

---

A N N A L E S  
UNIVERSITATIS MARIAE CURIE-SKŁODOWSKA  
LUBLIN – POLONIA

VOL. LVIII, 4

SECTIO H

2024

---

MAGDALENA JAŻDŻEWSKA-GUTTA

m.gutta@ug.edu.pl

University of Gdańsk. Faculty of Economics  
119/121 Armii Krajowej St., Sopot 81-824, Poland  
ORCID ID: <https://orcid.org/0000-0001-5693-8362>

ANNA MARIA NIKODEMSKA-WOŁOWIK

anna.nikodemska-wolowik@ug.edu.pl

University of Gdańsk. Faculty of Economics  
119/121 Armii Krajowej St., Sopot 81-824, Poland  
ORCID ID: <https://orcid.org/0000-0003-3650-5214>

DAGMARA WACH

dagmara.wach@ug.edu.pl

University of Gdańsk. Faculty of Economics  
119/121 Armii Krajowej St., Sopot 81-824, Poland  
ORCID ID: <https://orcid.org/0000-0001-6419-9870>

*Decoding Online Consumer Behaviour Towards Counterfeits:  
Insights from Systematic Literature Review and Future  
Research Framework*

**Keywords:** counterfeiting; consumer behaviour; online shopping; tangible products; systematic literature review

**JEL:** D91; D11; L81

**How to quote this paper:** Jażdżewska-Gutta, M., Nikodemska-Wołowik, A.M., & Wach, D. (2024). Decoding Online Consumer Behaviour Towards Counterfeits: Insights from Systematic Literature Review and Future Research Framework. *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, 58(4), 87–125.

### Abstract

**Theoretical background:** Counterfeiting poses a significant global challenge, negatively impacting businesses and consumers. This issue has been exacerbated by the rapid growth of online shopping, which has increased the availability and accessibility of counterfeit products. Despite the growing prevalence of counterfeit goods in the online marketplace, there remains a substantial research gap in understanding the dynamics of online counterfeit consumption. Previous studies have primarily focused on offline counterfeit markets, leaving a void in the literature regarding the unique factors that influence consumer behaviour and intentions in the digital environment.

**Purpose of the article:** The aim of the article is to examine the factors influencing consumer behaviour and intentions in the context of purchasing counterfeits online. The conducted systematic review aims to fill the existing research gap by identifying new and overlooked themes and suggesting directions for future research in this area.

**Research methods:** The article integrates empirical studies on online counterfeit purchases conducted between 2008 and 2024. The analysed articles were classified based on the year of publication, research methodologies, and characteristics of the study population.

**Main findings:** The review identifies four thematic categories: person-centric, social and cultural, market-related, and risk-related themes. The insights provide valuable guidelines for researchers, highlighting areas for further investigation, and offer practical recommendations for policymakers and marketers to combat counterfeiting and protect consumer interests online.

### Introduction

Counterfeiting is a significant global issue and diminishing the worldwide demand for such products is vital to protect businesses and safeguard consumers (Wilson, Sullivan et al., 2016). Astonishingly, studies suggest that about one-third of consumers globally purchase counterfeits intentionally (Sterling & Peterson, 2020). Despite the establishment of anti-counterfeiting measures, the allure of counterfeits persists, with consumers showing consistent interest.

It is imperative, thus, to examine the demand-side dynamics to thoroughly grasp the problem (Pratt & Zeng, 2019). Data from the European Union Intellectual Property Office (EUIPO) reveals that a significant 37% of young Europeans, aged between 15 and 24, have intentionally and knowingly engaged in the purchase of counterfeit goods (EUIPO, 2022). Consumer reactions seem to be shaped more by personal factors, serving either as incentives or disincentives, than by broader socio-economic factors (Viot et al., 2014). Additionally, efforts to shift the responsibility of counterfeiting surveillance onto consumers met resistance, as they viewed this expectation as unfair (Large, 2014).

Counterfeit products, often substandard, pose risks to consumer health and safety, with greater risks in online purchases compared to traditional retail (Tham et al., 2019). Sterling and Peterson (2020) underscored the gravity of this, noting the surge of counterfeits in online marketplaces. Predominantly, a surge in online shopping has been observed, attributable to the volatile environment, particularly post the 2008 recession, and recently exacerbated by the SARS-CoV-2 pandemic of 2020. Consequently, a multitude of retailers transitioned to an online-first model (Kowalczyk et

al., 2021; Rathi et al., 2022). With this acceleration in online purchasing, counterfeiters have discovered additional avenues to circumvent the legitimate supply chain and sell directly to consumers who are enticed to purchase counterfeits (Sterling & Peterson, 2020). Furthermore, numerous e-commerce sites lack effective regulatory mechanisms to ensure reliability in product specification or advertising, rendering these products unavailable for physical inspection (Rojek, 2017). Therefore, online buyers, especially those less digitally advanced, are susceptible to such deceptions. Online buyers may also feel a false sense of security due to perceived anonymity.

Despite the dynamic growth of online shopping, existing literature has not sufficiently covered this topic, as indicated by Gupta and Lyndem (2024) and Samaddar et al. (2024). Therefore, the purpose of this structural literature review is to synthesize empirical research on counterfeiting and consumer approach to gain a deeper understanding of the underlying factors that influence consumers' behaviours, and intentions regarding online counterfeit purchases. It highlights emerging and overlooked themes, suggesting future research directions to address these complexities. The review focuses on key consumer concerns in cyberspace, such as security, trust, risk, legal issues, and the specifics of the online purchasing process. By exploring person-centric, sociocultural, and market-related themes, it aims to inform policy-making and marketing strategies for combating counterfeiting and protecting online consumers. This article addresses the following research questions:

RQ1: How has the scholarly research on consumer behaviour towards online counterfeit product purchases changed over time?

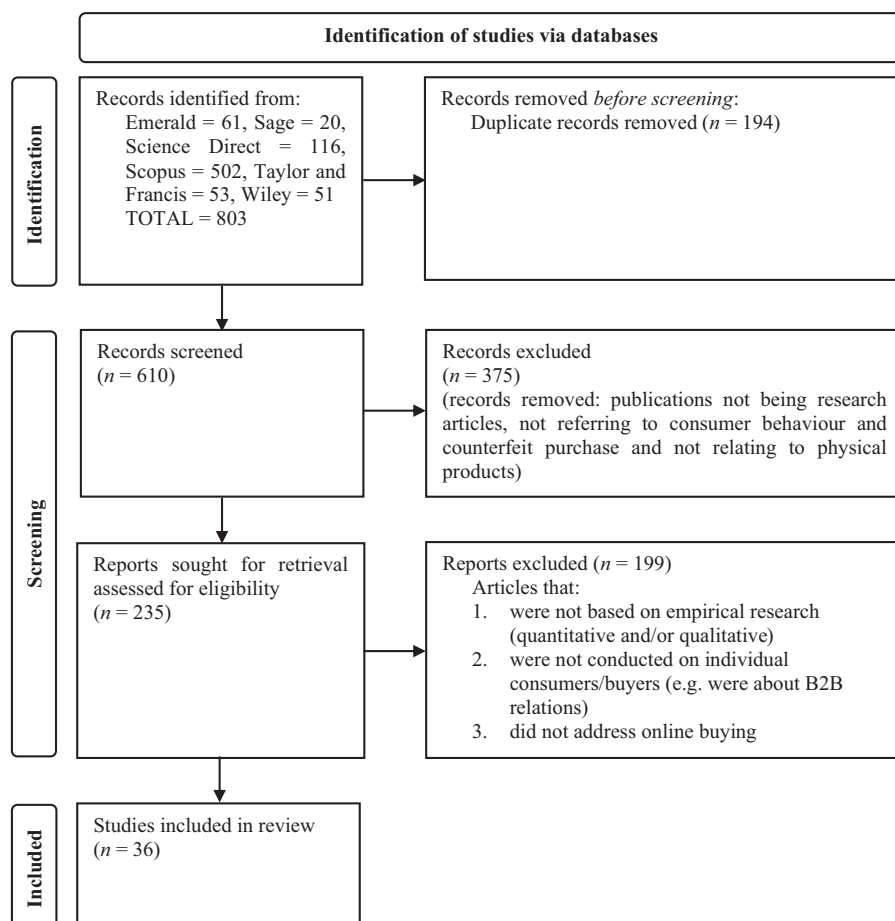
RQ2: What key conceptual themes have emerged in the study of consumer mindset regarding counterfeit online purchases, as revealed by a systematic literature review?

RQ3: What future research directions arise from emerging and overlooked themes in online counterfeit purchase literature?

This systematic literature review was used to examine the existing counterfeit studies in consumer behaviour and online shopping that were published between January 2008 and January 2024. The justification for setting the starting year is the fact that the global recession of 2008/9 has revised the current consumer behaviour, influenced their more rational and economical purchasing decisions, and led to the search for cheaper substitutes for previously purchased products (Hampson & McGoldrick, 2013). The following years showed that the difficult, turbulent and increasingly less predictable conditions of consumer behaviour did not end after the above-mentioned recession. Turbulent conditions in consumer behaviour have continued globally since then. Additionally, 2008 saw the leak of a draft of the Anti-Counterfeiting Trade Agreement (ACTA), sparking debates on intellectual property, and the start of ACTA negotiations, which concluded in 2010. Additionally, in 2008, an EU directive was published (EU 2008) to approximate the laws of the Member States relating to trademarks.

## Research methods and procedures

The analysis included only peer-reviewed scientific articles from well-recognized journals in academia. The literature search was conducted using the following electronic journal databases: Elsevier, Scopus, Routledge/Taylor and Francis, Wiley, Emerald, SAGE. These databases were selected due to their comprehensive coverage of high-quality, peer-reviewed academic journals across diverse disciplines, ensuring a thorough and reliable synthesis of existing research. Additionally, we selected the databases that allowed for detailed searches within abstracts and keywords.



**Figure 1.** PRISMA flow diagram

Source: Authors' own study based on (Page et al., 2021).

In the first step, search criteria for articles containing terms such as counterfeit, on-line/online, e-commerce, internet and consumption or consumer in the title, ab-

stracts, keywords and content were defined to identify a core set of scientific articles. Counterfeit\* and consum\* were combined by the Boolean AND operator, while the other terms were combined by OR operators (counterfeit\* AND (“on-line” OR online OR “e-commerce” OR “internet”) AND consum\*). The articles from all databases were transferred to Mendeley and then all duplicate records were deleted. Ultimately, a total of 610 works were selected for further selection (Figure 1).

To avoid bias resulting from different understanding of the meanings and contexts of the analysed studies, the screening of the articles was simultaneously conducted by three researchers. Initially, a total of 375 records were excluded based on specific criteria designed to filter out irrelevant publications. These records were removed because they did not meet the necessary conditions of being empirical research articles that address both counterfeiting and consumer-related topics. Although “consumer” and “counterfeiting” were used as search words in the title, abstract, and keywords, some articles only mentioned these terms without making them the main theme of the study. Additionally, we excluded all articles that clearly did not refer to consumer behaviour or did not relate to physical products. Since we attempted to find literature on consumer behaviour regarding the purchase of counterfeited physical products, a significant portion of sources had to be removed from the database as they focused on pirated music, movies, games, and other types of multimedia and software. We have also limited review to the articles published in English. These stringent criteria ensured that only the most relevant and focused studies were included in the next step of the review.

The final assessment of the articles was based on previously defined search criteria and an additional criterion: articles based on empirical research (quantitative and/or qualitative) conducted on individual consumers/buyers (not B2B). The last criterion relates to the online shopping channel. This selection criterion could not be introduced at the first stage, as a significant portion of the articles did not explicitly mention the online shopping channel, even if they were somewhat related to online shopping. The analysis was carried out concurrently and independently by three researchers, and articles that did not meet the previous criteria were collectively reviewed in a meeting. A total of 36 articles were qualified for review. The protocol used in this study corresponds to existing SLRs, especially theme-based reviews (Pradhan et al., 2023; Sharma et al., 2023), with a special emphasis on discussion and indication of directions for further research. Consequently, we observed that we ended up with only a limited number of articles. This suggests that the topic is under-investigated and may present a research gap.

In the data analysis component of our systematic literature review, we systematically structured the examination of the selected articles into three distinct stages to ensure a thorough understanding of the literature. Initially, a bibliometric analysis was conducted to scrutinize the chronological distribution of the publications and to evaluate the prevalent keywords used across these studies. Subsequently, each article was assessed based on the research methodologies and theoretical frameworks

employed by the authors. This approach allowed us to understand the foundational aspects influencing the research field. Following this, we refined our analysis by categorizing the articles according to how they specifically addressed online shopping behaviours. For those studies where online shopping was a primary focus rather than a mere mention, a thematic analysis was performed to draw out deeper insights. Lastly, in identifying future research directions, our focus was on pinpointing the gaps related to consumer behaviour concerning counterfeit product purchases. This involved analysing themes that are commonly explored in counterfeit consumer behaviour research but are overlooked in studies examining online shopping behaviours for counterfeit products. This structured analytical approach aids in highlighting critical insights and emphasizing areas needing further scholarly attention.

## Results

### Categorization of research

Figure 2 indicates that the highest number of publications related to counterfeit products were published between 2016–2017 and 2021–2024. This trend might suggest an increasing awareness of the issue of counterfeiting, and efforts to understand the factors driving consumer behaviours. We categorized the articles into two groups: core online shopping behaviour studies and partial online shopping references.

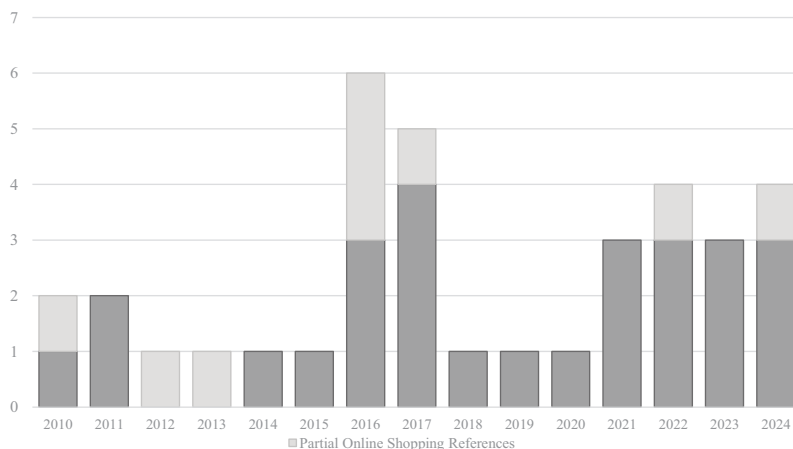
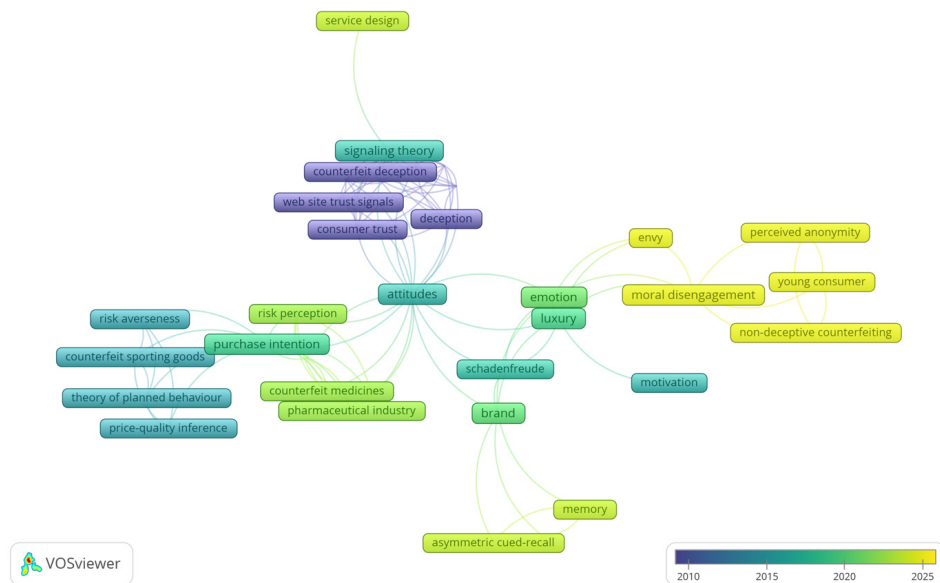


Figure 2. Number of articles in 2008–2024

Source: Authors' own study.

Using the VOSviewer software, we checked the co-occurrence relationships of terms contained in the article keywords (Figure 3). In the first years covered by the study, there was a noticeable emphasis on trust in both sellers and the product information they posted on websites, which then moved towards emotions and the social aspect. The latest research introduces the concept of moral detachment, an aspect not found in previous publications, revealing a sense of cognitive dissonance due to its dual nature.



**Figure 3.** Overlay visualization

Source: Authors' own study.

In total, studies on the intention to purchase counterfeit products were conducted in 10 countries, with 3 studies covering multiple countries on a single continent, and 2 studies spanning at least two countries across two continents. The location of research was unspecified in 3 articles. Additionally, 63% of the studies omitted information regarding their timing. The largest number of articles focused on the purchasing behaviour and attitudes towards counterfeits of respondents from the USA, China (5 articles), and India.

### Most frequently used data collection and analysis methods

The final analysis covered articles (27 papers) involving both qualitative and quantitative research. Some studies incorporated a combination of both qualitative and quantitative methods (in four cases) at varying stages of research, while others

employed different methods within the same study when covering different countries and groups of respondents. A comprehensive matrix detailing the utilized data collection methods and types of responders is presented in Appendix 1.

Online surveys were the predominant data collection method, and this trend is attributed to the widespread use of platforms (e.g. SOJUMP, MTurk). In addition to online surveys, researchers also employed traditional data collection methods, such as paper questionnaires distributed at various locations, most commonly in shopping centres. In the selected articles, research conducted in the US predominates, with six instances identified. In each case, quantitative methods were employed, predominantly computer-assisted web interviewing (CAWI). Therefore, it should be noted with a degree of caution that in the case of studies conducted in the USA, quantitative methods dominated, particularly CAWI. China ranks second, where, in addition to quantitative studies, qualitative research was also conducted, specifically through in-depth interviews (IDIs). Interestingly, IDIs are the most prevalent, having been applied in five of the cases under consideration, whereas focus group interviews (FGIs) were utilized in only two studies.

Somewhat surprisingly, in as many as 8 out of the 27 articles selected for this analysis, the research sample consisted of students. Thus, among all the studies, a significant portion specifically targeted students, while a comparable proportion examined a mix of typical and diverse consumers. Notably, observations suggest a systematic increase in the number of studies involving students over successive years. This reveals a significant limitation in the analysed articles, where the choice of sample introduced considerable bias. The over-reliance on specific groups, like students, without adequately representing the broader society, compromises the generalizability of the findings (Wells, 2014). The overwhelming majority of the research utilized a convenience sampling method. As a result, the samples often comprised random individuals who might not genuinely represent the broader demographic of the intended population. Substantial variations in the sizes of study groups were also apparent. Excluding qualitative research, which typically involves small respondent groups, quantitative research encompassed groups ranging from 42 to over 1,282 individuals. Occasionally, the methodology descriptions were convoluted, making it challenging to ascertain the study group and sample size.

In the rapidly evolving field of data science, the selection of appropriate data analysis methods is crucial for extracting meaningful insights from complex datasets to serve as a foundational step in guiding researchers, data analysts, and practitioners through the myriad techniques available for data interpretation. Among others, Sharma et al. (2023), Hao et al. (2019) and Celik et al. (2022) noted this importance and summarized the analytical methods used in their SLR. Thus, Table 1 was prepared showing which analytical methods dominate in the research field that is the subject of our study. In the analysed scientific studies, the most used analytical methods were SEM, CFA, regression, and ANOVA. SEM allowed researchers to analyse complex relationships between variables, considering both observed and latent variables. CFA



was used to confirm the factor structure of measurement tools, while regression and ANOVA were employed to analyse relationships and differences between groups.

**Table 1.** Analytical methods used in SLR

Main data analysis methods	Sources
SEM	(Chiu et al., 2014; Gupta & Lyndem, 2024; Marticotte & Arcand, 2017; Samaddar et al., 2024; Shan, Jiang, Peng Cui et al., 2021)
Conjoint	(Le Roux et al., 2016, 2019)
CFA	(Chaudhry & Stumpf, 2011; Chiu et al., 2014; Mavlanova & Benbunan-Fich, 2010; Shan, Jiang, Peng Cui et al., 2021)
EFA	(Shan, Jiang, Peng Cui et al., 2021)
PROCESS Macro	(Dommer & Parker, 2023; Peinkofer & Jin, 2023)
Regression	(Chaudhry & Stumpf, 2011; Clemons et al., 2016; Luo & Park, 2024; Ofori-Parku & Park, 2022; Raman & Pramod, 2017; Robinson & Doss, 2011)
Logistic regression	(Dima et al., 2017; Levi et al., 2021; Mavlanova & Benbunan-Fich, 2010; Pueschel et al., 2017)
GLM	(Herstein et al., 2015; Robinson & Doss, 2011)
ANOVA	(Dommer & Parker, 2023; Feng et al., 2023; Mavlanova & Benbunan-Fich, 2010; Raman & Pramod, 2017; Shan, Jiang, Peng Cui, et al., 2021)

Source: Authors' own study.

## Dominant theories

In the current research on counterfeiting within the consumer mindset, theories related to human behaviour are predominantly referenced by the authors. Table 2 includes theories and concepts that hold an established position in the tradition of scientific studies.

A review of preceding studies concludes that a significant majority were predicated on Ajzen's (1985) Theory of Planned Behaviour (TPB). Despite its inception in the 1980s (as an extension of the antecedent Theory of Reasoned Action), the TPB has found extensive application across diverse domains of consumer research, where it has been frequently adapted and expanded. However, in addressing the issue of counterfeit purchases, researchers have significantly broadened the array of theories employed. By incorporating, for instance, social identity theory or signalling theory, they have tended to underscore the role of external factors, including environmental factors, situations, and the influence of others, not included in the TPB. From the perspective of our study, signalling theory is particularly appropriate. A sender transmits a signal to a recipient in a communication process characterized by asymmetric information (Spence, 1973) which mirrors the process of buying counterfeits, where the demand side of the market is often underinformed. Conversely, the reliance on cognitive dissonance has facilitated the incorporation of such critical factors as fear or embarrassment, and risk perception.

**Table 2.** Main theories and concepts used in the analysed articles

Theories and concepts	Sources
Theory of planned behaviour	(Chiu et al., 2014; Herstein et al., 2015; Li et al., 2018; Marticotte & Arcand, 2017; Martinez & Jaeger, 2016; Ofori-Parku & Park, 2022; Pueschel et al., 2017; Samaddar et al., 2024)
Theory of reasoned action	(Ofori-Parku & Park, 2022)
Cognitive dissonance	(Bardey et al., 2022; Pueschel et al., 2017)
Consumer risk/perceived risk	(Herstein et al., 2015; Li et al., 2020; Ofori-Parku & Park, 2022; Pueschel et al., 2017; Samaddar et al., 2024; Shan, Jiang, Peng Cui et al., 2021)
Social identity theory	(Bardey et al., 2022; Li et al., 2020; Marticotte & Arcand, 2017)
Signalling theory	(Mavlanova & Benbunan-Fich, 2010; Peinkofer & Jin, 2023)
Veblen's approach	(Dima et al., 2017)
Flow theory	(Islam et al., 2021)
Prospect theory	(Luo & Park, 2024)

Source: Authors' own study.

Moreover, the Veblen's theory also appeared (Veblen, 1899). It provides a socio-economic critique of the consumption patterns of the affluent and their role in social stratification. Veblen's analysis is grounded in the concept of conspicuous consumption, which he defines as the spending of money on and the acquiring of luxury goods and services to publicly display economic power.

In the realm of online consumer behaviour research, the application of the flow theory was posited as a significant theoretical advancement (Islam et al., 2021). This concept encapsulates an optimal state of engagement wherein individuals become so immersed in an activity that external concerns become inconsequential. The phenomenon of "flow" is characterized by a transient period of complete immersion, mastery, and gratification, which manifests as spontaneous participation in e-commerce transactions. Individuals experiencing "flow" are those who are deeply absorbed and fervently participate in enjoyable online activities. In their 2021 study, Islam et al. explored the extent to which materialism and the pursuit of novelty, through mediating and moderating mechanisms, shape consumer attitudes toward the purchase of luxury counterfeit goods on a preeminent social commerce platform globally.

In their exploration of financial and functional risk, Luo et al. (2024) applied Prospect Theory, which posits a more empirically aligned model of risk-related decision-making. Diverging from the classical economic presumption of rationality, this theory incorporates psychological factors into choice behaviour. It emphasizes the role of reference points – subjective benchmarks against which gains and losses are assessed. For example, an individual's existing wealth may influence their financial risk assessments, leading to the rejection of objectively favourable gambles due to a shift in perspective from absolute outcomes to relative changes.

### Categorisation of articles

All the articles that were eligible for further analysis were grouped based on the type of reference they made to the online shopping environment (Table 3). We were able to determine eight categories.

**Table 3.** Classification of online shopping context appearance in the selected articles

Online context	Description	References
Online as the main shopping environment / main theme	Online purchase of counterfeit luxury products (online as an analysed shopping environment but not compared to other channels)	(Gupta & Lyndem, 2024)
	Online pharmacies – an increased role in the proliferation and consumption of substandard and falsified medicines	(Ofori-Parku & Park, 2022)
	Consumer perceptions on responsibility for selling counterfeits in different retailing contexts.	(Peinkofer & Jin, 2023)
	Factors influencing the online counterfeit market and the policies available to deal with this threat	(Raman & Pramod, 2017)
	Understanding and analysing the behaviour of young consumers when purchasing counterfeit products online	(Samaddar et al., 2024)
	Counterfeiters, using the internet, can exploit product presentations and website signals to present fake goods as authentic	(Mavlanova & Benbunan-Fich, 2010)
	Additional assurances needed in online shopping in countries with less online shopping experience. Differences in trust to online shopping possibly based on online shopping experience	(Clemons et al., 2016)
	Indication of the motives behind counterfeit purchase	(Thaichon & Quach, 2016)
	Significant role of Compulsive Internet Use in counterfeits purchases in social commerce	(Islam et al., 2021)
Comparison of online vs. other places of purchase	Differences between buying online and from street vendors regarding perceived behavioural control, purchase intention, risk averseness, and consumers' attitudes	(Chiu et al., 2014)
	No difference between online and offline hedonic shopping experience	(Chaudhry & Stumpf, 2011)
	Shy consumers shift to online shopping for counterfeit goods	(Li et al., 2018)
	Place of purchase does not determine purchase to the same extent as similarity to the original product	(Le Roux et al., 2016)
	Place of purchase as an important determinant of consumer's purchase behaviour of counterfeits depending on product category	(Le Roux et al., 2019)
	Online shopping involves higher risk of purchasing counterfeit products than offline	(Luo & Park, 2024)
Online as a variable	Online shopping distinguished in the survey (but no wider comments)	(Dima et al., 2017)
	Question regarding online purchasing in the questionnaire	(Robinson & Doss, 2011)
Online shopping as an experimental condition	The respondents exposed to scenarios describing an online retailer selling counterfeits	(Marticotte & Arcand, 2017)
	Online as a shopping channel in an experiment	(Dommer & Parker, 2023)
	Purchasing counterfeits online	(Shan, Jiang, Peng Cui et al., 2021)
	Consumers assessed psychosocial risk after reading an article on increasing online counterfeit consumption	(Feng et al., 2023)

Online context	Description	References
Respondent's expressions	Awareness of counterfeit sellers' dishonesty among respondents	(Bian et al., 2016)
	Happiness and joy of bargain purchase	(Bardey et al., 2022)
	Feeling cheated and ashamed after unknowingly buying counterfeit goods online	(Li et al., 2020)
	Resentment over the availability of counterfeit well-known brands on the internet	(Pueschel et al., 2017)
	Online shopping as an opportunity for reaching counterfeits or finding a bargain	(Samaddar & Gandhi, 2022)
Implications	Social campaigns using the Internet do not appear to influence consumer behaviour positively	(Herstein et al., 2015)
	Utilization of designated and verified online retailers for authentic brand purchases	(Yoo & Lee, 2012)
	B2C e-commerce channel should be used to convey messages to discourage the purchase of counterfeits	(Razmus et al., 2024)
	Luxury brand retailers should uphold online prestige and foster brand-centric communities for a luxurious buyer experience	(Iyer et al., 2022)
The Internet only incidentally mentioned as a POS and/or distribution channel	Counterfeiters can trade on the Internet without prior consumer inspection using presentational devices to signal their apparent trustworthiness	(Ding et al., 2017)
	Particularly in developing countries of South Asia exposure of people is more to traditional media than internet	(Anwar Mir, 2013)
	Online purchase of products for children needs additional search for information and autonomous safety checks to reduce the risk	(Bastos & Levy, 2012)
Future research directions	Investigating consumers' awareness, attitude and intent toward purchasing fashion counterfeit goods on the Internet	(Kim & Karpova, 2009)
	Due to increasing interest in online shopping, there is a need for more specific research, focusing on people who purchase online	(Sharif et al., 2016)
	Exploration of online shopping behaviour	(Martinez & Jaeger, 2016)

Source: Authors' own study.

The first category includes articles that fully address the issue of online shopping (Clemons et al., 2016; Gupta & Lyndem, 2024; Mavlanova & Benbunan-Fich, 2010; Ofori-Parku & Park, 2022; Peinkofer & Jin, 2023; Raman & Pramod, 2017; Samaddar et al., 2024; Thaichon & Quach, 2016). These studies examine factors such as consumer behaviour, perceptions, and the impact of online marketplaces on the proliferation of counterfeit products. The research covers consumer attitudes towards counterfeits, and the effectiveness of policies to combat online counterfeit markets. However, not all articles analyse the online shopping environment itself; some simply conduct research among online shoppers without examining the specifics of the online context, nor do they analyse specific constructs or psychographic traits that would be typical for online shopping.

The second type of articles offers a comparison of consumer behaviours between online shopping and other shopping channels. These studies highlight several differences, including differences in perceived behavioural control, purchase intention, risk averseness, and consumer attitudes between online and offline purchases. Secondly, consumer traits and preferences play a significant role. Some research suggests that

shy consumers are more likely to shift to online shopping for counterfeit goods (Li et al., 2018). In contrast, other studies find no significant difference between the online and offline hedonic shopping experience. Thirdly, the place of purchase influences consumer behaviour in varying degrees (Chaudhry & Stumpf, 2011). For some consumers, the similarity to the original product is more important than the place of purchase (Le Roux et al., 2016). However, the place of purchase can be an important determinant of behaviour, particularly concerning counterfeit products and depending on the product category (Le Roux et al., 2019). Lastly, risk perception is higher in online shopping, with studies emphasizing the greater risk of purchasing counterfeit products online compared to offline (Luo & Park, 2024). This highlights the need for enhanced measures to protect online consumers.

In two of the studies, online shopping was listed as one of the questions in the survey; however, no detailed analysis was presented about this particular shopping environment (Dima et al., 2017; Robinson & Doss, 2011). Four other articles (Dommer & Parker, 2023; Feng et al., 2023; Marticotte & Arcand, 2017; Shan, Jiang, Peng Cui et al., 2021) were based on experiments where online shopping was one of the conditions, meaning the participants were placed in an online shopping situation. In both categories, however, the results of the studies did not underscore the specificity of purchasing on the internet in a way that would allow for further detailed investigation.

The next category of studies allows for a more in-depth analysis. It contains articles based on qualitative research, from which we extracted respondents' answers that addressed online shopping. From these responses, we determined emerging issues not always identified by the authors of the referenced articles, as they focused on different aspects of counterfeiting literature. Respondents exhibited a range of emotions and awareness levels regarding counterfeit products, including an awareness of counterfeit sellers' dishonesty among respondents, happiness and joy from finding a bargain, despite the potential risks associated with counterfeit goods, feelings of being cheated and ashamed after unknowingly purchasing counterfeit goods online, resentment among consumers over the availability of counterfeit well-known brands on the internet, or an opportunity to reach counterfeits or find a bargain.

The remaining categories address online shopping to a lesser extent. In four articles we were able to find relevant implications for theory or practice regarding online shopping of counterfeits. These implications relate to the limited effectiveness of social campaigns using the internet in positively influencing consumer behaviour, the importance of utilizing designated and verified online retailers for authentic brand purchases, and the need for luxury brand retailers to uphold online prestige and foster brand-centric communities for a luxurious buyer experience. In a similar vein, some studies set future research directions regarding the online purchase of counterfeits. These directions include the exploration of online shopping behaviour, the need for more specific research focusing on people who purchase online due to the increasing interest in online shopping, and investigating consumers' awareness,

attitudes, and intent toward purchasing fashion counterfeit goods on the internet. The last group contains some reference to online shopping for counterfeits in the results or conclusions, but it is not the subject of further in-depth analysis.

**Emergent themes and constructs**

Thematic analysis was drawn upon the works of Le Roux (2019), Hussain et al. (2017), and Viot et al. (2014). The emergent themes identified in this study are categorized into four groups: person-centric themes, social (inclusive of legal aspects) and cultural themes, market-related themes, and risk-related themes.

*Person-centric themes*

Themes related to personal factors (see Table 4), which include psychographics and moral considerations, are essential for understanding the variations in consumer reactions to counterfeit products available online.

**Table 4.** Emerging person-centric themes and related constructs

Themes	Factor/construct	Research outcome (relationship and significance)	References
Emotions	Emotions in general	Emotions play a significant role in purchasing counterfeits	(Feng et al., 2023; Marticotte & Arcand, 2017)
	Discomfort	Feeling bad after purchasing a counterfeit	(Samaddar & Gandhi, 2022)
		“Shy” (as named in the paper) consumers discreetly buy counterfeits online	(Li et al., 2018)
	Resentment / Anger	Consumers outraged by the sale of counterfeits on the Internet	(Pueschel et al., 2017)
	Envy	Malicious envy encourages online shoppers to purchase counterfeited products	(Gupta & Lyndem, 2024)
	Schadenfreude	Schadenfreude is positively correlated with the intention to buy and the attitude toward counterfeiting and negatively correlated with the attitude toward the original brand	(Marticotte & Arcand, 2017)
Morality	Hedonic benefits (related by the authors with emotions)	In a social commerce context, hedonic benefits are positively associated with attitude toward luxury counterfeits	(Islam et al., 2021)
	Moral judgment	Negative impact on purchase intention	(Ofori-Parku & Park, 2022)
		Moral disengagement	Positively related to counterfeit purchase intention and moderates the relationship between counterfeit attitude and purchase intention
	Malicious envy leads to moral disengagement, thus resolving the moral dilemma often linked with counterfeiting		(Gupta & Lyndem, 2024)
Needs	Psychological need	Positive impact of belongingness on counterfeits purchasing	(Thaichon & Quach, 2016)

Themes	Factor/construct	Research outcome (relationship and significance)	References
Attitudes	Attitudes in general	Positive attitudes towards counterfeits have a favourable impact on the intention to purchase them	(Samaddar et al., 2024)
Beliefs	Behavioural control	The online shoppers have stronger behavioural control than buyers from street vendors	(Chiu et al., 2014)
Cognitive traits	Awareness of counterfeits	Young people are aware of the problems associated with counterfeits on the Internet	(Raman & Pramod, 2017)
Values / personality traits	Materialism	In a social commerce, materialism has a positive relationship with attitude toward luxury counterfeits	(Islam et al., 2021)
Addictive behaviour	Compulsive internet use	Compulsive internet use has a positive relationship with the attitude toward counterfeits	(Islam et al., 2021)

Source: Authors' own study.

Emotions as factors determining consumer behaviour, are significant drivers of purchasing decisions, particularly in relation to the online purchase of counterfeit goods (Feng et al., 2023; Marticotte & Arcand, 2017). Among them, *schadenfreude* is positively correlated with the intention to buy and the attitude toward counterfeiting and negatively correlated with the attitude toward the original brand (Marticotte & Arcand, 2017). This emotion occurs when we derive satisfaction from someone else's hardships or setbacks. Moreover, analysed papers also refer to a sense of discomfort associated with purchasing counterfeit products online (Li et al., 2018; Samaddar & Gandhi, 2022). However, they do not elaborate on this notion nor specify it (for instance, whether it pertains to cognitive dissonance). In addition to *schadenfreude*, other intense emotions mentioned in the reviewed literature were identified: anger and resentment as reactions towards counterfeits appearance in online outlets (Pueschel et al., 2017). Furthermore, Gupta and Lyndem (2024), focusing on another expressive emotion – envy, assert that malicious envy leads to moral disengagement (explained below), driving consumers to seek retribution against brands by purchasing counterfeits. This behaviour reflects the role of envy in influencing moral evaluations and consumer decisions within the luxury sector.

In general morality, as a construct, resonates distinctly in the articles analysed. Ofori-Parku and Park (2022) found that moral judgment adversely affects purchase intentions, with immoral perceptions of substandard or counterfeit medicines significantly deterring consumers. Concurrently, Samaddar et al. (2024) were focused on more complex construct originating from social cognitive theory – moral disengagement, which describes a process of cognitive restructuring that enables individuals to engage in unethical behaviour without experiencing conflict with their internal moral standards. The authors assert that moral disengagement has a positive correlation with the intention to purchase counterfeits and moderates the link between the attitude towards counterfeits and the purchase intention.

Other studies on the online shopping of counterfeits have demonstrated a positive influence on such purchases by psychological factors, including an attitude that accepts counterfeits (Samaddar et al., 2024) and belongingness (Thaichon & Quach,

2016). It is worth noting that this approach associates, although not explicitly, one of the Maslow's basic needs with the subject of counterfeits.

While examining purchasers with respect to an alternative psychological construct: beliefs, Chiu et al. (2014) suggest that individuals engaging in online shopping exhibit enhanced behavioural control over their purchasing actions compared to consumers procuring goods from terrestrial vendors. It is relevant to note the researchers' reference to a specific market segment in the context of cognitive traits; specifically, they posit that young consumers are aware of the issues implicated by the availability of counterfeit products online (Raman & Pramod, 2017). However, in certain instances, the behaviour of individuals transcends their self-regulatory capabilities. Contemporary internet users frequently become engrossed in the digital realm, developing an addiction to the constant presence within the virtual world. This phenomenon of compulsive internet use has been highlighted by Islam et al. (2021). The same authors claim that in a social commerce context, hedonic benefits and materialism are positively associated with attitude toward luxury counterfeits.

#### *Social and cultural themes*

Based on the analysis of selected scientific articles, we found the following themes: objective norms and legal context, subjective norms and ethics, cultural and social dimensions (Table 5). The objective norms and legal context provide a framework for understanding the regulatory challenges and enforcement limitations faced by authorities. Subjective norms and ethics delve into the dilemmas and justifications consumers encounter when purchasing counterfeit goods. Lastly, the cultural and social dimensions explore how societal values and peer influences shape consumer behaviour towards counterfeits. Together, these themes offer a comprehensive lens through which the complexities of counterfeit commerce can be examined, highlighting the need for interdisciplinary approaches to develop effective strategies against the proliferation of counterfeit goods in the digital marketplace.

Broadly understood objective norms, i.e. adopted, and accepted (sometimes imposed by those in power) legal regulations, are very rarely linked in current research with buyers' behaviour towards counterfeits. Most empirical studies suggest a degree of indifference among buyers; they contend that culpability should not be assigned to them for the procurement of counterfeit goods, particularly when no measures were taken to prevent these goods from infiltrating the market (Raman & Pramod, 2017). Additionally, there is an observed deficiency in consumer education regarding the safeguarding against counterfeit products (Thaichon & Quach, 2016). Contrarily, Dima et al. (2017) assert that consumers demonstrate a reluctance to engage in the purchase of counterfeit items, influenced by potential legal consequences and moral judgments. Chaudhry and Stumpf (2011) underscore ethical concerns, emphasizing their substantial impact on the intent to purchase counterfeit goods. The onus of responsibility is argued to lie with the market's supply side. Consequently, it is



imperative to ascertain under what conditions, if any, consumers exhibit interest in the legal implications of such transactions. Chaudhry and Stumpf (2011) found a positive link between collectivist behaviours and the use of counterfeit movies and medicines, but not necessarily their purchase frequency.

**Table 5.** Social and cultural themes and related constructs

Themes	Factor/construct	Research outcome (relationship and significance)	References
Objective norms and legal context	Legal aspects	Consumer avoid purchasing counterfeits due to legal and moral aspects	(Dima et al., 2017)
		Consumers resist accusations of buying counterfeits	(Raman & Pramod, 2017)
		Consumers not familiar with penalties and legal consequences of buying fakes	(Thaichon & Quach, 2016)
Subjective norms and ethics	Ethical concern / ethical values	Ethical concerns played a significant role in shaping purchase intentions of fakes	(Chaudhry & Stumpf, 2011)
Conspicuous consumption	Product conspicuousness	Product conspicuousness moderate the link between materialism and luxury counterfeit purchase intention	(Islam et al., 2021)
Cultural and social dimensions	Collectivism	Positive link between collectivist behaviours and the use of counterfeit movies and medicines, but not necessarily their purchase frequency	(Chaudhry & Stumpf, 2011)
	Face consciousness	Higher level of face consciousness exhibits a greater inclination to select luxury counterfeits	(Samaddar et al., 2024)
	Social networks	Positive influence of opinions on SN on buying fakes	(Thaichon & Quach, 2016)
	Social pressure	Consumers who purchase counterfeits online are less easily influenced by social pressure	(Chiu et al., 2014)

Source: Authors' own study.

Scholarly inquiry has partially addressed the relationship between cultural factors and counterfeit consumption. While some studies have identified variances attributable to cultural diversity or significant inter-country disparities, there remains a gap in pinpointing the specific cultural elements driving these differences. For example, Chaudhry and Stumpf (2011) found a positive link between collectivist behaviours (i.e. emphasizing group cohesion and interdependence) and the use of counterfeit movies and medicines, but not necessarily their purchase frequency. In turn, Samaddar et al. (2024) noticed that a higher level of face consciousness (i.e. concern for one's public image, reputation, dignity, and honour in the eyes of others) exhibited a greater inclination to select luxury counterfeits. The subject of luxury products was also addressed in a different context by Islam et al. (2021), who asserted that product conspicuousness moderates the link between materialism and luxury counterfeit purchase intention.

In the current discourse, the potency of social influence is unequivocal. Research into online social networks by Thaichon and Quach (2016) observed a positive correlation between social network opinions and the propensity to purchase counterfeit goods. Conversely, Chiu et al. (2014) contend that individuals who engage in the online procurement of counterfeit products exhibit a diminished susceptibility

to social influence. Like the case with person-centric themes, here too, numerous gaps can be discerned that require exploration through research focused narrowly on aspects specific to the purchase of counterfeits online, as presented in section 8.

*Market-related themes*

The next step encompasses the analysis of specific purchasing circumstances, the intended use of the purchased product, as well as the significance of trust in these purchases and the brand of the product (Table 6).

**Table 6.** Market-related themes

Themes	Factor/construct	Research outcome (relationship and significance)	References
Circumstances and situations of purchase	Bargain	Possibility of buying products like originals at an attractive price	(Samaddar & Gandhi, 2022)
		Positive emotion of finding a bargain	(Bardey et al., 2022)
	Counterfeit availability	Internet offers convenient access to wide range of counterfeits	(Samaddar & Gandhi, 2022; Thaichon & Quach, 2016)
	Counterfeit affordability/price	Positive influence on purchasing decision	(Thaichon & Quach, 2016)
	Importance of place of purchase	The place of purchase impact counterfeit purchase behaviour depending on the product category	(Le Roux et al., 2016, 2019)
Purchase-related trust	Erosion in trust	Erosion of trust does not negatively impact repurchase intentions; however, the loss of trust is greater when associated with an online seller rather than a third-party seller	(Peinkofer & Jin, 2023)
	Trust in seller	Trust in the seller is a significant predictor of the willingness to purchase counterfeits	(Mavlanova & Benbunan-Fich, 2010)
	Trust in cultural context	Geographical variance exists in e-commerce trust seen as routine in developed markets, while in China, vendors must first prove quality	(Clemons et al., 2016)
The product's intended use	Purchasing for oneself versus for someone else	Consumers who have received counterfeit goods as a gift tend to become a frequent counterfeit buyer and user	(Thaichon & Quach, 2016)
Brand	Brand awareness	Brand awareness affects directly and indirectly the purchase of counterfeits	(Feng et al., 2023)
	Brand punishment	Brand punishment mediates the relationship between malicious envy and counterfeit purchase intention	(Gupta & Lyndem, 2024)
Opinions on product	Online reviews sensitivity	Positive online reviews moderate the link between compulsive internet use and luxury counterfeit purchase intention	(Islam et al., 2021)

Source: Authors' own study.

In the investigation of specific circumstances, situations, and external conditions associated with the purchase of counterfeit goods, five constructs have emerged: bargain (Samaddar & Gandhi, 2022; Bardey et al., 2022), counterfeit availability (Samaddar et al., 2024; Thaichon & Quach, 2016), counterfeit affordability and/or price (Thaichon & Quach, 2016), anonymity of buyers (Samaddar et al., 2024; Thaichon & Quach, 2016), and importance of place of purchase (Le Roux et al., 2016, 2019). The initial four factors favour consumer decisions regarding the acquisition of counterfeit products, while the last one moderates the impact on attitude towards fakes.

Another distinct construct identified is trust, which is depicted in three critical contexts. Peinkofer and Jin (2023) posit that the loss of trust is greater when associated with an online seller rather than a third-party seller. According to Mavlanova and Benbunan-Fich (2010), trust in the seller is a significant predictor of the willingness to purchase counterfeits. In turn, Clemons et al. (2016) noticed the role of trust and cultural determinants in purchasing counterfeits. These are significant not only from the perspective of counterfeit purchases but also as regards to the broader dynamics of the concept of trust within market relationships.

A factor observed only once in this literature analysis, and moreover overlooked in previous studies on counterfeits as a whole, is the differentiation of the purchase's intent – whether it is a product bought for oneself or for another person (Thaichon & Quach, 2016). Similarly, Islam et al. (2021) highlighted a particularly unique dimension regarding the influence of online reviews and compulsive internet use on the purchase intentions of counterfeit products.

Two studies scrutinized the correlation between brand within the consumer perceptions and the procurement of counterfeit goods online. Although brand awareness exerts a direct and ancillary influence on the acquisition of such items (Feng et al., 2023), the literature introduced a concept of “brand punishment” that emerges in tandem with a potent emotion previously mentioned – malicious envy (Gupta & Lyndem, 2024).

#### *Risk-related themes*

The perceived risk by consumers when purchasing counterfeit products online was examined in two dimensions: individual risk management and the type of risk involved. Regarding the first dimension, while risk aversion may deter the purchase of counterfeits on the internet (Chiu et al., 2014), individuals who are generally risk-seeking tend to behave in the opposite manner (Thaichon & Quach, 2016). Furthermore, researchers identified the possibility of risk reduction through the thorough independent verification of all information about a given online seller before making a purchase decision (Levi et al., 2021).

In relation to online purchases, three types of risk emerged: functional, financial, and psychosocial (Table 7). According to the researchers, the former is felt more acutely in online transactions, whereas the second becomes a key determinant in

inhibiting the purchase decision (Luo & Park, 2024). Similarly, psychosocial risk may act as a deterrent to the purchase of counterfeit products online, a phenomenon observed by Feng et al. (2023), Li et al. (2020), and Thaichon and Quach (2016).

**Table 7.** Risk-related themes and related constructs

Themes	Factor/construct	Research outcome (relationship and significance)	References
Risk management behaviours	Risk propensity	Risk-takers are more willing to buy counterfeits	(Thaichon & Quach, 2016)
	Risk averseness	The online buyers have higher path scores for the path of risk averseness to consumers' attitudes (stronger impact of risk averseness on consumer attitudes when buying online)	(Chiu et al., 2014)
	Risk reduction	Additional search for information and autonomous safety checks needed to reduce the risk when shopping online (to avoid purchasing counterfeits)	(Levi et al., 2021)
Types of risk	Functional risk	Functional risk may be higher in online shopping as the consumers have no possibility to check the condition of the product	(Luo & Park, 2024)
	Financial risk	Level of financial risk relatively high and became a critical factor that negatively influenced purchasing decision	(Luo & Park, 2024)
	Psychosocial risk (including risk of embarrassment)	Negative influence on attitudes towards counterfeit products	(Feng et al., 2023; Li et al., 2020; Thaichon & Quach, 2016)

Source: Authors' own study.

The issue of perceived risk in the purchase of counterfeit goods, particularly online, warrants greater attention. It is of value to investigate the impact of other types of risk, as well as to examine its role at various stages and in different circumstances in which consumers opt to purchase counterfeit products online or may do so unwittingly.

## Discussions

### Directions for theory

#### *Person-centric themes in research on online shopping*

Person-centric studies show mixed results regarding the impact of psychological factors on online counterfeit purchases or intentions. Emotions, a key driver of consumer behaviour (Bardey et al., 2022), play a role in counterfeit purchases online.

Among them, such emotions as: anger, envy, discomfort and schadenfreude were investigated in the prior studies. While the authors did not express it explicitly, discomfort was presented closely to embarrassment, also appearing in a slightly

different context as the risk of embarrassment. This sheds light on expanding the scope of research. It would be interesting to investigate which emotions are responsible for the perception of different types of consumer risk, widely observed in the online shopping circumstances. One may notice a lack of research on emotions in a comprehensive and systematic way, focusing only on these determinants. Emotion selection based, for example, on Plutchik's traditional "wheel of emotions" concept (Plutchik & Kellerman, 1980) provides a solid theoretical foundation. Therefore, such research could provide interesting insights into the hierarchy of emotions released when shopping for counterfeits online, as well as determine the strength of these emotions and their interconnections, e.g. whether fear is combined with disgust or sadness. In this context, *schadenfreude* deserves in-depth research, as an emotion that arises from experiencing joy or pleasure due to the misfortune of another person, often associated with social comparison theory, developed by Leon Festinger in the 1950s. It occurs when one derives satisfaction from someone else's hardships or setbacks and is positively correlated with the intention to online purchasing of fakes (Marticotte & Arcand, 2017). Furthermore, in the context of emotional factors, it is advisable to disaggregate the constituent basic emotions inherent within the variable *schadenfreude*. As previously emphasized, "morality" and "ethics" ought to be considered distinct variables. An in-depth examination of their respective influences on the propensity to purchase counterfeit goods may pave the way for novel avenues of research, as the relationship between them and counterfeit consumption is far from straightforward. Analogous to the case with emotions, other variables examined in the studies of online counterfeit purchases necessitate a coherent approach based on uniform/standardized criteria. In the studies under review, the variable "belongingness" emerged, exhibiting a positive influence on the online purchase of counterfeits (Thaichon & Quach, 2016). This presents an intriguing topic for further exploration, given that it pertains to one of the most fundamental psychological needs within Maslow's hierarchy. Comparing "belongingness" with other needs from this framework and investigating their impact on counterfeit purchases appears highly important. Alternative conceptualizations of needs according to various theories can be proposed (e.g. Herzberg's Two-Factor Theory or ERG Theory proposed by Clayton Alderfer), as a distinct focus on exploring the needs of counterfeit consumers has not yet been undertaken. A consensus among researchers suggests that attitudes have a favourable impact on the inclination to procure counterfeit products broadly, that is, without an exclusive emphasis on online transactions (*inter alia*, Kasber et al., 2023; Noor & Muhammad, 2019; Singh et al., 2021). Nevertheless, given that attitudes are influenced by a spectrum of factors, both intrinsic and extrinsic, and considering the predominance of intrinsic factors in existing literature, there is a compelling need for comprehensive research that concentrates on extrinsic factors, encompassing those of an environmental nature. Furthermore, cognitive traits, which refer to consistent inclinations to respond to specific types of stimuli or situations in predictable manners, hold greater significance in the realm of online

shopping compared to brick-and-mortar stores (Riquelme & Román, 2014). Thus, it is worthwhile to delve deeper into the significance of cognitive traits in the analysed literature, which has been limited to the construct of “awareness of fakes”. Although Cognitive Dissonance (CD) theory elucidates the psychological discomfort experienced by individuals when their actions, including those related to moral and ethical standards, are at odds with their beliefs, thus integrating multiple factors, its relevance is noteworthy. This theory, which prominently arises in online purchases, especially of counterfeits at various stages of the complex purchasing process, is relevant to this topic. Therefore, analysing the potential occurrence of CD and determining its magnitude in these phases would enhance the understanding of the reasons behind consumer hesitation. In the exploration of CD manifestation, the role of the time-lag phenomenon (Park et al., 2015) should be contemplated, which may lead to a dual incidence of CD. Chadha et al. (2018) assert the significance of examining CD within the pre-purchase phase of the online purchasing process, a subject area that, to our knowledge, remains unexplored in existing research, opening a new field for investigation. Furthermore, it seems advantageous to further cultivate the previously mentioned flow theory within the scope of these studies. The concept was first articulated in the 1970s by psychologist Mihaly Csikszentmihalyi. His formulation of the theory was predicated on observations of artists who would become profoundly engrossed in their creative process, dedicating numerous hours to the production of art characterized by fervent passion and total concentration (van den Hout & Davis, 2019). This immersion occurred in the absence of extrinsic incentives, such as financial compensation or acclaim. Although its initial applications diverged from those proposed nearly half a century later by Islam et al. (2021), the findings and conclusions remain exceedingly valuable. This is particularly true as individuals are indeed becoming increasingly engrossed in the virtual world.

#### *Social and cultural themes in research on online shopping*

In the realm of social and cultural aspects, a certain gap emerges within the examined literature. Specifically, the legal context is, if at all, superficially addressed. There is an oversight regarding the fact that, in accordance with the law, counterfeiting goods constitutes a criminal offense, an act of intellectual property theft, and furthermore, a deception towards customers.

Similarly, prior research has insufficiently addressed emotional reactions to legal sanctions. Moreover, although online shopping has a global dimension, the specificity of purchasing counterfeit goods is conditioned, among other factors, by cultural aspects, which warrant further attention. Avnet et al. (2023) demonstrated the necessity of tailoring anti-counterfeiting approaches to specific cultural and environmental market contexts. Concurrently, Jiang et al. (2023) observed distinct materialistic determinants across Western and Eastern cultures. The profound significance of comparative studies is underscored here. Materialism can be applied as a theoretical

framework, while material conditions and economic factors are the primary influences shaping societal structures and cultural practices. This viewpoint underscores the material world's primacy in shaping human consciousness and societal interactions. In this context, one can observe the predominance of material values over spiritual ones, which paves the way for considerations on the role of religion in contemporary consumption. While some societies are undergoing secularization, the significance of religion cannot be underestimated. As a potent component of many cultures, it constitutes a framework of reference for consumer behaviours towards counterfeits (Ali et al., 2022; Jiang et al., 2019; Kasber et al., 2023; Yaakop et al., 2021). Religiosity, encompassing the spectrum of an individual's faith, observances, and dedication, can profoundly shape their ethical viewpoints and choices. However, this aspect is frequently overlooked in research pertaining to online shopping behaviour. The theory of cultural orientations, namely individualism and collectivism, may prove to be valuable in terms of their impact on the purchase of counterfeit goods. Thus, the significance of comparative studies re-emerges. It is not self-evident, as it has not been investigated, that representatives of these cultural orientations exhibit behaviour typical to them under the specific conditions of online purchasing.

#### *Market-focused themes in research on online shopping*

In prior market-focused studies we identified an incipient theoretical domain: brand equity theory. It explicates the additional value conferred by a brand name relative to its unbranded equivalent, akin to counterfeit goods in a broader context.

Considering all five classic components of brand equity, as identified by Aaker (1991) the roles of brand loyalty, awareness, and associations appear to be particularly significant in the purchasing decision, especially in counterfeit product research. When discussing brand and loyalty towards it, trust theory emerges. Brand trust, as a facilitating factor for purchase which has been operationalized by numerous researchers, coexists with, and sometimes overlaps, trust in the sales venue and the brand's manufacturer/owner (these concepts are not identical). It is worthwhile to investigate the extent to which these various categories of trust influence the intention to purchase (Lu et al., 2010). This underscores the importance of trust in the brand, which can be a decisive factor in consumer behaviour towards counterfeit products. Given that in online purchases, many links in the supply chain are difficult to verify by the end purchaser, numerous references to the theory of information asymmetry can be found here. The theory of information asymmetry addresses the imbalance in information between parties in a transaction, which is particularly significant in the context of online shopping where the buyer's ability to assess the product is limited (Senali et al., 2024). This concept is crucial in understanding market dynamics and consumer behaviour in digital marketplace. Therefore, it is worth taking this economic theory into account in such research (Akerlof, 1970; Rothschild & Stiglitz, 1976; Spence, 1973).

*Risk-related themes in research on online shopping*

At first it is critical to clearly define what type of risk is under investigation. For instance, in the classic approach among the six types of risk, psychological and social risks are separated (*inter alia*, Ross, 1975; Schiffman & Kanuk, 2007). We support this approach because the psychological one concerns the self-perception and self-concept of an individual, the impact of the purchase on the individual's sense of self-worth, dignity, or the consumer's way of thinking about himself, while the social one always refers to relationships with others, how they perceive and judge a person. Especially in relation to consumer behaviour, reasons and the intensity of social risk and psychological risk in the same purchasing situation may be different. Pursuing this line of thought, we recognize opportunities for intriguing research that links psychological risk with personal, i.e. internal determinants of consumer behaviour, and social risk with cultural conditions. Therefore, in the first instance, one may refer, for example, to the enduringly relevant self-concept theory (originated by Rogers, 1959), and in the latter, to the continually utilized social identity theory (initially postulated by Tajfel and Turner, 1979).

While time risk plays a crucial role in contemporary consumer behaviour due to its significant impact on decision-making processes, it should gain more attention. In the context of consumer dynamics in online shopping, time risk refers to the potential loss or adverse outcomes that consumers might face because of time constraints or delays in receiving a product. Time constitutes a critical resource, and the hazards linked to temporal constraints may embody potential opportunity costs (Bradford et al., 2017). The lead time in product delivery could cause consumers to forgo alternative prospects, thereby impacting their cumulative contentment and perceived value. Hence, these issues can be considered from a broad perspective of the theory of opportunity costs. Opportunity cost, an essential tenet in economic theory, denotes the prospective advantages relinquished by an individual when electing a particular option in lieu of another. Within the sphere of consumer behaviour, time risk may be conceptualized as the opportunity cost associated with the temporal investment or potential squandering incurred during the interaction with a product.

**Directions for research topics and domains***Directions for person-centric topics in research on online shopping*

An important factor that may influence consumers' decisions to purchase counterfeit products is the phenomenon of moral decoupling. Existing studies suggest that a higher level of moral decoupling can increase the likelihood of purchasing counterfeit luxury products (Chen et al., 2018; Orth et al., 2019; Shan, Jiang, & Cui, 2021). Moral decoupling allows consumers to separate their purchasing behaviours from their personal moral values, enabling them to make purchases that would



normally conflict with their beliefs. Consumers employing moral decoupling may view their purchases as unrelated to their personal moral values, thereby reducing their feelings of guilt and cognitive dissonance. Future research on this phenomenon could focus on identifying factors influencing the level of moral decoupling, such as social norms, peer pressure, or risk perception.

Cognitive dissonance, particularly in the context of various types of risk, is a crucial issue in the decision-making process of consumers. Cognitive dissonance occurs when consumers experience internal conflict between their beliefs and behaviours. In the case of purchasing counterfeits, consumers may experience dissonance related to legal, social, and quality risks, which affects their purchasing decisions. Expanding on this topic, it is worth investigating how individual motivations and barriers impact consumer purchasing decisions, especially considering these theories.

Research by Herstein et al. (2015) reveals that consumers do not form a homogeneous group but are divided into different micro-segments, each characterised by unique behavioural patterns and varying susceptibility to anti-counterfeiting campaigns. Furthermore, negative campaigns are not perceived as effective, and online campaigns have not shown a positive impact on consumer behaviour (Thackeray et al., 2008). Therefore, focusing on positive campaigns appears more promising in achieving the desired outcomes. Future research should explore how different educational and informational campaigns influence the level of moral decoupling and cognitive dissonance among consumers. Consumers may be driven by the perceived economic benefit of purchasing counterfeits online, which are often priced significantly lower than genuine products. This economic proposition creates a temptation for individuals who prioritize financial prudence over the authenticity of products. It has been addressed in numerous previous studies; however, insufficient attention has been given to the values per se. It is possible to utilize ten key values proposed by Schwartz, particularly: hedonism (partially investigated by Islam et al., 2021), power, security, self-direction. For instance, power as a value in the context of counterfeit products can shed light on the complex motivations behind purchasing and using fakes. As the ability to influence or control others, this value may become an attractive trait that some consumers strive to achieve through the possession of luxury goods – even if they are counterfeits.

#### *Directions for social media-related topics in research on online shopping*

Social media deserve the development of a research topic regarding their impact on the purchase and use of counterfeits, which so far has been shown in a rather narrow aspect of social media word-of-mouth (WOM) and social commerce related to users of fake luxury brands (Feng et al., 2023; Islam et al., 2021).

Studying public self-consciousness and its impact on the intention to purchase counterfeit items is crucial in the era of social media because these platforms amplify concerns about public image and peer judgment. The role of social media

in shaping consumer values and behaviours, especially regarding the perception of luxury brands and the fear of social embarrassment, underscores the need for deeper understanding in this digital age. Moreover, the visibility and accessibility of counterfeits through social media networks necessitate a comprehensive analysis of how public self-consciousness impacts consumer choices in a hyper-connected world. This relationship highlights the global significance of face consciousness, showing how social media acts as a bridge connecting cultural concepts of reputation management with modern consumer behaviour. The role of WOM in social media, as a highly interconnected and visible platform, can amplify the embarrassment and social stigma associated with being caught purchasing or endorsing counterfeit products. The increased risk of public exposure serves as a deterrent, influencing consumer attitudes by adding a layer of social consequences to their purchasing decisions. Today's social media are not only a source of opinion formation but also an increasingly popular retail channel (Lindsey-Mullikin & Borin, 2017; Kaszycka, 2017) which poses risks of market abuses and potential harm to consumers due to inadequate regulation.

*Directions for security and trust related topics in research on online shopping*

In online shopping, the establishment of trust is essential, and a unified sales and shipping process by the same retailer can be instrumental in circumventing counterfeit products. The erosion of trust does not necessarily diminish the intention to repurchase; however, the impact is more pronounced when the trust deficit is associated with an online retailer rather than an external seller.

Peinkofer and Jin (2023) suggest that this is an area worth exploring further, proposing that researchers investigate various strategies online retailers can employ to lessen the adverse effects experienced by consumers. They suggest that enabling consumers to make more informed decisions by providing additional information such as the third-party's location or authentication by the product manufacturer could be beneficial.

The use of artificial intelligence (AI) is another avenue that could be explored to empower consumers. AI can support authentication processes by verifying the legitimacy of products and sellers, thus ensuring consumer confidence and trust in their purchases. Such innovative tools that assist consumers in verifying the authenticity of online product offerings would be interesting subjects for future research, for example answering the question on how AI-based anti-counterfeiting measures affect consumer purchasing decisions and perceptions of product authenticity, including the behaviour of consumers who seek out counterfeit products deliberately. The assurance of authenticity and delivery as promised is a critical aspect of consumer trust in online commerce. This trust is reinforced when a retailer handles both the sale and shipment of a product, which can serve as a safeguard against counterfeit goods.

*Directions for research on online shopping process*

The delay between purchase and consumption in online shopping due the lead time resulting from order processing and transport, is another phenomenon that has been observed but not extensively studied in the context of counterfeits. Park et al. (2015) touched upon this construct, but there is room for further research to understand its implications fully. We hypothesize that the emotions and possibly cognitive dissonance experienced by consumers during the lead time may be significantly different from those felt after the product is delivered.

The situational context of a purchase, such as the distinction between buying for oneself versus someone else and the intent behind the purchase, is also significant. We hypothesize that the purpose of purchase (for oneself or for someone else) may moderate the relations between risk perception or consumer attitudes towards the product and their purchasing behaviour. The topics worth investigating in this context include various motivations such as deceiving someone, saving money, or purchasing based on recommendations due to embarrassment. The concept of “perceived anonymity” in online shopping, as identified by Samaddar et al. (2024) is a factor that significantly influences young consumers’ behaviour towards purchasing counterfeits online. We suggest that this topic is further explored, especially when combined with the purpose of purchase.

*Directions for risk and legal topics in research on online shopping*

The legal context is an interesting topic for in-depth research, including knowledge of legal regulations and responsibility for the emergence of counterfeits in the market. It is important to take a broad look at the somewhat neglected legal aspects concerning consumer choices. In law, such as European law, the theft of intellectual property is treated like the theft of a physical item. The question arises whether buyers of counterfeits are aware that purchasing a fake is legally equivalent to purchasing, for example, a stolen bicycle.

The conflict between understanding the illegality of purchasing counterfeits and engaging in such purchases can intensify cognitive dissonance. By categorizing legal themes, we can assess how legal knowledge and perceptions of enforcement influence consumer decisions and moral judgments regarding counterfeits. From the perspective of this study, the increasing prevalence of counterfeits and the rise in online shopping necessitate consideration of risk-related topics: legal risk, non-delivery risk, and return policy risk. Legal risk pertains to the uncertainty regarding the origin of purchased products, a concern highlighted by Viot et al. (2014). This uncertainty can lead to significant repercussions for consumers who unknowingly purchase counterfeit goods, potentially facing legal consequences or unknowingly supporting illegal activities. Non-delivery risk addresses the concerns buyers have about whether they will receive the product they purchased.

This risk is particularly relevant in the context of online shopping, where transactions occur without face-to-face interactions, and the physical goods are not immediately in hand. Tham et al. (2019) underscore this issue, noting that the fear of non-delivery can deter consumers from making online purchases, especially from unfamiliar or unverified sellers. Return policy risk involves the conditions under which consumers can return purchased goods. This risk becomes prominent when the return policies are unclear, overly restrictive, or difficult to execute. Consumers may be hesitant to purchase products, particularly high-value items, if they are uncertain about their ability to return them in case of dissatisfaction or if the products turn out to be counterfeits. These occurrences open new avenues for future research, focusing on how these risks affect consumer behaviour and decision-making in the context of online shopping and counterfeit products. An intriguing thread that emerged only once in the analysed literature, specifically in the study by Patel et al. (2023), is the exploration of the relationship between an individual's propensity for risk-taking in various aspects of life and their likelihood of purchasing counterfeit products. This area of research is worth developing further. Understanding how a person's general risk tolerance influences their purchasing decisions, especially in the context of counterfeits, could provide valuable insights into consumer behaviours. For example, individuals who are more inclined to take risks in their personal or professional lives might be more willing to purchase counterfeit goods despite the associated legal, non-delivery, and return policy risks. Moreover, this line of inquiry could extend to how different types of risk are perceived and managed by consumers. Understanding these dynamics can help develop more effective consumer protection strategies and policies that address the specific risks associated with counterfeits and online shopping.

### **Directions for methodology**

As mentioned before, online surveys were the predominant data collection method, a trend attributed to the widespread use of online survey platforms. Given the online shopping environment, this method is obvious as it allows researchers to reach internet users who are possibly online shoppers. Moreover, online surveys enable the application of diverse and more complicated research methods.

However, this approach can potentially give rise to issues, as researchers lack control over external factors that could impact the study's outcomes (Bethlehem, 2010). These factors may include perceived anonymity, a lack of control over respondent selection, or technical problems with survey access. The precise location of participants during the study remains unknown, introducing the possibility of additional factors affecting their responses. In such scenarios, researchers cannot ensure study standardization. It is crucial to use trustworthy survey tools and platforms that ensure the sample accurately reflects the population. If the method is well executed, it can provide valuable quantitative insights. Still, according to statistical data,

a proportion of the population does not shop online. Therefore, for any comparisons made between online shoppers and those who prefer traditional ways of shopping, it would be advisable to conduct telephone-based or in-person surveys.

One method used in consumer and market studies, which is not often applied in counterfeit purchase research, especially in the online context, is the conjoint method. Integrating the conjoint method into the research methodology enhances the understanding of consumer preferences by quantifying the relative importance of different product and purchasing situation attributes. This method can reveal key drivers of consumer decisions, allowing researchers to identify which factors most influence the purchase of counterfeit products (Gustafsson et al., 2007). The conjoint method's ability to simulate real-world purchasing scenarios enriches traditional survey and experimental methods.

It would also be advisable to use other empirical research methods, with particular emphasis on qualitative research. Qualitative studies can, of course, be the main research method or part of a triangulation process and mixed-method approach. A mixed-method approach specifically refers to a research design that intentionally integrates both qualitative and quantitative methods within a single study or research project (Flick, 2018). This approach is used to capitalize on the strengths of both methods, providing a more comprehensive understanding of the research problem.

There are many new phenomena in consumer behaviour regarding online shopping of counterfeits that need researchers' attention. In such cases, the sequential mixed-method approach should be applied, meaning that quantitative research should be preceded by qualitative studies that allow for a deeper understanding of the underlying factors and details. This preliminary qualitative research can help identify key themes, inform the development of hypotheses, and refine survey instruments, ensuring that subsequent quantitative studies are more targeted and effective in capturing the complexity of consumer behaviour towards counterfeit products online. Triangulation includes the mixed-method approach but encompasses a wider range of techniques aimed at enhancing the reliability and validity of research findings. Specifically, methodological triangulation, data triangulation, and theoretical triangulation are advised (Flick, 2018).

Our literature review revealed that most research analyses attitudes towards counterfeits or purchase intentions. However, there is a research gap regarding *ex-post* studies that would allow for gaining a deep understanding of attitudes, emotions, moral and ethical issues, cognitive dissonance, etc., after the product was purchased. With the non-zero lead time in online shopping, there is a wide possibility to uncover these emotions even before the product is delivered, as evidenced in the qualitative research by Samaddar and Ghandi (2022). Since this nuanced nature may be difficult to capture in quantitative research, qualitative studies may be a good solution.

Given the online context of counterfeit purchases and the rising importance of social commerce in the counterfeits market (Islam et al., 2021), future research should consider employing netnography (Sharma et al., 2018). This qualitative

research method, adapted from ethnography, focuses on studying online communities and cultures. Platforms such as Reddit, Instagram, Facebook, and specialized e-commerce forums should be included to capture diverse consumer interactions and discussions. Researchers could conduct participant observation and content analysis on these platforms to capture authentic consumer narratives, engagement patterns, and sentiment towards counterfeit products, thus revealing the underlying drivers behind purchase intentions and community influence. This method will contribute to enhancing knowledge of consumer behaviours regarding counterfeit purchases by providing deep insights into motivations, social dynamics, and cultural factors influencing these decisions within digital spaces (Kozinets & Gambetti, 2020).

The literature review revealed that a considerable portion of existing research on counterfeit consumption is rooted in non-representative samples, frequently focusing on specific segments such as students or niche consumer groups. Moreover, the majority of the research is single-country based, with a predominant focus on countries such as the US, China, India, and Israel. This approach may limit the generalizability and comprehensive understanding of the topic at large.

To thoroughly understand emergent themes like religiosity or cultural differences, there is an imperative need to engage with representative international samples. Such samples would offer a richer, more diverse set of perspectives, ensuring the validity and comprehensiveness of findings. Countries differ not only in terms of the availability of counterfeits, both in stationary and online distribution channels, but also in terms of morality. Eisend (2019) pointed out that country-specific conditions provide facilitators or inhibitors of counterfeit consumption, and therefore morality is dependent on differences in consumers' moral engagement. Either the Corruption Perception Index proposed by Eisend (2019) or any other measure that reflects the social and institutional context, such as the percentage of populations shopping online or cultural dimensions (Hofstede et al., 2010; Inglehart & Welzel, 2019), could be criteria for choosing a diverse international sample.

At the same time, it is important to standardize the research methods across countries and to ensure the equivalence of the research object, measurement, research sample, and the process of direct research. This equivalence guarantees that the concepts being studied are understood similarly across different cultural contexts, allowing for accurate comparisons and interpretations (Smith et al., 2011).

The analysis of consumer behaviour can be complemented by cluster analysis. This method plays a crucial role in research on counterfeit consumption by identifying distinct groups or segments within a population based on similar characteristics or behaviours (Wedel & Kamakura, 2000; Zampetakis, 2014). By grouping consumers with similar attitudes, purchasing patterns, or demographic traits, cluster analysis helps researchers uncover underlying patterns and insights that might not be apparent in aggregate data (Wedel & Kamakura, 2000). This technique enables the identification of specific consumer segments more likely to engage in counterfeit consumption, thereby allowing for targeted interventions and more effective marketing strategies.

Furthermore, cluster analysis can reveal variations in consumer behaviour across different cultural or socio-economic groups, providing a deeper understanding of the diverse factors influencing counterfeit consumption.

Given the call for more qualitative research on consumer behaviours regarding online counterfeit purchases, it is crucial to incorporate relevant methods for qualitative data, such as sentiment analysis, particularly in connection with methods like netnography. Sentiment analysis involves using computational tools to identify and quantify the emotional tones expressed in text data. In the context of netnography, which studies online communities and cultures, sentiment analysis can significantly enhance researchers' ability to understand consumer attitudes and emotions towards counterfeit products. By analysing the sentiments expressed in online discussions, reviews, and social media posts, researchers can gain insights into the prevailing opinions and emotional responses of consumers (Mehraliyev et al., 2022). For instance, sentiment analysis can be applied to comments on social media platforms or reviews on e-commerce websites to gauge the positive, negative, or neutral sentiments towards counterfeit items. This approach allows researchers to identify patterns and trends in consumer sentiments over time and across different platforms. Moreover, combining sentiment analysis with traditional qualitative methods can provide a richer, more nuanced understanding of consumer behaviours and perceptions. It enables researchers to quantify qualitative data, making it easier to compare and contrast findings across different cultural contexts and demographic groups (Pawar et al., 2016).

## Conclusions and limitations

Over the years, we have observed a significant shift in the topics included in research on counterfeit online purchasing and related consumer behaviours.

Thus, addressing the RQ1 (i.e. how the scholarly research on consumer behaviour towards online counterfeit product purchases has changed over time), we noticed that the earliest analysed research concentrated on trust and counterfeit deception. This was followed by research on risks, emotions, and attitudes, which reflects the need for a deeper analysis of consumer behaviours, including person-related traits. The most recent research addresses moral disengagement and introduces new constructs reflecting the characteristics of the online shopping channel, such as perceived anonymity. This calls for more research to explore the new characteristics of online shopping and their impact on consumer behaviour. A marked increase in the number of publications occurred in the years 2016 and 2017, followed by another surge from the year 2020 onwards. Post-2020, there has been a proliferation of articles focused exclusively on online shopping. However, it leads to the conclusion that there has been a paucity of publications dedicated solely to online shopping, and this issue warrants further investigation.

In response to RQ2 (i.e. what key conceptual themes have emerged in the study of consumer mindset regarding counterfeit online purchases, as revealed by a systematic literature review), it was possible to delineate the following themes: person-centric themes, social themes, cultural themes, market-related themes, and risk-related themes. In the academic discourse, it is acknowledged that legal aspects are of great importance in relation to consumer studies. However, it is somewhat infrequent to encounter comprehensive discussions of these legal considerations within the analysed literature. This observation underscores a significant gap in the scholarly examination of consumer behaviour, particularly in the context of online counterfeit product purchases, where legal ramifications play a critical role. Each theme represents a distinct area of focus that collectively contributes to a comprehensive understanding of the phenomenon.

Further research on online counterfeit purchases should address the question: What future research directions arise from emerging and overlooked themes in online counterfeit purchase literature? Several key areas across theoretical, topical, and methodological contexts warrant attention. Theoretically, an interdisciplinary approach is needed to understand consumer mindsets towards counterfeits, focusing on terminological precision and the integration of emotions and cognitive traits, such as *schadenfreude*, cognitive dissonance, and moral and ethical influences. Topically, research should explore person-centric factors like moral decoupling, motivations behind counterfeit purchases, and the influence of social and cultural contexts, including face consciousness, legal awareness, and the impact of social media. Additionally, exploring market-related issues like trust, purpose of purchase, the influence of AI-based authentication, the role of time risk and opportunity costs, and the effectiveness of positive versus negative anti-counterfeiting campaigns can provide valuable insights. Methodologically, employing mixed-method approaches, including qualitative techniques like netnography and sentiment analysis, alongside quantitative methods like conjoint, and cluster analysis, can offer a comprehensive understanding of consumer behaviour. Cross-cultural and international studies using standardised research designs and representative international samples are also recommended to ensure validity and broader applicability of findings.

Our study has several limitations that should be acknowledged. Firstly, our review, while comprehensive, is not exhaustive. For example, we limited our search to databases that allowed searches in titles, abstracts, and keywords, potentially excluding relevant studies indexed in databases with different search functionalities. We tried to overcome this limitation by employing several databases, including Scopus, which contains recognised journals from other sources, as we were committed to reaching studies of confirmed highest substantive value and global access. Thirdly, in our literature review we arrived with a limited number of articles. This however results from limiting the search criteria to the online distribution channel. In this context we were able to reveal a research gap. The section on future research directions acknowledges that some themes have already been discussed in the liter-



ature on counterfeit purchases in general, regardless of the distribution channel. To address this limitation, we proposed extended future research directions regarding online shopping within this broader context.

## References

- Aaker D.A. (1991). *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. The Free Press.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action Control: From Cognition to Behavior* (pp. 11–39). Springer.  
**[https://doi.org/10.1007/978-3-642-69746-3\\_2](https://doi.org/10.1007/978-3-642-69746-3_2)**
- Akerlof, G.A. (1970). The market for “lemons”: Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84(3), 488–500. **<https://doi.org/10.2307/1879431>**
- Anwar Mir, I. (2013). Examination of attitudinal and intentional drivers of non-deceptive counterfeiting in a South Asian context. *Journal of Business Economics and Management*, 14(3), 601–615.  
**<https://doi.org/10.3846/16111699.2012.707150>**
- Avnet, T., Drori, N., Herstein, R., & Berger, R. (2023). Fighting counterfeits in emerging markets through the demand side: The role of product domain in the effect of regulatory fit on persuasion. *Journal of International Consumer Marketing*, 1–18. **<https://doi.org/10.1080/08961530.2023.2276297>**
- Bardey, A.C., Turner, R., & Piccardi, P. (2022). Bargaining our emotions: Exploring the lived experience of purchasing luxury fashion counterfeit. *Strategic Change*, 31(5), 505–514.  
**<https://doi.org/10.1002/jsc.2521>**
- Bastos, W., & Levy, S.J. (2012). A history of the concept of branding: practice and theory. *Journal of Historical Research in Marketing*, 4(3), 347–368. **<https://doi.org/10.1108/17557501211252934>**
- Bethlehem, J. (2010). Selection bias in web surveys. *International Statistical Review*, 78(2), 161–188.  
**<https://doi.org/10.1111/j.1751-5823.2010.00112.x>**
- Bian, X., Wang, K.-Y., Smith, A., & Yannopoulou, N. (2016). New insights into unethical counterfeit consumption. *Journal of Business Research*, 69(10), 4249–4258.  
**<https://doi.org/10.1016/j.jbusres.2016.02.038>**
- Bradford, D., Courtemanche, C., Heutel, G., McAlvanah, P., & Ruhm, C. (2017). Time preferences and consumer behavior. *Journal of Risk and Uncertainty*, 55(2), 119–145.  
**<https://doi.org/10.1007/s11166-018-9272-8>**
- Chaudhry, P.E., & Stumpf, S.A. (2011). Consumer complicity with counterfeit products. *Journal of Consumer Marketing*, 28(2), 139–151. **<https://doi.org/10.1108/07363761111115980>**
- Chen, J., Teng, L., & Liao, Y. (2018). Counterfeit luxuries: Does moral reasoning strategy influence consumers’ pursuit of counterfeits? *Journal of Business Ethics*, 151(1), 249–264.  
**<https://doi.org/10.1007/s10551-016-3255-y>**
- Chiu, W., Lee, K.-Y., & Won, D. (2014). Consumer behavior toward counterfeit sporting goods. *Social Behavior and Personality*, 42(4), 615–624. **<https://doi.org/10.2224/sbp.2014.42.4.615>**
- Clemons, E.K., Wilson, J., Matt, C., Hess, T., Ren, F., Jin, F., & Koh, N.S. (2016). Global differences in online shopping behavior: Understanding factors leading to trust. *Journal of Management Information Systems*, 33(4), 1117–1148. **<https://doi.org/10.1080/07421222.2016.1267531>**
- Dima, C., Badea, L., & Cristescu, A. (2017). Consumer perception concerning the trade of counterfeit clothing brands in Romania. A pilot study – southern region and Bucharest. *Industria Textila*, 68(5), 380–387. **<https://doi.org/10.35530/it.068.05.1366>**
- Ding, B., Stevenson, M., & Busby, J.S. (2017). The relationship between risk control imperative and perceived causation: The case of product counterfeiting in China. *Journal of Risk Research*, 20(6), 800–826. **<https://doi.org/10.1080/13669877.2015.1121903>**

- Dommer, S.L., & Parker, J.R. (2023). Cued-recall asymmetries: the case of brand names and logos. *Marketing Letters*, 34(4), 669–684. <https://doi.org/10.1007/s11002-023-09697-0>
- Eisend, M. (2019). Morality effects and consumer responses to counterfeit and pirated products: A meta-analysis. *Journal of Business Ethics*, 154(2), 301–323. <https://doi.org/10.1007/s10551-016-3406-1>
- European Union Intellectual Property Office (EUIPO). (2022). *Intellectual Property and Youth Scoreboard 2022* (Issue June). <https://doi.org/10.2814/249204>
- Feng, W., Yang, M.X., & Yu, I.Y. (2023). From devil to angel: How being envied for luxury brand social media word of mouth discourages counterfeit purchases. *Journal of Business Research*, 165, 113919. <https://doi.org/10.1016/j.jbusres.2023.113919>
- Flick, U. (2018). *Doing Triangulation and Mixed Methods*. <https://doi.org/10.4135/9781529716634>
- Gupta, T., & Lyndem, P.K. (2024). Dual envy influences online shoppers' intention to purchase luxury counterfeits. *International Journal of Consumer Studies*, 48(2), e13036. <https://doi.org/10.1111/ijcs.13036>
- Gustafsson, A., Herrmann, A., & Huber, F. (2007). Conjoint analysis as an instrument of market research practice. In A. Gustafsson, A. Herrmann, & F. Huber (Eds.), *Conjoint Measurement: Methods and Applications* (pp. 3–30). Springer. [https://doi.org/10.1007/978-3-540-71404-0\\_1](https://doi.org/10.1007/978-3-540-71404-0_1)
- Hampson, D. P., & McGoldrick, P. J. (2013). A typology of adaptive shopping patterns in recession. *Journal of Business Research*, 66(7), 831–838. <https://doi.org/10.1016/j.jbusres.2011.06.008>
- Hao, A. W., Paul, J., Trott, S., Guo, C., & Wu, H.-H. (2019). Two decades of research on nation branding: a review and future research agenda. *International Marketing Review*, 38(1), 46–69. <https://doi.org/10.1108/IMR-01-2019-0028>
- Herstein, R., Drori, N., Berger, R., & Barnes, B.R. (2015). Anticounterfeiting strategies and their influence on attitudes of different counterfeit consumer types. *Psychology and Marketing*, 32(8), 842–859. <https://doi.org/10.1002/mar.20822>
- Hofstede, G., Hofstede, G.J., & Minkov, M. (2010). *Cultures and Organizations: Software of the Mind*. McGraw Hill.
- Hussain, A., Kofinas, A., & Win, S. (2017). Intention to purchase counterfeit luxury products: A comparative study between Pakistani and the UK consumers. *Journal of International Consumer Marketing*, 29(5), 331–346. <https://doi.org/10.1080/08961530.2017.1361881>
- Inglehart, R., & Welzel, C. (2019). *World Values Survey Database*. Worldvaluessurvey.org.
- Islam, T., Pitafi, A.H., Akhtar, N., & Liang, X.B. (2021). Determinants of purchase luxury counterfeit products in social commerce: The mediating role of compulsive internet use. *Journal of Retailing and Consumer Services*, 62. <https://doi.org/10.1016/j.jretconser.2021.102596>; WE – Social Science Citation Index (SSCI).
- Iyer, R., Babin, B.J., Eastman, J.K., & Griffin, M. (2022). Drivers of attitudes toward luxury and counterfeit products: The moderating role of interpersonal influence. *International Marketing Review*, 39(2), 242–268. <https://doi.org/10.1108/IMR-02-2021-0091>
- Jiang, L., Cui, A.P., & Shan, J. (2023). The risk of embarrassment in buying luxury counterfeits: Do face-conscious consumers care? *European Journal of Marketing*, 57(8), 1996–2020. <https://doi.org/10.1108/EJM-11-2021-0891>
- Jiang, Y., Miao, M., Jalees, T., & Zaman, S.I. (2019). Analysis of the moral mechanism to purchase counterfeit luxury goods: evidence from China. *Asia Pacific Journal of Marketing and Logistics*, 31(3), 647–669. <https://doi.org/10.1108/APJML-05-2018-0190>
- Kasber, A., El-Bassiouny, N., & Hamed, S. (2023). Can religiosity alter luxury and counterfeit consumption? An empirical study in an emerging market. *Journal of Islamic Marketing*, 14(7), 1768–1792. <https://doi.org/10.1108/JIMA-02-2022-0058>
- Kaszycka, I. (2017). Consumer behaviour in music industry: Generations X and Y. *Annales Universitatis Mariae Curie-Skłodowska, sectio H, Oeconomia*, 51(2), 113–121. <https://doi.org/10.17951/h.2017.51.2.113>
- Kim, H., & Karpova, E. (2009). Consumer attitudes toward fashion counterfeits: Application of the theory of planned behavior. *Clothing and Textiles Research Journal*, 28(2), 79–94. <https://doi.org/10.1177/0887302X09332513>

- Kowalczyk, P., Siepmann (née Scheiben), C., & Adler, J. (2021). Cognitive, affective, and behavioral consumer responses to augmented reality in e-commerce: A comparative study. *Journal of Business Research*, 124, 357–373. <https://doi.org/10.1016/j.jbusres.2020.10.050>
- Kozinets, R.V., & Gambetti, R. (Eds.). (2020). *Netnography Unlimited: Understanding Technoculture using Qualitative Social Media Research*. Routledge. <https://doi.org/10.4324/9781003001430>
- Large, J. (2014). ‘Get real, don’t buy fakes’: Fashion fakes and flawed policy – the problem with taking a consumer-responsibility approach to reducing the ‘problem’ of counterfeiting. *Criminology & Criminal Justice*, 15(2), 169–185. <https://doi.org/10.1177/1748895814538039>
- Le Roux, A., Bobrie, F., & Thébault, M. (2016). A typology of brand counterfeiting and imitation based on a semiotic approach. *Journal of Business Research*, 69(1), 349–356. <https://doi.org/10.1016/j.jbusres.2015.08.007>
- Le Roux, A., Thébault, M., & Roy, Y. (2019). Do product category and consumers’ motivations profiles matter regarding counterfeiting? *Journal of Product and Brand Management*, 28(6), 758–770. <https://doi.org/10.1108/JPBM-06-2018-1923>
- Levi, S., Calif, E., Aronin, A., & Gesser-Edelsburg, A. (2021). Shopping online for children: Is safety a consideration? *Journal of Safety Research*, 78, 115–128. <https://doi.org/10.1016/j.jsr.2021.05.011>
- Li, E.P.H., Lam, M., & Liu, W.-S. (2018). Consuming counterfeit: A study of consumer moralism in China. *International Journal of Consumer Studies*, 42(3), 367–377. <https://doi.org/10.1111/ijcs.12428>
- Li, J., Ghaffari, M., & Su, L. (2020). Counterfeit luxury consumption strategies in a collectivistic culture: the case of China. *Journal of Brand Management*, 27(5), 546–560. <https://doi.org/10.1057/s41262-020-00197-4>
- Lindsey-Mullikin, J., & Borin, N. (2017). Why strategy is key for successful social media sales. *Business Horizons*, 60(4), 473–482. <https://doi.org/10.1016/j.bushor.2017.03.005>
- Lu, Y., Zhao, L., & Wang, B. (2010). From virtual community members to C2C e-commerce buyers: Trust in virtual communities and its effect on consumers’ purchase intention. *Electronic Commerce Research and Applications*, 9(4), 346–360. <https://doi.org/10.1016/j.elerap.2009.07.003>
- Luo, H., & Park, S.-Y. (2024). Exploring barriers to second-hand luxury consumption among Chinese consumers and changes during the COVID-19 pandemic. *Journal of Business Research*, 174, 114497. <https://doi.org/10.1016/j.jbusres.2024.114497>
- Marticotte, F., & Arcand, M. (2017). Schadenfreude, attitude and the purchase intentions of a counterfeit luxury brand. *Journal of Business Research*, 77, 175–183. <https://doi.org/10.1016/j.jbusres.2016.12.010>
- Martinez, L.F., & Jaeger, D.S. (2016). Ethical decision making in counterfeit purchase situations: The influence of moral awareness and moral emotions on moral judgment and purchase intentions. *Journal of Consumer Marketing*, 33(3), 213–223. <https://doi.org/10.1108/JCM-04-2015-1394>
- Mavlanova, T., & Benbunan-Fich, R. (2010). Counterfeit products on the Internet: The role of seller-level and product-level information. *International Journal of Electronic Commerce*, 15(2), 79–104. <https://doi.org/10.2753/JEC1086-4415150203>, WE – Science Citation Index Expanded (SCI-EXPANDED), WE – Social Science Citation Index (SSCI).
- Mehraliyev, F., Chan, I.C.C., & Kirilenko, A.P. (2022). Sentiment analysis in hospitality and tourism: a thematic and methodological review. *International Journal of Contemporary Hospitality Management*, 34(1), 46–77. <https://doi.org/10.1108/IJCHM-02-2021-0132>
- Noor, N.A.M., & Muhammad, A. (2019). The influences of attitude, social influence and price consciousness in promoting consumers’ intention to purchase counterfeit products. *International Journal of Supply Chain Management*, 8(1), 683–689.
- Ofori-Parku, S.S., & Park, S.E. (2022). I (Don’t) want to consume counterfeit medicines: exploratory study on the antecedents of consumer attitudes toward counterfeit medicines. *BMC Public Health*, 22(1), 1–14. <https://doi.org/10.1186/s12889-022-13529-7>
- Orth, U.R., Hoffmann, S., & Nickel, K. (2019). Moral decoupling feels good and makes buying counterfeits easy. *Journal of Business Research*, 98, 117–125. <https://doi.org/10.1016/j.jbusres.2019.01.001>

- Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., Shamseer, L., Tetzlaff, J.M., Akl, E.A., Brennan, S.E., Chou, R., Glanville, J., Grimshaw, J.M., Hróbjartsson, A., Lalu, M.M., Li, T., Loder, E.W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71.  
<https://doi.org/10.1136/bmj.n71>
- Park, I., Cho, J., & Rao, H.R. (2015). The dynamics of pre- and post-purchase service and consumer evaluation of online retailers: A comparative analysis of dissonance and disconfirmation models. *Decision Sciences*, 46(6), 1109–1140. <https://doi.org/10.1111/deci.12176>
- Patel, A.K., Singh, A., & Parayitam, S. (2023). Risk-taking and WOM as moderators in the relationship between status consumption, brand image and purchase intention of counterfeit brand shoes. *Journal of Advances in Management Research*, 20(2), 161–187. <https://doi.org/10.1108/JAMR-05-2022-0095>
- Pawar, A.B., Jawale, M.A., & Kyatnavar, D. N. (2016). Fundamentals of sentiment analysis: Concepts and methodology. In W. Pedrycz & S.-M. Chen (Eds.), *Sentiment Analysis and Ontology Engineering: An Environment of Computational Intelligence* (pp. 25–48). Springer International Publishing.  
[https://doi.org/10.1007/978-3-319-30319-2\\_2](https://doi.org/10.1007/978-3-319-30319-2_2)
- Peinkofer, S.T., & Jin, Y.H. (2023). The impact of order fulfillment information disclosure on consequences of deceptive counterfeits. *Production and Operations Management*, 32(1), 237–260.  
<https://doi.org/10.1111/poms.13833>
- Plutchik, R., & Kellerman, H. (1980). *Emotion, Theory, Research, and Experience: Emotions in Early Development*. Academic Press. <https://books.google.pl/books?id=TI99AAAAMAAJ>
- Pradhan, B., Kishore, K., & Gokhale, N. (2023). Social media influencers and consumer engagement: A review and future research agenda. *International Journal of Consumer Studies*, 47(6), 2106–2130.  
<https://doi.org/10.1111/ijcs.12901>
- Pratt, S., & Zeng, C.Y.H. (2019). The economic value and determinants of tourists' counterfeit purchases: The case of Hong Kong. *Tourism Economics*, 26(1), 155–178. <https://doi.org/10.1177/1354816619834482>
- Pueschel, J., Chamaret, C., & Parguel, B. (2017). Coping with copies: The influence of risk perceptions in luxury counterfeit consumption in GCC countries. *Journal of Business Research*, 77, 184–194.  
<https://doi.org/10.1016/j.jbusres.2016.11.008>
- Raman, R., & Pramod, D. (2017). A strategic approach using governance, risk and compliance model to deal with online counterfeit market. *Journal of Theoretical and Applied Electronic Commerce Research*, 12(3), 13–26. <https://doi.org/10.4067/S0718-18762017000300003>
- Rathi, R., Garg, R., Kataria, A., & Chhikara, R. (2022). Evolution of luxury marketing landscape: A bibliometric analysis and future directions. *Journal of Brand Management*.  
<https://doi.org/10.1057/s41262-022-00273-x>
- Razmus, W., Grabner-Kräuter, S., & Adamczyk, G. (2024). Counterfeit brands and Machiavellianism: Consequences of counterfeit use for social perception. *Journal of Retailing and Consumer Services*, 76(July 2023). <https://doi.org/10.1016/j.jretconser.2023.103579>
- Riquelme, I.P., & Román, S. (2014). The influence of consumers' cognitive and psychographic traits on perceived deception: A comparison between online and offline retailing contexts. *Journal of Business Ethics*, 119(3), 405–422. <https://doi.org/10.1007/s10551-013-1628-z>
- Robinson, T., & Doss, F. (2011). Pre-purchase alternative evaluation: prestige and imitation fashion products. *Journal of Fashion Marketing and Management: An International Journal*, 15(3), 278–290.  
<https://doi.org/10.1108/13612021111151897>
- Rogers, C.R. (1959). A theory of therapy, personality, and interpersonal relationships: As developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A Study of a Science. Formulations of the Person and the Social Context* (Vol. 3, pp. 184–256). McGraw-Hill. <https://books.google.pl/books?id=zsIBtwaACAAJ>
- Rojek, C. (2017). Counterfeit commerce: Relations of production, distribution and exchange. *Cultural Sociology*, 11(1), 28–43. <https://doi.org/10.1177/1749975516650233>

- Ross, I. (1975). Perceived risk and consumer behavior: A critical review. *ACR North American Advances*. <https://api.semanticscholar.org/CorpusID:147850206>
- Rothschild, M., & Stiglitz, J. (1976). Equilibrium in competitive insurance markets: An essay on the economics of imperfect information. *The Quarterly Journal of Economics*, 90(4), 629–649. <https://doi.org/10.2307/1885326>
- Samaddar, K., & Gandhi, A. (2022). Exploring customer perceived value towards non-deceptive counterfeiting: a grounded theory approach. *South Asian Journal of Business Studies*. <https://doi.org/10.1108/SAJBS-07-2021-0259>
- Samaddar, K., Mondal, S., & Gandhi, A. (2024). Online counterfeit purchase behaviour: moderating effect of perceived anonymity and moral disengagement. *Young Consumers*, 25(1), 84–108. <https://doi.org/10.1108/YC-10-2022-1621>
- Schiffman, L.G., & Kanuk, L.L. (2007). *Consumer Behavior*. Pearson Prentice Hall. <https://books.google.pl/books?id=vTRPngEACAAJ>
- Shan, J., Jiang, L., & Cui, A.P. (2021). A double-edged sword: How the dual characteristics of face motivate and prevent counterfeit luxury consumption. *Journal of Business Research*, 134, 59–69. <https://doi.org/10.1016/j.jbusres.2021.05.032>
- Shan, J., Jiang, L., Peng Cui, A., Wang, Y., & Ivzhenko, Y. (2021). How and when actual-ideal self-discrepancy leads to counterfeit luxury purchase intention: A moderated mediation model. *International Journal of Consumer Studies*, n/a(n/a). <https://doi.org/10.1111/ijcs.12730>
- Sharif, O.O., Asanah, A.F., & Alamanda, D.T. (2016). Consumer complicity with counterfeit products in Indonesia. *Actual Problems of Economics*, 175(1), 247–252. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84964824185&partnerID=40&md5=48a1b0ca23da7b814b2457c342553eac>
- Sharma, K., Trott, S., Sahadev, S., & Singh, R. (2023). Emotions and consumer behaviour: A review and research agenda. *International Journal of Consumer Studies*, 47(6), 2396–2416. <https://doi.org/10.1111/ijcs.12937>
- Sharma, R., Ahuja, V., & Alavi, S. (2018). The future scope of netnography and social network analysis in the field of marketing. *Journal of Internet Commerce*, 17(1), 26–45. <https://doi.org/10.1080/15332861.2017.1423533>
- Singh, D.P., Kastanakis, M.N., Paul, J., & Felix, R. (2021). Non-deceptive counterfeit purchase behavior of luxury fashion products. *Journal of Consumer Behaviour*, 20(5), 1078–1091. <https://doi.org/10.1002/cb.1917>
- Senali, M.G., Iranmanesh, M., Ghobakhloo, M., Foroughi, B., Asadi, S., & Rejeb, A. (2024). Determinants of trust and purchase intention in social commerce: Perceived price fairness and trust disposition as moderators. *Electronic Commerce Research and Applications*, 101370. <https://doi.org/10.1016/j.elerap.2024.101370>
- Smith, S.N., Fisher, S.D., & Heath, A. (2011). Opportunities and challenges in the expansion of cross-national survey research. *International Journal of Social Research Methodology*, 14(6), 485–502. <https://doi.org/10.1080/13645579.2011.611386>
- Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, 87(3), 355–374. <https://doi.org/10.2307/1882010>
- Sterling, E.K., & Peterson, D. (2020). Optimal placement of anti-counterfeiting indicators. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 64(1), 1486–1490. <https://doi.org/10.1177/1071181320641355>
- Tajfel, H., & Turner, J.C. (1979). *An Integrative Theory of Intergroup Conflict*. <https://api.semanticscholar.org/CorpusID:141114011>
- Thackeray, R., Neiger, B.L., Hanson, C.L., & McKenzie, J.F. (2008). Enhancing promotional strategies within social marketing programs: Use of Web 2.0 social media. *Health Promotion Practice*, 9(4), 338–343. <https://doi.org/10.1177/1524839908325335>
- Thaichon, P., & Quach, S. (2016). Dark motives-counterfeit purchase framework: Internal and external motives behind counterfeit purchase via digital platforms. *Journal of Retailing and Consumer Services*, 33, 82–91. <https://doi.org/10.1016/j.jretconser.2016.08.003>; WE – Social Science Citation Index (SSCI).

- Tham, K.W., Dastane, O., Johari, Z., & Ismail, N.B. (2019). Perceived risk factors affecting consumers' online shopping behaviour. *The Journal of Asian Finance, Economics and Business*, 6(4), 249–260. <https://doi.org/10.13106/JAFEB.2019.VOL6.NO4.249>
- van den Hout, J.J.J., & Davis, O.C. (2019). An introduction to flow theory. In J.J.J. van den Hout & O.C. Davis (Eds.), *Team Flow: The Psychology of Optimal Collaboration* (pp. 1–5). Springer International Publishing. [https://doi.org/10.1007/978-3-030-27871-7\\_1](https://doi.org/10.1007/978-3-030-27871-7_1)
- Veblen, T. (1899). *The Theory of the Leisure Class*. McMaster University Archive for the History of Economic Thought.
- Viot, C., Le Roux, A., & Krémer, F. (2014). Attitude towards the purchase of counterfeits: Antecedents and effect on intention to purchase. *Recherche et Applications En Marketing (English Edition)*, 29(2), 3–31. <https://doi.org/10.1177/2051570714533474>
- Wedel, M., & Kamakura, W.A. (2000). Clustering methods. In M. Wedel & W.A. Kamakura (Eds.), *Market Segmentation: Conceptual and Methodological Foundations* (pp. 39–73). Springer US. [https://doi.org/10.1007/978-1-4615-4651-1\\_5](https://doi.org/10.1007/978-1-4615-4651-1_5)
- Wells, V.K. (2014). Behavioural psychology, marketing and consumer behaviour: A literature review and future research agenda. *Journal of Marketing Management*, 30(11–12), 1119–1158. <https://doi.org/10.1080/0267257X.2014.929161>
- Wilson, J.M., Sullivan, B.A., & Hollis, M.E. (2016). Measuring the “unmeasurable”: Approaches to assessing the nature and extent of product counterfeiting. *International Criminal Justice Review*, 26(3), 259–276. <https://doi.org/10.1177/1057567716644766>
- Yaakop, A.Y., Hafeez, H.M., Faisal, M.M., Munir, M., & Ali, M. (2021). Impact of religiosity on purchase intentions towards counterfeit products: Investigating the mediating role of attitude and moderating role of hedonic benefits. *Heliyon*, 7(2), e06026. <https://doi.org/10.1016/j.heliyon.2021.e06026>
- Yoo, B., & Lee, S.-H. (2012). Asymmetrical effects of past experiences with genuine fashion luxury brands and their counterfeits on purchase intention of each. *Journal of Business Research*, 65(10), 1507–1515. <https://doi.org/10.1016/j.jbusres.2011.10.018>
- Zampetakis, L. (2014). The emotional dimension of the consumption of luxury counterfeit goods: an empirical taxonomy. *Marketing Intelligence & Planning*, 32(1), 21–40. <https://doi.org/10.1108/MIP-10-2012-0102>

Appendix 1. Single-method research

	FTF	Online	Other survey	Experiment – undefined	Questionnaire experiment	Laboratory experiment	Interview	Focus	Other methods	Total
China	0	2	0	1	0	0	2	0	0	5
France	0	0	1	0	0	0	0	0	0	1
India	0	2	0	0	0	0	0	1	0	3
Israel	1	1	0	0	0	0	1	1	0	4
Multiple countries – at least two continents	0	1	0	0	0	1	0	0	0	2
Multiple countries – one continent	0	1	0	0	0	0	2	0	0	3
Romania	0	1	0	0	0	0	0	0	0	1
Taiwan	0	1	0	0	0	0	0	0	0	1
USA	0	2	1	1	2	0	0	0	0	6
Vietnam	0	0	0	0	0	0	1	0	1	2
Undefined	0	2	1	0	0	0	0	0	0	3
Total	1	13	3	2	2	1	6	2	1	31
Consumers	0	8	1	1	1	0	2	1	1	15
Specific	0	3	0	0	0	0	1	1	0	5
Student	1	1	1	1	1	0	3	0	0	8
Undefined	0	0	1	0	0	1	0	0	0	2
Total	1	13	3	2	2	1	6	2	1	31

Source: Authors' own study.