

Eurasian Studies in Business and Economics 20
Series Editors: Mehmet Huseyin Bilgin · Hakan Danis

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Hakan Danis
Ender Demir
Gokhan Karabulut *Editors*

Eurasian Business and Economics Perspectives

Proceedings of the 33rd Eurasia
Business and Economics Society
Conference



Springer

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Eurasian Business and Economics Perspectives

Proceedings of the 33rd Eurasia Business
and Economics Society Conference

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Preface

This is the 20th issue of the Springer's series **Eurasian Studies in Business and Economics**, which is the official book series of the Eurasia Business and Economics Society (EBES, www.ebesweb.org). This issue includes selected papers presented at the 33rd EBES Conference - Madrid that was held on October 7–9, 2020. The conference was jointly organized with the *Faculty of Economics and Business, UNED* with the support of the *Istanbul Economic Research Association*. Due to the COVID-19 pandemic, the conference presentation mode has been switched to “online/virtual presentation only.”

We are honored to have received top-tier papers from distinguished scholars from all over the world. We regret that we were unable to accept more papers. In the conference, 164 papers were presented and 338 colleagues from 48 countries attended the online conference. **Jonathan Batten** from RMIT University, Australia; **Klaus F. Zimmermann** from EBES, GLO, UNU-MERIT and Maastricht University, the Netherlands; and **Marco Vivarelli** from Università Cattolica del Sacro Cuore in Milano, Italy, joined the “Editor’s Panel Session” on “How to publish in WoS journals.” Moreover, we organized the “Keynote Session” entitled “*Global Financial Sector in the Post COVID-19 area*” with **Steven Ongena**, University of Zurich, Switzerland; **José María Labeaga** from National Distance Education University (UNED), Spain; **Ricardo Gimeno** from the Banco de España, Spain; **M. Kabir Hassan** from the University of New Orleans, USA; and **Amine Tarazi** from Université de Limoges, LAPE, France.

In addition to publication opportunities in EBES journals (*Eurasian Business Review* and *Eurasian Economic Review*, which are also published by Springer), conference participants were given the opportunity to submit their full papers for this issue. Theoretical and empirical papers in the series cover diverse areas of business, economics, and finance from many different countries, providing a valuable opportunity to researchers, professionals, and students to catch up with the most recent studies in a diverse set of fields across many countries and regions.

The aim of the EBES conferences is to bring together scientists from business, finance, and economics fields, attract original research papers, and provide them

with publication opportunities. Each issue of *the Eurasian Studies in Business and Economics* covers a wide variety of topics from business and economics and provides empirical results from many different countries and regions that are less investigated in the existing literature. All accepted papers for the issue went through a peer review process and benefited from the comments made during the conference as well. The current issue is entitled *Eurasian Business and Economics Perspectives* and covers fields such as human resources management, management, marketing, finance, and regional studies.

Although the papers in this issue may provide empirical results for a specific country or regions, we believe that the readers would have an opportunity to catch up with the most recent studies in a diverse set of fields across many countries and regions and empirical support for the existing literature. In addition, the findings from these papers could be valid for similar economies or regions.

On behalf of the series editors, volume editors, and EBES officers, I would like to thank all the presenters, participants, board members, and keynote speakers, and we are looking forward to seeing you at the upcoming EBES conferences.

Best regards

Istanbul, Turkey

Ender Demir

Eurasia Business and Economics Society (EBES)

EBES is a scholarly association for scholars involved in the practice and study of economics, finance, and business worldwide. EBES was founded in 2008 with the purpose of not only promoting academic research in the field of business and economics but also encouraging the intellectual development of scholars. In spite of the term “Eurasia,” the scope should be understood in its broadest terms as having a global emphasis.

EBES aims to bring worldwide researchers and professionals together through organizing conferences and publishing academic journals and increase economics, finance, and business knowledge through academic discussions. Any scholar or professional interested in economics, finance, and business is welcome to attend EBES conferences. Since our first conference in 2009, around 13,749 colleagues from 99 countries have joined our conferences and 7729 academic papers have been presented. **EBES has reached 2541 members from 87 countries.**

Since 2011, EBES has been publishing two journals. One of those journals, *Eurasian Business Review*—*EABR*, is in the fields of industrial organization, innovation, and management science, and the other one, *Eurasian Economic Review*—*EAER*, is in the fields of applied macroeconomics and finance. Both journals are published quarterly by *Springer* and indexed in *Scopus*. In addition, *EAER* is indexed in the *Emerging Sources Citation Index* (*Clarivate Analytics*), and *EABR* is indexed in the *Social Science Citation Index (SSCI)* with an impact factor of 3.5 as of 2020.

Furthermore, since 2014 Springer has started to publish a new conference proceedings series (**Eurasian Studies in Business and Economics**) which includes selected papers from the EBES conferences. The series has been indexed by **SCOPUS**. In addition, the 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th (Vol. 2), 21st, and 24th EBES Conference Proceedings have already been accepted for inclusion in the *Conference Proceedings Citation Index—Social Science & Humanities (CPCI-SSH)*. Other conference proceedings are in progress.

We look forward to seeing you at our forthcoming conferences. We very much welcome your comments and suggestions in order to improve our future events. Our success is only possible with your valuable feedback and support!

With my very best wishes,

Klaus F. Zimmermann
President

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Part I
Eurasian Business Perspectives: Human
Resources Management

A Qualitative Study of Factors Influencing Employee Ecological Behavior of Academics in Higher Education



Mohd Yusoff Yusliza, Zikri Muhammad, Khalid Farooq,
Wan Zulkifli Wan Kassim, and Muhamad Khalil Omar

Abstract Employee ecological behavior (EEB) of academics has emerged as the most crucial factor for facilitating universities to move towards being low-carbon campuses. The purpose of this study was to determine how EEB is influenced by other factors so as to enhance academics' environmentally friendly behavior at Malaysian universities for sustainability. The study used the qualitative method. Data were collected through semi-structured face-to-face interviews with focus group academics of Malaysian top four universities. Based on the themes observed from the interview transcripts, the factors influencing EEB of academics were organizational factors (green top management support and green organizational climate), environmental factors (environmental knowledge, environmental attitude, environmental consciousness, and environmental awareness) and individual factors (green mindfulness and green self-efficacy). The scope of this study was limited to public research universities in Malaysia. Future studies may explore other variables that may further influence EEB. The study's findings may form the basis for drafting policies that will help enhance academics' environmentally friendly behavior. Research on EEB in Malaysia has been very limited. This study contributes to the current literature by providing a discussion on how academics' EEB is influenced by environmental, organizational, and individual factors. High academics' EEB will facilitate universities to become more sustainable and environmentally friendly.

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Keywords Universities · Employee ecological behavior · Organizational factors · Environmental factors · Individual factors · Malaysia

1 Introduction

Today's environmental degradation has been caused by various factors, including natural disaster, climate change, and depletion of natural resources through human activities, such as excessive cutting of trees (Rezai et al., 2016). To mitigate the problem, many countries and organizations have pledged to different global movements and implemented policies to encourage environmentally friendly behavior. For example, Malaysia, through its 11th and 12th national plans, has joined the global initiatives to become more sustainable (Sim & Putuhena, 2015). Promoting a green culture and employee behaviors that eliminate or reduce harm to the environment have been shown to be beneficial for organizations and essential for societies (Rayner & Morgan, 2017). These initiatives include reduction of carbon emission, usage of electricity, office materials, and appropriate recycling (Fawehinmi et al., 2020). When employees' environmental competencies are enhanced, there will be a higher likelihood of organizations achieving environmental performance (Dumont et al., 2017; Fawehinmi et al., 2020; Leidner et al., 2019).

One of the contributors to environmental degradation is higher education institutions. Most of these institutions are being operated as business organizations or as "small cities," with large and various complex activities taking place in their campuses, creating serious direct and indirect impacts on the environment (Alshuwaikhat & Abubakar, 2008). For example, the use of the large network of transportations, extensive energy, different chemicals in the laboratories, and the large quantity of paper, coupled with improper waste disposal and water supply circulation, has led to an alarming rise in carbon emission (Yañez et al., 2020). At the same time, higher education institutions have the responsibility of shaping the nations (Lozano, 2006), training the next generation's leaders, decision-makers, and managers (Alshuwaikhat & Abubakar, 2008). As such, it is important for the institutions to integrate sustainability (Yuriev et al., 2020) and move towards being low-carbon campuses. Achieving this goal of low-carbon emission and proper utilization of resources requires a high level of employee ecological behavior (EEB) among their employees, especially the academics (Fawehinmi et al., 2020). EEB refers to a set of behaviors that support the protection and management of environmental initiatives (Zhang et al., 2019). Examples of these behaviors include double-side printing, recycling, and turning off the lights (Fawehinmi et al., 2020; Yuriev et al., 2020). There are different levels of EEB at the workplace, which may be in-role or extra-role behavior (Dumont et al., 2017). These maybe shaped by several factors, including organizations' sustainability policies (Norton et al., 2014).

Due to their inefficient environmental performances, higher education institutions have begun to shift their focus away from recycling and upgrading their technological advancement towards employees' behavioral change (Anwar et al., 2020). In

addition, Cho (2019) has argued for the need to investigate the EEB of academics. However, despite the awareness of the importance of EEB in the achievement of the institutions' environmental performance, research on the factors influencing EEB has been very little. Furthermore, to the best of our knowledge, studies that examined the antecedents of EEB of academics in Malaysian higher education have not yet been conducted. Therefore, the purpose of this study was to determine the factors that influence EEB of academics in Malaysian higher education.

This study advanced the knowledge of EEB in threefold. First, the study extended the understanding of how different factors may influence EEB. Secondly, the study filled the gap by investigating the impact of individuals' capabilities to perform EEB. For example, employees with more green self-efficacy will be more likely to involve themselves in EEB, as suggested by Kim et al. (2019). As for higher education institutions, by focusing on the green self-efficacy of their academics, they may be able to set up more acceptable practices for green behaviors. Thirdly, the study focused on green behavior at workplace, which added new knowledge about academics' green behaviors at higher education institutions. This concept has long been suggested for further attention (Anwar et al., 2020; Fawehinmi et al., 2020).

The remaining sections of the paper comprise of literature review of studies related to the EEB, and their relationship with organizational, environmental and individual factors. The literature review will be followed by the theoretical background of the study. After that, in the methodology section, the research method and sample and data collection, and data analysis has been discussed. After the discussion on methodology, the results of the analysis are presented and interpreted in the next section. Implications, research limitations, future research directions, and conclusions are summarized subsequently.

2 Literature Review

2.1 *Employee Ecological Behavior*

Employee ecological behavior (EEB) is defined as "scalable actions and behaviors that employees engage in, or bring about, that are linked with, and contribute to, environmental sustainability" (Ones & Dilchert, 2012, p. 456). Such behaviors are considered as secondary to work and require motivational factors to trigger (Norton et al., 2014). Work-related green behavior differs from general pro-environmental behavior, which is mostly considered as general behavior or behavior at home (Stern, 2000). Norton et al. (2015) divide EEB into two categories, namely required EEB and voluntary EEB. Required EEB refers to the behavior performed by employees as part of job duties, which require completion similar to task performance. Voluntary EEB is related to exceeding organizational expectations and is similar to organizational citizenship behavior for the environment (Norton et al., 2015). Factors influencing EEB in the workplace have not been extensively studied (Dumont et al., 2017; Fawehinmi et al., 2020; Kim et al., 2019; Norton et al., 2015).

Individuals' green behavior at work may differ from their green behavior at home, so the antecedents of their environmental behaviors at work and at home maybe different (Davis et al., 2019). This means that factors that influence their green behaviors at home may be not effective at the workplace (Kim et al., 2014). Furthermore, research on EEB has mostly focused on the organizational level factor (Dumont et al., 2017; Fawehinmi et al., 2020). Dumont et al. (2017) have argued that factors of EEB should be examined at both individual and organizational levels.

2.2 *Environmental Factors That Influence EEB*

2.2.1 Environmental Attitude

Attitude is linked with individuals' decision-making process and also their behavior (Ajzen, 1991; Lin, 2013). Environmental attitude of individuals is one of the factors that influence their green intentions or environmental activities (Han et al., 2019). Individuals with pro-environmental attitude are more likely to practice green behavior and are willing to accept possible inconveniences related to the green behavior (Mi et al., 2019).

2.2.2 Environmental Awareness

Humans are inherently always aware of the environment (Kollmuss & Agyeman, 2002). Environmental awareness can be defined as the capability of individuals to integrate sensation from the environment and its problems with targeted goals in order to be environmentally friendly (Fu et al., 2020). Various studies have found positive relationships between environmental awareness and green behaviors (Kikuchi-Uehara et al., 2016; Lillemo, 2014; Ozaki & Sevastyanova, 2011).

2.2.3 Environmental Knowledge

Environmental knowledge refers to the factual information that an individual has about the ecology of the planet and the effects of human activities on the environment (Arcury & Johnson, 1987) and the solutions for the environmental problems (Vicente-Molina et al., 2018). Arcury and Johnson (1987) argued that environmental knowledge and environmental knowing are two different domains or cognitions. Environmental knowing is how individuals learn about and perceive the environment, while environmental knowledge is factual information individuals have that influences their actions (Zareie & Navimipour, 2016). A number of studies found that individuals with greater environmental knowledge showed more commitment towards green behavior (Carmi et al., 2015; Ellen, 1994; Fawehinmi et al., 2020;

Fryxell & Lo, 2003; Fu et al., 2020; Mostafa, 2007; Safari et al., 2018; Taufique et al., 2016; Vicente-Molina et al., 2013).

2.2.4 Environmental Consciousness

The environmental consciousness of individuals is considered the most important factor that motivates them to be environmentally friendly (Cheema et al., 2020). Individuals with high concern about the environment are willing to engage in extra efforts to protect it (Mancha & Yoder, 2015). Fraj and Martinez (2006) argued that when individuals are conscious of the consequences of their actions and behaviors, they will be more willing to adopt green behaviors.

2.3 Organizational Factors That Influence EEB

2.3.1 Green Top Management Support

Top management supports in terms of commitment towards green sustainability help organizations develop and implement sustainable practices (Hoejmose et al., 2012; Dubey et al., 2016; Blome et al., 2014). The absence of top management support for sustainability creates difficulties in adopting green practices and sustainability in organizations (Gupta, 2018). When top management and employees collaborate for sustainability, EEB and practices increase (Burki et al., 2019; Kim et al., 2019). In addition, Graves et al. (2019) also discovered the influential role of top management support in influencing the EEB. As Rubel et al. (2018) argued, line managers relate their trust in management more with their in-role performance.

2.3.2 Green Organizational Climate

The climate of an organization is a shared perception of employees involving the work environment, and this climate influences the employees to behave accordingly (James et al., 2008). Organizational climate and organizational culture overlap up to some extent, but they both have different meanings (Chou, 2014). Organizational climate is the shared perception of an individual's interpretation of the implications and significance of certain aspects in the work environment, while organizational culture is the normative belief and systematic behavioral expectations designed by the organizations (James et al., 2008).

2.4 *Individual Factors That Influence EEB*

2.4.1 Green Mindfulness

Mindfulness is an individual's state of mind that focuses attention to the present moment and develops a non-judgmental awareness of the moment through feelings and actions (Hwang & Lee, 2019). It develops self-awareness, positive interpersonal relationships, and self-regulations that increase positive behavior (Chiesi et al., 2017). Green mindfulness refers to the environmental well beings of individuals that allow them to support green creativity and initiatives (Bahl et al., 2016; Ndubisi & Al-Shuridah, 2019). Dharmesti et al. (2020) found a positive relationship between green mindfulness and pro-environmental behavior.

2.4.2 Green Self-Efficacy

Self-efficacy is individuals' belief about their capabilities to produce the designated level of performance (Lim et al., 2018). Green self-efficacy is more related to individuals' belief about their capabilities to perform environmental practices (Lauren et al., 2016). Individuals who have a strong belief about their environmental protection capabilities will exert more effort to carry out appropriate behavior for the conservation of natural resources (Lim et al., 2018). Kim et al. (2016) found a positive relationship between self-efficacy and pro-environmental behavior.

3 Theoretical Background

The theoretical foundation referenced in this study was the social identity theory. Social identity theory posits that people are happy and affirmative when they attach themselves to teams and groups which have positive standings. This sense of belonging helps to reinforce their self-concept of association with groups. The theory helps to explain the relationship between organizations and their employees (Ashforth & Mael, 1989). Studies have found that employees who are integrated with organizations' positive activities and values tend to show strong organizational commitment (Scott, 2007; Su & Swanson, 2019). Employees who have a positive perception of organizations' environmental strategies tend to exhibit high level of eco-friendly behavior (Kim et al., 2019). Studies have confirmed that employees who are more environmentally conscious and identify their employers' efforts towards environmental sustainability are more inclined to be especially engaged in green behavior (Chaudhary, 2019; Kim et al., 2019).

4 Methods

4.1 *Research Method and Sample*

This study employed the qualitative research method where focus group discussions were conducted. The qualitative method was suitable due to the nature of the study that aimed to determine the factors that influence the EEB of academics based on their own perceptions (Jabbour et al., 2020; Okereke & Kung, 2013). Moreover, as argued by Jabbour et al. (2020) the qualitative method is appropriate for finding the nuances in the respondents' answers.

Respondents were academics from four universities in Malaysia. These universities are highly involved in low-carbon emission practices. They are recognized for their sustainability and low-carbon emission efforts, as evidenced by their green metrics ranking and ISO certification. These universities were selected out of all Malaysian universities based on their green metrics ranking. Another reason for their selection was that they are receiving national attention and under pressure from the stakeholders to increase environmental sustainability (Yang et al., 2020).

The study's sample included 16 faculty members. No specific criterion exists to determine appropriate sample size in qualitative research; size depends on resource availability, time, and objectives (Malhotra & Dash, 2016; Patton, 2002). Adler and Adler (2012) suggested a sample size of 12, as did Guest et al. (2006). Saunders et al. (2003) found that the sample size's acceptable range in semi-structured interviews was between 5 and 25. However, the actual sample size is based on the point of saturation, which happens when no new information or themes are found in the data (Hastings & Perry, 2000).

4.2 *Data Collection*

Data were collected between July to December 2020 through interviews with the respondents. The discussions were based on an interview guide with several questions based on the literature search. The questions consisted of 37 questions, divided into eight sections. Questions in the first section were related to respondent's personal information. Each respondent was presented with the interview protocol that had been approved by the ethics committee of the lead researcher's university. The document ensured the anonymity of all participants. Respondents were asked to describe their role and work routine and their awareness about environmental issues and universities' green initiatives. Prior to starting the interview, the interviewers went through the interview protocol with the respondents, answered their queries about the interview questions and the study, and ensured their understanding of the study's scope. The respondents were asked to describe some pro-environmental behaviors at the workplace (e.g., double-sided printing, turning off the air-conditioners, recycling, switching off lights and computers, saving water, and efficient food consumption). The duration of each interview was between 60 and 90 minutes. The interviews were recorded.

4.3 Data Analysis

The recorded interviews were transcribed in full. The transcripts were analyzed using content analysis, a method defined as a “research method for subjective interpretation of the content of text data through the systematic process of coding and identifying themes of patterns” (Shannon, 2005, p. 1278). The analysis consisted of two steps. First, relevant passages were analyzed and categorized into three meta types—Individual, Organizational, and Environmental—as suggested in the research framework. Then, these passages were further analyzed to identify the themes that emerged with regards to the factors that influence their EEB.

5 Results

5.1 Overview

The content analysis of the data produced eight themes considered as factors that influence the EEB of the academics. Four of these themes were categorized under the environmental factor, namely *environmental attitude*, *environmental awareness*, *environmental knowledge*, and *environmental consciousness*. Two were categorized under the organizational factor, and these themes were *green top management* and *green organizational climate*. The last two themes were categorized under the individual factor, and they were *green mindfulness* and *green self-efficacy* (Table 1).

Table 1 Participants demographics profile

University	Participant Number	Gender
University A	1	Male
	2	Female
	3	Female
	4	Female
	5	Male
University B	1	Female
	2	Male
	3	Male
University C	1	Male
	2	Female
	3	Male
University D	1	Male
	2	Female
	3	Female
	4	Male
	5	Male

Source: Authors' own work

5.2 Environmental Factors That Influence EEB

5.2.1 Environmental Attitude

There was a consensus among most respondents that environmental attitude influences their EEB. They agreed that one should have the attitude to preserve the environment in order to develop environmentally friendly behavior.

One of the respondents said:

I look at my seniors, after they came back from Japan, their attitude totally changed. One example is regarding throwing the rubbish. In my house, there are different types of dustbin. About the attitude and mind-set in other countries, I think I will apply them in Malaysia. (Respondent 1, University A).

Another respondent said:

The attitude of course. Even though you have the awareness, if you don't want to be responsible, of course you will not do it. (Respondent 3, University B).

5.2.2 Environmental Awareness

Environmental awareness as a factor influencing the academics' EEB emerged from the interviews where the majority of the respondents described in some way the importance of environmental awareness.

A respondent said:

We focus on awareness, so we encourage people to bring the Tupperware containers. (Respondent 7, University C).

There were also some remarks about how being environmentally aware has steered the respondents towards being environmentally friendly. A respondent said:

I'm not sure whether it is because of the level of my knowledge or the level of my education . . . but my awareness towards the environment is there. (Respondent 3, University B).

Another respondent remarked:

As for me, even before I went overseas, the awareness already existed. I practice in addition to recycling. (Respondent 9, University D).

5.2.3 Environmental Knowledge

Another theme identified as being the factor that influences the EEB of academics is environmental knowledge. There was an agreement that having such knowledge is very important. In addition, it was accepted that employees with greater knowledge related to the environment show more environmentally friendly behaviors.

One respondent said:

I think having enough knowledge is very important. (Respondent 1, University A).

Another respondent talked about the need to disseminate knowledge related to the environment:

As a teacher, what we can do is giving them the knowledge, like throwing the rubbish properly. (Respondent 13, University B).

5.2.4 Environmental Consciousness

Consciousness towards environmental issues emerged as one of the factors, as most respondents expressed agreement about its importance.

One respondent remarked:

I think . . . what is important is the consciousness. We might be able to do that. It is also related to discipline. If you don't have a consciousness or discipline, you might not be able to do those things. In our daily life, we must have consciousness. (Respondent 4, University A).

Another respondent restated the importance of environmental consciousness:

How we use the computer, the lights depends on the level of our environmental consciousness. Being energy-friendly or environmental-friendly firstly depends on our level of environmental consciousness. (Respondent 15, University A).

A respondent who happened to hold the post of director of a sustainability centre at one of the institutions remarked about having to be conscious environmentally so as to be exemplary:

I have to set an example for everybody in the university. . . I have to be conscious about something being environmentally friendly or not. I have to consider everything in what I do. (Respondent 18, University B).

5.3 Organizational Factors That Influence EEB

5.3.1 Green Top Management

Analysis of the data also revealed that the respondents believe top management plays a role in influencing the academics' EEB.

One respondent said:

I think the top management is the one that can play the role. (Respondent 6, University B).

Another respondent also agreed:

I think with the support from top management, and they really want to see the impact, those things can be implemented. (Respondent 5, University B).

One respondent believed that if something is issued from the top, the employees below will be obliged to follow:

From what I understand, it is actually from the top management. When top people issue directives, automatically we will practise them. (Respondent 10, University D).

5.3.2 Green Organizational Climate

There was a consensus that organizational green climate may influence the EEB of academics. Respondents shared their views regarding the need for the institutions to create a positive climate that channels the academics towards being more environmentally friendly. This climate can be nurtured through campaigns, standard practices, and programs. A respondent shared about what has been established at one of the institutions:

Mangrove Talk is about the environment. But more on the general aspect. We also have held talks about climate, sustainability issues, and solid waste. We have a sustainability science course. (Respondent 4, University A).

5.4 Individual Level Factors That Influence EEB

5.4.1 Green Mindfulness

Green mindfulness emerged as an important antecedent of EEB. Respondents agreed that being mindful regarding the environment increases individuals' awareness of the environment. In turn, they will more likely be involved in green behavior. Discussion centered around the need to instill green mindfulness at a young age. One respondent remarked:

I think these factors come from home, and then our children will learn from that. My children are mindful of these things especially rubbish. My children also said we eat whatever on the plate. Don't waste it. (Respondent 6, University B).

5.4.2 Green Self-Efficacy

Green self-efficacy was discussed as one of the factors influencing the EEB of academics. It was agreed that those with high green self-efficacy are more likely to engage in environmentally friendly behavior. One respondent said:

You can't say that it is the university's responsibility as well. If the individuals are aware and realize what they are doing, they can be responsible for their own actions. You can enforce all you want, but if people do not want to follow, they will not do so. (Respondent 18, University B).

6 Discussion

The purpose of the study was to identify the factors that influence the EEB of academics in Malaysian higher education institutions. The results showed that the EEB could be influenced by eight factors, four under the environmental category

(environmental attitude, environmental awareness, environmental knowledge, environmental consciousness), two under the organizational category (green top management, organizational green climate), and two under the individual category (green mindfulness, green self-efficacy).

Most respondents were of the view that environmental attitude influences their EEB. They agreed that a positive attitude towards the environment helps to develop environmentally friendly behavior. This concurs well with the fact that attitude is the precursor to individuals' decision-making process and behavior, as posited by Ajzen (1991) and Lin (2013). The majority of the respondents believed that environmental awareness is a factor influencing their EEB. They agreed that being aware of what is happening to the environment in terms of environmental problems may influence them to be more pro-environmental at the workplace. The result was in line with those from other studies where a positive relationship between environmental awareness and green behavior was established (Kikuchi-Uehara et al., 2016; Lillemo, 2014; Ozaki & Sevastyanova, 2011). Another theme considered as being the factor that influences the EEB of academics is environmental knowledge. The respondents agreed that having such knowledge is very important. In addition, they concurred that employees with greater knowledge related to the environment show more environmentally friendly behaviors. The result was similar to those in earlier studies where it was found that individuals with greater knowledge of the environment had more tendency to engage in green behavior (Carmi et al., 2015; Ellen, 1994; Fawehinmi et al., 2020; Fryxell & Lo, 2003; Fu et al., 2020; Mostafa, 2007; Safari et al., 2018; Taufique et al., 2016; Vicente-Molina et al., 2013). The result also showed that consciousness towards environmental issues is one of the factors shaping academics' EEB. Most respondents expressed agreement about the importance of environmental consciousness. The positive relationship between being conscious of the environment and engaging in environmentally friendly behavior is explained by Mancha and Yoder (2015), who stated that individuals who have a high concern regarding the environment are willing to do whatever is necessary to protect it.

From the analysis of the data, it was found that the respondents believe top management plays a role in influencing the academics' EEB. As explained by Kim et al. (2019), when employees receive consistent messages regarding green behavior from the top management, they feel triggered to practice environmentally friendly behavior. The result was in line with that of Graves et al., (2019), who found the influential role of top management in developing EEB. Organizational climate is also considered as one of the influencing factors for EEB. As maintained by James et al. (2008), when the climate is more towards attaining sustainability and being environmentally friendly, there is a higher chance of employees being influenced by it and thus being more willing to engage in green behavior.

At the individual level, academics' EEB can be influenced by two factors, namely green mindfulness and green self-efficacy. The result was similar to that of Dharmesti et al. (2020), who found a positive relationship between green mindfulness and pro-environmental behavior. In addition, the emergence of green self-efficacy as a factor affecting the EEB of academics was not unexpected, as earlier

studies by Kim et al. (2016) and Lauren et al. (2016) also found a positive relationship between green self-efficacy and pro-environmental behavior.

7 Implications

7.1 *Theoretical Implications*

Through addressing a call for research by Dumont et al., (2017), the current study contributed to the literature on EEB and on strategies for enhancing EEB by adding new information on the factors that influence the EEB of academics in Malaysian higher education institutions, from the aspects of individual, organizations, and environment. This information will be useful for institutions in their endeavor to establish a managerial framework for ensuring that their employees, especially the academics, can assist them in meeting the challenges of being low-carbon campuses. In addition, this study helped build a new construct by addressing Norton et al. (2015) recommendation to investigate how organizational factors influence EEB. The study also enhanced the literature by examining the effect of self-efficacy on EEB. Furthermore, the study broadened the understanding of how institutions can strategically manage their carbon footprint by focusing on improving the EEB of their academics.

7.2 *Practical Implications*

The current study provides insights to the managements at Malaysian higher education institutions regarding the factors that influence the EEB of their academics. This information is useful in the context of the institutions' aims of being low-carbon campuses. As academics are the main instruments for achieving the goal, this information may help institutions to utilize their organizational capabilities effectively to identify strategies for further developing the academics' EEB. The study also highlighted the roles of green top management, environmental knowledge, and environmental awareness towards ensuring the achievement of the goal of low-carbon emission. In this regard, findings from the study may be used by Malaysian higher education institutions as supports when dealing with policymakers and government institutions to mitigate environmental degradations.