When Work Groups Influence Sustainable Behavior: The Role of Social Identity on Employee Involvement in Corporate Sustainability Initiatives

Ringgold P. Atienza
Misamis University
ringgoldatienza@yahoo.com

Abstract

Recognizing that employee involvement in corporate sustainability initiatives (SI) is an ongoing issue for many managers, this study sought to determine the effect of materialism, environmental concern, pro-environmental self-identity, and social identity on employee sustainability involvement. Through a survey that utilized a purposive sampling technique, the author collected a total of 83 responses from Filipino employees, who were asked questions that were meant to capture the constructs of pro-environmental self-identity and pro-environment social identity. Data collected were analyzed using PLS-SEM.

The study revealed that an employee's social identity can magnify the employee's involvement in a company's sustainability initiatives. This means that organizations can promote their sustainability initiatives as a source of social upliftment. Managers can also organize employees as social groups, through which employees can identify themselves when they participate in the company's sustainability programs.

Future studies can test the model among employees coming from different levels of an organization, and across business industries; and can look into the level of commitment and level of engagement of employees with regards to their involvement in corporate sustainability initiatives. A more detailed examination of personal characteristics and group characteristics might also provide light on why a particular employee is influenced by self-identity rather than social identity and vice versa.

Key Words: materialism, sustainability initiatives, sustainable behavior, social identity, Filipino

Background of the study

Humans had generally lived within their means until the Industrial Revolution intensified consumerism (Bakırtas, Buluş, & Bakırtaş, 2014). Consumerism is manifested through the motivation to have more, and the belief that more consumption brings more pleasure (Fournier & Richins, 1991). As a result, people became more materialistic that they placed material possessions at the center of their being. They also tended to judge their success and those of others by the material wealth accumulated (Durvasula & Lysonski, 2010).

A high level of materialism drives consumers to buy products excessively and unnecessarily, and brings inevitable losses to society as it makes people more insensitive towards

the environment (Belk, 1988). Humankind's voracious appetite for excessive consumption has devastating effects on the environment (Dermody et al., 2015), especially in terms of the depletion of the earth's natural resources (Krausmann et al., 2009). Fortunately, there has been an increasing recognition of the limits of the earth's capacity to support and nurture all life forms, which has resulted in the rise of environmental movements and of sustainability initiatives. Members of society are now being reminded of meeting their current needs without compromising the ability of future generations to meet their own needs.

Business organizations, whose traditional role in the society is to produce the goods and services, are not spared the pressures of environmental movements and of other stakeholders for them to give back to society and to conduct their affairs in a socially responsible manner. Consequently, this has led managers to examine the effects of their products and services to the community and to environment, and has led to the adoption of corporate programs that address both social and environmental concerns.

One of the challenges that managers face, though, is how to encourage the participation of their employees in corporate social initiatives, which are seen to improve a company's competitive context (Habaradas, 2013), as well as to legitimize its presence in communities in which it operates at the end (Habaradas, 2012). These initiatives include traditional forms of volunteerism such as mentoring schoolchildren, taking care of the homeless, elderly, or disadvantaged, participating in disaster relief, and building community playgrounds, among others. Volunteerism also involves "skill-based" engagement efforts, through which employees use their technical and commercial know-how to address social concerns. Volunteerism has likewise expanded into adopting responsible behavior on the job. Employees are now engaged in sustainable supply chain management, cause-related marketing, and green business initiatives. However, the decision to be part of sustainability programs and the self-sacrifice involved in participating in these programs should come from the employees themselves (Mirvis, 2012).

Nowadays, employees do not just look for jobs for a living, but they also look for employers that can fulfill their sense of purpose and meaning in life. They want to do a job that can have an impact on the organizational goals that are also relevant to the community (Mirvis, 2012). Employees would like to work in a company that has a good reputation. Valdez (2017), for example, confirms that a company's social performance affects corporate human resources in terms of hiring and personnel retention. For organizations to attract potential talents, they have to build their reputation as organizations that provide a positive impact to the community. Having employees that are engaged in issues concerning the community and the environment provides a good effect on the organizational reputation and branding for the future candidates in the organization. Therefore, it is worth examining how companies can provide an encouraging and supportive environment for employees to engage in their social and sustainability initiatives wholeheartedly.

This research fills the gap in the literature by exploring how the values of materialism, environmental concern, and pro-environmental identity directly affect employee involvement in the company's social and environmental initiatives. Specifically, this study sought to: (1) develop a model of employee involvement in sustainability initiatives; (2) measure the direct effect of the values of materialism, environmental concern, pro-environmental self-identity, and social identity

on employee involvement in corporate sustainability initiatives (SI); (3) determine whether pro-environmental self-identity mediate the effect of materialism and employee involvement in SI; (4) determine whether pro-environmental self-identity mediate the effect of environmental concern and employee involvement in SI; (5) determine whether pro-environmental social-identity mediate the effect of materialism and employee involvement in SI; and (6) determine whether pro-environmental social-identity mediate the effect of environmental concern and employee involvement in SI. By attaining these objectives, the researcher would be able to provide organizations the theoretical knowledge in understanding employee involvement in corporate sustainability initiatives.

Theoretical Frameworks

This study bridges the field of sustainable consumption behavior to organizational behavior by adopting the Sustainable Consumption Behavior Model (Dermody et al., 2015) and using it in the context of workplace behavior, particularly to measure employee involvement in SIs. The Sustainable Consumption Behavior Model (Dermody et al., 2015) measures an individual's sustainable consumption using materialism, environmental concern, social consumption motivation, and pro-environmental self-identity. It also captures the application of self-identity theory on predicting behaviors relating to sustainability (Sparks & Shepherd, 1992). The following sub-sections provide a discussion on how this model was operationalized and applied in this study.

Environmental concern and pro-environmental self-identity

According to Dunlap & Jones (2002), "environmental concern entails individuals being aware of environmental problems and demonstrating their willingness to personally support and/or engage in solutions to help resolve these problems." Thus, the construct of environmental concern has been regarded by many researchers as a predictor for behaviors relating to sustainability (Hartmann & Apaolaza-Ibáñez, 2012; Kilbourne & Pickett, 2008). For example, a study found a direct link between environmental concern and general ecological behavior, which was measured using three dimensions, namely consumer behavior, environmental citizenship, and policy support (Bakırtas et al., 2014). However, Bamberg (2003) argued that previous studies that showed a weak direct relationship between environmental concern and specific environmentally related behaviors is due to the wrong notion that general attitudes such as environmental concern directly determine specific behaviors.

Dermody et al. (2015) further showed that the link between environmental concern and consumer behavior is mediated by pro-environmental self-identity. The study of Gatersleben, Murtagh, & Abrahamse (2012) and van der Werff, Steg, & Keizer (2014) confirmed that self-identity mediates values and behavior in the context of sustainability behavior. Van der Werff et al (2014) demonstrated that environmental self-identity mediates the relationship between past pro-environmental activities and subsequent pro-environmental preferences; hence initial pro-environmental actions may lead to subsequent pro-environmental preferences and behavior. Reminding people of their past pro-environmental behavior can strengthen environmental self-identity. However, this may not always be the case as environmental self-identity also depends on values and is thus stable to a certain extent. The past behavior needs to imply something about the person performing the behavior in order to strengthen environmental self-identity. Based on

attribution theory (Kelley & Michela, 1980) and self-perception theory (Bem, 1972), the past pro-environmental actions will strengthen environmental self-identity to a larger extent when this behavior is more indicative of who you are.

Self-identity was also explored by Sparks & Shepherd (1992) as part of the antecedents in the Theory of Planned Behavior, specifically on green consumerism. Their study showed a direct link of self-identity to green consumption behavior. They suggested that the Theory of Reasoned Action and Theory of Planned Behavior must take serious account of the role of self-identity in influencing behavioral intentions and behaviors. In conclusion, it is reasonable to expect that pro-environmental self-identity mediates the relationship of the independent variables materialism and environmental concern to the dependent variable sustainable consumption behavior.

People who are environmentally concern are aware of environmental problems, and they demonstrate their willingness to personally support or engage in solutions to help resolve environmental problems (Dunlap & Jones, 2002). Many studies have regarded environmental concern as a major explanation of why individuals do or do not engage in sustainability-orientated behaviors (Hartmann & Apaolaza-Ibáñez, 2012). This research argued that environmental concern is likely to lead to employee involvement in SI, mediated by pro-environmental self-identity.

Materialism

Materialism has become an integral part of consumers' economic activities and modern-day living, with mainly negative consequences reported from a materialistic lifestyle. Some of the reported negative effects of materialism are increasing consumer debt and bankruptcy, shrinking saving, economic crisis, and lower levels of life satisfaction and well-being (Bauer, Wilkie, Kim, & Bodenhausen, 2012; Dittmar, Bond, Hurst, & Kasser, 2014; Duh, 2015). Additionally, it was also reported that people with high materialistic level are more dissatisfied with their standard of living than those people with low materialistic level (Richins, 1987). Further, it showed that materialism affects the multiple domains of life satisfaction, such as satisfaction with families, friends, income, and life as general (Kasser, 2014; Richins & Dawson, 1992).

Materialism can also provide positive roles in the lives of an individual such as identity builder (Burroughs & Rindfleisch, 2002), self-esteem booster, and satisfier of the need of distinctiveness and belonging (Wong et al., 2011). Also, materialism is positively associated with achievement values; thus, it may also be positively related to positive work and educational outcomes (Kasser, 2014). This research argued that materialism provides a positive effect on employee involvement in sustainability initiatives, and that this positive effect is triggered if involvement provides achievement and belongingness to employees.

Sustainable behavior in the workplace / Employee involvement in sustainability initiatives

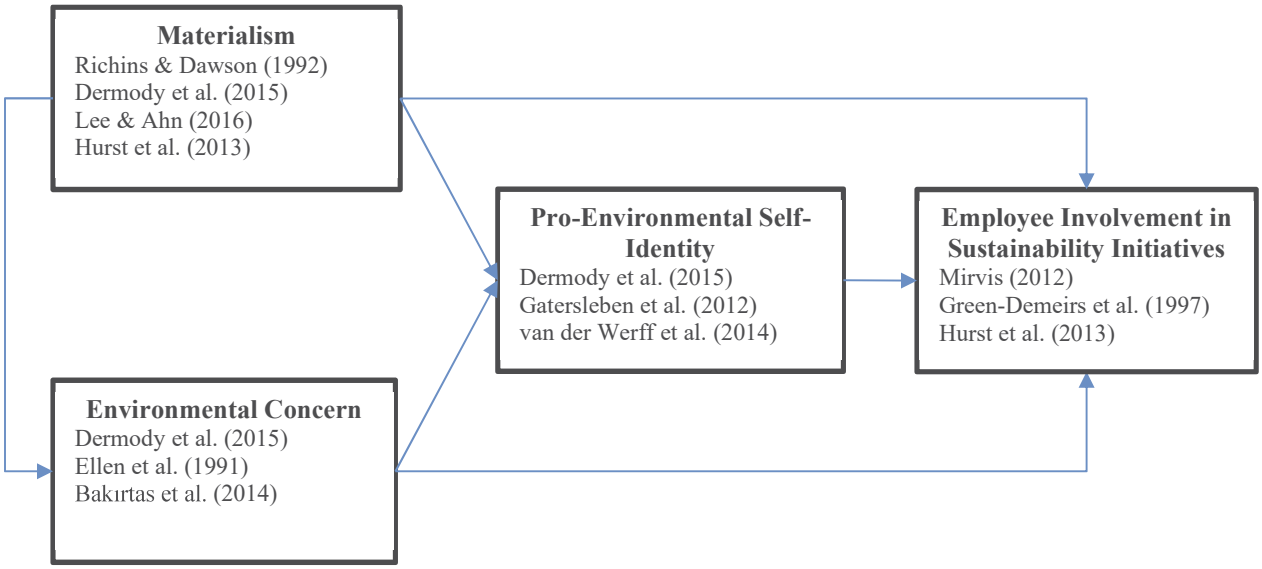
Behaviors related to sustainability was conceptualized as pro-environmental behavior (Hurst, Dittmar, Bond, & Kasser, 2013; Zhou, Ye, Geng, & Xu, 2015), ecological behavior (Bakırtas et al., 2014; Kaiser, 1998), positive environmental behavior (Green-Demeirs, Pelletier, & Ménard, 1997), and vicarious behavior (Kaiser & Wilson, 2004) in the previous studies. Some general measure of sustainability behavior of Kaiser (1998) includes purchase behavior, pro-social

behavior, personally responsible consumer behavior, societal responsible consumer behavior, conservation of water and power, volunteering, ecological behavior and environmental behavior (Bakırtas et al., 2014; Buerke, Straatmann, Lin-Hi, & Müller, 2017; Hurst et al., 2013; Kaiser & Wilson, 2004). Employee involvement in sustainability initiatives refers explicitly to an act of volunteering one's time to be part of the organization's initiatives, including environmental-based and community-based activities.

This study excludes the construct social consumption motivation as part of the explanatory variables from the Sustainable Consumption Behavior Model (Dermody et al., 2015) as the focus of this study is the sustainable behavior in the workplace and not sustainable consumption.

Figure 1

Operational Framework



Methodology

Participants and design

The questionnaire was administered using both paper and electronic surveys. This study used a purposive sampling technique by qualifying the respondents. First, the respondents must be employees from the Philippines. Second, the respondents should acknowledge the presence of SI in their companies. Prior to giving the questionnaire, informed consent was sought. A total of 83 participants were reached. Survey participants were broadly demographically representative of the population sampled in terms of age, while data on gender and educational level were steep on female and college level, respectively, as seen on Table 1.

Table 1
Demographic characteristics of the survey sample

	Frequency	%		Frequency	%
Age					
25 or below	22	26.5	Educational level		
26-35	33	398	Elementary	1	1.2
36-45	20	24.1	High School	5	6.0
46 or above	8	9.6	Vocational	6	7.2
Gender			College Degree	55	66.3
Male	33	39.8	Master's Degree	11	13.3
Female	50	60.2	Doctorate Degree	5	6.0

Measures

All scale items in material value scale (MVS), environmental concern (EC), pro-environmental self-identity (PESI), and employee involvement in SI were measured using seven-point rating scales (1 = Strongly Disagree and 7 = Strongly Agree). The material value scale (MVS) was first developed by Richins & Dawson (1992) and was continuously validated by different authors in different samples and context (Lipovčan, Prizmić-Larsen, & Brkljačić, 2015; Richins, 2014). Environmental concern (EC) was measured with four items adapted from Ellen, Wiener, & Cobb-walgren (1991). The PESI scale used in this study consisted of five items adapted from Whitmarsh & O'Neill (2010) and Roberts (1996). Employee involvement in SI is a direct measure to assess the level of employee involvement in organizational sustainability projects. Measures that were reverse coded in scales MVS, EC, and PESI were properly accounted for.

Confirmatory factor analysis was conducted on the material value scale (MVS), environmental concern (EC), and pro-environmental self-identity (PESI) to test their validity since most of these scales were utilized a different context. Promax oblique rotation was used as this rotation method is more suited in social sciences (Matsunaga, 2011). Promax rotation began with a varimax solution, after which factor loadings were raised to a 4^{th} power kappa (κ), as set by the researcher. The Promax method operates to obtain the solution with the lowest possible kappa so that the resultant factors/components are maximally distinguishable (Comrey & Lee, 2013).

Table 2
Rotated factor matrix for Material Value Scale (MVS)

Items	Factor 1	Factor 2
I admire people who own expensive homes, cars, clothes.	.742	
I like to own things that impress people.	.865	.492
I don't place much emphasis on the amount of material objects people own as a sign of success.		
I'm happier if I could afford to buy more things.	.567	.749
My life would be better if I own certain things I don't have	.483	.768
It bothers me that I can't afford to buy things I'd like.	.650	.760
I try to keep my life simple, as far as possessions are concerned.		
Buying things gives me a lot of pleasure.	.635	.696
I like a lot of luxury in my life.	.757	.614
Eigenvalues	4.345	1.161

Items	Factor 1	Factor 2
Percentage of variance explained	48.274	12.898
Cronbach's alpha	.863	.864

Extraction method: Principal components analysis.
Rotation method: Promax with Kaiser Normalization
Factors loading less than .40 are to be omitted.

In Table 2, it shows that in both Factor 1 and Factor 2, items number 3 and 7 were omitted. In Factor 2, item number 1 was omitted. In this case, Factor 1 is used in this study since it has the highest percentage of variance explained (48.724%), and has a big drop of variance explained when Factor 2 is chosen (12.989%). However, this does not mean that Factor 2 is an invalid measure for material value. For conservative measure, the researcher retained Factor 1 as a measure for material value scales (MVS).

Table 3
Rotated factor matrix for Environmental Concern (EC)

Items	Factor 1
Environmental problems are not affecting my life, personally.	.827
Environmental problems are exaggerated because in the long run, things balance out.	.853
I can think of many things I'd rather do than work toward improving the environment.	.866
I have too many obligations to take an active part in an environmental organization.	.763
Eigenvalues	2.743
Percentage of variance explained	68.587
Cronbach's alpha	0.844

Extraction method: Principal components analysis.
Rotation method: Promax with Kaiser Normalization
Factors loading less than .40 are to be omitted.

Table 3 shows that the environmental concern (EC) scale is already a good measure with 68.587% variance explained and with a Cronbach's alpha of .844. For this reason, the researcher retained all items in the scale.

Table 4
Rotated factor matrix for Pro-Environmental Self-Identity (PESI)

Items	Factor 1	Factor 2
I think of myself as an environmentally-friendly consumer.	.851	
Each consumer's behavior can have a positive effect on society by purchasing products sold by socially responsible companies.	.867	
I think of myself as someone who is very concerned with environmental issues.	.832	
I would not be embarrassed to be seen as having an environmentally-friendly lifestyle.		.910
I want my family or friends to think of me as someone who is concerned about environmental issues.		.918
Eigenvalues	2.342	1.601
Percentage of variance explained	46.835	32.022
Cronbach's alpha / Correlation coefficient (for factor with two items)	0.810	.682

Extraction method: Principal components analysis.
Rotation method: Promax with Kaiser Normalization
Factors loading less than .40 are to be omitted.

Table 4 rotated factor matrix for the pro-environmental self-identity (PESI) scale shows a very interesting result. Factor 1 and Factor 2 did not overlap in their measures. This could mean that the scale pro-environmental self-identity should be broken down into two meaningful scales. Both factors are good measures with 46.835%, and 32.022% variance explained, respectively, and has good Cronbach's alpha.

To make sense of the creation of two new measures we can see that Factor 1 includes items 1 and 3 with statements, "I think of myself as an environmentally-friendly consumer," and "I think of myself as someone who is very concerned with environmental issues" that pertain to being self-reflective on ones owns' self-identity, as the statement describes, "I think of myself." Item 2 pertains to the belief that actions can produce results when it comes to environmental efforts, and this magnifies one's perception of self-identity. The Self-Identity Theory explains that a person has self-schema, which refers to an unconscious and systematized generalization about self. This self-schema includes scripts, future intentions, and expectations about self-realization and core values (Horowitz, 1998). Items 1 and 3 provide a state of self-representation, which refers to a conscious belief or potential conscious expression about "me" that may be symbolized in words, images, or bodily tensions such as posture, gait, muscle tensions, and gestures (Horowitz, 2012). Further, it explained that identity is a conscious or intuitive sense of sameness over time. Pro-environmental self-identity is a conscious view of oneself. Thus, Factor 1 fits in the definition of what is meant by self-identity; hence we retain Factor 1 as "pro-environmental self-identity."

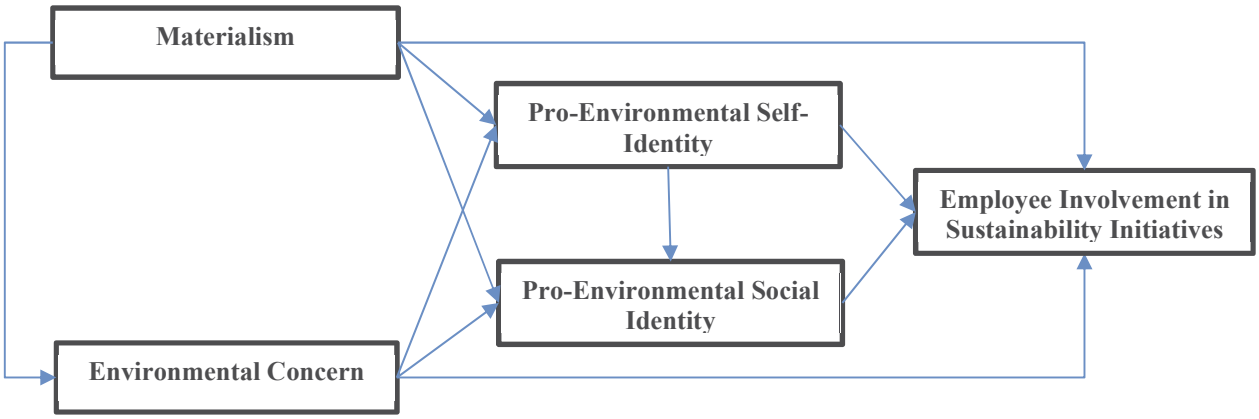
Factor 2 relates to how one self's perception on how others view him or her as a person who is a pro-environment, as proved in the statements, "I would be embarrassed to be seen as having an environmentally-friendly lifestyle.", and "I would not want my family or friends to think of me as someone who is concerned about environmental issues." After having an understanding of one's own self-identity, an individual may look for groups of people with the same set of values, beliefs, behaviors, or goals, thus taking part in social identity. The Social Identity Theory proposed that the groups (i.e., social class, family, basketball team, school, etc.) to which people belonged were an important source of pride and self-esteem (Tajfel, 1974).

The Social Identity theory outlined three mental processes of social identity: first, social categorization, second, social identification, and third is social comparison. Groups give people a sense of social identity, a sense of belonging to a social world. As part of the normal cognitive process, people tend to group things together. In a society, people create stereotyping that puts people into groups or categories; thus, there exists a social categorization (stage 1). Social identification pertains to adopting the identity of the group that oneself belonged to. If a person belongs to a group of pro-environmentalist, that person will most likely behave what is expected for as an environmentalist (stage 2). The final stage is the social comparison, in which a person compares one's group with another identified group. In order to increase one's self-image, a person may enhance the status of the group in which one belonged or may discriminate and hold prejudiced views against the group one does not belong (stage 3).

Factor 2 captured the definition of social identity in which the questions captured how one would think about how others may compare them once he or she became part of an environmental movement or pro-environmental groups. For this reason, the author believes that Factor 2 should be named as "pro-environment social identity."

The new proposition for this research is to have two types of pro-environmental identity, namely, pro-environmental self-identity and pro-environmental social identity. This makes sense since self-identity is focused on one self's identification about one's values, traits, beliefs, and purpose in this world. In contrast, social-identity considers the view of others upon his own group identity.

Figure 2
New Model



Statistical treatment of data

The data from 83 observations had undergone diagnostics and found to have non-normal distribution. This type of data called for a non-parametric statistical approach. Partial Least Square Structural Equation Modeling is known as an alternative for covariance-based SEM as it can handle non-parametric data (Ringle, Wende, & Becker, 2015). PLS-SEM is also referred to as soft-modeling-technique with minimum demands regarding measurement scales, sample sizes, and residual distributions (Monecke & Leisch, 2012). The structural equation model paths in Figure 3 were tested using the bootstrapping technique, subsamples set at 500, and maximum iteration at 10,000. All latent variables were considered to have reflective indicators. This study utilized two-tailed p-value tests of significance since the research does not have a priori hypotheses that inferred direction of the variables' relationships.

Measures validity

Construct validity and discriminant validity tests for the PLS structural equational model (Figure 2) were conducted using rho_A, composite reliability, average variance extracted (AVE), and results showed that all measures were valid (Table 5). For rho_A and composite reliability, PLS-SEM requires a value higher than 0.70, while AVE requires a value higher than 0.50 (Henseler, Ringle, & Sarstedt, 2015).

Table 5
Construct and discriminant validity

Variables	rho_A	Composite Reliability	AVE	Fornell-Larcker Criterion 1	2	3	4
Pro-environmental self-identity	0.989	0.874	0.699	0.836			
Pro-environmental social identity	0.818	0.914	0.841	-0.208	0.917		
Environmental concern	0864	0.895	0.681	-0.198	0.740	0.825	
Materialism	0.894	0.896	0.681	0.273	-0.595	-0.563	0.745

Results

Descriptive results in Table 6 showed that Filipino employees have higher self-identification in terms of their identity as being pro-environment than their projection; they want others to perceive them as being pro-environment. Filipino employees also showed weaker employee involvement in SI in general, although this varies a lot in all samples (SD = 1.732). In terms of the Filipino employees' environmental concern value and material value, their results are higher than the average. However, variation in the samples is high, with a standard deviation of 1.434 and 1.229, respectively.

Table 6
Descriptive statistics of the dependent and independent variables

Variables	Mean	SD	Skewness	Kurtosis	Q25%	Q75%	IQR
Employee involvement in SI	3.891	1.732	0.068	1.961	3.000	5.000	2.000
Pro-environmental self-identity	5.204	0.987	0.003	2.060	4.333	6.000	1.667
Pro-environmental social identity	4.839	1.288	0.045	1.677	3.650	6.000	2.350
Environmental concern	4.072	1.434	-0.066	1.985	3.000	5.250	2.250
Materialism	4.079	1.229	-0.335	2.933	3.428	4.714	1.285

Table 7 shows the correlation matrix of the latent variables. Employee involvement in SI was negatively correlated with materialism, Pearson's r(83), = .475, $p < .001$. This negative association could mean that those who have high material value are less likely to be involved in sustainably or environmental projects. However, validation is needed to test the causal nature of materialism in the bootstrapping technique in PLS structural equation model path.

Employee involvement in SI is also positively correlated with pro-environmental social identity, Pearson's r(83), = 0.532, $p < .001$, and environmental concern, Pearson's r(83), = 0.770, $p < .001$. However, there found no significant correlation between pro-environmental self-identity and other variables. This self-identity and social identity difference effect could mean that the employee involvement in SI provides the social interaction that could amplify social identity.

Table 7
Correlation matrix

	Variables	1	2	3	4	5
1	Employee involvement in SI	1	-1.250	0.532**	0.770**	-0.475**
2	Pro-environmental self-identity		1	0.194	-0.172	-.207
3	Pro-environmental social identity			1	0.653**	0.465**
4	Environmental concern				1	-0.531**
5	Materialism					1

Note: *p ≤ 0.05; **p ≤ 0.01 (2-tailed)

Results in Table 8 confirmed the correlation test on self-identity and social identity as a predictor of employee involvement in SI, and are consistent the study of Carmeli et al. (2017) on the importance of SI's identification with an organization as a critical socio-psychological mechanism to enable employees to satisfy their need to belong. Tajfel et al. (1979) stated that there is a continuum between self-identity and social identity that determines the extent to which group-related or personal characteristics influence a person's feelings or actions. In this study, it showed that employees showed stronger salient basis on social identity for self-conception in the context of SI. Conversely, when group membership is not salient, then employees' behavior should be in accord with their own personal and idiosyncratic characteristics rather than group norms, thus favoring self-identity as a manifestation of involvement in SI (Terry, Hogg, & White, 1999).

Practically, this means that organizations should promote their SI as a source of social upliftment for the employees. Managers should promote the creation of social identity categorization or grouping among employees that they may identify themselves as pro-environment (stage 1). As a result, it would create amplification on employee's social identity as a pro-environmentalist, even if they have a less prior social identity. During the social identity process (stage 2), once part of the environmentalist group in an organization, an employee will tend to act what is expected of as being an environmentalist and may do continue to do so to maintain that social identity. This social identity for an employee can become an important source of pride and self-esteem.

Table 8
Path coefficients of self-identity and social identity

Path Coefficient	Original Sample	SD	T Statistics	P Values
Self-Identity -> Employee Involvement in SI	-0.023	0.089	0.254	0.800
Social Identity -> Employee Involvement in SI	0.611	0.076	8.092	0.000***

Note: *p ≤ 0.10; **p ≤ 0..05; ***p ≤ 0.01

Table 9 shows the mediating effects of pro-environmental self-identity and pro-environmental social identity on materialism and employee involvement in SI. The results showed that pro-environmental social identity mediates the effect of materialism on employee involvement in SI. Further, materialism showed negative effects on both pro-environmental social identity and employee involvement in SI. Results indicate that materialistic value, as a personal characteristic, has a detrimental impact on the actual behavior even after considering having a group identifier. In other words, employees with high materialistic values will be less likely to get involved in SI,

and this phenomenon can be magnified when an organization's social identity for SI is not imminent.

The direct effect of materialism on employee involvement in SI is negative, which indicates that as an individual's material value goes higher, that individual's willingness to be involved in sustainability initiatives or environmental programs lessen. The result is consistent with the study of Bakırtas et al. (2014), which shows that materialism negatively affects ecological behavior. On the other hand, the study of Dermody et al. (2015) shows that materialism positively affects sustainable consumption behavior. Although, conclusions should be made in these comparisons where the effect of materialism could be different for every specific environmentally-related behavior.

Another interesting result showed the positive effect of materialism on self-identity. The result is consistent with the study of Dermody et al. (2015), which shows that materialism positively affects pro-environmental self-identity in an Asian setting while the materialism negatively affects pro-environmental self-identity in a western setting. Furthermore, results also show that the effect of materialism is absent when the model considers the mediation of pro-environmental self-identity. The result also indicates that the employee's pro-environmental self-identity does not lead to employee involvement in SI, even after considering the employee's materialistic value. This suggests that group-related characteristics in SI and not personal characteristics determine employee's involvement in SI.

Table 9
Mediation effect of self-identity and social identity on materialism and employee involvement in sustainability initiatives

Path Coefficient	Original Sample	SD	T Statistics	P Values
Materialism -> Employee Involvement in SI	-2.080	0.107	1.940	0.048*
Materialism -> Self-Identity	0.274	0.142	1.922	0.055*
Materialism -> Social Identity	-0.596	0.101	5.876	0.000***
Self-Identity -> Employee Involvement in SI	0.014	0.089	0.159	0.874
Social Identity -> Employee Involvement in SI	0.496	0.117	4.222	0.000***
Materialism -> Self-Identity -> Employee Involvement in SI	0.004	0.027	0.144	0.886
Materialism -> Social Identity -> Employee Involvement in SI	-0.295	0.080	3.672	0.000***

Note: *p ≤ 0.10; **p ≤ 0..05; ***p ≤ 0.01

Table 10 tested the mediating effects of pro-environmental self-identity and pro-environmental social identity on environmental concern and employee involvement in SI. The results showed that environmental concern predicts employee involvement in SI and social identity. However, there found no mediation effects. Interestingly, this indicates that employees with a high level of environmental concern will highly likely get involved in SI. Although no mediation effect was found in this study, both direct effects of environmental concern on self-identity and employee involvement in SI are consistent with the study of Dermody et al. (2015).

Table 10
Mediation effect of self-identity and social identity on environmental concern and employee involvement in sustainability initiatives

Path Coefficient	Original Sample	SD	T Statistics	P Values
Environmental Concern -> Employee Involvement in SI	0.816	0.084	9.764	0.000***
Environmental Concern -> Self-Identity	-0.192	0.148	1.295	0.196
Environmental Concern -> Social Identity	0.741	0.045	16.522	0.000***
Self-Identity -> Employee Involvement	0.020	0.064	0.310	0.757
Social Identity -> Employee Involvement	0.015	0.103	0.141	0.888
Environmental Concern -> Self-Identity -> Employee Involvement in SI	-0.004	0.017	0.229	0.819
Environmental Concern -> Social Identity -> Employee Involvement in SI	0.011	0.077	0.140	0.889

Note: *p ≤ 0.10; **p ≤ 0..05; ***p ≤ 0.01

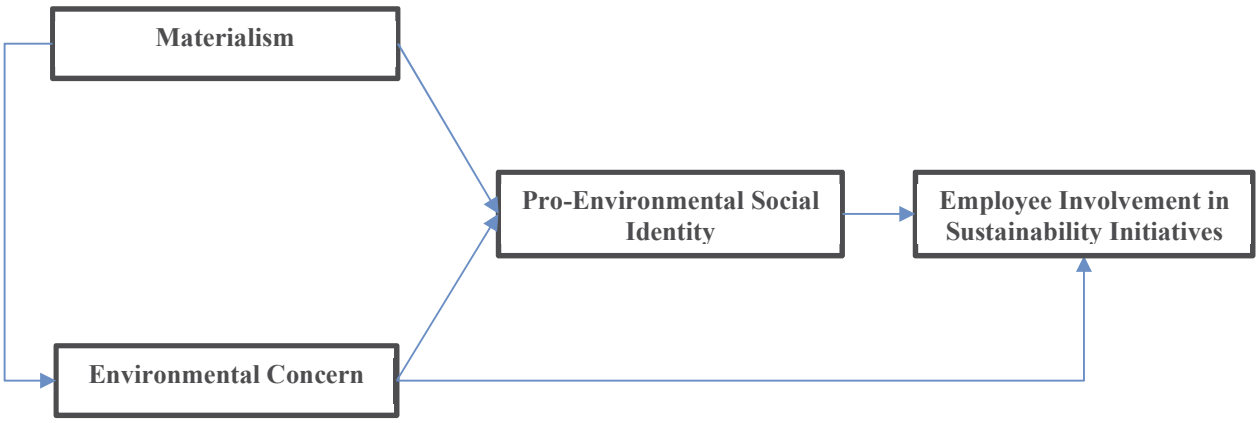
A robustness test is done on the whole model to show the interrelating effects of latent variables in the model (Table 11). Results showed that pro-environmental social identity fully mediates the effect of materialism on employee involvement in SI. Materialism also persisted in its effect on social identity as mediated by environmental concern.

Table 11
Robustness test on the model

Path Coefficient	Original Sample	SD	T Statistics	P Values
Environmental Concern -> Employee Involvement in SI	-0.785	0.091	8.599	0.000***
Environmental Concern -> Self-Identity	0.593	0.100	5.932	0.675
Environmental Concern -> Social Identity	-0.038	0.194	0.193	0.000***
Materialism -> Employee Involvement in SI	-0.063	0.080	0.786	0.432
Materialism -> Environmental Concern	-0.563	0.076	7.406	0.000***
Materialism -> Self-Identity	-0.261	0.115	2.264	0.153
Materialism -> Social Identity	0.224	0.182	1.229	0.024**
Self-Identity -> Employee Involvement in SI	0.004	0.112	0.034	0.973
Self-Identity -> Social Identity	-0.021	0.097	0.214	0.831
Social Identity -> Employee Involvement in SI	0.028	0.062	0.449	0.654
Materialism -> Environmental Concern -> Employee Involvement in SI	-0.442	0.081	5.431	0.000***
Materialism -> Environmental Concern -> Social Identity	-0.334	0.059	5.628	0.000***

Note: *p ≤ 0.10; **p ≤ 0..05; ***p ≤ 0.01
Specific indirect paths that are not significant are not included.

Figure 3
Final Model



Conclusion, Limitations, and Recommendations

This study concluded that materialism, environmental concern, pro-environmental social identity are good predictors of employee involvement in SI. One interesting result found in this study was that the pro-environmental self-identity (PESI) scale could be broken down into two measures, the pro-environmental self-identity, and pro-environment social identity. However, the researcher considers this as exploratory and expects that future endeavors to delineate both construct using in-depth psychometric analysis.

Another interesting result found out that employee involvement in SI of an organization can be magnified by social identity and vice versa. Practically, this would mean that organizations should promote their SI as a source of social upliftment for the employees. For example, managers should promote the creation of social identity among employees that they may identify themselves as a "pro-environments" when the organization initiates an environmental project. This social identification with the organization can be the key socio-psychological mechanism to enable people to satisfy their belonging needs, which translates to positive affective reaction and hence involvement in sustainability behaviors (Carmeli et al., 2017).

The study acknowledges some limitation which may offer exciting avenues for future research. The study sample size is minimal, hence the use of a much more lenient PLS-SEM. Also, this study was not able to discriminate employee's profiles such as the industry in which they work, their length of service in the company, and their position in the company which future researchers must consider. Future studies may also consider looking at the level of commitment and level of engagement of the employee in their involvement in SI. A cross-cultural examination among different countries may also provide a more in-depth understanding of the values and work behavior among Filipinos. A more detailed look into the personal characteristics of the employees and group characteristics of the companies in their SI may provide light on why a particular employee is influenced by self-identity rather than social identity and vice versa.

References

Bakırtas, H., Buluş, G. C., & Bakırtaş, İ. (2014). The effects of materialism and consumer ethics on ecological behavior: An empirical study. *European Journal of Sustainable Development*, *3*(4), 125–134. https://doi.org/10.14207/ejsd.2014.v3n4p125

Bamberg, S. (2003). How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. *Journal of Environmental Psychology*, *23*(1), 21–32.

Bauer, M. A., Wilkie, J. E. B., Kim, J. K., & Bodenhausen, G. V. (2012). Cuing consumerism: Situational materialism undermines personal and social well-bein. *Psychological Science*, *23*(5), 517–523. https://doi.org/10.1177/0956797611429579

Belk, R. (1988). Third world consumer culture. *Marketing and Development: Towards Broader Dimensions*, 103–127. Greenwich: JAI Press.

Bem, D. J. (1972). Self-perception theory. *Advances in Experimental Social Psychology*, *6*(1), 1–62.

Buerke, A., Straatmann, T., Lin-Hi, N., & Müller, K. (2017). Consumer awareness and sustainability-focused value orientation as motivating factors of responsible consumer behavior. *Review of Managerial Science*, *11*(4), 959–991. https://doi.org/10.1007/s11846-016-0211-2

Carmeli, A., Brammer, S., Gomes, E., & Tarba, S. Y. (2017). An organizational ethic of care and employee involvement in sustainability-related behaviors: A social identity perspective. *Journal of Organizational Behavior*, *38*(9), 1380–1395. https://doi.org/10.1002/job.2185

Comrey, A., & Lee, H. (2013). *A first course in factor analysis* (2nd ed.). Psychology Press.

Dermody, J., Hanmer-Lloyd, S., Koenig-Lewis, N., & Zhao, A. L. (2015). Advancing sustainable consumption in the UK and China: The mediating effect of pro- environmental self-identity. *Journal of Marketing Management*, *31*, 1472–1502.

Dittmar, H., Bond, R., Hurst, M., & Kasser, T. (2014). The relationship between materialism and personal well-being: A meta-analysis. *Journal of Personality and Social Psychology*, *107*(5), 879–924. https://doi.org/10.1037/a0037409

Duh, H. I. (2015). Antecedents and consequences of materialism: An integrated theoretical framework. *Journal of Economics and Behavioral Studies*, *7*(1), 20–35. https://doi.org/doi:10.1108/IntR-11-2013-0247

Dunlap, R. E., & Jones, R. E. (2002). Environmental concern: Conceptual and measurement issues. *Handbook of Environmental Sociology*, *3*(6), 482–524.

Durvasula, S., & Lysonski, S. (2010). Money, money, money - how do attitudes toward money impact vanity and materialism? - the case of young Chinese consumers. *Journal of Consumer Marketing*, *27*(2), 169–179. https://doi.org/10.1108/07363761011027268

Ellen, P. S., Wiener, J. L., & Cobb-walgren, C. (1991). The role of percieved consumer effecetiveness in motivating environmentally consicious behaviors. *Journal of Public Policy & Marketing*, *10*(2), 102–117.

Fournier, S., & Richins, M. (1991). Some theoretical and popular notions concerning materialism. *Journal of Social Behavior and Personality*.

Gatersleben, B., Murtagh, N., & Abrahamse, W. (2012). Values, identity and pro-environmental behaviour. *Contemporary Social Science*, *9*(4), 374–392. https://doi.org/10.1080/21582041.2012.682086

Green-Demeirs, I., Pelletier, L. G., & Ménard, S. (1997). The impact of behavioural difficulty on the saliency of the association between self-determined motivation and environmental behaviours. *Canadian Journal of Behavioural Science*, *29*(3), 157–166. https://doi.org/10.1037/0008-400X.29.3.157

Habaradas, R. B. (2012). Shifting philanthropic motives: Shell's corporate social initiatives in the Philippines. *International Journal of Business and Social Science*, *3*(17), 181–186.

Habaradas, R. B. (2013). Corporate social initiatives in the Philippines: Experiences of four major corporations. *Journal of Legal, Ethical and Regulatory Issues*, *16*(2), 1–16.

Hartmann, P., & Apaolaza-Ibáñez, V. (2012). Consumer attitude and purchase intention toward green energy brands: The roles of psychological benefits and environmental concern. *Journal of Business Research*, *65*(9), 1254–1263. https://doi.org/10.1016/j.jbusres.2011.11.001

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Horowitz, M. (1998). *Cognitive psychodynamics: From conflict to character.* New York: Wiley.

Horowitz, M. (2012). Self-identity theory and research methods. *Journal of Research Practice*, *8*(2), M14--M14. Retrieved from http://jrp.icaap.org/index.php/jrp/article/view/296/261

Hurst, M., Dittmar, H., Bond, R., & Kasser, T. (2013). The relationship between materialistic values and environmental attitudes and behaviors: A meta-analysis. *Journal of EnvironmentalPsychology*, *36*(December), 257–269. https://doi.org/10.1016/j.jenvp.2013.09.003

Kaiser, F. G. (1998). A general measure of ecological behavior. *Journal of Applied Social Psychology*, *28*(5), 395–422. https://doi.org/10.1111/j.1559-1816.1998.tb01712.x

Kaiser, F. G., & Wilson, M. (2004). Goal-directed conservation behavior: The specific composition of a general performance. *Personality and Individual Differences*, *36*(7), 1531–1544. https://doi.org/10.1016/j.paid.2003.06.003

Kelley, H. H., & Michela, J. L. (1980). Attribution theory and research. *Annual Review of Psychology*, *31*(1), 457–501.

Kilbourne, W., & Pickett, G. (2008). How materialism affects environmental beliefs, concern, and environmentally responsible behavior. *Journal of Business Res*, *61*(9), 885–893. https://doi.org/10.1016/j.jbusres.2007.09.016

Krausmann, F., Gingrich, S., Eisenmenger, N., Erb, K. H., Haberl, H., & Fischer-Kowalski, M. (2009). Growth in global materials use, GDP and population during the 20th century. *Ecological Economics*, *68*(10), 2696–2705. https://doi.org/10.1016/j.ecolecon.2009.05.007

Lee, M. S. W., & Ahn, C. S. Y. (2016). Anti-consumption, materialism, and consumer well-being. *Journal of Consumer Affairs*, *50*(1), 18–47. https://doi.org/10.1111/joca.12089

Lipovčan, L. K., Prizmić-Larsen, Z., & Brkljačić, T. (2015). Materialism, affective states, and life satisfaction: Case of Croatia. *SpringerPlus*, *4*(1), 1–9. https://doi.org/10.1186/s40064-015-1494-5

Matsunaga, M. (2011). How to factor-analyze your data right: Do's, don'ts, and how-to's. *International Journal of Psychological Research*, *3*(1), 97–110. https://doi.org/10.4090/juee.2008.v2n2.033040

Mirvis, P. (2012). Employee engagement and CSR: Transactional, relational, and developmental approaches. *California Management Review*, *54*(4), 93–117. https://doi.org/10.1525/cmr.2012.54.4.93

Monecke, A., & Leisch, F. (2012). semPLS: Structural equation modeling using partial least squares. *Journal of Statistical Software*, *48*(3), 1–32. https://doi.org/10.1108/EBR-10-2013-0128

Richins, M. L. (2004). The material values scale: Measurement properties and development of a short form. *Journal of Consumer Research*, *31*(1), 209–219.

Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research*, *19*(3), 303. https://doi.org/10.1086/209304

Ringle, C. M., Wende, S., & Becker, J. M. (2015). *SmartPLS 3*. Retrieved from http://www.smartpls.com

Roberts, J. A. (1996). Green consumers in the 1990s: Profile and implications for advertising. *Journal of Business Research*, *36*(3), 217–231. https://doi.org/10.1016/0148-2963(95)00150-6

Sparks, P., & Shepherd, R. (1992). Self-identity and the theory of planned behavior: assessing the role of identification with 'green consumerism''.' *American Sociological Association*, *55*(4), 388–399. https://doi.org/10.1590/S1415-65552000000200007

Tajfel, H. (1974). Social identity and intergroup behaviour. *Social Science Information*, *13*(2), 65–93. https://doi.org/10.1177/053901847401300204

Tajfel, H., Turner, J. C., Austin, W. G., & Worchel, S. (1979). An integrative theory of intergroup conflict. *Organizational Identity: A Reader*, *56*, 65.

Terry, D. J., Hogg, M. A., & White, K. M. (1999). The theory of planned behaviour: Self-identity, social identity and group norms. *British Journal of Social Psychology*, *38*(3), 225–244. https://doi.org/10.1007/s11136-018-2000-7

Valdez, N. B. C. (2017). Corporate social performance affects human resources: The Philippine experience. In *Quality and Business Management Conference Proceedings* (p. 110).

van der Werff, E., Steg, L., & Keizer, K. (2014). Follow the signal: When past pro-environmental actions signal who you are. *Journal of Environmental Psychology*, *40*, 273–282. https://doi.org/10.1016/j.jenvp.2014.07.004

Whitmarsh, L., & O'Neill, S. (2010). Green identity, green living? The role of pro-environmental self-identity in determining consistency across diverse pro-environmental behaviours. *Journal of Environmental Psychology*, *30*(3), 305–314. https://doi.org/10.1016/j.jenvp.2010.01.003

Zhou, K., Ye, L., Geng, L., & Xu, Q. (2015). How do implicit materialism and postmaterialism affect proenvironmental behavior? *Social Behavior and Personality: An International Journal*, *43*(9), 1495–1505. https://doi.org/10.2224/sbp.2015.43.9.1495