

Fake Information and Communication Technology Products: A Threat for Branded Version

Jilna John¹, Biju John M.²

Abstract

The practice of creating fake version of branded products is known as counterfeiting practices. A lion's share of the branded products and services are facing a huge challenge from their counterfeited versions worldwide. Counterfeit products have emerged as one of the biggest challenge faced by business concerns which curtails the economic, social and financial development of business units. The present study focuses on non-deceptive counterfeiting. The study highlighted the attitude of the customers towards counterfeit Information and Communication Technology products in Ernakulam district, Kerala State. ICT counterfeiting takes the customers' trust and confidence in established brands as a prey and poses dangers to their health, safety and privacy. Attitude towards counterfeit products or ATCP has been measured with the factors of Price and Status Appeal on the basis of gender, age and education. Ernakulam district, a small geographical location has only focused to show the intensity of the global threat of counterfeiting practices. The other factors which influence the buying behavior of the customers towards the counterfeit versions of the genuine brands can be taken along with an expanded geographical area and a higher sample size as a gap to be filled by further research works.

Keywords: Fake ICT Products; Counterfeiting Practices; ATCP, Price; Status Appeal.

Introduction

Counterfeiting practices are against the values of business ethics which is a hindrance for sustainable development for the business concerns. A counterfeit product is a fake version of genuine brands which have similar trademark, label and packaging with low quality materials. It can be explained as any unauthorized manufacturing of goods whose special characteristics are protected as intellectual property rights constitutes product counterfeiting.

Counterfeiting products have emerged as one of the biggest challenge faced by business concerns which curtails the economic, social and financial development of business units. The practice

of counterfeiting has been a serious issue for manufacturers, entrepreneurs and customers for a long time and it has been growing in a faster pace as a global problem these days. The existence of robust laws and their ineffectiveness in the nation makes it convenient for all those who are engaged in the purchase and sale of counterfeited products.

Recent years have witnessed a constant rise in the spread of ICT infrastructure and a growing demand for ICT goods. This strong and growing demand for ICT goods makes them an attractive target for counterfeiters. OECD report on "Trade in Counterfeit ICT Goods" shows that smartphone batteries, chargers, memory cards, magnetic strip cards, solid state drives and music players are increasingly falling prey to counterfeiters. Counterfeit ICT goods entail health and safety risks, service outages and loss of income for companies and governments. China is the primary source of fake ICT goods and US manufactures are the most hit by lost revenue and erosion of brand value as per the OECD report. Almost 43% of seized fake ICT goods infringe the IP rights of US firms, followed by 25% for Finnish firms and 12% for Japanese firms.

Author's Affiliation: ¹Assistant Professor ²Associate Professor, Research Department of Commerce, St. Thomas' College (Autonomous), Thrissur, Kerala 680001, India.

Corresponding Author: Jilna John, Assistant Professor, Research Department of Commerce, St. Thomas' College (Autonomous), Thrissur, Kerala 680001, India.

E-mail: jilnagohn@gmail.com

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Counterfeiting practices are mainly classified into two: deceptive counterfeiting and non-deceptive counterfeiting. When customers purchase something with a notion that they are purchasing the original brand while it is a counterfeit one, then it is termed to be deceptive counterfeiting. When the customers purchase a counterfeit version intentionally, then it is a practice of non-deceptive counterfeiting.

The present study is a demand – side investigation focusing on the attitude of customers towards counterfeit ICT products in Ernakulam district, Kerala State. A small geographical location has only focused to show the intensity of the global threat of counterfeiting practices. The phenomena of counterfeit has its presence in many industries, but for the present study the counterfeit version of intermediary ICT products have taken since ICT counterfeiting takes the customers' trust and confidence in established brands as a prey and poses dangers to their health, safety and privacy. Attitude towards counterfeit products or ATCP has been measured with the factors of Price and Status Appeal on the basis of gender, age and education. The customers who cannot afford branded products but who are really fond of satisfying their social or status needs will purchase the counterfeit version and this is termed as a factor of status appeal. The manufacturers and marketers of the genuine branded products can formulate better marketing strategies to induce the customers to buy the original product and not the counterfeit version by having a better understanding of the attitude of the customers regarding the counterfeit or fake ICT products.

Research Problem

The growing sales of fake or counterfeit ICT products constitute a significant crisis for the branded ICT products worldwide. Several researches have provided useful insight into the particularities of counterfeiting, though certain aspects are yet to be studied. Thus the current study is carried out in order to find out the attitude of the customers towards non-deceptive counterfeit ICT products and also to ensure the influence of certain factors such as price and status appeal for forming the ATCP or Attitude Towards Counterfeit Products.

Objectives

1. To analyze the demographic statistics of customers of counterfeit information and

communication technology products in Ernakulam District.

2. To evaluate the attitude of the customers towards counterfeit information and communication technology products in Ernakulam District.
3. To identify the level of influence of price and status appeal for forming the attitude towards counterfeit information and communication technology products in Ernakulam District.

Research Design and Methodology

The study is designed as both descriptive and exploratory one based on primary and secondary data. Primary data are collected by way of direct interviews and questionnaires. Secondary data are collected from books, journals and other published sources.

Population

The targeted population in this study is the counterfeit customers in Ernakulam District, Kerala and it includes the customers of counterfeit intermediary ICT products including smartphone batteries, chargers, memory cards, magnetic strip cards, solid state drives and music players.

Sample Size

The questionnaires were distributed among 100 respondents in Ernakulam District, Kerala. All 100 questionnaires found to be completely filled and useful for the data analysis showing a response rate of 100 %.

Data Collection Method

Snowball sampling is a non-probability sampling technique used where potential respondents or participants are hard to find. Thus the method of snowball sampling is adopted for data collection purpose. The primary data collection was done through questionnaire and direct interview method.

Questionnaire Design

The questionnaire contains two sections. First section includes different personal and demographic variables of the respondents. This section obtains the respondent's information about gender, age, education, status and income.

Second section includes the latent variables that are important in the present study and it includes

price, status appeal and attitude towards counterfeit information and communication technology products. This section has been developed based on the past literature and already used questionnaires. The scale of price was taken from (Mir et al., 2011), scale of status appeal was taken from (Wee et al., 1995) and the scale of attitude toward counterfeit products were taken from (De Matos et al., 2007).

The variable of price was measured using 3 indicators such as the willingness to purchase least expensive counterfeit ICT products, checking prices and the element of unfair price in high priced genuine brands. The variable of status appeal was measured using 3 indicators such as readiness to buy a product with status, willingness to pay for a product which has more status and the product's high status appeal taken as the additional value of performance. The variable of attitude toward counterfeit products was measured using 4 indicators such as reliability, truth in buying counterfeit products, effectiveness in quality and effectiveness in functions offered by the counterfeit ICT products. For each statement, the respondent indicates his/her opinion on a seven-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (7).

The present study used Cronbach Alpha to examine the reliability of the data collecting instrument. The ideal Cronbach Alpha value should be above 0.7 indicating a high reliability and all the calculated Cronbach Alpha values of the scales used for the present study are above 0.7 which is given in Table 1 shows that the instrument used for data collection is highly reliable.

Table 1: Reliability of Measurement Instrument

Scales	Items	Cronbach's Alpha
Price	3	.925
Status Appeal	3	.894
ATCP	4	.876

Source: Primary Data.

Table 2: Demographic Characteristics.

Demographic Variables	Variables	No. of Respondents	Percentage	Cumulative Percentage
Gender	Male	58	58	58
	Female	42	42	100
	Total	100	100	

Tools for Data Analysis

Descriptive Statistics and Chi-square test were used for testing and evaluating the hypothesis relating to the influence of different factors on attitude towards counterfeit information and communication technology products in Ernakulam district, Kerala.

Hypothesis

The following hypotheses were set for meeting the objectives of the study:-

H1: There is an association between the gender of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.

H2: There is an association between the age of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.

H3: There is an association between the education level of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.

H4: There is an association between the gender of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.

H5: There is an association between the age of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.

H6: There is an association between the education level of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.

Data Analysis and Findings

The following Table 2 shows the demographic statistics of the respondents of the study.

Age	20-25 years	43	43	43
	25-30 years	18	18	61
	30-35 years	9	9	70
	35-40 years	19	19	89
	Above 40 years	11	11	100
	Total	100	100	
Education	Graduation	18	18	18
	Diploma	31	31	49
	Post-Graduation	19	19	68
	Professional Courses	32	32	100
	Others	0	0	
	Total	100	100	
Status	Student	30	30	30
	Employed	40	40	70
	Business	30	30	100
	Unemployed	0	0	
	Total	100	100	
Income	Less than Rs. 10000	9	9	9
	Rs. 10000 - Rs. 20000	18	18	27
	Rs. 20000 - Rs. 30000	22	22	49
	Rs. 30000 - Rs. 40000	31	31	80
	Above Rs. 40000	20	20	100
	Total	100	100	

Source: Primary Data.

The demographic traits shows that out of the 100 respondents, majority were male constituting 58% and a lion's share of respondents falls under the age group of 20-25 years with 43%. The educational qualification report shows that comparatively more respondents who purchase the counterfeit version of the branded information and communication technology products are those who have qualified

professional courses (32%) and diploma holders (31%). Employed people seem to create a huge demand for the counterfeit products with 40%. Counterfeit ICT products are purchased mainly by the people who earn a monthly income of Rs. 30000-40000 with a percentage of 31%.

Chi - Square Test

Table 3: Influence of price and status appeal on the basis of gender, age and education.

Demographic Variables	Variables	Price		Total	Status Appeal		Total
		Influenced	Not Influenced		Influenced	Not Influenced	
Gender	Male	50	8	58	52	6	58
	Female	40	2	42	35	7	42
	Total	90	10	100	87	13	100
Age	20-25 years	35	8	43	38	5	43
	25-30 years	11	7	18	11	7	18
	30-35 years	5	4	9	6	3	9
	35-40 years	11	8	19	10	9	19
	Above 40 years	10	1	11	7	4	11
	Total	72	28	100	72	28	100

Education	Graduation	11	7	18	5	13	18
	Diploma	23	8	31	20	11	31
	Post-Graduation	16	3	19	5	14	19
	Professional Courses	21	11	32	12	20	32
	Others	0	0	0	0	0	0
	Total	71	29	100	42	58	100

Source: Primary Data.

Table 4: Calculation of chi-square regarding the influence of price on gender basis.

(O)	E	(O-E) ²	(O-E) ² /E
50	52.2	4.84	0.09
8	5.8	4.84	0.83
40	37.8	4.84	0.13
2	4.2	4.84	1.15
100			2.2

$$\chi^2 = \sum (O-E)^2/E = 2.2$$

$$\text{Degree of freedom} = (r-1)(c-1) = 1 \times 1 = 1$$

Level of significance = 5%

Table value at 0.05 level of significance = 3.841

The calculated value is less than the table value. Hence the null hypothesis is accepted and the alternative hypothesis is rejected.

There is no association between the gender of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.

Table 5: Calculation of chi-square regarding the influence of price on age basis.

(O)	E	(O-E) ²	(O-E) ² /E
35	30.96	16.32	0.53
8	12.04	16.32	1.36
11	12.96	3.84	0.30
7	5.04	3.84	0.76
5	6.48	2.19	0.34
4	2.52	2.19	0.97
11	13.68	7.18	0.53
8	5.32	7.18	1.35
10	7.92	4.33	0.55
1	3.08	4.33	1.41
100			8.1

$$\chi^2 = \sum (O-E)^2/E = 8.1$$

$$\text{Degree of freedom} = (r-1)(c-1) = 4 \times 1 = 4$$

Level of significance = 5%

Table value at 0.05 level of significance = 9.488

The calculated value is less than the table value. Hence the null hypothesis is accepted and the alternative hypothesis is rejected.

There is no association between the age of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.

Table 6: Calculation of chi-square regarding the influence of price on education basis.

(O)	E	(O-E) ²	(O-E) ² /E
11	12.78	3.17	0.25
7	5.22	3.17	0.61
23	22.01	0.98	0.45
8	8.99	0.98	0.11
16	13.49	6.30	0.47
3	5.51	6.30	1.14
21	22.72	2.96	0.13
11	9.28	2.96	0.32
100			3.48

$$\chi^2 = \sum (O-E)^2/E = 3.48$$

$$\text{Degree of freedom} = (r-1)(c-1) = 3 \times 1 = 3$$

Level of significance = 5%

Table value at 0.05 level of significance = 7.82

The calculated value is less than the table value. Hence the null hypothesis is accepted and the alternative hypothesis is rejected.

There is no association between the education level of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.

Table 7: Calculation of chi-square regarding the influence of status appeal on gender basis.

(O)	E	(O-E) ²	(O-E) ² /E
52	50.46	2.37	0.05
6	7.54	2.37	0.31
35	36.54	2.37	0.06
7	5.46	2.37	0.43

100	0.85
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$$\chi^2 = \sum (O-E)^2 / E = 0.85$$

$$\text{Degree of freedom} = (r-1) (c-1) = 1 \times 1 = 1$$

Level of significance =5%

Table value at 0.05 level of significance = 3.841

The calculated value is less than the table value. Hence the null hypothesis is accepted and the alternative hypothesis is rejected.

There is no association between the gender of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.

Table 8: Calculation of chi-square regarding the influence of status appeal on age basis.

(O)	E	(O-E) ²	(O-E) ² /E
38	30.96	49.56	1.60
5	12.04	49.56	4.12
11	12.96	3.84	0.30
7	5.04	3.84	0.76
6	6.48	0.23	0.04
3	2.52	0.23	0.09
10	13.68	13.54	0.99
9	5.32	13.54	2.55
7	7.92	0.85	0.11
4	3.08	0.85	0.28
100			10.84

$$\chi^2 = \sum (O-E)^2 / E = 10.84$$

$$\text{Degree of freedom} = (r-1) (c-1) = 4 \times 1 = 4$$

Level of significance =5%

Table value at 0.05 level of significance = 9.488

The calculated value is higher than the table value. Hence the null hypothesis is rejected and the alternative hypothesis is accepted.

There is an association between the age of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.

Table 9: Calculation of chi-square regarding the influence of status appeal on education basis.

(O)	E	(O-E) ²	(O-E) ² /E
5	7.56	6.55	0.87
13	10.44	6.55	0.63
20	13.02	48.72	3.74
11	17.98	48.72	2.71

5	7.98	8.88	1.11
14	11.02	8.88	0.81
12	13.44	2.07	0.15
20	18.56	2.07	0.11
100			10.13

$$\chi^2 = \sum (O-E)^2 / E = 10.13$$

$$\text{Degree of freedom} = (r-1) (c-1) = 3 \times 1 = 3$$

Level of significance =5%

Table value at 0.05 level of significance = 7.82

The calculated value is higher than the table value. Hence the null hypothesis is rejected and the alternative hypothesis is accepted.

There is an association between the education level of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.

Findings

- ❖ Majority of the respondents are male, 58% in specific.
- ❖ A lion's share of respondents falls under the age group of 20-25 years with 43%.
- ❖ The educational qualification report shows that comparatively more respondents who purchase the counterfeit version of the branded ICT products are those who have qualified professional courses (32%) and diploma holders (31%).
- ❖ Employed people seem to create a huge demand for the counterfeit products with 40%.
- ❖ Counterfeit ICT products are purchased mainly by the people who earn a monthly income of Rs. 30000-40000 with a percentage of 31%.
- ❖ The chi-square value regarding the influence of price on gender is 2.2 which is less than the critical value which is 3.841, so that the null hypothesis is accepted. There is no association between the gender of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.
- ❖ According to chi-square test regarding the influence of price on age, the test statistic 8.1, which is less than the critical value 9.488, we accept the null hypothesis. So there is no association between the age of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.

- ❖ The test statistic of chi-square test regarding the influence of price on education is 3.48, which is less than the critical value of 7.82 and so the null hypothesis is accepted. There is no association between the education level of the respondents and the influence of price for forming the attitude of customers towards counterfeit ICT products.
- ❖ As per the chi-square test regarding the influence of status appeal on gender the test statistic 0.85, which is less than critical value 3.841, so the null hypothesis is accepted. There is no association between the gender of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.
- ❖ According to chi-square test, regarding the influence of status appeal on age, the test statistic 10.84 is more than the critical value of 9.488, so the null hypothesis is rejected. There is an association between the age of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.
- ❖ The chi-square value regarding the influence of status appeal on education is 10.13 which is more than the critical value which is 7.82, so that the null hypothesis is rejected. So there is an association between the education level of the respondents and the influence of status appeal for forming the attitude of customers towards counterfeit ICT products.
- ❖ The result of the present study shows that there is an association between the age and education level of the respondents with the factor of status appeal for forming their attitude towards counterfeit ICT products in Ernakulam district.

Suggestions

- ❖ Anti-counterfeiting strategies are to be adopted by every manufacturer and organizations both at national and international level.
- ❖ Awareness campaigns highlighting the economic effects, social issues and legal consequences have to be carried out as a part of eradicating counterfeit products.
- ❖ Educate the customers projecting the relevance of business ethics and consumer ethics and the consequences in using counterfeit products.
- ❖ Identification of further areas and its study helps to give a mass awareness programme

by the government or business organizations about the challenges of counterfeit products.

The further study can be conducted with a wider scope in the areas like increasing the sample size, choose other geographical areas, considering other variables, etc. The study can be expanded to other products apart from ICT products. A wide study can be conducted by the manufacturers, entrepreneurs, government, etc. to identify the intensity of usage of counterfeit products, so as to frame policies to eliminate the usage or to revise the existing 'anti - counterfeiting package'. The genuine manufacturers or the true owners who produce fake version of their products can also bring under the purview of further studies.

Conclusion

Counterfeiting is a serious threat faced by many people. Anti-counterfeiting strategies are adopted by many manufacturers and organizations both at national and international level. Awareness campaigns highlighting the economic effects, social issues and legal consequences are carried out as a part of eradicating counterfeit products. But there is no decrease in the availability of counterfeit versions of branded products since there is a continuous huge demand from the part of the customers.

Low price, status appeal, social recognition etc. matters a lot for the counterfeit customers go behind the counterfeit versions of the genuine products. An effective revised awareness programme for educating the customers must be devised projecting the relevance of business ethics and consumer ethics and the consequences in using counterfeit products. Ernakulam district, a small geographical location has only focused to show the intensity of the global threat of counterfeiting practices.

There are a lot of other factors which influence the buying behavior of the customers towards the counterfeit versions of the genuine brands and that can be taken along with an expanded geographical area and a higher sample size as a research gap to be filled by future research works.

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