Original Research   **Open Access**

Employee Pro-Environmental Behaviour: A Systematic Review and Suggestions for Future Research

Faiq Aziz[*]
Azman Hashim International Business School, Level 10, Menara Razak, Universiti Teknologi Malaysia, Jalan Sultan Yahya Petra, 54100, Kuala Lumpur, Malaysia

Nomahaza Mahadi
Azman Hashim International Business School, Level 10, Menara Razak, Universiti Teknologi Malaysia, Jalan Sultan Yahya Petra, 54100, Kuala Lumpur, Malaysia

Jihad Mohammad
Azman Hashim International Business School, Level 10, Menara Razak, Universiti Teknologi Malaysia, Jalan Sultan Yahya Petra, 54100, Kuala Lumpur, Malaysia

Abstract

Changing behaviour towards pro-environment will not only can contribute towards organization sustainability but also will help to prevent further environment destruction. However, empirical research on developing model or solution to foster employee pro-environmental behaviour in workplace is still lacking. Therefore, this paper examines existing literature pertaining employee pro-environmental behaviour in the workplace from year 2008 to 2017 that (1) discussed individuals' pro-environmental behaviour at workplace, (2) identified variables and antecedence that lead to pro-environmental behaviour and (3) theories used towards this behaviour. This paper also provides suggestions for future research to researchers that interested in this research topic. Based on information gathered in this paper, the role of emotion and values of employee would encourage their decision to engage in various types of pro-environmental behaviour in the workplace and provide important implications for organization sustainability.

Keywords: Pro-environmental behaviour; Employee; Workplace.

1. Introduction

2. Employee Pro-Environmental Behaviour

Basically, pro-environmental behaviour can be understood as actions contributing to environmental conservation, or human activity intended to protect natural resources, or at least reduce environmental deterioration. However, in related to workplace, researchers in management generally discuss pro-environmental behaviour in wider scope. In general, pro-environmental behaviour at work comprises wide range of activities and this requires significant class of employee behaviours, because it facilitates and may contribute towards organizational plan to preserve natural resources and the environment (Anderson and Bateman, 2000). Besides that, Ramus and Steger (2000) use the term eco-initiatives to describe action taken by employees who thought would improve the environmental performance of the company. Kollmuss and Agyeman (2002) refers pro-environmental behaviour as a cautious action that seeks to minimize the undesirable impact on the environment. In addition, Ramus and Killmer (2007) define one of their dependent variable that is corporate greening behaviours as the changing of organizational practices to more environmentally sound ones. Moreover, Ciocirlan (2017) used the term "green employee" in her research that described green employee has an environmental identity, an intrinsic motivation to protect the environment through work, and aims for consistency between home and work environmental behaviours.

While behaviour related to environment have proliferated over the years in parallel to the increasing interest in environment concern, there are still lack of efforts to clarify the terms. In short, the aspect of pro-environmental behaviour are broad. Study by Ones and Dilchert (2012) have supplied one of the most comprehensive understanding regarding PEBs in organizational settings. They mentioned that the environmental behaviours are scalable actions and behaviuors that employees engage in that are linked with and contribute to or detract from environmental sustainability. In relation to this, Ones and Dilchert proposed that employees' actions may impact the natural environment through five main behaviours. The main behaviours include the following: conserving (reducing use, reusing, repurposing and recycling); working sustainably (changing how work is done); avoiding harm (e.g., preventing pollution); influencing others (e.g., encouraging and supporting others); and taking initiative (e.g., initiating programs and policies). Thus, it can be proposed that conserving, working sustainably and avoiding harm are direct PEBs and that influencing others and taking initiatives are indirect PEBs.

Employees tend to be pro-environmental behaviour by their own interest and feeling of care about the environment without influence by other people or reward by the management (Boiral O.., 2009). The effectiveness of pro-environmental behaviour in an organization highly depends on the involvement of the employees in the

*Corresponding Author

programs and activities that implement in organization. Daily *et al.* (2009) stated that voluntary basis of employees which act without concerning with any benefit and reward will contribute towards success of organization that aim operate in their business in preserving nature. In other words, the success of fostering employee pro-environmental behaviour in a person also depends on the factor where the person is required to be pro-environment or voluntary basis. When a situation where the person is required to be pro-environmental, they are mandatory to perform that behaviour. It usually happened in organization that operates in a greening environment that required their employees to act environmentally in their practice and doing their task. In contrast, voluntary basis is important to influence pro-environmental behaviour when this act is not include in the reward system of the organization. Moreover, employees that independently motivate themselves can contribute towards the significant part in encouraging voluntary pro-environmental behaviour in organization. Therefore, the effectiveness of person to be pro-environmental behaviour is mostly depend on their own voluntary basis that can motivate them to have their own environmental values or by their self-interest that they get when the acting environmentally.

Employees can implement their daily routine in such environmentally friendly behaviours during the process of completing their own required tasks at the office and the employee may also aggressively participate broader environmentally friendly changes in the policies and procedures in their organization (Pichel, 2008). This research support the term pro-environmental behaviour in workplace by Ramus and Steger (2000) that stated, pro-environmental behaviours are any action taken by employees that he or she thought would improve the environmental performance of the company. The researcher belief that this definition is broad enough to capture a wide range of behaviours, and enables the drawing together of theoretical and empirical evidence from both environmental psychology and management. Referred to Ramus and Steger (2000), this definition includes behaviours common in environmental management literature, such as environmental championing (Anderson and Bateman, 2000), recycling, and pollution prevention (Egri and Herman, 2000). In line with this research, the term employee pro-environmental behaviour (EPEB) are operationally define as any action taken by the employee in the organization to support the sustainability of the company through preserving the environment. Parallel to this, (Ciocirlan, 2017) mentioned that in the past few years, research on individual behaviours performed with a concern for the natural environment at work has burgeoned.

3. Issues Related to Pro-Environmental Behaviour

Research on environmental sustainability suggested that the need for a long-term competitive advantage is what drives firm's engagement in environmental values, emphasis on sustainability and adoption of a proactive approach to climate change (Nidumolu *et al.*, 2009). Furthermore, sustainability is far more than an issue concerning environmental consciousness and sustained growth of the economy. It is causally intertwined with deeply ethical causes to make such a sustainable paradigm realisable (Hassan, 2016). The way how company put their change of strategy into practice and connect sustainability with the way how they operate their business ecosystem (Seuring and Gold, 2013) has been neglected by researchers despite the extensive body of literature concerning about environmental practices (Green *et al.*, 2012) Meanwhile, Rizk (2014) added that when applied to the natural environment, a lack of awareness and understanding of Shari'ah prescriptions is not limited to the Western country only, it is also low levels of environmental awareness and ethics of the Shari'ah principals in environmental movements, despite evidence of an important association between tradition or religiosity and pro-environmental behaviour in both the private and public spheres (Rizk, 2014).

Sustainability is instilled in the organizational practices in a business ecosystem (Rajala *et al.*, 2016). Without the understanding of this aspect, the discussion of environmental sustainability remains incomplete. The researcher believes that the battle against environmental degradation has become one of the main topics all around the world including Malaysia and it is currently recognized as one of the greatest challenges human has ever confronted. Moreover, there is no doubt that Islamic principles may influences the whole human lifestyle, behaviour, attitude and environment (Hassan, 2016). Besides, it is agreed by several researchers that organizations are consider to be one of the highest contributor towards climate change and in the final analysis, preserving the environment only can be done with individual behaviour because the problems of environmental degradation can be addressed only through behavioural change of individuals (Ramus and Killmer, 2007). Thus, by changing behaviour of employee towards environmental behaviour will not only can contribute towards greening organization but also will help to prevent further environment destruction (Robertson and Barling, 2013).

Organization leaders recognizes opportunities which are substantial for their company in the pursuit of enhanced environmentally sustainability which may reflect company's long-term competitive reputation (Zibarras and Coan, 2015). Zibarras and Coan (2015) mentioned that, environmental sustainability concept is discussed often inside wider scope of sustainability framework which combining social aspect, economic considerations, and environmental. However, the way organization can possibly achieve this level of sustainability still remain unclear; therefore, it is critical to enhance research which is capable of uncovering the way how business can structure their initiatives and policies to enhance their organization performance towards environmental sustainability (Renwick *et al.*, 2013). Linking employee behaviour to organizational efforts is the key approach; there is an argument on how environmental degradation are mostly derived from human activity and that is by changing human behaviour is how the issues should be tackled (Ones and Dilchert, 2012). However, while the change of individual behaviour and daily task has been the fundamental reference behind most of environmental change programs outside of the organizations (Uzzell and Moser, 2009), employee behavioural role in delivering environmental performance's improvements within organizations has largely been overlooked (Ones and Dilchert, 2012).

As discussed, linking organizational efforts to employee behaviour is the key approach. The key part of the solution to the issues of organizations addressing their environmental impacts is that organizations needs to recognize their employees' behaviour towards environmental (Temminck *et al.*, 2015). Previous research on this matter have been done in developed countries which operationalize in the western tradition. However, the motivation of this study is to examine how well can the theories apply in nations from other part of the world like Malaysia with different cultures compared to Western cultures. Changes in human behaviour is thought to be effective at tackling the problem on environmental issues caused by human themselves (Robertson and Barling, 2013). This research focuses on the developments and applies a measure based on the theory of planned behaviour (Ajzen, 1991) in order to examine the employee pro-environmental behaviour in a workplace. This is a step towards the understanding of how employee behaviour can be harnessed to achieve environmental improvements.

It is still remained a challenge on the implementation of an effective strategy to achieve a sustainable organization event though many organization are starting to understand and acknowledge the importance of sustainability (Galpin *et al.*, 2015). Until now, the way in which an organization achieves the level of sustainability still remains unclear. This scenario reflected the level of environmental behaviour of an employee in organizations is low than supposed to care for the environment when performing their daily task. This is supported by Robertson and Barling (2013), that revealed the major cause of environmental degradation today is caused by human activity within organizations. Due to this, how business can able to structure their initiatives and policies to enhance the opportunities for environmental sustainability is crucial to be covered by researchers (Renwick *et al.*, 2013). According to Ciocirlan (2017) research on individual behaviours performed that concern for the natural environment at work has prospered, but the problem of environmental degradation specifically related to organizational outcome still remain unsolved and there are still lacks of agreement regarding the appropriate model of antecedents and the relative importance of variables in explaining the engagement in environmental behaviour at workplace (Lo *et al.*, 2012). Thus, the encouragement of pro-environmental behaviours at workplace such as conservation, waste reduction behaviours, recycling and others will contribute to not only just towards greening process of organizations, but will also affect climate change positively while preventing further environmental degradation (Robertson and Barling, 2013).

Table-1. Previous Research on Pro-Environmental in Organization

Author	Behavioural Examine	Context	Theory/ Model Used	Method	Findings
(Brick and Lewis, 2016)	Emission reduction behaviour (ERB)	Adults survey through Amazon MTurk **(USA)**	HEXACO personality framework, New Ecological Paradigm Scale (NEP) & Big Five Personality Traits	Quantitative, Online survey, N=345	Openness and Conscientiousness predicted ERB as mediates by environmental attitude.
(Zientara and Zamojska, 2016)	Organizational citizenship behaviour for the environment (OCBE)	Hotel Industry **(Poland)**	Value-belief–norm theory (VBN) & Social exchange theory	Quantitative, self-report questionnaire, N= 249	Green organization climate significantly moderate environmental values and OCBE
(Manika *et al.*, 2015)	Recycling behaviour, energy savings behaviour, and printing reduction behaviour	Seven different organizations **(United Kingdom)**	Not specified	Quantitative, Email survey, Self-report measurement, N=1204	IV = Organization Perceived environmental behaviour, organization environmental friendly reputation, perceived incentives from organization, perceived support from organization and general environmentally friendly attitudes. Result shows printing reduction behaviours were significantly higher than recycling and energy saving behaviours
(Temminck *et al.*, 2015)	Organization citizenship behaviour directed towards the environment (OCBE)	Environmental Regulator and Educational Institute **(United Kingdom)**	New Ecological Paradigm Scale (NEP)	Quantitative, Online survey, Self-report measurement, N=547	Significant relationship between (a) employees' concern for their environment and OCBE, (b) perceived organizational support for environment efforts and OCBE and (c) organizational commitment and OCBE were found.

(Zibarras and Coan, 2015)	General employee pro-environmental behaviour	214 organizations representing different sizes and industry sectors **(United Kingdom)**	Environmental management system (EMS). Theory not specified	Mix Method (Survey and interview) N=266	HRM practices (employee life cycle; rewards; education and training; employee empowerment; and management commitment) are not a great extent to encourage employees pro-environmental behaviour.
(Boiral O. et al., 2015)	General employee pro-environmental behaviour	Mexican university **(Mexico)**	Social exchange theory (SET)	Quantitative. Using survey form. N=449	Results shows employees are encouraged to engage in eco-helping when they experience relationships with their peers. Indicating that the social exchange framework is appropriate for studying pro-environmental behaviours in the workplace
(Norton et al., 2014)	Employee green behaviour (EGB)	Full time employees **(Australia)**	Theory of normative conduct (TNC)	Quantitative. Online survey, N=436	Organizational sustainability policy positively related to self-report task-related and proactive EGB and fully mediated by green work climate perceptions of the organization and of co-workers
(Lo et al., 2014)	Energy saving behaviour	Four different organizations **(Netherlands)**	Theory of Planned Behaviour (TPB) and self-reported habit.	Quantitative. Tested using confirmatory factor analysis (CFA) and SEM. N=not specified	Attitude is not always the strongest predictor of intention for office energy-saving behaviours.
(Kim et al., 2017)	Voluntary workplace green behaviour (VWGB)	Different type of company in construction, information technology and financial sector. **(South Korea)**	Not specified	Quantitative. Survey distribution. N=325	Leader's VWGBs appear to increase employee advocacy of such behaviour. Positive linkage between green behaviours of leaders and those of followers
(Kastner and Matthies, 2014)	Energy saving behaviour	Higher Education Institutions (HEIs). **(Germany)**	Not specified	Quantitative. N=not specified.	Found lower levels of implementation (i.e. reducing the intervention materials) and lower levels of participation to decrease the interventions' outcomes.
(Chou, 2014)	Employees' environmental behaviour (General)	Hotel Industry **(Taiwan)**	Theory of planned behaviour (TPB), Value-belief–norm theory (VBN) & Expectancy-value motivational model	Quantitative. N=254	Found that organizational climate is a moderating effect through personal environmental norms on personal environmental behaviour.
(Blok et al., 2015)	Pro-environmental behaviour in the workplace (General)	Green university **(Netherlands)**	Theory of planned behaviour (TPB)	Qualitative. N=411	Conclude that clear differences between factors influencing pro-environmental behaviour in households and in the workplace. TPB is insufficient to explain PEB in the workplace completely since social norms and leadership support to act pro-

					environmentally have an impact on PEB.
(Zhang *et al.*, 2014)	Employee energy saving behaviour	Employees working in Beijing. **(China)**	Norm activation model (NAM)	Quantitative. N=344	Shows that personal norm positively influences employee electricity saving behaviour
(Paillé *et al.*, 2013)	Organization citizenship behaviour directed towards the environment (OCBE)	Employees enrolled in the executive MBA programmes Canadian university **(Canada)**	Social exchange theory (SET)	Quantitative. N=407	Employee will perform environmental efforts if they perceive that the organization supports his/her supervisor by granting the decision-making latitude and necessary resources to engage in pro-environmental behaviour.
(Zhang *et al.*, 2013)	Electricity saving behaviour	Employees working in Beijing. **(China)**	Theory of planned behaviour (TPB)	Quantitative. N=273	Results show that employee attitude toward electricity saving and perceived behavioural control positively influence employee intention to save electricity. Environmental benefit, organizational benefit, enjoyment, and organizational electricity saving climate positively influence employee attitude toward electricity saving, whereas the effect of anticipated extrinsic benefit is found insignificant.
(Greaves *et al.*, 2013)	Environmental behavioural intentions in a workplace	UK-based publicly funded Organization **(United Kingdom)**	Theory of planned behaviour (TPB)	Quantitative. N=449	TPB can be used to explain Video-conferencing behavioural, PC switch off behavioural and recycling behavioural.
(Robertson and Barling, 2013)	Employees' environmental behaviour (General)	Subordinates from Study Response Program **(USA & Canada)**	Social comparison theory & Social learning theory	Quantitative. N=231	1) Employees' harmonious environmental passion and their leaders' workplace pro-environmental behaviours predicted their workplace pro-environmental behaviours. 2) Leaders' environmental descriptive norms and pro-environmental behaviours play an important role in the greening of organizations.
(Bissing-Olson *et al.*, 2013)	Employees' environmental behaviour (General)	Employees working in small businesses. **(Australia)**	Broaden-and-build theory of positive emotions	Quantitative. N=not specified	1) Unactivated positive affect was positively related to daily task-related pro-environmental behaviour. 2) Individuals' incidental daily affect positively related to PEB
(Lo *et al.*, 2013)	Employee Pro-environmental travel behaviour	4 organizations in two Dutch provinces. **(Netherlands)**	Theory of planned behaviour (TPB)	Qualitative. N=not specified	1) Found that teleworking and teleconferencing have the potential to reduce travel frequency. 2) Financial incentive may change employee travelling behavioural mode.
(Murtagh *et al.*, 2013)	Energy use behaviour	Medium-sized University **(United Kingdom)**	Not specified	Mixed Method. N=83	1) Attitude significantly related to energy use behaviour. 2) Motivation is needed to foster energy use

					behaviour.
(Graves *et al.*, 2013)	Employees' pro-environmental behaviours (General)	Four global organizations **(China)**	Self-determination theory	Quantitative. Cross Section N=294	1) Environmental transformational leadership (ETL) will increase in employees' autonomous and external motivation. 2) Autonomous motivation in turn, positively related to PEBs. 3) Motivation and PEBs was moderated by ETL
(Boiral O. *et al.*, 2015)	Organization citizenship behaviour directed towards the environment (OCBE)	Manufacturing sector **(Canada)**	Theory of planned behaviour (TPB)	Quantitative. Simple Random Sampling N=304	1) Managers' environmental values are positively related to OCBEs. 2) Environmental management practices mediate relationship between OCBEs and environmental performance
(Lo *et al.*, 2012)	Energy-Related Behaviours	Four Dutch organisations. **(Netherlands)**	Theory of planned behaviour (TPB)	Qualitative. N=not specified	Self-efficacy is the highest salient and social norm is the lowest contributor towards ERB.
(Cantor *et al.*, 2012)	Employee engagement in environmental behaviours	Government, academic, and environmental industry **(USA)**	Organizational support theory (OST)	Quantitative. N=317	Supervisor support, training and reward will influence employee perception and may lead towards employee environmental behaviour.
(Carrico and Riemer, 2011)	Employee conservation behaviour	Mid-sized private University. **(USA)**	Not specified	Quantitative. N=352	1) Peer education and feedback manage to reduce energy use by employee.
(Davis *et al.*, 2009)	Sustainable attitude and behaviour	Non-academic staff within Griffith University, Queensland. **(Australia)**	Theory of planned behaviour (TPB)	Quantitative. Cross-sectional sample. N=100	1) TPB shows that employee satisfied with university sustainability effort. 2) Need to increase respondents' awareness of inconsistencies between their reported attitudes and behaviours at home and at work.
(Scherbaum *et al.*, 2008)	Employee energy-conservation behaviours	University employee. **(USA)**	Value-belief–norm theory (VBN)	Quantitative. N=154	1) Environmental personal norms predicted self-reported energy-conservation behaviours. 2) Environmental personal norms mediated the relationship of environmental worldviews and self-reported energy-conservation behaviours.

In summary, the table presented above is the previous study related to pro-environmental behaviour in the context of workplace. Firstly, the table shows that the majority of the research has been done in Western countries which United Kingdom and USA are the highest amount of research. Secondly, theories that has been used by previous researcher to study environmental behaviours at workplace mainly Theory of Planned Behaviour (TPB), Value Belief Norm theory (VBN) and Social Exchange Theory (SET). Thirdly, the majority of previous research used quantitative method in conducting their research and on average, the sample size that being used by previous researcher in determined their environmental behaviour in N = 450. Based on the findings from previous study above, environmental attitude (Brick and Lewis, 2016), green work climate perception (Norton *et al.*, 2014) environmental management practice (Boiral O. *et al.*, 2015) and environmental personal norms (Scherbaum *et al.*, 2008) were used as mediator variables in previous environmental behaviour research. Meanwhile, green organization climate (Zientara and Zamojska, 2016) and organization climate (Chou, 2014) were used as moderator variables in previous environmental behaviour research.

4. Conclusion and Recommendations

The solution to fostering employee pro-environmental behaviour remain unsolved because in previous study, research have been contemplated in both private sphere and general society, but rarely in work setting despite of it's potential at contributing towards environmental sustainability (Ones and Dilchert, 2012). This is also supported by

Inoue and Alfaro-Barrantes (2015) who mentioned that, this body of research currently suffers from the fact that no systematic effort has been made to understand what the research collectively informs us related to the factors and conditions affecting employee pro-environmental behaviour (EPEB). To generalize the research's finding based in the domestic sector to the workplace may be tempting, but the motivations to behave pro-environmental manner at work and home might be different (Graves et al., 2013). Furthermore, Blok et al. (2015) mentioned that, the problem of existing model is that they are not applied in the workplace sufficiently but it is applied to explain PEB in household's perspective. There is a literature gap in the explanation of PEB exclusively in the workplace due to this problem. PEB in the workplace is expected to contribute to the minimization of the negative impact of actions taken by the employee towards the natural and built environment because employees spend about one third of their daily life in the office (Blok et al., 2015).

As mentioned, TPB is one of the theory that most widely used to examine human behaviour, but TPB is not without criticism. Theoretically, the factors included in the TPB are not sufficient and it is possible to measure some of other factors and add them to the theory in order to improve prediction (Ramayah et al., 2012). (Blok et al., 2015) stated that, TPB is insufficient to explain PEB in the workplace completely, since other factors (e.g. values, environmental awareness and personal norm) are also important in fostering PEB. Besides that, the antecedent of attitude in TPB is not always the strongest predictor of intention that can lead towards behavior (Lo et al., 2014). Besides that, although the relationship between intentions and behaviour are consistently correlated to one another, the relationship it is not perfect. In fact, Anthony et al. (2016) suggested that to increase the predictability of intention and behaviour, support adding more constructs (e.g. exogenous, mediating and moderating) to the TPB when they are theoretically based. The inconsistency of TPB model allows for the incorporation of additional variables in the model (Ramayah et al., 2012). Therefore, in line with this theoretical issue, the researcher belief that there is a significant contribution towards TPB literature to examine other related variables or antecedences that may strengthen the relationship within the construct of TPB model.

Recently, Inoue and Alfaro-Barrantes (2015) revealed that most of study related to environmental behaviour in workplace obtained data from employees within Western countries which are different with other countries in many aspects. This is supported by Hassan (2016) that mentioned, businesses should be engaged in the sustainable development activities so as to determine economic viability, social equality and environmental development in adherence to Islamic ethical responsibilities for business organizations. No doubt that, Islamic principles may influence the whole human personality, behaviour, lifestyle, tastes and preferences, attitudes towards human beings, resources and environment (Hassan, 2016). Although there is lack of previous research, the study in Egypt mentioned that Islamic religious teachings and religiosity have a positive relationship with pro-environmental behavior (Rice, 2006). Ali and Al-Owaihan (2008) meanwhile, revealed that the orientation which inspire and forms the involvement and contribution of believers in the workplace is the Islamic work ethic. According to Mohammad et al. (2016), the majority of studies related to work ethic which express its relationship with individual and organizational variables still focus on Western context, with Protestant work ethic (PWE) become the main attention. Despite of the important role of Islamic thought about the importance of preserving the environment, research on how Islamic work ethics may solve the environmental issues in organization has been neglected. Therefore, to better understand the issues of work ethics, it is valuable to examine the role of IWE towards fostering employee pro-environmental behaviour.

Meanwhile, research related to emotion may influence employee pro-environmental behaviour through various processes which are different from other cognitive aspects of attitude, thus will lead towards generating numbers of new research question. Along with these advancements in affective literature, emotion or affect, has been considered as a motivational factor that may influencing environmental behaviour. In fact, Inoue and Alfaro-Barrantes (2015) suggested that study on examining emotions on the other hand, would like to enjoy opportunities to advance the literature on pro-environmental behaviour in workplace. However, in most pro-environmental studies, the role of emotion is largely absent. In short, employees will be energized, inspired to make a difference in the natural environment quality, and are motivated to engage in workplace pro-environmental behaviours when the employees influence by positive emotion (Robertson and Barling, 2013).

Accordingly, one of the main limitations of the problem examining pro-environmental behaviours using attitude theories is that they largely neglected the emotional aspects because they are primarily focused on the cognitive aspects of attitude. To the best of researcher knowledge, only few research in this context have the attempt to understand how the effects of emotion can contribute towards environmental behavior (Bissing-Olson et al., 2013). Parallel to this, significant interest in a growing area of research has been generated through the construct of "emotional intelligence" even though the analysis interaction between cognition, emotion and behaviour is not new. In spite of the logic of this argument, there are, to the researcher knowledge, empirical studies have been done to examined the role of emotional intelligence in predicting pro-environmental behaviour is still lacking. Therefore, this research suggests to incorporated the additional variables in TPB construct to bridge the gap in pro-environmental behaviour in the context of employee in organization.

References

Ajzen, I. (1991). *The theory of planned behavior. Organizational behavior and decision processes.* Academic Press. Inc: University of Massachusetts at Amherst.

Ali, A. J. and Al-Owaihan, A. (2008). Islamic work ethic, A critical review. Cross cultural management. *An International Journal,* 15(1): 5-19.

Anderson, L. M. and Bateman, T. S. (2000). Individual environmental initiative, Championing natural environmental issues in US business organizations. *Academy of Management Journal,* 43(4): 548-70.

Anthony, S. J., Anthony, S. J., Maloni, M. J., Maloni, M. J., Henley, A., Henley, A. and Campbell, S. (2016). Motivational influences on supply manager environmental sustainability behavior. *Supply Chain Management, An International Journal,* 21(3): 305-32.

Bissing-Olson, M. J., Iyer, A., Fielding, K. S. and Zacher, H. (2013). Relationships between daily affect and pro-environmental behavior at work, The moderating role of pro-environmental attitude. *Journal of Organizational Behavior,* 34(2): 156-75.

Blok, V., Wesselink, R., Studynka, O. and Kemp, R. (2015). Encouraging sustainability in the workplace: a survey on the pro-environmental behaviour of university employees. *Journal of Cleaner Production,* 106: 55-67.

Boiral, O. (2009). Greening the corporation through organizational citizenship behaviors. *Journal Of Business Ethics,* 87(2): 221-36.

Boiral, O., Talbot, D. and Paillé, P. (2015). Leading by example: A model of organizational citizenship behavior for the environment. *Business Strategy and the Environment,* 24(6): 532-50.

Brick, C. and Lewis, G. J. (2016). Unearthing the green, personality, Core traits predict environmentally friendly behavior. *Environment and Behavior,* 48(5): 635-58.

Cantor, D. E., Morrow, P. C. and Montabon, F. (2012). Engagement in environmental behaviors among supply chain management employees, An organizational support theoretical perspective. *Journal of Supply Chain Management,* 48(3): 33-51.

Carrico, A. R. and Riemer, M. (2011). Motivating energy conservation in the workplace, An evaluation of the use of group-level feedback and peer education. *Journal of Environmental Psychology,* 31(1): 1-13.

Chou, C.-J. (2014). Hotels' environmental policies and employee personal environmental beliefs, Interactions and outcomes. *Tourism Management,* 40: 436-46.

Ciocirlan, C. E. (2017). Environmental workplace behaviors, Definition matter. *Organization & Environment,* 30(1): 51-70.

Daily, B. F., Bishop, J. W. and Govindarajulu, N. (2009). A conceptual model for organizational citizenship behavior directed toward the environment. *Business & Society,* 48(2): 243-56.

Davis, G., O'Callaghan, F. and Knox, K. (2009). Sustainable attitudes and behaviours amongst a sample of non-academic staff, A case study from an information services department, griffith university, brisbane. *International Journal of Sustainability in Higher Education,* 10(2): 136-51.

Egri, C. P. and Herman, S. (2000). Leadership in the north american environmental sector, Values, leadership styles, and contexts of environmental leaders and their organizations. *Academy of Management Journal,* 43(4): 571-604.

Galpin, T., Whitttington, J. L. and Bell, G. (2015). Is your sustainability strategy sustainable? Creating a culture of sustainability. *Corporate Governance,* 15(1): 1-17.

Graves, L. M., Sarkis, J. and Zhu, Q. (2013). How transformational leadership and employee motivation combine to predict employee proenvironmental behaviors in China. *Journal of Environmental Psychology,* 35: 81-91.

Greaves, M., Zibarras, L. D. and Stride, C. (2013). Using the theory of planned behavior to explore environmental behavioral intentions in the workplace. *Journal of Environmental Psychology,* 34: 109-20.

Green, J. K. W., Zelbst, P. J., Meacham, J. and Bhadauria, V. S. (2012). Green supply chain management practices Impact on performance. Supply chain management. *An International Journal,* 17(3): 290-305.

Hassan, A. (2016). Islamic ethical responsibilities for business and sustainable development. *Humanomics,* 32(1): 80-94.

Inoue, Y. and Alfaro-Barrantes, P. (2015). Pro-environmental behavior in the workplace, A review of empirical studies and directions for future research. *Business and Society Review,* 120(1): 137-60.

Kastner, I. and Matthies, E. (2014). Implementing web-based interventions to promote energy efficient behavior at organizations–a multi-level challenge. *Journal of Cleaner Production,* 62: 89-97.

Kim, A., Kim, Y., Han, K., Jackson, S. E. and Ployhart, R. E. (2017). Multilevel influences on voluntary workplace green behavior, Individual differences, leader behavior, and coworker advocacy. *Journal of Management,* 43(5): 1335-58.

Kollmuss, A. and Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior. *Environmental education research,* 8(3): 239-60.

Lo, S. H., Peters, G. J. Y. and Kok, G. (2012). A review of determinants of and interventions for proenvironmental behaviors in organizations. *Journal of Applied Social Psychology,* 42(12): 2933-67.

Lo, S. H., van, B., G. J., Peters, G.-J. Y. and Kok, G. (2013). Proenvironmental travel behavior among office workers, A qualitative study of individual and organizational determinants. *Transportation Research Part A, Policy and Practice,* 56: 11-22.

Lo, S. H., Peters, G.-J. Y., van, B. G. J. and Kok, G. (2014). Only reasoned action? An interorganizational study of energy-saving behaviors in office buildings. *Energy efficiency,* 7(5): 761-75.

Manika, D., Wells, V. K., Gregory-Smith, D. and Gentry, M. (2015). The impact of individual attitudinal and organisational variables on workplace environmentally friendly behaviours. *Journal Of Business Ethics,* 126(4): 663-84.

Mohammad, J., Quoquab, F. and Omar, R. (2016). Factors affecting organizational citizenship behavior among malaysian bank employees, The moderating role of islamic work ethic. *Procedia-Social and Behavioral Sciences,* 224: 562-70.

Murtagh, N., Nati, M., Headley, W. R., Gatersleben, B., Gluhak, A., Imran, M. A. and Uzzell, D. (2013). Individual energy use and feedback in an office setting, A field trial. *Energy Policy,* 62: 717-28.

Nidumolu, R., Prahalad, C. K. and Rangaswami, M. R. (2009). Why sustainability is now the key driver of innovation. *Harvard Business Review,* 87(9): 56-64.

Norton, T. A., Zacher, H. and Ashkanasy, N. M. (2014). Organisational sustainability policies and employee green behaviour, The mediating role of work climate perceptions. *Journal of Environmental Psychology,* 38: 49-54.

Ones, D. S. and Dilchert, S. (2012). Environmental sustainability at work, A call to action. *Industrial and Organizational Psychology,* 5(4): 444-66.

Paillé, P., Boiral, O. and Chen, Y. (2013). Linking environmental management practices and organizational citizenship behaviour for the environment, A social exchange perspective. *The International Journal of Human Resource Management,* 24(18): 3552-75.

Pichel, K. (2008). *Enhancing ecopreneurship through an environmental management system, A longitudinal analysis for factors leading to proactive environmental behavior. In sustainable innovation and entrepreneurship.* Edward Elgar Publishing. 141-89.

Rajala, R., Westerlund, M. and Lampikoski, T. (2016). Environmental sustainability in industrial manufacturingm, Re-examining the greening of interface's business model. *Journal of Cleaner Production,* 115: 52-61.

Ramayah, T., Lee, J. W. C. and Lim, S. (2012). Sustaining the environment through recycling, An empirical study. *Journal of Environmental Management,* 102: 141-47.

Ramus, C. A. and Steger, U. (2000). The roles of supervisory support behaviors and environmental policy in employee ecoinitiatives,at leading-edge european companies. *Academy of Management Journal,* 43(4): 605-26.

Ramus, C. A. and Killmer, A. B. (2007). Corporate greening through prosocial extrarole behaviours–a conceptual framework for employee motivation. *Business Strategy and the Environment,* 16(8): 554-70.

Renwick, D. W., Redman, T. and Maguire, S. (2013). Green human resource management, A review and research agenda. *International Journal of Management Reviews,* 15(1): 1-14.

Rice, G. (2006). Pro-environmental behavior in egypt, Is there a role for islamic environmental ethics? *Journal of Business Ethics,* 65(4): 373-90.

Rizk, R. R. (2014). Islamic environmental ethics. *Journal of Islamic Accounting and Business Research,* 5(2): 194-204.

Robertson, J. L. and Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of Organizational Behavior,* 34(2): 176-94.

Scherbaum, C. A., Popovich, P. M. and Finlinson, S. (2008). Exploring individual-level factors related to employee energy-conservation behaviors at work. *Journal of Applied Social Psychology,* 38(3): 818-35.

Seuring, S. and Gold, S. (2013). Sustainability management beyond corporate boundaries, From stakeholders to performance. *Journal of Cleaner Production,* 56: 1-6.

Temminck, E., Mearns, K. and Fruhen, L. (2015). Motivating employees towards sustainable behaviour. *Business Strategy and the Environment,* 24(6): 402-12.

Uzzell, D. and Moser, G. (2009). *Introduction: Environmental psychology on the move.* Academic Press.:

Zhang, Y., Wang, Z. and Zhou, G. (2013). Antecedents of employee electricity saving behavior in organizations, An empirical study based on norm activation model. *Energy Policy,* 62: 1120-27.

Zhang, Y., Wang, Z. and Zhou, G. (2014). Determinants of employee electricity saving, The role of social benefits, personal benefits and organizational electricity saving climate. *Journal of Cleaner Production,* 66: 280-87.

Zibarras, L. D. and Coan, P. (2015). Hrm practices used to promote pro-environmental behavior, A UK survey. . *The International Journal of Human Resource Management,* 26(16): 2121-42.

Zientara, P. and Zamojska, A. (2016). Green organizational climates and employee pro-environmental behaviour in the hotel industry. *Journal of Sustainable Tourism*: 1-18.