

Research Paper

The Influence of Place Attachment on Pro-Environmental Behavioural Intentions of Ecotourists in Taman Negara National Park, Pahang, Malaysia

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Abstract: Place attachment plays a key role in determining tourist satisfaction and pro-environmental behaviour to sustain an ecotourism destination. Place attachment refers to the emotional bonding or engagement between an individual and a particular environmental setting. It influences what a tourist sees, thinks and feels about the place and destination visited. Even though the place attachment concept has been explored in different perspectives, it is yet to be fully examined together with pro-environmental behavioural intentions, especially in the ecotourism context. Thus, this study aims to analyse the influence of place attachment on the pro-environmental behavioural intentions of ecotourists in Taman Negara National Park (TNNP), Pahang. A survey was carried out among 387 local and international ecotourists in TNNP, Pahang to examine the relationship between the four dimensions of place attachment (including place identity, place affects, place dependence and place social bonding) on ecotourist behaviour. The results suggest that only place dependence and place identity significantly influence pro-environmental behavioural intentions; while none of these dimensions has a significant relationship with ecotourist's actual pro-environmental behaviour. Future research should explore the mediating and moderation effects of the socio-demographic profile of ecotourists on the relationship between place attachment and behavioural intention in different ecotourism sectors.

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Introduction

Environmental issues are recognised as one of the serious challenges faced by the global ecotourism sector for business continuity and sustainability. The massive transition of ecotourism destinations from nature-based tourism to commercial tourism can seriously damage and destroy natural areas. In addition, there can be adverse effects on natural resources, wildlife and local communities such as environmental pollution, disruptions to local lifestyle and culture and others. Such environmental damages can now be seen in many countries such as wildlife abuse in Thailand (Naomi, 2017); environmental damages in Nepal (Sustainability Leaders Project, 2019); destruction of land and local culture in Kenya (Drughi, 2018); loss of wildlife and rare species, habitats, and pollution in India (Rahman & Bassam, 2016) and devastation of ecotourism destinations (including cultural desecration, exploitation of resources and wildlife) in Bahamas and the Philippines (Folk, 2018). Malaysia is no exception (Hassan & Azhar, 2017; Samdin, Abdul Aziz, Radam, & Yacob, 2013; Othman, Mohd Anwar & Lim, 2010). Several serious environmental issues were identified in Taman Negara National Park (TNNP), Pahang, Malaysia such as unsatisfactory water quality at Kuala Tahan river, food stalls, warm surrounding temperature, overcrowding, littering, provocation of wildlife, nature resource conflicts, as well as disturbance of the biodiversity system and river erosion (Ibrahim & Hasan, 2011). Hence, pro-environmental behaviour has emerged as one of the major concerns to address and solve the rising environmental issues at ecotourism destinations. A number of studies have addressed pro-environmental behaviour in ecotourism destinations in relation to environmental knowledge or literacy (Li, Li, Jin, & Wang, 2019; Masud, Aldakhil, Abdelmohsen, & Azam, 2017; Ramdas & Mohamed, 2014; Kim, Kim, & Thapa, 2018; Wong, Herman, Ramachandran, Kunasekaran, & Chan, 2018; Jitrumluek, Falcioni, Thiengkamol, & Thiengkamol, 2019); personal norms (Esfandiar, Pearce, & Dowling, 2019; Zhang et al., 2016); place attachment (Ramkissoon & Mavondo, 2015; Ramkissoon, Weiler, & Smith, 2013a; Halpenny, 2010; Tonge, Ryan, Moore, & Beckley, 2015; Junot, Paquet, & Fenouillet, 2017); behavioural intention (Carfora, Caso, Sparks, & Conner, 2017; Leonidou, Coudounaris, Kvasova, & Christodoulides, 2014; Mair & Laing, 2013)

and tourism experiences (Rosa, Profice, & Collado, 2018). However, it has not been fully explored in the ecotourism sector. Therefore, this study aims to examine the influence of the four dimensions of place attachment on environmental behavioural intentions and actual behaviour of ecotourists in Taman Negara, Pahang Malaysia.

Literature Review

Ecotourism

Ecotourism refers to responsible travel which promotes preservation, reduces damage to the environment and improves the socio-economic status of local communities through their participation (Ceballos-Lascurain, 1998). International Ecotourism Society (2013) defines ecotourism as a responsible trip or visit to a natural area which preserves the environment and improves the well-being of local communities through education and interpretation. In other words, ecotourism is known as tourism activities that consist of learning about nature, active participation of local communities and the sustainability of ecological environments through the conservation, empowerment, cooperation of public and private sectors as well as scientific and educational research (Jaini, Anuar, & Daim, 2012; Packer & Ballantyne, 2013; Parks, Parks, & Allen, 2009; Honey, 1999).

Place Attachment

Place attachment is referred to as a positive bond created from the behavioural, cognitive and affective aspects which connects an individual to groups and their surroundings (Brownlee et.al, 2015; Wynveen et al., 2012; Halpenny, 2006; Snider, Hill, Luo, Buerger, & Herstine, 2011; Mazumdar, 2005, Eisenhauser, Krannich, & Blahna, 2000; Gieryn, 2000). Many studies have addressed the positive and significant relationship between tourist satisfaction, revisit intention, repeated visits and destination loyalty (Beckman, Kumar & Kim, 2013; Prayag & Ryan, 2012; Yuksel Yuksel, & Bilim, 2010; Song, Kim & Yim, 2017; Lee, Graefe, & Burns, 2007; Mechinda Serirat, & Gulid., 2009; Hosany & Gilbert., 2010). Place attachment is further divided into four sub-dimensions such as place dependence, place identity, place affect (Giuliani, 2003; Hinds & Sparks, 2008) and social bonding (Ramkissoon, Smith, & Weiler, 2013b).

Place Dependence

Place dependence refers to a functional attachment or positive evaluation of a place to achieve specific goals or individual needs (Stokols & Shumaker, 1981; Williams, Patterson, Roggenbuck, & Watson, 1992). Place dependence develops when someone becomes attached to a place and finds meaningfulness through a broad range of

settings; from man-made attractions to natural ones such as parks, mountains, lakes, forests and trails (Halpenny, 2010; Manzo 2005; Raymond, Brown, & Weber, 2010).

Place Identity

Place identity is known as an emotional or cognitive connection and social interaction between an individual and a visited place (Tsai, 2016; Wynveen, Kyle, & Sutton, 2012; Stedman, 2002; Clayton, 2003; Lalli, 1992; Proshansky, 1978). Place identity is created through an accumulation of experiences at a particular tourism destination (Budruk, Thomas, & Tyrrel, 2009; Cheng, Wu, & Huang, 2013). Some studies (Gu & Ryan, 2008; Halpenny, 2010; Therkelsen, Halkier, & Jensen, 2010) asserted that the physical and social attributes of natural destinations strongly influence the formation of a place identity and specific memories about how others feel about the place. The place identity concept has also been tested in heritage and cultural tourism contexts and found to strongly influence place attachment (Hou, Lin, & Morais, 2005; Poirá, Reichel, & Biran, 2006; Poirá, Butler, & Airey, 2004).

Place Affect

An emotional bond that exists between a person and a visited destination is known as place affect (Kals & Maes, 2002). This emotional bonding can be positive or negative, depending on the tourist's experiences and level of satisfaction (Manzo, 2005, Pooley & O'Connor, 2000). An individual who undergoes a more intense experience with natural environments at tourism destinations may exhibit a stronger emotional attachment compared to those with a lesser experience (Hinds & Sparks, 2008). Studies by Esch, Langner, Schmitt, and Geus (2006) as well as Hosany, Ekinici, and Uysal (2006) indicated that customer satisfaction is higher when there is a stronger emotional attachment to a particular product. De Rojas and Camarero (2008) further added that place affects which provide special meanings in natural settings also enhance the level of satisfaction. Similarly, a study by Ramkissoon and Mavondo (2015) stated that high satisfaction will lead to positive emotions, place affect and repeat visits.

Place Social Bonding

Place social bonding refers to social ties or communal bonds that are created through people-place interactions and shared experiences (Measch & Manor, 1998; Scannell & Gifford, 2010; Oluyinka, 2011; Nye & Hargreaves, 2009). Place bonding can be expressed through shared values, beliefs and actions of the collective groups that the individuals are closely engaged with (Scannell & Gifford, 2010; Gunderson & Watson 2007; Devine-Wright & Clayton, 2010). Several researchers such as Ramkissoon et al. (2013b), Hidalgo and Hernandez (2001) and Hendrickson, Rosen,

& Aune (2011) highlighted that the positive link connecting people is stronger than attachments with physical attributes of a place, and this is also known as a significant determinant of place attachment in nature-based destinations.

Pro-environmental Behaviour

Pro-environmental behaviour refers to behaviour which consciously seeks to minimise the negative impact of one's actions on natural resources. In other words, it is known as the action or behaviour of a tourist to reduce damages and destruction to nature and the environment while promoting conservation or preservation (Kollmuss & Agyeman, 2002; Steg & Vlek, 2009). Kim (2014) divided pro-environmental behaviour into three categories such as green purchases (via purchase and consumption of recycled goods or non-toxic products), good citizenship (minimise wastage-production and consumption while promoting conservation and recycling) and environmental activism (membership in an environmental group). Furthermore, the lack of environmental-friendly infrastructure and practical activities on preserving and protecting nature especially at tourist destinations is recognised as the main factor contributing to the damages and destruction of nature and environment (Chubchuwong, Beise-Zee, & Speece, 2015). Ramkisson and Mavondo (2015) claimed that increased trips to destinations that tourists are attached to emotionally and physically can easily harm and damage the resources of the destination itself. In contrast, Pooley and O'Conner (2000) argued that tourists with high levels of place dependence demonstrate a strong tendency to protect and conserve the destinations' natural surroundings and resources; while those with high levels of place identity focus on promoting protective behaviour. Similarly, Junot et al. (2017) confirmed that all three dimensions of place attachment (including place dependence, place affect and place social bonding) demonstrate positive and significant relationships with pro-environmental behaviour, except place identity.

Theory Background

This study adopted a combined theoretical framework of the human attachment theory (Bowlby, 1969, 1975, 1980) and Theory of Planned Behaviour. The human attachment theory used to explain the attachment relationship was created from the naturalistic observations of an infant on the mother which is biologically rooted and supports the survival of the infant (Ainsworth & Bowlby, 1991). Later, it was expanded and explored in different fields and perspectives, including place attachment. The place attachment theory highlights human relationships with physical environments, and the meanings they assign to these environmental settings (Morgan, 2010; Stedman, 2002; Mesch & Monar, 1998). Additionally, Altman and Low (1992) explained the interaction between humans and places in three

dimensions: cognitive (communication that leads to spatial perception which guides people in understanding and applying environmental elements to direct their way), behavioural (interaction that highlights the activities and functional relationship between people and place) and emotional (interaction that focuses on satisfaction and attachment to the place).

Meanwhile, tourist pro-environmental behaviour is underpinned by the Theory of Planned of Behaviour (TPB). TPB which is extended from the Theory of Reasoned Action (TRA) elaborates human behavioural intention and actual behaviour via attitude, subjective norms, and perceived behavioural control (Ajzen, 1998, 2011). Attitude is measured through the outcomes of performing a behaviour either positive or negative; subjective norm is defined as the person's own perception of a particular action and strength of motivation to influence a particular behaviour; and perceived behavioural control refers to the perceived power which controls and monitors a person's ability to perform a behaviour (Ajzen, 2011, 2015; Asare, 2015; Bandura, 1978). Several researchers such as Kennedy (2013), Mimicchie and Abraham (2004), Pawson and Tilley (1997), Ham et. al. (2009) and Steg and Vlek (2009) applied TPB theory in their pro-environmental behaviour studies which demonstrated positive and significant relationship between constructs. However, Nunkoo and Ramkisson (2010) and Maisarah and Salmi (2015) argued that this theory is still in its infancy, especially in examining actual behaviour.

Materials and Methods

The purpose of this study was to examine the influence of four dimensions of place attachment (place dependence, place identity, place affect and place social bonding) on pro-environmental behaviour (both behavioural intention and actual behaviour) of ecotourists in TNNP. In line with this, this study adopted a quantitative research method. A quantitative research method deals with statistical, mathematical or numerical data where data is collected through primary research from a large sample size and analysed using statistical software (Saunders, Lewis, & Thornhill, 2012; Patel, 2009). Therefore, a survey questionnaire with psychometric Likert scale items was used to collect the needed data. The quota sampling method was adopted for this study based on the total population of visitors to Taman Negara in 2016. According to statistics from Department of Wildlife and National Parks of Malaysia, the total number of ecotourists to TNNP in 2016 was 73,664; consisting of 29,210 local ecotourists and 44,454 international ecotourists. If the sample was randomly selected, it will lead to a sampling bias. Sampling bias is known as errors that occur in a research when the respondents are not selected properly (Mesa, Chica, Duquia, Bonamigo, & Bastos, 2016). Hence, this study applied a 60: 40 ratio in determining the sample (respondents). In this regard, 60% and 40% of the study respondents were selected from international ecotourists and local ecotourists, respectively. The self-

administered survey questionnaires were distributed to 500 TNNP ecotourists from April to August 2018. The questionnaire consisted of two parts, which are Section A and Section B. Five items in section A collected data on the demographic profile of the respondents including gender, age, nationality, education level and occupation. In section B, six items looked at the four dimensions of place attachment –place dependence, place identity, place affect and place social bonding and two types pro-environmental behavioural via behavioural intention and actual behaviour. All these items used a five-point Likert scale from 1 to 5, from Strongly Disagree to Strongly Agree. A pilot test of the survey questionnaire was conducted with 40 respondents to identify the flaws of the questionnaire. Crossman (2019) defined pilot study as a research project applied on a limited scale that allows researchers to obtain a clear idea of what they want to know and how they can best find it without undertaking the expenses and efforts of full-fledged study. Out of 500 questionnaires, only 387 usable questionnaires were analysed using SPSS and PLS-SEM (partial least squares structural equation modelling). SPSS analysis was used to analyse the demographic profile of respondents while PLS-SEM was used to examine the relationship between place attachment and pro-environmental behaviour of the ecotourist.

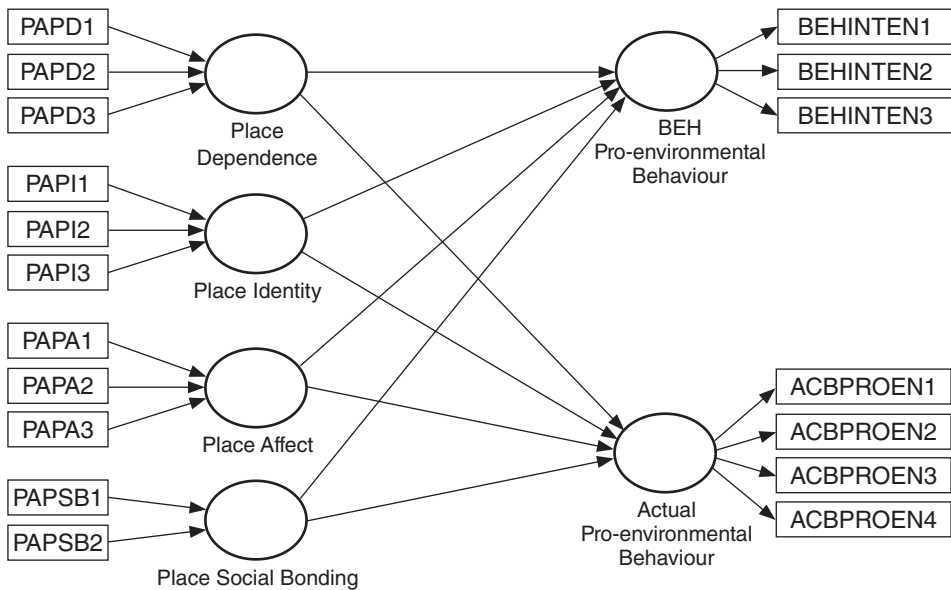


Figure 1. Proposed research framework

The proposed research framework of this study, which was designed from a combination of the attachment theory and theory of planned behaviour is illustrated in Figure 1. Eight hypotheses as shown below were formed based on literature.

H1: Place Dependence has direct and significant effects on pro-environmental behavioural intention

H2: Place Dependence has direct and significant effects on actual pro-environmental behaviour.

H3: Place Identity has direct and significant effects on pro-environmental behavioural intention

H4: Place Identity has direct and significant effects on actual pro-environmental behaviour.

H5: Place Affect has direct and significant effects on pro-environmental behavioural intention

H6: Place Affect has direct and significant effects on actual pro-environmental behaviour.

H7: Place Social Bonding has direct and significant effects on pro-environmental behavioural intention

H8: Place Social Bonding has direct and significant effects on actual pro-environmental behaviour.

Findings

Demographic Profile of Ecotourists

This section of the paper discusses the findings of the research according to the eight hypotheses mentioned earlier. Prior to the discussion, a brief description of the demographics related to the sample used in the study is given. A total of 500 questionnaires were distributed among local and international tourists in TNNP. Out of these, 387 were returned and analyses were conducted on the data collected from these questionnaires. The demographics of the respondents are shown in Table 1.

Table 1. Demographic profile of respondents

		Frequencies	Percent
Gender	Male	225	58.1
	Female	162	41.9
Age	18 and below	77	19.9
	19–38	193	49.9
	39–48	56	14.5
	49–58	44	11.4
	59 and above	17	4.4

Table 1 (con't)

		Frequencies	Percent
Nationality	Local — Malaysian	159	41.0
	International	228	59.0
Education	Primary	1	0.3
	Secondary	113	29.2
	Diploma/ A Level	74	19.1
	Bachelor Degree	146	37.7
	Master/PhD	52	13.4
	Others	1	0.30
Occupation	Unemployed	45	11.6
	Student	142	36.7
	General Worker	82	21.2
	Executive	18	4.7
	Professional	52	13.4
	Government Servant	19	4.9
	Self-Employed	16	4.1
	Retired	7	1.8
Others	6	1.6	

The findings show that a total of 58.1% (225) of the respondents were males and 41.9% (162) were females. Since past literature indicates that age, educational background and nationality play a significant influence on tourist experiences and behaviour, the researchers sought to obtain this background data through the questionnaire. The majority of those who participated in the survey were ecotourists aged 19 to 38 (49.9%), 18 and below (19.9%) and 39 to 48 (14.5%). Besides that, 59% (228) of international ecotourists and 41% (159) of Malaysians participated in this survey. The international ecotourists came from several countries around the world such as Germany, Holland, Netherland, Italy, Turkey, Sweden, Poland, Italy, Australia, Belgium, Japan, USA, Singapore, Switzerland, Spain, Thailand, France, and Sweden. As shown in Table 1, a majority of the respondents hold a bachelor's degree (37.7%), followed by secondary education (29.2%), diploma or A level (19.1%) and a master's or doctoral degree (13.4%). In addition, the table also illustrates that 36.7% of the ecotourists were students, 21.2% were general workers, 13.4% were professionals, 11.6% were unemployed and so on.

Measurement Model Analysis

In order to evaluate the measurement model, the researchers looked at the indicator loadings, average variance extracted (AVE) and the composite reliability (CR loadings) to evaluate the convergent validity. Hair et al. (2018) claimed that higher values of

indicator loadings, above 0.60, depict higher levels of reliability. Gholami, Sulaiman, Ramayah, & Molla (2013) further indicated that the AVE value should be above 0.50 while the CR threshold value should be above 0.70. As displayed in Table 2, all the values met the recommended thresholds, thus establishing convergent validity.

Table 2. Measurement model

Factors	Items	Loadings	AVE	Composite Reliability	
Place Attachment	PAPD1	0.915	0.762	0.906	
	PAPD2	0.822			
	PAPD3	0.880			
	PAPI1	PAPI1	0.865	0.778	0.913
		PAPI2	0.881		
		PAPI3	0.900		
	PAPA1	PAPA1	0.861	0.756	0.903
		PAPA2	0.865		
		PAPA3	0.882		
	PAPSB1	PAPSB1	0.963	0.576	0.709
PAPD1		0.915			
Pro-environmental Behavioural Intention	BEHIN 1	0.782	0.537	0.775	
	BEHIN 2	0.768			
	BEHIN 3	0.639			
Pro-environmental Actual Behaviour	ACBPROEN1	0.712	0.604	0.859	
	ACBPROEN1	0.825			
	ACBPROEN1	0.719			
	ACBPROEN1	0.843			

Next, discriminant validity (DV) was assessed to analyse the extent to which a construct differs from other constructs. Fornell & Larcker (1981) recommended that the indicator’s outer loading value should be higher than all cross loadings on other variables. If the outcomes fail to meet this requirement, items would need to be deleted. Table 3 presents the outcome of the Fornell–Larcker criterion analysis, which indicates that all the indicator’s loading values are higher than all the cross loadings of other variables or constructs used. Therefore, the constructs met the Fornell & Larcker criterion and discriminant validity was confirmed.

Table 3. Discriminant validity

	PA	PD	PI	PSB	ABPROEN	BEHINPROEN
Place Affect (PA)	0.868					
Place Dependence (PD)	0.542	0.873				
Place Identity (PI)	0.751	0.484	0.881			
Place Social Bonding (PSB)	0.417	0.38	0.403	0.78		
Actual Behaviour - Pro-environmental (ABPROEN)	0.284	0.227	0.267	0.123	0.771	
Behavioural Intention - Pro-environmental (BEHINPROEN)	0.349	0.324	0.398	0.181	0.56	0.729

Structural Model Analysis

Subsequently, the path analysis to test the eight proposed hypotheses were generated. Table 4 displays the results of the analysis. The direct effects between place dependence, place affect, place identity, place social bonding, behavioural intention (pro-environmental) and actual behaviour (pro-environmental) were tested. The outcomes imply that only place dependence (b= 0.164, p =0.006) and place identity (b=0.286, p= 0.000) are positively related to the pro-environmental behavioural intention; while the rest of the constructs did not significantly influence the pro-environmental behavioural intention. Furthermore, results also demonstrated negligible relationships between all four dimensions of place attachment and actual behaviour (pro-environmental). Thus, only H1 and H3 are supported as illustrated in Figure 2.

Table 4. Hypothesis testing

	Std. Beta	SE	t-values	Decision
Place Affect → Pro-environmental Actual Behaviour	0.159	0.085	1.883	Rejected
Place Affect → Pro-environmental behavioural intention	0.052	0.081	0.642	Rejected
Place Dependence → Pro-environmental Actual Behaviour	0.096	0.068	1.421	Rejected

Table 4 (cont)

	Std. Beta	SE	t-values	Decision
Place Dependence → Pro-environmental behavioural intention	0.164	0.059	2.776*	Supported
Place Identity → Pro-environmental Actual Behaviour	0.11	0.082	1.348	Rejected
Place Identity → Pro-environmental behavioural intention	0.286	0.076	3.766*	Supported
Place Social Bonding → Pro-environmental Actual Behaviour	-0.025	0.089	0.278	Rejected
Place Social Bonding → Pro-environmental behavioural intention	-0.018	0.058	0.31	Rejected

*p < 0.05

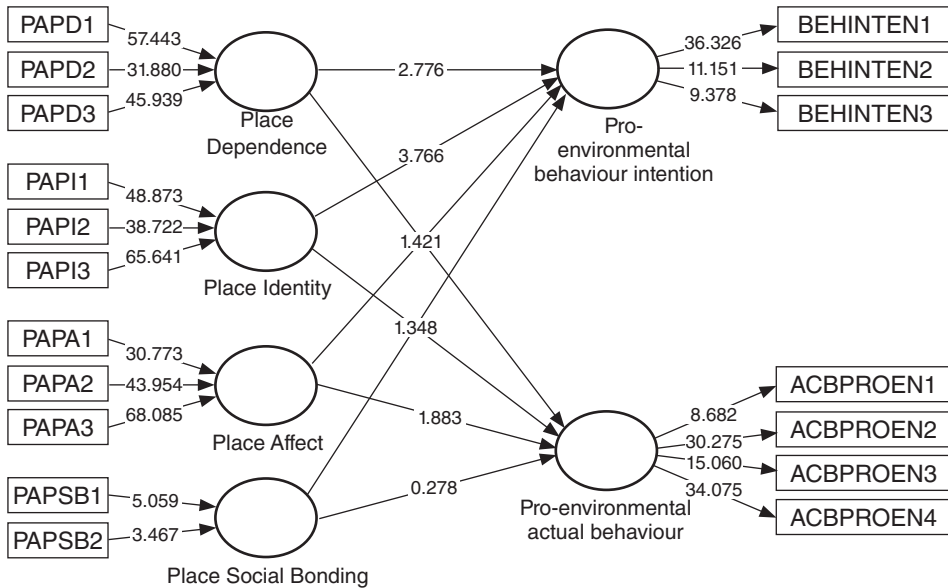


Figure 2. Path analysis

Discussions and Conclusion

The four dimensions of place attachment were examined to evaluate the relationship between pro-environmental behavioural intention and actual pro-environmental behaviour. The outcomes of the research suggest that place dependence and place identity significantly influence the ecotourist’s pro-environmental behaviour

intention but not their actual behaviour. This finding corroborates with that of Ramkissoon and Mavondo (2015) and Pooley and O'Conner (2000). However, the results for place identity contradicts with the findings of Junot et al. (2017), Uzzell, Pol, and Badenes (2002) as well as Ramkissoon et al. (2013a), who found a negative relationship between place identity and general pro-environmental behaviour. Meanwhile, place affect and place social bonding were found to demonstrate non-significant relationships between pro-environmental behaviour intention and actual behaviour. In contrast, the work of Ramkissoon et al. (2013b, 2012), Jaiswal and Kant (2018), Chen and Dwyer (2017), Tsai (2016), Zhang, Wu, and Buhalis (2017), Yuksel et al. (2010), Tsai (2012) and Prayag and Ryan (2012) revealed a significant relationship between place affect and pro-environmental behaviour. As a conclusion, the findings of the study demonstrate that only place dependence and place identity significantly influence pro-environmental behavioural intention and none of these dimensions portray a significant relationship with actual pro-environmental behaviour.

This research has some limitations that must be acknowledged. Firstly, this study analysed only the direct relationship between the four dimensions of place attachment on pro-environmental behaviour intention and actual behaviour. The mediating and moderating analysis were not explored in this study. Secondly, the study mainly focused on the relationship between place attachment and pro-environmental behaviour whereas other influencing constructs were ignored. Thirdly, the outcomes of the study cannot be used to generalise or provide an overall conclusion about ecotourist behaviour in Malaysia since the study only surveyed 387 respondents in TNNP. Therefore, future studies should be conducted by focusing on other constructs that influence place attachment and tourist pro-environmental behaviour in different ecotourism sectors such as, nature-based tourism, marine, coastal, island and heritage. In addition, the mediating and moderating analysis using socio-demographic profile of tourists should also be explored in future studies.

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