

A comparative study of consumers' intention to purchase counterfeit outdoor products in Taiwan and Hong Kong

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Abstract

Purpose – This study aims to compare the purchase intention of counterfeit outdoor products between Taiwan and Hong Kong consumers.

Design/methodology/approach – A total of 584 respondents from Hong Kong ($n = 247$, 42%) and Taiwan ($n = 337$, 58%) were recruited for the study. Data analysis was performed by using structural equation modelling techniques.

Findings – The results showed that consumers' perceived risk had a negative influence on attitude and intention to purchase counterfeit outdoor products. Moreover, attitude towards buying counterfeit outdoor products, perceived behavioural control and subjective norm had positive impacts on purchase intention. Brand consciousness, however, had a negative influence on purchase intention. The multi-group analysis identified significant differences between Hong Kong and Taiwanese respondents.

Originality/value – This study provides a better understanding of how these factors affect purchase intention of counterfeit outdoor products across different cultures.

Keywords Outdoor products, Counterfeit, Theory of planned behavior, Perceived risk, Brand consciousness
Paper type Research paper

Introduction

Because of an increasing interest in a healthy and active lifestyle, the outdoor recreation industry has been growing in recent years (Duff and Phelps, 2016). This worldwide growth in the industry has witnessed the establishment of various outdoor-related organisations, including the Outdoor Industry Association (OIA) in the USA, the European Outdoor Group (EOG) in Europe and the Scandinavian Outdoor Group (SOG) in Scandinavia. In China, the China Outdoor Association (COA) and China Outdoor Commerce Alliance (COCA) represent the industry. In an OIA report in 2017, it was noted that outdoor recreation was one of

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the largest economic sectors in the USA, generating US\$887bn in consumer spending. The primary component was in travel spending, although the amount spent on outdoor recreation products, including gear, apparel, footwear, equipment and services, was still significant, amounting to US\$184.5bn. This was a significant increase from the US\$120.7bn reported in 2012 (Outdoor Industry Association, 2017).

The outdoor recreation markets in both Hong Kong and Taiwan have developed much earlier when compared to China. Hong Kong, as one of the major cities and transportation hubs in Asia, is home to many outdoor recreation brands. Companies in the outdoor recreation industry set up their subsidiaries and distribution networks in Hong Kong to strategically manage and promote their businesses in the region. Consequently, consumers in Hong Kong are familiar with many outdoor brands and can easily purchase outdoor recreation equipment. According to a government survey, the retail sales in travel and sporting goods, household goods and other goods was US\$8.7bn in 2016 (Census and Statistics Department of Hong Kong SAR, 2016). Over in Taiwan, the outdoor recreation industry is characterised by its established supply chains linking suppliers of raw materials, intermediaries, manufacturers, distributors and retailers. According to the Taiwan Outdoor Group (TOG), the retail value of the outdoor recreation market is about US\$1bn in 2014.

The above discussion highlights the value of the outdoor recreation industry in both Hong Kong and Taiwan. However, because of the popularity of outdoor products, it has become one of the primary targets for counterfeiting (Transcrime, 2010). Many outdoor recreation companies are located in China, where a grey market exists. Counterfeits of popular outdoor recreation brands are common in both brick-and-mortar and online stores, and this has led to considerable losses to companies in the industry (Anti-Counterfeiting Group, 2003). Some of the companies have taken steps to prevent the purchase of counterfeits and protect authentic products. For example, ArcTeryx, a leading Canada outdoor recreation brand, used its website to educate its customers to distinguish genuine products from counterfeits. Moncler, an Italian–France luxury outdoor brand, used radio frequency identification (RFID) chips in their products to counter counterfeit goods.

There are many different outdoor activities, each requiring different types of equipment and outdoor products to protect users and enhance their experiences. Compared to other product categories, consumers are more likely to value functionality, safety and environmentally friendly features in outdoor recreation products. Consequently, such features will result in higher prices for these products. This creates an opportunity for counterfeits to offer lower prices to attract consumers. However, using counterfeit outdoor recreation products can be risky for consumers. When the products do not perform in the harsh outdoor environment, it may lead to physical harm to consumers.

Although counterfeit purchases have been examined in many different product categories (Chiu *et al.*, 2014; Chiu and Leng, 2016; Phau and Teah, 2009; Phau *et al.*, 2009), the product category of outdoor recreation product has not received much interest. To address the research gap in the extant literature, the primary purpose of this study is to explore the factors influencing consumers' purchase intention of counterfeit outdoor products using the theory of planned behaviour (TPB, Ajzen, 1991). The TPB is a widely used social-psychological model to explain consumers' both volitional and non-volitional decision-making process (Ajzen, 1991) and deemed as an appropriate theory to explore consumers' consumption of counterfeits. Moreover, to date, few studies have investigated differences in consumers' attitudes and behaviour toward counterfeits across countries (Bian and Veloutsou, 2007; Chiu and Leng, 2016). It has been argued that more cross-cultural research in consumer behaviour is needed to gain a better understanding of the role of cultural differences in consumers' decision-making process (De Mooij and Hofstede, 2011; Hassan *et al.*, 2016). Cross-cultural research can also provide insights into consumer behaviour in countries or regions with different economic development and cultural norms (De Mooij and Hofstede, 2011). Accordingly, the secondary

purpose of this study is to examine the purchase intention of counterfeit outdoor products between Hong Kong and Taiwanese consumers.

Literature review

Theory of planned behaviour

The TPB posits that an individual's purchase behaviour is determined by purchase intention, which is, in turn, determined by the attitude towards the behaviour, subjective norms and perceived behavioural control (Ajzen, 1991). In many studies across a spectrum of product categories, general support of the TPB in the purchase of counterfeit goods has been found. Specifically, it was established that intentions are predictive of actual behaviour. Also, attitude, subjective norm and perceived behavioural control are positively correlated with intention and behaviour. However, the relative importance of attitude, subjective norm and perceived behavioural control in predicting intention can vary across product categories (Ajzen, 1991; Armitage and Conner, 2001).

The TPB has also been used to explain behaviour in the purchase of counterfeit goods (Phau *et al.*, 2009; Chiu *et al.*, 2014; De Matos *et al.*, 2007; Penz and Stottinger, 2005; Chiu and Leng, 2015, 2016). The TPB is deemed an appropriate tool to understand consumer behaviour in the purchase of counterfeits, as it examines consumers' both volitional and non-volitional decision-making process (Ajzen, 1991). Similar to other product categories, attitude, subjective norms and perceived behavioural control are positively correlated with intention in purchasing counterfeits. When consumers have a more favourable attitude towards the purchase of counterfeits, they are also more likely to purchase counterfeits (Swami *et al.*, 2009; Tom *et al.*, 1998; Phau *et al.*, 2009; Ang *et al.*, 2001; Chiu *et al.*, 2014; Wee *et al.*, 1995).

In addition, subjective norms can affect consumer's intention to purchase counterfeits (De Matos *et al.*, 2007; Penz and Stottinger, 2005; Phau *et al.*, 2009; Ang *et al.*, 2001; Tom *et al.*, 1998; Rahman *et al.*, 2011; Prendergast *et al.*, 2002; Huang *et al.*, 2015; Chiu *et al.*, 2014). When the behaviour of purchasing counterfeits is accepted by relatives and friends, the consumer is more likely to purchase counterfeits. Conversely, when the behaviour is not accepted by relatives and friends, the consumer is less likely to engage in such behaviour, especially when the product category is conspicuous (Lan *et al.*, 2012; Tang *et al.*, 2014; Lord *et al.*, 2001).

Due to their illicit nature, counterfeits are not openly available for sale to consumers in many markets. Consequently, consumers do not have complete control in their purchase of counterfeits, as this depends on access to information on the availability of counterfeits (Lan *et al.*, 2012). With higher levels of access to counterfeit goods, consumers will have higher levels of perceived behavioural control, and this can lead to higher levels of intentions to purchase counterfeit goods (Prendergast *et al.*, 2002; Chiu *et al.*, 2014; Chiu and Leng, 2016; Armitage and Conner, 2001; Penz and Stottinger, 2005). Consequently, the following hypotheses are detailed as below:

- H1. Attitude towards purchasing counterfeit outdoor products will have a positive influence on purchase intention of counterfeit outdoor products.
- H2. Perceived behavioural control will have a positive influence on purchase intention of counterfeit outdoor products.
- H3. Subjective norm will have a positive influence on purchase intention of counterfeit outdoor products.

Brand consciousness

Brand consciousness refers to consumers' psychological preference of brand-name products in their decision-making process to purchase (Nelson and Mcleod, 2005; Jiang and Shan, 2016).

Extant literature suggests that brand consciousness may have a negative impact on consumers' intention to purchase counterfeit outdoor products (Chiu and Leng, 2016). Consumers who have a higher brand consciousness tend to buy branded products to express their ideal self-image and associate themselves with a higher level of social status (Wee *et al.*, 1995; Bian and Moutinho, 2011). In particular, brand names can play an essential role in affecting consumer choice in the sports apparel category (Dickson and Pollack, 2000). They not only reflect consumer choice but also indicate membership and shared beliefs of the group (Chae *et al.*, 2006; Dickson and Pollack, 2000; Bae, 2011).

Counterfeit products often use authentic brand name and logo to confuse consumers particularly when they are not familiar with the product (Nelson and Mcleod, 2005; Jiang and Shan, 2016). This suggests that brand consciousness may be an essential factor in the study of counterfeits buying behaviour. As such, it is expected that consumers who are high in brand consciousness are less likely to purchase counterfeits (Gentry *et al.*, 2006; Phau *et al.*, 2009). This leads to the following hypothesis:

- H4. Brand consciousness will have a negative influence on purchase intention of counterfeit outdoor products.

Perceived risk

Perceived risk consists of consumers' perceptions of the uncertainty and adverse consequences of purchasing a service/product (Park *et al.*, 2005). The literature suggests that perceived risk can affect consumers' attitudes and purchase intention (De Matos *et al.*, 2007; Wee *et al.*, 1995; Lobb *et al.*, 2007). As counterfeits are not genuine products, consumers expect that there will be inherent risks when using the products (Ting *et al.*, 2016). These risks include functional risks where the products do not perform as expected and social risks where the consumer is ostracised as a result of purchasing and using counterfeits (Veloutsou and Bian, 2008).

There are potential risks in all outdoor activities. Consumers who are familiar with outdoor activities will be more aware of such risks when compared to general consumers (Grant *et al.*, 1996). In particular, counterfeit outdoor recreation products may carry physical risks when the product causes physical harm to the consumer. Risk-averse consumers may be more concerned as to whether counterfeits goods will perform as expected, are safe or will affect them adversely in how others perceive them. As such, they are less likely to have a positive attitude towards purchasing counterfeits and an intention to purchase counterfeits (Ang *et al.*, 2001; Tom *et al.*, 1998; Chiu *et al.*, 2014). Consequently, the hypotheses are as follows:

- H5. Perceived risk will have a negative influence on attitude towards purchasing counterfeit outdoor products.
- H6. Perceived risk will have a negative influence on purchase intention of counterfeit outdoor products.

Cultural differences

Consumers' acceptance and purchase of counterfeits differ across countries (Eisend and Schuchert-Güler, 2006; Gentry *et al.*, 2006; Bian and Veloutsou, 2007). In part, this difference is explained by cultural and historical factors. As copyright protection legislation originated in western countries, it is a notion that has gained less acceptance and support in Asian countries. Consequently, Asian consumers are more accepting when it comes to purchasing and consuming counterfeits (Swinyard *et al.*, 1990; Hamelin *et al.*, 2013; Tang *et al.*, 2014; Chang, 2004).

However, even among Asian countries, there are differences in the consumption of counterfeits. A study showed that although consumers in Hong Kong and China share many cultural and demographic similarities, there were still differences in the attitudes towards the purchase of counterfeits and the availability of counterfeits in the two regions (Tang *et al.*, 2014). Similarly, although the majority of consumers in Singapore and Taiwan are of Chinese ethnicity, there were differences between the two countries in attitudes and subjective norms towards counterfeits (Chiu and Leng, 2016) (Figure 1).

Extant literature has identified a need to examine the cultural difference in consumers' decision-making process (De Mooij and Hofstede, 2011). In this study, although both Taiwan and Hong Kong are predominantly Chinese societies with similar demographics and cultures, they have different histories. This may result in differences in consumers' attitudes and behaviours. Therefore, consumers' acceptance and purchase behaviour of counterfeits may still differ across the two regions. The final hypothesis for this study is as follows:

H7. Relationships between the variables in the research model will be different between Taiwan and Hong Kong consumers.

Method

Participants and procedure

The questionnaires were distributed to physical outdoor speciality shops in Taiwan and outdoor shops in Hong Kong over three months from November 2016 to February 2017. The products selected for this study were hiking products, as they are the most popular outdoor products amongst consumers. Respondents were provided with a small gift as a token of appreciation for completing the questionnaire. Of the total 584 valid questionnaires, 58% ($n = 337$) were from Taiwan and 42% ($n = 247$) were from Hong Kong. Among Taiwanese respondents, 58.2% ($n = 196$) were male. The modal group of Taiwanese respondents was between 31 and 40 years of age ($n = 128$, 38%) with a university degree ($n = 227$, 67.4%). For the Hong Kong study, 55.1% ($n = 136$) of the respondents were male. The modal group for Hong Kong respondents was between 21 and 30 years of age ($n = 115$, 46.6%). This is detailed in Table 1 below.

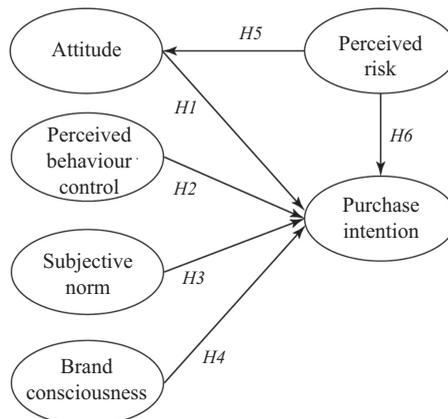


Figure 1.
Research model and hypotheses

H7: Relationship between the variables in the research model will be different between Taiwan and Hong Kong consumers

	Taiwan (<i>n</i> = 337)		Hong Kong (<i>n</i> = 247)	
	<i>n</i>	%	<i>n</i>	%
<i>Gender</i>				
Male	196	58.2	136	55.1
Female	141	41.8	111	44.9
<i>Age (years)</i>				
Below 20	5	1.5	41	16.6
21–30	77	22.8	115	46.6
31–40	128	38.0	70	28.3
Above 40	127	37.7	21	8.5
<i>Education</i>				
Senior high	25	7.4	89	36.0
University	227	67.4	89	36.0
Graduate school	84	25.2	69	28.0
<i>Income*</i>				
1	24	7.1	19	7.7
2	39	11.6	177	71.7
3	83	24.6	32	12.9
4	191	56.7	19	7.7

Note(s): *Due to the different currencies in Hong Kong and Taiwan, the income level was labelled from 1 to 5
 Hong Kong: 1 = below HKD10,000; 2 = HKD10,001–HKD25,000; 3 = HKD25,001–HKD50,000; 4 over HKD50,001 per month
 Taiwan: 1 = below NTD20,000; 2 = NTD20,001–NTD30,000; 3 = NTD30,001–NTD40,000; 5 over NTD40,001 per month

Table 1.
 Respondents' demographic characteristics

Measures

The survey instrument was based on earlier studies. The scales of purchase intention (three items), attitude towards counterfeit goods (five items), perceived behavioural control (four items), subjective norm (four items) and brand consciousness (four items) were adopted from [Chiu and Leng \(2016\)](#). Perceived risk scale was taken from [De Matos et al. \(2007\)](#). These items were originally written in English and translated into traditional Chinese, using back-translation ([Brislin, 1970](#)). All items were assessed on a seven-point Likert scale, ranging from strongly disagree (1) to strongly agree (7).

Data analysis

Data analysis proceeded in three phases using SPSS 20.0 and Amos 20.0. First, the scale reliability and validity were calculated by confirmatory factor analysis (CFA) with maximum likelihood (ML) estimation. A chi-square statistic index, comparative fit index (CFI), Tucker and Lewis index (TLI) and root mean square error of approximation (RMSEA) were used to test the adequacy of the research model. According to the criteria suggested by [Hair et al., 2010](#), CFI and TLI values should be larger than 0.90, and the RMSEA value should be below 0.08. Second, structural equation modelling (SEM) analysis was used to examine the hypotheses in the proposed model. Finally, a multiple-group analysis was conducted to examine the differences between Taiwanese and Hong Kong samples in the conceptual model.

Results

Scale reliability and validity

Scale reliability and validity were evaluated by conducting a CFA. However, it found that one item of subjective norm and one item of brand consciousness reported low factor loadings

(< 0.50). Thus, it was determined that dropping these items would improve the model without compromising the theoretical meaningfulness of the measure (Bentler and Chou, 1987; Byrne, 2016). The deletion of these item resulted in an appropriate model fit of measurement model, $\chi^2(174) = 528.081$, CFI = 0.963, TLI = 0.955, RMSEA = 0.067.

The reliability of the scale was calculated using composite reliability (De Matos et al., 2007) and Cronbach's alpha. As shown in Table 2, the values of CR ranged from 0.856–0.972, fulfilling the recommended criterion of 0.70 (Fornell and Larcker, 1981). The values of Cronbach's alpha all fulfilled the cut-off of 0.70 (Nunnally, 1978). The convergent validity was tested by factor loading and the average variance extracted (AVE) and revealed appropriate results (Hair et al., 2010). The factor loadings of the observable items were all above the criterion of 0.50, and AVE values of the construct were higher than the suggested value 0.50, except for perceived behavioural control (0.485). Moreover, discriminant validity was evaluated by the method proposed by Fornell and Larcker (1981). As reported in Table 3, the correlation coefficients between pairs of constructs were less than the square root of AVE for the individual variables, and as such, there was good discriminant validity of the constructs in this study.

Hypothesis testing

The goodness-of-fit indices showed that the proposed model fitted the data adequately, model fit: $\chi^2(183) = 626.227$, CFI = 0.917, TLI = 0.903, RMSEA = 0.079 (Hu and Bentler, 1999). The results showed that purchase intention, attitude, perceived behavioural control and subjective norms have positive influences on purchase intention ($p < 0.001$), supporting H1, H2 and H3. Moreover, brand consciousness had a negative influence on purchase intention ($p < 0.01$), supporting H4. Finally, the paths from perceived risk to attitude and

Table 2.
Summary results of measurement

Construct	Number of items	Cronbach's alpha	Factor loadings	CR	AVE
INT	3	0.971	0.947–0.983	0.972	0.920
ATT	5	0.941	0.793–0.923	0.944	0.770
PBC	4	0.884	0.667–0.919	0.889	0.670
SN	3	0.960	0.920–0.938	0.961	0.891
BC	3	0.851	0.685–0.921	0.856	0.668
PR	3	0.894	0.797–0.915	0.897	0.744

Note(s): INT = purchase intention; ATT = attitude; PBC = perceived behavioural control; SN = subjective norm; BC = brand consciousness; PR = perceived risk

Table 3.
Mean, SD, square roots of AVE and correlations between constructs

	Mean	SD	INT	ATT	PBC	SN	BC	PR
INT	2.784	1.459	<i>0.959</i>					
ATT	2.678	1.296	0.825	<i>0.878</i>				
PBC	4.226	1.552	0.466	0.476	<i>0.818</i>			
SN	2.747	1.312	0.683	0.744	0.476	<i>0.944</i>		
BC	4.289	1.173	-0.289	-0.215	-0.153	-0.164	<i>0.817</i>	
PR	5.057	1.304	-0.497	-0.465	-0.156	-0.417	0.458	<i>0.862</i>

Note(s): INT = purchase intention; ATT = attitude; PBC = perceived behavioural control; SN = subjective norm; BC: brand consciousness, PR = perceived risk. Italic diagonal elements are the square root of AVE; values below the diagonal are correlations

purchase intention were statistically and negatively significant ($p < 0.001$), supporting *H5* and *H6*. *Table 4* shows the results of hypotheses testing in more detail.

Multi-group analysis

Independent *t*-tests were conducted to measure differences between Taiwanese ($n = 337$) and Hong Kong ($n = 247$) respondents. The results are reported in *Table 5*. There were significant differences in the mean score of purchase intention, attitude, perceived behavioural control, subjective norm and perceived risk between Taiwanese and Hong Kong respondents. Compared to Taiwanese respondents, Hong Kong respondents reported significantly higher purchase intention ($M_{\text{Taiwanese}} = 2.369, M_{\text{Hong Kongese}} = 3.351; t = -8.294, p < 0.001$), attitude ($M_{\text{Taiwanese}} = 2.242, M_{\text{Hong Kongese}} = 3.273; t = -10.326, p < 0.001$), perceived behavioural control ($M_{\text{Taiwanese}} = 3.756, M_{\text{Hong Kongese}} = 4.868; t = -9.138, p < 0.001$) and subjective norm ($M_{\text{Taiwanese}} = 2.267, M_{\text{Hong Kongese}} = 3.402; t = -11.237, p < 0.001$) towards purchasing counterfeit outdoor products. However, Taiwanese respondents reported a higher level of perceived risk ($M_{\text{Taiwanese}} = 5.379, M_{\text{Hong Kongese}} = 4.618; t = 7.266, p < 0.001$) than Hong Kong consumers.

As a next step, the multi-group analysis was conducted for the proposed model to examine differences between Taiwanese and Hong Kong consumers. The data were split into Taiwanese ($n = 337$) and Hong Kongese ($n = 247$) sample sets for the multi-group analysis by using SEM. The overall model fit in each group was examined respectively. In both groups, the model fitted the data acceptably: $\chi^2(183) = 609.447$, CFI = 0.918, TLI = 0.904, RMSEA = 0.063 for Taiwanese sample; $\chi^2(183) = 703.738$, CFI = 0.897, TLI = 0.881, RMSEA = 0.091 for Hong Kong sample (Hu and Bentler, 1999). Therefore, the model was deemed plausible and stable across the two groups. The standardised coefficients of each path between Taiwanese and Hong Kong consumers are reported in *Table 6*.

Next, to compare whether Taiwanese and Hong Kong consumers differ significantly with respect to any single path of the proposed model, the values of the critical ratio for differences

Hypothesis	Path	Standardized coefficient (β)	<i>t</i> -value
<i>H1</i>	ATT → INT	0.693	19.073***
<i>H2</i>	PBC → INT	0.102	3.587***
<i>H3</i>	SN → INT	0.182	6.525***
<i>H4</i>	BC → INT	-0.089	-3.056**
<i>H5</i>	PR → ATT	-0.471	-10.797***
<i>H6</i>	PR → INT	-0.123	-0.3704***

Note(s): ** $p < 0.01$, *** $p < 0.001$

Table 4.
SEM results of the hypotheses

Construct	Mean (SD)		<i>t</i> -value
	Taiwanese ($n = 337$)	Hong Kongese ($n = 247$)	
INT	2.369 (1.273)	3.351 (1.508)	-8.294***
ATT	2.242 (1.049)	3.273 (1.365)	-10.326***
PBC	3.756 (1.596)	4.868 (1.233)	-9.138***
SN	2.267 (1.134)	3.402 (1.256)	-11.237***
BC	4.352 (1.247)	4.204 (1.061)	1.549
PR	5.379 (1.305)	4.618 (1.170)	7.266***

Note(s): * $p < 0.01$, ** $p < 0.001$

Table 5.
Results of independent *t*-tests

were examined. As reported in Table 6, the significant differences were found in the paths from perceived risk to attitude (critical ratio for difference = $-1.653, p < 0.10$) and purchase intention (critical ratio for difference = $-1.658, p < 0.10$), indicating that perceived risk has stronger influences on attitude and purchase intention for Hong Kong consumers. Moreover, it found that the path from attitude to purchase intention was significantly different between Taiwanese and Hong Kong consumers (critical ratio for difference = $-1.903, p < 0.10$), indicating attitude has a stronger influence on purchase intention for Taiwanese consumers. Therefore, the results support *H7* that consumer behaviour towards counterfeit outdoor products is different across Taiwan and Hong Kong.

Discussion

Researchers have endeavoured to investigate the factors influencing the consumers' purchase behaviour across various types of counterfeit products. In particular, TPB has been used as a critical framework to explain consumers' attitude and purchasing behaviour towards counterfeit goods (Chiu *et al.*, 2014; Chiu and Leng, 2015, 2016). To explore consumers' purchasing behaviour of counterfeits in the outdoor recreation market, this study used the TPB as the theoretical base to examine consumers' decision-making process of buying counterfeit outdoor products. In addition, brand consciousness and perceived risk were incorporated to examine as possible factors in this study.

The results support the use of TPB in explaining the purchase intention of counterfeit outdoor recreation products. Specifically, it was found that subjective norms, perceived behavioural control and attitude had a positive influence on the intention to purchase counterfeits outdoor recreation products. This is consistent with the findings from earlier studies on the purchase of counterfeits in other product categories (Chiu *et al.*, 2014; Chiu and Leng, 2016; Yoon, 2011). In particular, the role of attitude is the most influential among the three variables of TPB, indicating the critical role of individuals' attitudes towards counterfeit outdoor products in purchase intention. Many studies have also found similar results that when individuals have a more favourable and positive attitude towards counterfeits, they are more likely to make a purchase of counterfeits (Sharma and Chan, 2017; Souiden *et al.*, 2018).

The additional factor of brand consciousness was found to have a negative influence on consumers' attitudes towards the purchase of counterfeit outdoor recreation products. This relationship is consistent with the findings of previous studies (Chiu and Leng, 2016; Gentry *et al.*, 2006; Phau *et al.*, 2009; Jiang and Shan, 2016). Brands are essential in the purchase of outdoor recreation products, as it is a symbol of quality and elicits trust from consumers (Phau *et al.*, 2009). Consumers who are high in brand consciousness are, thus, less likely to purchase counterfeits (Gentry *et al.*, 2006; Chiu and Leng, 2016; Bhatia, 2018).

Path	Taiwanese ($n = 337$)		Hong Kongese ($n = 247$)		Critical ratio for difference
	Estimate	p	Estimate	p	
ATT → INT	0.826	0.000	0.667	0.000	-1.903†
PBC → INT	0.084	0.001	0.130	0.004	0.893
SN → INT	0.217	0.000	0.158	0.000	-0.985
BC → INT	-0.104	0.022	-0.147	0.027	-0.536
PR → ATT	-0.275	0.000	-0.422	0.000	-1.653†
PR → INT	-0.092	0.016	-0.202	0.000	-1.658†

Table 6.
Multi-group analysis

Note(s): † $p < 0.10$

Moreover, perceived risk, as expected, had a negative influence on consumers' attitude towards counterfeit outdoor recreation products and their purchase intention. These findings are in line with previous studies in the context of counterfeit products (Chiu *et al.*, 2014; Huang *et al.*, 2004). It must be noted that role of perceived risk could be more salient in this study as outdoor recreation products are mostly used in an environment with many potential risks. Consumers depend on the products to protect them from danger and face the challenges of their surroundings. As such, it is not surprising that perceived risk significantly affects both consumers' attitude and purchase intention.

Further, it was found that Hong Kong consumers have higher levels of purchase intention, attitude, subjective norm and perceived behavioural control than Taiwanese consumers. These findings may be attributed to the availability and relatively low price of counterfeit products in Hong Kong (Chan *et al.*, 1998). Thus, Hong Kong consumers are more likely to have a more favourable attitude towards counterfeit outdoor products and are less concerned about purchasing them. In addition, the multi-group analysis found that consumers in Hong Kong and Taiwan are different in their attitude and purchase intention of counterfeits outdoor recreation products. Hong Kong consumers are affected to a larger extent by the level of perceived risk on attitude and purchase intention when compared to consumers in Taiwan. Although Taiwan and Hong Kong share the same Chinese culture, this study suggests that consumer behaviour in the two countries is not similar.

Practical implication

The outdoor recreation product industry has taken many initiatives to prevent counterfeits at the stage of design, manufacture and marketing. This study examines the purchase of counterfeits from the consumer perspective. Applying the TPB, which is used in explaining the purchase of counterfeits in other product categories, this study suggests that consumers are aware of safety and functionality issues in the outdoor recreation product context.

More risk-averse consumers are less likely to purchase counterfeits. They will prefer to buy authentic products, perhaps driven by the quality and perceived safety and functionality promised by the brands. As such, outdoor recreation product companies should focus on marketing the product attributes of their brand that emphasises their speciality or function that cannot be reproduced by other companies. In addition, the companies should also emphasise the risks in outdoor activities and how the use of quality and trusted brands can minimise such risks. This marketing strategy is especially important for consumers with higher perceived risk. It will create brand loyalty in this group of consumers. In particular, the study also suggests that different marketing anti-counterfeit strategies should be used in different geographic areas according to the different consumers' attitudes toward counterfeits.

Limitations and future research

This study is not without limitations. First, respondents of this study were selected from consumers patronising brick-and-mortar retail stores selling authentic products. However, it must be noted that most counterfeit purchases occur on internet platforms. Studies found that consumers may have different behaviours purchasing outdoor products online (Chiu *et al.*, 2018). Future research should investigate online purchasing behaviour, as it may differ from brick-and-mortar consumers. Moreover, this study did not explore consumers' interest and involvement in outdoor activities, which could be influential factors in predicting purchase intention. Therefore, future research needs to comprehensively consider consumers' demographic backgrounds to better understand their decision-making process in purchasing counterfeit outdoor products. Also, this study studied only hiking counterfeit products. Future studies should consider other different types of outdoor products to obtain a

more holistic picture of counterfeit product purchasing behaviour. In addition, it should be noted that the TPB has been criticised for ignoring emotional, habitual and motivational factors in consumers' decision-making process (Perugini and Bagozzi, 2001). Therefore, future studies may consider applying the model of goal-directed behaviour (Perugini and Bagozzi, 2001), which is another social-psychological model addressing the limitations of the TPB, to explore consumers' purchase behaviour of outdoor counterfeits (Chiu *et al.*, 2018; Chiu and Choi, 2018).

Conclusion

In sum, this study is one of the few to explore the factors affecting consumers' intention to purchase counterfeit outdoor products and further compare the differences between Taiwan and Hong Kong. This study found that the TPB explained Taiwan and Hong Kong consumers' behaviour of purchasing counterfeit outdoor products. Moreover, it was found that the influence of attitude on purchase intention was more substantial for Taiwan consumers. Meanwhile, the impact of perceived risk on consumers' attitudes and purchase intention was more influential for Hong Kong consumers.

References

- Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 2, pp. 179-211.
- Ang, S.H., Cheng, P.S., Lim, E.A. and Tambyah, S.K. (2001), "Spot the difference: consumer responses towards counterfeits", *Journal of Consumer Marketing*, Vol. 18 No. 3, pp. 219-235.
- Anti-Counterfeiting Group (2003), *Why You Should Care about Counterfeiting*, Author, London.
- Armitage, C.J. and Conner, M. (2001), "Efficacy of the theory of planned behaviour: a meta-analytic review", *British Journal of Social Psychology*, Vol. 40 No. 4, pp. 471-499.
- Bae, S. (2011), "Decision-making styles in purchasing sport products: an international comparison between American and Korean college students", in Dolles, H. and Söderman, S. (Eds), *Sport as a Business*, Palgrave Macmillan, London, pp. 35-52.
- Bentler, P.M. and Chou, C.P. (1987), "Practical issues in structural modeling", *Sociological Methods and Research*, Vol. 16 No. 1, pp. 78-117.
- Bhatia, V. (2018), "Examining consumers' attitude towards purchase of counterfeit fashion products", *Journal of Indian Business Research*, Vol. 10 No. 2, pp. 193-207.
- Bian, X. and Moutinho, L. (2011), "The role of brand image, product involvement, and knowledge in explaining consumer purchase behaviour of counterfeits: direct and indirect effects", *European Journal of Marketing*, Vol. 45 Nos 1-2, pp. 191-216.
- Bian, X. and Veloutsou, C. (2007), "Consumers' attitudes regarding non-deceptive counterfeit brands in the UK and China", *Journal of Brand Management*, Vol. 14 No. 3, pp. 211-222.
- Brislin, R.W. (1970), "Back-translation for cross-cultural research", *Journal of Cross-Cultural Psychology*, Vol. 1 No. 3, pp. 185-216.
- Byrne, B.M. (2016), *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, Lawrence Erlbaum, New York.
- Chae, M.H., Black, C. and Heitmeyer, J. (2006), "Pre-purchase and post-purchase satisfaction and fashion involvement of female tennis wear consumers", *International Journal of Consumer Studies*, Vol. 30 No. 1, pp. 25-33.
- Chan, A., Wong, S. and Leung, P. (1998), "Ethical beliefs of Chinese consumers in Hong Kong", *Journal of Business Ethics*, Vol. 17 No. 11, pp. 1163-1170.
- Chang, H.H. (2004), "Fake logos, fake theory, fake globalization", *Inter-Asia Cultural Studies*, Vol. 5 No. 2, pp. 222-236.

- Chiu, W. and Choi, H. (2018), "Consumers' goal-directed behavior of purchasing sportswear products online: a case study of Chinese consumers", *Sport, Business and Management: An International Journal*, Vol. 8 No. 2, pp. 118-133.
- Chiu, W. and Leng, H.K. (2015), "Is that a Nike? The purchase of counterfeit sporting goods through the lens of the Theory of Planned Behavior", *Sports Management International Journal Choregia*, Vol. 11 No. 1, pp. 79-94.
- Chiu, W. and Leng, H.K. (2016), "Consumers' intention to purchase counterfeit sporting goods in Singapore and Taiwan", *Asia Pacific Journal of Marketing and Logistics*, Vol. 28 No. 1, pp. 23-36.
- Chiu, W., Lee, K.Y. and Won, D. (2014), "Consumer behavior toward counterfeit sporting goods", *Social Behavior & Personality*, Vol. 42 No. 4, pp. 615-624.
- Chiu, W., Kim, T. and Won, D. (2018), "Predicting consumers' intention to purchase sporting goods online: an application of the model of goal-directed behavior", *Asia Pacific Journal of Marketing and Logistics*, Vol. 30 No. 2, pp. 333-351.
- De Matos, C.A., Ituassu, C.T. and Rossi, C.A.V. (2007), "Consumer attitudes toward counterfeits: a review and extension", *Journal of Consumer Marketing*, Vol. 24 No. 1, pp. 36-47.
- De Mooij, M. and Hofstede, G. (2011), "Cross-cultural consumer behavior: a review of research findings", *Journal of International Consumer Marketing*, Vol. 23 Nos 3-4, pp. 181-192.
- Dickson, M.A. and Pollack, A. (2000), "Clothing and identity among female in-line skaters", *Clothing and Textiles Research Journal*, Vol. 18 No. 2, pp. 65-72.
- Duff and Phelps (2016), "Outdoor products industry insights - 2016", available at: <https://www.duffandphelps.com/-/media/assets/pdfs/publications/mergers-and-acquisitions/outdoor-products-industry-insights-2016.pdf> (accessed 1 October 2019).
- Eisend, M. and Schuchert-Güler, P. (2006), "Explaining counterfeit purchases: a review and preview", *Academy of Marketing Science Review*, Vol. 12 No. 6, pp. 1-25.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Gentry, J.W., Putrevu, S. and Shultz, C.J. (2006), "The effects of counterfeiting on consumer search", *Journal of Consumer Behaviour*, Vol. 5 No. 3, pp. 245-256.
- Grant, B.C., Thompson, S.M. and Boyes, M. (1996), "Risk and responsibility: in outdoor recreation", *Journal of Physical Education, Recreation and Dance*, Vol. 67 No. 7, pp. 34-35.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis*, Prentice-Hall, Englewood Cliffs, NJ.
- Hamelin, N., Nwankwo, S. and El Hadouchi, R. (2013), "Faking brands': consumer responses to counterfeiting", *Journal of Consumer Behaviour*, Vol. 12 No. 3, pp. 159-170.
- Hassan, L.M., Shiu, E. and Parry, S. (2016), "Addressing the cross-country applicability of the theory of planned behaviour (TPB): a structured review of multi-country TPB studies", *Journal of Consumer Behaviour*, Vol. 15 No. 1, pp. 72-86.
- Hu, L.T. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives", *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 6 No. 1, pp. 1-55.
- Huang, J.H., Lee, B.C. and Ho, S.H. (2004), "Consumer attitude toward gray market goods", *International Marketing Review*, Vol. 21 No. 6, pp. 598-614.
- Huang, Y.A., Lin, C., Su, H.J., Tung, M.L. and Phau, I. (2015), "I worship, so I download? Idol worship, music purchase and piracy by young consumers in Taiwan", *Asia Pacific Journal of Marketing and Logistics*, Vol. 27 No. 1, pp. 99-126.
- Jiang, L. and Shan, J. (2016), "Counterfeits or shanzhai? The role of face and brand consciousness in luxury copycat consumption", *Psychological Reports*, Vol. 119 No. 1, pp. 181-199.
- Lan, M.Y., Liu, F., Fang, C.H. and Lin, T.M.Y. (2012), "Understanding word-of-mouth in counterfeiting", *Psychology*, Vol. 3 No. 3, pp. 289-295.

- Lobb, A.E., Mazzocchi, M. and Traill, W.B. (2007), "Modelling risk perception and trust in food safety information within the theory of planned behaviour", *Food Quality and Preference*, Vol. 18 No. 2, pp. 384-395.
- Lord, K.R., Lee, M.S. and Choong, P. (2001), "Differences in normative and informational social influence", *Advances in Consumer Research*, Vol. 28 No. 1, pp. 280-285.
- Nelson, M.R. and Mcleod, L.E. (2005), "Adolescent brand consciousness and product placements: awareness, liking and perceived effects on self and others", *International Journal of Consumer Studies*, Vol. 29 No. 6, pp. 515-528.
- Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York.
- Outdoor Industry Association (2017), "Outdoor recreation economy report", available at: <https://outdoorindustry.org/resource/2017-outdoor-recreation-economy-report/> (accessed 1 September 2019).
- Park, J., Lennon, S.J. and Stoel, L. (2005), "On-line product presentation: effects on mood, perceived risk, and purchase intention", *Psychology and Marketing*, Vol. 22 No. 9, pp. 695-719.
- Penz, E. and Stottinger, B. (2005), "Forget the 'real' thing-take the copy! an explanatory model for the volitional purchase of counterfeit products", *Advances in Consumer Research*, Vol. 32, p. 568.
- Perugini, M. and Bagozzi, R.P. (2001), "The role of desires and anticipated emotions in goal-directed behaviours: broadening and deepening the theory of planned behaviour", *British Journal of Social Psychology*, Vol. 40 No. 1, pp. 79-98.
- Phau, I. and Teah, M. (2009), "Devil wears (counterfeit) Prada: a study of antecedents and outcomes of attitudes towards counterfeits of luxury brands", *Journal of Consumer Marketing*, Vol. 26 No. 1, pp. 15-27.
- Phau, I., Teah, M. and Lee, A. (2009), "Targeting buyers of counterfeits of luxury brands: a study on attitudes of Singaporean consumers", *Journal of Targeting, Measurement and Analysis for Marketing*, Vol. 17 No. 1, pp. 3-15.
- Prendergast, G., Chuen, L.H. and Phau, I. (2002), "Understanding consumer demand for non-deceptive pirated brands", *Marketing Intelligence and Planning*, Vol. 20 No. 7, pp. 405-416.
- Rahman, S., Haque, A. and Rahman, M. (2011), "Purchasing behavior for pirated products", *Journal of Management Research*, Vol. 11 No. 1, pp. 48-58.
- Sharma, P. and Chan, R.Y. (2017), "Exploring the role of attitudinal functions in counterfeit purchase behavior via an extended conceptual framework", *Psychology and Marketing*, Vol. 34 No. 3, pp. 294-308.
- Souiden, N., Ladhari, R. and Zarrouk Amri, A. (2018), "Is buying counterfeit sinful? Investigation of consumers' attitudes and purchase intentions of counterfeit products in a Muslim country", *International Journal of Consumer Studies*, Vol. 42 No. 6, pp. 687-703.
- Swami, V., Chamorro-Premuzic, T. and Furnham, A. (2009), "Faking it: personality and individual difference predictors of willingness to buy counterfeit goods", *The Journal of Socio-Economics*, Vol. 38 No. 5, pp. 820-825.
- Swinyard, W.R., Rinne, H. and Kau, A.K. (1990), "The morality of software piracy: a cross-cultural analysis", *Journal of Business Ethics*, Vol. 9 No. 8, pp. 655-664.
- Tang, F., Tian, V.I. and Zaichkowsky, J. (2014), "Understanding counterfeit consumption", *Asia Pacific Journal of Marketing and Logistics*, Vol. 26 No. 1, pp. 4-20.
- Ting, M.-S., Goh, Y.-N. and Isa, S.M. (2016), "Determining consumer purchase intentions toward counterfeit luxury goods in Malaysia", *Asia Pacific Management Review*, Vol. 21 No. 4, pp. 219-230.
- Tom, G., Garibaldi, B., Zeng, Y. and Pilcher, J. (1998), "Consumer demand for counterfeit goods", *Psychology and Marketing*, Vol. 15 No. 5, pp. 405-421.
- Transcrime (2010), *Anti Brand Counterfeiting in the EU: Report on International and National Existing Standards*, Joint Research Centre on Transnational Crime, Italy.

-
- Veloutsou, C. and Bian, X. (2008), "A cross-national examination of consumer perceived risk in the context of non-deceptive counterfeit brands", *Journal of Consumer Behaviour: International Research and Review*, Vol. 7 No. 1, pp. 3-20.
- Wee, C.H., Ta, S.J. and Cheok, K.H. (1995), "Non-price determinants of intention to purchase counterfeit goods: an exploratory study", *International Marketing Review*, Vol. 12 No. 6, pp. 19-46.
- Yoon, C. (2011), "Theory of planned behavior and ethics theory in digital piracy: an integrated model", *Journal of Business Ethics*, Vol. 100 No. 3, pp. 405-417.

Appendix 1

Survey instrument

Purchase intention scale

- (1) I will purchase counterfeit outdoor products.
- (2) I will never consider buying counterfeit outdoor products.
- (3) The probability that I will consider buying counterfeit outdoor products is high.

Attitude towards counterfeit goods

- (1) Generally speaking, buying counterfeit outdoor products is a better choice.
- (2) Considering the price, I prefer counterfeit outdoor products.
- (3) I enjoy shopping for counterfeit outdoor products.
- (4) Buying counterfeit outdoor products generally benefits the consumer.
- (5) There is nothing wrong with purchasing counterfeit outdoor products.

Subjective norm

- (1) If I purchase counterfeit outdoor products, most of the people who are important to me will disapprove.
- (2) People who are important to me will look down on me if I purchase counterfeit outdoor products.
- (3) My family members will think it is okay to purchase counterfeit outdoor products.
- (4) My friends believe that buying counterfeit sporting goods is wrong.*

Perceived behavioural control

- (1) It is easy to purchase counterfeit outdoor products.
- (2) I know where to purchase counterfeit outdoor products.
- (3) I can find counterfeit outdoor products if I wanted to.
- (4) Buying counterfeit outdoor products is entirely within my control.

Brand consciousness

- (1) Well-known brands are best for me.
- (2) I usually choose more expensive brands.
- (3) I prefer buying best-selling brands.
- (4) The most advertised brands are usually better choices.*

Perceived risk

- (1) The risk that I take when I buy a counterfeit outdoor product is high.
- (2) There is high probability that the counterfeit outdoor product does not work.
- (3) Spending money with a counterfeit outdoor product might be a bad decision.

*Items were removed due to low factor loadings (< 0.50)

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