CONSUMER CHRONICLES: PROBING THE DEPTHS OF EGYPTIAN PREFERENCES FOR COUNTERFEIT AND GENERIC MERCHANDISE

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Abstract

The counterfeit market is a growing concern globally, and this study aims to investigate the factors influencing consumers' preferences for counterfeit and generic products in Egypt. Through surveying 271 consumers, this research concludes that demographic variables, perceived risk, and prior experience are insignificant factors in choosing counterfeits or generics, while price, taste and preferences, quality, the price of related products, subjective norms, and expected prices significantly affect consumer preferences and demand. Consumers who prioritize quality, expected prices, and the price of related products are more likely to purchase generics, while those whose tastes and preferences are influenced by others' expectations, prestige, and acceptance are more likely to purchase counterfeits. Moreover, price negatively affects consumer demand, while the price of related products and expected prices affect consumer preferences positively toward generics and negatively toward counterfeits. These findings provide insights for profit-maximizing non-counterfeit producers to understand consumer behavior and allocate resources efficiently. The government can also use this information to apply more efficient policies regarding the counterfeit market. This study contributes to the existing literature by examining the demand side of the counterfeit market, which is crucial for understanding the market's impact on the economy. It also fills the literature gap by analyzing the factors influencing consumers' preferences for counterfeit and generic products in Egypt. This study's limitations are also discussed, and recommendations for future research are provided.

Keywords: counterfeit, generic products, consumer preferences, price, quality, Egypt.

INTRODUCTION

Currently, almost all markets contain counterfeits, especially in developing countries. Distinguishing between products and brand name products is necessary for understanding why the counterfeit market exists. In any given category, products meet the needs of households; however, brands are made by consumers. Many consumers prefer to buy brands to be confident of quality and safety (i.e., to reduce the risk of negative consequences). Additionally, brands are said to provide consumers with positive emotions and good feelings of self-esteem and perfection. Hence, brands are what consumers want, not what they need (Bearden, Netemeyer, & Teel, 1989). Therefore, brand owners

can raise their prices far above their costs solely due to the brand name. These pricing strategies may result in middle- and low-income households being unable to purchase these products and enjoy the prestigious characteristics claimed by these brands. Thus, such strategies are applied by the brand owners to create and preserve value for their products (Poppick, Moyer, & Stein, 2017).

As a result of high mark-up and exaggerated prices, some producers prefer to produce counterfeit products instead of producing generic products that only satisfy the need of the consumers. This

illegal labeling means the producer can benefit from the brand names and can still offer a mark-up that is lower than the price applied by legitimate brands. This gives these producers a higher profit margin than from producing generics (Baruönü, Kaytaz, &Kirezli, 2018). Accordingly, this allows counterfeit producers to attract consumers who desire the original brand but are constrained by their income.

Although counterfeit products usually are of lower quality and are not subjected to any safety tests, the U.S. government estimated that in 2008, the size of the global market for counterfeit products was growing at a rate of 1,700% annually. Additionally, the International Trademark Association estimated the market value of counterfeit products would reach $2.3 trillion in 2022 (Baruönü et al., 2018).

The effect of counterfeit marketing is economy-wide. The market affects the economy's trade, balance of payments, taxes, shadow economy, number of jobs (and accordingly, labor), and industries (Wiedmann, Hennigs, & Klarmann, 2012). Thus, this topic is of global concern for all economists, governments, and organizations. This research tackles the issue by looking at the micro level, especially on the demand side because without demand there would be no supply.

The aim of this study is to explain consumer choices about whether to purchase low-quality, highrisk counterfeit products and pay high prices or to purchase generic products that have better quality and lower risk and pay lower prices. In other words, this study examines how consumers act when it is assumed that they know the cost-benefit of each choice. This research is based on Egyptian consumers, and the findings mainly benefit profit-maximizing non-counterfeit producers to help them better understand consumer behavior so they can consider when applying their marketing strategies. It will also assist them in allocating their resources efficiently. Additionally, this research will benefit the government in its efforts to apply more efficient policies regarding the counterfeit market.

This study is organized as follows: Section 2 discusses the theories related to consumer behavior and choices, reviews the empirical literature, gives an overview of the counterfeit market in Egypt and its effects on the economy, and discusses the literature gap. Section 3 provides the data collection method, the research question and hypothesis, and the expected signs. Section 4 presents the data analyses. Section 5 summarizes and discusses the findings, offers recommendations for producers and the government, shows the limitations of the research, and offers recommendations for future research.

Literature review

There are four theories about the variables that affect consumer preferences and choices. These theories also explain the heterogeneity among consumers. First, the Theory of Planned Behavior demonstrates that human behavior is a function of intentions and intentions are based on three elements. The first is attitude, which is affected by beliefs that a certain behavior will lead to a certain outcome. The second element is subjective norm. The third is perceived behavioral control (Madden, Ellen, & Ajzen, 1992; Schifter & Ajzen, 1985). The probable behavior is the choice that an individual believes is going to provide the highest level of satisfaction. This theory then leads to the theories of Consumer Choice and Consumer Demand.

According to these theories, consumer choice and, therefore, demand are affected by the price of products, available income, tastes and preferences, the price of related products, expected future prices and tastes, and family size (Norum & Cuno, 2011). Finally, the Biased Scanning theory demonstrates that an individual's behavior is based on previous experiences and behavior, self-interested motives, and motives based on the consequences of past behavior that leads to expectations. The consequences of past behavior and experience build up some beliefs and expectations. Those beliefs and expectations affect an individuals' attitude, then affect their

intentions, and, finally, their demand (Albarracín& Wyer, 2000; Armitage & Christian, 2003; Ouellette & Wood, 1998).

After indicating some factors that influence consumer demand, prior research will be presented that specifically determines the size of the counterfeit market. Additionally, the argument about the effect of demographic variables, price, tastes and preferences, the price of related goods, quality, pricequality inference, perceived risk, previous behavior, and subjective norms on consumer decisions about whether to buy counterfeited products or non-counterfeited products will be presented.

First, several researchers have attempted to understand consumer willingness or unwillingness to purchase counterfeit products. Amine and Magnusson (2007); Lee and Workman (2011); Phau (2009) examined the effect of consumer beliefs and attitudes on the willingness to purchase counterfeit products and the size of the counterfeit market. They concluded that consumer beliefs and attitudes affect consumer willingness to purchase counterfeits positively due to trends such as purse parties. Therefore, willingness to pay for the brand name increases the size of the counterfeit market. However, Marcketti and Shelley (2009) concluded that consumer beliefs and attitudes negatively affect consumer willingness to purchase counterfeits as their information and knowledge about these products being unsafe increases, decreasing the size of the counterfeit market.

Second, demographic variables (i.e., gender, age, income, and education) are argued to be among the variables that affect how consumers perceive counterfeit products (Ang, Cheng, Lim, &Tambyah, 2001). Cheung and Prendergast (2006); Hamelin, Nwankwo, and El Hadouchi (2013); Moores and Chang (2006) studied the effect of gender on consumer willingness to pay for counterfeits. They concluded that women tend to buy fewer counterfeits, whereas Norum and Cuno (2011); Tom, Garibaldi, Zeng, and Pilcher (1998) concluded that gender is insignificant. Additionally, Amine and Magnusson (2007); Lin (2011) examined the effect of age on the dependent variable and concluded that consumers who are more likely to purchase counterfeits are either very young or very old due to their limited information regarding quality and risk. Further, young consumers tend to buy counterfeits rather than the original brand because of more affordable prices. They believe them to hold the same value at a lower price and that they represent good value for the money spent. However, Cordell, Wongtada, and Kieschnick (1996) concluded that age is insignificant. Moreover, Hamelin et al. (2013) examined the effect of income and concluded that low-income groups are more likely to buy counterfeits. Cheung and Prendergast (2006); Norum and Cuno (2011) concluded that middle- and high-income groups are more likely to buy counterfeits because they are more concerned with brand names. With reference to education, Amine and Magnusson (2007); Norum and Cuno (2011) concluded that there is a negative relation between educational level and purchasing counterfeits. Conversely, Matos, Ituassu, and Rossi (2007) concluded that demographic variables are insignificant.

Third, price is another factor that is expected to influence consumer choice and demand. Green and Smith (2002); Jirotmontree (2013); Phau and Teah (2009) examined the effect of price on consumer willingness to purchase counterfeits. They concluded that at low prices, consumers have positive attitudes toward counterfeits. Therefore, price negatively affects consumer willingness to purchase counterfeits. However, Huang, Lee, and Ho (2004) concluded that price is insignificant.

Additionally, consumer taste and preferences toward counterfeits can be observed when consumers have several choices and they demand counterfeits. Bloch, Bush , and Campbell (1993); Wilcox, Kim, and Sen (2009) investigated the effect of taste and preferences and the price of related products on consumer willingness to purchase counterfeits. They concluded that there is a positive relation between the price of the original brand and consumer willingness to purchase counterfeits. Additionally, consumer preferences are positively related to the desire to purchase the original

brand. Therefore, they are less likely to care for the quality as much as they care about the social and financial benefit of owning a brand.

Moreover, price-quality inference means that price is a good indicator of quality. Therefore, the higher the price, the higher the quality, and vice versa (Ordóñez, 1998). Huang et al. (2004); Matos et al. (2007) studied the effect of price-quality inference on consumer willingness to purchase counterfeits. They concluded that price-quality inference negatively affects consumer demand for counterfeits (i.e., most individuals who relate quality to price tend to buy fewer counterfeited goods). This supports the argument that counterfeit consumers are less likely to care for the quality but primarily care about the lower price and the value.

Risk: is another non price determinant of consumer choice and demand. Consumers make their decisions under the uncertainty of the future outcome. Risk related to purchasing goods is the probability of facing negative consequences from such a purchase. This perceived risk involves many dimensions, including financial, safety, social, time and opportunity, and performance (Havlena&DeSarbo, 1991; Huang et al., 2004). Cordell et al. (1996); Huang et al. (2004); Koay (2018); Mitchell (1992); Tan (2002) studied the effect of risk on consumer demand for counterfeits. They concluded that risk negatively affects consumer demand. Thus, counterfeits are associated with higher risk, and risk-averse consumers have negative attitudes toward counterfeits.

Besides, consumers' previous experience with counterfeits affects their demand. Kwong, Yau, Lee, Sin, and Tse (2003); Matos et al. (2007); Tan (2002); Yoo and Lee (2012) studied the effect of past behavioral experiences on consumer demand. They concluded that past behavioral experience is positively related to consumer demand under the condition that the feelings and beliefs acquired from prior experience were favorable. Additionally, their previous experiences lower their perceived risk in demanding counterfeits because they previously acquired some beliefs and knowledge about the performance and suppliers.

Finally, subjective norms, or normative susceptibility, with regard to consumer demand is defined as consumers' attempts to create a certain self-image by purchasing specific products that they expect will impress others (Bearden et al., 1989; Green & Smith, 2002). On the one hand, Budiman, Haryono, Haryanto, and Hidayat (2017); Phau and Teah (2009) examined the effect of subjective norms on consumer demand for counterfeits. They concluded that subjective norms are positively related to the demand for counterfeits as long as the product can deceive others into believing that the counterfeits are originals (i.e., purchasers believe that such products will contribute to a higher self-image). On the other hand, Ang et al. (2001) concluded that subjective norms are negatively related to the demand for counterfeits. This is due to the negative beliefs that others might hold for counterfeits.

It is speculated that there is a huge market for counterfeit products in Egypt, including all types of goods and covering all industries, e.g., food, apparel, pharmaceuticals, and electrical products. This is a result of the great demand and large proportion of such goods that are imported. It was estimated that the volume in counterfeit goods rose from 21 billion pounds in 2005 to 30 billion pounds in 2010, which accounts for 30% of the Egyptian market.

This is considered as an economic issue due to the unfair competition between counterfeit producers and legitimate investments, which has forced some of them to exit from the Egyptian market. This includes multinational corporations such as Sony, thereby creating a reduction in foreign direct invest. Those companies also exit the market because counterfeits use their names to sell low-quality and high-risk products, thereby damaging their brand names.

Counterfeits also affect the economy negatively in other aspects. First, they reduce international and local trade due to their accessibility and low prices. Thus, companies that care about quality and invest in research and development cannot compete with the low prices and consequent lack of

innovation. Second, due to lower investments, tax revenues decline along with the number of jobs, thereby, increasing unemployment. Third, counterfeits are not subject to safety tests, and this negatively affects the health of Egyptians and of the environment.

However, focusing on the micro level, it is necessary for producers to understand the consumer behavior toward this market to successfully allocate resources and maximize their profits. Variables such as prices, social influences, and accessibility are a major concern for Egyptian consumers (Wiedmann et al., 2012).

Therefore, as a result of the limited macro- and micro level literature in Egypt, this research aims to investigate the effect of those variables on Egyptian consumer demand. Additionally, several previous researchers differentiated between purchasers and non-purchasers of counterfeits but not between purchasers of counterfeit and purchasers of generic products. Moreover, to the best of the authors' knowledge, the previous research has not tested the effect of the price of related products on determining consumer preferences between counterfeits or generics. Therefore, this research considers generic products as a substitute for counterfeit products. Furthermore, past studies did not consider family size and expected prices as variables that influence consumer demand. Finally, most of the research addresses this topic from the marketing perspective but not from the economic one.

The following section discusses the data collection methods, the research question and hypothesis, and the expected relation between the exogenous variables and consumers' preferences toward counterfeits and generics.

Data and methodology

Data collection and transformation

A questionnaire was distributed to collect data to address the research question. The questionnaire was divided into two sections. The first section requests the consumers' demographic information, and the second part asks about their experiences and preferences (see Appendix A).

The data collected represented demographic characteristics of the Egyptian consumers, their prior experience, their preferences for counterfeits or generics, their tastes and preferences, whether they care about price, whether they care about quality, their perceptions about risk, and their preferences after the floatation of the Egyptian pound after applying the value-added tax (VAT). Moreover, the information collected is represented in frequency distribution tables and crosstabs to assess their role on the endogenous variable. Furthermore, a reliability test was applied on the dimension of the expected price.

The respondents were a random sample of students and academic staff who were targeted directly in some of the private Egyptian universities. Following Sekaran and Bougie (2016), the sample size was 350; however, only 271 of the surveyed sample returned questionnaires. This represents a 77.1% response rate. The quality and validity of the response data were established by conducting a reliability test using Cronbach's alpha (Sekaran & Bougie, 2016). No transformation has been done to the data.

Empirical framework

As alluded to above, this research focuses on consumer choice between counterfeits and generics. Consequently, the research question is "Why do some consumers prefer to buy counterfeit products with a relatively higher risk, higher prices, and lower quality rather than buying generic products with a relatively lower risk, lower prices, and higher quality?" Accordingly, the research hypothesis is that the variables used do not affect the decision making of Egyptian consumers.

Variables and Expected Signs:

Table 1.

Summary of the expected signs.

Exogenous Variable	Endogenous Variable	Expected sign
Gender	Consumer preferences for counterfeit and generic products	Gender is a binary variable that takes the value zero for males and one for females. Following the mainstream of previous researches, men are expected to have positive preferences towards counterfeits. Additionally, since this research is offering a substitute for counterfeit products, thus, it is expected that women prefer generic products.
Age	Consumer preferences for counterfeit and generic products	Middle age group are expected to prefer generics, while the young and old are expected to prefer counterfeits
Income	Consumer preferences for counterfeit and generic products	Based on the consumer demand theory and the literature, if consumers purchase counterfeits mainly for the "trademark" then it is expected that there is a positive relationship between income and consumers preferences for counterfeits and negative relationship between income and generics
Education	Consumer preferences for counterfeit and generic products	Education is negatively related to consumers' preferences towards counterfeits and positively related to their preferences towards generics
Family Size	Consumer preferences for counterfeit and generic products	Since counterfeits are offered with higher prices than generic products and as the family size increases the income per capita declines, this research expects that family size is negatively related to consumers' preferences towards counterfeits and positively related to their preferences for generics
Price	Consumer preferences for counterfeit and generic products	Price is negatively related to consumers' demand
Tastes and Preferences	Consumer preferences for counterfeit and generic products	Consumers' preferences for the social benefit and prestige is positively related to their preferences for counterfeits and negatively related to their preferences for generics.
Quality	Consumer preferences for counterfeit and generic products	Consumers' care for the quality is positively related to their preferences for generics and negatively related to their preferences for counterfeits

Price of Related Products	Consumer preferences for counterfeit and generic products	Consumers substitute the high-priced product with the low-priced product. Therefore, this research expects consumers to substitute counterfeits with generics.
Perceived Risk	Consumer preferences for counterfeit and generic products	Consumers' beliefs and information about risk negatively affect their attitude and intentions towards the behaviour. Thus, as counterfeits are associated with higher risk then risk averse consumers have negative attitudes towards counterfeits.
Prior Experience with Counterfeits	Consumer preferences for counterfeit and generic products	Consumers' previous demand for counterfeits is expected to affect their preferences and future demand for it positively (and generics negatively) if the consequences were favourable in terms of knowledge, quality, and risk
Subjective Norms	Consumer preferences for counterfeit and generic products	Subjective norms affect consumers' demand for counterfeits positively if they believe that it is socially acceptable and brings them prestige
Expected Prices	Consumer preferences for counterfeit and generic products	Consumers' expectations about an increase in the future price level affects their current demand positively, however, after the increase in the price level consumers' are expected to decrease their demand or shift to a lower-priced product. Therefore, this research expects consumers' current preferences to be different than their preferences after applying the VAT and after the floatation of the Egyptian pound as they affected the price of both counterfeits and generics, and as a result of the price elasticity of demand, consumers demand change. Thus, it is expected that consumers' current preferences to be towards generics as it is cheaper.

Empirical analysis and discussion

This section presents and analyzes the data collected from the survey by viewing the frequency and applying cross-tabulations and required reliability tests.

Demographically, approximately half of the sample was males and the other half was females. The mean age of the sample lies between the second and third age groups. Average income was between the first- and second-income groups. The education level mean for the sample was undergraduate and graduate. Finally, the average person in the sample had three or four individuals living with them (see Appendix A).

Concerning prior experience, the average respondent did not have past experience with counterfeits. Hence, consumer preferences are independent of this variable. However, respondents might believe that purchasing counterfeits is unacceptable and, therefore, might not have answered truthfully. This was supported by their answers when they were asked "if yes, what kind of counterfeit products did you purchase?" where 83% of the sample answered when the question clearly stated "if yes."

Therefore, their answers in the two questions are contradictory. Had this not been stated, they might have been deceived into believing that the product was the original brand or they may not have been aware of the brands in the first place and were therefore unaware of its counterfeits.

Measuring consumer preferences, 91.1% of consumers preferred generics, while only 8.9% preferred counterfeits. Therefore, approximately 9 out of 10 of the respondents preferred generics.

As to the motives behind their preferences, the mean number of respondents were motivated by the quality or never thought about the issue.

The percentage of the sample that was never motivated to purchase and made choices based on what was available was 29.3. In this case, consumer control over the behavior positively affected their attitude or, in other words, their demand. This matches what was mentioned in the Theory of Planned Behavior. Additionally, it supports the conclusion of Phau and Teah (2009) that argued that when products are easily attainable, consumers have positive attitudes toward the behavior.

Moreover, the 15.2% of respondents who were motivated by prestige or by recommendations from friends believed that their preference was socially acceptable or would impress others. Accordingly, they are motivated to obtain products that would impress others. This matches the Theory of Reasoned Action that states that normative beliefs affect subjective norms and, consequently, intentions and behavior.

When respondents were asked whether price played a significant role in their choice, a combination of 97.4% of respondents believed that price might or would significantly affect their choices. This matches the findings of Phau and Teah (2009), which concluded that price affects consumer choice. When respondents were asked whether quality plays a significant role in their choices, approximately 9 out of 10 respondents believed that quality significantly affected their choices.

When respondents were asked whether they would buy a product that would probably not work very long, 48% said "no." This indicates that when consumers were fully aware of the risk or expected a negative consequence from purchasing a product, they were more likely to have a negative attitude about demanding it. This supports the argument of Tan (2002) and Koay (2018) that indicated that performance risk negatively influences individuals' attitudes. This response also indicates the risk averseness of the respondents.

The effect of expected prices on respondents' preferences was measured by determining whether their preferences changed after two specific events occurred. The first was the application of the VAT, and the second was the floatation of the Egyptian pound in 2016. Both the VAT and the floatation of the Egyptian pound were reflected in a significant increase in price levels. The increase in prices affected expectations and demands at the time and still affects them.

When asked whether their preferences changed after the floatation and applying the VAT, 56.1% of respondents have changed their preferences due to the floatation of the Egyptian pound and 43.9% have changed due to the VAT. The average of respondents who changed their preferences due to the two events was 50%. This means that their past preferences changed to their current preferences, and 91.1% of respondents answered that their current preferences were for generics. Therefore, the average number of respondents shifted from preferring counterfeits or the original brand to preferring generics.

Because the average number of respondents believe that prices might or do significantly affect their choices and because the average income of the respondents lies between the first and secondincome groups, one way to explain this change in preferences is price and the income elasticities of demand. The VAT and floatation affected the price level, and these consumers have a limited income. Therefore, they substituted their past preferences with the current ones. In other words, they substituted the high-priced product with a lower-priced one. Additionally, the two events affected the price level by increasing the total price by a specific percentage. As the original brand and

counterfeits have higher prices than generics, the actual increase in prices of generics is less than the actual increase in the prices of counterfeits and original brands. Thus, more consumers shifted to the generics market.

While 25.45% believed that their preferences have not changed due to both events and 91.1% prefer generics, this indicates that either they already preferred generics or they belong to the rest of the sample who prefer counterfeits.

The floatation of the Egyptian pound had a higher effect on the increase in price levels than the VAT. That is why the percentage of respondents who believed that their preferences have changed due to the floatation was higher than the percentage of respondents who believed that their preferences have change due to the VAT.

Therefore, expected prices negatively affected consumer preference for counterfeits and positively affected consumer preference for generics. This matches the relationship between the variables that was expected in this research. Table 2 shows the reliability of this dimension.

Table 2.

Reliability test.

Variable	Number of Items	Reliability Statistic (Cronbach's Alpha)
Expected Prices	3	0.859

Source: Author's calculations.

Generally, reliability coefficients (Cronbach's alpha) of 0.6 or higher are considered adequate. As illustrated in Table 2, the calculated reliability coefficient for Cronbach's alpha is 0.859, so the variable included in the study is reliable.

Cross tabulation

This section assesses the role of the exogenous variables except for the expected price on the endogenous variable. This is done by making cross-tabulations. Table 3 presents the dependency between the variables and Pearson's chi-squared test.

Table 3.

Dependency test

Variable	Variable	Pearson Chi-Square
Gender	Prefer Counterfeit or Generic	0.683
Age	Prefer Counterfeit or Generic	0.786
Income	Prefer Counterfeit or Generic	0.822
Education	Prefer Counterfeit or Generic	0.645
Family Size	Prefer Counterfeit or Generic	0.998
Knowingly Purchased Counterfeits	Prefer Counterfeit or Generic	0.206
Type of Product	Prefer Counterfeit or Generic	0.313
Motivation	Prefer Counterfeit or Generic	0.001
Does Price Play a Significant Role	Prefer Counterfeit or Generic	0.001
Does Quality Play a Significant Role	Prefer Counterfeit or Generic	0.000

Probability of Not Working For a Long Time	Prefer Counterfeit or Generic	0.341

Source: Author's calculations.

As shown in Table 3, based on Pearson's chi-squared test, there is a dependency between consumer preferences toward counterfeits and generics with price, quality, and tastes and preferences (motivation) as Pearson's chi-squared test is equal to 0.001, 0.000, and 0.001, respectively. Therefore, as these values are smaller than the p-value at the 0.05 significance level, the null hypothesis that states that the variables are independent is rejected, meaning that there is a dependency between the variables.

The demographic variables are insignificant, which supports the argument of Matos et al. (2007) and rejects the expected relationship between all the demographic variables and consumer preference toward counterfeits. However, income and family size, as per the Theory of Consumer Demand, are variables that affect consumer preference. This is because consumers are constrained by their income, so they shape their preferences - or make their choices - based on income. The same holds for family size; all other things being equal as the family size increases the income is divided by a higher number of individuals. Therefore, there is less income per capita. However, this interdependence between the variables can be a result of respondents already having chosen the cheapest options. Therefore, they cannot change to a cheaper one; all they can do is decrease their demand.

According to the survey, the average number of respondents did not have past experience with counterfeits; however, this response contradicts their answers to the question that followed it. This regarded the interdependency between the prior experience variable and their preferences. This invalidates the expected relationship between prior experience and their preferences toward counterfeits and generics that is proposed by this research. However, as per the theory, an individual's prior behavior significantly affects their future behavior. Whether the effect on future behavior is positive or negative depends on the consequences and the feelings that they got from this behavior in the past.

Consumer preference toward counterfeits and generics was independent of the perceived risk. However, when respondents were confronted with the risk associated with the performance, the average number of respondents showed either risk averseness or neutrality. Additionally, 55.6% believed that quality is the motivation behind their preferences. Thus, if their preferences are independent of perceived risk, this indicates that respondents lack the awareness or knowledge to explicitly determine the risk associated with their purchase of counterfeits and generics, and they make their choices accordingly. This argument is supported by the answer to the question about whether they knowingly purchased counterfeits; or that this choice was due to the limited sample size. This result does not match the expected effect and sign proposed by the research, and it does not match the Theory of Biased Scanning and the Theory of Reasoned Action about an individual's belief that a certain behavior will lead to a certain outcome. **Assessing the role of taste and preferences**

Table 4 shows the relation between respondents' tastes and preferences and their preferences toward counterfeits or generics.

Table 4.

Total

Motivation	Never thought about it, it was just available (for example, online or in the store)	Count	14	65	79
		% of Total	5.2%	24.3%	29.5%
	Prestigious	Count	2	14	16
		% of Total	.7%	5.2%	6.0%
	Friend recommendation	Count	4	20	24
		% of Total	1.5%	7.5%	9.0%
	Quality	Count	4	145	149
		% of Total	1.5%	54.1%	55.6%
Total		Count	24	244	268
		% of Total	9.0%	91.0%	100.0%

Motivation and preferences towards counterfeits or generics.

As viewed in Table 4, 54.1% out of the 91% who preferred generics chose quality as their main motivation, while only 1.5% of the 9% who preferred counterfeits chose quality. This matches the findings of Bloch et al. (1993) and Wilcox et al. (2009) that consumers who prefer counterfeits are less likely to care about quality. This also matches the expected relation that was proposed by this research: that consumers' concern about quality is positively related to their preference for generics and negatively related to their preference for counterfeits.

Additionally, 24.3% of the 91% who preferred generics and 5.2% of the 9% who chose counterfeits (which is more than half of those who preferred counterfeits) purchase what is available. This means that if respondents did not think about such choices and bought whatever was available, they are more likely to prefer or buy counterfeits. This matches what was proposed by the Theory of Planned Behavior. This result also matches the findings of Wiedmann et al. (2012), which indicated that the market for counterfeits is enlarging and, consequently, counterfeits are becoming more available.

Moreover, 12.7% of the 91% who preferred generics said they were motivated by recommendations from friends and by prestige, while 2.2% of the 9% who preferred counterfeits had the same motivation. Even though the percentage of respondents who preferred counterfeits is far smaller than the percentage of respondents who preferred generics, the percentage of respondents who chose friend

	Prefer Counterfeit or Generic	
	Counterfeit	Generic

recommendations and prestige as their motivation to the total percentage of respondents is higher for counterfeits than for generics. This indicates that the normative beliefs of both categories of respondents are affected positively. However, if the main factor that influences consumer taste and preferences is their friends' recommendation or prestige, they are more likely to prefer counterfeits.

Assessing the role of price

Table 5 shows the relationship between price and consumer preference toward counterfeits or generics.

Table 5.

Price and preferences towards counterfeits and generics

			Prefer counterfeit or generic		Total
			Counterfeit	Generic	
Does Price Play a Significant Role	Maybe	Count	1	110	111 41.4%
		% of Total	.4%	41.0%	
	Yes	Count	22	129	151
		% of Total	8.2%	48.1%	56.3%
	No	Count	1	5	6
		% of Total	.4%	1.9%	2.2%
Total		Count	24	244	268
		% of Total	9.0%	91.0%	100.0%

As viewed in Table 5, the highest percentage of respondents, whether they preferred counterfeits or generics, believed that price is a significant factor affecting their choice. However, even though very few consumers preferred counterfeits to generics, a higher percentage of their total number (91.11%) believed that price plays a significant role in their preference. This can be illustrated by the argument of previous research studies that showed that counterfeit consumers prefer counterfeits because they benefit from the value provided by a name brand but with less financial outlay. Therefore, their primary motivation was price.

Additionally, the significance of price matches the Theory of Consumer Demand. That is, price affects consumers negatively as mentioned when applying the VAT and the floatation of the Egyptian pound because they measure the change in price. However, this question only shows the significance of price on consumer demand.

Assessing the role of quality

Table 6 shows the relationship between quality and consumer preference for counterfeits and generics.

Table 6.

Quality and preferences towards counterfeits or generics.

			Prefer Counterfeit or Generic		
			Counterfeit	Generic	Total
Does Quality Play a Significant Role	Maybe	Count	11	14	25
		% of Total	4.1%	5.2%	9.4%
	Yes	Count	11	224	235
		% of Total	4.1%	83.9%	88.0%

	No	Count	2	5	7
		% of Total	.7%	1.9%	2.6%
Total		Count	24	243	267
		% of Total	9.0%	91.0%	100.0%

As shown in Table 6, 92.2% of the respondents who preferred generics believed that quality plays a significant role in their choice; 5.7% believed that it might affect choice; and only 2.1% believed that it does not influence choice. On the other hand, 45.6% of the total percentage of individuals who preferred counterfeits believed that quality affected their choice; 45.6% believed that it might affect choice; and only 7.8% believed that it does not. This indicates that generic consumers are more likely to care about quality.

Section 5 summarizes the aim of the research, the empirical literature, and the literature gaps filled by this research. The findings are summarized, and recommendations are offered for producers and the government. It also shows the limitations of this research and makes recommendations for future research.

Conclusions and recommendations

This research aimed to determine why consumers prefer to buy counterfeits with relatively low quality and high risk and higher prices instead of buying generics with relatively high quality and lower risk and lower prices. The hypothesis of this research was tested by surveying a sample of 271 Egyptian consumers.

This research used variables that empirical literature has found to affect consumer demand except the price-quality inference variable.[1] It also fills the literature gap in this research regarding the effect of family size and expected price variables in determining consumer preference.

Additionally, this research used the price of related products to determine the effect of this variable on the demand for counterfeits and generics. It fills the literature gap in this area of research. Moreover, the effect of the variables is determined particularly for Egyptian consumers. It fills another literature gap because there is limited literature in Egypt on this topic, especially on the micro level. Finally, this research explains this topic from the perspective of counterfeit products and their effect on the economy, which is another area that has not been fully researched. The goal is to make useful recommendations to help non-counterfeit producers maximize profit by knowing what to produce and how to efficiently allocate their resources.

This research finds that demographic variables, perceived risk, and prior experience are insignificant variables as the Cronbach alpha is greater than the p-value at the 0.05 significance level. Therefore, the null hypothesis cannot be rejected, which means that these variables do not affect the decision making of Egyptian consumers. This finding rejects the hypothesized relationship between all the demographic variables and consumer preference toward counterfeits. However, based on the Theory of Consumer Demand, income and family size are factors that do affect consumer demand because consumers are constrained by their incomes. Based on that constraint, they determine their preferences and make their choices from the available options. Additionally, the effect of income was measured implicitly with the expected prices because the average number of respondents believed that their current preferences have changed from prior preferences due to the increase in the price levels. If their income increased by the same proportion, this change in preferences would not have occurred. However, this did not happen, and they were forced to shift to a cheaper option.

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[1] This is because this variable needs further study regarding the exact difference in quality and prices between the original brand, counterfeits, and generics in all industries and to determine the exact quality within each category in each of the three markets.

A similar change of preference goes for family size. All things being equal, as family size increases, less income is available for each individual. The insignificance of this relation can be because large families are already choosing the cheapest options.

Moreover, because respondents do not have prior experience with counterfeits, their preferences were independent of their prior experience. However, the Theory of Biased Scanning indicates that prior experience affects consumers' future behavior.

Furthermore, when respondents were confronted with risk associated with performance of the product, the average respondent showed risk averseness or neutrality. Moreover, the average respondent believed that quality is the motivation behind their preferences. If their preferences are independent of perceived risk, the respondents must lack the awareness or knowledge to explicitly determine the risk associated with their purchases.

The second finding was the significance of taste and preferences, subjective norms, price, quality, expected prices, and the price of related products and the way these factors affect Egyptian consumer preference for counterfeits and generics. However, consumers who care about quality, expected prices, and the price of related products are more likely to purchase generics. Consumers whose tastes and preferences are primarily influenced by others' expectations, prestige, and acceptance are more likely to purchase counterfeits. These conclusions match the expected relationships between those exogenous variables and the consumers' tendency to prefer counterfeits or generics. The effect of price was significant for both preferences; however, price was shown to be more important for the small percentage that preferred counterfeits. Price has a negative effect on consumer preference when viewed in terms of the VAT and the floatation of the Egyptian pound. As a result of the increase in prices, consumers changed their preferences to the cheaper products, in other words, to generics. The effect of all these factors together formed the respondents' preferences whether it was toward counterfeits or generics. The choice that they made was the choice that they believed would maximize their satisfaction.

However, because counterfeiting is believed to hurt the Egyptian economy and legitimate producers, one future recommendation that could maximize profits for non-counterfeit producers would be to focus on the factors that most affect generic consumers. A second recommendation would be to focus on the factors that most affect counterfeit consumers. These strategies could help them keep their consumers and also attract new consumers to their market. Additionally, the government can raise awareness of the counterfeiting issue, which could negatively affect the normative beliefs toward counterfeiting. In other words, the government can educate consumers about the negative consequences of counterfeiting.

Limitations

A limitation faced in this research is that whether consumers preferred counterfeits or generics, information about the actual quantities of counterfeits and generics demanded were not available to determine the decline in consumer demand as a result of the increase in prices. Another limitation was measuring the effect of each variable separately because all the exogenous variables are interrelated and affect each other. This might be the reason that some variables were insignificant. Moreover, this research was limited by sample size. This might be another reason for the insignificance of some variables.

Future research

Further research is recommended to fill in the gap about the effect of family size on consumer demand by classifying families according to factors such as marital status, age, and whether the members have a paid job or not. This will help determine whether each individual in the family relies on his/her income or whether they all rely on the parents' income.

Additionally, future research could be conducted to determine consumer preference when the consumer expects an increase in income. Additional research could determine consumer preference from a behavioral perspective. This would involve determining whether individuals enjoy deceiving others into believing that their counterfeit purchases are originals. If the answer is "yes," this pleasure could be classified by gender and age. Finally, further research needs to be conducted on the price-quality inference variable.

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Appendix A:

Question	Choices	Mean	Standard Deviation	Percentage	Rank
What is your gender?	Male Female	0.4982	0.50092	50.2% 49.8%	1 2
What is your age?	Under 18 18-25 26-35 36-50 Above 50	1.4539	0.93724	1.8% 73.4% 9.2% 8.5% 7.0%	5 1 2 3 4
What is your monthly nominal gross income (income before tax)?	Under 3000 3000 - 6000 6000 - 10000 Above 10000	0.9262	0.98230	43.9% 27.7% 20.3% 8.1%	1 2 3 4
What is your level of education?	School student Undergraduate Graduate Post graduate (diploma, MSc, Ph.D.)	1.5609	0 .74223	3.3% 49.1% 35.8% 11.8%	4 1 2 3
Have you ever knowingly purchased a counterfeit (fake) product?	Yes No	0.2268	0.41952	22.7% 77.3%	2 1
If yes, what kind of counterfeit products did you purchase?	Electronics (ex: charger, headphones) Clothes Medication Jewelry	0.4089	0.71459	69.3% 23.6% 4.0% 3.1%	1 2 3 4
Would you prefer to buy a counterfeit (fake) product or a generic product?	Counterfeit Generic	0.9108	0.28559	8.9% 91.1%	2 1

Based on your answer, what was your motivation?	Prestigious Friend recommendation Quality Never thought about it, it was just available (for example, online or in the store)	1.9111	1.33562	5.9% 9.3% 55.6% 29.3%	4 3 1 2
Based on your answer, what was	Prestigious Friend recommendation Quality	1.9111	1.33562	5.9% 9.3% 55.6%	4 3 1
your motivation?	Never thought about it, it was just available (for example, online or in the store)			29.3%	2
Does price play a significant role in your choice?	Yes No Maybe	0.6148	0.53828	56.3% 2.6% 41.1%	1 3 2
Does quality play a significant role in your choice?	Yes No Maybe	0.9331	0.33898	88.1% 2.6% 9.3%	1 3 2
Would you buy a product which has the probability of not working for a long time?	Yes No Maybe	1.1181	0.91129	15.9% 48.0% 36.2%	3 1 2
Did your preferences change after the floatation of the Egyptian pound?	Yes No Maybe	1.0185	0.66363	56.1% 22.9% 21.0%	1
Did your preferences change after applying the VAT (Value Added Tax)?	Yes No Maybe	1.0000	0.75031	43.9% 28.0% 28.0%	2

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