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Influential Decision Factors of Counterfeit Consumers in Shijiazhuang City of China: A Logit Analysis

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Abstract

The policies implemented towards open-economy by the Chinese government encouraged adopting foreign technology or marketing techniques. Counterfeiting has been found to be an antagonistic consequence of the policy. The study has attempted to determine the socio-demographic attributes that influence the decision of buying counterfeit. Using convenience sampling technique 301 samples were collected. Descriptive statistics, non-parametric mean test, spearman correlation and logit analysis were employed to fulfill the objectives of the study. Most of the socio-demographic attributes were found to be significant in hastening the intension to buy counterfeit. The findings showed that the deceptive consumers are slightly older than the non-deceptive consumers though the non-deceptive consumers had lower education. The study recommended that motivational work and implementation of effective legal system could protect expansion of counterfeit marketing in the study area as well as in china.

Keywords: Counterfeit product, china, logit model, influential factor, decision factor

INTRODUCTION

Counterfeit products have been found to be a serious problem around the world in recent days. Counterfeiting is such a problem that causes havoc not only in economic activities but also affect social life as well. Being deceptive by buying counterfeit has some psychological effect, too. However, in short, the

consequences of the counterfeit product, no matter consumers intend to buy or not, have some hostile effect on consumers' welfare as a whole. Besides, it hampers the benefits of the legal (actual producers) manufactures; even endanger the human life.

The international trade of counterfeit product is enormous. According to an estimate provided by the 'The World Customs Organization' shows that counterfeiting accounts for 5 to 7 percent of the global merchandise trade in 2004. However, Asia is notoriously considered as the worst violator of intellectual property rights and probably China is the leading counterfeit producer in the world (Prendergast et al., 2003).

About two decades ago China was a fully socialist country. The means of production used to be entirely controlled by the public authority. The Chinese economy was identified theoretically as a command economy. But since 1980 it started turning out as a mixed economy; not fully market economy, the change led to the economy to resuscitate and a more open trend of marketing system. The government set many policies to encourage manufacturers such as learning and adopting technology or marketing techniques from the foreign companies. By taking privilege of this polices, some companies started to imitate locally or internationally popular commodities such counterfeit spin and light product in the Eastern China. After 90 years of communist regime, now a day, greater demand of merchandise market prevails in present china with a market structure of competitive price. Presently, Estimation shows that about 700,000 cases involved in counterfeit product marketing that is 103 times more than that of 1986 in 1990's. This statistics was unable to include many counterfeits because of inadequate information and difficulties in surveying counterfeits. From April, 2001 to the end of October, 2004, the General Administration of Quality Supervision, Inspection and Quarantine of china estimated the value of counterfeit goods approximately 11.1 billion RMB. Another report shows that the value of counterfeit products could have been more than 137 billion RMB. These two estimates show the magnitude of the problem of counterfeit products in China.

Consequences of the Existence of Counterfeit Products

Since there is a boom of counterfeit products in China, the industrial sector meets many problems such as lower growth and profit. In contrast, consumers face the consequences of being deceptive though counterfeits satisfy their need occasionally. For instance, brand fanatic consumers become satisfied by buying counterfeits as they can not afford the actual brand that leads to a loss to the actual producer. Sometimes, consumers become deceptive because of unawareness about the actual brand and information on the product. Being deceptive seems intolerable incident to some extent to the consumers, sometimes. The negative and distressful impact of counterfeits on human life is another chapter of counterfeit marketing. For example, counterfeit electronic home appliances and vehicle assembles devitalized many peoples' life, patients lost lives for the effect of inferior medicines; farmers lost better harvests and had soil degradation,

infants' life were at risk for taking low quality baby food. In addition, studies shows that in the last few decades, Chinese enterprises lost revenue of billion dollars as well as caused severe unemployment of about 20 million people by loosing the job at the actual industry of counterfeit product. Counterfeiting directly influences future development of companies and depress the entrepreneurial interest and true motivation for innovation.

Public sector is also affected by counterfeits as well. Chinese governments have been meeting a loss in collecting tax that results in low public revenue. Counterfeit products deteriorated the private investment in China. The actual manufacturers do not intend to produce famous products in the place where there are many counterfeits. Furthermore, the reputation of Chinese exports quality goods meet a loss by loosing foreign currency.

The overall picture of the existence of counterfeit products and its impact on socio-economic life seems to be an opportune issue to be investigated. The most crucial task is to examine the decision factors that affect consumers' decision. Counterfeit product must be associated with some features that benefit the consumers sometimes and induce to buy it. Although by procuring counterfeit sometimes consumers become benefited in the short run but in the long run it affects the income and employment generated by the actual industry and ends up with 'shutdown'.

Identifying the influential factors of buying counterfeits might be helpful for remedial purpose. Thus, it is necessary to investigate the factors along with demographic attributes of counterfeit deceptive and non-deceptive buyer. Consumers' awareness of legal system and prevailing anti-counterfeit acts, brand loyalty seems important to be examined in this regard. Thus, the study has attempted to investigate the above issues.

The following sections describe the literatures that are relevant to the objectives of the study and support the analytical framework. A list of methodological issues has been discussed in the methods section followed by the section results and discussion. Finally the concluding comments have been made by synthesizing the findings of the study.

LITERATURE REVIEW

Commonly, counterfeits are defined as imitated or faked products made to be sold to consumers to make profit by the manufacturer. It is also defined as the production of goods that are identically packaged, with trade marks and labeling included so as seeming to a consumer the genuine article (Key 1990). The definitions of counterfeit product by western researchers are generally associated with the infringement of trademarks, copyright, brand, labeling, and features, all of these concerning the appearance of the product (Bosworth and Yang, 1996). Since the definitions of counterfeit products vary with market and geographical factors, it is important to examine the characteristics of Chinese counterfeit products. In China, there are generally two kinds of counterfeits, the

counterfeiting of commodities and the counterfeiting of symbols attached to products (Yang, 2002). The former types of counterfeit gives rise to problems in the physical product itself, such as poisonous rice, false medicine and harmful cigarettes; whereas the latter involves problems concerning brands, trademarks, copyright and the labeling of a product.

Many researchers suggested counterfeits as generally of very low quality, carrying comparably lower prices and most of these are copies of luxury brands (Grossman and Shapiro, 1988; Bosworth and Yang, 1996). Luxury goods represent an insignia, where it is a major factor that influences consumption pattern. Often, counterfeits are manufactured in semi-industrialized countries that bear low production cost, such as China (Grossman and Shapiro 1988; Gentry et al., 2001). Other researchers disagreed to the points made by Grossman and Shapiro that all counterfeits are of low quality (Clark, 1999). Clark (1999) separated counterfeits into two categories of quality - 'genuine value' and 'street value'. Price was also suggested to be the main motivator and most important reason that cause consumer to buy counterfeits (Prendergast et al., 2003; Cordell et al., 1996). Because of the huge inflated price of branded products, people would prefer the counterfeit product with the purpose of criticizing the brand houses (wee et al., 1995).

Grossman and Shapiro (1988) separated the transaction of counterfeits into two categories namely deceptive purchase and non-deceptive purchase. Deceptive counterfeit transactions take place when consumer cannot readily observe the quality of the goods or distinguish copies from the genuine during the purchasing process; they are victims. Meanwhile, when consumers are aware that they are purchasing counterfeits participate in as non-deceptive counterfeit transactions, they are willing collaborators. However, investigators have generally agreed that most buyers are under the non-deceptive purchase behaviors (Cordell et al., 1996; Grossman and Shapiro, 1998; Bush et al., 1989; Prendergast et al., 2003).

The Non-price Influential Factors of Buyer Behaviors

Price is not the sole determinant in consumers' decisions to purchase counterfeit goods. Other reasons that influence consumers' behavior (Wee at al., 1995; Tom et al., 1998; Nancy, 1999; Kenneth et al., 2003) include demographic factors, consumers' perception toward counterfeit products, brand and legal factors. Regarding demographic factors, one view from Solomon and O'Brien (1991) is that age, educational background, and family incomes are correlating factors to consumers' decisions. Oliver (1988) stated that 'age' and 'gender' factor influence decision of buying counterfeits. Higher educated people usually buy less counterfeits product, thus education level has an inverse relationship with the quantity of counterfeit purchase (Wee et al., 1995). On the contrary, other researchers (Kenneth et al., 2003; Cheung and Prendergast, 2004) reported that these two factors have a little effect on the purchase such as highly educated people are also found with more intension to buy pirated CDs and software. Prendergast et al. (2003) observed similar scenario that most of the counterfeit

buyers had higher education and income. In contrast, Kenneth et al., (2003) found that income has no significant influence on counterfeit buying behavior. Based on these studies it is possible to say that there might be some contradiction in determining the effect of age, education and income on the buying behavior of counterfeits because pirated goods buying behavior is product-specific (Cheung and Prendergast, 2004).

There are other factors such as cultural, social, personal, any psychological that might be influencing customers' behavior (Kotler, 2003). Thereby, the buying behavior toward counterfeit products may also be influenced by these four factors. In stating the effect of socio-political system on counterfeit, Wang et al., (2005) argued that the counterfeits would have a firmer stronghold if the country is predominated by Confucianism. Confucianism is a popular religious belief in China. In addition, the Chinese culture represents a consumption pattern that reflects the passivism of consumer behavior (Liu, 2004).

Among the personal and psychological factors that have an impact on consumer behavior toward counterfeit products are value consciousness, attitude, and novelty seeking (Wang et al., 2005; Wee et al., 2000). The consumers whose attitude is more inclined toward lawfulness are more willing to purchase low risk product, and the less inclined are less willing (Cordell et al., 1996). Brand loyalty and legislation also affect consumers' decision towards buying counterfeit (Cordell et al., 1996; Gentry et al., 2001; Li, 2003, Li and Zhang, 2003; Ren, 2002; Ye, 2003).

METHODS

Study area and data collection

The study was conducted in a medium city – Shijiazhuang – of Northern part of China and about 280 kilometers away from Beijing. Shijiazhuang city was selected because it is a developing city in China where the consumption market is very active; residents have obtained a relatively strong purchase power. Shijiazhuang is the nearest city for wholesaling and retailing distribution centre to Beijing as well as to the northern part of China[1]. Branded goods as well as their counterfeits are easily available to all consumers in the study area.

An accidental survey (convenience sampling) was used for collecting data as the population was unknown (Krejcie and Morgan, 1970; Jennings, 2001). A total 328 respondents were interviewed of what 27 cases were excluded because of non-sampling error. The study area has six districts. Five percent of the population of each city was taken proportionally to represent the population. Such method is very useful in a critical study (Sekaran, 2003). A structured questionnaire with

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[1] The first largest wholesaling and retailing market is called "Yiwu commodity market" where in Zhejiang China.

opened and closed questions was used for interviewing the respondents. A 7-point Likert scale (arranged from 1 to 7) were used as a measurement method for each item. In order to ensure the feasibility and appropriateness of the questionnaire, 20 respondents were interviewed as pre-testing. These respondents were not included in the actual survey.

Figure 1. Map of Shijiazhuang city of China

Analytical Framework

This section discusses the methodological aspects of the study. Various statistical analyses have been employed to meet the objectives as follows.

Descriptive statistics
Frequency and percentage has been used to articulate some findings to reach clear conclusion. Sometimes mode has been obtained for determining the central tendency of a variable that provides the information on highest number of occurrence of a case.

Nonparametric T-test

Most of the variables of the study are categorical that constraints the use of parametric method of data analysis such as average, standard deviation and variance estimation (Safa, 2004). Thus, the study followed the non-parametric approach to test the mean difference between two groups (Norusis, 1999; Coakes, 2001; Safa, 2004). As a non-parametric technique Mann-Whitney test was conducted to examine whether there is any significant difference between deceptive and non-deceptive groups of consumers in terms of socio-demographic attributes.

Limited dependent variable analysis (logit Analysis)

The study attempted to examine the probability of having intension to buy counterfeit products based on the socio-demographic attributes of the study. The dependent variable is intension (1) or no-intension (0) to buy counterfeit products. The independent variables are age, education, marital status, occupation, and income and identification ability. Since the dependent variable is dichotomous that constrains the application of OLS (Ordinary Least Square) procedure. Thus, maximum likelihood estimators have been used by employing logit analysis (Gujarati, 2003; Pindyck and Rubinfeld, 1998).

Logit Model Formulation

The formulation of the population model has been described in the following section.

The binary dependent variable is as follows:

If, intension to buy counterfeit   = 1
                                                = 0, otherwise

Independent variables:

The independent variables are:

(1) Gender (gen); if male = 1, = 0, otherwise
(2) Age (ag) level (from under 20 to over 60 has been grouped into five classes and coded nominally)
(3) Marital status (ms); if married = 1, = 0, otherwise
(4) Annual income (ai) (from under RMB12000 to over RMB240,000 per has been grouped into five classes and coded nominally)
(5) Occupation (oc) (grouped into five classes and coded nominally)
(6) Education qualification(ed) (grouped into five classes and coded nominally)
(7) Identification ability (ia), (grouped into seven classes and coded nominally)

The functional form of the model is as follows:

$$P_i = E(Y = 1 \mid X_i)$$
$$= 1/(1 + e^{-(\beta_0 + \beta_1 gen + \beta_2 ag + \beta_3 ms + \beta_4 ai + \beta_5 oc + + \beta_6 ed + \beta_7 ia)}) \ldots \ldots \quad (1)$$

Where P_i is a probability, $Y_i = 1$ (intension to buy counterfeit); $X_1, X_2 \ldots, X_n$ are independent variables while $\beta_1, \beta_2 \ldots, \beta_k$ are coefficients to be estimated corresponding to the logistic function. For ease of interpretation, equation (1) can be rewritten as:

$$P_i = \frac{1}{1 + e^{-Z_i}} \qquad \ldots \ldots \quad (2)$$

Where $Z_i = \beta_0 + \beta_1 gen + \beta_2 ag + \beta_3 ms + \beta_4 ai + \beta_5 oc + + \beta_6 ed + \beta_7 ia + \mu$

Equation (2) represents what is known as the (cumulative) logistic distribution function (Gujarati, 2003). It is easy to verify that as Z_i ranges from $-\infty$ to $+\infty$, P_i ranges between 0 and 1 and that P_i is nonlinearly related to Z_i (i.e., X_i). Because of non-linear relationship OLS procedure cannot be applied to estimate the coefficients of the model. Maximum likelihood method has been employed to estimate the parameters (Gujarati, 2003).

If P_i is the probability of consumers with intention to buy counterfeits; then, $(1- P_i)$ the probability of consumers with no-intention to buy counterfeits that could be written as follows:

$$1 - P_i = \frac{1}{1 + e^{Z_i}} \qquad \ldots \ldots \ldots \ldots \quad (3)$$

Therefore, the odd ratio in favor of having intension and no-intension to buy counterfeits is as follows:

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{Z_i}}{1 + e^{-Z_i}} = e^{Z_i} \qquad \ldots \ldots \quad (4)$$

By taking the natural log of equation (4) and adding an error term (μ) to the equation, the following form could be derived for estimating the coefficients.

$$L_i = \ln\left(\frac{P_i}{1 - P_i}\right) = Z_i$$
$$= \beta_0 + \beta_1 gen + \beta_2 ag + \beta_3 ms + \beta_4 ai + \beta_5 oc + + \beta_6 ed + \beta_7 ia + \mu$$

RESULTS AND DISCUSSION

This section discusses the findings of the study and provides a constructive synthesis. Firstly, it discusses the demographic attributes of the respondents followed by a section on legal issues. Finally, the influence on the intension to counterfeit of the consumers has been analyzed using logit model.

Demographic attributes

Gender and age

Table 1 shows the frequency distribution and percentage of various demographic attributes of the respondents as well as descriptive and non-descriptive separately. Most of the respondents were female (53.2 percent) compared to male (46.80 percent). Almost similar findings reveal in the deceptive and non-deceptive group of respondents. The results of Mann-Whitney test (Table 2) shows that there was no significant difference between the deceptive and non-deceptive groups of respondents in terms of gender. Thus, the indifference between two groups in terms of gender issue is not related to the deceptiveness or non-deceptiveness of consumers. Table 2 shows the results of Mann-Whitney test that provides the statistical difference between the deceptive and non-deceptive group in terms of demographic attributes.

In case of age, the respondents were classified into six age classes (Table 1). The highest number of respondents belonged to the '21-30 years' group followed by the '31-40 years' group. The frequency differs from deceptive to non-deceptive group slightly for these two groups. The Mann-Whitney test (Table 2) shows that there is no significant difference between the deceptive and non-deceptive group of consumers in terms of age. Herein, age, as a demographic variable, does not seem to explain the subject of deceptiveness to purchase counterfeit products. The findings is consistent with the findings of Wee (1995), age cannot be used as a segmentation variable for consumer counterfeit purchase.

Marital status and Annual Income

Table 1 shows that the numbered of married and partnered respondents (61.8) is higher than that of single respondents (35.9). The Mann-Whitney test (Table 2) shows that there is no significant difference between deceptive and non-deceptive groups of respondents (Table 2).

The consumers were classified into six income groups according to their different levels of annual incomes. Most of the respondents (52.8 percent) fell under the group 'below RMB12,000' group, followed by the group (25.6 percent) of income 'RMB12,000-24,000'. There is a small difference between the income scenario of deceptive and non-deceptive group. However, Mann-Whitney test has proved that there was no significant difference between these two groups in terms of annual income.

Table 1. Demographic attributes of the respondents

Item	Variable	Total (301)	Deceptive (n^2= 136)	Non-deceptive (n=147)
Gender	Male	141(46.8)	63(46.32)	68(46.25)
	Female	160(53.2)	73(53.67)	79(53.74)
Age	Under 20	30(10.0)	7(5.1)	21(14.3)
	21-30	147(48.8)	72(52.9)	66(44.9)
	31-40	54(17.9)	25(18.4)	23(15.6)
	41-50	28(9.3)	11(8.1)	16(10.9)
	51-60	31(10.3)	16(11.8)	15(10.2)
	Over 60	11(3.7)	5(3.7)	6(4.1)
Marital status	Single	108(35.9)	42(30.9)	39(27.3)
	Partnered	52(17.3)	28(20.6)	33(23.1)
	Married	134(44.5)	61(44.9)	68(47.6)
	Others	7(2.3)	5(3.7)	3(2.1)
Annual income (RMB)	< 12000	159(52.8)	68(50.0)	83(56.5)
	12000-24000	77(25.6)	35(25.7)	36(24.5)
	24000-36000	32(10.6)	14(10.3)	16(10.9)
	36000-60000	20(6.6)	10(7.4)	9(6.1)
	60000-120000	8(2.7)	5(3.7)	2(1.4)
	>120000	5(1.7)	4(2.9)	1(0.7)
Occupation	Government administrative/ state owned work unit/	25(8.3)	9(6.6)	15(10.2)
	Professional/ technical staff	45(15.0)	24(17.6)	19(12.9)
	Worker/ attendant / staff	35(11.6)	16(11.8)	16(10.9)
	Foreign equity enterprise	6(2.0)	4(2.9)	2(1.4)
	Admin personnel/ factory director/ manager	27(9.0)	12(8.8)	12(8.2)
	Private Enterprise/ Company	37(12.3)	16(11.8)	19(12.9)
	Student	48(15.9)	15(11.0)	31(21.1)
	Teacher	10(3.3)	6(4.4)	4(2.7)
	Doctor	31(10.3)	18(13.2)	11(7.5)
	Unemployed	15(5.0)	8(5.9)	5(3.4)
	Housewives	19(6.3)	7(5.1)	11(7.5)
	Others	3(1.0)	1(0.7)	2(1.4)
Education Qualification	Below High school	65(21.59)	27(19.9)	34(23.1)
	High school	65(21.59)	33(24.3)	29(19.7)
	College diploma	90(29.9)	44(32.4)	39(26.5)
	Bachelor Degree	64(21.3)	25(18.4)	36(24.5)
	Master degree	16(5.3)	7(5.1)	8(5.4)
	PhD	1(0.3)	-	1(0.7)
Identifying Ability	Very difficult	51(16.9)	20(14.7)	29(19.7)
	Difficult	99(32.9)	42(30.9)	55(37.4)
	A little difficult	27(9.0)	13(9.6)	12(8.2)
	Moderate	64(21.3)	31(22.8)	26(17.7)
	A little easy	13(4.3)	9(6.6)	4(2.7)
	Easy	36(12.0)	15(11.0)	16(10.9)
	Very easy	11(3.7)	6(4.4)	5(3.4)

[2] n = Sample size of the group such as deceptive and non-deceptive

Education and occupation

Respondents were classified into six education levels. Most of the respondents had a 'college diploma' (29.9 percent) followed by 'high school graduate' (21.59 percent), 'below high school' (21.6 percent), and 'bachelor degree' (21.3). The respondents with "college diploma" (32.4 percent) comprised the highest percentage in the deceptive consumer group, followed by 'high school graduate' (24.3 percent) and 'below high school' (19.9 percent). In the non-deceptive group, the number of respondents with a 'college diploma' (26.5 percent) was the highest, followed by 'bachelor degree' (24.5 percent). The education levels of the respondents did not differ significantly across the two groups (Table 2). The education level of the respondents was higher than that the national average reported by the National Bureau of Statistics of (National Bureau of statistics (china), 2004).

Among the various occupational categories (Table 1), 'students' made up the highest percentage (15.9), followed by 'processional/technical staff' group (15.0) and private enterprise/company (12.3). There also was no significant difference between the deceptive and non-deceptive group in terms of occupation (Table 2).

Identifying ability

In terms of their ability to identify counterfeit products, the respondents were classified into seven points from 'very difficult' to 'very easily', and the highest percentage of respondents (32. 9 percent) felt that it was 'difficult' to distinguish between counterfeit and genuine products (Table 1), followed by those who felt 'moderate' (21.3 percent). Moreover, most of the non-deceptive respondents (65.3 percent) felt it was difficult to distinguish counterfeit products compared with 55.2 percent of deceptive respondents. Therefore, deceptive buyers would find it easier to distinguish counterfeit products from the genuine. In addition, the Mann-Whitney test proved that there was a significant difference of identifying ability between these two groups of respondents at 5 percent level of significance. The lack of identifying ability may be considered as a major difference between deceptive consumers with non-deceptive consumers.

Table 2. Nonparametric T-test for demographic attributes for deceptive and non-deceptive consumers

Item	Z-value	Asymp. Sig. (2-tailed)
Gender	-0.011	0.991
Age	-0.904	0.366
Marital status	-1.348	0.178
Annual income	-1.348	0.178
Occupation	-0.031	0.975
Education	-0.468	0.640
Identifying ability	-1.809	0.030**

**Significant at 5 percent level

The significant difference between deceptive buyers and non-deceptive buyers were found to be only in their 'identifying ability'. In case of other attributes non-deceptive buyers did not differ from the deceptive consumers. The finding suggests counterfeit products are generally purchased by consumers from a cross section of the whole demography (age, gender, martial status, annual income, education, occupation), from all walks of life, and not only by those from specific demographic groups. Moreover, demographic factors are impersonal factors which could not be considered as the measurement of distinguishing the deceptiveness or non-deceptiveness of consumers. Meanwhile, the 'identifying ability' could be considered as a subjective factor[3], which may be able to differentiate deceptive consumers from non-deceptive consumers.

Legal Consciousness about Counterfeit Products

This section discusses the legal consumer consciousness of counterfeit in Shijiazhuang city. Several different options are considered to examine the legal awareness of the respondents. Table 3 shows the perception of Chinese law towards counterfeit issue. The findings show that the majority of the respondents (64 cumulative percentages) deemed to have good understanding of the Chinese law. Only a few of them (36 cumulative percentage) were not aware of law. Most of the respondents (33.6 percent) were aware of statue law followed by the group (31.2 percent) which is conscious of both statue and case law. Eighty four percent respondents were aware of Chinese legal system whereas 29 percent were having ignorance of Chinese legal system.

The level of consumers' legal application was tested through the means chosen by consumers to solve knottiness. As Zhang (2004) asserted 'the most correct and efficient way of solving knottiness is through 'lawsuit approach'[4] , unfortunately, most Chinese people failed to do it' (Zhang, 2004). This is consistent with the finding of the present study whereby only 23 percent of people were indicated to have the lawsuit approach to solve the problem of counterfeit.

According to Zhang (2004), it is possible to get a clear understanding about the level of consumers' legal awareness through the above scenarios. Therefore, the whole findings suggest that, in Shijiazhuang city, the legal consciousness of consumers is very low; the legal knowledge of most consumers is limited to only a basic understanding about the Chinese legal system. Moreover, most of them do not know solving consumer-related problems such as counterfeiting should be solved through the legal approach other than the improper channels. Such circumstance may occur due to the fact that the Chinese government has limited propaganda and motivation for creating consciousness among consumers.

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[3]Answer chosen by people are fully according to their perception, such as their attitude

[4] A lawsuit is a civil action brought before a court in order to recover a right, obtain damages for an injury, obtain an injunction to prevent an injury, or obtain a declaratory judgment to prevent future legal disputes

Table 3. Legal awareness of the respondents

Item	Frequency of total respondents		
	Number	Percent	Cumulative percentage
Chinese law awareness			
Understanding very well	5	1.7	1.7
Almost all known	71	23.6	25.3
More than half Known	70	23.3	48.6
Half known	48	15.9	64.5
A little know	43	14.2	78.7
Almost not known	55	18.3	97.0
Absolutely not known	9	3.0	100.0
Total	301	100.0	100.0
Fundamental law awareness			
Statute law	101	33.6	33.6
Case law	33	11.0	44.6
Statute law and Case law	94	31.2	75.8
Ignorance	73	24.2	100.0
Total	301	100.0	100.0
Chinese legal system awareness			
Constitution	253	84.1	84.1
Criminal law	4	1.3	85.4
Civil law	8	2.7	88.1
Marriage articles	7	2.3	90.4
Ignorance	29	9.6	100.0
Total	301	100.0	100.0
Ways to solve knottiness			
Through lawsuit approach	69	22.9	22.9
Through intermediation by other people	49	16.4	39.3
Solving privately	75	24.9	64.2
Meet losses doing nothing	66	21.9	86.1
Others	42	13.9	100.0
Total	301	100.0	100.0

Awareness of Consumer Right

This section investigates consumers' awareness of 'consumer right protection law' which is a part of the consumer legal consciousness analysis. In china, anti-counterfeit campaigns have mostly been conducted by the Chinese anti-counterfeit association along with its specialized regulation—'consumer right protection law'. 'Consumer right protection law' - also known as consumer protection - is a public regulation that protects the interests and rights of consumers, especially against counterfeit products in China (Guan, 2004). Therefore, a good understanding of the 'consumer right protection law' and a

proper way of application are most important for people to protect themselves and reduce risks in purchasing counterfeit products.

Table 4. Awareness of anti-counterfeit activity among the respondents

Item	Frequency	percentage
Awareness of "consumer right protection law"		
Yes	277	92.0
No	24	8.0
Total	301	100.0
Awareness of year theme of Consumers' association in 2005		
Creating a trustworthy consumption environment	28	9.3
Using trust against cheating	16	5.3
Safety and healthy consumption	19	6.3
Green consumption	47	15.6
Healthy, vindicating our right	27	9.0
Realizing consumption	22	7.3
Scientific consumption	6	2.0
Not known	136	45.2
Total	301	100.0

Table 4 shows consumer awareness in terms of 'consumer right protection law' which indicates that almost all of the respondents (92 percent) has heard of the regulation. Unfortunately, most of the respondents (91 percent) do not understand it well. This was proven by the investigation carried out of the 'Awareness year theme of the Consumers' Association in 2005'[5]. It could be seen that most of the respondents (91 percent) could not select the correct answer, reflecting consumers' weak awareness regarding 'consumer right protection law.

Overall, the result suggested that the consumers held weak legal awareness, which is consistent with the observation by Li (2003), Li and Zhang (2003) and Ye (2003). Perhaps, such lack of awareness caused persistent consumption of counterfeit products.

Results of Logit Analysis

Table 5 shows the significant variables of the logistic regression analysis (the complete output is presented in appendix C). The 'Hosmer and Lemeshow' test (Table 5) indicates that the model was fitted well. The level of significance of 'goodness of fit' of the model is very high (0.75>.05) at degrees of freedom 8. The chi-square value is 5.22. In addition, the dichotomies dependent variable is 32 percent described by the explanatory variables. Although the non-parametric variant of R^2 is low, according to a prevailing literature (Gujarati, 2003; Pindyck

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[5] The year theme of consumer association has been diced as "healthy, vindicating our right".

and Rubinfeld, 1998) the determination of correlation diagnostic is not a vital measure for non-parametric models.

Table 5. Results of Logistic Regression Analysis

Variables	Coefficient	Standard error	Wald	Sig.	Odd ratio
Constant	-23.523	51671.788	0.000	1.000	0.000
Age	-	-	14.022	0.015	-
31-40	1.988	0.977	4.141	0.042	7.303
51-60	2.582	1.039	6.170	0.013	13.221
Marital	-	-	15.928	0.001	-
Income	-	-	9.418	0.093	-
Occupation	-	-	19.692	0.050	-
Education	-	-	12.554	0.028	-
Chi-square statistics[6]	5.222 (8 df)		0.734 (p-value)		
-2 Log likelihood	309.872				
Cox and Snell R Square	0.237				
Nagelkerke R Square	0.316				

Most of the variables were found to be significantly influential to the dichotomous dependent variable intension, 1 or 0, otherwise. Since all the explanatory variables were categorical, SPSS produced logistic coefficients for each factor. People in the age group of 31-40 years are more likely to have the intention to buy counterfeit products as represented by the age variable in the study area. The odd ratio of 1.99 for this group of age indicates a higher probability of having intention to purchase at 5 percent significance level. Consumers belonging to the age group 51-60 years have a higher odd ratio that indicates a higher probability of having the intention to buy counterfeits than the earlier group at 5 percent significance level. One reason behind the phenomenon may be due to the growth of the Chinese economy from the early 90's, people who were born before the end of the 1970's would have remained within a relatively low economic level with low living standards. They were struggled to 'dress warmly and ear their fill' and did not have additional money for other living wants. Meanwhile, deposits of financial assets in banks provide an indication of savings and security attitude. There was sensitivity on price and hence tried to increase their security by saving. Even at present, most people within this generation (aged above 30) would remain such sensitivity on price and buy product 'fit enough for use'. Thus, low price could be causing the intension to by counterfeit products.

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[6] Produced by Hosmer and Lemeshow Test

Marital status, education, occupation and confusion were also found to be affecting intention of buying counterfeit. The Wald statistic of marital status variable is 15.93 that are significant at 1 percent level showing its usefulness in the model to explain dichotomous dependent variable. The statistics of education and occupation also reveal usefulness, to explain dependent variable at 5 percent level of significance. Income was found to be influencing the intention of buying counterfeits at 10 percent level of significance. Only 'confusion' variable was found to be insignificant in the model to explain the variation in intention to purchase counterfeits. The odd ratio for occupation and education is comparatively very high indicating that the intention of buying counterfeit is very likely to be affected by these two variables.

CONCLUDING COMMENTS

Based on the findings, the following conclusion could be made. The demographic attributes of the consumers such as age, education level, and annual income as well as identifying ability affect their awareness of buying counterfeits. Consumers having younger age, or holding a higher level of education or lower annual income as well as high identifying abilities are likely to have a higher awareness of buying counterfeit products. Hence, this group of consumers could be fallen under non-deceptive consumers group. Other factors also affect prominently consumers' intention towards counterfeit purchase.

The findings of legal awareness show that most of the consumers are not aware of legal issues on counterfeit as well as the remedies to meet the relevant problems. Also they are not aware of the prevailing legal services provided to ensure consumers welfare.

The result of logit analysis showed that most of the demographic attributes are significantly related to the probability of having intension to purchase counterfeit or otherwise. Among all demographic attributes, age and occupation are more effective to consumers' intension to buy counterfeits.

The following recommendation could be made based on the findings of the study and earlier discussion:

a) Government needs to enhance the propaganda on 'consumer rights and protection regulations'; especially focusing on the undeveloped or suburbia, town region. In addition, service is required to facilitate the consumers for application of the laws and regulations.
b) Government could take initiative to enhance motivational activities regarding social rules, moral and ethics. Especially in Chinese education systems, moral and ethical training are required to be incorporated.
c) Chinese legal system should be matched with the necessity of the consumers so as to avoid the manufacturers who skirt the rules. China needs to set up a strict law aims to those counterfeit non-deceptive buyers in order to reduce their non-deceptive buying activities by forcing them through the strict rules.

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Appendix A

SPSS output of logit analysis

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Gender(1)	0.090	0.306	.085	1	0.770	1.094
Age			14.022	5	0.015	
Age(1)	0.550	1.130	0.237	1	0.626	1.733
Age(2)	0.773	0.940	0.676	1	0.411	2.166
Age(3)	1.988	0.977	4.141	1	0.042	7.303
Age(4)	1.801	1.029	3.062	1	0.080	6.056
Age(5)	2.582	1.039	6.170	1	0.013	13.221
Marital			15.928	3	0.001	
Marital(1)	0.731	1.403	0.271	1	0.602	2.077
Marital(2)	-1.308	1.415	0.854	1	0.355	0.270
Marital(3)	-0.422	1.380	0.094	1	0.760	0.656
Income			9.418	5	0.093	
Income(1)	23.157	20008.521	0.000	1	0.999	11398625698.277
Income(2)	24.012	20008.521	0.000	1	0.999	26819620507.315
Income(3)	23.929	20008.521	0.000	1	0.999	24663961438.026
Income(4)	24.328	20008.521	0.000	1	0.999	36766961187.901
Income(5)	21.823	20008.521	0.000	1	0.999	3004729424.800
Occup			19.692	11	0.050	
Occup(1)	19.159	25576.919	0.000	1	0.999	209137960.595
Occup(2)	20.643	25576.919	0.000	1	0.999	922734245.512
Occup(3)	21.579	25576.919	0.000	1	0.999	2352251458.008
Occup(4)	20.476	25576.919	0.000	1	0.999	781141194.644
Occup(5)	21.068	25576.919	0.000	1	0.999	1411859524.585
Occup(6)	21.153	25576.919	0.000	1	0.999	1537507500.839
Occup(7)	22.276	25576.919	0.000	1	0.999	4723130533.182
Occup(8)	20.094	25576.919	0.000	1	0.999	532800310.509
Occup(9)	21.809	25576.919	0.000	1	0.999	2960867456.869
Occup(10)	21.552	25576.919	0.000	1	0.999	2290409333.344
Occup(11)	20.271	25576.919	0.000	1	0.999	636274253.294
Edu			12.554	5	0.028	
Edu(1)	-22.689	40192.552	0.000	1	1.000	0.000
Edu(2)	-21.822	40192.552	0.000	1	1.000	0.000
Edu(3)	-22.185	40192.552	0.000	1	1.000	0.000
Edu(4)	-21.057	40192.552	0.000	1	1.000	0.000
Edu(5)	-20.792	40192.552	0.000	1	1.000	0.000
Confusion			10.166	6	0.118	
Confusion(1)	-0.357	0.858	0.173	1	0.677	0.700
Confusion(2)	-0.796	0.810	0.964	1	0.326	0.451
Confusion(3)	1.048	0.934	1.261	1	0.261	2.853
Confusion(4)	-0.473	0.826	0.327	1	0.567	0.623
Confusion(5)	-0.695	1.046	0.441	1	0.506	0.499
Confusion(6)	-0.217	0.862	0.063	1	0.802	0.805
Constant	-23.523	51671.788	0.000	1	1.000	0.000