimensions. This paper makes substantial contributions in highlighting the relationships between GTL and OCB. It also adds to the critical and theoretical understandings, essential in developing green leadership styles and OCB.*

**Keywords:** Green Transformational Leadership, Corporate Social Responsibility, Information Technology Organizations, Organizational Citizenship Behavior

## 1. Introduction

OCB has been investigated for decades and was found to have a significant impact on the effectiveness and performance of organizations, groups, and units (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). In the IT sector, empirical research proves that OCB stimulates innovation and change, better knowledge-sharing, improved quality of software development, and customer satisfaction (Yen, Li, and Niehoff, 2008). Additionally, OCB is vital due to high uncertainty, the need for change and new knowledge, and high levels of stress faced by IT professionals on daily bases (Yen et al., 2008). It has been argued that IT professionals show considerably lower levels of OCB compared to non-IT professionals (Dekas, 2010). Therefore, investigating ways to inspire them to contribute to the enhancement of their organization's performance is one primary step towards gaining a competitive advantage (Dekas, 2010).

Egypt has a wide range of talented workforce working in the IT sector; this has been the key to its success and growth for years (Lalchandani, 2018). Even though the IT field has developed

noticeably in the last few years in Egypt, it still lags behind other nations in terms of growth rates. Further, IT has proven to have environmental effects, a considerably huger one than most perceive (Alem, 2009). Therefore, this sector is chosen as the study field, due to its critical role affecting every aspect of life.

CSR increases employees' commitment to the firm (Fu, Ye, & Law, 2014). Groves & LaRocca (2011) suggested that OCB-towards-the Organization is a direct result of perceived CSR activities. Additionally, according to Bass and Avolio (1994), true transformational leaders can inspire followers to perform more than their basic job requirements. Adopting this style with an environmental focus might have a substantial impact on followers' OCB. In other words, as employees perceive internal concern for the natural environment, the more likely those employees exhibit OCB (Fu et al., 2014; Abdullah & Abdul Rashid, 2012). This research examines the effect of GTL on OCB in Egyptian IT organizations.

## 2. Literature Review and Hypothesis Development

### 2.1 Green Transformational Leadership (GTL)

Scholars who were interested in examining the relationship between leadership and OCB, have frequently considered the transformational leadership style (Abdullahil, Zhiqiang, Mustafa, Antwi, & Adu, 2017). Transformational leaders motivate followers to go beyond their self-interest for the sake of the organization, or the broader community (Bass and Riggio, 2006). According to Podsakoff, Mackenzie, Moorman & Fetter (1990), transformational leaders were initially identified as those who put others' interests and values of citizenship before their own. Thus, this leadership style is others-directed by nature, making it suitable to examine with an environmental focus.

Scholars agree that human activities in organizations are the leading cause of environmental degradation (Plourde, 2017). The success of environmental efforts depends on behaviors of leaders and employees. Leaders concerned about integrating environmental management into their business techniques, realize the need for a change-oriented leadership style (Lacy, Haines, and Hayward, 2012, as cited in Robertson, 2018). To shift behavior, scholars explored how transformational leadership could alter behavior to be more environmentally friendly (Egri & Herman, 2000). Previous research concluded that GTL could increase green performance (Chen & Change, 2013).

GTL is defined as "*behaviors of leaders who motivate followers to achieve environmental goals and inspire followers to perform beyond expected levels of environmental performance*" (Chen and Chang, 2013, p. 113). GTL is the behaviors of leaders that tries to create a clear vision to motivate followers. GTL also develops followers' skills to enhance pro-environmental behaviors in the organization (Mittal and Dhar, 2016; Chen and Chang, 2013). It consists of the four dimensions of transformational leadership (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) aimed specifically at improving pro-environmental performance (Robertson, 2018).

First, in showing *idealized influence*, leaders act as role models of environmental behavior and empower followers to adopt this kind of conduct. They also develop an environmental vision that inspires followers (Robertson and Barling, 2017). Through this behavior, green leaders communicate a vision that sets standards of quality, portraying the organization as a responsible entity (Robertson & Barling, 2017). This draws a positive image in the minds of employees, stirring their devotion and commitment.

Second, leaders who exhibit *inspirational motivation* behavior, empower their followers through their energy, and idealism to defeat emotional and physical hindrances (Robertson & Barling, 2017). They motivate them to go beyond what is beneficial for themselves by engaging in pro-environmental behaviors (Robertson, 2018). This offers followers challenges and meaning to be committed and to work on shared goals (Ciulla, 1998).

Third, *intellectually stimulating* leaders inspire followers to consider environmental problems

and address them in various advanced manners, as well as question their organization's environmental practices (Robertson and Barling, 2017). It is also crucial that leaders avoid retaliation against followers for their opposing ideas. On the contrary, they should support them as they question assumptions and taken for granted beliefs. This behavior entails providing followers with a sense of security and protection, when going against the grain. In turn, followers would feel valued because their thoughts and ideas were respected (Parry & Proctor-Thomson, 2002), and more willing to put more effort than officially required.

Finally, leaders who display *individualized consideration*, build close relationships with employees to strengthen environmental values and show sympathy and compassion for followers' prosperity. They also help them build their potentials and abilities (Bass & Avolio, 1994). This behavior provides followers with positive feelings like strength, power, and pride (Blanchard and Peale, 1988, as cited in Robertson and Barling, 2013), which may reflect on their performance.

To sum up, with the rising concern for environmental sustainability, scholars started studying transformational leadership theory and environmental practices to save the environment. Behaviors by leaders that show commitment to the common good and concern for external stakeholders (the natural environment) may reflect on followers' positive behaviors like OCB.

## 2.2 Organizational Citizenship Behavior (OCB)

Many leadership scholars argued that altruism is a central part of transformational leadership, not just because it is other-directed, but also due to its ethical foundations (Bass and Steidlmeier, 1999). Furthermore, OCB has been investigated for decades and found to have a positive influence on the effectiveness and performance of organizations, groups, and units (Podsakoff et al., 2000). In the IT sector, empirical research proves that OCB stimulates innovation, change, better knowledge-sharing, quality of software development, and customer satisfaction (Yen et al., 2008).

For years, scholars presented various models and dimensions for OCB. However, the nature of the needed extra efforts and support by employees has changed. This change is due to the recently required variety of skills in the workplace, complicated problems, the new dynamic technologies, and changing customer needs (Van Dyne & LePine, 1998; Dekas, Bauer, Welle, Kurkoski, & Sullivan 2013). As a result, OCB constructs previously introduced in the literature are outdated and don't serve modern organizational needs (Dekas, 2010).

To introduce an OCB construct that fulfills those needs, Dekas et al. (2013) conducted mixed methods to determine OCB dimensions appropriate for Knowledge Workers (KW) in modern organizations. KW are those whose work relies on brains more than hands (Dekas, 2010). Lately, the KW concept includes most professional, managerial, and administrative positions.

Dekas et al. (2013) defined OCB as the "individual employees' discretionary behaviors that are helpful but not required by employers" (p. 3). They presented five categories of OCB for Knowledge Workers (OCB-KW); civic virtue, voice, helping, social participation, and employee sustainability (Dekas et al., 2013).

The first dimension in Dekas's model is civic virtue; it is a behavior that was previously introduced as an OCB dimension (Organ, Podsakoff, & MacKenzie, 2006). Dekas et al. (2013) adopted Organ's definition of civic virtue. He defined it as the "actions indicative of a macro-level interest in the organization as a whole, and the recognition of one's responsibilities as an organizational member" (Organ et al., 2006, p. 310). This dimension includes behaviors that show willingness to make constructive suggestions and improve processes for getting work done (Dekas et al., 2013).

Voice is the second dimension in OCB-KW construct. It is described in almost the same manner as the voice dimension in LePine & Van Dyne's (1998) OCB model. Consequently, Dekas et al. (2013) adopted their definition. Voice behavior involves "participating in activities, making suggestions, or speaking out with the intent of improving the organization's products, or some aspect of individual, group, or organizational functioning" (Dekas, 2010, P.66).

The third dimension of OCB-KW is helping. Organ et al. (2006) definition of helping behavior is

used in this construct. They defined it as "voluntarily helping coworkers with work-related issues or problems, or preventing the occurrence of work-related problems" (p. 308). Dekas et al. included behaviors like willingness to help others solve work-related problems, as well as helping others with heavy workloads.

The fourth dimension in Dekas's construct is social participation; it entails taking part in social activities, during the workday, that are not directly related to core job tasks. An example of behaviors representing this dimension, is participation in informal social activities with coworkers during the workday (Dekas et al., 2013).

Finally, employee sustainability for self as well as colleagues is a new dimension presented in this construct (Dekas et al., 2013). Dekas et al. defined it as the actions related to looking after or enhancing employee's own psychological and physiological wellbeing, and assisting colleagues with maintaining their health. Behaviors associated with this dimension include lifting colleagues' spirits through gestures of appreciation for their help (Dekas et al., 2013).

In short, the traditional views of OCB dimensions are no longer useful for modern organizations and especially in the IT sector. This paper targets IT organizations, where all employees are considered KW operating in highly dynamic work environments. Despite the fact, the Organ's five dimensions construct is the most widely used in the literature, this construct was developed specifically for the targeted sector, which makes it particularly relevant for this study.

### 2.3 Transformational leadership, Corporate Social Responsibility (CSR), and Organizational Citizenship Behavior (OCB)

Several scholars proved that transformational leadership, as well as CSR, have a positive effect on OCB (Groves & LaRocca, 2011; Fu et al., 2014). Scholars also reported an increase in OCB among employees, in socially responsible organizations directed toward external stakeholders, such as the natural environment (Bozkurta & Balb, 2012). In their research, Azim (2016), Abdullah & Abdul Rashid (2012), and Fu et al. (2014) claimed a positive correlation between perceived CSR, organizational commitment, employee engagement, and OCB.

CSR helps employees become emotionally attached to their organization, enjoy enhanced self-image, a greater sense of fairness, and trust. (Abdullah & Abdul Rashid, 2012; Bozkurta & Balb, 2012). Employees may feel proud as outsiders view their organization more favorably due to its volunteerism program (Timothy Coombs and Holladay, 2013). Such positive feelings may become an important drive for OCB. Further, employees might feel an obligation to reciprocate the organizations' responsible actions by engaging in OCB (Abdullah & Abdul Rashid, 2012; Azim, 2016).

Egri and Herman (2000) were the first to develop a model and define environmental leadership as "the ability to influence individuals and mobilize organizations to realize a vision of long-term ecological sustainability" (p. 572). The results of their study led them to conclude that both a transformational and a transactional style are required for an effective environmental leader driven by leaders' personal belief in the importance of nature (Egri & Herman, 2000).

While the transactional leadership style is based on utilizing resources, paying little attention to social and environmental concerns, the transformational style is considered more suitable as it includes building a vision, aligning resources, and motivating followers to accomplish common goals (Akiyama & Hanaki, 2013).

Despite the proven relationship between transformational leadership, CSR, and OCB, the relationship between GTL and OCB has not been investigated before in related literature. Little is known on how employees might respond to their leaders' GTL practices. Therefore, the following hypotheses are proposed:

- H<sub>1</sub>: There is a statistically significant effect of GTL on employees' OCB dimensions
- H<sub>a</sub>: There is a statistically significant effect of GTL on employees' civic virtue.
- H<sub>b</sub>: There is a statistically significant effect of GTL on employees' voices.
- H<sub>c</sub>: There is a statistically significant effect of GTL on employees' helping.

H<sub>4</sub>: There is a statistically significant effect of GTL on employees' employee sustainability.  
H<sub>c</sub>: There is a statistically significant effect of GTL on employees' social participation.

### 3. Research Methodology

#### 3.1 Population and Sample

The population of this study consists of employees working for IT organizations based in Egypt. According to the Information Technology Industry Development Agency (ITIDA), the total number of employees working for IT organizations in Cairo and Giza that are owned by Egyptian investors, excluding communication and contact centers, reached 25,365. The questionnaire was distributed randomly in four organizations (Egypt Middle East Information Technology, Wireless Dynamics, Link Development, and RMGs) operating in this field. The research sample was selected randomly from the research population. The sample size, according to Herbert Arkin formula, is (378) IT employees (Bishmani, 2014).

#### 3.2 Measures

The study variables were measured using previously tested standard 5 point Liker-type scale (where 1 represents strongly disagree, and 5 strongly agree).

- A 12-item scale developed by Robertson (2018), was used to measure GTL. Robertson (2018) also proved the tool's validity and reliability. Examples of items in Robertson's scale include: "My leader acts as an environmental role model" and "My leader encourages me to think about environmental issues in different ways."
- OCB was measured using Dekas et al. (2013) 23 item scale. They also presented its validation and proved its reliability. Examples of items in Dekas et al. (2013) scale include: "I keep up with organizational news (e.g., organization-wide announcements, organizational changes, etc.)", also "I volunteer for special projects in addition to my core job tasks."

To test the questionnaire's reliability and validity, calculations were conducted using Cronbach's Alpha. The values of reliability of all variables were greater than the minimum standard of 0.70. Also, validity scores were significant. This proves the questionnaire's consistency and stability.

#### 3.3 Test of Normality

In order to choose between parametric and non-parametric tests for the subsequent analyses, the Shapiro-Wilk normality test was conducted (Razali & Wah, 2011).

The Shapiro-Wilk test was calculated using the following Equation (Razali & Wah, 2011):

$$W = \frac{(\sum_{i=1}^n a_i y_i)^2}{\sum_{i=1}^n (y_i - \bar{y})^2}$$

Where:

$y_i$  is the ordered sample values,

$\bar{y}$  is the sample mean,

$a_i$  is the expected values generated for random variables pulled from a normally distributed population.

Table (1) shows the results of the Shapiro–Wilk test for the research variables.

**Table (1):** Test of Normality using Shapiro–Wilk test

Variables	Sub Variables (Dimensions)	Shapiro–Wilk test		Normality
		W	p-value	
Green Transformational Leadership	Idealized influence	0.884	0.000	Not Normal
	Inspirational motivation	0.880	0.000	Not Normal
	Intellectual stimulation	0.945	0.000	Not Normal
	Individualized consideration	0.957	0.000	Not Normal
Organizational Citizenship Behavior	Civic Virtue	0.927	0.000	Not Normal
	Voice	0.850	0.000	Not Normal
	Helping	0.933	0.000	Not Normal
	Employee Sustainability	0.911	0.000	Not Normal
	Social Participation	0.781	0.000	Not Normal

**Source:** Own survey

From Table (1), the Shapiro-Wilk test indicated that all variables are not normally distributed, because the *p*-value of Shapiro-Wilk is less than the significance level (*p*-value = 0.000 <  $\alpha$  = 0.05). Thus, Non-Parametric tests are a suitable choice for this research. As a result, Spearman's rank correlation coefficient and Multiple Linear Regression Analysis were conducted. Regression Analysis was conducted using the Stepwise Regression method.

### 3.4 Descriptive Statistics

In order to access and confirm the general trend of the sample's opinion, the following were calculated

- The mean
- Standard deviation.
- Median
- The Wilcoxon signed-rank test

Table (2) shows the Mean, Standard Deviation, Median, and Wilcoxon signed-rank for the research variables.

**Table (2):** Descriptive Statistics and Wilcoxon Signed-Rank test

Variables	Sub Variables	Descriptive Statistics			Wilcoxon Signed-Rank test
		Mean	SD	Median	p-value
Green Transformational Leadership	Idealized influence	2.7257	0.8021	2.6667	0.000
	Inspirational motivation	3.1852	0.7391	3.0000	0.000
	Intellectual stimulation	2.9974	0.9609	3.0000	0.625
	Individualized consideration	3.0194	0.9173	3.0000	0.962
Organizational Citizenship Behavior	Civic Virtue	2.7270	0.8887	2.8000	0.000
	Voice	3.2335	0.6704	3.0000	0.000
	Helping	3.1927	0.7955	3.1667	0.000
	Employee Sustainability	3.2044	0.7510	3.0000	0.000
	Social Participation	2.5198	1.1182	2.0000	0.000

**Source:** Own survey

Table (2) shows that the Mean and Median values were greater than or very close to 3. Therefore it can be concluded that the sample's opinions tend to agree about the variables. On the other hand, values for social participation were significantly lower than 3; this means that the sample disagreed about this variable. While Wilcoxon test for social participation shows that the median is significantly different from 3, as the  $p$ -value of the Wilcoxon test is less than 5% ( $p$ -value = 0.000 <  $\alpha$  = 0.05) for most of the variables.

However, intellectual stimulation and individualized consideration median values were very close to 3. The Wilcoxon test ensured that whereas the  $p$ -value was greater than the 5% ( $p$ -value >  $\alpha$  = 0.05). Therefore, it is concluded that the sample had a neutral opinion about them.

In Table (2), it is clear that the general trend for the sample's opinions for all the variables tends to agree, as Mean and Median values were higher than or very close to 3. While the Mean and Median values for social participation was significantly lower than 3, this means that the sample disagreed about it.

Moreover, Wilcoxon test shows that the median is significantly different from 3 as the  $p$ -value of Wilcoxon test is less than 5% ( $p$ -value = 0.000 <  $\alpha$  = 0.05) for most of the variables. Nevertheless, the Wilcoxon test suggested that intellectual stimulation and individualized consideration median values were not significantly different from 3. This means that the sample's opinion was neutral about them.

### 3.5 Analyses to Test Hypotheses

In this section, some statistical techniques were conducted to study the effect of Green Transformational Leadership on Organizational Citizenship Behavior.

#### 3.5.1 First: Calculating Spearman's rank the correlation coefficient

Table (3) shows a significant relationship between all the independent and dependent variables included in the research hypotheses, the  $p$ -values of all the correlation coefficients are less than the significance level at 5% and 10% ( $p$ -value = 0.000 <  $\alpha$  = 0.05).

**Table 3:** Spearman Correlation between Green Transformational Leadership dimensions and Organizational Citizenship Behavior dimensions.

GTL	Correlation	Organizational Citizenship Behavior				
		Civic Virtue	Voice	Helping	Employee Sustainability	Social Participation
Idealized influence	$R$	0.562	0.312	0.297	0.230	0.455
	$p$ -value	0.000	0.000	0.000	0.000	0.000
Inspirational motivation	$R$	0.295	0.307	0.332	0.240	0.391
	$p$ -value	0.000	0.000	0.000	0.000	0.000
Intellectual stimulation	$R$	0.307	0.322	0.359	0.384	0.329
	$p$ -value	0.000	0.000	0.000	0.000	0.000
Individualized consideration	$R$	0.284	0.366	0.409	0.406	0.313
	$p$ -value	0.000	0.000	0.000	0.000	0.000

**Source:** Own survey

#### 3.5.2 Second: Conducting Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted using the Stepwise Regression method. Table (4) shows the Multiple Correlation Coefficient ( $r$ ), Coefficient of Determination ( $r^2$ ), Adjusted Coefficient of Determination (Adjusted  $r^2$ ), Standard Error of the Estimate (S.E.), and ANOVA table. Moreover,

Table (5) shows the t-test, Regression Coefficients, Beta Coefficients, and Collinearity Diagnosis.

**Table 4:** Regression Model Summary of the relationship between Green Transformational Leadership and Organizational Citizenship Behavior

Dependent variables	R	r <sup>2</sup>	Adjusted r <sup>2</sup>	S.E.	ANOVA table	
					F	p-value
Civic Virtue	0.633	0.400	0.394	0.69185157	62.260	0.000
Voice	0.544	0.295	0.288	0.56578161	39.095	0.000
Helping	0.545	0.297	0.290	0.6702839	39.490	0.000
Employee Sustainability	0.581	0.338	0.331	0.61444480	47.562	0.000
Social Participation	0.685	0.469	0.463	0.81928554	82.305	0.000

Source: Own survey

**Table 5:** Model Coefficients and t-test of the relationship between Green Transformational Leadership and Organizational Citizenship Behavior

Dependent variables	Variables	Coefficients		Beta	t-test		Collinearity
		Value	S.E.		t	p-value	VIF
Civic Virtue	Constant	0.050	0.184	----	0.275	0.784	----
	Idealized influence	0.436	0.049	0.394	8.990	0.000	1.192
	Inspirational motivation	0.208	0.054	0.173	3.845	0.000	1.255
	Intellectual stimulation	0.140	0.045	0.151	3.087	0.002	1.489
	Individualized consideration	0.135	0.048	0.139	2.809	0.005	1.532
Voice	Constant	1.489	0.150	----	9.911	0.000	----
	Idealized influence	0.157	0.040	0.188	3.963	0.000	1.192
	Inspirational motivation	0.143	0.044	0.157	3.229	0.001	1.255
	Intellectual stimulation	0.139	0.037	0.199	3.745	0.000	1.489
	Individualized consideration	0.148	0.039	0.202	3.757	0.000	1.532
Helping	Constant	1.128	0.178	----	6.338	0.000	----
	Idealized influence	0.225	0.047	0.227	4.794	0.000	1.192
	Inspirational motivation	0.146	0.052	0.136	2.792	0.006	1.255
	Intellectual stimulation	0.161	0.044	0.195	3.681	0.000	1.489
	Individualized consideration	0.166	0.047	0.191	3.564	0.000	1.532
Employee Sustainability	Constant	1.258	0.163	----	7.710	0.000	----
	Idealized influence	0.106	0.043	0.113	2.465	0.014	1.192
	Inspirational motivation	0.123	0.048	0.121	2.561	0.011	1.255
	Intellectual stimulation	0.251	0.040	0.321	6.247	0.000	1.489
	Individualized consideration	0.170	0.043	0.208	3.979	0.000	1.532
Social Participation	Constant	-1.329	0.218	----	-6.109	0.000	----
	Idealized influence	0.434	0.057	0.312	7.562	0.000	1.192
	Inspirational motivation	0.517	0.064	0.342	8.084	0.000	1.255
	Intellectual stimulation	0.158	0.054	0.135	2.942	0.003	1.489
	Individualized consideration	0.181	0.057	0.148	3.176	0.002	1.532

Source: Own survey

### 3.5.3 Multiple Linear Regression Analysis for the research hypotheses

Tables (4) & (5) illustrate that there is statistically significant effects of the independent variables on the dependent variables at 5% significant level, according to the Stepwise Regression method, whereas the p-value of the t-test is less than the significant level (p-value < α = 0.05). Moreover, the



regression model was statistically significant, with a 5% significance level. The difference between  $r^2$  and adjusted  $r^2$  is small. So,  $r^2$  increases because the independent variables are good predictors of the dependent variables, not just because of the total of the independent variables included. The collinearity test shows that the relationships between the independent variables do not negatively affect the regression model because the VIF values for these variables are less than 10. This means that the regression model is a good one. These conclusions are correct for all sub-variables in the above tables.

Tables (4) and (5) indicate the following:

1. There is a statistically significant effect of Idealized influence, Inspirational Motivation, Intellectual Stimulation, and Individualized consideration on Civic Virtue. Since the  $p$ -value of F-test, shown in Table (5), is less than the significant level ( $F = 62.260$ ,  $p\text{-value} = 0.000 < \alpha = 0.05$ ). These variables are also moderately correlated with *Civic Virtue*, with a value of Multiple Correlation Coefficient (0.633). They can together account for approximately 40% of changes in *Civic Virtue*, while the remaining 60% may be due to other unaddressed factors.
2. There is a statistically significant effect of Idealized influence, Inspirational motivation, Intellectual Stimulation, and Individualized consideration on Voice. Where the  $p$ -value of F-test is less than the significant level ( $F = 39.095$ ,  $p\text{-value} = 0.000 < \alpha = 0.05$ ). These variables are moderately correlated with Voice, with a value of Multiple Correlation Coefficient (0.544). Furthermore, these variables can together account for approximately 29.5% of changes in Voice, while the remaining 70.5% may be due to other unmentioned factors.
3. There is a statistically significant effect of Idealized influence, Inspirational motivation, Intellectual Stimulation, and Individualized consideration on *Helping*. In Table (5), the  $p$ -value of F-test is less than the significant level ( $F = 39.490$ ,  $p\text{-value} = 0.000 < \alpha = 0.05$ ). These variables are moderately correlated with *Helping*, with Multiple Correlation Coefficient of (0.545). Moreover, these independent variables can together account for approximately 29.7% of changes in *Helping*, while the remaining 70.3% may be due to other factors.
4. There is a statistically significant effect of Idealized influence, Inspirational motivation, Intellectual Stimulation, and Individualized consideration on Employee Sustainability. In the regression model, the  $p$ -value of F-test is less than the significant level ( $F = 47.562$ ,  $p\text{-value} = 0.000 < \alpha = 0.05$ ). These variables are moderately correlated with *Employee Sustainability*, with a value of Multiple Correlation Coefficient (0.581). Together these independent variables account for approximately 33.8% of changes in *Employee Sustainability*, while the remaining 66.2% may be due to other factors.
5. There is a statistically significant effect of Idealized influence, Inspirational motivation, Intellectual Stimulation, and Individualized consideration on Social Participation. In the regression model, the  $p$ -value of F-test is less than the significant level ( $F = 82.305$ ,  $p\text{-value} = 0.000 < \alpha = 0.05$ ). These variables are moderately correlated with *Social Participation*, with a value of Multiple Correlation Coefficient (0.685). Besides, these variables can together account for approximately 46.9% of changes in Social Participation, and the remaining 53.1% may be due to other factors not mentioned in this study.

#### 4. Research Discussion

The statistical analysis demonstrated that GTL (Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration) had a significant positive effect on OCB (Civic Virtue, Voice, Helping, Employee Sustainability, and Social Participation). First, all GTL dimensions had a significant effect on employees' civic virtue dimension of OCB. Idealized influence significant effect on civic virtue is supported by Abdullahil et al. (2017), who pointed out that a transformational leader who represents a role model to followers, will positively influence their civic virtue. In addition, according to Graham (1995), leaders who show concern for stakeholders can

encourage their followers' civic virtue.

In accordance with Podsakoff et al. (2000) findings, this research found a significant effect of inspirational motivation on civic virtue. Leaders who inspire followers to engage in pro-environmental behavior, direct employees' behaviors towards civic virtue. This contradicts Nahum-Shani & Somech (2011) research, which showed no influence between inspirational leaders and followers' actions that benefit the organization as a whole.

The results also show that intellectual stimulation had a significant effect on civic virtue. Related research showed that, in an environment high in social responsibility, employees become eager to take more responsibilities towards achieving the overall goals of the organization (Abdullahil et al., 2017). Besides, leaders who inspire diversity and dissent to encourage continued learning results in more civic virtue by followers (Drake & Baasten, 1990; Graham, 1995).

Further, individualized consideration, as perceived by employees, has a significant effect on their civic virtue. This finding is in line with earlier research proving that the support and inspiration to care for the natural environment, increases followers' trust and loyalty to the organization showing more civic virtue (Deluga, 1998). According to Bass & Avolio (1994), Bass (1985) claimed that followers who are inspired by their leader's vision of a better state of affairs, would also invest extra effort in the organization.

Second, all dimensions of GTL had statistically significant relationships with the employees' voice dimension of OCB. Idealized influence significant effect on employees' voices is congruent with previous research proving that leaders who personally have a vision for the social good, stimulate positive emotions such as pride and enthusiasm in followers. Those kinds of feelings lead to voice behavior (Zhang & Inness, 2019; Wang, Sun, & Liu, 2019). Leaders' perceived commitment to the natural environment leads to the increased willingness of followers to voice ideas that benefit the organization.

Besides, inspirational motivation had a significant effect on employees' voice behavior. Green inspirational leaders motivate followers to enhance their environmental performance. As a result, followers reciprocate this enthusiasm for the greater good by providing ideas that would improve organizational performance. This finding concurs with Liang, Chang, Ko & Lin, (2017) research results that showed a relationship between inspirational motivation and creative ideas offered by followers.

Additionally, intellectual stimulation had a positive relationship with voice behavior. Green leaders encourage followers to think about new ways to improve their environmental performance. As a result, followers are motivated to communicate those ideas and any other idea that contributes to organizational success. This is also supported by research suggesting that transformational leaders inspire employees to think about current situations and problems in a new light. Followers, in response, are motivated to voice new perspectives and points of view (Detert and Burris, 2007). Yet, this finding contradicts Podsakoff et al. (2000), who explained that intellectual stimulation could lead to role ambiguity conflict. This is not the case in the IT sector, as most employees are highly intelligent with a high degree of intelligence quotient.

Further, individualized consideration had a statistically significant effect on the employees' voices. Leader's belief in their followers' abilities to improve the organization's environmental performance, leads to more voice behavior by followers. This finding is supported by Ilkhanizadeh & Karatepe (2017). They indicated that in organizations, where protecting the natural environment is a corporate social responsibility, employees contribute to the organization through voice behavior. Additionally, Qi & Ming-Xia (2013) and Van Dyne, Graham, & Dienesch (1994) proposed that leaders focusing on promoting followers skills results in diminished fear associated with sharing different views and ideas. This helps employees pay more attention to their goals rather than their insecurities (Shamir, House, & Arthur, 1993).

Third, all GTL dimensions had a statistically significant effect on employees' helping dimension of OCB. Idealized influence significant effect on helping behavior is supported by Zhu & Akhtar (2014). They explained that followers' perception of leaders as role models creates trust, respect, and faith between them; this leads to increased helping behavior between coworkers. Helping behavior

towards coworkers was viewed as a way of fulfilling an obligation to reciprocate leaders' commitment to the greater good (Aryee, Budhwar, & Chen, 2002). Followers with high prosocial motivation are more willing to reciprocate their sense of confidence about leaders' decisions and actions (Zhu & Akhtar, 2014).

Additionally, inspirational motivation had a statistically significant effect on helping behavior. Inspirational leaders create an atmosphere of passion and hope for the future of the organization's environmental performance. Therefore, followers are encouraged to help others as they realize the importance of their effort. This is consistent with previous research, indicating that inspirational leadership gives employees a sense of value, which stimulates helping behavior (Abdullahil et al., 2017). When leaders set inspirational goals, employees are likely to engage in helping behavior (Zehir, Müceldili Altındağ, Şehitoğlu, & Zehir, 2014).

Likewise, intellectual stimulation had a statistically significant effect on helping behavior. This finding agrees with Lin & Hsiao (2014), who showed that helping behavior is inspired when followers feel that their leaders actually encourage them and their colleagues to be as creative as possible. In their research, the relationship between intellectual stimulation and followers' intention to share knowledge (a form of helping behavior) showed a significantly positive correlation.

Moreover, individualized consideration had a statistically significant effect on helping. Leaders show recognition and support to each follower's abilities to improve the organization's environmental performance and appreciate their individual contributions. Followers are thus, inspired to help each other. This result is in line with related research that showed that individualized consideration had a significant effect on altruism (Abdullahil et al., 2017). Scholars also proposed that helping behavior is an integral part of transformational leadership, specially individualized consideration (Grant, 2012).

Fourth, all GTL dimensions had a significant effect on employees' sustainability. The analyses show that idealized influence had a statistically significant effect on employees' sustainability. Leaders' commitment towards environmental performance, creates awareness among followers about their health and wellbeing. This finding concurs with Corrigan, Diwan, Campion, & Rashid (2002). They proved that idealized influence was found to have a negative relationship with emotional exhaustion, which harms followers' wellbeing.

Besides, Corrigan et al. also found a negative relationship between inspirational motivation and emotional exhaustion, thus enhancing followers' health and well-being. This coheres with the finding of the current research that proved a significant effect of inspirational motivation on followers' sustainability. Leaders' inspirational motivation encourages followers to achieve more than what was once thought possible for the whole society. Followers then feel that they can overcome psychological setbacks and potential problems. This gives them confidence and self-esteem, contributing to their wellbeing.

Next, intellectual stimulation had a statistically significant effect on followers' wellbeing. Through this behavior, followers sense an autonomy to come up with their ideas about an important universal matter like the natural environment. This may also result in confidence to develop and protect their wellbeing. This finding is in line with Corrigan et al. (2002) research, who proved that intellectual stimulation had a significant effect on personal accomplishment. However, this contradicts Zineldin & Hytter (2012), who found a negative relationship between intellectual stimulation and wellbeing. They assumed this to be due to the stress and confusion that could emerge when taken for granted ideas are questioned. As mentioned before, this is not the case in the IT sector, as most of the IT workforce is highly intelligent with high educational degrees.

Moreover, individual consideration had a significant effect on employees' sustainability. Transformational leaders show care and support for each follower's needs and their environmental performance. As a result, followers' wellbeing improves, showing more passion for others health. This finding concurs with Abdullahil et al. (2017), Zineldin & Hytter (2012), and Corrigan et al., (2002) findings. They showed that individualized consideration is the degree to which leaders show genuine interest empathy and guidance in followers' personal wellbeing.

Fifth, all GTL dimensions had a significant effect on employees' social participation. Idealized

influence had a statistically significant effect on employee's social participation. Followers are keen to participate in informal social activities, as they perceive leaders' commitment and integrity to enhance the organization's environmental performance. This finding agrees with El-Kassar, Yunis, & El-Khalil (2017) research. They demonstrated that management involvement in stakeholder and society enhancement could reflect on employees' responses in terms of promoting better relationships with coworkers. Followers who experience their leaders' positive behaviors may well perceive themselves to be alike and form closer relationships (Li & Hung, 2009).

Furthermore, inspirational motivation had a significant effect on employees' social participation. Inspirational leaders are optimistic and passionate about organizational environmental performance. As followers' attention shifts to a higher and noble goal, they perceive the similarity between them, developing friendship ties. This finding concurs with previous research findings that show that inspirational motivation eliminates envy or hatred, creating harmony and friendliness (Kohan, Safari, & Teimouri, 2018). This is due to inspirational motivation behavior that creates open channels between followers. (Abdullahil et al., 2017). Such positive emotions develop an atmosphere of trust and social cohesion that helps employees relate to each other (Oades, Steger, Fave, and Passmore, 2017).

Leaders' perceived intellectual stimulation also had a statistically significant effect on employees' social participation. As leaders encourage creative ideas to improve environmental performance, followers get closer to each other developing friendships. This finding agrees with previous research, which proposed that intellectual stimulation results in more frequent collaboration and communication between employees. This collaboration increase cohesion and social ties between employees (Wang & Walumbwa, 2007).

Finally, individualized consideration had a statistically significant effect on employees' social participation. Leaders exhibiting individualized consideration encourage followers through support and care to attain an environmental vision, thus encouraging followers to develop personal relationships. Bass & Avolio (1994) mentioned that one way to enhance emotional and social bonds is through shared vision, shared values, and collective goals. Li & Hung (2009) research supports this finding. Their study shows that through individualized consideration, leaders include those who are less involved, creating strong social ties between them. When employees are all active participants in the organization, they develop social cohesion and friendships. Also, the relationship between followers and transformational leaders extends to relationships between followers. In other words, followers who share the same type of connection with a leader, tend to associate with each other (Kohan et al., 2018).

## 5. Recommendations

The significant effect of GTL on OCB among employees provides promising implications for CEOs, top managers, leaders, supervisors, and Human Resources (HR) Departments. Adopting a leadership style that facilitates the expression of OCB would prove useful, considering the importance of OCB with its desirable and numerous consequences (Harvey et al., 2018; Dekas, 2010). Moreover, through GTL, organizations would enjoy improved CSR as well as organizational image.

### 5.1 Recommendations for the Chief Executive Officers (CEOs)

- CEOs should disseminate knowledge of their organizational environmental objectives and strategies, through diverse channels and embed these concepts into all processes and platforms.
- CEOs should encourage all organizational levels to participate in articulating environmental vision and strategies. Involving managers as well as bottom-line employees in this process could help them have a sense of ownership and shared responsibility.

## 5.2 Recommendations for the Human Resources (HR) Department

- The HR department should include specific environmental skills and knowledge levels into the selection process, by adding them to job requirements and pre-employment assessments.
- HR specialists should follow up with seniors and managers about all operations and procedures to ensure environmental measures are correctly followed. This is also important to locate areas of improvement and training needs.
- The training and development specialists along with supervisors should develop training programs to improve leaders' environmental and transformational skills. This type of training should help leaders acquire transformational leadership abilities, adopt environmental best practices, encourage followers to accept variously and opposing opinions, understand the Egyptian environmental legislations, ...etc.

## 6. Research Limitations

This research had a few limitations that need to be addressed. First, the research sample consisted of IT employees surveyed using self-reporting questionnaires, which imposes the risk of bias. This bias could be due to the tendency to present a desirable self-image, fear of retaliation, situational pressure, etc. (Donaldson and Grant-Vallone, 2002). Second, this research included IT organizations owned by Egyptian investors; results may have varied if the sample included foreign organizations due to cultural variances and organizational sizes. This study focused on organizations based in Cairo and Giza governorates, which may limit the generalization of the results. Finally, this research was conducted from the year 2018 to 2020.

## 7. Suggestions for Future Research

1. Explore the effect of GTL on other dependent variables like employees' commitment, engagement, turn-over rates,...etc.
2. In order to avoid response bias, future research could add supervisor-rating and co-worker-rating to measure the research variables.
3. Examine the mediating effect of organizational ethical culture and climate on the relationship between GTL and OCB.
4. Explore methods and strategies to foster GTL.
5. Apply the study on different developing countries and sectors.

## 8. Conclusion

This study's aim was to investigate the effect of GTL on the OCB of IT employees. Four IT organizations owned by Egyptian investors in Cairo and Giza were studied (Link Development, Egypt Middle East Information Technology, Wireless Dynamics, and RMGS). A simple random sample was selected to fill a self-administrate questionnaire. The questionnaire was distributed on 378 participants and further validated and statistically analyzed.

The findings of this research showed that all GTL dimensions had a significant effect on employee OCB dimensions. Efforts initiated by leaders to benefit the whole society can, if perceived well by employees, prompt behaviors that exceed the job's initial requirements. The research discussion and recommendations were explored to benefit and enhance IT employees' performance in Egypt. It provided a full understanding of GTL and its effect on OCB. This way, managers in IT organizations will be able to use all these research findings to motivate employees to adopt pro-environmental behaviors and engage in OCB. In short, this research results suggest that GTL style is a critical factor in stimulating work environment that contributes to OCB.

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