Authentic or Counterfeit? Determinants of Purchase Intention and Strategies to Reduce Counterfeit Demand

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A Thesis
Presented to
The University of Guelph

In partial fulfilment of requirements
for the degree of
Master of Science
in
Marketing and Consumer Studies

Guelph, Ontario, Canada

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ABSTRACT

AUTHENTIC OR COUNTERFEIT? DETERMINANTS OF PURCHASE INTENTION
AND STRATEGIES TO REDUCE COUNTERFEIT DEMAND

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Counterfeit products are a major problem throughout the world, resulting in several negative
effects. The current research identified the most important determinants of people's attitude
towards counterfeit products. Moreover, this research explored the effectiveness of two types of
strategies in reducing counterfeit demand. Results showed that an educational strategy, in which
a company educates consumers how to distinguish between authentic and counterfeit versions of
its products, is more effective than a typical promotional strategy in reducing intention to buy
counterfeit products. Importantly, it was found that a promotional strategy might even backfire
and increase demand for counterfeit versions of products. Results also revealed that subjective
norm, materialism, and perceived risk were significant predictors of attitude towards counterfeit
products. Contrary to predictions, however, integrity was not a significant determinant. Finally, it
was found that attitude towards counterfeit products would determine people's intention to buy
these products.
ACKNOWLEDGEMENTS

"This research could not have been done without the support of the following people." It might sound like a cliché, but now I am at the point that I believe it can be the most authentic sentence a researcher can write after the research is done.

I would like to thank Dr. Tirtha Dhar for the countless meetings we had and the endless optimism you brought into this research. You spent so much time to help me in all aspects of this research despite your very busy schedule. You kept me motivated for over a year. Keep smiling and keep encouraging students as I know for a fact that they need it.

I would also like to thank Dr. Vinay Kanetkar. I was impressed by your curious nature and your limitless knowledge. Our meetings changed my view towards research and taught me how it should be done. We discussed so many topics both within and beyond the scope of this research. And each discussion was a learning session for me. I cannot thank you enough.

I would like to thank my committee member Dr. May Aung for her supports, and all faculty and staff of the MCS department for the help and kindness they provided throughout the course of my graduate studies.

Finally, I would like to thank you Mojdeh, for each and every moment you comforted me with your smile. This thesis was just a fraction of the journey we are taking together. You were always there for me whenever I needed you. Be there as I will always need you. There are still so many roads to be travelled, and so many moments to be lived.
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Chapter 1: Introduction

1.1 The Domain of Illegal Production and Distribution

Counterfeit products are a major problem throughout the world. They impact every society and leave several negative effects on economies (de Matos et al., 2007). Advancement of technologies and globalization have contributed to rapid growth of counterfeiting market (Gentry et al., 2006; Bloch et al., 1993). Due to the nature of the market, the exact size of the counterfeiting market is not clear. However, estimations show that the market is growing in a very fast pace. The total value of counterfeit and pirated goods was estimated between 923 billion to 1.13 trillion dollars in 2013, and it is predicted to reach 1.9 to 2.81 trillion dollars by 2022 (Frontier Economics Ltd, 2017).

The current research deals with counterfeiters and products that they manufacture. However, counterfeiters are not the only players of the illegal production and distribution domain. Rather, this domain encompasses several types of markets and players. Two of the most commonly used terms in this area are black markets and grey markets.

Tilman (1968) explains the concept of black markets. They are formed when governments build a strict economic system with a mandatory pricing system. If supply and demand go out of balance, a free market system might emerge irrespective of authorities’ intentions. This system is called a black market. Grey markets, on the other hand, are characterized by distribution channels that have not been approved by legitimate manufacturers (Berman & Dong, 2016). There is a whole spectrum of illegal activities taking place in black markets and grey markets.
Different types of products present in the domain of illegal production and distribution can be defined as follows:

**Counterfeit products:** According to Ang et al. (2001), "counterfeit products are unauthorized reproductions that appear identical to legitimate products in appearance, including packaging, trademarks, and labeling." Counterfeit products might be sold through either legal or illegal channels.

**Grey products:** Authentic products that are sold through illegal distribution channels or by unauthorized dealers (Berman & Dong, 2016).

**Pirated products:** These are the artistic work such as software, music, movies, etc. that are illegally copied for distribution, duplication, and release. Piracy can also include copyrights and patents (Paradise, 1999).

The current research deals with counterfeit products. The following section discusses different aspects of the harm these products can cause to businesses, industries, individuals, and societies.

**1.2 Counterfeit Products and Their Negative Effects**

The negative effect of counterfeit products is by no means limited to the underdeveloped world. They have become a major problem in both developed and underdeveloped countries (de Matos et al., 2007). Proliferation of these products has led to a variety of negative effects throughout the world. These effects can range from economic impacts to social, moral, and health-related influences.
Counterfeit products can result in severe financial and economic impacts on companies and industries (Singh et al., 2009; Cordell et al., 1996; Chaudhry et al., 2005). They can damage original manufacturers in various ways (Grossman & Shapiro, 1988). Counterfeit products can have detrimental effects on brands, probably the most valuable assets companies possess. Brands are results of years or even decades of investment, thinking and hard work, and some of them are worth billions of dollars (Green & Smith, 2002). Counterfeit products can absorb demand of the original product and, therefore, impose a significant financial loss on the original manufacturer. In addition, these products might reduce the originator’s brand equity if its customers are informed that a part of the inventory of the brand is actually fake (Wilke & Zaichkowsky, 1999). It can make consumers lose their trust and confidence in the brand. It is commonly believed that counterfeiters imitate luxury brands. However, counterfeiting of luxury and prestigious brands account for only a fraction of this fraudulent mechanism’s operations. Counterfeit products cover almost every category from software to shampoo, auto parts, condoms and so on (McDonald & Roberts, 1994).

Depending on the type of counterfeit products, they can affect public health. Counterfeit medicines (CFM) are becoming more and more widespread throughout the world. They are a threat to individuals in need of effective drugs throughout the world (Sholy, 2015). They are widely distributed through both offline and online channels (Cozzella et al., 2012). Consequences of CFM go beyond the individual level and affect public health and quality of medical care. CFM can result in drug resistance and lead to negative long-term effects on the health of the society. The poor is the main victim of CFM because they have limited purchasing power and are more likely to purchase potentially cheaper counterfeit drugs. Patients receiving CFM are exposed to the risk of side effects, while they could be cured if received authentic
medicine (Wertheimer & Norris, 2009). Some counterfeit drugs with low active pharmaceutical ingredients (API) lead to viral resistance which makes future medication ineffective. In addition, CFMs are mostly sold without leaflets, which increases cases of self-medication and misuse (Dégardin et al., 2014). Unfortunately, the effects of receiving CFM go unnoticed in many cases unless they cause mass fatalities (Erhun Babalola & Erhun, 2001). CFM can also form a macroeconomic problem and negatively influence the cycle of economy in a country. By undermining people's health and life expectancy, CFM reduces worker productivity and results in long-term social and economic damages. The indirect costs of CFM remain unseen, but soon emerge as expenditures not anticipated by countries (Wertheimer & Norris, 2009).

Another stream of research shows that using counterfeit products can also damage consumers' ethicality and influence the way they judge people around them (Gino et al., 2010). Products we possess are a major reflection of our identities (Russell W Belk, 1988) and counterfeit goods are no exception. People purchase counterfeit goods to send positive signals to themselves and to the others. Consumers of luxury counterfeit products, for instance, want to show that they have a high income or a superior social status (Wilcox et al., 2009). However, using counterfeits sometimes results in behavioral effects not intended by the user. Counterfeit products can cause people to be something they are not. They make people unethical and form a "counterfeit self" inside them. The counterfeit self guides individual to behave in unethical ways (Gino et al., 2010). This function of counterfeit products can lead to a behavioral conflict in their consumers. While the wearer of a counterfeit intends to send positive signals, it can in fact result in sending a negative signal to the self. In this sense, wearing a counterfeit product can have a priming effect on the individual's behavior (Gino et al., 2010). Given the numerous studies conducted on the effect of primes on behavior (e.g., Berkowitz & Lepage, 1967; Berger &
Fitzsimons, 2008), it can be expected that wearing counterfeit goods results in negative effects on behavior despite the owners' intention to send positive signals.

Now that the detrimental effects of counterfeit products are explained, the next section discusses the size of counterfeiting market and some reasons behind proliferation of counterfeit products.

1.3 Proliferation of Counterfeit Products

The size of counterfeiters' business, from production to distribution, is increasing significantly. Several factors contribute to the proliferation of counterfeit products, with an important one being globalization. There are different benefits of globalization mentioned by researchers. Globalization helps firms reach new markets and more customers. The result is more sales and a higher level of efficiency for companies operating in the international market (Czinkota & Ronkainen, 2003). Globalization allows companies to search exceptional talents abroad and hire best employees from different countries (Theuerkauf et al., 1996). In addition, it increases product availability and provides consumers with an unprecedentedly high number of choices (Czinkota & Ronkainen, 2003). However, the consequences of globalization can be double-edged.

On the one hand, globalization facilitates dissemination of authentic products. On the other hand, it provides an opportunity for counterfeit products to be distributed more easily (Chang, 2004). Due to the nature of the market, the exact size of the counterfeiting market is not clear. However, estimations show that the market is growing in a very fast pace. The total value of counterfeit and pirated goods was estimated between 923 billion to 1.13 trillion dollars in 2013, and it is predicted to reach 1.9 to 2.81 trillion dollars by 2022 (Frontier Economics Ltd,
The huge size of this market and its astronomical growth rate have urged researchers to conduct numerous studies in this area.

The negative effects of counterfeit products and the huge size of the counterfeiting market invites both researchers and practitioners to engage in a bigger fight against counterfeiters and their activities. The next section provides a brief overview of the previous research and the current study.

1.4 Previous Research and the Current Study

There have been two main streams of anti-counterfeiting research: supply-oriented and demand-oriented research. Supply-oriented research tries to reduce the supply of counterfeit products, and demand-oriented research attempts to discourage consumers from buying them. Most research has been focused on the supply-side (Shultz & Saporito, 1996; Harvey, 1987; Harvey & Ronkainen, 1985; Albers-Miller, 1999; Alcock et al., 2003). However, there is a growing body of research focusing on the reasons why consumers buy counterfeit products (Bloch et al., 1993; Cordell et al., 1996; Gentry et al., 2000; Nia & Zaichkowsky, 2000; (Gentry et al., 2001; Gentry et al., 2002; Bamossy, 2002). The current research investigates the demand-side of the problem while trying to cover some gaps identified in literature.

Research questions were as follows:

1. What is the effect of company's strategies on consumers' intention to purchase counterfeit products?
2. What are the main determinants of people's intention to buy counterfeits?
3. How strong are each of these determinants?
The effect of companies' promotional strategies is well-documented from different viewpoints (e.g. Ailawadi & Nelsin, 1998; Davis et al., 1992), but it is not clear how these strategies can shape people's purchase intention towards counterfeits. It is argued in the current research that promotional strategy is not the most effective strategy a company can take to curb demand for counterfeit products. Rather, it is suggested that education strategy, in which a company teaches consumers on how to distinguish between authentic and counterfeit versions of its products, is a more effective strategy to achieve this specific goal. Other than comparing these two strategies, this research tries to explore the effects of the most important indicators identified in literature.

In order to find the main determinants, an extensive review of demand-side literature was conducted. At the end of this phase, it was concluded that subjective norm, perceived risk, integrity, and materialism are the main indicators of intention to purchase counterfeit products. The effect of these determinants was then tested in six experimental conditions composed of two products (Ralph Lauren t-shirts and Canada Goose parkas) and three corporate strategies (Control vs Education vs Promotion).

Prior to commencement of the main study, a pretest was conducted. The objective of the pretest was to choose two products and to make sure that the educational guidelines provided for the products were actually effective in helping participants detect counterfeit versions of the products. Three products were tested in the pretest: Canada Goose parkas, Ralph Lauren t-shirts, and Nike shoes. After conducting the pretest, Canada Goose and Ralph Lauren were chosen for the main study.
Results of the main study showed significant and positive effect of subjective norm on participants' attitude towards counterfeit products. Perceived risk had a significant and negative effect on attitude. Contrary to predictions, materialism had a negative effect on attitude towards counterfeit products. Moreover, it was observed that integrity did not have a significant effect on attitude. Finally, it was found that favorable (unfavorable) attitude towards counterfeit products resulted in higher (lower) intention to buy them.

In terms of marketing strategies, results approved the research predictions. Educational strategy was the most effective strategy among the three conditions. It was significantly more effective than promotional strategy in reducing consumers' intention to purchase counterfeit products. Importantly, there was no significant difference between promotional condition and control condition (no promotion or education) in terms of reducing counterfeit demand, with the results being even partially in favor of the control condition. It shows that a typical promotional strategy is not effective in reducing demand for counterfeit versions of a company's products or can even lead to opposite results. However, companies can reduce likelihood of consumers buying counterfeit versions by providing them with a detailed guideline on how to distinguish between authentic and counterfeit products.
Chapter 2: Literature Review

2.1 Companies' Strategies and Demand for counterfeit

Companies can take different actions to either cut the supply of counterfeit products into the market or to curb the demand for these products among consumers. These two perspectives have led to two general types of research in the area of counterfeiting: supply-oriented research and demand-oriented research. Supply-oriented research tries to reduce the supply of counterfeit products, and demand-oriented research attempts to discourage consumers from buying them. Most research has been focused on the supply-side (e.g. Shultz & Saporito, 1996; Harvey, 1987; Harvey & Ronkainen, 1985).

In order to cut the supply of counterfeit products, Companies have tried different approaches such as taking legal actions against counterfeiters, attempting to pass stronger anti-counterfeiting regulations, participating in the International Anti-Corruption Conference (IACC), encouraging enforcement of laws, offering incentives to the members of the supply chain to reject counterfeit products, reducing distribution of original products in counterfeit-dominated markets, and monitoring the activities of channel members (Bush, Bloch, & Dawson, 1989; P. E. Chaudhry & Walsh, 1996). Despite all these efforts, counterfeiters could never be stopped from doing what they do best. Therefore, there is a need to implement strategies to reduce demand of counterfeit products.

In order to decrease the demand for counterfeit products, companies should think about how to design effective anti-counterfeiting campaigns. Previous research identifies some techniques used by companies to help consumers identify their products. For example, brand
name companies such as Rolex, Prince, and Hennessey used anti-counterfeit labels developed by Polaroid (Leisen & Nill, 2001). Not only these instances are scarcely discussed in literature, previous research remains mostly silent on the effectiveness of such strategies. It seems from review of literature that no study was conducted to compare such methods and their effectiveness in reducing demand for counterfeit.

In the current research, it is argued that manufacturers can educate consumers on how to distinguish between authentic and counterfeit versions of their products. This type of strategy is called educational strategy in this research. One of the objectives of the current research is to measure the effectiveness of this educational strategy in reducing people's intention to buy counterfeit products. In order to achieve this goal, the effectiveness of this strategy was compared with that of a typical promotional strategy in which manufacturers highlight superior features of their products. It is argued in this research that the educational strategy is more effective than the promotional strategy. The reasons behind this prediction will be discussed in the next chapter.

When designing advertisements and promotional campaigns, manufacturers can focus on different aspects of the products as well as different characteristics of their target audience. By focusing on the appropriate characteristics, they can increase the chance of their campaigns making a significant impact. Therefore, it is crucial for them to identify the most important determinants of intention to buy counterfeit products. The next section provides an extensive review of previous research in this area.
2.2 Determinants of Intention to Buy Counterfeit

The objective of the demand-oriented strategies is to deter consumers from buying counterfeits and, therefore, to reduce demand for such products. These strategies use carefully crafted messages in an attempt to limit counterfeit demand. In order to create an effective message, it is required to know determinants of people's intention to buy counterfeit. Some studies exploring such determinants are discussed in the following.

Bloch, Bush, and Campbell (1993) conducted a study to explore people's willingness to buy counterfeit products. A sample of 200 adult consumers at either a regional shopping mall or a flea market in a medium-sized city in the United States participated in the research. The product category chosen for this study was knit sport shirts. Participants were shown three different cotton knit shirts of the same color in random order. The first shirt was a well-known designer brand with a distinctive logo on the breast. The second shirt was identical to the first one, but identified as a "counterfeit" and selling for a lower price. The third shirt carried a retailer brand with no logo on the breast. This shirt was described as a legitimate brand selling for the same price as the counterfeit shirt. Participants were asked to indicate which of the three shirts they would be likely to purchase. Of the 200 respondents, 29 percent chose the designer label shirt, 37.5 percent chose the counterfeit shirt, and the remaining 33.5 percent selected the non-logo shirt. Moreover, data collected from the two sites showed identical choice patterns. The authors also asked participants to evaluate all three shirts on the following product attributes: attention-getting, attractive, high quality, fashionable, good value, prestigious, comfortable, and well made. Participants choosing the designer label shirt rated it consistently higher across all attributes except "good value". Those choosing the counterfeit shirt rated it the highest on "good value". These participants rated the designer label shirt the highest on "quality" and "prestige".
For them, the designer label shirt was rated equivalent to the counterfeit shirt and superior to the non-logo shirt on attributes of ability to attract attention, attractiveness, fashionability, comfort, and being well made. A mixed pattern was observed among participants choosing the non-logo shirt. Then, the authors explored 14 respondent characteristics and found that there was a difference in terms of self-image between participants choosing designer label and counterfeit shirts. Furthermore, they found that product importance was not influential in explaining willingness to buy counterfeit. Finally, the authors explored the role of five purchase criteria: store reputation, durability, style/fashionability, brand image, and price. The three choice groups did not differ in terms of the importance given to store reputation, price, or style. The highest importance given to brand image was observed among participants choosing the designer label shirt, interestingly following by the ones choosing the non-logo shirt, and finally participants choosing the counterfeit shirt. As expected, the ones choosing counterfeit gave less importance to product durability.

Wee, Tan, and Cheok (1995) conducted an exploratory study to identify the key non-price determinants of intention to buy counterfeit products. After review of consumer behavior literature, they identified eight main determinants and categorized them into three groups of psychographic, product-attribute, and demographic variables. Psychographic variables include attitude, brand status, materialism, novelty seeking, and risk taking. Product attribute variables include durability and perceived fashion content. Finally, they identified demographic variables as the eighth determinants of intention to buy counterfeit. They argued that age, education, and household income are the most important demographic variables in determining people's willingness to purchase counterfeit products. In the next phase of the research, they distributed 949 questionnaires to college students and working adults in an industrialized state island in
South-East Asia. Four product types were used in the study: literature (textbooks and reference books), computer software, leather wallets/purses, and watches. Stepwise regression procedure was used to analyze data. Results showed some differences in the kinds of determinants and their magnitude of importance on intention to buy different types of counterfeit products. However, it was generally found that product attribute variables were the most effective determinant of intention to buy counterfeit. Demographic variables were also found to be good predictors of the dependent variable. Although in lower magnitude, psychographic variable (attitude towards counterfeiting) was the only determinant consistently affecting all four types of counterfeit products.

Cordell et al. (1996) investigated some factors influencing people's willingness to purchase counterfeit goods. 221 business students participated in this study. Each participant was presented descriptions of two products: a knit shirt and a 35-mm camera. These two products were chosen because they are common, used by both sexes, and clearly differentiated by investment-at-risk. On a seven-point scale, participants rated their willingness to buy each of the two products. For each product, a well-known (Ralph Lauren for the knit shirt and Nikon for the camera) and a fictitious name condition was created. The retailer manipulation in the scenario was either "a prestige department store of your choice" or a flea market vendor. Price was manipulated as approximately either one-half or one-quarter of normal retail price of the products. Therefore, each participant was given one of eight questionnaire variations. Results showed that willingness to buy counterfeit products was negatively related to attitudes toward lawfulness. Mixed support was found for the hypothesis that willingness to buy counterfeit had a positive relationship with product performance expectations. Moreover, it was found that branding and price conditions impacted willingness to buy low, but not high, investment-at-risk
products. Finally, results showed that retailer condition influenced willingness to purchase high, but not low, investment-at-risk products.

Leisen and Nill (2001) conducted a study to explore the role of perceived shopping environment attributes, perceived product attributes, perceived risks (i.e., financial/performance, social, legal), and awareness of societal consequences on the purchase intention of three types of counterfeit products. The three product categories used in this study were Tylenol, Ray Ban, and Rolex. These products were chosen because they are often the target of counterfeiters, have a high brand name recognition, and expose consumers to different risks. Shopping scenarios were formulated for each of the product categories. A convenient sample of 144 MBA students at a university in the United States participated in the study. On a five-point scale, participants were asked to report their likelihood of purchasing the three products within the next 12 months. The data were analyzed using three OLS regression analyses. It was found that the perceived shopping environment was a significant predictor of the purchase intent for Ray Ban and Rolex, the perceived product attributes were a significant predictor of the purchase intent for Ray Ban, and the perceived financial/performance risk was a significant predictor of the purchase intent for Tylenol and Rolex. The perceived social risk, perceived legal risk, and awareness of societal consequences did not influence the purchase intent for any of the product categories. Moreover, results showed that no single factor was significant was significant across all product categories. The authors concluded that, in order to be successful, anti-counterfeiting campaigns should be product-specific.

de Matos et al. (2007) conducted a research in an attempt to identify the main predictors of consumers' intention to buy counterfeit products. A sample of 400 individuals in two big Brazilian cities answered a survey instrument. Structural Equation Modelling technique was used
to analyze data. They hypothesized that intention to buy counterfeit depends on price-quality inference, perceived risk, whether consumers have bought a counterfeit before, subjective norm, integrity, and personal gratification. On seven-point scales, participants answered questions on the independent variables and rated their intention to purchase counterfeits. Results showed that all hypothesized predictors influence intention to buy counterfeit products. The authors also found that consumers’ attitudes toward counterfeits mediates the relationship between these predictors and the dependent variable. In addition, it was found that attitude toward counterfeits were influenced by the identified determinants in the following order: perceived risk, previous counterfeit purchase, subjective norm, integrity, price-quality inference, and personal gratification.

Bian and Moutinho (2009) investigated several factors involved in shaping people's likelihood of purchasing counterfeit products. They used a mall intercept survey method to interview 430 U.K. shoppers. As the stimuli, they used Rolex and Gucci watches. In their survey, they explored the effect of product involvement, product knowledge, brand image, brand personality (including competence, excitement, and sophistication), perceived product attributes, perceived benefits (including satisfactory benefit, functional benefit, and image benefit), perceived risks (including social risk and financial risk), and demographics (including age, income, education, and gender). They found that product involvement did not have a significant effect on intention to buy counterfeit. Product knowledge was found to have no significant effect for Rolex counterfeit watches, but to be a significant factor in predicting intention to purchase Gucci counterfeits. Perceived brand personality was a significant predictor for both counterfeit products, having a positive effect. Similarly, product attribute was positively associated with intention to buy both counterfeit products. Perceived benefits showed a positive effect as well.
For Rolex, social risk was a significant negative predictor of the likelihood of counterfeit purchase consideration, but financial risk was not. For Gucci, both social and financial risks were significant. Finally, age, income (except for Gucci), educational attainment, and age did not affect consideration of counterfeit purchase. The authors also used a different analysis method and found similar results (Bian & Moutinho, 2011).

Wilcox et al., (2009) tried to find an answer to the question why consumers buy counterfeit luxury brands. In order to find the answer, they conducted three studies. They used groups of U.S. students as their sample. Fashion brands, Louis Vuitton handbags, and Tissot watches were used in study 1, 2, and 3, respectively. The authors explored the effect of luxury brand attitude (social-adjustive function versus value-expressive function), counterfeit moral beliefs, exposure to counterfeit brand, brand conspicuousness (logo versus no-logo), and advertising type (social-adjustive versus value-expressive). Results revealed that consumers' intention to purchase counterfeits was higher when they had social-adjustive rather than value-expressive attitude toward luxury brands. In addition, the authors found that when people held value-expressive rather than social-adjustive attitude toward luxury brands, their intention to buy counterfeit products would be more sensitive to their moral beliefs. In the next step, the authors explored the effect of exposure to counterfeit brand on consumers' real brand preference. It was found that the effect was more negative for those who had social-adjustive rather than value-expressive attitude toward luxury brands. Moreover, it was shown that attitude toward luxury brands was more influential on people's counterfeit purchase intention when the brand was more conspicuous. Finally, results showed that when compared with social-adjustive advertising, value-expressive advertising was more effective in reduction of consumers' intention to purchase counterfeit products.
In another research, Martinez and Jaeger (2016) explored the impact of moral emotions, moral awareness, and moral judgement on consumers' intention to buy counterfeits. They administered online surveys among 225 respondents from several European countries (mostly Germany). The product category used in their study was sunglasses. The identified determinants were moral awareness, moral emotions (including anger, guilt, and gratitude), moral judgement, and purchase experience. Results showed that higher levels of moral awareness led to higher levels of moral judgement concerning counterfeit purchase. In addition, it was found that high level of this moral judgement could result in lower intention to buy counterfeits. According to the authors, moral emotions reduced participants' counterfeit purchase intention. Moreover, these emotions increased moral judgement concerning purchase of counterfeit products. It was also found that moral awareness increased moral emotions. Finally, the study revealed that people's purchase experience could decrease their counterfeit purchase intention.

Liu et al. (2017) conducted a study to explore how consumers feel when they use counterfeit products, and how these feelings can impact the price premium they are willing to pay for genuine products. Four studies were conducted to investigate the research questions. The studies were conducted either recruiting undergraduate students or using M-Turk participants. They found that people experience mixed emotions when they use counterfeit products. Furthermore, these mixed emotions were stronger when counterfeit was used in public versus private settings. Finally, the authors compared the effectiveness of social anti-counterfeiting ads compared to non-social and generic ads. Social ads are those that send people a social cue regarding the use of counterfeit products. In their study, social (non-social) ads prompted participants to imagine public (private) counterfeit consumption. They found that social ads were
more effective in increasing the price premium participants are willing to pay for authentic over counterfeit products.

The above literature review shows that most studies have used intention to buy counterfeit products as their dependent variable. Several factors have been examined as determinants of counterfeit purchase intention. The conceptual framework intended for the current research is discussed in the following section.

2.3 Classification of Determinants

After an extensive literature review on studies exploring determinants of counterfeit purchase, Eisend and Schuchert-Güler (2006) provided a comprehensive framework for future research. They categorized determinants of counterfeit purchase into four main categories: person-related determinants (demographic and psychographic variables), product-related determinants (such as price, product attributes, scarcity), determinants related to social and cultural context, and determinants related to purchase situation and mood. This framework will be used as the basis of the current study. The framework is shown in Figure 2-1.
Based on the above platform, all determinants identified in the previous section are classified in Table 2-1.
Based on the above literature review, the next chapter describes conceptual framework and hypotheses of the research.

<table>
<thead>
<tr>
<th>Person</th>
<th>Product</th>
<th>Social and Cultural</th>
<th>Purchase Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics (mostly n.s.); Self-image/integrity; Attitude toward lawfulness (partially s.); Attitude toward counterfeits (IV and mediator); Moral awareness; Moral emotions (partially s. mediator and IV); Moral judgement (marginally s. mediator); Previous counterfeit purchase (mixed results); Risk averseness (n.s.); Personal gratification; Luxury brand attitude; Brand conspicuousness; Novelty seeking (n.s.); Materialism (mixed results);</td>
<td>Product involvement (n.s.); Product knowledge (partially s.); Brand image (n.s. mediator, mixed IV); Brand personality; Product attributes (mixed results); Perceived benefits (partially s.); Product importance (n.s.); Style/fashionability (mixed results); Price (mixed results); Durability (mixed results); Expected performance; Branding (partially s.); Brand status (n.s.); Quality; Physical appearance (partially s.);</td>
<td>Perceived risks (mixed results); Awareness of societal consequences (n.s.); Subjective norm;</td>
<td>Store reputation (mixed results); Shopping environment attributes (partially s.);</td>
</tr>
</tbody>
</table>
Chapter 3: Hypotheses

3.1 Gaps in Literature

The extensive literature review in Chapter 2 identified several indicators of intention to buy counterfeit products. It was discussed how these indicators can be categorized and what their effects are. However, it appears that no study investigated the effect of companies' strategies on consumers' intention to purchase counterfeit products.

The effect of companies' promotional strategies is well-documented from different viewpoints (e.g. Ailawadi & Nelsin, 1998; Davis et al., 1992), but it is not clear how these strategies can shape people's purchase intention towards counterfeits. In addition, it is argued in the current research that promotional strategy is not the most effective strategy a company can take to curb demand for counterfeit products. Rather, it is suggested that education strategy, in which a company teaches consumers on how to distinguish between authentic and counterfeit versions of its products, is a more effective strategy to achieve this specific goal.

Other than comparing these two strategies, this research tries to explore the effects of the most important indicators identified in literature. A complete list of indicators of intention to buy counterfeit was provided in the previous chapter in Table 2-1. These indicators were then classified into four main categories in Table 2-2. Based on the overall weight of the indicators in literature, the four most important ones were chosen as follows: subjective norm, perceived risk, integrity, and materialism. The effect of these indicators on consumers' intention to purchase counterfeit products were assessed for each of the abovementioned strategies for two products (Canada Goose parkas and Ralph Lauren t-shirts). The products are discussed in the next chapter.
The next section discusses all hypotheses tested in the current research.

3.2 Hypotheses

Company's Strategies

Strategies that companies take can affect consumers' intention to purchase their products. Previous research shows that well-crafted promotional strategy can increase consumers' likelihood of buying a company's products (Pechmann & Stewart, 1990). However, it is not clear how these promotional strategies influence consumers' intention to purchase counterfeit versions of the products. Other than a typical promotional strategy, a company can teach its consumers how to distinguish between authentic and counterfeit versions of products. In this research, such a strategy is called "educational strategy". Currently, a few manufacturers such as Canada Goose and Arc’teryx conduct this strategy through their websites. Review of literature revealed no study to evaluate the effectiveness of an educational strategy. The current research argues that a counterfeit-oriented educational strategy is more effective than a typical promotional strategy in reducing demand for counterfeit versions of a product.

The first reason behind this prediction comes from the simple intuition that the educational strategy is counterfeit-related, while the promotional strategy is generic with unknown effects on the demand for counterfeit products. In fact, the promotional strategy is geared towards increasing sales of the manufacturer's products. Therefore, one might argue that it can even work in favor of the counterfeit versions because of lack of ability to detect counterfeit versions among some consumers. In other words, a typical promotional strategy can promote both authentic and counterfeit versions of a product at the same time.
The second reason revolves around the importance of information processing. Previous research has shown the significance of information processing in designing effective marketing strategies. For example, Tybout et al. (1981) used information processing theory to design the best strategies a company could take in the time of circulation of an adverse rumor around a product. Based on the information processing view, informational inputs represented in active memory can be retrieved later to affect behavior. This takes place through a process of rehearsal where attributes are associated with an object (Bettman, 1979). It is argued in this research that the educational strategy provides consumers with the expertise required to detect counterfeit products. At the time of purchase, this information will be retrieved in the shopper's mind to guide the purchase decision.

The effectiveness of educational strategy can be further discussed in the light of fast and slow systems of thinking. Kahneman (2011) identifies two systems of thinking in human mind: system 1 and system 2. System 1 is the fast and automatic system of thinking that makes many of people's everyday decisions in a very fast and efficient manner. System 2, on the other hand, is the slower and analytical mode of thinking which relies on reasoning. It can be argued that typical promotional strategies, in many cases, engage only system 1. In these cases, people do not pay enough attention to advertisements they see. The educational strategy in employed in this research, on the other hand, engages both system 1 and system 2. While some aspects of the strategy might be already known to consumers and therefore processed by their system 1, there are some technical aspects that fall within the domain of system 2. By inviting both system 1 and system 2 to take part in decision making, it can be expected that the educational strategy would be more effective than a typical promotional strategy.
Finally, previous research mostly assumes that consumers knowingly purchase counterfeit products (Ang et al., 2001; de Matos et al., 2007; Cordell et al., 1996; Turkyilmaz and Uslu, 2014; Wilcox et al., 2009; Albers-Miller, 1999). However, this is not how it happens in the real world. While some people knowingly buy counterfeit products, many individuals do not know that the product they are buying is fake. They make their purchase decision based on the information they receive at the moment of purchase. From this point of view, the educational strategy can help them detect counterfeit products and avoid buying them.

Therefore, it is predicted that:

H1: Educational strategy is more effective than promotional strategy in reducing consumers’ intention to buy counterfeit products.

Subjective Norm

Ajzen (1991) defines subjective norm as the perceived social pressure to conduct or not to conduct a specific behavior. In other words, important people around us can increase or decrease our likelihood of engaging in different types of behaviors (Park, 2000). Ajzen (1991) argues that when an individual has a favorable subjective norm towards a behavior, he or she will be more likely to perform the behavior. This concept has been applied to many contexts. For example, Abrams et al. (1998) applied it to the context of employee turnover rates, Wu and Tang (2009) implemented it in the context of organ donation, and Bagozzi et al. (2000) applied the concept to the context of eating in group and individual settings.

It has been shown in previous studies that subjective norm is an important factor in the context of counterfeit products as well. Penz and Stottinger (2005) found that those who felt pressure from significant others on decision to buy counterfeit products had stronger intention to
purchase them. Several studies showed the effect of subjective norm on people's attitude towards counterfeit products (e.g. de Matos et al., 2007; Kim & Karpova, 2010; Shen & Dickson, 2001; Rahman et al., 2011; Ang et al., 2001; Burke, 2006; Cheng et al., 2011). Therefore, the second hypothesis of this research was formulated as follows:

H2: People who perceive their friends/relatives approve (do not approve) their behavior of purchasing a counterfeit product will have favorable (unfavorable) attitude towards counterfeit products.

Perceived Risk

As discussed in the previous chapter, counterfeit products can bring several risks to consumers. Therefore, the risk variable is a significant factor in their decision to purchase these products (de Matos et al., 2007). Previous research usually defines the concept of risk as the level of uncertainty and detrimental consequences that consumers perceive as a result of purchasing products and services (Dowling & Staelin, 1994). When making decisions whether to buy a product, consumers evaluate the risks and consequences of such purchase. The perceived risk includes different aspects from financial to social, performance, safety, psychological, and time (Havlena & DeSarbo, 1991).

In the context of counterfeit products, Albers-Miller, (1999) showed that perceived risk was a significant factor in shaping consumers' intention to buy counterfeit products. In addition, (de Matos et al., 2007) found that perceived risk was an important determinant of people's attitude towards these products. Therefore, it was predicted in the third hypothesis that:

H3: People who assign more (less) risk to counterfeit products will have unfavorable (favorable) attitude towards them.
Integrity

Purchase of counterfeit products, while not being a criminal act, contributes to counterfeiters' activities and businesses. In addition, people are different in terms of their respect to the rules of law. Therefore, it is reasonable to expect that respect for lawfulness can explain people's participation in counterfeit purchase. Previous research shows that this expectation is sound. For instance, Cordell et al., (1996) showed that people with more favorable attitude towards lawfulness were less likely to purchase counterfeit products. Research also shows that people with lower moral standards feel less guilty when engaging in purchase of counterfeit products (Ang et al., 2001). There is also evidence that consumers who have higher ethical standards would have unfavorable attitude towards counterfeit products (de Matos et al., 2007). Therefore, it was expected in the fourth hypothesis of this research that:

H4: People who attribute more (less) integrity to themselves will have unfavorable (favorable) attitude towards counterfeit products.

Materialism

Materialism is one of the most commonly used indicators in counterfeiting literature. It can be defined as the importance of material possessions to an individual, and the extent to which such possessions play a role in one's life (Belk, 1984). Richins (2004) developed a comprehensive scale to measure materialism. The scale was composed of three components: items that measure success, items that measure centrality of material possessions in one's life, and items that measure the level to which such possessions result in happiness. The concept of materialism and its effects has been used in numerous studies (e.g. Eastman et al., 1997; Webster

26
& Beatty, 1997; Dittmar, 2005; Ogden & Cheng, 2011; Schaefer et al., 2004; Chan & Prendergast, 2007).

The concept has been popular in the context of counterfeit products as well. Previous research shows mixed results. While a few studies, such as Wee et al. (1995), did not find a significant effect for materialism, most studies reported the important role of materialism. Chuchinprakarn (2003) conducted a study and showed that students from less affluent families who valued materialism used more counterfeit products in their life. Similarly, Auerbach et al. (2010) argued that increase in materialism can lead to behaviors such as purchasing counterfeit products. Research shows that in countries that social reputations and materialism is important, people are more likely to buy counterfeit (Taormina & Chong, 2010). Other studies also reported the significant effect of materialism on people's intention to purchase counterfeit products (Han et al., 2010; Swami et al., 2009). Following this logic, the fifth hypothesis was formulated as:

**H5:** People who have favorable (unfavorable) attitude towards luxury brands would have favorable (unfavorable) attitude towards counterfeit products.

**Attitude towards Counterfeits and Purchase Intention**

Attitude is defined as "…a learned predisposition to behave in a consistently favorable or unfavorable manner with respect to a given object" (Schiffman & Kanuk, 1997, p. 167). Based on the Theory of Reasoned Action, "attitude is derived from a group of beliefs that one holds about the object of the behaviour and evaluations of the consequences of the beliefs" (Marcketti & Shelley, 2009, p.328). Ajzen and Fishbein, (1980) stated that people's attitude is a strong predictor of their behaviors.
In the domain of counterfeit products, the link between attitude and purchase intention has been found in several studies. Research shows that positive (negative) attitude towards counterfeit products results in stronger (weaker) intention to buy them (Swami et al., 2009; de Matos et al., 2007; Furnham & Valgeirsson, 2007; Shen & Dickson, 2001; Marcketti & Shelley, 2009; Kim & Karpova, 2010; Bian & Veloutsou, 2007; Koklic, 2011). Following the same trend, it is expected that:

H6: People with more favorable (unfavorable) attitude towards counterfeit products have higher (lower) intention to purchase them.

3.3 Conceptual Framework

Based on the above discussions, it is expected in this research that subjective norm, perceived risk, integrity, and materialism affect people's attitude towards counterfeit products. Attitude can in turn influence consumers' intention to purchase these products. Importantly, it is predicted that a counterfeit-oriented educational strategy is more effective than a typical promotional strategy in reducing people's intention to purchase counterfeit. Figure 3-1 shows the conceptual framework of the research.
Figure 3-1 Conceptual framework of the research
Chapter 4: Methodology

4.1 Pretest

Prior to designing and performing the main study, a pretest was conducted in the form of an online survey. The pretest was designed so that the researchers can achieve these two main goals: 1) to select two appropriate products for the main study; and 2) to make sure that the designed educational material can actually help participants detect counterfeit versions of the products.

The survey was designed in the online platform Qualtrics. It was divided into three sections each dedicated to one of the three products chosen to be pretested. The three products selected for the pretest were Canada Goose parkas, Nike shoes, and Ralph Lauren t-shirts. At the beginning of each section, participants went through a detailed guideline on how to distinguish between the authentic and the counterfeit versions of the product. After reading the guidelines, they answered a few questions and provided some feedbacks.

31 undergraduate students from the University of Guelph completed the online survey. Of participants, 45% (14 students) identified themselves as male and 55% (17 students) as female. In addition, 35% (11 students) said that they had purchased counterfeit products before, 61% (19 students) said that they had not done so, and one student preferred not to answer the question. In arguably the main question of the survey, participants were asked to rate on a scale of 1 to 7 their ability to detect the counterfeit version of the product before and after reading each guideline. Table 4-1 summarizes the results of paired samples t-test for this question.
Results show that all three guidelines were successful in improving participants' ability to detect counterfeit products (p=0.000 for all three products). Of the three products, Canada Goose and Ralph Lauren were chosen for the main study. It was partly because the guidelines prepared for these two products were even more successful than the Nike guideline in helping participants detect counterfeit versions. In addition, choosing Canada Goose parkas and Ralph Lauren t-shirts could improve consistency of the main study as these products are both classified under clothing and apparel category. It would be also in line with previous research that shows counterfeit apparel holds one of the top spots in terms of the volume of consumption and manufacturing (Swami et al., 2009).

Table 4-1 Summary of Pretest Results

<table>
<thead>
<tr>
<th>Ability to detect counterfeit</th>
<th>Mean</th>
<th>Std.Err</th>
<th>t-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada Goose =~</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>3.43</td>
<td>0.278</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After</td>
<td>6.23</td>
<td>0.133</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>2.80</td>
<td>0.316</td>
<td>8.865</td>
<td>0.000</td>
</tr>
<tr>
<td>Ralph Lauren =~</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>2.81</td>
<td>0.302</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After</td>
<td>5.45</td>
<td>0.212</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>2.64</td>
<td>0.306</td>
<td>8.644</td>
<td>0.000</td>
</tr>
<tr>
<td>Nike =~</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>3.32</td>
<td>0.276</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After</td>
<td>5.55</td>
<td>0.190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>2.23</td>
<td>0.289</td>
<td>7.714</td>
<td>0.000</td>
</tr>
</tbody>
</table>
4.2 Main Study

4.2.1 Participants

Main study was conducted in the form of an online survey. 275 undergraduate students studying Marketing at the University of Guelph participated in this online study through SONA system. For their participation, the students received 2% course credit one of the courses MCS 1000, MCS 2020 and MCS 2600. Of these students, 264 participants completed the survey. There were three conditions for Canada Goose and three conditions for Ralph Lauren. 131 students participated in the three experimental conditions for Canada Goose and 133 participated in Ralph Lauren conditions. Of participants, 161 identified themselves as male (61 percent), 99 identified themselves as female (37 percent), and 4 preferred not to say (2 percent).

4.2.2 Design

The study was a 2 (Product) * 3 (Company's Strategy) between-subject factorial design. As explained in the pretest, Canada Goose and Ralph Lauren were chosen as the two products to be tested in main study. The three levels of company's strategy were Control, Education, and Promotion. Therefore, there were a total of six conditions in the study.

The online study was designed and distributed through Qualtrics. Participants were randomly assigned to one of the six conditions. In the Education condition, participants were shown a detailed guideline on how to distinguish between counterfeit and authentic versions of the product. In the Promotion condition, they were presented promotional materials for the product. In the Control condition, there was no material provided to participants.
4.2.3 Stimuli

As stimuli, two types of materials were provided for each product: educational material and promotional material. Educational material was a detailed guideline on how to distinguish between counterfeit and authentic versions of the product. Several features of the product were highlighted in the guidelines. For example, Canada Goose guideline provided details on arctic patch, stitching, or the type of fur used in fake and authentic Canada Goose parkas. As explained in the previous section, the educational guidelines developed for Canada Goose and Ralph Lauren were pretested before the commencement of the main study.

Promotional materials were developed based on the typical promotional strategies that a company would use. Similar to the educational guidelines, participants went through several steps in the promotional materials. Each step explained a specific feature of the product. For instance, Canada Goose promotional materials provided details on the type of fur, down, or stitching used in the company's parkas.

4.2.4 Scales

Based on literature review, a set of determinants were chosen to be used in this research. To measure these determinants, pre-existing scales were captured from previous research. The scales are explained in detail in the following. Table 4-2 lists all questions used to measure research constructs.

Subjective Norm

The scale used to measure subjective norm was inspired from the concept developed by Ajzen (1991). The article defines subjective norm as the perceived social pressure to conduct or not to conduct a specific behavior. In the context of counterfeit products, de Matos and
colleagues (2007) used a 2-item scale and Kim and Karpova (2010) used a 3-item scale to measure subjective norm. The researchers reported Cronbach's alpha of 0.74 and 0.82 respectively. In the current research, the two-item scale was used to measure this construct. The questions asked participants' opinion on a 7-point Likert scale. The answers ranged from 1="completely disagree" to 7="completely agree".

**Integrity**

The scale for measuring integrity was taken from Ang and colleagues (2001). The scale was built based on the Rokeach Value Survey developed by Rokeach (1973). Vinson et al. (1977) categorized the items of the Rokeach Value Survey into ten factors, one of them being integrity. This factor was composed of four items for honesty, politeness, responsibility, and self-control. Therefore, Ang et al. (2001) used four questions each asking participants how important each value was to them. They reported the Cronbach's alpha of 0.78 for this scale. Similar questions were used in the current study, asking respondents' opinion on a 7-point scale with 1 meaning "completely disagree" and 7 meaning "completely agree".

**Perceived Risk**

The scale used to measure perceived risk was captured from de Matos and colleagues (2007). In order to design the questions, they used the concepts discussed in the research conducted by Dowling and Staelin (1994). As a result, they used a 3-item scale to measure the construct. The Cronbach's alpha reported for this scale was 0.76. Similar to previous scales, questions were asked on a 7-point scale, with answers ranging from 1="completely disagree" to 7="completely agree".
Materialism

The scale to measure materialism was captured from Richins's (2004) study in which the construct was categorized into three main aspects: success, centrality, and happiness. The researcher developed 6 questions to measure each aspect, resulting in the total of 18 questions. Short versions of the questionnaire were also provided in the research. Since several constructs were to be measured in the current research, the 3-item version was used to avoid a lengthy survey. Each question focused on one of the main aspects, asking respondents' opinion on a 7-point scale with 1 meaning "completely disagree" and 7 meaning "completely agree".

Attitude Towards Counterfeits

Huang et al. (2004) conducted a research on determinants of consumers' attitude towards gray market products. They developed a scale to measure this construct and tested on 156 participants. They found the scale to be highly reliable with the Cronbach's alpha of 0.85. Therefore, this scale was used in the current study. To adjust for this research, the term "gray market goods" was replaced by "counterfeit products". Five questions of the scale asked participants' opinion on a 7-point scale, with answers ranging from 1="completely disagree" to 7="completely agree".

Purchase Intention

Zeithaml et al. (1996) conducted a study on effects on service quality on behavioral intentions. They categorized behavioral intentions into five dimensions: loyalty, switch, pay more, external response, and internal response. In the context of counterfeit products, de Matos et al. (2007) used this study and developed a 4-item scale to measure participants' intention to purchase counterfeit products. They reported the high Cronbach's alpha of 0.85 for this scale.
The same scale was used in the current research. However, slight changes were made to adjust the scale to the purchase scenario designed for this study. The four questions asked respondents' opinion on a 7-point scale with 1 meaning "not at all likely" and 7 meaning "extremely likely".

Table 4-2 lists all scale questions used in the current research.
<table>
<thead>
<tr>
<th>Scale</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjective Norm</strong></td>
<td></td>
</tr>
<tr>
<td>SN1</td>
<td>My relatives and friends approve my decision in case I buy counterfeit products</td>
</tr>
<tr>
<td>SN2</td>
<td>My relatives and friends think that I should buy counterfeit products</td>
</tr>
<tr>
<td><strong>Perceived Risk</strong></td>
<td></td>
</tr>
<tr>
<td>PR1</td>
<td>If I buy a counterfeit product, the risk that I take is high</td>
</tr>
<tr>
<td>PR2</td>
<td>There is high probability that a counterfeit product doesn’t work</td>
</tr>
<tr>
<td>PR3</td>
<td>Spending money with a counterfeit product might be a bad decision</td>
</tr>
<tr>
<td><strong>Integrity</strong></td>
<td></td>
</tr>
<tr>
<td>IN1</td>
<td>I consider honesty as an important quality for one’s character</td>
</tr>
<tr>
<td>IN2</td>
<td>I consider very important that people be polite</td>
</tr>
<tr>
<td>IN3</td>
<td>I admire responsible people</td>
</tr>
<tr>
<td>IN4</td>
<td>I like people that have self-control</td>
</tr>
<tr>
<td><strong>Materialism</strong></td>
<td></td>
</tr>
<tr>
<td>MA1</td>
<td>I admire people who own expensive designer clothing</td>
</tr>
<tr>
<td>MA2</td>
<td>I like a lot of luxury in my life</td>
</tr>
<tr>
<td>MA3</td>
<td>I’d be happier if I could afford to buy more designer clothing</td>
</tr>
<tr>
<td><strong>Attitude toward Counterfeits</strong></td>
<td></td>
</tr>
<tr>
<td>AT1</td>
<td>Considering price, I prefer counterfeit products</td>
</tr>
<tr>
<td>AT2</td>
<td>I like shopping for counterfeit products</td>
</tr>
<tr>
<td>AT3</td>
<td>Buying counterfeit products generally benefits the consumer</td>
</tr>
<tr>
<td>AT4</td>
<td>There’s nothing wrong with purchasing counterfeit products</td>
</tr>
<tr>
<td>AT5</td>
<td>Generally speaking, buying counterfeit products is a better choice</td>
</tr>
<tr>
<td><strong>Purchase Intention</strong></td>
<td></td>
</tr>
<tr>
<td>PI1</td>
<td>What are the chances that you consider buying this product?</td>
</tr>
<tr>
<td>PI2</td>
<td>What are the chances that you buy this product?</td>
</tr>
<tr>
<td>PI3</td>
<td>What are the chances that you recommend to friends and relatives that they buy this product?</td>
</tr>
<tr>
<td>PI4</td>
<td>What are the chances that you say favorable things about this product?</td>
</tr>
</tbody>
</table>
4.2.5 Procedure

The study was conducted in the form of an online survey, designed in Qualtrics. There were three conditions for each of the two products. The three conditions were control, education, and promotion. The products were Canada Goose parkas and Ralph Lauren t-shirts. As a result, there was a total of six different conditions in the study, to which participants were randomly assigned. At the beginning of each condition, participants were presented a consent form through which they stated their consent in participation in the research. Similarly, a debriefing form was presented to all participants at the end of the survey to ask their informed consent. What happened between these two consent forms slightly differed based on the condition each participant was assigned to.

At the beginning of the education condition, participants were told that the purpose of the study was to develop an effective guideline on how to detect fake products. In the next pages, they went through a detailed guideline on how to distinguish between authentic and counterfeit versions of the product. The Canada Goose guideline, for example, provided participants with the following seven steps: check the packaging, check the arctic disc or patch, check the stitching and seams, check the hologram, check the zipper and other hardware, check the fur quality, and check the price. For each of these steps, pictures were provided to make the guideline more effective. After reading the guideline, participants answered a few questions about it. One of the questions asked their ability to detect counterfeit versions of the product before and after reading the guideline. This question served as manipulation check, to make sure that the guideline was actually helpful in helping them spotting fake products. After these general questions, the scale items discussed above were asked from participants. In this section of the survey, questions on subjective norm, perceived risk, integrity, materialism, and attitude towards counterfeit products.
were asked. All these questions were asked on a 7-point scale, with answers ranging from 1="completely disagree" to 7="completely agree". Then, a purchase scenario was presented to participants in which they were asked to imagine they had gone to a store to buy either a winter jacket or a t-shirt (depending on the product condition). The price provided in the scenario was around one fourth of the retail price for the authentic version of the product (200 dollars for the Canada Goose and 20 dollars for the Ralph Lauren scenario). Then some features of the product were shown to participants. The product was a counterfeit version. It was expected that, compared to promotion and control conditions, it would be easier for the education condition to notice that the product was fake. After reading the purchase scenario, participants were asked four questions to measure their intention to purchase the counterfeit product. Finally, a few questions including a question on participants' gender were asked.

At the beginning of the promotion condition, participants were told that the research was focused on developing a promotional campaign for the product they were assigned to. Then they read some detailed information on different aspects of the product. In the Canada Goose condition, for instance, they went through some explanations on the type of down, fur, wool and shearling, design, and stitching used in Canada Goose parkas. Some pictures were also provided to make the promotional materials more interesting and effective. The materials were designed in a manner that they resembled typical promotional campaigns used by manufacturers. For example, the information on Canada Goose parkas were mostly taken from the company's official website. Similar to the education condition, a few general questions were asked after showing the promotional materials. The rest of the survey was exactly the same as the education condition: participants answered the scale items on subjective norm, perceived risk, integrity, materialism, and attitude towards counterfeit products, and completed the purchase intention
section after reading the same purchase scenario. Finally, they answered a few general and demographic questions.

As the cover story for the control condition, participants were told at the beginning of this condition that the survey would ask them some questions on several issues and also a few questions on the product they were assigned to. After the cover story, the rest of the survey was the same as the other two conditions: they first answered scale question on subjective norm, perceived risk, integrity, materialism, and attitude towards counterfeit products, and then answered purchase intention questions after reading the same purchase scenario. The final general and demographic questions were also the same as the other two conditions.
Chapter 5: Results

5.1 Description of the Sample

275 undergraduate students of the University of Guelph participated in this online study. 264 participants completed the survey. 131 students participated in the three experimental conditions for Canada Goose and 133 participated in Ralph Lauren conditions. Of participants, 161 identified themselves as male (61 percent), 99 identified themselves as female (37 percent), and 4 preferred not to say (2 percent).

5.2 Manipulation Check

As the manipulation check, participants were asked to rate their ability to detect counterfeit version of the research products before and after reading educational materials. The table below summarizes results of paired samples t-test as manipulation check for the two products.

<table>
<thead>
<tr>
<th>Ability to detect counterfeit</th>
<th>Mean</th>
<th>Std.Err</th>
<th>t-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada Goose =~</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>3.14</td>
<td>0.234</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After</td>
<td>5.79</td>
<td>0.168</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>2.651</td>
<td>0.215</td>
<td>12.310</td>
<td>0.000</td>
</tr>
<tr>
<td>Ralph Lauren =~</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>2.95</td>
<td>0.223</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After</td>
<td>6.02</td>
<td>0.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>3.068</td>
<td>0.207</td>
<td>14.847</td>
<td>0.000</td>
</tr>
</tbody>
</table>

43 students completed education condition for Canada Goose and 44 students participated in this condition for Ralph Lauren. Results showed that manipulation was successful
for both products (p=0.000). In other words, the educational material actually increased participants’ ability to distinguish between authentic and counterfeit versions of Canada Goose and Ralph Lauren products.

5.3 Scales Reliability

All scales in this research were Likert scales. Cronbach's alpha is the measure widely used to decide on internal consistency and reliability of Likert-type scales. Cronbach's alpha above 0.7 shows that the utilized measure has been reliable. The closer the number to 1, the greater the internal consistency would be. It means greater correlation between test items (Reynaldo and Santos, 1999; Gliem and Gliem, 2003). The table below shows Cronbach's alpha for all constructs used in this research. Cronbach's alpha was calculated using lavaan package in R.

<table>
<thead>
<tr>
<th>Construct</th>
<th>SN</th>
<th>PR</th>
<th>IN</th>
<th>MA</th>
<th>AT</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's alpha</td>
<td>0.69</td>
<td>0.64</td>
<td>0.79</td>
<td>0.82</td>
<td>0.89</td>
<td>0.95</td>
</tr>
</tbody>
</table>

Table 5-2 Construct Reliabilities

Table 5-2 shows that most scales used in research were reliable. The Cronbach's alpha for two measures was below 0.7. It was 0.69 for subjective norm and 0.64 for perceived risk. However, these scales were still used in analysis as they were adapted from literature. As can be seen in the table, the other four scales have acceptable reliabilities. The scale used for measuring purchase intention has the highest reliability (0.95), followed by attitude towards counterfeit (0.89), materialism (0.82), and integrity (0.79).
5.4 Structural Equation Modeling

R was used to conduct analysis in this research. In order to run structural equation modeling, package lavaan was utilized. An R syntax was written, capturing latent variables, experimental conditions, covariances, and regressions. The following table reports loadings for all questions measuring the scales. As Table 5-3 shows, all questions are excellent indicators of the concepts they are representing.

Table 5-3 Loadings of the Construct Indicators

|         | Estimate | Std.Err | z-value | P(|z|) |
|---------|----------|---------|---------|--------|
| SN =~   |          |         |         |        |
| SN1     | 1.000    |         |         |        |
| SN2     | 1.362    | 0.158   | 8.632   | 0.000  |
| PR =~   |          |         |         |        |
| PR1     | 1.000    |         |         |        |
| PR2     | 0.737    | 0.133   | 5.544   | 0.000  |
| PR3     | 1.415    | 0.197   | 7.192   | 0.000  |
| IN =~   |          |         |         |        |
| IN1     | 1.000    |         |         |        |
| IN2     | 1.324    | 0.165   | 8.003   | 0.000  |
| IN3     | 1.443    | 0.172   | 8.411   | 0.000  |
| IN4     | 1.228    | 0.160   | 7.675   | 0.000  |
| MA =~   |          |         |         |        |
| MA1     | 1.000    |         |         |        |
| MA2     | 0.963    | 0.087   | 11.120  | 0.000  |
| MA3     | 1.280    | 0.113   | 11.290  | 0.000  |
| AT =~   |          |         |         |        |
| AT1     | 1.000    |         |         |        |
| AT2     | 0.922    | 0.060   | 15.368  | 0.000  |
| AT3     | 0.898    | 0.061   | 14.836  | 0.000  |
| AT4     | 0.863    | 0.070   | 12.322  | 0.000  |
| AT5     | 0.833    | 0.052   | 15.901  | 0.000  |
| PI =~   |          |         |         |        |
| PI1     | 1.000    |         |         |        |
| PI2     | 0.955    | 0.035   | 27.014  | 0.000  |
| PI3     | 0.910    | 0.037   | 24.380  | 0.000  |
| PI4     | 0.885    | 0.043   | 20.576  | 0.000  |
Table 5-4 summarizes regression results of the model. Based on the estimates and p-values reported in this table, research hypotheses are discussed in the next section. The variables created for experimental conditions and products are explained in the following.

The variable "Product" captures the main effect of the product. It equals 1 for Canada Goose and -1 for Ralph Lauren. Moreover, there are three conditions in this study which means we need two variables to capture conditions. The variable "exp_Ed" captures Education condition with 1 if Education, -1 if Control, and 0 if Promotion. Similarly, the variable "exp_Prom" captures Promotion condition with 1 if Promotion, -1 if Control, and 0 if Education.

Interaction terms were created using multiplications of the two main effects. The variable "Prod_Ed" captures interaction between "exp_Ed" and "Product". Similarly, the variable "Prod_Prom" captures interaction between "exp_Prom" and "Product". The R syntax used to specify and fit the model is provided in the appendices section.
Table 5-4 Regression Results of the Model

|       | Estimate | Std.Err | z-value | P(|z|) |
|-------|----------|---------|---------|-------|
| SN    |          |         |         |       |
| exp_Ed | -0.019   | 0.100   | -0.192  | 0.847 |
| exp_Prom | 0.034    | 0.099   | 0.339   | 0.735 |
| Product | -0.023   | 0.070   | -0.329  | 0.742 |
| Prod_Ed | -0.065   | 0.100   | -0.655  | 0.513 |
| Prod_Prom | 0.100    | 0.100   | 1.009   | 0.313 |
| PR    |          |         |         |       |
| exp_Ed | 0.014    | 0.092   | 0.154   | 0.877 |
| exp_Prom | -0.112   | 0.093   | -1.204  | 0.229 |
| Product | 0.056    | 0.065   | 0.857   | 0.392 |
| Prod_Ed | 0.283    | 0.098   | 2.876   | 0.004 |
| Prod_Prom | -0.208   | 0.095   | -2.191  | 0.028 |
| IN    |          |         |         |       |
| exp_Ed | 0.081    | 0.057   | 1.431   | 0.153 |
| exp_Prom | -0.045   | 0.056   | -0.809  | 0.418 |
| Product | -0.022   | 0.039   | -0.567  | 0.571 |
| Prod_Ed | -0.023   | 0.056   | -0.409  | 0.683 |
| Prod_Prom | -0.039   | 0.056   | -0.695  | 0.487 |
| MA    |          |         |         |       |
| exp_Ed | -0.228   | 0.123   | -1.850  | 0.064 |
| exp_Prom | 0.085    | 0.122   | 0.700   | 0.484 |
| Product | -0.020   | 0.086   | -0.234  | 0.815 |
| Prod_Ed | 0.051    | 0.122   | 0.417   | 0.677 |
| Prod_Prom | 0.028    | 0.122   | 0.234   | 0.815 |
| AT    |          |         |         |       |
| SN    | 0.769    | 0.143   | 5.388   | 0.000 |
| PR    | -0.515   | 0.172   | -2.986  | 0.003 |
| IN    | -0.034   | 0.148   | -0.229  | 0.819 |
| MA    | -0.167   | 0.059   | -2.840  | 0.005 |
| exp_Ed | -0.130   | 0.092   | -1.404  | 0.160 |
| exp_Prom | -0.017   | 0.090   | -0.191  | 0.848 |
| Product | 0.038    | 0.064   | 0.588   | 0.556 |
| Prod_Ed | 0.043    | 0.100   | 0.432   | 0.666 |
| Prod_Prom | 0.004    | 0.092   | 0.039   | 0.969 |
| PI    |          |         |         |       |
| AT    | 0.275    | 0.081   | 3.385   | 0.001 |
| exp_Ed | -0.894   | 0.155   | -5.775  | 0.000 |
| exp_Prom | 0.275    | 0.152   | 1.804   | 0.071 |
| Product | -0.276   | 0.108   | -2.559  | 0.010 |
| Prod_Ed | 0.058    | 0.153   | 0.378   | 0.705 |
| Prod_Prom | -0.068   | 0.153   | -0.445  | 0.656 |
5.5 Hypotheses Testing

Hypothesis 1 predicted that the educational strategy would be more effective than promotional strategy in reducing consumers’ intention to buy counterfeit products. Regressions results show that experimental strategy had a significant negative effect on intention to purchase counterfeit (β=-0.894, SE=0.155, p=0.000). On the other hand, promotional strategy had no significant effect on intention to buy counterfeit product at the 0.05 alpha level. However, the effect was marginally significant (p=0.071). Closer look at the results shows that the effect of promotional strategy on intention to buy counterfeit version of the products was positive (β=0.275), meaning that promotional strategy not only does not help reduce demand for counterfeit, but also can lead to unwanted increase in counterfeit demand. Therefore, it can be concluded that hypothesis 1, which was arguably the main hypothesis of this research, was supported.

Hypothesis 2 stated that people perceiving that their friends/relatives approve (do not approve) their behavior of purchasing counterfeit products would have favorable (unfavorable) attitude towards these products. Regression results reveal that subjective norm had a positive effect on attitude towards counterfeit products, and this effect is statistically significant (β=0.769, SE=0.143, p=0.000). Therefore, hypothesis 2 was supported.

It was predicted in hypothesis 3 that people who assign more (less) risk to counterfeits would have unfavorable (favorable) attitude towards these products. This prediction was also supported. Based on regression results, perceived risk had a significant negative effect on attitude towards counterfeit products (β=-0.515, SE=0.172, p=0.003). Therefore, hypothesis 3 was supported.
Hypothesis 4 predicted that people with stronger (weaker) integrity would have unfavorable (favorable) attitude towards counterfeits. Regression results did not support this hypothesis because the negative effect of integrity on attitude was not statistically significant (p=0.819). In other words, there is not enough evidence to support the idea that integrity affects attitude towards counterfeiting. It can be concluded that hypothesis 4 was not supported.

Hypothesis 5 stated that people who have favorable (unfavorable) attitude towards luxury brands would have favorable (unfavorable) attitude towards counterfeit products. Results show that materialism had a significant effect on attitude towards counterfeits. Contrary to the prediction, however, this effect was negative (β=-0.167, SE=0.059, p=0.005). Therefore, hypothesis 5 was not supported. Potential reasons for this finding are discussed in the next chapter.

Finally, hypothesis 6 predicted that people with more favorable (unfavorable) attitude towards counterfeits would have higher (lower) intention to purchase these products. Regression results showed that attitude had a significant positive effect on purchase intention (β=0.275, SE=0.081, p=0.001). It can be concluded that hypothesis 6 was supported, showing that attitude positively affects purchase intention.
Chapter 6: Discussion

The current research followed three main objectives: 1) investigated the effect of companies' strategies on consumers' intention to purchase counterfeit version of their products; 2) identified the most important determinants of intention to buy counterfeit; and 3) explored relative importance of the identified determinants. To address the first objective, it was predicted that education strategy, in which a company teaches consumers on how to distinguish between authentic and counterfeit versions of its products, would be more effective than a typical promotional strategy in reducing people's demand for fake products. It was arguably the main hypothesis of this research. Results supported this prediction by showing a significant difference between the effectiveness of these two strategies. The effect of educational strategy on consumers' intention to purchase counterfeit products was negative and significant. Importantly, the effect of promotional strategy on this purchase intention was positive and marginally significant. It shows that a typical promotional strategy is not effective in reducing demand for counterfeit versions of a company's products or can even lead to opposite results. As a result, companies should be careful about the unwanted negative impact of their promotional campaigns. When a company advertises its products, it is actually advertising for counterfeiters of its products as well. In this way, not only counterfeiters steal the product, they also steal a portion of the company's promotional efforts as well. There is no surprise that counterfeit products have been compared with parasites in nature (Shultz & Saporito, 1996). However, companies can reduce the likelihood of consumers buying counterfeit versions of their products by providing them with a detailed guideline on how to distinguish between authentic and counterfeit products. Currently, not many companies take this approach. Canada Goose and
Arc'teryx are two of the arguably few companies that have taken this strategy. The small number of companies using this method partly reflects the difficulty of designing and promoting such guidelines. However, there are ways to conduct this approach in an inexpensive way. One recommendation to managers is to have a section in their companies' websites that teaches consumers on how to detect fake products. With the whole world moving towards the online space, this simple inexpensive act might result in some profitable outcomes. Compared with promotional campaigns, the costs of this approach are negligible. Although no study has investigated the effectiveness of such an online strategy, one might argue that it is worth the effort due to its low cost.

To address the second objective listed above, an extensive review of the demand-side counterfeiting literature was conducted. At the end of this phase, it was concluded that subjective norm, perceived risk, integrity, and materialism are the main indicators of intention to purchase counterfeit products. The effect of these determinants was then tested in six experimental conditions composed of two products (Ralph Lauren t-shirts and Canada Goose parkas) and three corporate strategies (Control vs Education vs Promotion). Results of the main study showed positive significant effect of subjective norm on participants' attitude towards counterfeit products. As predicted, the effect of perceived risk on people's attitude towards counterfeiting was negative and significant. Moreover, it was observed that integrity did not have a significant effect on attitude towards counterfeits. The observed effect of materialism on attitude was significant, but it was interestingly in a direction opposite of what was predicted. Contrary to predictions, it was found that people who have favorable (unfavorable) attitude towards luxury brands would have unfavorable (favorable) attitude towards counterfeit products.
The observed negative effect of materialism on people's intention to purchase counterfeit products might be resulted from cultural factors. Research shows that in countries that social reputations and materialism is important, people are more likely to buy counterfeit (Taormina & Chong, 2010). It can be argued that, compared to some other less developed countries, materialism is not very important in Canada. In other words, Canadians do not use designer brand products to show off their social status or to improve their image. Rather, possession of such products has a utilitarian value for them. Consequently, it is reasonable to conclude that Canadians who value designer products are actually more sensitive about the authenticity of the products that they buy. As a result, the higher the score of materialism, the less likely they are to buy counterfeit products as they want to make sure that the product they buy functions well and delivers the promised outcomes.

Finally, it was found that favorable (unfavorable) attitude towards counterfeit products resulted in higher (lower) intention to buy them. It means that if companies design their message in a way that it makes an unfavorable attitude towards counterfeit products among consumers, it will be automatically translated into lower demand for counterfeit versions of their products. In order to design such a message, they can focus on the most important determinants of intention to purchase counterfeit: subjective norm, perceived risk, and materialism. Results of this research showed that these would be the key elements to affect people's attitude towards counterfeit products.

The third objective of this research was to measure relative importance of the identified determinants of attitude towards counterfeit products. Results of the SEM model, summarized in Table 5-4, shows that subjective norm is the most important determinant (estimate=0.769), followed by perceived risk (estimate=-0.515) and materialism (estimate=-0.167). Since integrity
was not a significant predictor, the most important determinants, in order of importance, can be sorted as follows: subjective norm, perceived risk, and materialism. These findings guide marketers how to design effective anti-counterfeit messages. Putting emphasis on these three factors, in order of importance, can lead to the best results.

A more detailed analysis of the determinants and experimental conditions revealed that, compared with the control condition, subjective norm, perceived risk, integrity, and materialism were not significantly different in educational and promotional conditions. In other words, educational and promotional strategies did not change any of the four determinants. Similarly, the main effect of product type was not significant for the four determinants. However, there were some significant interactions affecting the results. Interaction of product type and education as well as interaction of product type and promotion were not significant for subjective norm, integrity, and materialism. For perceived risk, however, interaction of product type and education (estimate=0.283, p-value=0.004) and interaction of product type and promotion (estimate=-0.208, p-value=0.028) were both significant. Comparison of means can provide a clearer picture. Table 6-1 summarizes construct means in all experimental conditions (please refer to appendix for a detailed explanation of calculation of means). It appears from comparison of the means that education is successful in increasing the perceived risk for Canada Goose consumers. On the other hand, promotion works better for Ralph Lauren consumers. However, the effect of education is stronger than the effect of promotion. This difference results in the educational strategy being more effective than the promotional strategy.
Table 6-1 Summary of construct means in the three conditions

<table>
<thead>
<tr>
<th></th>
<th>SN</th>
<th>PR</th>
<th>IN</th>
<th>MA</th>
<th>AT</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Canada Goose</strong> =~</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td>3.455</td>
<td>4.465</td>
<td>6.082</td>
<td>4.345</td>
<td>2.676</td>
<td>3.797</td>
</tr>
<tr>
<td><strong>Ralph Lauren</strong> =~</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>3.387</td>
<td>4.846</td>
<td>6.112</td>
<td>4.494</td>
<td>2.533</td>
<td>4.712</td>
</tr>
<tr>
<td>Education</td>
<td>3.413</td>
<td>4.404</td>
<td>6.314</td>
<td>3.993</td>
<td>2.490</td>
<td>3.139</td>
</tr>
<tr>
<td>Promotion</td>
<td>3.301</td>
<td>4.769</td>
<td>6.204</td>
<td>4.329</td>
<td>2.315</td>
<td>4.386</td>
</tr>
</tbody>
</table>

As a further step, the indirect effects of all variables on purchase intention through attitude towards counterfeiting were tested using R. Table 6-2 summarizes all these indirect and total effects. Results showed that the indirect effect of integrity on purchase intention was significant (estimate=-2.00, p-value=0.023). In other words, attitude towards counterfeiting mediates the effect of integrity on intention to buy counterfeit products. In addition, the indirect effect of materialism was marginally significant (estimate=-0.052, p-value=0.059). Other indirect effects were not significant.
Table 6-2 Summary of indirect effects

|       | Estimate | Std.Err | z-value | P(>|z|) |
|-------|----------|---------|---------|---------|
| **SN ~** |          |         |         |         |
| Indirect effect | 0.364    | 0.339   | 1.074   | 0.283   |
| Total effect     | 0.074    | 0.144   | 2.598   | 0.009   |
| **PR ~** |          |         |         |         |
| Indirect effect | -0.304   | 0.338   | -0.901  | 0.368   |
| Total effect     | -0.458   | 0.169   | -2.706  | 0.007   |
| **IN ~** |          |         |         |         |
| Indirect effect | -2.00    | 0.088   | -2.277  | 0.023   |
| Total effect     | -0.516   | 0.215   | -2.397  | 0.017   |
| **MA ~** |          |         |         |         |
| Indirect effect | -0.052   | 0.028   | -1.885  | 0.059   |
| Total effect     | -0.023   | 0.100   | -0.234  | 0.815   |
| **exp_Ed ~** |          |         |         |         |
| Indirect effect | -0.024   | 0.031   | -0.768  | 0.443   |
| Total effect     | -0.778   | 0.139   | -5.598  | 0.000   |
| **exp_Prom ~** |          |         |         |         |
| Indirect effect | -0.002   | 0.033   | -0.076  | 0.940   |
| Total effect     | -0.169   | 0.145   | -1.169  | 0.242   |
| **Prod_Ed ~** |          |         |         |         |
| Indirect effect | -0.019   | 0.033   | -0.574  | 0.566   |
| Total effect     | 0.012    | 0.146   | 0.083   | 0.934   |
| **Prod_Prom ~** |          |         |         |         |
| Indirect effect | 0.031    | 0.034   | 0.912   | 0.362   |
| Total effect     | -0.013   | 0.145   | -0.091  | 0.927   |
Chapter 7: Contribution and Future Research

7.1 Contribution to Literature

The main contribution of this research to the literature was investigation of the impacts of companies' marketing strategies on consumers' intention to purchase counterfeit versions of their products. The effect of companies' typical promotional strategies is well-documented from different viewpoints (e.g. Ailawadi & Nelsin, 1998; Davis et al., 1992), but literature says nothing about how these strategies can shape people's purchase intention towards counterfeits. It was argued in the current research that promotional strategy is not the most effective strategy a company can take to reduce demand for counterfeit products. Rather, it was suggested that educational strategy, in which a company teaches consumers how to distinguish between authentic and counterfeit versions of its products, would be a more effective strategy to achieve this specific goal. Results of this study supported the predictions by showing that educational strategy was statistically more effective than promotional strategy in curbing demand for counterfeit. This is the first study in literature to investigate this effect.

The theoretical contribution of this research is not limited to investigation of the effectiveness of these two strategies. It also identified the most important determinants of people's attitude towards counterfeit products. Review of literature identified subjective norm, perceived risk, integrity, and materialism as the main determinants. Results showed that subjective norm, perceived risk, and materialism were the first, the second, and the third most important determinants of consumers' attitude towards counterfeiting. However, integrity did not have a significant effect on attitude. Results were also in line with previous research (de Matos et
al., 2007) in showing that attitude towards counterfeit products would positively affect people's intention to purchase them.

7.2 Contribution to Practice

As stated above, this is the first study to explore the impact of educational and promotional strategies on consumers' intention to buy counterfeit products. In this research, promotional strategy is a typical advertising strategy that companies take to promote their products. Educational strategy, on the other hand, is the one in which a company teaches its consumers on how to distinguish between authentic and counterfeit versions of its products. Results showed that promotional strategy is not effective in reducing demand for counterfeit products and can even result in an opposite outcome. Therefore, companies should be careful when designing their promotional strategies as they might be unintentionally advertising for the counterfeiters as well. Since a significant effect of educational strategy on intention to buy counterfeit was observed, companies can take it as a separate strategy parallel to their advertisements or include it as a part of their promotional efforts. A recommendation to managers is to have a section in their companies' websites that teaches consumers how to detect fake products. Now that the world of business is moving towards the online space, this simple inexpensive approach might steal some revenue back from counterfeiters. Compared with huge expensive promotional campaigns conducted by companies, the costs of such an approach are negligible.

In addition, results showed that the most important determinants of people's attitude towards counterfeit products, in order of importance, can be sorted as follows: subjective norm, perceived risk, and materialism. This finding is especially significant in design of anti-counterfeiting campaigns. When designing anti-counterfeiting campaigns, companies can put
emphasis on these factors to achieve the best results. The first factor marketers should focus on is subjective norm. They can emphasize on the negative perceived social acceptance that can result from buying counterfeit products. This emphasis will in turn make more unfavorable attitude towards counterfeits among consumers. In the next step, marketers can focus on the risks resulted from using counterfeit products. Finally, those who value designer brands will have unfavorable attitude towards counterfeits. If marketers can increase this value among consumers, they will be able to make unfavorable attitude towards counterfeit products. Combination of these attempts can in turn reduce people's intention to purchase counterfeit which is the ultimate goal of an anti-counterfeiting campaign.

7.3 Limitations and Future Research

Although every attempt was made to conduct this study as rigorous as possible, there were a few limitations involved. The first limitation of this study was the use of convenient sampling. Since the study was conducted through SONA system in the University of Guelph, only undergraduate students participated in it. Although students are identified as potential buyers and consumers of counterfeit products, a more inclusive sample could result in more reliable results. Future research can replicate this study using a more comprehensive sample to see if the results still hold. Specifically, the effect of four determinants might change if the sample includes participants other than students as well.

The second limitation of this research was the size of the sample. Due to the size of the SONA pool as well as time constraints, 264 students participated in the study. Since SEM was used as the statistical analysis method, a larger sample size could allow the researchers to measure invariances and construct a model with a higher power. Future research can use a large sample size to achieve these goals.
The third limitation was available materials to design the educational guidelines. There is a massive amount of information on how to detect fake products online. While this abundance of information can be considered an opportunity, it can also cause problems in research as many of the materials available in the online space are not reliable. Only a few companies such as Canada Goose and Arc'teryx provide such guidelines on their official websites. The materials used to design the guideline on Canada Goose parkas were obtained from the company's website, but it was a challenge to design a reliable guideline for other products. In addition, only pictures and written descriptions were used in design of the guidelines. Future research can replicate the study by using other types of material designs such as multimedia guidelines.

Finally, only two types of strategies were compared against the control condition in this research. While the educational strategy was not used in previous research, future research can include hybrid strategies as well. A hybrid strategy can be a promotional strategy focused on counterfeit products. For instance, a company can talk about the counterfeit versions of its products and their adverse effects in its promotional campaign. The effect of such a hybrid strategy was not assessed in the current research, which provides an opportunity for future researchers.

7.4 Conclusion

The current research tested the overarching prediction that an educational strategy, in which a company teaches consumers how to distinguish between authentic and counterfeit versions of its products, is more effective than a typical promotional strategy in reducing consumers' demand for counterfeit products. It would suggest companies, thus, to include such an educational strategy in their promotional efforts. Results supported the prediction by showing significant effect of the educational strategy. It was also found that subjective norm and perceived risk were
significant predictors of people's attitude towards counterfeit products, while integrity and materialism were not. Finally, results revealed that attitude towards counterfeiting would have a positive and significant effect of consumers' intention to but counterfeits.
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Lebanon.


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Appendices
Appendix A: Calculation of Construct Means

As explained in Chapter 5, the variable "Product" captures the main effect of the product. It equals 1 for Canada Goose and -1 for Ralph Lauren. Moreover, there are three conditions in this study which means we need two variables to capture conditions. The variable "exp_Ed" captures Education condition with 1 if Education, -1 if Control, and 0 if Promotion. Similarly, the variable "exp_Prom" captures Promotion condition with 1 if Promotion, -1 if Control, and 0 if Education.

Interaction terms were created using multiplications of the two main effects. The variable "Prod_Ed" captures interaction between "exp_Ed" and "Product". Similarly, the variable "Prod_Prom" captures interaction between "exp_Prom" and "Product". Means of the experimental conditions can be calculated as follows.

\[
SN = 3.344 - 0.019\text{exp}_E + 0.034\text{exp}_P - 0.023\text{Product} - 0.065\text{Prod}_E + 0.100\text{Prod}_P
\]

When Product=1 (Canada Goose):

- Control: \(SN = 3.344 - 0.019(-1) + 0.034(-1) -0.023(1) -0.065(1)(-1) +0.100(1)(-1) = 3.271\)
- Education: \(SN = 3.344 - 0.019(1) + 0.034(0) -0.023(1) -0.065(1)(1) +0.100(1)(0) = 3.237\)
- Promotion: \(SN = 3.344 - 0.019(0) + 0.034(1) -0.023(1) -0.065(1)(0) +0.100(1)(1) = 3.455\)

When product=-1 (Ralph Lauren):

- Control: \(SN = 3.344 - 0.019(-1) + 0.034(-1) -0.023(-1) -0.065(-1)(-1) +0.100(-1)(-1) = 3.387\)
- Education: \( SN = 3.344 - 0.019(1) + 0.034(0) - 0.023(-1) - 0.065(-1)(1) + 0.100(-1)(0) = 3.413 \)

- Promotion: \( SN = 3.344 - 0.019(0) + 0.034(1) - 0.023(-1) - 0.065(-1)(0) + 0.100(-1)(1) = 3.301 \)

\[
\text{IN} = 6.188 + 0.081\exp_{\text{Ed}} - 0.045\exp_{\text{Prom}} - 0.022\text{Product} - 0.023\text{Prod}_{\text{Ed}} - 0.039\text{Prod}_{\text{Prom}}
\]

When Product=1 (CG):

- Control: \( \text{IN} = 6.188 + 0.081(-1) - 0.045(-1) - 0.022(1) - 0.023(1)(-1) - 0.039(1)(-1) = 6.192 \)

- Education: \( \text{IN} = 6.188 + 0.081(1) - 0.045(0) - 0.022(1) - 0.023(1)(1) - 0.039(1)(0) = 6.224 \)

- Promotion: \( \text{IN} = 6.188 + 0.081(0) - 0.045(1) - 0.022(1) - 0.023(1)(0) - 0.039(1)(1) = 6.082 \)

When Product=-1 (RL):

- Control: \( \text{IN} = 6.188 + 0.081(-1) - 0.045(-1) - 0.022(-1) - 0.023(-1)(-1) - 0.039(-1)(-1) = 6.112 \)

- Education: \( \text{IN} = 6.188 + 0.081(1) - 0.045(0) - 0.022(-1) - 0.023(-1)(1) - 0.039(-1)(0) = 6.314 \)

- Promotion: \( \text{IN} = 6.188 + 0.081(0) - 0.045(1) - 0.022(-1) - 0.023(-1)(0) - 0.039(-1)(1) = 6.204 \)
MA = 4.252 - 0.228exp_Ed + 0.085exp_Prom - 0.020Product + 0.051Prod_Ed + 0.028Prod_Prom

When Product=1 (CG):

- Control: MA = 4.252 - 0.228(-1) + 0.085(-1) - 0.020(1) + 0.051(1)(-1) + 0.028(1)(-1) = 4.296
- Education: MA = 4.252 - 0.228(1) + 0.085(0) - 0.020(1) + 0.051(1)(1) + 0.028(1)(0) = 4.055
- Promotion: MA = 4.252 - 0.228(0) + 0.085(1) - 0.020(1) + 0.051(1)(0) + 0.028(1)(1) = 4.345

When Product=-1 (RL)

- Control: MA = 4.252 - 0.228(-1) + 0.085(-1) - 0.020(-1) + 0.051(-1)(-1) + 0.028(-1)(-1) = 4.494
- Education: MA = 4.252 - 0.228(1) + 0.085(0) - 0.020(-1) + 0.051(-1)(1) + 0.028(-1)(0) = 3.993
- Promotion: MA = 4.252 - 0.228(0) + 0.085(1) - 0.020(-1) + 0.051(-1)(0) + 0.028(-1)(1) = 4.329

AT = 3.226 + 0.769SN – 0.515PR – 0.034IN – 0.167MA - 0.130exp_Ed - 0.017exp_Prom + 0.038Product + 0.043Prod_Ed + 0.004Prod_Prom

When Product=1 (CG):
Control: \[ AT = 3.226 + 0.769(3.271) – 0.515(4.808) – 0.034(6.192) – 0.167(4.296) - 0.130(-1) - 0.017(-1) + 0.038(1) + 0.043(1)(-1) + 0.004(1)(-1) = 2.475 \]

Education: \[ AT = 3.226 + 0.769(3.237) – 0.515(5.082) – 0.034(6.224) – 0.167(4.055) - 0.130(1) - 0.017(0) + 0.038(1) + 0.043(1)(1) + 0.004(1)(0) = 2.160 \]

Promotion: \[ AT = 3.226 + 0.769(3.455) – 0.515(4.465) – 0.034(6.082) – 0.167(4.345) - 0.130(0) - 0.017(1) + 0.038(1) + 0.043(1)(0) + 0.004(1)(1) = 2.676 \]

When Product=-1 (RL):

- Control: \[ AT = 3.226 + 0.769(3.387) – 0.515(4.846) – 0.034(6.112) – 0.167(4.494) - 0.130(-1) - 0.017(-1) + 0.038(-1) + 0.043(-1)(-1) + 0.004(-1)(-1) = 2.533 \]
- Education: \[ AT = 3.226 + 0.769(3.413) – 0.515(4.404) – 0.034(6.314) – 0.167(3.993) - 0.130(1) - 0.017(0) + 0.038(-1) + 0.043(-1)(1) + 0.004(-1)(0) = 2.490 \]
- Promotion: \[ AT = 3.226 + 0.769(3.301) – 0.515(4.769) – 0.034(6.204) – 0.167(4.329) - 0.130(0) - 0.017(1) + 0.038(-1) + 0.043(-1)(0) + 0.004(-1)(1) = 2.315 \]

PI = 3.130 + 0.275AT – 0.894exp_Ed + 0.275exp_Prom - 0.276Product + 0.058Prod_Ed - 0.068Prod_Prom

When Product=1 (CG):

- Control: \[ PI = 3.130 + 0.275(2.475) – 0.894(-1) + 0.275(-1) - 0.276(1) + 0.058(1)(-1) - 0.068(1)(-1) = 4.164 \]
- Education: \[ PI = 3.130 + 0.275(2.160) – 0.894(1) + 0.275(0) - 0.276(1) + 0.058(1)(1) - 0.068(1)(0) = 2.612 \]
- Promotion: \( PI = 3.130 + 0.275(2.676) - 0.894(0) + 0.275(1) - 0.276(1) + 0.058(1)(0) - 0.068(1)(1) = 3.797 \)

When Product=-1 (RL):

- Control: \( PI = 3.130 + 0.275(2.533) - 0.894(-1) + 0.275(-1) - 0.276(-1) + 0.058(-1)(-1) - 0.068(-1)(-1) = 4.712 \)
- Education: \( PI = 3.130 + 0.275(2.490) - 0.894(1) + 0.275(0) - 0.276(-1) + 0.058(-1)(1) - 0.068(-1)(0) = 3.139 \)

Promotion: \( PI = 3.130 + 0.275(2.315) - 0.894(0) + 0.275(1) - 0.276(-1) + 0.058(-1)(0) - 0.068(-1)(1) = 4.386 \)
Appendix B: R Syntax Used to Specify SEM Model and Calculate Reliabilities

The following R syntax was used to specify the SEM model, plot the conceptual model, and calculate construct reliabilities. Towards the end of the syntax, below the section "indirect effect of Prod_Ed on PI", there are some codes to specify and fit a model to evaluate indirect effects. The current lines evaluate the indirect effect of the variable Prod_Ed (interaction between product and educational strategy) on purchase intention that happens through attitude. In order to evaluate other indirect effects, appropriate variables should be replaced. Please also note that the beginning of the code reads data from computer. The current lines read two datasets (one for Canada Goose and one for Ralph Lauren) and then combine them into one larger dataset. Readers might want to take a different approach. In addition, appropriate addresses should be used for "read.csv" commands depending on where the datasets have been saved on the user's computer.

***************************************************
# Load lavaan
library(lavaan)

library(semTools)

#Read data from disc
CGdata = read.csv("....", header=TRUE)

CGdata$Product <- 1

#Read data from disc
RLdata = read.csv("....", header=TRUE)
RLdata$Product <- -1

# Combine data files
combined_df <- rbind(CGdata, RLdata)

# Assign contrast coding for experimental conditions

N <- length(combined_df$Product)

for (i in 1:N) {
  combined_df$exp_Ed[i] <- 0
  combined_df$exp_Prom[i] <- 0

  if (combined_df$Condition[i] == "Control") {
    combined_df$exp_Ed[i] <- -1
    combined_df$exp_Prom[i] <- -1
  }
  if (combined_df$Condition[i] == "Education") combined_df$exp_Ed[i] <- 1
  if (combined_df$Condition[i] == "Promotion") combined_df$exp_Prom[i] <- 1
}

# Create Interaction terms
combined_df$Prod_Ed <- combined_df$Product * combined_df$exp_Ed
combined_df$Prod_Prom <- combined_df$Product * combined_df$exp_Prom

# SN: subjective norm
# PR: perceived risk
# IN: integrity
# MA: materialism
# AT: attitude
# PI: purchase intention
# Specify model - Latent variables correlated
latent_cor.model <- '  

#latent variables
SN =~ SN1 + SN2
PR =~ PR1 + PR2 + PR3
IN =~ IN1 + IN2 + IN3 + IN4
MA =~ MA1 + MA2 + MA3
AT =~ AT1 + AT2 + AT3 + AT4 + AT5
PI =~ PI1 + PI2 + PI3 + PI4

#regressions
SN ~ exp_Ed + exp_Prom + Product + Prod_Ed + Prod_Prom
PR ~ exp_Ed + exp_Prom + Product + Prod_Ed + Prod_Prom
IN ~ exp_Ed + exp_Prom + Product + Prod_Ed + Prod_Prom
MA ~ exp_Ed + exp_Prom + Product + Prod_Ed + Prod_Prom
AT ~ SN + PR + IN + MA + exp_Ed + exp_Prom + Product + Prod_Ed + Prod_Prom
PI ~ AT + exp_Ed + exp_Prom + Product + Prod_Ed + Prod_Prom

# Covariances among latents
SN ~~ PR
SN ~~ IN
SN ~~ MA
PR ~~ IN
PR ~~ MA
IN ~~ MA

#fit model
latent_cor.fit <- sem(latent_cor.model,
                      data = combined_df,meanstructure=TRUE)

summary(latent_cor.fit,fit.measures=TRUE)
#plot model
library(semPlot)

semPaths(latent_cor.fit, layout = "tree2", residuals = FALSE, sizeMan = 3, sizeInt = 1, sizeLat = 5)

#specify factor model to estimate reliability for each of scales
factor.model <-`

#latent variables
SN =~ SN1 + SN2
PR =~ PR1 + PR2 + PR3
IN =~ IN1 + IN2 + IN3 + IN4
MA =~ MA1 + MA2 + MA3
AT =~ AT1 + AT2 + AT3 + AT4 + AT5
PI =~ PI1 + PI2 + PI3 + PI4
`

factor.fit <- cfa(factor.model, data=combined_df)
reliability(factor.fit)

#indirect effect of Prod_Ed on PI
indirect_effect_model <-`

#latent variables
SN =~ SN1 + SN2
PR =~ PR1 + PR2 + PR3
IN =~ IN1 + IN2 + IN3 + IN4
MA =~ MA1 + MA2 + MA3
AT =~ AT1 + AT2 + AT3 + AT4 + AT5
PI =~ PI1 + PI2 + PI3 + PI4

#direct effect
PI ~ c*Prod_Ed

#mediator
AT ~ a*Prod_Ed

PI ~ b*AT

#indirect effect (a*b)

ab := a*b

#total effect

total := c + (a*b)'

indirect_effect.fit <- sem(indirect_effect.model,
                          data = combined_df, meanstructure=TRUE)

summary (indirect_effect.fit, fit.measures=TRUE)

*******************************************************************************
Appendix C: Research Ethics Board Approval

<table>
<thead>
<tr>
<th>APPROVAL PERIOD:</th>
<th>December 19, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPIRY DATE:</td>
<td>December 18, 2018</td>
</tr>
<tr>
<td>REB:</td>
<td>G</td>
</tr>
<tr>
<td>REB NUMBER:</td>
<td>17-11-029</td>
</tr>
<tr>
<td>TYPE OF REVIEW:</td>
<td>Delegated</td>
</tr>
<tr>
<td>PRINCIPAL INVESTIGATOR:</td>
<td>Dhar, Tirtha (<a href="mailto:tdhar@uoguelph.ca">tdhar@uoguelph.ca</a>)</td>
</tr>
<tr>
<td>DEPARTMENT:</td>
<td>Marketing &amp; Consumer Studies</td>
</tr>
<tr>
<td>SPONSOR(S):</td>
<td>N/A</td>
</tr>
<tr>
<td>TITLE OF PROJECT:</td>
<td>Anti-Counterfeit Campaigns and Consumer’s Attitude towards Counterfeit Products</td>
</tr>
</tbody>
</table>

The members of the University of Guelph Research Ethics Board have examined the protocol which describes the participation of the human participants in the above-named research project and considers the procedures, as described by the applicant, to conform to the University’s ethical standards and the Tri-Council Policy Statement, 2nd Edition.

The REB requires that researchers:
- Adhere to the protocol as last reviewed and approved by the REB.
- Receive approval from the REB for any modifications before they can be implemented.
- Report any change in the source of funding.
- Report unexpected events or incidental findings to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants, and the continuation of the protocol.
- Are responsible for ascertaining and complying with all applicable legal and regulatory requirements with respect to consent and the protection of privacy of participants in the jurisdiction of the research project.

The Principal Investigator must:
- Ensure that the ethical guidelines and approvals of facilities or institutions involved in the research are obtained and filed with the REB prior to the initiation of any research protocols.
- Submit an Annual Renewal to the REB upon completion of the project. If the research is a multi-year project, a status report must be submitted annually prior to the expiry date. Failure to submit an annual status report will lead to your study being suspended and potentially terminated.

The approval for this protocol terminates on the EXPIRY DATE, or the term of your appointment or employment at the University of Guelph whichever comes first.

Signature: ___________________________________________  Date: December 19, 2017

Stephens P. Lewis
Chair, Research Ethics Board-General
Appendix D: Sample Educational Material

The following is the educational material used for Canada Goose condition.

********************************************************************

Counterfeit versions of Canada Goose parkas can be very similar to authentic ones. This simple 7-step guideline can help consumers determine the authenticity of their parka.

1. Check the packaging

The presentation box is made out of Colourplan Ebony Wire paperstock and a handle which is the material as the back of the coat. A picture of a Canadian mountain is printed inside the box.

2. Check the arctic disc or patch

The patch, which shows the brand’s trademark logo, should have clean embroidery and the correct font. The maple leaves and brand name should be the same size and be evenly
spaced. Counterfeit parkas will usually have poorly replicated patches, with uneven embroidery and inaccurate colors.

This is a sample of an **authentic** patch

This is a sample of a **counterfeit** patch
3. Check the stitching and seams

A telltale sign of counterfeit goods is a bad stitching job. Genuine coats will always display even stitching that’s usually done by machine.

4. Check the hologram

Another important feature of the Canada Goose parka is the hologram, which counterfeiters will find hard to replicate. The hologram security tag is a feature that was implemented in 2011 to help fight counterfeiting. You will find it in every Canada Goose jacket and accessory that was made after 2011.

This is a sample of an authentic hologram
This is a sample of a counterfeit hologram

5. Check the zipper and other hardware

Canada Goose uses only YKK zippers on its outerwear. Aside from the YKK zipper brand, inspect the quality of the zipper and other hardware. Replicated goods will typically have defective hardware because of the cheap materials used.

6. Check the fur quality

Real Canada Goose parkas use high-quality coyote fur along the hood, while replicas from unknown manufacturers will use cheaper alternatives like raccoon fur, which is a lot rougher and scragglier than coyote fur.
This is a sample of full and soft coyote fur used in an **authentic** parka

This is a sample of less voluminous raccoon fur used in a **counterfeit** parka

7. Check the price

Canada Goose parkas **never go on sale**. While prices can vary based on the product model, authentic parkas are usually 800 dollars or more. Counterfeit versions of Canada Goose parkas are significantly cheaper, because of tax evasion and also the low-quality materials used in their
production. You might pay a lower price for a counterfeit parka, but what you get will probably be the lowest quality in the market.
Appendix E: Sample Questionnaire

The following is a sample survey in the Canada Goose education condition.

***************************************

1. My relatives and friends approve my decision in case I buy counterfeit products

completely disagree  completey agree

2. My relatives and friends think that I should buy counterfeit products

completely disagree  completey agree

3. If I buy a counterfeit product, the risk that I take is high

completely disagree  completey agree

4. There is high probability that a counterfeit product doesn't work

completely disagree  completey agree

5. Spending money with a counterfeit product might be a bad decision

completely disagree  completey agree

6. I consider honesty as an important quality for one's character

completely disagree  completey agree

7. I consider very important that people be polite

completely disagree  completey agree

8. I admire responsible people

completely disagree  completey agree

9. I lie people that have self-control

completely disagree  completey agree
10. I admire people who own expensive designer clothing
completely disagree completely agree

11. I like a lot of luxury in my life
completely disagree completely agree

12. I'd be happier if I could afford to buy more designer clothing
completely disagree completely agree

13. Considering price, I prefer counterfeit products
completely disagree completely agree

14. I like shopping for counterfeit products
completely disagree completely agree

15. Buying counterfeit products generally benefits the consumer
completely disagree completely agree

16. There's nothing wrong with purchasing counterfeit products
completely disagree completely agree

17. Generally speaking, buying counterfeit products is a better choice
completely disagree completely agree

18. Have you ever purchased a counterfeit product?
yes
no

Now, let's wrap up the survey by asking you a few questions about Canada Goose products.
19. How would you describe your overall opinion of the Canada Goose brand?

not at all favorable  
very favorable

20. What words come to your mind when you think about the Canada Goose brand? Please try to write at least 5 words in the box below.

21. Have you ever owned a Canada Goose product before?

yes  
no

Imagine that you go to a store to buy a winter jacket. You find a good deal for a Canada Goose jacket. The jacket is 200 dollars. The following pictures show some parts of the product.
When answering questions 22 to 25, please have in mind this jacket. Please rate on a scale of 1 to 7 how likely or unlikely each question statement is.

22. What are the chances that you consider buying this Canada Goose jacket?
very unlikely    very likely

23. What are the chances that you buy this Canada Goose jacket?
very unlikely    very likely

24. What are the chances that you recommend to friends and relatives that they buy this Canada Goose jacket?
very unlikely    very likely

25. What are the chances that you say favorable things about this Canada Goose jacket to other people?
very unlikely    very likely
Finally, please indicate your gender.

Male

Female

Other

Prefer not to say
# Appendix F: Literature Review Table

The following table shows a summary of the demand-oriented literature.

<table>
<thead>
<tr>
<th>Study</th>
<th>Study descriptors (method, participants)</th>
<th>Counterfeit product</th>
<th>Determinants</th>
<th>Dependent variable</th>
<th>Statistics</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bian and Moutinho, 2009</strong></td>
<td>Mall intercept survey, 430 U.K. shoppers</td>
<td>Rolex and Gucci watches</td>
<td>Product involvement (PI); Product knowledge (PK); Brand Image (BI); Brand personality (competence, excitement, sophistication); Perceived Product attributes (PPA); Perceived benefits (satisfactory benefit (SB), functional benefit (FB), image benefit (IB)); Perceived risks (social risk (SR), financial risk (FR)); Demographics (age, income, education, gender)</td>
<td>Consideration of counterfeit purchase</td>
<td>Tested at .01 level <strong>Rolex:</strong>&lt;br&gt;PI: $\beta=-0.08$, $t=-1.34$, $p=0.180$;&lt;br&gt;PK: $\beta=0.14$, $t=2.45$, $p=0.015$;&lt;br&gt;Competence: $\beta=0.30$, $t=5.94$, $p=0.000$;&lt;br&gt;Excitement: $\beta=1.3$, $t=2.64$, $p=0.001$;&lt;br&gt;PPA: $\beta=0.24$, $t=4.87$, $p=0.000$;&lt;br&gt;SB: $\beta=0.28$, $t=5.57$, $p=0.000$;&lt;br&gt;FB: $\beta=-1.11$, $t=-2.18$, $p=0.01$;&lt;br&gt;SR: $\beta=-1.3$, $t=-3.49$, $p=0.000$;&lt;br&gt;FR: $\beta=-0.3$, $t=-4.7$, $p=0.641$; <strong>Gucci:</strong>&lt;br&gt;PI: $\beta=-0.03$, $t=-0.52$, $p=0.606$;&lt;br&gt;PK: $\beta=0.13$, $t=2.09$, $p=0.011$;&lt;br&gt;Competence: $\beta=0.16$, $t=3.10$, $p=0.001$;&lt;br&gt;Excitement: $\beta=0.23$, $t=4.86$, $p=0.000$;&lt;br&gt;Sophistication: $\beta=0.26$, $t=4.90$, $p=0.000$;&lt;br&gt;PPA: $\beta=0.24$, $t=4.57$, $p=0.000$;&lt;br&gt;IB: $\beta=0.34$, $t=6.33$, $p=0.000$;&lt;br&gt;FB: $\beta=-0.10$, $t=-1.99$, $p=0.048$;&lt;br&gt;SR: $\beta=-0.09$, $t=-2.24$, $p=0.01$;&lt;br&gt;FR: $\beta=-0.11$, $t=-2.70$, $p=0.001$;</td>
<td>Product involvement does not affect people's likelihood of consideration of a counterfeit (H1 not supported); Consumers' perceived product knowledge impacts their consideration of Gucci counterfeit purchase, but not for Rolex counterfeit purchase (H2 supported for Gucci); Consumers' perceived brand personality of counterfeit brand products positively impacts consideration of these products (H3 supported); Product attribute is a positive predictor of consideration of counterfeit products (H4 supported); Consumers' perceptions of benefits have a positive influence on the likelihood of consideration of counterfeit purchase (H5 partially supported); For Rolex, social risk is a significant negative predictor of the likelihood of counterfeit purchase consideration, but financial risk is not. For Gucci, both social and financial risks are significant (H6 partially supported); Age, income (except for Gucci), educational attainment, and age do not affect consideration of counterfeit purchase.</td>
</tr>
<tr>
<td><strong>Bian and Moutinho, 2011</strong></td>
<td>Mall intercept survey, 430 U.K. shoppers</td>
<td>Rolex watch</td>
<td>Product involvement (PI); Product knowledge (PK); Brand Image (BI); Brand personality</td>
<td>Brand image (mediator); Purchase intention of counterfeit</td>
<td>Competence: $\beta=0.342$, $p=0.000$;&lt;br&gt;Excitement: $\beta=0.064$, $p=0.255$;&lt;br&gt;FA: $\beta=0.118$, $p=0.034$;&lt;br&gt;SB: $\beta=0.131$, $p=0.018$;&lt;br&gt;IB: $\beta=0.053$, $p=0.349$;</td>
<td>Perceived brand personality (only competence, not excitement) plays a more dominant role in explaining consumers' purchase intention of counterfeits than other influential factors (e.g. benefit and product.</td>
</tr>
<tr>
<td>Study</td>
<td>Method</td>
<td>Sample</td>
<td>Demographics</td>
<td>Attributes</td>
<td>Scores</td>
<td>Conclusion</td>
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<tr>
<td>Bloch et al., 1993</td>
<td>Survey, 200 adult U.S. consumers at mall and flea market (potential buyers of counterfeits)</td>
<td>Shirts</td>
<td>Demographics; Self-image (SI); Product importance (PI); Store reputation (SR); Durability (D); Style/fashionability of the product (SF); Brand Image (BI); Price (P)</td>
<td>Stated choice to purchase a designer label, a counterfeit, or a no-logo shirt; evaluation of product attributes</td>
<td>Scores out of 5 reported for only those who chose the counterfeit shirt: SR: M=3.3, n.s.; D: M=4.2, significant at .05 level; SF: M=3.6, n.s.; BI: M=2.5, significant at .05 level; P: M=4.1, n.s.; Self-image factors (only the ones significant at .05): Confident: M=2.2; Careful: M=2.4; Successful: M=2.5; High status: M=2.9; Well off financially: M=2.9</td>
<td>Demographic variables did not distinguish between the choice groups; Less reliance on durability and brand image has a positive influence on the stated choice to purchase a counterfeit compared to a designer label or a no-logo shirt; Apart from good value, all evaluation items scored higher for the designer label compared to the counterfeit shirt; Self-image is partially significant with respect to stated choice (5 of 14 evaluation items: counterfeit buyers are less confident, careful, successful, of lower status, and less successful financially); No significant differences for demographics, product importance, store reputation, style/fashionability of the product, and price with respect to stated choice; Results showed similar pattern in mall and flea market</td>
</tr>
<tr>
<td>Cordell et al., 1996</td>
<td>Experiment, 221 U.S. business students (potential buyers of counterfeit products)</td>
<td>Knit shirt (Ralph Lauren of a fictitious brand), 35-mm camera (Nikon or a fictitious brand)</td>
<td>Attitude toward lawfulness (AL); Attitude toward counterfeits (AC); Expected performance of the product (EP); Branding (B); Retailer prestige (RP); Price concession (PC); Investment-at-risk</td>
<td>Willingness to purchase known counterfeit</td>
<td><strong>Low investment-at-risk (knit shirt):</strong> B: β=.35, p=0.006; RP: β=.09, p=0.447; PC: β=.31, p=0.014; AL: β=.29, p=0.023; AC: β=.27, p=0.035; EP: β=.33, p=0.009 <strong>High investment-at-risk (camera):</strong> B: β=.14, p=0.309; RP: β=.40, p=0.002; PC: β=.03, p=0.816; AL: β=.20, p=0.130; AC: β=.14, p=0.291; EP: β=.77, p=0.000</td>
<td>Attitude towards lawfulness is negatively related to willingness to purchase a known counterfeit only for knit shirts; Expected performance is positively related to willingness to purchase a known counterfeit for both products; Branding and price concession are positively related to willingness to purchase a known counterfeit for low investment-at-risk (knit shirt); Retailer prestige is positively related to willingness to purchase a known counterfeit for high investment-at-risk (camera)</td>
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<td>Leisen</td>
<td>Survey, 144</td>
<td>Tylenol</td>
<td>Perceived shopping</td>
<td>Intention to</td>
<td>Tylenol:</td>
<td>Perceived shopping environment enhances the</td>
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<td>Source</td>
<td>Sample Description</td>
<td>Variables</td>
<td>Findings</td>
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<td>and Nill, 2001</td>
<td>U.S. students (potential buyers of counterfeits)</td>
<td>pain reliever, Ray Ban sunglasses, Rolex watch</td>
<td>PSEA: $\beta = .106$, n.s.; PPA: $\beta = .072$, n.s.; FPR: $\beta = .381$, significant at .01; SR: $\beta = .053$, n.s.; LR: $\beta = .115$, n.s.; ASC: $\beta = .059$, n.s.;</td>
<td>purchase intention for counterfeit Rolex and Ray Ban; Perceived financial and performance risk reduces the purchase intention for counterfeit Tylenol</td>
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<td>Martinez and Jaeger, 2016</td>
<td>Online survey, 225 European respondents (mostly German)</td>
<td>Sunglasses, Moral awareness (MA); Moral emotions (ME) (anger, guilt, gratitude); Moral judgement (MJ); Purchase experience (PE)</td>
<td>Effect of MA on MJ: $\beta = .51$, p &lt; .001; Effect of MJ on PI: $\beta = -.13$, p = .06; Effect of ME on PI: Anger: $\beta = -.21$, p = .001; Gratitude: $\beta = .38$, p &lt; .001; Guilt: $\beta = .09$, p = .24;</td>
<td>The higher the individual's level of moral awareness, the higher her/his level of moral judgment concerning the purchase of a counterfeit product (H1 supported); The greater the individual's level of moral judgment, the lower his/her intent to purchase a counterfeit product (H2 marginally supported); Moral emotions will decrease purchase intention for a counterfeit product (H3 partially supported); Moral emotions will increase moral judgment concerning the purchase of a counterfeit product (H4 partially supported); Moral awareness will increase moral emotions (H5 supported) Individuals' purchase experience decreases their intention to buy counterfeits</td>
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<td>Matos, et al., 2007</td>
<td>Survey, 400 Brazilian shoppers</td>
<td>Not specified, Price quality (PQ); Risk averseness (RA); Subjective Norm (SN); Attitude (AT) (mediator); Behavioral</td>
<td>Significant determinants of AT in order: Effect of PR on AT: $\beta = -.487$; Effect of PCP on AT: $\beta = .347$;</td>
<td>Consumers' belief in the price-quality inference does not affect their attitude towards counterfeits (H1 not supported);</td>
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</table>
| Perception/Intention | Effect on | Effect on | Effect of | Effect of | Only significant factors and only for student sample reported here (since we are going to use student sample):  
|----------------------|-----------|-----------|-----------|-----------|-------------------------------------------------|
| Perceived Risk (PR); Integrity (IN); Personal gratification (PG); Previous counterfeit purchase (PCP) | Intention (BI) | SN on AT: $\beta=.245$; | IN on AT: $\beta=.157$; | PQ on AT: $\beta=.149$; | Literature:  
P: $\beta=.248$, p=.000;  
A: $\beta=.274$, p=.000;  
I: $\beta=.129$, p=.029  
Software:  
Q: $\beta=.283$, p=.000;  
PA: $\beta=.172$, p=.009;  
NS: $\beta=.140$, p=.015  
Wallets/purses:  
I: $\beta=.250$, p=.000;  
AP: $\beta=.204$, p=.001;  
E: $\beta=.181$, p=.002  
Watches:  
Q: $\beta=.240$, p=.000;  
E: $\beta=.243$, p=.000;  
PA: $\beta=.136$, p=.030  
| Consumers' risk averseness does not affect their attitude toward counterfeits (H2 not supported);  
Consumers who perceive more risk in counterfeits will have unfavorable attitude toward counterfeits (H3 supported);  
Consumers who attribute more integrity to themselves will have unfavorable attitude toward counterfeits (H4 supported);  
Consumers’ sense of accomplishment will affect their attitude toward counterfeits (H5 supported);  
Consumers perceiving that their friends/relatives approve their behavior of buying a counterfeit will have favorable attitude toward counterfeits (H6 supported);  
Consumers who have already bought a counterfeit have more favorable attitude toward counterfeits (H7a supported);  
Previous counterfeit purchase does not affect behavioral intentions toward counterfeits (H7b not supported);  
Consumers with more favorable attitudes toward counterfeits will have more favorable behavioral intentions toward these products (H8 supported);  
| Psychological variables (attitude towards piracy (AP), brand status (BS), materialism (M), novelty seeking (NS), risk taking (RT)); product attribute variables (purpose (P), quality (Q), perceived fashion content (PFC), physical appearance (PA), image (I), durability (D)); demographic variables (education (E), age (A), household income (HI)) | Intention to purchase pirated products | Only significant factors and only for student sample reported here (since we are going to use student sample):  
| Literature:  
P: $\beta=.248$, p=.000;  
A: $\beta=.274$, p=.000;  
I: $\beta=.129$, p=.029  
Software:  
Q: $\beta=.283$, p=.000;  
PA: $\beta=.172$, p=.009;  
NS: $\beta=.140$, p=.015  
Wallets/purses:  
I: $\beta=.250$, p=.000;  
AP: $\beta=.204$, p=.001;  
E: $\beta=.181$, p=.002  
Watches:  
Q: $\beta=.240$, p=.000;  
E: $\beta=.243$, p=.000;  
PA: $\beta=.136$, p=.030  
| Attitude towards piracy is related to purchase intention for all counterfeit products;  
Brand status, materialism, novelty seeking, and risk taking have no influence on purchase intention;  
Purpose is related to purchase intentions for counterfeit literature and software;  
Quality is related to purchase intentions for all counterfeit products;  
Perceived fashion content is related to purchase intentions for counterfeit watches;  
Physical appearance is related to purchase intentions for leather wallets/purses and watches;  
Image and durability have no influence on purchase intention;  
Education is negatively related to purchase intentions for all counterfeit products;  
Household income is negatively related to | }
| Wilcox et al., 2009 | Study 1: survey, 79 U.S. students | Study 1: fashion brands | Luxury brand attitude (social-adjustive function (SAF) vs value-expressive function (VEF)); Counterfeit moral beliefs (CMB); Exposure to a counterfeit brand; Brand conspicuousness (Logo vs NoLogo); Advertising type (AT) (social-adjustive vs value-expressive) | Counterfeit purchase intent | H1: SAF (b=.42, t=2.01, p<.05); VEF (b=.09, t=.56, n.s.); H2: CMB*VEF (b=.31, t=2.11, p<.05); CMB*SAF (b=.04, t=.20, n.s.) H3: M_VEFSAF=.00, M_SAF=-.27, F(1,129)=5.20, p<.05 H4: NoLogo (M_VEFSAF=2.24, M_SAF=2.56, F(1,130)=.48, n.s.) Logo (M_VEFSAF=2.54, M_SAF=4.14, F(1,130)=12.23, p<.05) H5: M_VEFSAF=2.69, M_SAF=3.07, F(1,170)=4.04, p<.05 | People's counterfeit purchase intent is greater when they hold social-adjustive attitudes toward luxury brands than when they have value-expressive attitudes (H1 supported); People's counterfeit purchase intent is more sensitive to their moral beliefs about counterfeit consumption when they have value-expressive rather than social-adjustive attitudes toward luxury brands (H2 supported); Exposure to a counterfeit brand has a more negative effect on people's preference for the real brand when they have a social-adjustive rather than value-expressive attitudes toward luxury brands (H3 supported) When the brand is more conspicuous, people's counterfeit purchase intent will be more strongly affected by their attitudes toward luxury brands (H4 supported) People who view a value-expressive rather than a social-adjustive ad will have a lower intention to buy counterfeit (H5 supported) | purchase intentions for counterfeit leather wallets/purses |
The above table summarizes the reviewed articles, the name of the authors, methodology, the identified determinants and dependent variables, and the reported results.