



COUNTRY-OF-ORIGIN AND COUNTERFEIT IN THE B2B PURCHASE PROCESS

O PAÍS DE ORIGEM E A CONTRAFAÇÃO NO PROCESSO DE COMPRAS B2B

EL PAÍS DE ORIGEN Y LA FALSIFICACIÓN EN EL PROCESO DE COMPRA B2B

ABSTRACT

Purpose: This article aims to analyze whether the relationship between the origin of the product and the perception of risk of counterfeiting affects the purchase intention in B2B relationships.

Design/methodology/approach: Through an experiment, eight scenarios were developed that describe a purchase situation with risk of acquiring a counterfeit product. Analysis of variance (ANOVA) and logistic regression were subsequently applied for statistical tests.

Results: The results suggest that purchase intention is affected by the origin of the product. Likewise, managers perceive the risk of counterfeiting in B2B relationships.

Practical implications: There is a tendency for managers to analyze a purchasing process by looking at different variables in the process. When relating the origin of the product with the perception of counterfeiting risk, purchasing managers have a strong tendency not to carry out the transaction.

Originality/value: Counterfeit products have definitely entered the list of risks and must be fought, as they threaten the integrity of supply chains. This study highlights the importance of discussing counterfeit products and the possibility of them entering supply chains through the firms' purchasing process.

Keywords: Counterfeiting. Country-of-origin. Purchase. B2B. Risk perception. Percepção de risco.

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RESUMO

Objetivo: Este artigo visa a analisar se a relação entre a origem do produto e a percepção de risco de contrafação afeta a intenção de compra em relações B2B.

Design/metodologia/abordagem: Por meio de um experimento, foram desenvolvidos oito cenários que descrevem uma situação de compra com risco de adquirir um produto contrafeito. Análise de variância (ANOVA) e regressão logística foram posteriormente aplicadas para os testes estatísticos.

Resultados: Os resultados sugerem que a intenção de compra é afetada pela origem do produto. Do mesmo modo, os gestores percebem o risco de contrafação em relações B2B.

Implicações práticas: Existe uma tendência de os gestores analisarem um método de compra observando diferentes variáveis no processo. Ao relacionar a origem do produto com a percepção de risco de contrafação, os gestores de compras possuem forte tendência de não efetuar a transação.

Originalidade/valor: Produtos contrafeitos entraram em definitivo na lista de riscos e devem ser combatidos, pois ameaçam a integridade das cadeias de suprimento. Este estudo realça a importância da discussão sobre produtos contrafeitos e a possibilidade de eles entrarem nas cadeias de suprimentos por meio do processo de compras das firmas.

Palavras-Chave: Contrafação. País de origem. Compra. B2B. Percepção de risco.

RESUMEN

Propósito: Este artículo tiene como objetivo analizar si la relación entre el origen del producto y la percepción de riesgo de falsificación afecta la intención de compra en las relaciones B2B.

Diseño/metodología/enfoque: A través de un experimento se desarrollaron ocho escenarios que describen una situación de compra con riesgo de adquirir un producto falsificado. Posteriormente se aplicaron análisis de varianza (ANOVA) y regresión logística para las pruebas estadísticas.

Resultados: Los resultados sugieren que la intención de compra se ve afectada por el origen del producto. Asimismo, los directivos perciben el riesgo de falsificación en las relaciones B2B.

Implicaciones prácticas: Los gerentes tienden a analizar un proceso de compra observando diferentes variables en el proceso. Al relacionar el origen del producto con la percepción de riesgo de falsificación, los responsables de compras tienen una fuerte tendencia a no realizar la transacción.

Originalidad/valor: Los productos falsificados definitivamente han entrado en la lista de riesgos y deben combatirse, ya que amenazan la integridad de las cadenas de suministro. Este estudio destaca la importancia de discutir los productos falsificados y la posibilidad de que ingresen a las cadenas de suministro a través del proceso de compra de las empresas.

Palabras Clave: Falsificación. País de origen. Compra. B2B. Percepción de riesgo.



INTRODUCTION

Over the past few decades, research on vulnerability and risk management within the supply chain (referred to as SCRM, an acronym for Supply Chain Risk Management) has posed significant challenges for companies and their management teams (Christopher & Lee, 2004). In recent years, the industry has been engaged in discussions concerning the risk of counterfeiting within the supply chain. The World Economic Forum (WEF) underscores this concern in its annual report on global risks (13th edition, 2018), categorizing illicit trade (e.g., counterfeiting, smuggling, corruption, organized crime) as one of the primary risks faced by companies and the global economy.

The International Chamber of Commerce (ICC, 2016) has provided substantial data on the prevalence of counterfeiting in global trade, impacting industries to the tune of 650 billion dollars annually. By 2015, this had already resulted in a total impact of 1.8 trillion dollars. Furthermore, according to the ICC (2016), this impact is expected to deduct around 4.2 trillion dollars from the global economy by 2022, putting 5.4 million legal jobs at risk.

Within this complex landscape, the process of product procurement and supplier selection involves multidimensional criteria, often requiring buyers to make decisions and judgments that may occasionally conflict with each other. In the case of counterfeit products, which are crafted to mimic branded items (Wang et al., 2020), buyers may assume one of two roles: they can either act as the key figure behind the purchase, thereby accepting all associated risks, or they can become unwitting victims, mistakenly believing they are purchasing a genuine product (Cordell et al., 1996). The way managers process information influences their decision-making processes, which, in turn, is evident in their responses and actions when faced with supply chain disruptions or while managing risks (Bode & Macdonald, 2017), as well as in their ESG (Environmental, Social, and Governance) performance (Dai & Tang, 2022).

Following this, Machado, Paiva, and Silva (2018) put forth the argument that decisions pertaining to supply chain management have the

potential to mitigate the risks associated with counterfeiting. Therefore, strategic definitions regarding supply capacity, alternative suppliers, and trust relationships between buyers and suppliers should be intensified, including strategies to mitigate counterfeiting risks. Ethical and moral concerns regarding the origin and authenticity of purchases also concern, especially, the "G" pillar of ESG, which is a key aspect for the company's image in the eyes of interested parties (Whitelock, 2019). Therefore, there is still a lack of studies on anti-counterfeiting activities in the supply chain (Berman, 2008; Grenoble et al., 2014). The complexity of the issue is acknowledged to heighten the challenge for companies when it comes to gathering information about counterfeiting incidents (Stevenson & Busby, 2015). Furthermore, it presents obstacles in the development of proactive measures aimed at preventing the infiltration of counterfeit products into the supply chain. Additionally, it is a challenge to avoid becoming narrowly focused on the isolated economic aspects and to balance these concerns with other social and environmental benefits (Lee et al., 2022).

This study starts from understanding the relationships between companies in purchasing relationships, a B2B (Business-to-Business) situation. In this case, the purchaser does not have all needed information to identify whether those goods can be counterfeit. Unlike B2C (Business-to-Consumer), when a consumer, for example, sees an expensive perfume for sale in a street market for a quarter of the retail price, where there are sufficient signs of lack of authenticity, in B2B often the appearance, the price, and, above all here, the distribution (supply chain) faithfully imitates the authentic products (Ghadge et al., 2021).

Therefore, it becomes important to carry out a selection process to identify a new supplier, so that it meets a demand as accurately as possible. Negative events in supply chains affect existing relationships and transactions and open new perspectives and challenges for purchasing managers. It is worth mentioning that factors such as access, low prices, and even similar quality are drivers in the purchase of counterfeit products (Berman, 2008). The possibility of conscious consumption of counterfeit products is real, as there is a possibility that they will bring some satisfac-



tion to the end consumer (Bavar et al., 2017).

Therefore, this article aims to answer: do the country-of-origin and risk perception of counterfeiting affect purchase intentions in B2B relationships?

To answer the research question, an experiment was carried out that included eight scenarios. After the pre-design, there were tests including manipulation and realism checks. The sample was selected with 272 respondents, with more than 30 respondents in each scenario. Analysis of variance (ANOVA) and logistic regression were performed. As a result, it can be stated that the managers' purchase intention is affected by the product origin and the perception of the risk of counterfeiting that the manager develops in B2B relationships.

This article is structured as follows: in section two, the concept of counterfeiting, the theoretical construction of the hypotheses, and the proposed analysis model are presented. The experimental methodology is detailed below, with the analyses and results of each of the scenarios described below. It ends with the conclusion and implications of the study and the identification of future research.

LITERATURE REVIEW

The Strategic Role Of Purchasing

In the 1980s, Kraljic (1983) has shed new lights to the discussion on purchase responsibility. He highlighted the inherent need for companies to seek a strategic commitment in managing their supply processes - from corporate negotiations to supply risk mitigation. From such discussion, which was consolidated in the field of operations and supply management, it was identified that "purchasing management refers to all activities necessary to manage relationships with suppliers so that their activities are aligned with the company's general business strategies and interests." (van Weele, 2014, p. 10).

From an Operations Management view, the literature showed that purchase started to play a strategic role, with a clear contribution to company's strategic objectives (Carr & Smeltzer, 1997; Farmer, 1997; Wolf, 2005). The more stra-

tegic the purchase becomes, the more general managerial skills are required, as they lead to political and entrepreneurial skills (Tassabehji & Moorhouse, 2008).

External relationship skills as well as negotiation and facilitation are required to deal with suppliers (Wu et al., 2010). Purchasing managers must use their communication skills to address all supplier representatives appropriately and avoid miscommunications and interpretations; in other words, they must manage their suppliers (Johnston & Staughton, 2009).

Purchasing is, in many ways, similar to an entrepreneur activity. Purchasing managers should satisfy internal customers and manage suppliers while dealing with cost and quality pressures (Giunipero et al., 2005). The current profile for purchasing managers includes the need for communication and relationship management (Bals et al., 2019). The role of the purchasing managers is also seen as an evaluator of suppliers. They evaluate suppliers during the selection phase, exploring technical, commercial, cultural, and behavioral issues and adapting these aspects to their own organizations (Johnston & Staughton, 2009). Influence and persuasion are not only social skills but also strategic ones, as they are fundamental in cases of conflicts or problems (Karttunen, 2018). Oral communication skills, including persuasion, the ability to defend one's point of view, and oral expression, affect the success of supply management and relationship satisfaction (Large, 2005). Purchasing managers require purchasing skills (Parker & Anderson, 2002) and abilities to perform their job activities competently (Mehra & Inman, 2004; Tassabehji & Moorhouse, 2008).

Counterfeit products can undermine a company/brand/sector (even a nation) when present in their supply chains, and therefore it is an important issue. This situation create so much disturb, leading the buyers to lose confidence in established supply sources and willing them to "try" new ones (Ghadge et al., 2021). Therefore, skills are necessary to them to achieve achieve strategic objectives in an ethical and socially responsible way (Allal-Chérif & Maira, 2011; Mehra & Inman, 2004). In this context, ESG portrays a set of extra-financial factors that can have material



impacts (positive or negative) on corporate performance or the value of a company (Whitelock, 2019). It is important to all stakeholders – from investors, employees, board of directors, customers, regulators, and activists – of the company because ESG provides a means of evaluating a company's ability to withstand adversity.

ESG issues influence supply chain operations and supply chain operations affect ESG performance (Dai & Tang, 2022). This article seeks to understand how the "G" pillar of ESG considerations interacts with end-to-end supply chain operations. G Pillar, especially related to counterfeiting activities provides "increasing the value of the company's reputation in the eyes of customers, employees, investors, and regulators" (Whitelock, 2019, p. 928). ESG requires companies to conduct business ethically to balance environmental, social, and economic benefits rather than focusing solely on economic goals (Lee et al., 2022). Therefore, ESG activities will likely increase the company's value in the long term and purchasing products and services with guaranteed origin can strengthen the G Pillar.

Counterfeiting

Previous studies established different definitions for counterfeiting, but it is commonly used to describe piracy even as an imitation of a branded product (Sharma & Chan, 2011). However, counterfeiting is always related to something illicit and that, in some way, violates laws and impacts the original owner of the brand or product in different ways.

Building a strong brand or a company's reputation takes time and investments in product development and quality. Famous brands have followed this path and today enjoy popularity and quality standards among consumers. On the other hand, companies that are just starting out have different experiences. Therefore, companies seek to improve security along their supply chains, avoiding the risks of counterfeiting (Voss et al., 2009).

Counterfeit products can be purchased consciously or unconsciously (Grossman & Shapiro, 1988). Usually, counterfeit products have lower prices compared to the original product

and inferior quality (Berman, 2008). Very often they are produced in a way seeking to deceive the buyer (Grenoble et al., 2014). Therefore, the threat of counterfeit products is present (Stevenson; Busby, 2015) and must be considered when choosing a new supplier.

With the advent of new technologies, there is a possibility of providing a myriad of new products and services to consumers (Bahrin et al., 2016). These innovations enabled the intensification of smart devices, such as RFID, 3D printing, and IoT (Internet of Things), making productivity more efficient and with lower costs besides obtaining higher control in the processes (Cheng et al., 2015). These devices, consequently, help to mitigate the risks of counterfeiting in supply chains (Zhao et al., 2010; Balocco et al., 2011; Dwivedi et al., 2017), providing greater security to the buyer and reducing the perception of risk in the purchasing.

Country of Origin of Products

When considering that certain markets or types of products require a certain rigor in the selection of suppliers, Fratocchi et al. (2016) state that luxury products often demand the specification of the origin of raw material suppliers. Majid (2017) also highlights that the buyer's perception of choice is related to their pre-existing expectation about the country of origin of the raw material. Thus, this image can be positive or negative, usually associated with the country from which these products originate (Papadopoulos & Heslop, 2002).

The perception of the origin of a particular product can be exemplified by the North American market, which regards Colombian coffee as excellent, since Colombia is one of the largest coffee producers in the world (Kotler & Gerther, 2002). The same is true for French perfumes and Swiss watches. On the other hand, products originating from some Asian countries are often met with suspicion regarding their quality and originality (Grenoble et al., 2014), thus affecting buyer behavior in terms of their intention to purchase them (Kotler & Gerther, 2002).

Considering that one of the evaluations a purchasing manager makes when defining their



supplier portfolio is the supplier's location and that such a factor can generate uncertainty about their reliability, the following hypothesis can be proposed:

Hypothesis 1: The origin of the product influences purchase intention in B2B relationships.

Risk Perception

Counterfeiting can be understood in various ways (Sharma & Chan, 2011), all of which relate to illicit actions that affect the companies owning the original brands and their consumers. The country of origin of the product can be a relevant factor in the perception of counterfeiting risk, as the buyer's perception of the country of origin often impacts their view of product attributes (e.g., originality, quality, price) (Kumara & Canhua, 2010).

The buyer's perception of the risk embedded in the acquisition is often not taken into consideration, as they are seeking satisfaction or benefit from using the product. According to Strehlau and Urdan (2015), when using a counterfeit product, the buyer is usually only concerned with not being "exposed."

Despite the globalized nature of the counterfeiting industry, Asian countries are still seen as major producers of counterfeits (Grenoble et al., 2014), further increasing the risks of acquiring products from those regions. Thus, risk perception is one of the variables that should be studied in this relationship:

Hypothesis 2: The country of origin of a product influences the perception of counterfeiting risk in B2B relationships.

Discount and quality

As the country of origin has various effects on consumer behavior, including their willingness to pay for a product (Han, 2010). Han (2010) argues that countries with a tradition of producing a particular product are typically perceived as more reliable, influencing the buyer's willingness to pay higher prices.

On the other hand, offering a discount on

the price can stimulate consumption, increase willingness to pay, and encourage new experiences or brand switching (Aaker, 1991). Pharr (2005) suggests that the monetary factor acts as a moderator for the country-of-origin effect, altering the buyer's perspective on the product, potentially impacting the country-of-origin effect.

According to Dowling and Staelin (1994), buyers' uncertainties about continued product purchases are linked to perceptions of transactional risk. Obtaining a low-quality product or one with financial risk makes buyers implicitly apprehensive about each purchase transaction.

Acknowledging the importance of a buyer's willingness to pay for a specific product, often influenced by the value or benefits the product offers (Frank et al., 2015), and recognizing that perceived risk can deter people from seeking a product (Dowling & Staelin, 1994), we can formulate the following hypothesis:

Hypothesis 2a: The discount offered moderates the relationship between the country of origin of the product and the perception of counterfeiting risk in B2B relationships.

Buyers continuously receive information about products, suppliers, production sources, and more. Consequently, they use both tangible and intangible information to assess the quality of a product (Garvin, 1984) and to alter their perception of the risk associated with the purchase (Dowling & Staelin, 1994). One of the sources of risk perception is the origin of the product, specifically the nationality of the producing company. Fracocchi et al. (2016) argue that the origin of certain products significantly influences purchase intentions. Therefore, buyers often perceive higher risks when buying products from countries with negative images or associated risks (Cordell et al., 1996). Conversely, familiarity with a particular supplier or the country of origin can lead to a positive view of the purchase intention (Wyer Jr., 2011).

Given that the quality of a product can be perceived in various ways, influenced by its attributes and the context surrounding it, and is linked to a buyer's willingness to pay, we can propose the following hypothesis:

Hypothesis 2b: Product quality modera-



tes the relationship between the country of origin of the product and the perception of counterfeiting risk in B2B relationships.

Purchase intention

Given that purchase intention essentially reflects a buyer's willingness to acquire a particular product, research by Chen and Chang (2012) indicates that product-related attributes can significantly impact purchase intention. Many professionals invest a portion of their time in decoding market signals to gain insights into their products' purchase intentions. However, it's crucial to recognize that a supplier's perception may differ from the buyers, as various factors influence consumer decisions (Zeithaml, 1988). Consequently, purchase intention can be swayed by the perceived risk associated with the purchase process, wherein factors such as cost, quality, and the product's origin contribute to this perception of risk, introducing elements of uncertainty for consumers (Dowling & Staelin, 1994; Solomon, 2011).

When selecting a new supplier, it is imperative to align the criteria and choices with the expectations and standards of the buyer. In simpler terms, these aspects should be rigorously evaluated before deciding (Kahraman et al., 2003). The interpretation of risk perception can take various forms (Dowling & Staelin, 1994), with individuals classifying risks as significant or insignificant challenges based on their personal attributes (Wildavsky & Daker, 1990).

Jüttner, Peck, and Christopher (2003) argue that, from the perspective of purchasing managers, risk is typically regarded as an integral and inevitable component of the process. In essence, risk is inseparable from decision-making under conditions of uncertainty. However, Dai et al. (2014) provide a rationale suggesting that prior experiences in purchasing new products can simplify this process, thereby diminishing the perceived risk associated with buying products unfamiliar to the buyer. Consequently, this leads us to the formulation of the third hypothesis:

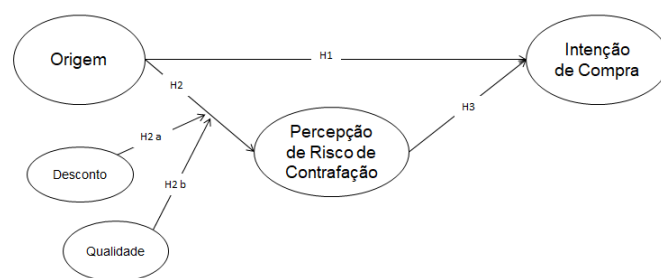
Hypothesis 3: Counterfeit risk perception mediates the relationship between the country-of-origin of the product and purchase intention

in B2B relationships.

Theoretical Model

From the formulation of our hypotheses, we proceeded to construct the theoretical model as depicted in Figure 1. The fundamental concept behind this model is to examine the extent to which the product's origin can impact the perception of counterfeiting risk and, in turn, how this perception influences purchase intention.

Figure 1
Proposed model



METHOD

The methodological approach chosen for this study involved conducting an experiment to explore the impact of the relationship between the country of origin, the risk of counterfeiting, and purchase intention. Priem et al. (2011) contend that investigation, achieved through the creation of scenarios, is an appropriate means to assess individuals' ethical and intentional judgments.

In this experiment, the focal point was the purchase process for acquiring specific sports shoes, managed by a purchasing manager. Confronted with a new supplier option, the purchasing manager had to determine, using the information presented within the experimental scenario, whether their purchase intention was influenced by the counterfeiting risks within the supply chain. The vignette's description was meticulously designed to closely emulate real-life situations (Finch, 1987).



Research Method Operationalization

Following Rungtusanatham et al. (2011), scenarios should be built in a way that guarantees realism, being notably clear, precise, and appropriate to the research question you want to observe. Thus, the experiment had eight scenarios (2x2x2) (Figure 2).

The variables employed in this experiment are presented below:

Discount: The “5% discount” is characterized in the experiment by a 5% discount on the purchase price compared to the price charged by the current supplier of the product. The “No Dis-

count” option is characterized by the same price charged by the current supplier.

Quality: The “Lower quality” is characterized in the experiment by a price 15% below what the current supplier offers, which will cause a decrease in the quality and durability of the product, but which may not be noticed by many consumers. “Similar quality” is characterized by the same characteristics of the product used by the company to manufacture its current products, not generating any impact on a possible exchange; and

Country-of-origin: characterized in the experiment by the supplier location, being “Brazilian origin” or “Asian country origin”.

Figure 2

Manipulating analysis scenarios

| # | Scenario | Description |
|---|----------|--|
| 1 | BCDQA | Brazilian origin / 5% discount / Similar quality |
| 2 | BCDQI | Brazilian origin / 5% discount / Lower quality |
| 3 | BSDQA | Brazilian origin / No Discount / Similar quality |
| 4 | BSDQI | Brazilian origin / No Discount / Lower quality |
| 5 | ASDQI | Asian country origin / No Discount / Lower quality |
| 6 | ACDQI | Asian country origin / 5% discount / Lower quality |
| 7 | ASDQA | Asian country origin / No Discount / Similar quality |
| 8 | ACDQA | Asian country origin / 5% discount / Similar quality |

At the conclusion of each scenario, a commentary was included, indicating the prevalence of counterfeiting within the country and highlighting the challenging efforts of regulatory authorities in controlling it. This measure was taken to encourage participants to contemplate the potential impact of purchasing counterfeit products on their purchase intentions. Each participant was assigned just one of the scenarios created (following a between-subjects design). Following the reading of their assigned scenario, the participant proceeded to complete the designated questionnaire (Rungtusanatham et al., 2011).

Pre-design

A pre-design phase was conducted to assess and choose the experimental scenarios, ensuring the reliability of the steps involved in the study (Rungtusanatham et al., 2011; Aguinis & Bradley, 2014). This initial phase of comprehending and developing the scenarios involved the

participation of fifteen students from the Graduate program in Business Management at Fundação Armando Álvares Penteado (FAAP/SP). Participants were provided with hard copies of the scenarios and responded to them manually. Suggestions for the scenarios and descriptions were also welcome, and all participants received full assistance throughout the process.

Realism Check

To assess the realism of the proposed scenarios and gauge the engagement of respondents (Dabholkar, 1994), the initial phase of scenario testing involved students from the undergraduate Business Administration program at Faculdade das Américas (FAM/SP). This phase revealed the necessity to revise the arguments and expressions used within the scenarios. Following the adjustments, a second round of realism verification was conducted with a sample of 43 MBA students specializing in Management and Strategy at Fun-



dação Getulio Vargas in São Paulo.

To gauge the realism of the scenarios, questions were posed, primarily aimed at determining the respondents' understanding of the text and whether they found "the situation to be realistic" or if they encountered any difficulty in envisioning themselves in the depicted scenarios. A 7-point Likert scale was employed, with 1 indicating "Strongly Disagree" and 7 indicating "Strongly Agree," as a measure of realism (Dabholkar, 1994). Consequently, the respondents found the scenarios to be realistic ($x = 5.24$, $SD = 1.397$), thereby affirming their suitability for subsequent stages of the study.

Manipulation Check

To assess manipulation, the respondents were prompted to discern, from the scenarios they received, whether they could determine the country of origin of the product based on the statement: "The new supplier is located in Brazil." This was rated on a 7-point Likert scale, with 1 indicating "Strongly Disagree" and 7 representing "Strongly Agree." The results, analyzed using ANOVA, revealed significant distinctions among the respondents ($x_{Brazil} = 5.25$; $x_{Asia} = 1.0$, $p < 0.001$).

Following the same rationale in other analyses, the identification of manipulation in product quality was observed by the statement "There is a change in product quality in this new supply proposal", in which the tests identified the understanding of manipulations in this variable ($x_{quali_similar} = 3,33$; $x_{quali_lower} = 6,64$, $p.000$). In identifying the manipulation of the discount applied, the tests also showed the existence of a manipulated variable ($x_{no_desc} = 2,36$; $x_{with_desc} = 6,56$, $p.000$) when respondents were faced with the statement "The new supply proposal has a lower purchase price".

Measurable Variables

In relation to the scenario presented, each participant, in the role of purchasing manager, was asked to evaluate the following statements, according to the scale:

"The probability of this product being re-

liable is" using a 5-point Likert scale, where 1 is equivalent to "Very high" and 5 to "Very low".

"What level of risk could this purchase present to the company?" using a 5-point Likert scale, where 1 is equivalent to "No risk" and 5 to "Extremely risky".

Regarding the dependent variable, adopted in binary format, the following questions were asked:

"Would you, instead of the purchasing manager, make the purchase with this new supplier?", rating "1" for "Yes" and "0" for "No".

A logistic regression model was applied, with the objective of determining the probability of the purchase being made given the scenario presented.

Sample

For the experiment, we selected MBA students from Fundação Getulio Vargas in São Paulo, comprising a total of 272 respondents. This provided a robust number, with over 30 respondents per scenario, ensuring a reliable level of significance and sensitivity for conducting statistical tests (Hair Jr et al., 2005). It's important to note that this was a non-probabilistic sample. The sample distribution was carefully considered to guarantee the independence and diversity of respondents. You can find a summary of the demographic data in Figure 3.

Figure 3

Demographic data

| | | |
|----------------------------|----------------------------------|-----|
| Gender | Male | 128 |
| | Female | 144 |
| Industry | Financial institution | 31 |
| | Commerce | 29 |
| | Clothing/Fashion | 9 |
| | Pharmaceutical | 13 |
| | Food/Beverage industry | 24 |
| | Electronics industry | 26 |
| | Logistics/Transport | 14 |
| | Technology/Systems | 42 |
| | Other | 84 |
| | Purchasing/Supply Chain | 64 |
| Occupation area | Finance | 31 |
| | Technology | 29 |
| | Human resources | 11 |
| | Marketing | 67 |
| | Other | 70 |
| Years of experience | Less than 5 years | 37 |
| | 5 to 10 years | 117 |
| | 11 to 15 years | 58 |
| | 16 to 20 years | 51 |
| | 21 to 30 years | 7 |
| | Over 31 years old | 2 |
| Title | Student / Researcher / Professor | 2 |
| | Assistant / Analyst | 74 |
| | Manager / Director | 69 |
| | Coordinator / Supervisor | 42 |
| | Buyer | 33 |
| | Salesperson | 23 |
| | Consultor | 22 |
| | Others | 22 |

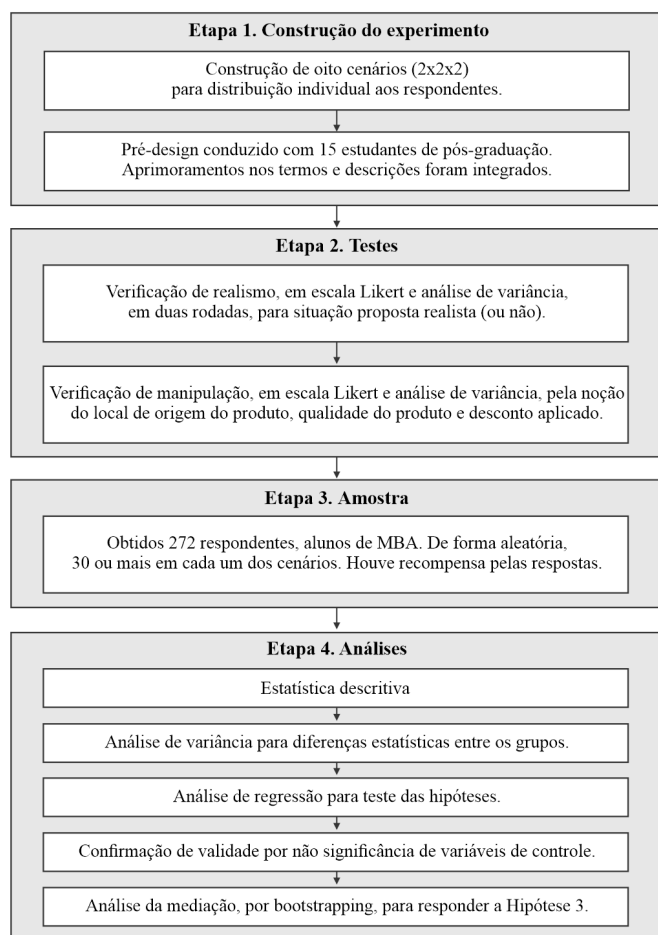


Respondents were randomly assigned to one of eight scenarios, thus assuming the role of purchasing manager for the company Athletic. After reading the described scenario, questions related to the experiment were presented. The reward for participating in the experiment was a chocolate bar.

Finally, Figure 4 summarizes the methodological steps.

Figura 4

Sumário das etapas metodológicas



ANALYSIS AND RESULTS

The analyses were conducted using SPSS 21 software, considering the following model structure: mediator variable (Mi) affecting the relationship $X \rightarrow Y$; also considering the moderating variables (W) discount and (Z) quality in the relationship $X \rightarrow Mi$. Initially, logistic regressions and other analyses will be used to validate the model.

Descriptive Statistics For Model Check

Based on descriptive statistics, as presented in Table 1, it is possible to verify the difference in the values originating from the independent variables. When the country-of-origin is in Asia, the average (3.3456) is higher than that reported for Brazil (3.1654). This result indicates the country-of-origin effect in the assessment of the perception of counterfeiting risk by the participants.

Table 1

Descriptive statistics of model operationalization

| | Counterfeiting risk perception | | | | |
|------------|--------------------------------|--------|------------|------------|-----|
| | Mean | SD | LLCI (95%) | UCLI (95%) | N |
| Asia (0) | 3,3456 | 0,6625 | 3,2332 | 3,4579 | 136 |
| Brazil (1) | 3,1654 | 0,7578 | 3,0369 | 3,2930 | 136 |
| Total | 3,2555 | 0,7162 | 3,1700 | 3,3410 | 272 |

Even though the coefficients presented by the regression are significant and the mean different behaviors, Analysis of Variance (ANOVA) can demonstrate differences in the variables analyzed, as established in Table 2. To this end, using the F test ($F=4.356$; $p=0.038$), it can be statistically verified that the means are not equal, confirming Hypothesis 1.

Table 2

ANOVA results

| | Sum of Squares | df | Mean of Square | F | Sig. |
|---------|----------------|-----|----------------|-------|-------|
| Between | 2,207 | 1 | 2,207 | 4,356 | 0,038 |
| Within | 136,785 | 270 | 0,507 | | |
| Total | 138,992 | 271 | | | |

Direct Effect of Country-of-Origin on Purchase Intention

We verified whether the proposed model can account for the impacts on the purchase intention variable (see Table 3). This allowed us to gauge the quality of the model in explaining a portion of these effects ($2LL = 363.665$, R^2 Nagelkerke = 0.064). Additionally, the Omnibus test ($X^2(1) = 13.348$, $p < 0.001$) validated the variables under analysis. Consequently, we were able to ascertain the presence of a direct relationship between the country of origin of the product and purchase intention.

The direct effect of origin on purchase intention was analyzed using binary logistic regression, as shown in Table 3, which is significant ($b = -0.897$, std error = 0.249, $\text{Exp}(b) = 0.408$, $p = 0.000$). In other words, there are 2.5 times more chances of purchasing the product from Brazil



than purchasing from the Asian supplier, as described in the model scenarios.

Table 3
Effect on purchase intention

| | B | Se | Wald | p | Exp (b) | LLCI (95%) | ULCI (95%) |
|-----------------------|--------|-------|--------|-------|---------|------------|------------|
| COUNTRY-OF-ORIGIN (1) | -0,897 | 0,249 | 13,018 | 0,000 | 0,408 | 0,250 | 0,664 |
| Constant | -0,031 | 0,124 | 0,062 | 0,804 | 0,907 | | |

This result confirms Hypothesis 1, which predicts that the country-of-origin affects purchase intention. This situation is observed by Majid (2017), highlighting that existing expectations about the country-of-origin of a product can affect the buyer’s decision to purchase

Control Variables

An experiment related to purchase intention can be affected by several factors, which must be controlled and monitored efficiently. Thus, when preparing the collection instrument, a section was established with demographic information about the respondent, which can help controlling possible changes in the results and improve the study’s validity. Therefore, in all analyses of the direct effect, none of the control variables were significant (Table 4).

Table 4
Result of logistic regression on the direct effect (control variables B2B Purchase Intention)

| | B | Se | Wald | p | Exp (b) |
|---------------------|--------|-------|-------|-------|---------|
| Constant | -0,574 | 0,766 | 0,561 | 0,454 | 0,563 |
| Risk Profile | 0,046 | 0,196 | 0,056 | 0,813 | 1,047 |
| Gender | 0,319 | 0,260 | 1,501 | 0,220 | 1,376 |
| Age | -0,211 | 0,236 | 0,801 | 0,371 | 0,810 |
| Industry | -0,018 | 0,044 | 0,166 | 0,684 | 0,982 |
| Years of experience | 0,236 | 0,161 | 2,143 | 0,143 | 1,266 |
| Title | 0,028 | 0,066 | 0,181 | 0,670 | 1,029 |
| Occupation area | 0,037 | 0,066 | 0,312 | 0,577 | 1,038 |

Next, the indirect effect of the control variables in the model was estimated, with the inclusion of the measurement of the perception of counterfeiting risk. In this case, there was also no significance in the results (Table 5). It is understood that participants may be from heterogeneous groups, so that there would be no influence on the results.

Table 5

Result of logistic regression on the indirect effect (control variables B2B Purchase Intention)

| | B | Se | Z | p |
|---------------------|---------|--------|---------|--------|
| Constant | -9,8639 | 1,5660 | -6,2989 | 0,0000 |
| Control variables | | | | |
| Risk Profile | -0,4411 | 0,2815 | -1,5667 | 0,1172 |
| Gender | 0,0503 | 0,3658 | 0,1375 | 0,8906 |
| Age | -0,2659 | 0,3217 | -0,8265 | 0,4085 |
| Industry | -0,0223 | 0,0626 | -0,3554 | 0,7223 |
| Years of experience | 0,0227 | 0,2205 | 0,1031 | 0,9179 |
| Title | -0,0469 | 0,0930 | -0,5039 | 0,6143 |
| Occupation area | -0,0022 | 0,0956 | -0,0232 | 0,9815 |

Indirect effect between Country-of-Origin and Purchase Intention through the Perception of Counterfeiting Risk and its moderations

To examine the indirect effect as posited by the model, we employed binary logistic regression. This analysis was conducted using the SPSS/Process software, specifically Model 9, designed for regressions involving moderation and mediation, as per Hayes (2018). The analyses were carried out with robust standard errors, following the methodology outlined by Hayes and Cai (2007).

Therefore, we continued with the test of the indirect effect of Origin (X) on Purchase Intention (Y) through the Counterfeiting Risk Perception (Mi). Furthermore, the model also works with two moderations: Discount (W) and Quality (Z). The analyzed model proved to be more efficient with the mediation variable (-2LL = 206.6927, R2 Nagelkerke = 0.6205, p < 0.001), with a response level of 62% of the model.

For the analysis of the “country-of-origin” variable, manipulated in the scenario presented by the experiment, that is, the product has Asian or Brazilian origin, coded as 0 and 1, respectively, the following results were observed (b = -0.183, se = 0.079, p = 0.021), as shown in Table 6, demonstrating that the origin of the product affects the perception of counterfeiting risk, confirming Hypothesis 2.

Moderation analysis

In the tests performed to identify the effects of moderations in the model, the following results were found (Table 6): the variable “discount” has partial significance in the interaction with the model (p=0.068), not fully confirming the statement that the price reduction may influence or encourage the purchase of a deter-



mined product (Aaker, 1991; Dowling & Staelin, 1994; Pharr, 2005).

Table 6
Effects on the Counterfeiting Risk Perception

| | b | se (HC3) | t | P |
|-------------------|--------|----------|--------|---------|
| Constant | 2,686 | 0,252 | 10,651 | 0,000 |
| Country-of-origin | -0,183 | 0,078 | -2,320 | 0,021* |
| Discount (Int 1) | -0,291 | 0,158 | -1,836 | 0,068** |
| Quality (Int 2) | -0,183 | 0,156 | 1,175 | 0,241 |

Note.: * $p \leq 0,05$, ** $p \leq 0,10$.

The starting point was the understanding that results like this are since the discount percentage offered for purchasing the product is not stimulating, leaving other variables to affect the purchase intention. Consequently, Hypothesis 2a was partially confirmed.

Regarding product quality, the model was not significant ($p=0.241$), showing that, although the scenarios presented to respondents indicate variations in the quality of the product offered, this would not be an indication of a counterfeit product, rejecting Hypothesis 2b.

Counterfeiting risk perception mediation

To answer Hypothesis 3, the mediation analysis using the bootstrapping approximation technique assumes that the distribution ($a * b$) of the indirect effect is not normal (Hayes, 2009). Therefore, the confidence interval (CI = 95%) is used as an estimate of the value of the indirect effect (Preacher et al., 2007).

To estimate the indirect effect of mediation, the bootstrapping technique was used, following the guidelines of Hayes (2018) to calculate mediation via Process/SPSS, which resulted in a significant and positive effect (effect = 3.5801; CI 95 % = 2.8131, 5.1377) within the confidence interval (Table 7), supporting Hypothesis 3. In other words, the perception of the product being counterfeit mediates the relationship between product origin and purchase intention in relationships B2B.

Table 7
Effects of mediation on Purchase Intention

| | Coef. | Boot SE | Boot LLCI | Boot ULCI |
|--------------------------------|---------|---------|-----------|-----------|
| Constant | -9,8639 | 1,9671 | -14,9036 | -7,1733 |
| Counterfeiting Risk Perception | 3,5801 | 0,5757 | 2,8131 | 5,1377 |

Note.: confidence interval (95%); bootstrap $n=10,000$ samples.

DISCUSSION

Companies' supply chains require effective strategies to meet their demands (Ellram; Cooper, 2014). Conversely, buyers must explore new supplier options to prevent potential risks from impacting their operations through their decision-making (Machado et al., 2018). Although previous studies have delved into the topic of counterfeiting, its associated risks, and challenges for companies (Berman, 2008; Grenoble et al., 2014; Stevenson & Busby, 2015), the primary objective of this study is to demonstrate the presence of the country-of-origin effect on purchase intentions, within the context of counterfeiting risks in supply chains. Building on the findings of previous research (Papadopoulos & Heslop, 2002; Fratocchi et al., 2016), it's evident that purchasing managers consistently take into account the product's origin before making procurement decisions.

However, we also examined other variables in this context. Both the impact of discounts (Berman, 2008) and the role of quality (Garvin, 1984; Berman, 2008) were analyzed as potential moderators of the relationship between country-of-origin and risk perception since they often drive purchase decisions. While the quality factor didn't show significant results ($p>0.05$), suggesting that lower-quality products aren't necessarily associated with counterfeiting risks, the role of discounts did reveal significance ($p<0.10$) in the context of this model. This indicates that price reductions can indeed influence and encourage the consumption of specific products, in line with previous research (Aaker, 1991; Dowling & Staelin, 1994; Pharr, 2005). Therefore, from the perspective of purchasing managers, product quality isn't a significant factor in risk perception, while discounts tend to play a qualifying role in this scenario. This outcome aligns with Berman's (2008) assertion that low-quality products and reduced prices tend to be associated with a hi-



gher likelihood of counterfeiting. Thus, the findings suggest that the product's origin holds significant influence, especially in relation to price. However, when evaluating quality, there's variation in the perception of counterfeiting, even in countries that are commonly seen as sources of counterfeit products.

Finally, we examined whether the perception of the risk of counterfeiting mediated the relationship between product origin and purchase intention. This proved to be a critical aspect of our study. The variable related to the perception of counterfeiting risk emerged as significant (effect

= 3.580, CI 95% = 2.8131, 5.1377, $p < 0.001$) in the mediation process. Not only does it affect purchase intentions, but this result also underscores that products originating from specific countries can elevate the perception of counterfeiting risks.

In summary, Figure 5 provides a comprehensive overview of the study's findings.

Figure 5
Hypothesis results

| Hypotheses | | Result |
|------------|--|---------------------|
| H1 | The country-of-origin of the product influences purchase intention in B2B relationships. | Confirmed |
| H2 | The country-of-origin of a product influences the risk perception of counterfeiting in B2B relationships. | Confirmed |
| H2a | The discount offered moderates the relationship between the country-of-origin of the product and the perception of counterfeiting risk in B2B relationships. | Partially confirmed |
| H2b | Product quality moderates the relationship between country-of-origin of the product and the counterfeit risk perception in B2B relationships. | Rejected |
| H3 | The counterfeit risk perception mediates the relationship between the country-of-origin of the product and purchase intention in B2B relationships. | Confirmed |

CONCLUSION

This study aimed to explore whether the link between a product's origin and the perception of counterfeit risk impacts purchase intentions in B2B relationships. Drawing from an experiment comprising eight scenarios, it can be concluded that the purchasing manager's intent to buy is influenced by the interplay between the product's origin and the manager's perception of the counterfeit risk in B2B relationships.

In general, the outcomes generated by the proposed model offer valuable insights into the realms of operations management and the supply chain field, shedding light on our unders-

tanding of the counterfeit phenomenon concerning purchase intent. The buyer's willingness to pay for a product when a price discount is on the table remains inconclusive, even though it's often seen as a way to introduce a new consumption experience, as suggested by Aaker (1991). This uncertainty may stem from the inherent risks involved in the transaction (Dowling & Staelin, 1994), primarily due to a lack of knowledge about the product's origin (Han, 2010).

The study also scrutinized the quality aspect, which, surprisingly, didn't appear to be a significant factor, even when product quality varied. Consequently, it appears that the product's quality might not necessarily correlate with it being



a counterfeit product, diverging from findings in studies by Dowling and Staelin (1994) and Wyer Jr (2011), which implied a connection between product quality and the country of origin.

The managerial implications of this study are valuable for purchasing managers as they navigate the purchase intention process. The results underscore the inclination of managers to evaluate purchases by considering various variables in the process rather than isolating one. This aligns with the “made in” effect identified by Fratocchi et al. (2016), which underscores the significant role of a product’s country of origin in purchase intentions. Additionally, when the product’s origin is linked to the perceived risk of counterfeiting, purchasing managers may be more inclined to avoid the transaction. Furthermore, the study underscores the importance of discussing counterfeit products and the potential for their legal entry into supply chains, emphasizing the significance of risk management within supply chains and the need for compliance-related actions within the procurement domain.

Despite efforts to minimize the limitations of this study through control tests, the portrayal of scenarios in a manner that accurately mirrored real-world commercial negotiations proved challenging. Additionally, generalizing the results based on a sample of 272 respondents, primarily comprising students from a single MBA school, may lead to biased responses. Moreover, the specificity of the product used in the research scenarios might make it difficult for respondents to grasp the significance of acquiring such a product for a company. Lastly, the percentage variations used in the scenarios to represent levels of discount (ranging from 5% to 15%) might not have adequately captured the potential influences of these two variables on purchase intentions.

The exploration of counterfeiting also opens doors to further insights. Given that the country-of-origin effect moderately impacts purchase intentions (Fratocchi et al., 2016), it’s imperative to delve into other essential variables for understanding the phenomenon, especially in cases where the country-of-origin doesn’t pose a high risk of counterfeiting. This calls for future analysis regarding price discounts beyond the range of 5% to 10% or 15%, and a deeper exa-

mination of product quality. We propose incorporating products and goods from various countries of origin, such as medicines, which are also susceptible to counterfeiting issues. Comparative studies between countries can be explored to determine if cultural factors affect risk aversion, among other attributes, besides cost and quality, which could influence purchase intentions.

REFERENCES

- Aaker, D. A. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. New York: The Free Press.
- Aguinis, H. & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational Research Methods*, 17(4), 351-371. doi:10.1177/1094428114547952
- Allal-Chérif, O. & Maira, S. (2011). Collaboration as an anti-crisis solution: the role of the procurement function. *International Journal of Physical Distribution & Logistics Management*, 41(9), 860-877. doi: 10.1108/09600031111175825
- Bahrin, M., Othman, F., Azli, N., & Talib, M. (2016). Industry 4.0: A review on industrial automation and robotic. *Journal Teknologi*, (6-13), 137-143. doi:10.11113/jt.v78.9285
- Balocco, R., Miragliotta, G., Perego, A., & Tumino, A. (2011). RFID adoption in the FMCG supply chain: an interpretative framework. *Supply Chain Management: An International Journal*, 16(5), 299-315. doi:10.1108/13598541111155820
- Bals, L., Schulze, H., Kelly, S., & Stek, K. (2019). Purchasing and supply management (PSM) competencies: Current and future requirements. *Journal of Purchasing and Supply Management*, 25(5), 100572. <https://doi.org/10.1016/j.pur-sup.2019.100572>
- Bavar, A., Tahmasebifard, H., & Kheiry, B. (2017). Studying the factors affecting consumers complicity with counterfeit products. *Business Management and Strategy*, 8(1), 39-57. doi:10.5296/bms.v8i1.10648
- Berman, B. (2008). Strategies to detect and reduce counterfeiting activity. *Business Horizons*, 51(1), 191-199. doi:10.1016/j.bushor.2008.01.002



- Bode, C. & Macdonald, J. R. (2017). Stages of supply chain disruption response: direct, constraining, and mediating factors for impact mitigation. *Decision Sciences*, 48(5), 836-874. doi:10.1111/dec.12245
- Carr, A. S. & Smeltzer, L. R. (1997). An empirically based operational definition of strategic purchasing. *European Journal of Purchasing & Supply Management*, 3(4), 199-207. doi: 10.1016/S0969-7012(97)00014-2
- Cordell, V. V., Wongtada, N., & Kieschnick Jr, R. L. (1996). Counterfeit purchase intentions: role lawfulness attitudes and product traits as determinants. *Journal of Business Research*, 35(1), 41-53. doi:10.1016/0148-2963(95)00009-7
- Chen, Y. S. & Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3) 502-520. doi:10.1108/00251741211216250
- Cheng C., Guelfirat, T., Messinger, C., Schmitt, J., Schnelte, M., & Weber, P. (2015). Semantic degrees for industries 4.0 engineering: deciding on the degree of semantic formalization to select appropriate technologies. In: European Software Engineering Conference and The Acm Sigsoft Symposium on The Foundations of Software Engineering, 2015, Bergamo. *Proceedings [...]* Nova York: ACM New York, p. 1010-1013.
- Christopher, M. & Lee, H. L. (2004). Mitigating supply chain risk through improved confidence. *International Journal of Physical Distribution and Logistics Management*, 34(5), 388- 396. doi:10.1108/09600030410545436
- Dai, B., Forsythe, S., & Kwon, W. S. (2014). The impact of online shopping experience on risk perceptions and online purchase intentions: does product category matter? *Journal of Electronic Commerce Research*, 15(1), 13-24.
- Dai, T. & Tang, C. (2022). Frontiers in Service Science: Integrating ESG Measures and Supply Chain Management: Research Opportunities in the Postpandemic Era. *Service Science*, 14(1), 1-12. doi: 10.1287/serv.2021.0295
- Dowling, G. R. & Staelin, R. (1994). A model of perceived risk and intended risk-handling activity. *Journal of Consumer Research*, 21(1), 119-134. doi:10.1086/209386
- Dwivedi, G., Srivastava, S. K., & Srivastava, R. K. (2017). Analysis of barriers to implement additive manufacturing technology in the Indian automotive sector. *International Journal of Physical Distribution & Logistics Management*, 47(10), 972-991. doi:10.1108/IJPDLM-07-2017-0222
- Ellram, L. M. & Cooper, M. C. (2014). Supply chain management: It's all about the journey, not the destination. *Journal of Supply Chain Management*, 50(1), 8-20. doi:10.1111/jscm.12043
- Farmer, D. (1997) Purchasing Myopia: Revisited. *European Journal of Purchasing & Supply Management*, 3(1), 1-8. doi: 10.1016/S0969-7012(96)00006-8
- Finch, J. (1987). The vignette technique in survey research. *Sociology*, 21(1), 105-114. doi:10.1177/0038038587021001008
- Frank, B., Enkawa, T., Schvaneveldt, S. J. & Herbas, T. B. (2015). Antecedents and consequences of innate willingness to pay for innovations: understanding motivations and consumer preferences of prospective early adopters. *Technological Forecasting and Social Change*, 99(16), 252-266. doi:10.1016/j.techfore.2015.06.029
- Fratocchi, L., Ancarani, A., Barbieri, P., Di Mauro, C., Nassimbeni, G., Sartor, M., Vignoli, M. & Zanoni, A. (2016). Motivations of manufacturing reshoring: an interpretative framework. *International Journal of Physical Distribution & Logistics*, 46(2), 98-127. doi:10.1108/IJPDLM-06-2014-0131
- Garvin, D. A. (1984). What does "product quality" really mean? *Sloan Management Review*, 25-43. <https://sloanreview.mit.edu/article/what-does-product-quality-really-mean>
- Ghadge, A., Duck, A., Er, M., & Caldwell, N. (2021) Deceptive counterfeit risk in global supply chains, *Supply Chain Forum: An International Journal*, 22(2), 87-99. doi:10.1080/16258312.2021.1908844
- Giunipero, L. C., Denslow, D., & Eltantawy, R. (2005). Purchasing/supply chain management flexibility: moving to an entrepreneurial skill set. *Industrial Marketing Management*, 34(6), 602-613. doi: 10.1016/j.indmarman.2004.11.004
- Grenoble, W.L., Ruamsook, K., Bechtel, L., Craighead,



- C. & Wilkerson, T. (2014). Counterfeiting: an omnipresent, critical and yet elusive supply chain issue. *Supply Chain Management Review*, July, 40-46. https://www.scmr.com/article/counterfeiting_an_omnipresent_critical_and_yet_elusive_supply_chain_issue
- Grossman, G. & Shapiro, C. (1988). Counterfeit-product trade. *The American Economic Review*, 78(1), 59-75.
- Ha-Brookshire, J. E. (2012). Country-of parts, country of manufacturing and country of origin: consumer purchase preferences and the impact of perceived prices. *Clothing and Textiles Research Journal*, 30(1), 19-34. doi:10.1177/0887302X11433502
- Hair Jr., J. F., Babin, B. J., Money, A. H., & Samouel, P. (2005). *Fundamentos de Métodos de Pesquisa em Administração*. Porto Alegre: Bookman.
- Han, H. (2010). The investigation of country-of-origin effect-using Taiwanese consumers' perceptions of luxury handbags as example. *Journal of American Academy of Business*, 15(2), 66-72.
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408-420. doi:10.1080/03637750903310360
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: a regression-based approach*. 2 ed. New York. Guilford Press.
- Hayes, A. F. & Cai, L. (2007). Using heteroskedasticity-consistent standard error estimators in OLS regression: an introduction and software implementation. *Behavior Research Methods*, 39(4), 709-722. doi:10.3758/BF03192961
- ICC – International Chamber of Commerce. (2016). *The economic impacts of counterfeiting and piracy*. <https://iccwbo.org/publication/economic-impacts-counterfeiting-piracy-report-prepared-bascap-inta/>
- Johnston, R. & Staughton, R. (2009). Establishing and developing strategic relationships – the role for operations managers. *International Journal of Operations & Production Management*, 29(6), 564-590. doi: 10.1108/01443570910957564
- Jüttner, U., Peck, H., & Christopher, M. (2003). Supply chain risk management: outlining an agenda for future research. *International Journal of Logistics: Research and Applications*, 6(4), 197-210. doi:10.1080/13675560310001627016
- Kahraman, C.; Cebeci, U.; Ulukan, Z. (2003). Multi-criteria supplier selection using fuzzy AHP. *Logistics Information Management*, 16(6), 382-394. doi: 10.1108/09576050310503367
- Karttunen, E. (2018). Purchasing and supply management skills revisited: an extensive literature review. *Benchmarking: An International Journal*, 25(9), 3906-3934. doi: 10.1108/BIJ-03-2017-0047
- Kotler, P. & Gertner, D. (2002). Country as brand, product and beyond: a place marketing and a brand management perspective. *Brand Management*, 9(4), 249-261. doi:10.1057/palgrave.bm.2540076
- Kraljic, P. (1983) Purchasing Must Become Supply Management. *Harvard Business Review*, 61, 109-117.
- Kumara, S. & Canhua, K. (2010). Perceptions of country of origin: an approach to identifying expectations of foreign products. *Journal of Brand Management*, 17(5), 343-353. doi:10.1057/bm.2009.28
- Large, R.O. (2005). Communication capability and attitudes toward external communication of purchasing managers in Germany. *International Journal of Physical Distribution & Logistics Management*, 35(6), 426-444. doi: 10.1108/09600030510611657
- Lee, M.T., Raschke, R.L., Krishen, A.S. (2022). Signaling green! firm ESG signals in an interconnected environment that promote brand valuation. *Journal of Business Research*, 138, 1-11. doi: 10.1016/j.jbusres.2021.08.061
- Machado, S. M., Paiva, E. L., & Silva, E. M. (2018). Counterfeiting: addressing mitigation and resilience in supply chains. *International Journal of Physical Distribution & Logistics Management*, 48(2), 139-163. doi:10.1108/IJP-DLM-01-2017-0004 <https://doi.org/10.1108/IJP-DLM-01-2017-0004>
- Majid, K. A. (2017). Drawing negative inferences from a positive country-of-origin image: consumers' use of COI and price levels to assess counterfeit drugs. *International Marketing Review*, 34(2),



293-310. doi:10.1108/IMR-03-2015-0060

Mehra, S. & Inman, R. A. (2004). Purchasing management and business competitiveness in the coming decade. *Production Planning & Control*, 15(7), 710-718. doi: 10.1080/09537280412331298247

Papadopoulos, N. & Heslop, L. A. (2002). Country equity and country branding: problems and prospects. *Journal of Brand Management*, 9(4), 294-314. doi:10.1057/palgrave.bm.2540079

Parker, G. G. & Anderson, E. G. (2002). From buyer to integrator: the transformation of the supply-chain manager in the vertically disintegrating firm. *Production and Operations Management*, 11(1), 75-91. doi: 10.1111/j.1937-5956.2002.tb00185.x

Pharr, J. M. (2005). Synthesizing country-of-origin research from the last decade: is the concept still salient in an era of global brands? *Journal of Marketing Theory and Practice*, 13(4), 34-45. doi:10.1080/10696679.2005.11658557

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42(1), 185-227. doi:10.1080/00273170701341316

Priem, R. L., Walters, B. A., & Li, S. (2011). Decisions, decisions! How judgment policy studies can integrate macro and micro domains in management research. *Journal of Management*, 37(2), 553-580. doi:10.1177/0149206310372258

Rungtusanatham, M. Wallin, C., & Eckerd, S. (2011). The vignette in a scenario-based role-playing experiment. *Journal of Supply Chain Management*, 47(3), 9-16. doi:10.1111/j.1745-493X.2011.03232.x

Sharma, P. & Chan, R. Y. K. (2011). Counterfeit proneness: Conceptualization and scale development. *Journal of Marketing Management*, 27(5), 602-626. doi:10.1080/0267257X.2010.489829

Solomon, M. (2011). *O comportamento do consumidor: comprando, possuindo, sendo*. Porto Alegre: Bookman.

Stevenson, M. & Busby, J. (2015). An exploratory analysis of counterfeiting strategies: towards counterfeit-resilient supply chain. *International Journal of Operations & Production Management*,

35(1), 110-144. doi:10.1108/IJOPM-04-2012-0174

Strehlau, S. & Urdan, A. T. (2015). O valor percebido no luxo falsificado pelo cliente de artigo legítimo: uma investigação qualitativa. *Revista de Administração da Unimep*, 13(3), 74-100. doi: 10.15600/1679-5350/rau.v13n3p74-100

Tassabehji, R. & Moorhouse, A. (2008). The changing role of procurement: developing professional effectiveness. *Journal of Purchasing and Supply Management*, 14(1), 55-68. doi: 10.1016/j.pursup.2008.01.005

van Weele, A. J. (2014). *Purchasing and supply chain management* (6th ed.). Cengage Learning EMEA.

Voss, M. D., Closs, D. J., Calantone, R. J., & Helferich, O. K. (2009). The role of security in the food supplier selection decision. *Journal of Business Logistics*, 30(1), 127-155. doi: 10.1002/j.2158-1592.2009.tb00102.x

Wang, Y., Jin, J., & Choi, T-M. (2020). Gray market and counterfeiting in supply chains: A review of the operations literature and implications to luxury industries. *Transportation Research Part E: Logistics and Transportation Review*, 133, 101823. doi: 10.1016/j.tre.2019.101823

Whitelock, V. G. (2019). Multidimensional environmental social governance sustainability framework: Integration, using a purchasing, operations, and supply chain management context. *Sustainable Development*, 27(5), 923-931. doi: 10.1002/sd.1951

Wildavsky, A. & Dake, K. (1990). Theories of risk perception: Who fears what and why? *Daedalus*, 119(4), 41-60.

Wolf, H. (2005). Making the transition to strategic purchasing. *MIT Sloan Management Review*, 46(4), 17-20.

Wu, Z., Steward, M. D., & Hartley, J. L. (2010). Wearing many hats: supply managers' behavioral complexity and its impact on supplier relationships. *Journal of Business Research*, 63(8), 817-823. doi: 10.1016/j.jbusres.2009.07.001

Wyer JR., R. S. (2011). Procedural influences on judgments and behavioral decisions. *Journal of Consumer Psychology*, 21(4), 424-238. doi:10.1016/j.jcps.2010.12.002



WEF – World Economic Forum. (2018). *The Global Risks Report 2018*. <http://wef.ch/risks2018>

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22. doi:10.1177/002224298805200302

Zhao, X.; Liu, C.; Lin, T. (2010). Incorporating business process management into RFID-enabled application systems. *Business Process Management Journal*, 16(6), 932-953. doi:10.1108/14637151011093008