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Catherine Viot, André Le Roux, Florence Kremer

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Attitude towards the purchase of counterfeits: Antecedents and effect on intention to purchase

Catherine Viot
IAE de Bordeaux, Equipe de Recherche en Marketing de l'IRGO – Université de Bordeaux, France

André Le Roux
IAE de Poitiers, Equipe de Recherche Stratégies de Marques et Cultures de Consommation, CEREGE, IAE, Université de Poitiers, France

Florence Krémer
IAE de Bordeaux, Equipe de Recherche en Marketing de l'IRGO – Université de Bordeaux, France

Abstract

Counterfeiting is a major issue for companies, public institutions and consumers. Despite extensive literature on the subject in marketing, an instrument for measuring the wide variety of the determinants of attitude towards and intention to purchase counterfeit products is missing. A second-order model comprising 13 determinants, grouped into three latent constructs, is validated. This model includes a dimension related to the societal consequences of counterfeiting and two dimensions representing individual factors' motivations and deterrents. This research pinpoints the most relevant motivations for and deterrents of counterfeit purchases. Results show that societal economic factors do not impact attitude towards and intention to purchase counterfeits, whereas individual motivations are crucial. Individual motivations and deterrents are the only antecedents of attitude towards counterfeits, with motivations being the most important determinant. Second-order factors indirectly influence intention to purchase counterfeits, through the mediation of attitude towards the purchase.

Keywords

attitude towards counterfeiting, attitude towards purchasing counterfeits, intention to purchase counterfeits, measurement scale, non-deceptive counterfeiting, second-order structural equation modeling

Introduction

Counterfeiting, defined as the action of forging an artistic or literary work or industrial product to the disadvantage of its author or inventor, has spread to a massive extent both geographically and in terms of the products concerned. The press is reporting 'record' seizures and exponential growth in counterfeiting:

Corresponding author:
Catherine Viot, Assistant Professor HDR – IAE de Bordeaux, Equipe de Recherche en Marketing de l'IRGO – Université de Bordeaux, 35 avenue Abadie - 33 072 Bordeaux Cedex, France.
Email: catherine.viot@u-bordeaux4.fr

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with nearly 9 million items seized in 2011, the French Customs recorded an annual increase of 42% (see Douane.fr, 2011). At the external borders of the European Union (European Union), in 2010 the customs authorities seized 103 million items with a total value of a billion euros. More than eight out of every 10 items seized came from China (European Commission, 2010). The international fight against this scourge is the central concern of ACTA (Anti-Counterfeiting Trade Agreement), a multilateral international treaty on strengthening intellectual property rights that 22 EU member states, including France, signed in January 2012 (*Le Monde*, 2012).

Counterfeiting is generally perceived by the public as involving luxury goods or brands with high symbolic value. In actual fact, luxury items account for no more than 20% of seizures in France, against 80% a decade earlier (*Le Monde*, 2008). The phenomenon has become widespread, extending to products of day-to-day life, including food and personal care. New trends in counterfeiting concern mobile phones, medicines (up 13.5% in France in 2008), cigarettes, optical goods (lenses and contact lenses) and electrical appliances (hair dryers, shavers, computer parts). As well as spreading, the phenomenon is becoming more serious due to its connections with organized crime (Union des Fabricants, 2005). It also seems, in France as elsewhere in Europe, that the counterfeit goods seized are increasingly often aimed at domestic markets and not for re-export to other areas. The growth of orders placed by individuals on the internet accounts for the massive increase in express and postal freight small item seizures at the borders of the EU, 69% of which are medicines (European Commission, 2010). Europe is now a hub for this traffic and is moving towards becoming a consumer market for counterfeit products.

Various arguments lead us to view counterfeiting as a major problem for marketing. First, those responsible for the strategic management of brands are constantly faced with counterfeiting and need to develop effective strategies to minimize the risk of copying. While the legal aspect is essential (Danand, 2009), the persistence of the phenomenon is proof that the answer does not lie solely in terms of legal sanctions. The fight would gain in effectiveness if it included a marketing component, particularly through advertising campaigns centered on deterrents to counterfeiting and consumers' underlying motivations with regard to it.

Second, the purchase of counterfeit products can be considered as a classic buying process. This proposition suggests that consumers make such purchases knowingly. Usually presented as victims of counterfeiting, within this perspective consumers become accomplices. As a result, various marketing researchers have proposed making a distinction between deceptive and non-deceptive counterfeiting (Bloch et al., 1993; Grossman and Shapiro, 1988a; Nill and Shultz, 1996). Counterfeiting is deceptive when consumers are deceived and believe they are buying a genuine product. Counterfeiting is non-deceptive when the circumstances of the purchase – particularly the location, the price differential and the quality level – leave no doubt as to the counterfeit nature of the merchandise. Consumers who knowingly buy counterfeit goods want to acquire their visual attributes – a well-known brand name or logo – without paying the price associated with the quality of the originals (Cordell et al., 1996; Gentry et al., 2001; Grossman and Shapiro, 1988b). Purchasing counterfeits knowingly is not a marginal phenomenon. A survey cited by the European Commission found that 40% of Europeans consider buying counterfeit goods (Market and Opinion Research International, 1997).

Research on counterfeiting using a marketing approach, initiated in the 1980s by Kaikati and LaGarce (1980), Bamossy and Scammon (1985) and Grossmann and Shapiro (1988a, 1988b), has given rise to a significant number of publications (Eisend and Schuchert-Güler, 2006; Staake et al., 2009). Among the topics addressed by these studies, attitude towards buying counterfeits is revealed as a primary determinant of their purchase.

However, research focused on the purchase of counterfeit goods has its limitations. Its main weakness is its lack of inclusiveness: conceptualizations of attitude towards the purchase of counterfeits are often limited to one or two determinants. Consequently, the scales developed to date remain incomplete (De Matos et al., 2007; Furnham and Valgeirsson, 2007; Kwong et al., 2009; Phau and Teah, 2009). But counterfeiting is a very complex phenomenon that neither governments nor companies have been able to

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eradicate. A more comprehensive knowledge of the factors that lead some consumers to buy illicit copies is therefore of crucial interest to those confronted by this problem. A second weakness is that the majority of the empirical studies published are based on convenience samples largely composed of students. Although students are a prime target of counterfeiting, they are not the only people affected by this phenomenon.

This article examines the antecedents of attitudes towards purchasing counterfeits. The main aim is to identify these antecedents and their positive impact on the attitude towards the purchase of counterfeits. This objective requires developing a measurement scale of the determinants of attitude towards buying counterfeits that integrates all the dimensions identified in the literature. We also propose improving the external validity of the results, particularly for the confirmatory stage, through the use of representative samples of the French population. Finally, at the managerial level, the article aims to identify the motivations and the deterrents to buying counterfeits, so as to improve cautionary campaigns.

This research focuses on the deliberate purchase of counterfeits, excluding piracy (illegal downloading), which for the most part does not involve an act of purchase. Deceptive counterfeiting, where purchasers are unaware they are buying counterfeits, refers for our purposes to a different consumption context. Thus we are concerned in this study solely with the deliberate and freely consented-to purchase of counterfeit products.

A conceptual framework is proposed on the basis of previous research. We then present various empirical studies that have been used to construct and validate a scale of attitude towards the purchase of counterfeits, together with an explanatory model of the intention to purchase counterfeit products. Finally, we discuss the results of these empirical studies.

Counterfeiting in marketing research: State of the art

There have been two literature reviews of studies on counterfeiting. Eisend and Schuchert-Güler (2006) list some 30 studies over a period up to 2005. Staake et al. (2009) identify a hundred or so publications and communications for a period that does not go beyond 2007. We have therefore included in our review works published after 2007, as well as publications on attitude prior to 2007 that were not mentioned by these authors. Our review allows three groups of determinants to be identified. The first concerns determinants that we consider to be societal, insofar as they reflect a danger to society as a whole, primarily in economic terms. This group includes macroeconomic risks, economic risks for business, and risks for brands (Table 1a). A second group includes individual motivations assumed to be positively related to the attitude towards the purchase of counterfeits. The second group covers individual motivations assumed to be positively related to attitude towards the purchase of counterfeits. These motivations comprise the low perceived price of counterfeit products, which are seen as a bargain by consumers; the small perceived difference in quality compared to genuine goods; a ludic dimension associated with the experience of purchasing counterfeit goods; and a desire for revenge on the large corporations (Table 1b). The third group of determinants – also individual – identified by the literature review include factors, unlike those in the previous group, that can negatively impact attitude towards purchasing counterfeits. Most of these deterrents conform to the risk typologies proposed in marketing (Jacoby and Kaplan, 1972; Roselius, 1971), namely psychological risk, social risk and physical risk. There is, in addition, legal risk, which is specific to the context of purchasing counterfeits, as well as doubt as to the origin of such products (Table 1c).

Although, as this literature review shows, there are numerous papers on the determinants of attitude and purchasing intent in relation to counterfeits, this is not the case with regard to the measurement of these determinants. Tom et al. (1998) measure attitude towards counterfeiting on the basis of 13 items, reflecting social cost, desire for revenge on large companies, the illegality of buying counterfeit products, the enjoyment in doing so, and value for money. Ang et al. (2001) propose a similar measure comprising 12 items related to risk, trust towards the store, value, economic costs, the benefits for society, and the immorality of such behavior. In the absence of factor analysis in these two studies, it is

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Table 1a. Negative societal impact of counterfeiting.

Determinants	Definitions and theoretical justification	Empirical confirmation
Macroeconomic risk	There is extensive discussion in the literature about the social consequences of counterfeiting (Ang et al. 2001; Chakraborty et al., 1997; Grossman et Shapiro, 1988a; Tom et al., 1998; Wang et al., 2005). The consequences of counterfeiting include tax evasion, loss of jobs and a deficit in the trade balance, because counterfeit products are often imported and authentic products are partly exported (Grossman et Shapiro, 1988a).	Empirical studies incorporating this determinant are relatively uncommon. A study of 87 American students shows that emphasizing the dangers of counterfeiting, for the national economy and jobs, reduced demand for these products (Chakraborty et al. 1997). Another study with 129 American consumers shows that in the opinion of those who have already knowingly bought counterfeits, the purchase of counterfeit products does not pose a risk to the US economy (Tom et al., 1998). But another study in the USA, with 437 students, shows that awareness of the dangers for the economy does not deter them from buying counterfeits (Norum and Cuno, 2009).
Risk for the company	Several authors mention the harm to companies whose products are counterfeited. The first consequence is the reduction in revenue due to lower sales (Green and Smith, 2002). Counterfeiting also results in reduced innovation and competitiveness, since part of the company's resources is used to defend itself (Wilke and Zaichkowsky, 1999). In addition, the benefits of investments in R&D are reduced (Grossman and Shapiro, 1988a).	To our knowledge, no empirical studies have included this determinant of attitude towards counterfeiting.
Risk for the brand	Brand equity is the value added by a brand name and rewarded by the market in the form of increased profits or higher market share (Marketing Science Institute). The proliferation of counterfeit goods results in a normalization of the brand that adversely affects its image (Bush et al., 1989) or its equity (Wilke and Zaichkowsky, 1999). This erosion of brand equity may result in the brand being avoided by its regular consumers.	A qualitative study with 40 Thai and Indian consumers shows that regular consumers of a brand may in fact turn away from the brand for fear of being confused with the buyers of counterfeits (Commuri, 2009). The results of two other studies suggest that brand image is not adversely affected: the first conducted with 74 Canadian consumers (Nia and Zaichkowsky, 2000) and the second with 223 German students (Hieke, 2010).

not possible to establish a structure and specify the relative weights of these determinants in shaping attitude towards buying counterfeits.

More recently, several scales measuring the determinants of attitude towards counterfeiting or attitude towards the purchase of counterfeits have been published (Table 2).

Several factors have been identified repeatedly in these scales:

- those relating to the quality or the perceived value of products (De Matos et al., 2007; Furnham and Valgeirsson, 2007; Phau and Teah, 2009);
- those relating to the social cost, with a negative dimension (Kwong et al., 2009; Phau and Teah, 2009), and a positive dimension reflecting the faster spread of innovations through counterfeits (Kwong et al., 2009);
- those relating to individual perceived risks (De Matos et al., 2007; Furnham and Valgeirsson, 2007;);
- those relating to ethics and integrity (De Matos et al., 2007; Kwong et al., 2009).

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Table 1b. Counterfeiting and individual motivations.

Determinants	Definitions and theoretical justification	Empirical confirmation
Perceived quality of counterfeits	Counterfeit products are still largely viewed as being of inferior quality. However, some authors assert that their quality has improved in recent years (Nill and Shultz, 1996), with the result that consumers find it difficult to differentiate genuine products from copies, especially if the price difference is small (Gentry et al., 2006). But counterfeit products are sold without guarantees, thus adding a financial risk to the purchase of such products (De Matos et al., 2007) that may deter some consumers from buying them.	Three studies focus on the quality differential between the originals and copies. The first study, conducted with 516 students and employees in South East Asia, shows that the closer the perceived quality of a counterfeit is to the original, the greater is the purchase intent (Wee et al., 1995). The second study, in which 221 American students were interviewed, shows that the expected quality of the counterfeit, compared to the original, has a positive effect on the consumer's choice (Cordell et al., 1996). Finally, a survey of 2002 German consumers residing in Turkey shows that the difference in perceived quality between the authentic product and the counterfeit reduces purchase intention (Jenner and Artun, 2005). Other studies show that the perceived quality of counterfeits affects purchase intent. A study with 144 American students shows that perceived risk in terms of performance reduces the intention to buy counterfeits (Leisen and Nill, 2001). A study of Hong Kong consumers shows that the perceived quality of counterfeiting affects purchase intention (Prendergast et al., 2002). Two other studies, conducted with Taiwanese and Chinese students, show that the poor performance associated with counterfeit products negatively influences purchase intention (Wang, 2005; Wang et al., 2005). Finally, a study with 87 American students shows that emphasizing the poor quality of counterfeits can reduce the demand for these products (Chakraborty et al., 1997).
Perceived price	The perceived price difference between the original and the counterfeit product is presented as a dominant variable for predicting attitude towards counterfeit goods or the intention of buying them. The price effect, however, must be treated with caution, because it can act positively (low price counterfeits that encourage their purchase) or negatively (a low price being associated in the minds of consumers with poor quality). Indeed, the more consumers tend to infer quality from the price, the more likely they are to view counterfeits – usually sold at a low price – as poor quality products.	A study among of 435 US consumers shows that an emphasis placed on price has a positive effect on the preference for counterfeits (Tom et al., 1998). A study with 92 US trainees shows that price is a determinant of intention to purchase counterfeit goods (Albers-Miller, 1999). In another survey of 200 consumers in Hong Kong, among many determinants, price appears to be the paramount consideration (Prendergast et al., 2002). A study among of 120 students from Hong Kong and 60 in Las Vegas shows that the higher the price of the original, the greater the intention to buy counterfeit products (Harvey and Walls, 2003). A study conducted among 456 Taiwanese students shows that price has a positive effect on intention to purchase counterfeits (Wang, 2005). Another study of 300 Singaporean students shows that the quality inferred from the price determines the attitude towards counterfeiting (Phau et al., 2009).

(Continued)

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Table 1b. (Continued)

Determinants	Definitions and theoretical justification	Empirical confirmation
Ludic dimension	The metaphor of equating consumption with a game implies that products are not only purchased for their intrinsic qualities, but to facilitate interactions with friends (Gistri et al., 2008). In the context of consumption, two practices may be included in the game: being in tune with one's peer group and socialization (Holt, 1995). This theoretical framework can be applied to the purchase of counterfeit products. Their purchase can be an opportunity to share experiences with friends or make witty remarks.	Three qualitative studies identify a ludic motivation. The first, conducted among 102 students of Chinese origin, shows that counterfeits provide novelty and symbolize travel experiences (Gentry et al., 2001). The second, involving 15 Italian consumers, shows that buying counterfeits is sometimes a game whose objective is either fellowship or socialization (Gistri et al., 2008). In a third study, 37 Mexican women acknowledge that it can be fun to buy counterfeits, because of the adventure, pleasure and perceived risk (Perez et al., 2010). Another study, involving 254 American students, shows that hedonic experience associated with the purchase of counterfeits is an antecedent of the intention to buy counterfeit products (Chaudhry and Stumpf, 2009).
Attitude towards large corporations	Some consumers view the purchase of counterfeits as a means to counter major brands. This would be a manifestation of the 'Robin Hood' syndrome (Nill and Shultz, 1996), which refers to 'consumers' strong desire to act against the interests of holders of intellectual property by supporting counterfeiting activities' (Kwong et al., 2009). These consumers see counterfeiting as a way of taking from the rich – multinationals – and giving to the poor – themselves (Aviv et al., 2008). This type of behavior is based on the neutralization mechanism, whereby the individual exempts themselves from blame by denying the reprehensible character of their behavior or by shifting the responsibility onto the victim of the behavior concerned (Sykes and Matza, 1957). The blame arising from the purchase of counterfeit products is thus neutralized on the grounds that brands adopt unfair tactics in relation to consumers.	A study among of 129 US consumers shows that for those who have already knowingly bought counterfeit goods, doing so is a means of expressing their anti-corporation feelings (Tom et al., 1998). Another study, with 1040 Austrians consumers, confirms a positive effect on purchase intention (Penz and Stöttinger, 2005). Conversely, in a third study, conducted among 220 British people and 280 inhabitants of Hong Kong, such an effect could not be identified (Kwong et al., 2009).

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Table 1c. Counterfeiting and individual deterrents.

Determinants	Definitions and theoretical justification	Empirical confirmation
Psychological risk	Purchasing counterfeit products could lead some consumers to have a bad image of themselves. Consumers buy brands rather than products and they choose them to raise their self-esteem. Buying a counterfeit brand could have the opposite effect and give rise to a sense of shame or guilt.	This risk has been confirmed in a survey of 200 US consumers, which shows that buyers of genuine products have higher self-esteem than consumers who purchase counterfeits (Bloch et al., 1993). Other studies have examined the effects of moral integrity on attitudes towards counterfeiting or purchase intent. A study conducted with 1211 Slovenian consumers shows that moral intensity is negatively related to the intention to purchase counterfeits (Koklic, 2011). In a second study involving 202 Australian students, moral integrity is a predictor of the intention to buy counterfeits (Phau et al., 2009).
Social risk	Social influence refers to the effect that other people have on a person's consumption behavior (Ang et al., 2001). A person's consumption is influenced by their social position and/or by the group they would like belong to. They may thus seek products or brands with high status to facilitate assimilation. This influence is particularly strong for luxury brands, but it seems that social influence can act either positively or negatively. On the one hand, buying counterfeit brands helps construct identity vis-à-vis other people – counterfeits are purchased as substitutes for major brands in order to impress other people – and facilitates identification with a group. On the other, there is a risk of being devalued by others as a result of flaunting counterfeit products. The theoretical basis for explaining these differences is the functional theory of attitudes (Katz, 1960). When consumers have a social conformity attitude with regard to a product, they use it to gain other people's approval, and to communicate their beliefs to them.	Two qualitative studies show that purchasing counterfeits is a way to construct one's identity in relation to others. The first was carried out with 20 young British consumers (Hoe et al., 2003) and the second with 37 Mexican women (Perez et al., 2010). Other studies have focused on purchasing counterfeits with a view to identifying with a social group. For example, a study using focus groups with 700 Chinese and Hong Kong consumers shows that the need for conformity is a determinant in purchasing counterfeits (Cheung and Prendergast, 2006). In contrast to the previous examples, the purchase of counterfeits can also be seen as a social risk. A qualitative study conducted in Asia, with 102 foreign students, shows that the wealthy classes perceive a risk of losing face if other people realize they do not have the original (Gentry et al., 2006).
Physical risk	Counterfeiting certain products potentially poses a threat to people's health and safety. In the late 1980s, Grossman and Shapiro (1988a) drew attention to this type of risk, especially for pharmaceutical products and aircraft parts.	Just one empirical study, with 102 British respondents, shows that the perceived danger of counterfeit products is a determinant of purchase intent (Furnham and Valgeirsson, 2007).
Legal risk	The purchase of counterfeits is illegal in many countries. In France, the maximum penalties for an individual are a €300,000 fine and 3 years' imprisonment. It is generally accepted that consumers' choices can be influenced by the fear of sanctions (O'Shaughenessy, 1987), but the risk of punishment is not always a deterrent.	In a study conducted on American students, it could not be demonstrated that the perceived legal risk had a negative effect on the intention to purchase counterfeits (Albers-Miller, 1999), whereas in another study comparing Americans to Hong Kong Chinese, the authors show that the possible sanctions have a negative effect on the intention to buy counterfeit products (Harvey and Walls, 2003).
Doubt about the origin of products	The perceived origin of counterfeit products can influence consumer attitudes towards counterfeiting. In the minds of consumers, counterfeits are, for the most part, produced abroad, which can give rise to suspicion about them. It seems that this effect is related to consumers' ethnocentrism (Chakraborty et al., 1996).	A study conducted with 130 American students shows that the guilt is stronger when the counterfeits are produced in the USA (Chakraborty et al., 1996). Another study with 157 Americans and 155 Mexicans shows that Americans feel more concerned than Mexicans about the origin of counterfeits and that counterfeits manufactured in the USA are preferred to Chinese counterfeits (Chapa et al., 2006).

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Table 2. Measurement scales of determinants of attitude towards counterfeiting.

Authors	Determinants	Reliability indicators	Type and size of samples
Furnham and Valgeirsson (2007)	Law and danger (3 items)	$\alpha = 0.86$	Convenience sample recruited in a London neighborhood. $N = 103$
	Good value: value comparable to originals (2 items)	$\alpha = 0.64$	
	Experience: ability to distinguish counterfeits from originals (3 items)	$\alpha = 0.68$	
De Matos et al. (2007)	Inference regarding price and quality (2 items)	$\alpha = 0.74$ AVE* = 0.62	Convenience sample recruited on the streets of two large Brazilian cities where counterfeits are sold. $N = 400$
	Risk aversion (2 items)	$\alpha = 0.46$ AVE = 0.32	
	Subjective norms (2 items)	$\alpha = 0.74$ AVE = 0.60	
	Perceived risk (2 items)	$\alpha = 0.76$ AVE = 0.63	
	Integrity (3 items)	$\alpha = 0.87$ AVE = 0.70	
Phau and Teah (2009)	Perception of counterfeit products: quality of counterfeits comparable to originals (3 items)	$\alpha = 0.90$	Convenience sample recruited in a Shanghai shopping mall. $N = 202$
	Social consequences: economic and legal consequences (4 items)	$\alpha = 0.82$	
Kwong et al. (2009)	Social cost of counterfeiting (4 items)	$\alpha = 0.69$	Convenience sample recruited on the streets of Hong Kong and the UK. $N_{UK} = 220$ $N_{Hong\ Kong} = 230$
	Ethical beliefs (3 items)	$\alpha = 0.80$	
	Anti-large corporation mentality (2 items)	$\alpha = 0.92$	
	Social benefits of counterfeiting: more rapid spread of innovations, innovation (2 items)	$\alpha = 0.56$	

*AVE = Average variance extracted.

On the other hand, the anti-large corporation attitude appears in only one scale (Kwong et al., 2009).

From a methodological standpoint, the evidence for the content validity of these scales is not always provided by the authors. Only De Matos et al. (2007) state that they used general scales, which were already validated, though in contexts other than counterfeiting. For example, for perceived risk, the authors adapted Dowling and Staelin's (1994) scale. For other scales, there is no mention either of adapting existing scales or of conducting a qualitative study. The validation of the structure of scales rarely goes further than an exploratory factor analysis. Moreover, all these scales were developed with convenience samples recruited from the commercial areas of large cities in Asia, Europe and South America.

With regard to the literature (Tables 1a–1c), these scales provide a fragmented view of the determinants of attitude towards the purchase of counterfeits.

To overcome these limitations, it is proposed to develop, within an integrative perspective, a scale containing all the determinants identified in the literature and/or during a preliminary qualitative study. A more extensive scale would have the advantage of identifying all motivations and deterrents in relation to attitudes towards the purchase of

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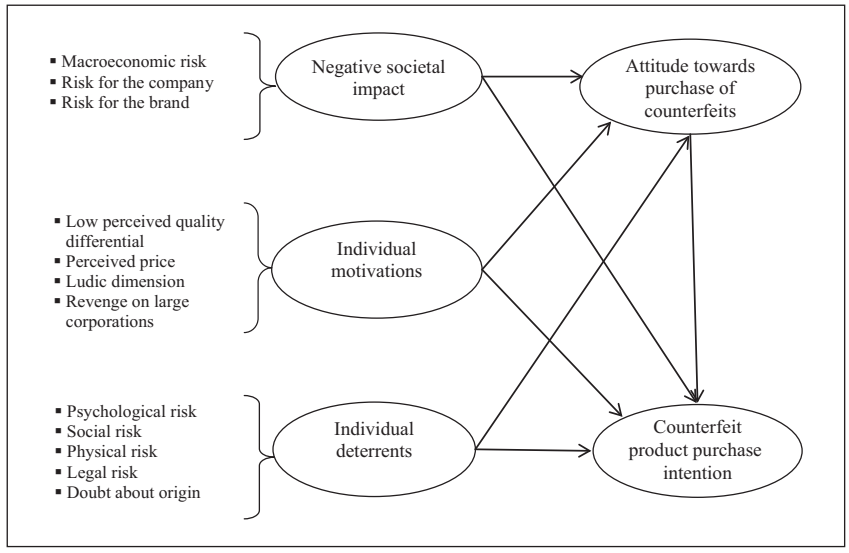


Figure 1. The conceptual model.

counterfeit products and of understanding their relative importance, both in the formation of the intention and the purchase of such products.

On the basis of the literature on counterfeiting, we put forward a conceptual model explaining the role of determinants in the formation of attitude towards the purchase of counterfeits (Figure 1). Twelve dimensions organized around three poles – negative societal impact, individual motivations and individual deterrents – were identified. These are taken as the determinants of attitude towards the intention to purchase counterfeits and towards their purchase.

We seek to measure a set of determinants of attitude towards the purchase of counterfeit products and of the intention to purchase counterfeits. In accordance with the extended attitude model of Ajzen and Fishbein (1977), behavior intention (here, the intention to buy counterfeits) is more related to the attitude towards this behavior (here, attitude towards the purchase of counterfeits) than to the attitude towards the object itself (here, the attitude towards counterfeiting). This model also draws on recent empirical studies (De Matos et al., 2007; Koklik, 2011; Marcketti and Shelley, 2009; Phau and Teah, 2009; Phau et al., 2009) based on an attitude model inspired by Ajzen and Fishbein (1977).

Measurement scale of determinants of attitude towards the purchase of counterfeits

The multidimensional measurement scale of the determinants of attitude towards the purchase of counterfeits was developed in conformity with Churchill's (1979) paradigm, enriched by the contributions of Anderson and Gerbing (1988), Gerbing and Anderson (1988) and Rossiter (2002). Churchill (1979) recommends purifying the items generated for the scale through an iterative process involving several samples. Thus, successive studies were needed after the specification of the construct in order to test a global model (Figure 2).

The data collection involved four studies whose characteristics are specified in Appendix 1. The first field study corresponds to an exploratory study with a convenience sample comprising 52 students. The aim of this study was to verify the relevance of the determinants identified through the literature review. The second field study, concerning 226 students, was designed to test the structure of the determinants through an exploratory factor analysis. The third field study, with a convenience sample of 338 adults, allowed us to confirm the structure of the scale. Finally, a fourth field study representative in terms of age, gender

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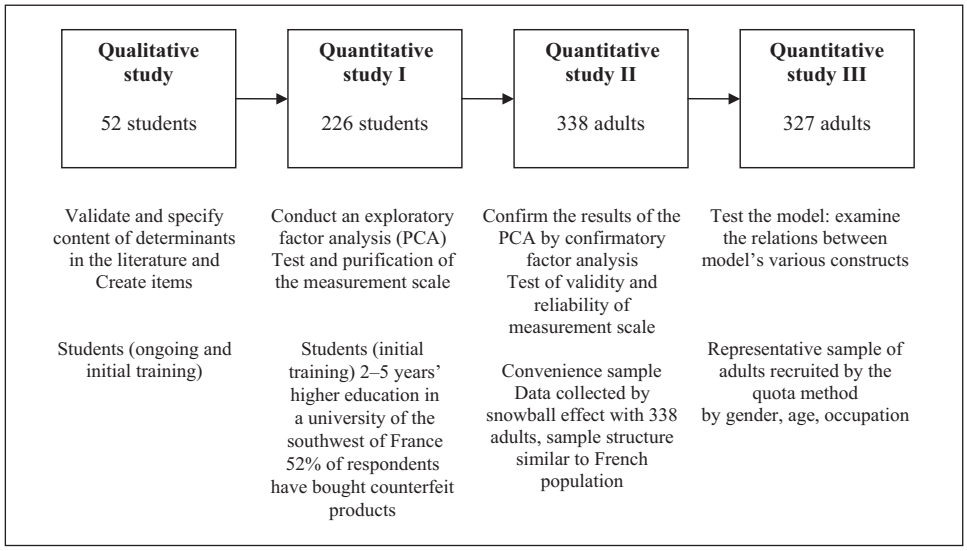


Figure 2. Study methodology.

and occupational category ($N = 327$) was used to test an explanatory model of the intention to purchase counterfeits.

Specification of the construct

The dimensions of the scale's construct were specified through a two-part exploration of the determinants of consumers' behavior with regard to counterfeiting: first, a review of the academic literature (Tables 1a–1c) and, second, a qualitative study. This study examined the determinants of attitude towards the purchase of counterfeits. It was carried out using an open questionnaire on a sample of 52 individuals representative in terms of meaning (Evrard et al., 2003). The respondents were students enrolled in initial and continuing education, with a view to obtaining different profiles in terms of age and interests (mean age 27, 40% female). To facilitate freedom of expression on a sensitive topic, the respondents answered open questions individually, in writing and anonymously. The responses were subject to an initial manual content analysis, complemented by counting occurrences using Sphinx software. A second content analysis was carried out using Alceste textual data analysis software. This exploratory phase allowed us to verify the exhaustiveness and relevance of the determinants identified in the literature review (Viot et al., 2006) and to refine the formulation of the items. The transcript was used to help us formulate the items of the scale. For example, one respondent wrote: 'I do not like buying counterfeit products because I'm afraid of getting caught at customs.' Another wrote, 'Buying fake products is rather like a game' and a third 'It gives a false impressive of myself' (Table 3).

Some items are taken from already published inventories or scales. For example, three items of the determinant 'revenge on large corporations' are directly inspired by the inventory of Tom et al. (1998) 'I like counterfeits because they demonstrate the initiative and ingenuity of the counterfeiters' (ggpes1); 'Buying counterfeits is a way to get back at uncaring and unfair 'big business'' (ggpes4) and 'I like buying counterfeit products because it's like playing a practical joke on the manufacturer of the original products' (ggpes2). Regarding the quality of counterfeit products, item quali1 was present in several Anglo-Saxon scales: 'Most counterfeit goods are as good as the originals' (Furnham and Valgeirsson, 2007); 'Counterfeit of luxury brands have similar quality to the original version' (Phau and Teah, 2009).

Scale development

The scale was developed using exploratory and confirmatory factor analysis.

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Table 3. Principal components analysis.

Factors	Satura-tions	Commun-alities	Corre-lations		Items
Risk for the brand	0.669	0.655	0.677	0.91	rmarq1 – I think that counterfeits infringe brands.
	0.901	0.806	0.821		rmarq2 – In my opinion, counterfeit products harm brand image.
	0.834	0.726	0.759		rmarq3 – For me, counterfeit products devalue the brand image of the originals.
	0.935	0.775	0.778		rmarq7 – I think that because of counterfeit products, brands lose control of their image.
	0.896	0.808	0.801		rmarq8 – I think that because of counterfeit products, brands lose control of their reputation.
Risk for the company	0.878	0.765	0.723	0.88	ecoent2 – I think counterfeits lead to lower sales for companies that market the original brands.
	0.750	0.713	0.689		ecoent3 – In my view, counterfeits represent a loss of revenue for companies that sell the original products.
	0.946	0.856	0.839		ecoent4 – I think counterfeits reduce the sales of companies that market the original brands.
	0.808	0.694	0.701		ecoent5 – For me, counterfeits damage the sales of companies that market the original products.
Social risk	0.857	0.779	0.698	0.81	rsoc1 – I don't like buying counterfeit products because it gives other people a bad image of me.
	0.876	0.748	0.646		rsoc4 – I don't like buying counterfeit products because I'm afraid that other people will be notice it.
	0.739	0.721	0.663		rsoc6 – I don't like buying counterfeit products because that gives a false image of me.
Psychological risk	0.885	0.814	0.799	0.92	rpsy1 – Buying counterfeit products gives me a bad conscience.
	0.922	0.871	0.864		rpsy 2 – If I bought a counterfeit product, I would have scruples.
	0.896	0.887	0.849		rpsy3 – If I bought a counterfeit product, I would feel guilty.
Physical risk	0.785	0.779	0.615	0.76	rphys1 – I think that counterfeit products can be dangerous for those who use them.
	0.907	0.789	0.615		rphys2 – I think that counterfeit products can be dangerous for health.
Legal risk	0.936	0.853	0.722	0.84	rjur4 – I don't like buying counterfeit products because I'm afraid of getting stopped at customs.
	0.863	0.850	0.722		rjur6 – I don't buy counterfeit products because of the risk of seizure.
Ludic dimension and revenge on large corpora-tions	0.626	0.594	0.650	0.89	ggpes1 – I like buying counterfeits because they demonstrate the initiative and ingenuity of the counterfeiters.
	0.585	0.636	0.658		ggpes2 – I like buying counterfeit products because it's like playing a practical joke on the manufacturers of the original products.
	0.658	0.622	0.656		ggpes3 – I like buying counterfeits because they attack large corporations.
	0.497	0.661	0.612		ggpes4 – Buying counterfeits is a way to get back at uncaring and unfair big business.
	0.750	0.664	0.660		ludiq1 – Buying counterfeit products is a bit like a game.
	0.887	0.726	0.693		ludiq2 – It's entertaining to buy counterfeit products.
	0.935	0.748	0.697		ludiq3 – Buying counterfeit products is fun.
	0.831	0.704	0.672		ludiq4 – It's nice to buy counterfeit products.

(Continued)

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Table 3. (Continued)

Factors	Saturations	Communalities	Correlations		Items
Doubt about original	0.907	0.891	0.812	0.90	orig5 – I don't like buying counterfeit products because I don't know where they come from.
	0.943	0.896	0.812		orig6 – I don't like buying counterfeit products because I don't know who has made them.
Low perceived quality difference	0.780	0.624	0.621	0.86	quali1 – Counterfeit products are as good as the original products.
	0.814	0.702	0.714		quali2 – The difference in quality between original and counterfeit products is minimal.
	0.773	0.611	0.630		quali3 – There is no difference in quality between original and counterfeit products.
	0.775	0.687	0.667		quali5 – Counterfeit products perform as well as the original products.
	0.832	0.754	0.759		quali6 – Counterfeit products are as reliable as the original products.
Excessive prices of brands	0.860	0.759	0.501	0.67	prix2 – For me, the price of the original products are a scam.
	0.823	0.694	0.501		prix3 – In my opinion, the prices of original products are exorbitant.
Bargain price of counterfeits	0.760	0.737	0.557	0.72	rfin2 – For me, buying a counterfeit product is getting a bargain.
	0.915	0.824	0.557		rfin3 – I think that buying a counterfeit product is obtaining the brand at a lower cost.
Macroeconomic risk	Items of the macroeconomic dimensions not present in the results of the principal component analysis (PCA) ecomac1 – I think counterfeiting undermines the economy. ecomac2 – I think counterfeiting can have negative consequences on jobs. ecomac3 – For me, counterfeiting creates unemployment.				

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Exploratory factor analysis. An exploratory factor analysis was conducted based on a questionnaire with 68 items taken from the literature and qualitative analysis. The questionnaire was administered to a convenience sample of 226 students. The items were measured by a six-point Likert scale (1 = strongly disagree, to 6 = strongly agree). The data was subjected to a PCA with Promax oblique rotation, with the factors assumed to be correlated. KMO tests (KMO = 0.816) and Bartlett's tests show that the data is well suited to this type of analysis (chi-square = 4892.804 for 703 d.f., $p < 0.001$). The interpretation of dimensions was performed using standard criteria (Kaizer, variance explained and Benzecri). The PCA produces an 11-dimension solution (Table 3) explaining 71.67% of the variance. Communalities are greater than 0.5 for all items. The factors identified cover three types of determinants identified in the literature review:

- negative societal impact combining economic risk for the company and economic risk for the brand;
- individual determinants acting as motivations, such as excessive pricing of the original products, low prices of counterfeits, low perceived difference in quality between the original and counterfeit products, and a factor combining the ludic dimension associated with the purchase of counterfeits and revenge on large corporations;
- individual determinants acting as deterrents with the different facets of perceived risk, such as social risk (presenting a poor self-image to other people), psychological risk (guilt related to the purchase and possession of counterfeit products), physical risk (danger of counterfeit products for health), legal risk (fear of sanctions) and, finally, a dimension related to doubts about the origin of counterfeit products.

Macroeconomic risk does not appear in the structure of the scale. This result, contrary to our expectations, can be explained by the fact that the sample is composed of students, a population that is perhaps less sensitive to the dangers that counterfeiting entails for a country's economy. The literature review (Table 1a) showed conflicting results on this topic. In some studies, awareness of the macroeconomic risks had no effect on the demand for counterfeits (Norum and Cuno, 2009; Tom et al., 1998), while another study came to the opposite conclusion (Chakraborty et al., 1997). In addition, the presence of this dimension in several scales (Kwong et al., 2009; Phau and Teah, 2009) developed in different cultural contexts (China, USA, UK) inclines us not to exclude it prematurely from the analysis. The measurement items of this determinant are retained for the next stages.

Two dimensions identified in the literature are combined into a composite factor: the ludic aspect of purchasing counterfeits and revenge against large corporations. The merger of these two factors is explained by their close proximity. Indeed, the opportunity perceived by some respondents of taking revenge on major corporations is viewed as highly enjoyable. It is therefore not surprising to find these two dimensions merging in the PCA results. Finally, the concept of price emerges in two different forms: the excessive prices of the originals and the bargain prices of the counterfeits. These two dimensions have been identified separately in the literature. For example, Harvey and Walls (2003) show that the higher the price of the original, the more the intention to buy counterfeit products increases. Similarly, the low price of counterfeits encourages their purchase (Wang, 2005).

The psychometric quality of the factors, measured by Cronbach's alpha, is satisfactory with regard to the number of items (Peterson, 1994). Only excessive pricing of brands has a reliability coefficient of less than 0.7. It would nevertheless be difficult to justify eliminating this determinant, whose effect on attitude towards purchase intention of counterfeit products has been empirically demonstrated (Harvey and Walls, 2003). We therefore decided to keep it. Some items from the qualitative study and the literature review were excluded either because of their low communality (< 0.5), or because of their connection to a factor other than expected, or because of their low correlation with the principal factor to which they were connected. Following the exploratory factor analysis, the scale comprised 38 items and 11 dimensions, to which three macroeconomic risk items have been added.

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Confirmatory factor analysis of the scale. A confirmatory factor analysis based on structural equation modeling, using Amos software, was conducted to assess the reliability and discriminant and convergent validity of the scale's determinants of attitudes towards purchasing counterfeits. The maximum likelihood estimation method was used, as this is considered more stable (Hu and Bentler, 1998). The measurement model was fitted to the data from a second field study with a sample of 338 adults (Figure 2 and Appendix 1). To check the stability of the estimated parameters, bootstrapping on 200 samples was carried out.

This model has an acceptable fit with regard to root mean square error of approximation (RMSEA) (0.062) but weaker with regard to goodness-of-fit index (GFI) (0.821) and Tucker Lewis index (TLI) (0.849). The model is characterized by a chi-square of 1440 for 624 d.f., i.e. a parsimony index of 2.31. The weakness of TLI can be explained by the complexity of the model. Indeed, TLI tends to penalize complex models. It is also sensitive to the size of the sample. The number of parameters to be estimated is large (Hu and Bentler, 1998). A *t*-test shows that all the λ_i are statistically significant. The reliability and validity of the measurement model was evaluated following Fornell and Larcker's (1981) recommendations. The scale includes 39 items.[1] Two items with insufficient variance shared with their latent construct were eliminated from the analysis (quali3 and ggpes4).

Reliability was assessed using Jöreskog's rho (1971). The coefficients ranged from 0.729 for the bargain prices of counterfeits dimension to 0.924 for psychological risk, thus testifying to good reliability (Table 4). Convergent validity was assessed by the average variance extracted (convergent validity rho: vc rho > 0.5). This condition is satisfied for all dimensions (Table 4). The discriminant validity of the factors is confirmed if the convergent validity rho of a dimension (vc rho) is greater than the squared correlation between it and other latent constructs. We can then conclude that the dimension includes more information than the variance it shares with another latent construct (Fornell and Larcker, 1981; Hulland, 1999). This condition is also verified (Appendix 2). The measurement model therefore satisfies the conditions of reliability and convergent and discriminant validity defined in the literature.

The results show relatively high correlations between latent constructs.[2] An analysis of these correlations leads to the identification of three groups of interrelated factors. The first group comprises societal determinants (macroeconomic, company and brand), with correlations between 0.730 and 0.762. The second group consists of individual deterrents (psychological, physical, social, origin-related and legal risks), with significant but lower correlations (from 0.415 between physical risk and psychological risk to 0.617 between physical risk and doubt about the origin).

The third set of factors, which are highly correlated, emerged from the confirmatory factor analysis. This group comprises determinants acting as motivations (the ludic dimension, revenge on large corporations, the low price of counterfeits, excessive pricing of the originals, and low perceived quality difference between copies and originals), whose correlations range from 0.536 (between bargain prices vs. excessive prices) to 0.750 (difference between low perceived difference in quality and revenge on large corporations). These groupings are consistent with those emerging from the literature review. When the correlations between latent variables are high, problems with multicollinearity may occur and result in non-significant relationships between first-order latent variables and dependent variables (Bagozzi and Yi, 2012: 24). However, in the proposed conceptual model (Figure 1), the dimensions of the scale are considered as antecedents of attitude towards counterfeit purchase and counterfeit purchase intention. In such a situation, Bagozzi and Yi (2012) underline the importance of second-order models that can address problems of multicollinearity. A second-order structure has been envisaged by combining the first-order latent variables with strong correlations. The question of the reflective or formative character of this second-order model then arises.

Specification of the second-order model. A second-order factor is a general concept that can either be

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Table 4. Confirmatory factor analysis: first-order measurement model.

			Lambda	*t*-test	Jöreskog's rho	Convergent validity
ecomac1	←	Macroeconomic risk	0.760	18.125***		
ecomac2	←	Macroeconomic risk	0.829	26.519***		
ecomac3	←	Macroeconomic risk	0.739	18.880***	0.890	0.729
ecoen2	←	Economic risk to companies	0.671	12.545***		
ecoen3	←	Economic risk to companies	0.764	17.746***		
ecoen4	←	Economic risk to companies	0.803	20.527***		
ecoen5	←	Economic risk to companies	0.706	14.361***	0.891	0.673
rmarq1	←	Brand equity risk	0.702	14.927***		
rmarq2	←	Brand equity risk	0.713	15.821***		
rmarq3	←	Brand equity risk	0.738	17.300***		
rmarq7	←	Brand equity risk	0.779	18.567***		
rmarq8	←	Brand equity risk	0.707	14.691***	0.907	0.661
ludiq1	←	Ludic dimension	0.656	11.716***		
ludiq2	←	Ludic dimension	0.799	22.351***		
ludiq3	←	Ludic dimension	0.733	15.316***		
ludiq4	←	Ludic dimension	0.722	15.866***	0.886	0.661
ggpes1	←	Revenge on large corporations	0.642	10.611***		
ggpes2	←	Revenge on large corporations	0.700	14.060***		
ggpes3	←	Revenge on large corporations	0.796	20.960***	0.841	0.641
prix2	←	Exorbitant prices of originals	0.889	12.084***		
prix3	←	Exorbitant prices of originals	0.624	7.726***	0.825	0.708
rfin2	←	Bargain price of counterfeits	0.750	11.532***		
rfin3	←	Bargain price of counterfeits	0.587	10.188***	0.729	0.578
quali1	←	Low perceived quality difference	0.611	9.481***		
quali2	←	Low perceived quality difference	0.619	9.678***		
quali5	←	Low perceived quality difference	0.713	12.835***		
quali6	←	Low perceived quality difference	0.722	14.979***	0.842	0.572
rsoc1	←	Social risk	0.818	22.024***		
rsoc4	←	Social risk	0.770	19.733***		
rsoc6	←	Social risk	0.710	18.037***	0.883	0.716
rpsy1	←	Psychological risk	0.800	20.976***		
rpsy2	←	Psychological risk	0.869	31.721***		
rpsy3	←	Psychological risk	0.822	23.608***	0.924	0.803
rphys1	←	Physical risk	0.835	13.965***		
rphys2	←	Physical risk	0.755	13.143***	0.860	0.756
rjur4	←	Legal risk	0.754	11.598***		
rjur6	←	Legal risk	0.802	11.205***	0.845	0.732
orig5	←	Doubt about origin	0.825	22.221***		
orig6	←	Doubt about origin	0.880	29.901***	0.908	0.831

***significant at 0.001.

represented (reflective model) or be constructed (formative model) by its first-order latent dimensions. Jarvis et al. (2003) propose a set of criteria to determine whether a second-order formative model should be used. We adopted these criteria to determine the nature of our model.

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1. In formative models, indicators are seen as defining second-order constructs. In our model, first-order constructs do not define second-order constructs, but represent them. The 'individual deterrents' dimension is reflected by several perceived risks, some of which are consistent with the prevailing view of risk (Jacoby and Kaplan, 1972), such as psychological risk and social risk, plus the risks specific to counterfeiting (legal risk, related illegality of purchasing counterfeit goods). Similarly, the second-order latent construct 'negative societal impact' is not an index defined by the various economic risks. This general concept is represented by different dimensions reflecting the negative consequences of counterfeiting, at the societal level.
2. In a formative model, changes in first-order indicators are supposed to cause changes in second-order constructs. In our model, the inherent nature of the construct 'individual deterrents' would not be called into question if changes occurred in the factors that reflect it. Thus not taking account of the less important first-order dimensions in the three second-order latent constructs does not change the inherent nature of the second-order latent constructs. For example, the fact of having added a specific risk dimension (legal risk) and removed the loss of time risk does not change the nature of the second-order latent variable 'individual deterrents'.
3. In a formative model, first-order indicators do not necessarily share a common theme. In our model, all the first-order indicators share a common theme with the second-order latent construct they reflect. For example, the latent indicators of the size of the second-order dimension 'negative societal impact of counterfeiting' have an economic dimension as a common theme. All the dimensions of the second-order variable 'individual deterrents' have the perception of a risk as a common theme. The dimensions of the factor 'individual motivations' combine the factors that make buying counterfeits attractive (pleasure, small perceived difference in quality, low prices).
4. In a formative model, eliminating an indicator may alter the conceptual domain of the construct. This is not the case in our model. In the second-order model, removing the dimension 'economic risk for business' does not change the nature of second-order latent construct, which is still societal impact. Furthermore, Churchill's paradigm recommends, if necessary, eliminating some variables to improve the model.
5. In formative models, a change in the value of one of the indicators is not supposed to be associated with a change in all other indicators. To justify the move to a second-order model, we have emphasized that the first-order latent variables supposed to reflect the same second-order factor have relatively high correlations. Because of these correlations, a change in one of these indicators should result in a change in the other indicators of the same second-order dimension.
6. In a formative model, the indicators are not supposed to have the same antecedents and consequences. Our second-order model is specified so that the second-order latent variables share the same consequences: attitude towards the purchase of counterfeits and the intention to purchase counterfeits.

Analysis of each of these criteria leads us to conclude that the second-order model developed in this paper is reflective. This means that the second-order variables are represented by their first-order dimensions. Each general concept (negative societal impact, individual deterrents and individual motivations) is manifested by a number of specific dimensions that are themselves latent variables (Becker et al., 2012).

Confirmatory second-order factor analysis. In view of the literature, we had assumed that the determinants of attitude towards the purchase of counterfeits could be grouped into three meta-factors: one societal and two individual meta-factors (motivations and deterrents). Since the strong correlations between some first-order latent constructs is consistent with this conceptualization, a model linking the 13 first-order dimensions to three second-order latent constructs was tested on the same sample (n =

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338). This model has an acceptable goodness of fit with respect to RMSEA (0.061), for a chi-square of 1517 and 687 d.f., i.e. a parsimony index of 2.209. GFI (0.804) and TLI (0.845) remain low.[3] A *t*-test shows that all the λ_i are statistically significant.

Jöreskog's rho coefficients range from 0.736 for the 'revenge on large corporations' dimension to 0.916 for the 'economic risk for business' dimension, which shows good reliability (Table 5). The average variance extracted, measured using the convergent validity rho (vc rho) is greater than 0.5 for all dimensions with the exception of 'revenge on large corporations'. This determinant, strongly present in the fields with student samples, seems less prominent in the sample composed of adults, which is more representative of the overall population. Nevertheless, it is still relevant for describing the motivations of some consumers, especially young people, and was retained in the model. Convergent validity is thus verified (Table 5).

While the principal components analysis (PCA) allowed us to identify 11 dimensions, the results of the confirmatory analyses suggest a solution of 13 first-order dimensions grouped into three second-order concepts: negative societal impact, individual motivations and individual deterrents. These results are consistent with the proposed conceptual model, constructed on the basis of the literature (Figure 1). It was therefore decided to retain this structure. In addition, the confirmatory analysis conducted with the adult sample allows macroeconomic risk to be re-integrated. Finally, the ludic and 'revenge on large corporations' dimensions are distinct latent constructs. Indeed, a model adjusted to 12 determinants, including a dimension merging the ludic and revenge on large corporations factors, has a significantly poorer goodness of fit (Chi-square = 1890 for 687 d.f., Chi-square difference = 27.8 for 1 d.f., $p < 0.001$). This model was therefore rejected.

The structure of the second-order three-dimension model is validated. The first meta-factor, which reflects the societal consequences of counterfeiting, is composed of macroeconomic risk, economic risk for the company and risk for the brand (Figure 3). The second meta-factor – individual motivations – comprises five first-order determinants: excessive prices of the originals, bargain prices of counterfeits, low perceived quality difference, revenge on large corporations and enjoyment of purchasing counterfeits. The third meta-factor consists of individual determinants that are analyzed as deterrents: social risk, psychological risk, legal risk, physical risk and doubt about the origin of counterfeits.

The latent second-order factors are mutually correlated. Negative social impact is negatively correlated with individual motivations (- 0.361) and positively with individual deterrents (0.554). Individual motivations and individual deterrents are negatively correlated (-0.541).

The second-order measurement model is thus consistent with the defined conceptual framework. It reproduces the structure of the dimensions identified in the literature. Its reliability and convergent validity are acceptable. It adequately represents the relations between the observed variables and the postulated latent concepts. The next stage now involves assessing its predictive validity though an explanatory model, incorporating attitudes towards the purchase of counterfeits and the intention to purchase counterfeits.

Explanatory model of attitudes towards counterfeit product purchase and purchase intention

Testing the model

In the causal model, the groups of second-order determinants are directly related to attitude towards the purchase of counterfeits, measured using two items ('I like buying counterfeit goods', 'I like owning counterfeit products'). The negative societal impact and the individual deterrents are assumed to determine negatively attitude towards the purchase of counterfeits, whereas a positive relationship is expected between individual motivation and attitude towards the purchase of counterfeits. The same second-order determinants are also directly linked to the intention to purchase counterfeits, and indirectly linked via attitude towards the purchase of counterfeits. Purchase intent is measured by one item ('I intend to buy counterfeit products'). The items of the dependent variables were measured using a six-point Likert scale (from 1 = strongly disagree, to 6 = strongly agree).

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Table 5. Confirmatory factor analysis: Second-order measurement model.

			Estimated parameter	*t*-test	Jöreskog's rho	Convergent validity
ecomac_1	←	Macroeconomic risk	0.774	22.294***		
ecomac_2	←	Macroeconomic risk	0.774	20.989***	0.866	0.684
ecomac_3	←	Macroeconomic risk	0.682	16.648***		
ecoen2	←	Economic risk to companies	0.758	20.777***		
ecoen3	←	Economic risk to companies	0.800	25.100***	0.916	0.733
ecoen4	←	Economic risk to companies	0.799	21.956***		
ecoen5	←	Economic risk to companies	0.758	20.069***		
rmarq1	←	Brand equity risk	0.821	20.448***		
rmarq2	←	Brand equity risk	0.758	21.039***		
rmarq3	←	Brand equity risk	0.698	16.118***	0.898	0.639
rmarq7	←	Brand equity risk	0.635	12.379***		
rmarq8	←	Brand equity risk	0.645	12.344***		
ludiq1	←	Ludic dimension	0.522	9.250***		
ludiq2	←	Ludic dimension	0.779	19.671***	0.824	0.543
ludiq3	←	Ludic dimension	0.655	14.065***		
ludiq4	←	Ludic dimension	0.621	10.393***		
ggpes1	←	Revenge on large corporations	0.600	10.307***		
ggpes2	←	Revenge on large corporations	0.602	8.654***	0.736	0.481
ggpes3	←	Revenge on large corporations	0.614	9.615***		
prix1	←	Exorbitant price of originals	0.907	4.534***	0.788	0.665
prix3	←	Exorbitant price of originals	0.534	4.598***		
rfin2	←	Bargain price of counterfeits	0.913	10.864***	0.764	0.639
rfin3	←	Bargain price of counterfeits	0.484	6.697***		
quali1	←	Low perceived quality difference	0.681	13.715***		
quali2	←	Low perceived quality difference	0.572	8.217***	0.847	0.582
quali5	←	Low perceived quality difference	0.750	16.158***		
quali6	←	Low perceived quality difference	0.687	13.787***		
rpsoc1	←	Social risk	0.798	24.025***		
rsoc4	←	Social risk	0.744	18.502***	0.886	0.721
rsoc6	←	Social risk	0.769	19.561***		
rpsy1	←	Psychological risk	0.733	17.886***		
rpsy2	←	Psychological risk	0.876	41.891***	0.909	0.771
rpsy3	←	Psychological risk	0.808	24.486***		
rphys1	←	Physical risk	0.837	23.714***		
rphys2	←	Physical risk	0.753	14.605***	0.860	0.756
rjur4	←	Legal risk	0.752	14.491***		
rjur6	←	Legal risk	0.801	16.433***	0.844	0.730
orig5	←	Doubt about origin	0.796	23.435***		
orig6	←	Doubt about origin	0.758	20.992***	0.844	0.730

***significant at 0.001.

The model was tested in the context of a final field study with a sample representative of the French population (n = 327). Respondents were recruited on the basis of gender, age and occupational category quotas, derived from Institut national de la statistique et des études économiques

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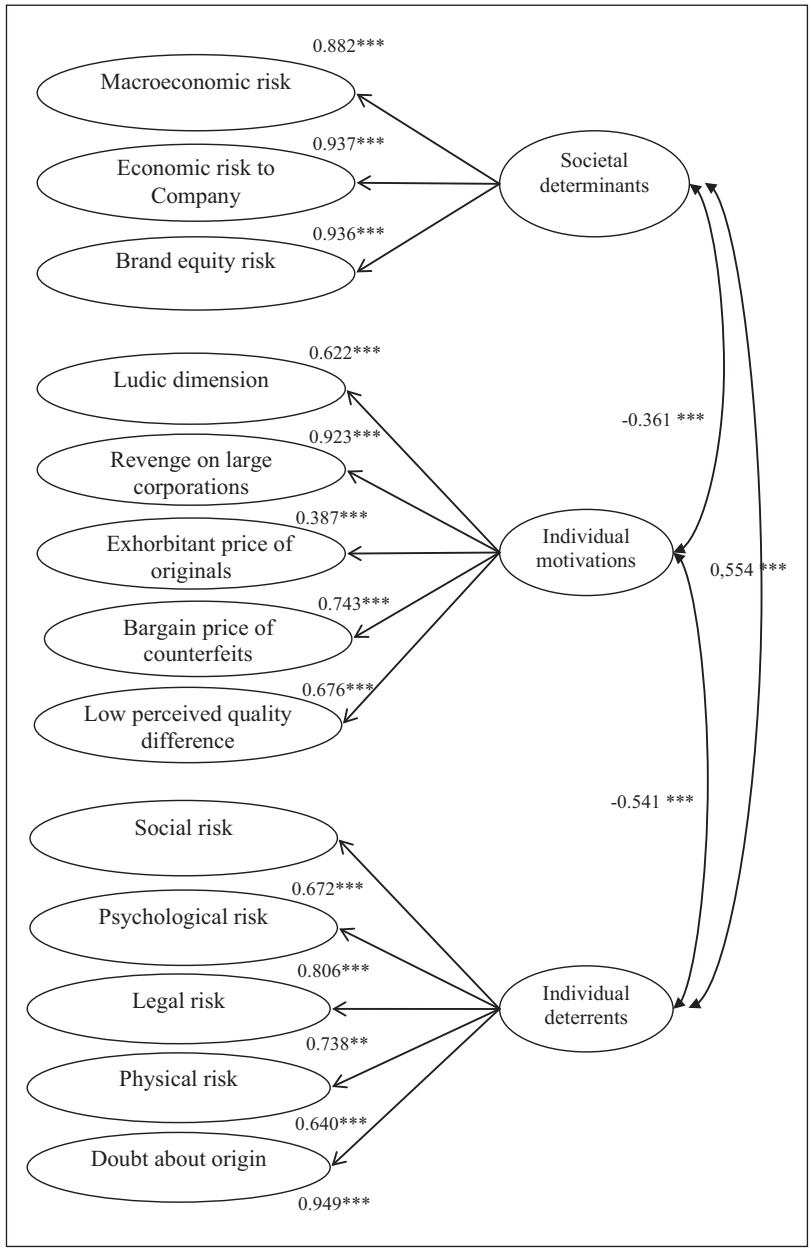


Figure 3. Second-order measurement model.

(INSEE) census data. The questionnaire consisted of the 39 items selected at the conclusion of the previous field. The fitted model corresponds to the measurement model from the second-order confirmatory factor analysis.

Results

The explanatory model, incorporating second-order latent variables, has slightly improved fit indices compared to a model testing the direct effect of the 13 determinants on the dependent variables.

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Chi-square is 1744 for 802 d.f. against 1859 for 801 d.f., or an index of parsimony that changes from 2.32 to 2.17. GFI and TLI increase respectively from 0.787 to 0.797 and from 0.751 to 0.845. Finally, the RMSEA of the second-order model is 0.06 against 0.064. The weak performance of GFI (0.797) can be explained by the sample size, given the number of parameters to be estimated. The use of this indicator too frequently leads to the fit of the model being rejected, with a sample smaller than 250 (Jolibert and Jourdan, 2006: 470). Our sample of 327 individuals is not far from this threshold and the model is complex. RMSEA is 0.06, the threshold for a close fit recommended by Jolibert and Jourdan (2006). Hair and colleagues (2010) consider that when the number of observed variables is greater than or equal to 30 (which is the case here) and the sample is more than 250, the RMSEA acceptability threshold is 0.07 (Hair et al., 2010: 646, Table 4). As for TLI, it should under these experimental conditions and according to the same authors be greater than 0.9, whereas here it is equal to 0.845.

All the λ_i are significant at the 95% threshold. The reliability of the model was assessed using Jöreskog's rho. Their value is greater than 0.5 for all dimensions (Table 6), lying between 0.736 (revenge on large corporations) and 0.916 (economic risk for the company) for the determinants of behavior towards counterfeiting. It is 0.914 for the dependent variable of attitude towards the purchase of counterfeits.[4] Convergent validity rho is greater than 0.5 for all dimensions except 'revenge on large corporations', which has a value close to the threshold (0.481). The explanatory model therefore meets the requirements of reliability and validity recommended by Fornell and Larcker (1981).

As in the second-order measurement model, the contributions of various first-order determinants to their latent construct are all positive and statistically significant (Figure 4).

The two individual meta-factors acting either as deterrents or as motivations are the only ones that explain attitude towards purchasing counterfeits and towards purchase intention (Figure 4). While the impact of individual motivations on attitude towards the purchase of counterfeits is positive, the impact of deterrents is negative. The effect of these two second-order factors on counterfeit purchase intention is indirect, with attitude towards the purchase of counterfeits acting as a mediating variable. The societal dimension, although correlated with the other two second-order factors, does not influence the dependent variables.

Discussion

Theoretical implications

The main theoretical contribution of this research is to show the various determinants of attitude towards the purchase of counterfeits. Three explanatory dimensions of attitude towards the purchase and the purchase intention of counterfeit products have been identified: one social dimension and two individual dimensions, one of which comprises deterrents, the other motivations.

The explanatory model allows us to identify which determinants contribute most to attitude towards the purchase of counterfeits. The results show that negative social impact of an economic nature has no explanatory power with regard to attitudes towards the purchase of counterfeits or attitudes towards the intention to purchase them. Although contrary to our expectations, which were based on some empirical studies (Phau and Teah, 2009), this result is consistent with the findings of other studies (Norum and Cuno, 2009). Hence, it appears that consumers' attitudinal and behavioral responses are dictated more by individual factors, acting as motivators or deterrents, than by societal considerations. Furthermore, the predictive power of motivations ($\gamma_1 = 0.525$) is much stronger than that of deterrents ($\gamma_2 = -0.266$). One possible reason why only motivations and deterrents affect attitude could be that the items making up these two dimensions are much more attitudinal (e.g. I like, I do not like) than those constituting the societal factor.

We were not able to confirm a direct relationship between the second-order determinants and purchase intent. This lack of direct effect is consistent with other results (Koklic, 2011). Indeed, in our results, deterrents and motivations act indirectly on the intention to buy counterfeits. The effects of individual deterrents and motivations operate through the attitude towards counterfeiting, which acts as a mediating variable. The hypothesis of a direct effect

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Table 6. Parameters of the explanatory model.

			Estimated parameter (λ)	*t*-test	Jöreskog's rho	Convergent validity
ecomac_1	←	Macroeconomic risk	0.774	22.263***		
ecomac_2	←	Macroeconomic risk	0.774	20.927***	0.866	0.684
ecomac_3	←	Macroeconomic risk	0.682	16.647***		
ecoen2	←	Economic risk to companies	0.758	20.751***		
ecoen3	←	Economic risk to companies	0.800	25.017***	0.916	0.733
ecoen4	←	Economic risk to companies	0.800	21.999***		
ecoen5	←	Economic risk to companies	0.759	20.095***		
rmarq1	←	Brand equity risk	0.820	20.363***		
rmarq2	←	Brand equity risk	0.758	21.065***		
rmarq3	←	Brand equity risk	0.698	16.100***	0.898	0.639
rmarq7	←	Brand equity risk	0.635	12.392***		
rmarq8	←	Brand equity risk	0.646	12.356***		
ludiq1	←	Ludic dimension	0.519	9.116***		
ludiq2	←	Ludic dimension	0.774	19.719***	0.824	0.543
ludiq3	←	Ludic dimension	0.654	13.864***		
ludiq4	←	Ludic dimension	0.624	10.549***		
ggpes1	←	Revenge on large corporations	0.611	10.713***		
ggpes2	←	Revenge on large corporations	0.590	8.226***	0.736	0.481
ggpes3	←	Revenge on large corporations	0.612	9.412***		
prix1	←	Exorbitant prices of originals	0.910	4.753***		
prix3	←	Exorbitant prices of originals	0.535	4.813***	0.788	0.665
rfin2	←	Bargain price of counterfeits	0.912	11.659***		
rfin3	←	Bargain price of counterfeits	0.484	6.907***	0.764	0.639
quali1	←	Low perceived quality difference	0.681	13.629***		
quali2	←	Low perceived quality difference	0.575	8.340***	0.847	0.582
quali5	←	Low perceived quality difference	0.747	16.042***		
quali6	←	Low perceived quality difference	0.687	13.728***		
rsoc1	←	Social risk	0.796	24.184***		
rsoc4	←	Social risk	0.743	18.629***	0.886	0.721
rsoc6	←	Social risk	0.771	19.788***		
rpsy1	←	Psychological risk	0.733	17.920***		
rpsy2	←	Psychological risk	0.874	42.393***	0.909	0.771
rpsy3	←	Psychological risk	0.810	25.272***		
rphys1	←	Physical risk	0.840	23.838***		
rphys2	←	Physical risk	0.750	14.595***	0.860	0.756
rjur4	←	Legal risk	0.750	14.425***		
rjur6	←	Legal risk	0.804	16.359***	0.844	0.730
orig5	←	Doubt about origin	0.794	23.379***		
orig6	←	Doubt about origin	0.759	20.879***	0.844	0.730
cfutur	←	Attitude to counterfeit purchase	0.885	28.684***		
cfutur	←	Attitude to counterfeit purchase	0.835	16.636***	0.914	0.841
cfutur	←	Counterfeit purchase intention	1.000	–	1.000	1.000

***significant at 0.001.

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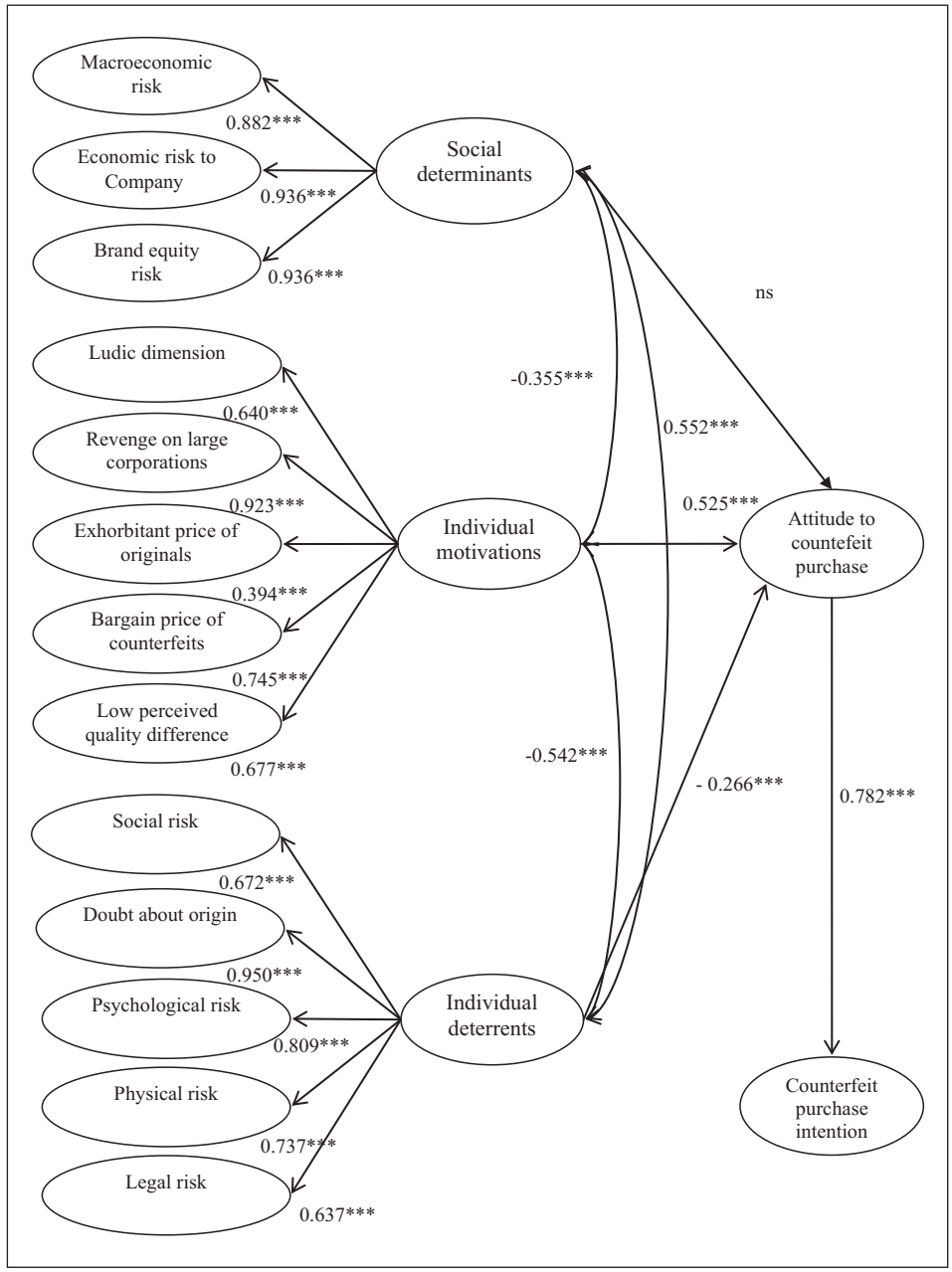


Figure 4. Explanatory model of attitude towards counterfeit purchase and purchase intent.

was based on the results of Michaelidou and Christodoulides (2011), who had found a direct relationship between perceived risk and purchase intention regarding counterfeits. These authors were interested in symbolic and experiential products. The specificities of the product category studied could explain the divergence of their results from our own.

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Managerial implications

From a managerial point of view, this study explores and highlights the most effective deterrents and motivations with regard to combatting the sale of counterfeit goods. One of the most striking results is the lack of explanatory power of the negative, predominantly economic, societal impact. The factors of this dimension (macroeconomic risk, risk for the company, risk for the brand), while constituting beliefs shared by the respondents[5], have no effect on attitude and purchase intent variables. Although, as citizens, people may think that employees may be affected by counterfeiting, as consumers they seem largely indifferent to this type of argument and more sensitive to determinants acting either as individual motivations (such as price, revenge on large corporations, and low quality differential) or as individual deterrents (the health danger of counterfeit products, and psychological or social risk, for example). The results suggest that communication campaigns aimed at discouraging people from buying counterfeit goods should be reconsidered. These campaigns often put forward economic arguments, as in the 'La contrefaçon, non merci' campaign ('Counterfeiting, no thank you'), initiated in 2006 by the Comité National Anti Contrefaçon (National Anti-Counterfeiting Committee). But this determinant does not influence attitudes towards counterfeit purchase and purchase intention.

Another significant managerial contribution of this study is the strong presence of factors related to the individual. The logical consequence of this finding is that communication campaigns should primarily focus on individual motivations and deterrents. The public authorities and brands would do better emphasizing the psychological and social risks run in purchasing counterfeits, and the dangers and questionable origin of these products. In addition, some consumers take pleasure in buying counterfeits. The ludic dimension therefore emerges as an incentive factor to be combatted as a matter of priority. This can be done by focusing on other individual variables such as psychological or social risk. One promising way to reduce purchases of counterfeits would be to highlight the morally reprehensible nature of counterfeiting and peer group or reference group reaction to it, since social judgment is a powerful driver of behavior.

Similarly, emphasizing the physical risks to which consumers are exposed in buying and using counterfeit products may be a way of turning them away from counterfeiting. Shock campaigns similar to those used in recent years for road safety should be considered. As well as displaying dangerous items, such campaigns could profitably show their consequences for human beings (an accident resulting from counterfeit mechanical parts, injuries caused by a counterfeit food processor, etc.).

Another possible focus for communication could be legal sanctions. Harvey and Walls (2003) showed that the propensity to buy a counterfeit rather than the original is influenced jointly by the likelihood of incurring a penalty and of its severity. In our study, the risk of being sanctioned is perceived as moderate (3.36 on a scale of 6). The threat of legal sanctions could be effective so long as the consumer is informed about them and believes there is a high probability of their being enforced. A campaign around penalties and the severity of their application could be an avenue to explore, with an added message such as 'Every year X French are sentenced for possession of counterfeit goods' or 'Daniel J., fined X euros for bringing back six counterfeit polo shirts as holiday souvenirs'.

While the fight against the possibility of being in a position to purchase counterfeits is the province of governments, companies and brands can nevertheless consider the role of determinants such as price or quality in their marketing strategy. The question here needs to be raised as to the justification and consequences of skimming and premium price strategies and enhancement of brand equity adopted by certain companies. The higher the price of a branded product, the more the intention to buy counterfeit products increases (Harvey and Walls, 2003). Our results confirm that excessive pricing of originals is a powerful incentive for buying counterfeits. The formation of the perceived value of a product is something that needs to be thought about.

Limitations and future research

This study has several limitations, some of which suggest areas for future research. One limitation is the lack of a purchasing context. The people questioned replied in relation to their attitude and their behavior towards the purchase of counterfeits,

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without giving any information about the products, where they were for sale, and the sellers. As a result there is probably a reduction in the impact of perceptual variables such as price and perceived quality. We can assume that the force of the determinants varies according to the product category concerned. The physical, legal, psychological or social risks vary according to whether it is matter of buying a T-shirt, a watch, a household appliance, contact lenses or medication. Lastly, attitude towards the purchase of counterfeits may be influenced by the place of purchase, the seller or the purpose of the purchase (for oneself, as a gift, as a souvenir, etc.). To better understand consumers' attitudes and behavior with regard to purchasing counterfeits, it is necessary to put it in context. This can be done using an experimental design to control variables related to the product (category, price) or the place of purchase (store, market).

A second limitation is that this study does not consider the effect of moderating variables, such as involvement in the product category or sensitivity to brands. Bian and Moutinho (2011) were not able to establish an explanatory effect of involvement on the intention to buy counterfeits. Possibly the status of this variable needs to be reconsidered.

The validated measurement model allows the importance of different determinants among the population to be identified and provides opportunities for the characterization and identification of specific consumer segments. For it is conceivable that consumer segments vary in terms of their sensitivity to the dimensions included in the scale, namely the ludic dimension, attitude towards large corporations, and social, psychological and physical risk. Acquiring a better understanding of consumers in relation to counterfeiting would allow better targeting of actions taken to combat it.

Another line of research, necessitating intercultural studies, would be to question the universality of the determinants of attitude towards the purchase of counterfeits. For certain determinants, the divergent results found in previous studies may be rooted in cultural factors. This seems to be the case for revenge on large corporations. While such a feeling encourages Australians and Americans to buy counterfeits (Penz and Stöttinger, 2005; Tom et al., 1998), it does not appear to apply to the British or the people of Hong Kong (Kwong et al., 2009). Such contradictory results have also been observed with regard to perceived legal risk, which does not influence Americans (Albers-Miller, 1999) but reduces the intention to buy counterfeits among Chinese consumers (Harvey and Walls, 2003).

Conclusion

This research has allowed us to propose a conceptual framework of the determinants of attitude towards the purchase of counterfeits. It integrates the results of previous work and thus provides a more comprehensive explanatory model. The different empirical studies conducted in this research allow us to better define and identify the determinants of attitude towards the purchase of counterfeits. This model, tested and validated by exploratory and confirmatory procedures, sheds light on the motivations and deterrents likely to influence individual behavior in relation to counterfeiting.

At a theoretical level the research highlights the wide variety of determinants of attitude towards the purchase of counterfeit products and the intention to purchase them. It identifies the main individual motivations and deterrents in relation to the phenomenon of counterfeiting. It also suggests the most effective ways of combatting the growth of purchasing counterfeits, for it is by reducing the demand for such products that one can hope to act, upstream, on the production and marketing of fakes. Lastly, this article identifies research areas to explore in order to increase our understanding of this phenomenon.

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Notes

1. At the end of the PCA, the scale consisted of 38 items, but the three items of the economic dimension were reintroduced, making 41 items. Two items were excluded during the confirmatory factory

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analyze (CFA), making the final number of items equal to 39.
2. The table of correlations among the variables can be supplied by the authors on request.
3. The number of parameters to be estimated in the second-order model is greater than in the first-order model.
4. Intention to purchase counterfeits is measured by a single item. It is therefore not possible to calculate Jöreskog's rho.
5. The mean scores for the first-order determinants of this dimension are relatively high: macroeconomic risk: 3.9/6; risk for the company: 4.2/6; and risk for the brand: 4.05/6.

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Appendix 1. Structure of the samples.

	Field 1: Convenience sample of students		Field 2: Convenience sample of adults		Field 3: Representative sample		2006 census
Gender	Number	%	Number	%	Number	%	%
Male	92	41	175	52	156	48	48
Female	133	59	162	48	171	52	52
Total	225	100	337	100	327	100	100
Age	Number	%	Number	%	Number	%	%
Under 20	10	4	3	1	27	8	8
20–24	189	84	51	15	50	15	8
25–34	22	10	108	32	73	22	25
35–54	0	0	89	26	91	28	26
55–64	0	0	44	13	40	12	14
65 and over	0	0	41	12	45	14	20
Total	221	98	336	99	326	100	100
Occupation	Number	%	Number	%	Number	%	
Farmers	0	0	3	1	4	1	1
Traders, artisans, entrepreneurs	0	0	38	11	19	6	3
Managers and higher intellectual professions	0	0	72	21	35	11	8
Intermediate professions	0	0	30	9	33	10	14
White collar	0	0	77	23	68	21	17
Blue collar	0	0	20	6	37	11	14
Unemployed	0	0	16	5	8	2	
Pupils, students	224	99	8	2	51	16	
Not in labor force	1	0	45	13	13	4	25
Others	1	0	29	9	57	17	18
Total	225	100	338	100	325	99	

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Appendix 2. Discriminant validity of the first-order measurement model: correlations matrix of squares of latent concepts.

	Macro economic risk	Economic risk to Company	Brand equity risk	Ludic dimen-sion	Large corp. dimension	Social risk	Doubt about origin	Psycho-logical risk	Physical risk	Legal risk	Exhorbitant price	Bargain price	Perceived quality
Economic risk to Company	0.533												
Brand equity risk	0.341	0.581											
Ludic dimension	0.101	0.097	0.161										
Large corp. dimension	0.188	0.059	0.123	0.498a									
Social risk	0.135	0.082	0.188	0.002	0.001								
Doubt about Origin	0.296	0.179	0.260	0.110	0.088	0.260							
Psychological risk	0.272	0.191	0.272	0.136	0.104	0.339	0.381						
Physical risk	0.213	0.122	0.143	0.094	0.118	0.091	0.379	0.110					
Legal risk	0.103	0.120	0.169	0.026	0.040	0.136	0.238	0.172	0.105				
Exhorbitant Price pricing	0.068	0.052	0.089	0.187	0.239	0.012	0.081	0.154	0.056	0.059			
Bargain price	0.126	0.022	0.091	0.462	0.312	0.062	0.161	0.298	0.130	0.008	0.287		
Perceived quality	0.072	0.031	0.078	0.432	0.563	0.004	0.124	0.052	0.188	0.094	0.158	0.364	
Jöreskog's rho	**0.729**	**0.673**	**0.661**	**0.661**	**0.641**	**0.716**	**0.831**	**0.803**	**0.756**	**0.732**	**0.708**	**0.578**	**0.572**