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## Did RSPO Overlook the Unwelcome Thoughts Amongst Growers and Millers?

(Adakah RSPO Terlepas Pandang Persepsi dan Tanggapan Pengurus Ladang dan Kilang?)

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#### ABSTRACT

This study examined the relationship between knowledge, past experience and personal value of growers and millers intention to adopt the RSPO. This study applied the theory of Planned Behaviour (TPB) to test the proposed relationship. This research applies a quantitative approach that uses a cross-sectional questionnaire survey in order to test the proposed hypotheses. A total of 122 palm oil companies in Sabah, Malaysia were identified and collected data were analysed using the partial least squares and structural equation modelling. The findings of this study confirmed the Theory of Planned Behaviour as a great predictor of behavioural intention. In addition, knowledge, past experience and personal value were also found to have significant relationship and this resulted into the conclusion that knowledge, past experience and personal value positively influence the attitude amongst growers and millers towards RSPO. The result of this study has proven that the TPB model is a valuable, practical and has a high potential to predict human behavioural intention.

Keywords: Sustainability; business; management; environmental management; RSPO; sustainable agriculture

#### ABSTRAK

Kajian ini bertujuan untuk meneliti hubung kait pengetahuan, nilai peribadi dan pengalaman lepas pengurus ladang dan kilang di dalam gunapakai RSPO. Kajian ini mengaplikasikan Teori TPB untuk mengukur hubung kait yang dicadangkan. Kajian ini menggunakan pendekatan kuantitatif yang melibatkan borang soal selidik di dalam mengkaji semua hipotesis. Sejumlah 122 syarikat di dalam industri kelapa sawit di Sabah telah dikenal pasti sebagai sampel untuk kajian ini. Kajian ini menggunakan PLS and SEM sebagai alat untuk menguji hubung kait yang dicadangkan. Kajian ini mendapati kesemua pembolehubah luaran adalah signifikan terhadap hubung kait yang dicadangkan dan memberikan kesimpulan bahawa pengetahuan, pengalaman lepas dan nilai peribadi mempunyai hubungan dan kesan positif terhadap sikap di dalam guna pakai RSPO. Hasil kajian ini menunjukkan bahawa Teori TPB merupakan satu teori yang kukuh dan sesuai di dalam meramal niat kelakuan manusia.

Kata kunci: Kelestarian; perniagaan; pengurusan; pengurusan persekitaran; RSPO, pertanian kelestarian

#### INTRODUCTION

Palm oil, which was once only found in the African nation, is now the most widely known vegetable oil produce in the world. In Malaysia, the plantation of palm oil has contributed to the clearing of huge land area since early 1980's. However, its usage is controversial due to sustainability issues such as deforestation, indigenous people rights and wildlife protection. How can we break the link between the increasing production of palm oil and the sustainability of this industry? There are several platforms that can be used to deal with the question of sustainability in the palm oil industry (Teoh 2010; Ivancic & Koh 2016). Currently, sustainability can be demonstrated with application of standard such as ISO14000, Roundtable on Sustainable Palm Oil (RSPO) or using the generic Malaysian standards (MS) on good agricultural practices (Teoh 2010).

In early 2001, The World Wildlife Foundation (WWF) with the help of the industry players finally managed to negotiate and by 31st August 2004, 47 organizations

from the palm oil industry have signed the statement of intent (SOI) and the "Roundtable on Sustainable Palm Oil (RSPO)," was formally established under Article 60 of the Swiss Civil Code with a governance structure that ensures fair representation of all stakeholders throughout the entire supply chain (Ivancic & Koh 2016).

Having said that, RSPO is not perfect but the roundtable is part of the solution. Since its introduction in 2004, only 15 percent of the total world palm oil has been certified sustainable. One of the challenges in the palm oil industry is to include applying the best practices to achieve sustainable development (Chan 2000; Basiron 2007; Garrett, Carlson, Rueda & Noojipady 2016).

Business in today's world needs to be competitive and one of the key elements is being sustainable. The challenge is to see best practices by growers and millers to achieve sustainable development. To date, at least five big plantation companies in Malaysia have pulled out from RSPO certification. The current issues on palm oil certification shows that big corporation voluntarily quitting the RSPO and to some extent starting to challenge

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the board. There is a need to fulfil both the internal and external environmental requirements to ensure sustainable development (Basiron 2003, Basiron & Chan 2004; Basiron 2007; Garrett et al. 2016). Although there is a significant amount of research predicting personal environmental intention behaviours, there is still inadequate research regarding it in the palm oil industry. Thus, the purpose of this study is to examine Sabah's palm oil growers and miller's intention to adopt sustainable practices such as the RSPO

Academically, this study is significant as it helps to answer the approach of knowledge, past experience and personal value in influencing Theory of Planned Behaviour. As for the business implication, this study helps major players in the industry to understand the character of growers and millers. Finally, the result of this study also significantly provides policy makers with useful information on sustainable practise in the palm oil industry.

#### THE THEORY OF PLANNED BEHAVIOUR

Developed by Ajzen (1988), the Theory of Planned Behaviour (TPB) had been successfully used to predict human intention and widely used to predict and examine behaviour. The submission of the TPB to a certain field of interest will offer a compilation of information that is extremely useful to understand human behaviours or to generate interventions, which could be effective in changing them (Vinokur & Van Ryn 1993; Norman & Smith 1995). Individual's intent was determined by three factors related to the desired outcome of the behaviour: the personal attitude towards the results, the perceived social norms, and the perceived behavioural control over the action (Sanchez, Romero & Sosa 2014). This is in line with Ajzen (1991) who explained that attitudes towards the behaviour (including perceived consequences of action), subjective norms (or social pressures) and perceived behavioural control have the necessary opportunities, abilities and resources to act.

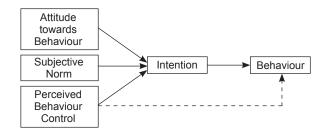


FIGURE 1. The theory of planned behaviour

Since the aim of this study is to examine managerial intention to adopt sustainable practices, constructs from this theory were found to be the best to explain an individual's intention to engage in these environmental behaviours (Cordano & Frieze 2000; Ajzen 2005; Gadenne, Kennedy & McKeiver 2009; Sharma & Sharma 2011; Greaves, Zibarras & Stride 2013; Dowd & Burke 2013; Chen & Tung 2014; Sanchez et al. 2014).

The Theory of Planned Behaviour has been used in many fields, particularly in the managerial area (Sanchez et al. 2014). Recent research in SMEs that applied the theory of planned behaviour, also found out that the decisions of individuals such as directors and managers have significant effects (Cordano & Frieze 2000; Gadenne et al. 2009; Sharma & Sharma 2011). Since TPB model has a good explanatory power for behavioural intention, it is used in this research to examine the attitude of growers and millers towards sustainable practices, their subjective norms and perceived behaviour control in determining their intention towards adopting the RSPO (Dowd & Burke 2013; Chen et al. 2014).

#### KNOWLEDGE AND ATTITUDE

Scholars have found that the knowledge gained may help to improve environmental attitude and recent study had shown that knowledge variables in the TPB can explain behavioural intention (Bradley, Waliczek & Zajicek 1999). The construct of the TPB model with knowledge could clarify behavioural intention as most of previous studies found it acceptable based on the percentage of variance explained (Koo et al. 2014; Lou et al. 2014; Goh & Sandhu 2014). Thus, the researchers hypothesize the following hypothesis:

H<sub>1</sub> Growers and millers knowledge about sustainable practices will have a positive effect on their attitude towards sustainable practices

#### PAST EXPERIENCE (PE) AND ATTITUDE

Newhouse (1991), in his study on implications of attitude and behaviour research for environmental conservation states that environmental attitudes are most likely formed as a result of past experience rather than exposure to any specific course or program. Life experience, socioeconomics status and culture probably influence environmental attitudes as well (Bradley et al. 1999). One study found that past experience has an influence towards intentions and that past experience could be explained as a direct antecedent of intentions (Loureiro & Araújo 2014). Also, past experience was found to have a direct effect on future exercise behavior over and above the influence of the TPB (Norman, Conner & Bell 2000). Other studies have also found out that past experience positively influence intention (George 2002; Huang & Hsu 2009). Thus, this posits us to the following hypothesis, which is:

H<sub>2</sub> Growers and Millers past experience will have a positive effect on their attitude towards sustainable practices.

### PERSONAL VALUE (PV) AND ATTITUDE

Personal value is the principles concerning the desired behaviour that guide a person's action (Hansen 2008). Fayolle, Liñán and Moriano (2014) in his study pointed out that personal value had a relevant role in the study

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of TPB and was also supported by Chou (2014) which stated that personal environmental norms were found to have a positive effect on employees' environmental behaviour and will be able to explain why people act in an environmentally manner. A study aimed at determining the relationship between personal value and attitude towards teaching profession shows that the personal value of teacher candidates were found to have significant relationship and predicts 22 percent of their attitude towards the teaching profession (Bektas & Nalcaci 2012). This relationship is most likely to be said as blueprints that influence specific attitudes and personal norms (Fransson & Garling 1999). Thus, leads to the following hypothesis:

H<sub>3</sub> Growers and Millers personal value will have a positive effect on their attitude towards sustainable practices

#### ATTITUDE AND INTENTION

As stated in Theory of Reasoned Action (TRA), the attitude towards the behaviour refers to the positive or negative value when the individual associate with the fact of producing the behaviour (Ajzen & Fishbein 1977). Attitude had also been described as user's favourable and unfavourable feeling and likeable towards a system (Mohd Suki, Ramayah & Mohd Suki 2011). Attitude is the user evaluation towards a system or technology on whether it is interesting and attractive (Charfeddine & Nasri 2013). Certain system or technology will be adopted when the user has a strong favourable and the user's evaluation will determine whether the system is useful, good, and valuable (Plewa, Troshani, Francis & Rampersad 2012). Hansen (2008) explains that a person will want to engage on certain behaviour when that individual has more promising attitude towards the behaviour. Therefore, the following hypothesis proposed:

H<sub>4</sub> Growers and millers attitude toward sustainable practices will have a positive effect on their intention to adopt RSPO

### SUBJECTIVE NORM AND INTENTION

Subjective norm refers to a person's evaluation of the social pressure to either perform or not perform on a particular behaviour. Study done by Murphy Vernon, Diamond and Tiro (2014) found that subjective norm directly affected the behaviour and indirectly affected intention through barriers. Altogether the results indicate that subjective norms will have no deliberative effects on behaviours as social motivations increase (Manning 2011). Other studies have also shown significant relationships between subjective norm and intention (Ramayah, Jantan & Aafaqi 2003; Ramayah & Jantan 2004; Ramayah, Yusoff, Jamaludin & Ibrahim 2009; Yang & Jolly 2009).

The TPB posits that the relationship between subjective norm and behaviour are fully mediated by behavioural intentions (Ajzen & Fishbein 1977; Ajzen 1991). Results from other latest study also indicated that

subjective norms strengthen the explanatory power of the model (Sandve & Ogaard 2014). Thus, this posits us to the following hypothesis, which is:

H<sub>5</sub> Growers and millers subjective norm will have a positive effect on their intention to adopt RSPO

#### PERCEIVED BEHAVIOUR CONTROL (PBC) AND INTENTION

Perceived behavioural control (PBC) refers to people's perception of the ease or difficulty of performing the behaviour of interest (Ajzen 1991). Past study has argued that PBC is poorly understood. The findings show some difficulty in discriminating between the presumed internal and external determinants of PBC (Zolait 2014). PBC was also found to have significant effect on intention in other studies (e.g. Cunningham & Kwon 2003; Alam & Sayuti 2011; Kim & Chung 2011). A study by Netemeyer and Bearden (1992) suggested that attitude-toward-the-act (ATA), subjective norm, and perceived behavioural control are better predictors of behavioural intention. In sum, results discovered that attitude, subjective norm and perceived behaviour control explains a high variance in behaviour intention (Chen, Gregoire, Arendt & Shelley 2011). This leads to the following hypothesis being posited:

H<sub>6</sub> Growers and millers perceived behaviour control will have a positive effect on their intention to adopt
 RSPO

### BEHAVIOURAL INTENTION

According to the Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB), behavioural intention will be affected by attitude and subjective norm (Lu, Yao & Yu 2005). An individual will consider the consequences before getting involved or not in a given behaviour (Ajzen & Fishbein 1977). In most study where this theory is included, behavioural intention is the most proximate predictor of behaviour (Ajzen 1991). Attitude toward the actual behaviour and subjective norm behavioural questions can determine the behavioural intention (Ajzen & Fishbein 1977). Managers' intentions are of great interest, as they correspond to their state of mind and focus their attention on their objective (Sanchez et al. 2014).

#### ATTITUDE

Previous research shows that attitude mediates knowledge, past experience and personal value on the intention to adopt (Chen et al. 2011). A study which was conducted by McCaffery, Wardle and Waller (2003) found that low or lack of knowledge was associated with negative attitudes and both factors were associated with lower intentions to participate in colorectal cancer screening. It also indicates that attitudes partially mediated the effect of knowledge on screening intentions (McCaffery et al. 2003). Other mediating analyses indicate that the influence of past behaviour (past experience) was mediated by TPB

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variables. In the contexts of negative word-of-mouth communication, the effect of past behaviour on intention was mediated by attitude (Cheng, Lam & Hsu 2005). This leads to the following hypothesis being posited:

- H<sub>7</sub> Attitude mediates knowledge and the intention to adopt RSPO
- $H_{7a}$  Attitude mediates past experience and the intention to adopt RSPO

#### RESEARCH DESIGN

This research applies a quantitative approach that uses a cross-sectional questionnaire survey approach. In order to test all the proposed hypotheses, primary data were obtained through both partially adopted and self-structured questionnaire. It was then analyzed using the smartPLS (Partial Least Square-Structural Equation Modelling).

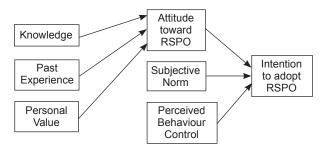


FIGURE 2. The research framework

The unit of analysis is based on the whole population of the palm oil industry in Sabah. This study has chosen growers and millers in Sabah palm oil industry as the respondents. The sample was selected from the Malaysian Palm Oil Board (MPOB) 2013 Directory that listed 122 companies under the State of Sabah. Although the sampling frame was based on the Malaysian Palm Oil Board (MPOB) 2013 directory, the data is still representative mainly due to the reason that the number of palm oil companies operating in Sabah does not changed rapidly and the robustness still provides representative result. Questionnaires were distributed through the collaboration with the Sabah's

Department of Environment (D.O.E). The distribution of the questionnaires was done through a compulsory seminar that must be attended by all the palm oil companies. Before the seminar began, the organizer representative (D.O.E staff) announced that all the participants were given ten minutes to answer the questionnaires. These companies were represented by either their mill or plantation manager. 122 questionnaires were used for data gathering from respondents. During tea break, questionnaires were collected and a total of 113 were received, which indicates 92 percent response rate. The sample size for this study is based on the number of predictors on power analysis (Green 1991) and the final 98 were deemed fit to be used for testing.

This research used a convenience sampling from the whole population. Questionnaires were used in this study consisted of 2 sections mainly; demographic information along with the growers and millers experience with sustainable practices. Items presented used a seven-point Likert scale (Armstrong & Overton 1977). Items used in this questionnaire were mostly adopted and modified from previous established studies by Ajzen and Fishbein (1980); Mackenzie, Lutz and Belch (1986); Shimp and Sharma (1987); Srinivasan and Agrawal (1988); Netemeyer and Bearden (1992); Sambandan and Lord (1995); Chen et al. (2011). The measurement items can be found in the Appendix.

## METHODOLOGY

### DATA ANALYSIS

The respondents' profile depicts a one-sided gender (only male) profile analysis and the number of respondents reflects a high composition of the palm oil industry population in Sabah. Therefore, the study sample was considered well representative of the target population. Composite reliability of 0.70 or greater is considered acceptable (Fornell & Larcker 1981) and this study concluded that the measurements are reliable since the composite reliability values in this study ranged from 0.847 to 1.000.

TABLE 1.	Reliabi	lity test
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Constructs	Measurement Items	Cronbach's Alpha	Loading Range	Number of items
Attitude	ATT1, ATT2, ATT3, ATT5, ATT6	0.952	0.660-0.986	5(6)
Intention	INT1, INT2, INT3	0.941	0.932-0.965	3(3)
Knowledge	KNOW1, KNOW2, KNOW3, KNOW4	0.911	0.894-0.912	4(4)
Perceived Behaviour Control	PBC1, PBC2, PBC3	0.836	0.794-0.903	3(3)
Past Experience	PE1, PE2, PE3	0.881	0.864-0.920	3(3)
Personal Value	PV1, PV2, PV3	0.855	0.841-0.912	3(4)
Subjective Norm	SN1, SN2, SN3, SN4, SN5	0.782	0.579-0.866	5(5)

<sup>\*</sup> SIM (Single Item Measured)

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<sup>\*</sup> Final Items Numbers (Initial Numbers)

Based from the past studies, the validation of a reflective measurement model can be established by testing its reliability, internal consistency, indicator reliability, convergent validity and discriminant validity (Straub, Boudreau & Gefen 2004; Lewis, Templeton & Byrd 2005). The final constructs were found to have met the satisfactory level of the measurement model's validity. When the composite reliability of each construct exceeds the threshold value of 0.7, a measurement model is said to have satisfactory internal consistency reliability. Table 1, shows that the composite reliability constructed for this study ranges from 0.847 to 0.965. This was above the suggested level value of 0.7. Thus, the outcomes suggest that the items used to characterize the constructs have acceptable internal consistency reliability. All the items that cross loaded were also recorded at a satisfactory level

measuring from 0.579 to 0.986. From Table 1, we can observe that all the items measuring a particular construct loaded highly on that construct and thus confirming construct validity.

#### INTERNAL CONSISTENCY RELIABILITY

Internal consistency reliability explains the consistency of the results delivered in a test, ensuring that the various items measuring the different constructs deliver consistent scores. Under PLS, the criterion for looking at internal consistency is through its Composite Reliability (CR) and the guideline is that CR should be more than 0.7 for exploratory or confirmatory research. A CR that is less than 0.6 shows the study is lack of reliability.

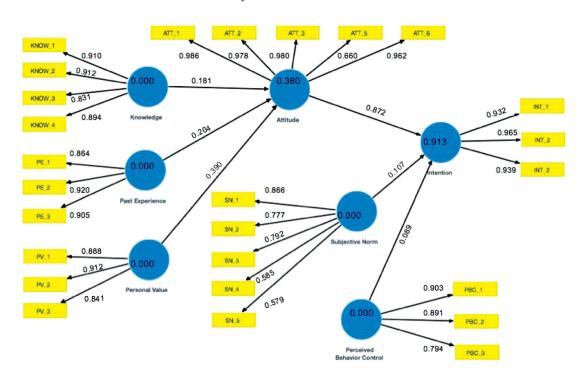


FIGURE 3. Final results of descriptive and reliability indication

#### CONVERGENT AND DISCRIMINANT VALIDITY

Table 2 shows value ranging from 0.532 to 1.00 for the Average Variance Extracted (AVE) of all constructs, which surpassed the suggested level value of 0.5. Thus, outcome confirms that the study's measurement model has established an acceptable convergent validity. Value ranges from 0.580 to 1.000 and the final items loading were above the recommended value of 0.5. Out of the 28 items initially developed in this study, only 26 items were finalized to fit the measurement model. Based on the outcomes, the square roots of all the AVE value surpassed the value in their related row and column. The highlighted value in Table 2 signifies the AVE square and non-highlighted values represent the inter-correlation value among constructs. All value was found to be lower than square roots of AVE. Overall, the measurement

model established acceptable convergent validity and discriminant validity.

Assessment of the path coefficient on Figure 3 and the summarize path coefficient and hypothesis testing on Table 3 demonstrates all the proposed hypotheses. The entire hypotheses ( $H_1$ ,  $H_2$ ,  $H_3$ ,  $H_4$ ,  $H_5$  and  $H_6$ ) are supported. All supported hypotheses were significant at least at the level of 0.05, have expected positive value and comprises of a path coefficient value ( $\beta$ ) ranging from 0.204 to 0.605. Figure 3 also includes the  $R^2$  values of each endogenous latent variable in the structural model. The computation of  $R^2$  for Attitude at 0.380 and Intention at 0.913 represents the amount of explained variance in the construct. It demonstrates a satisfactory result and exhibits a strong explanatory power, which will be further discussed in the discussion section.

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	AVE	1	2	3	4	5	6	7
Attitude	0.851	0.922						
Intention	0.894	0.903	0.945					
Knowledge	0.788	0.175	0.165	0.887				
Past Experience	0.804	0.210	0.198	0.241	0.896			
Perceived Behaviour Control	0.746	0.081	0.107	0.088	0.140	0.863		
Personal Value	0.776	0.080	0.314	0.124	0.179	0.181	0.881	
Subjective Norm	0.532	0.393	0.447	0.227	0.133	0.148	0.319	0.729

The mediating effect was established through literature review from past studies (McCaffery et al. 2003 Cheng et al. 2005; Chen et al. 2011). The structural model demonstrated significant mediation. Both paradigms

have been found to have mediation effects on the two relationships developed through hypothesis on knowledgeattitude-intention and past experience-attitude-intention.

TABLE 3. Path coefficient and hypothesis testing

Hypothesis	Relationship	Coefficient	t-value	Decision
1	Knowledge > Attitude	0.181	2.453	Supported
2	Past Experience > Attitude	0.204	2.604	Supported
3	Personal Value > Attitude	0.390	4.450	Supported
4	Attitude > Intention	0.872	17.328	Supported
5	Subjective Norm > Intention	0.107	2.058	Supported
6	Perceived Behaviour Control > Intention	0.089	1.892	Supported
7	Knowledge > Attitude > Intention		2.276	Supported
$7_{\rm a}$	Past Experience > Attitude > Intention		2.221	Supported

*Note*: t-values > 1.65\* (p < 0.05); t-values > 2.33\*\* (p < 0.01)

#### DISCUSSION

### RELATIONSHIP BETWEEN KNOWLEDGE AND ATTITUDE

The  $R^2$  value of attitude at 0.380 suggests that 38 percent of the variance in attitude can be explained by knowledge, past experience and personal value. A closer look shows that knowledge ( $\beta$  = 0.181, p < 0.01) was positively related and was a significant predictor of attitude. Thus,  $H_1$  of this study was supported. This verifies past studies that has shown knowledge as a variable in the TPB (Koo et al. 2014; Lou et al. 2014; Goh & Sandhu 2014).

Further examination on items that measure knowledge (KNOW\_1, KNOW\_2, KNOW\_3, and KNOW\_4) found that more than 45 percent of the respondents were not confident that their knowledge about sustainable practices was sufficient in order for them to carry out practices regarding sustainability agenda in their industry. This result also indicates that although sustainable practices were already established for quite some time now, majority of the key players in the industry are still not aware about sustainable practices especially the RSPO guidelines.

# RELATIONSHIP BETWEEN PAST EXPERIENCE AND ATTITUDE

Past experience ( $\beta$  = 0.204, p < 0.01) was positively related and was a significant predictor of attitude. The t-value of 2.604 suggests that  $H_2$  is significant in this study. Thus,  $H_2$  was supported. This study also proves that the effects of the relationship between past experience and attitude towards sustainable practices were significant (past experience coefficient value of 0.204).

Based on this result, claims by past studies are supported. Past experience was said to influence environmental attitude as well (Bradley et al. 1999). This simply means that growers and millers' past experience on sustainable practices probably have some significant influences in their decision and attitude towards future sustainable practices. With positive attitude, this may contributes towards their intention to adopt the RSPO, which is also another form of sustainable practices. A closer examination on the measurement items (PE\_1, PE\_2 and PE\_3) found that more than 60 percent of the respondents somewhat either agree or strongly agree that their past experience with sustainable practices were satisfying. This clearly shows that past experience had

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an influence towards intentions and that past experience could be explained as a direct antecedent of intentions (Loureiro & Araújo 2014).

# RELATIONSHIP BETWEEN PERSONAL VALUE AND ATTITUDE

Next, personal value ( $\beta$  = 0.390, p < 0.01) was positively related and was a significant predictor of attitude. This study also demonstrates that there is a positive effect of the relationship between personal value and the attitude towards RSPO are significant (t-value = 4.450). The t-value of 4.450 suggests that  $H_3$  is significant in this study. Thus,  $H_3$  of this study was supported.

Based on the result, there was an acceptable attitude conveyed within personal value. Past researcher had also found that overall, there was a favourable attitude expressed through personal value (Carman 1970). It is also shown that past studies had conjured to this relationship as playing a relevant role in the study of TPB (Fayolle et al. 2014). It also proves that personal value has a positive effect on environmental behaviour (Chou et al. 2014).

#### RELATIONSHIP BETWEEN ATTITUDE AND INTENTION

The results on the relationship between attitude and intention show that the  $R^2$  value was 0.913 suggesting that 91.3 percent of the variance in intention can be explained by attitude, subjective norm and perceived behaviour control. A closer examination shows that attitude was positively related ( $\beta = 0.872$ , p < 0.01). Attitude coefficient value of 0.872 suggested that H4 was supported in this study. This study also proved that the effects of attitude towards the intention to adopt RSPO were generally great (t-value = 17.328) and significant.

The result was consternated with the notion of the theory in which; the attitude toward the behaviour is the individual's positive or negative evaluation of performing the particular behaviour of interest (Ajzen 2005). This explains the reason that attitude towards the actual behaviour and subjective norm behavioural questions can determine the behavioural intention (Ajzen & Fishbein 1977). This is also consistent with past study which states that manager's intention are of great interest, as they correspond to their state of mind and focus their intention on their objectives (Sanchez et al. 2014). Other study that uses the theory had also support this result and confirms the manager's attitude and intention on intentbased models (Zhao, Seibert & Hills 2005; Lin, Marshall & Dawson 2009; Schwarz, Wdowiak, Almer-Jarz & Breitenecker 2009).

# RELATIONSHIP BETWEEN SUBJECTIVE NORM AND INTENTION

The results show that the R<sup>2</sup> value was 0.913 suggesting that 91.3 percent of the variance in intention can be explained by attitude, subjective norm and perceived behaviour control. A closer examination shows that

subjective norm was positively related ( $\beta = 0.107$ , p < 0.01). Subjective norm coefficient value of 0.107 suggests that H<sub>5</sub> was supported in this study. This study also proved that the effects of the relationship between subjective towards sustainable practices and the intention to adopt RSPO are significant (t-value = 2.059) in this study.

This is in line with past study that shows significant relationship between subjective norm and intention (Ramayah et al. 2003, 2004; Ramayah et al. 2005; Ramayah et al. 2009). This study also indicates that subjective norm strengthen the relationship and explanatory power of the model (Sandve & Ogaard 2014).

## RELATIONSHIP BETWEEN PERCEIVED BEHAVIOUR CONTROL AND INTENTION

Once again, the results show that the  $R^2$  value was 0.913 suggesting that 91.3 percent of the variance in intention can be explained by attitude, subjective norm and perceived behaviour control. A closer examination shows that perceived behaviour control was positively related ( $\beta = 0.089$ , p < 0.01). Perceived behaviour control coefficient value of -0.007 suggested that  $H_6$  was supported in this study. This study also demonstrates that there is a positive effect of the relationship between perceived behaviour control and the intention to adopt RSPO is significant (t-value = 1.892).

This result also supports majority of the past studies. Although there have been inconsistent findings about the relationship (Kaiser, Ranney, Hartig & Bowler 1999), majority of the past study revealed support for the view that measures of perceived behavioural control should be employed in the theory of planned behaviour (Kaiser et al. 1999). Result of this study means that the measurement had successfully considered all situational behaviour constraints instead of only testing a certain selected item (Kaiser et al. 1999). Thus, this study supports claimed by Ajzen (1985) that "perceived behaviour control is presumed to not only affect actual behaviour directly, but also affect it indirectly through behavioural intention."

Looking into this study, the result simply means that perceived behaviour control somehow influence behaviour directly through external factors. Item PBC\_3 found out that 36.7 percent of respondent disagree when asked about sustainable practices being something that is in their control. This could be due to the reason that managers in the palm oil industry believes that adoption of RSPO is difficult, thus performing the act is somehow seen as a great burden, unexciting and beyond their control. However, we could also argue that the measurement model did not take into consideration of measuring external factors (socio-cultural elements such as ethnic culture, religion practices, etc.)

## MEDIATING EFFECT OF ATTITUDE

For  $H_7$ , the bootstrapping analysis shows that there is mediation. Thus,  $H_7$  was supported, which means that attitude mediates between knowledge and the intention

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to adopt the RSPO. As mentioned earlier, previous studies show that attitude mediates knowledge, past experience and personal value on the intention to adopt (Chen et al. 2011). Low knowledge was linked with undesirable attitudes and both elements were linked with lesser intentions to adopt (McCaffery et al. 2003). Thus, the result of this study is in line with current analysis and adds the strength to the theory of TPB.

For  $H_{7a}$ , the bootstrapping analysis also shows that there is mediation. Thus,  $H_{7a}$  is supported.  $H_{7a}$  states that attitude, mediates between past experience and the intention to adopt the RSPO. Based on the result, growers and millers positive attitude had significantly contributed into facilitating their past experience towards the intention to adopt the RSPO. This study suggests that the positive attitude somehow managed to overcome the negative experience as shown by the data. This was supported by past study in which confirms that; in the context of negative word-of-mouth communication, the effect of past experience on intention was mediated by attitude (Cheng et al. 2005).

## IMPLICATION OF STUDY

Empirically, it was shown that 91.3 percent of behavioural intention was successfully predicted through the Theory of Planned Behaviour and attitudes were found to have the greatest impact on intentions to adopt the RSPO. Overall, it was found that there was a positive attitude towards sustainable practices and the RSPO adoption. The external variables (such as knowledge, past experience and personal value) show that it need not necessarily lead to the development of more realistic expectations. This will therefore not always influence the stability of attitude intention relationship. For example, intention to adopt RSPO has no relationship with a manager's work performance. Success on adopting RSPO is unrelated to the manager's attitude and subjective norm.

Though the study has concluded that the theory was proven right, yet the scenario in the real world suggests the other way. If the TPB model fits almost perfectly into this study, why is the adoption level of RSPO still low? Thus, one of the most important findings in this study towards its implication to knowledge is that, what is nice and true on paper may not always be true in reality. This was proven whereby; although the statistical analysis supports the hypothesis and theory that attitude is a very strong predictor of intention, managers positive attitude towards the adoption of the RSPO in reality does not fit with the level of adoption. This may imply to us that although the theory is strong, established and well developed, it may not be able to precisely predict intention without taking into consideration of other demographic and socio-cultural factors. The findings of this study also mean that growers and millers should not be taken as the sole cause for the low adoption of the RSPO in this industry.

From the government and policy maker perspective, this study is a small step towards understanding the

scenario of the palm oil industry. Knowing that the palm oil industry is a vital economic contributor to the nation generally and to the state of Sabah specifically, a more stern action needs to be initiated and enforced. The time has come and sustainable practices are inevitable. One of the challenges in the palm oil industry includes applying sustainable practices (Basiron & Weng 2004; Weng 2005). The current existing practices are just voluntary practices that are easy to bend and enforcement is quite loose. No matter how perfect a certification is, if it is not made compulsory, then the chances are, it will not be implemented.

Based on the findings of this study, it shows that growers and millers are quite happy with the support from their company in terms of resources (labour and finance) to conduct sustainable practices in their operation. However, this is by far still not good enough. Looking at the low adoption level, business owner's needs to step up their effort and strategize a better business plan that is more sustainable in the future. One way is to include adoption of sustainable certification as the criteria in evaluating a manager's performance. The moral finding of this study is modest: When a business fully implements sustainable practices, and its business compass is pointing in the right direction, everything else falls perfect into line of the business profit making process. It does seem to indicate that business without good sustainable practice is far more likely to fail due to their inability to sustain in the long run.

Results of this study also found that knowledge had a significant influence on growers and millers attitude towards sustainable practices. This suggested that the RSPO governing organization should focus on organizing more interesting seminars and talks on sustainable practices in order to attract these growers and millers into acquiring more knowledge in sustainable practices particularly in the RSPO agenda. Incorporating great visuals into their seminar slides is one way to keep people motivated to learn. Great visuals are found to get better attention and the usage of 'power' and 'command' words will get people's attention and focus and engaged (James & Linte 2014). It is also concluded that most of the respondents found out that although sustainable practices were good, positive, valuable, needed and important, more than half of the respondents found it to be unexciting. The RSPO governing body needs to emphasis on making sustainable practices more pleasant in order to attract these growers and millers to get excited in adopting them. One suggestion is through education. To ensure success in enhancing effective environmental education, coordinated effort with incorporation of technology is needed to make these educations more interesting, exciting and fun (Stevenson, Klemow & Gross 2014).

# LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FUTURE STUDY

There were some limitations in this paper as the results are illustrated by a constraint that limits the scope to which

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they can be reliably generalized. This was due to the reason that it was based on convenience sampling method from a single state of the country's palm oil industry.

Time was another constraint that has limited the perfection of this study. Given a longer period of time, more data would be collected and this study could be more generalized to fit the population. Besides, this study was conducted as a quantitative study and there were other study designs that could be adopted such as the mix method design which had also gain a lot of popularity in the recent years.

Furthermore, a mixed method designs could be tested as they are increasingly used and considered an innovative approach (Penman-Aguilar et al. 2014). A mix method has the ability to triangulate data and assures its validity (Migiro & Magangi 2011). Other benefits include the complimentary relationship between the two methods during analysis which in addition, boosts the effectiveness of the research (Migiro & Magangi 2011).

Finally, future study could also be taken into consideration of other different respondents from the upper level management team (stakeholder, shareholder and board of directors) and not focusing only on managers.

#### CONCLUSION

The findings of this paper confirm that the Theory of Planned Behaviour, which consists of attitude, subjective norm and perceived behaviour control, is a great predictor of behavioural intention. All the external variables (i.e. knowledge, past experience and personal value) were also found to have significant relationship and this resulted into the conclusion that knowledge, past experience and personal value positively influenced attitude towards RSPO. Apart from that, attitude also was found to mediate the relationship between knowledge-intention and past experience-intention. The findings in this study can only play a part in reflecting the present state of the chosen respondent due to other causal factors that are not taken into consideration within this research framework. However, this study could be a reference for future study to cover a bigger range of the palm oil industry and postulate a better view of the intention to adopt the RSPO.

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## APPENDIX

Construct	Items
Intention	- I intend to adopt more sustainable practices in my operation during the next year.
	<ul> <li>I will try to adopt sustainable practices in my operation during the next year.</li> </ul>
	<ul> <li>I plan to adopt sustainable practices during the next year.</li> </ul>
Attitude	For me, sustainable practice is good.
	- For me, sustainable practice is positive.
	For me, sustainable practice is valuable.
	<ul> <li>For me, sustainable practice is exciting.</li> </ul>
	- For me, sustainable practice is needed.
1 100 PN 1 100 C 1	For me, sustainable practice is important.
Subjective Norm	My work colleagues thinkimplement sustainable practices.
100	<ul> <li>My external work colleagues thinkimplement sustainable practices.</li> </ul>
	Other industry managers thinkimplement sustainable practices.
	General speaking, how much do you want to do what your colleagues think you should do?
	<ul> <li>General speaking, how much do other industry's managers influence your opinions?</li> </ul>
Perceived Behaviour Control	My budget allows me to implement sustainable practices.
	- The lack of information regarding how to start sustainable practices makes it difficult for me to implement them
	<ul> <li>Whether or not to implement sustainable practices is not my control or my decision.</li> </ul>
Knowledge	Compared to the average person, I know a lot about sustainable practices.
	<ul> <li>I understand a lot on sustainable practices.</li> </ul>
	- I know how sustainable practices work in my industry.
	<ul> <li>My friends consider me an expert in sustainable practices.</li> </ul>
Personal Value	I think sustainable practices can help the environment.
	<ul> <li>I think sustainable practices are good for the palm oil industry's corporate social responsibilities.</li> </ul>
	<ul> <li>In my opinion, my end customer desire sustainable practices.</li> </ul>
	<ul> <li>Overall, sustainable practices have reduced my operational costs.</li> </ul>
Past Experience	Overall, I am satisfied with the outcome of the current sustainable practices in my operation.
	- I am satisfied with the amount of resources (e.g., labour and finances)
	<ul> <li>I have to support sustainable practices in my operations.</li> </ul>
	<ul> <li>I am satisfied with my end customers' reaction toward sustainable practices in my operation.</li> </ul>
Demographic Information	- Gender
	- Age
	- Level of education
	- Number of years working in current industry
	- Number of years in charge of mill/plantation
	- Number of staff and workers
	- How is your mill/plantation managed? (Self-operated/Contract managed)
	- What is your company's status? (Private/Public)

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