

Theory of Planned Behavior Environmental Management towards Environmental Behavior: A Mediating Effect of Islamic Knowledge and a Moderating Effect of Islamic Upbringing

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Abstract. This study conceptualizes a model of Islamic knowledge upbringings on university students' environmental behavior. This study extends the framework of the Theory of Planned Behavior by addressing multidisciplinary studies (Islamic study and environmental management). This study contributes to the environmental management literature by identifying the environmental management attitude, environmental management norms, and environmental management perceived behavioral control towards environmental management behavior. Besides, this study contributes to the theory by integrating the mediating effect of Islamic knowledge and a moderating effect of Islamic upbringing. The expected result of this study is that Islamic values improved environmental behavior, and Islamic upbringing has a big impact on the relationship between environmental management attitude, environmental management norms and, environmental management perceived control with environmental behavior. Thus, this study shows that even though societies understood the importance of taking care of the environment, moral values and family values are critical in shaping society's environmental behavior. This study helps the educational policymakers and the government policymakers to be able to implement better environmental mitigation strategies. This study also helps in promoting Islamic values in addressing environmental issues faces by this generation.

Keywords: Theory of Planned Behavior, Environmental Behavior, Islamic Knowledge, Islamic Upbringing, Climate Change Mitigation Strategy.

1 Introduction

The *Shariah* principle related to the environment is the *Shariah* forbidding concerning thoughtless consumption; that is, extravagance and wastefulness (Meraj, 2016). Social culture is derived from the ethical principles that control the personal and professional behavior of an individual's personality (Abbasi, & Rana, 2012). Religion plays a clear role in every society to modify the behavior of people in their private and public affairs (Ron McGivern, 2013). The concept of behavior in the workplace in Islam, and an Islamic work ethic, has its roots in the Holy Quran *You are the best of peoples, evolved for "mankind, enjoining what is right, forbidding what is wrong, and believing in Allah .jal - Qur'an 3: 110()*. Therefore, the Islamic community produces environmentally friendly behavior which is very beneficial in maintaining the ecological balance. The Qur'an and Sunnah emphasize preserving the basic environmental elements in terms of quantity and quality, because they occupy vital importance in the Islamic value system (Singh, 2020; Hua, 2016).

Climate change is one of the most critical environmental issues of this generation (Goodstein, & Polasky, 2020; Nicholas & Breakey, 2017). Thus, scholars have proposed that educational systems to educate the younger generation to manage the environment better. Nevertheless, all religion has also stressed the importance of taking care of the environment either directly or indirectly. Thus, there is an open debate about whether the current climate change problem is due to societies' inconsideration behavior and not because society is not aware of the value of taking care of the environment. However, scarce evidence exists on how Islamic values upbringing society's behavior towards the environment to put this debate to rest. Thus, the main objectives of this study are the following:

1. To investigate the relationship between Attitude, Norms, and Perceived Control of Environmental Management on Environmental Behavior.
2. To investigate the mediating effect of Islamic Knowledge on the relationship between Attitude, Norms, and Perceived Control of Environmental Management and Environmental Behavior.
3. To investigate the moderating effect of Islamic Upbringing on the relationship between Islamic Knowledge and Environmental Behavior.

2. Literature Review

This study research objective is to investigate the impact of attitude, norms, and perceived control on university student's environmental behavior. This study also has introduced Islamic knowledge that helps to improve student's environmental behavior. In addition, this study also has proposed a moderating variable of Islamic upbringing to see if the way students been raised has an impact on student's environmental behavior. Figure 1 shows the theoretical framework of this study that is in line with Theory of Planned Behavior (TPB).

2.1 Theory of Planned Behavior (TPB)

TPB was introduced by Ajzen (1991) that posits individual action or intention will shape its behavior. That action or intention can come from attitude and social norms.

Attitude is defined as the act or perception to commit intention and behavior (Nie et al., 2020) while norms is referring to social acceptance that derives from culture and belief that will shape one's intention and behavior (Esfandiar, Dowling, Pearce, & Goh, 2020). These are supported by Theory of Reasoning Action (TRA) that explain an individual action is based on several reason which originated from individual's attitude and individual's norms (Xiao, 2020). However, the theory had received several criticisms that action of an individual also is based on the ability of that individual to control or perceived having a control of its action (Schwarz, Sanders, & Bouckennooghe, 2020). Thus, the theory had been improved and called as Theory of Planned Behavior (TPB), in which it can be defined as behavior or intention to commit an act is based on individual's attitude, norms and perceived control (Ajzen, 1991).

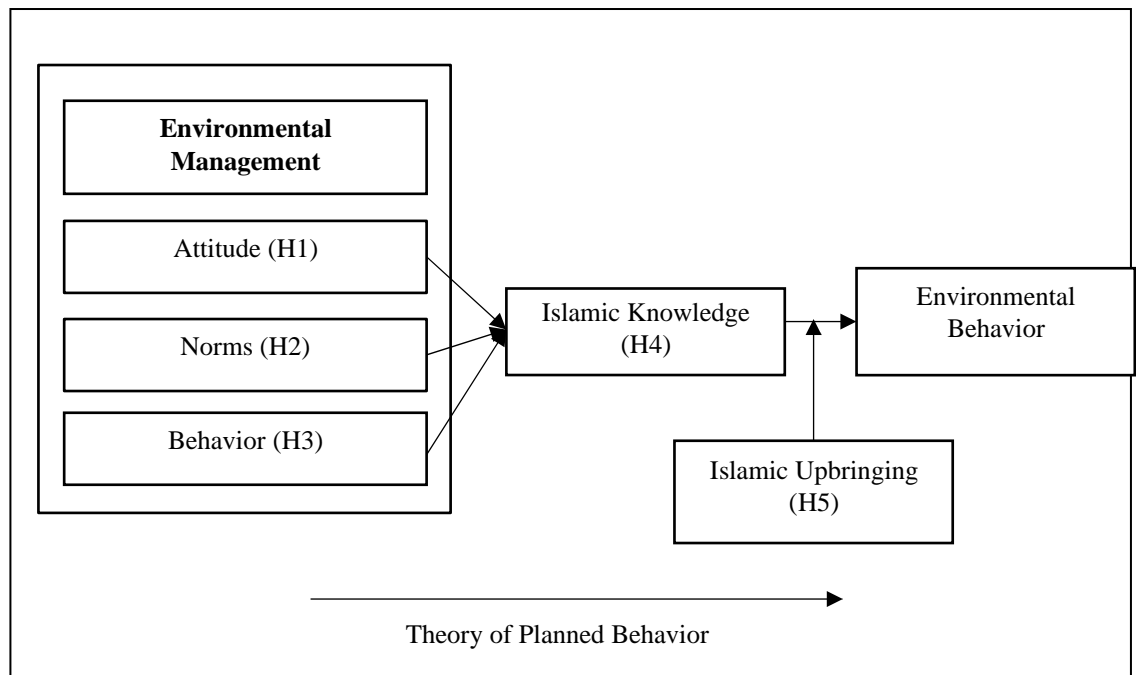


Fig. 1. Theoretical Framework.

3. Environmental Behavior

Environmental Behavior can be defined as an act of an individual to get involved in environmental protection programs, saving energy, increase oneself and others' environmental information, avoiding using harmful products and materials to the environment and preferring waste or recycle products and materials (Shafiei, & Maleksaeidi, 2020).

The literature regarding environmental behavior is focusing on pro-environmentalist issues (Shafiei, & Maleksaeidi, 2020; Hamann, & Reese, 2020), consumer issues (Kautish, & Sharma, 2020), cultural and tourism issues (Wang et al., 2020; Chwialkowska, Bhatti, & Glowik, 2020) and environmental science and engineering issues (Lee, Sung, Wu, Ho, & Chiou, 2020; Liu et al., 2020).

3.1 Attitude, Norms and Perceived Control of Environmental Management

In this study, attitude of an individual, its social norms and its ability to control its action lead to the individual having intention to take care of the environment or behave in a manner of protecting the environment. For example, when an individual has good attitude on taking care of the environment, its behavior will reflect in better environmental behavior. Furthermore, when an individual is exposed and learned that taking care of the environment are important, that individual will have good environmental behavior. Similarly, when an individual has a belief that protecting the environment will benefit that individual will increase its environmental behavior performance. Thus, it can be hypothesized that:

H1: Attitude of Environmental Management has a positive and significant effect on Environmental Behavior.

H2: Norms of Environmental Management has a positive and significant effect on Environmental Behavior.

H3: Perceived Control of Environmental Management has a positive and significant effect on Environmental Behavior.

4. Islamic Knowledge

Islamic knowledge refers to understanding the Islamic knowledge to be a good Muslim (Zamri, Rahman, & Haque, 2020). Islamic knowledge can be measured by one's understanding about the Islamic jurisprudence (Fiqh), faith (Aqidah) and Sufism

(Tasawuf). Islamic jurisprudence helped an individual to protect its individual rights and others while faith helped an individual to center its activities, works and life toward God. On the other hand, Sufism is optional but recommended in Islam as it helped an individual to think positively and act good to oneself and others.

The literature regarding Islamic knowledge has been very robust and complete. However, there are still room for improvement in integrating Islamic knowledge with other discipline of studies. There are limited studies on the linkage between Islamic knowledge and environmental management (Hnacock, 2020). Even though Islamic knowledge also had taught an individual to take care of the environment, the literature still needs to provide

empirical evidence for the relationship.

The current literature regarding Islamic knowledge has been confined to improving individual behavior at a workplace (Islam, Ahmad, Kaleem, & Mahmood, 2020) and Islamic banking knowledge management (Nurdin & Yusuf, 2020). The closest studies regarding Islamic knowledge with environmental management are on sustainability accounting (Irfan, Febria, Nofianti, & Rijulvita, 2020), environmental awareness (Mkumbachi, Astina, & Handoyo, 2020) and the role of Islamic educational institutions in promoting environmental conservation (Muhardi, Nurdin, & Irfani, 2020).

Based on the literature review, it is understood that Islamic knowledge has an impact on individual's behavior. As environment is also stressed in Islamic knowledge as critical element to be a good Muslim, this will lead to individual having good environmental behavior (Hancock, 2020). Thus, it can be hypothesized that:

H4: Islamic knowledge mediates the relationship between Attitude, Norms, and Perceived Control of Environmental Management on Environmental Behavior.

5. Islamic Upbringing

In the literature, upbringings by parents are identified as being either direct or indirect (Davis-Kean, 2005). Study by Ismail (2011), Islamic upbringing is referred to a parent's role, as a guardian, that will upbringing the individual. Study on development cognitive skills and predisposition to risky behaviour by Balsa, Gandelman, and Roldan (2017), defined Islamic upbringing as a Islamic investment which measured by knowing where the individual is going after school hours or weekends, concerning about individual academic performance, sharing at least one meal with the individual, alert to the time the individual arrives home once, keep a peaceful conversation with the individual, being confident for the individual and familiar with the individual's best friends. Durisic and Bunijevac (2017) defined Islamic upbringing or so call Islamic involvement towards successful education as a provide a safe and healthy environment, provide an appropriate learning experiences, have a positive attitude about school and support their individual. While this study will follow the definition of Ismail (2011), because of the same context of the study. The construct used throughout this study is Islamic upbringing. In this study, Islamic upbringing have seven measurement which are role of the parents to advise the individual to get a job after graduate, advising the individual to make regular payment of loan, remind the individual to save the loan during study so that the individual able to repay one off, upbringing the individual through parents loan experiences, always remind the individual to pay back the loan and the parents become a guarantor of the loan.

Currently research that use Islamic upbringing or Islamic involvement as predictor towards behaviour is more on the context of student academic achievements (Choe, 2020; Chung, Phillips, Jensen, & Lanier, 2020; Delprato, 2019; Ogg & Anthony, 2020; Poon, 2020). Other than that Islamic role also well discussed in the context of health care such as decision making for surgery (Bach, Thomale, & Müller, 2020; Fairhurst & Long, 2020; Lama, Hancock, Freimuth, Jamison, & Quinn, 2020; Links et al., 2020). Furthermore, Islamic upbringing have been discussed in the context individual behaviour (Academy, 2018; Sarwar, 2016) such as individual eating behaviour (Gibson et al., 2020; Rahill, Kennedy, & Kearney, 2020; Wolstenholme, Kelly, Hennessy, & Heary, 2020). Findings from Zainal and Ismail (2012) indicate that Islamic advice to students to repay their education loan has a positive correlation on the priority to repay. As studied by Zolkeplee,

Hamed, and Ogunbado (2018)) found that Islamic upbringing recorded as a positive upbringing on student's perception towards educational loan repayment. Thus, it can be hypothesized that:

H5: Islamic Upbringing moderates the relationship between Islamic Knowledge on Environmental Behavior.

6. Methodology

This study follows positivist philosophy where the intention of this study is to provide empirical evidence of environmental behavior. In order to provide empirical evidence, quantitative method is chosen to guide this study research design, data collection and data analysis. The research design of this study is to collect survey-based data from the respondent. The population of the respondent is university student residing and currently studying at Universiti Malaysia Pahang. The reason for choosing students at Universiti Malaysia Pahang is due to the university is actively improving its green campus world ranking and the students have been exposed to various green campus practices at the university to support the initiative. The population database is gathered from the e-community system provided by the university and it has 10 982 (Universiti Malaysia Pahang, 2020). The sample frame for this study is students that has a basic knowledge or have experience learning Islamic studies before. The minimum sample size required is 129 samples and the sampling technique is based on simple random sampling. This study had adopted and adapt measurement items for each variable to ensure reliability and validity of the instrument. The instrument has been pre-tested with academicians, students and language editor. Furthermore, the instrument also has been sent for pilot test and received reliability score of more than 0.7.

There are five sections in the questionnaire; Section A is for respondent profile, Section B is for environmental management (attitude, norms, & perceived control), Section C is on environmental behavior, Section D is on Islamic knowledge and Section E is on Islamic upbringing. The questionnaire was sent to the respondent through Google form that has been uploaded in the e-community system. The system is developed to synchronized and provide a platform for all user in the university to get related information and manage all activities related to the university. The data collection was initiated in the first week of August 2020 and will end in the fourth week of August 2020. After the data has been collected, data cleaning will be initiated. Since all question has been set as mandatory, the respondent cannot proceed answering other question and submitting without answering all questions. Therefore, there should be no missing data reported. Data collected will be analyzed using IBM SPSS version 26 for demographic profile while SmartPLS version 3.3.2 was used for model measurement, structural measurement, mediating analysis and moderating analysis.

7. Expected Outcome

This study expects that attitude and perceived control will have a significant impact on the environmental behavior based on previous study of Lee, Lee, & Thurasamy, 2020). On the other hand, it is interesting to see Islamic knowledge will have a mediating effect in increasing student's environmental behavior and it is belief that Islamic upbringing will give a greater impact on environmental behavior.

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This study can contribute to the literature of integrating Islamic discipline with environmental science discipline. Furthermore, the TPB theory has been widely used and the extended version can be further improved with this study empirical evidence due to the nature of multidisciplinary issues presented in this study.

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