

## Article

# An Exploratory Investigation of Garments' Production Countries of Origin (COOs) Disclosure to Consumers

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**Abstract:** For legislative and managerial purposes, brands are increasingly transparent in disclosing more information on the countries of origin (COOs) involved in their products' production. This study aims to further research what information regarding the COOs involved in the production of a garment must be communicated to consumers, and how such information should be communicated. To this end, a questionnaire survey was performed with a panel of 103 consumers, followed by the sharing of experimental products' webpages with an additional panel of nine consumers in France. The webpage was accessed via a QR code. The study shows that several preconceived notions drive consumers' perceptions, and, in fact, additional information regarding COOs does not overcome stereotypes.

**Keywords:** country-of-origin effect; provenance; fashion consumer; brand positioning



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## 1. Introduction

The fashion industry is having trouble transcending the scandals that have haunted it. Indeed, years after the collapse of the Rana Plaza factory in 2013, there is a renewed level of scrutiny as several brands have been incriminated for their involvement with forced labour stemming from the 2020 Uyghur crisis [1,2]. For Millet [3], the clothes made in these factories are tainted by a capitalist system, where productive frenzy prevails over the fate of workers. These industrial scandals had an impact on consumers' perception of brands. The scandals led consumers to have an increased informational expectation for knowledge regarding the COOs involved in the manufacturing of the fashion products they buy [4].

Research on communication regarding clothing's origin essentially focuses on the "made in" label, which indicates the country where the product is assembled [5–7]. Targeting the last substantial processing or labour resulting in the manufacturing of the product, the mention of the "made in", framed by the EU non-preferential rules of origin, only puts emphasis on the country of the products' final assembly. However, a garment is an "hybrid product", involving several processing stages and multiple related suppliers dispatched internationally [3,8,9]. The United Economic Commission for Europe (UNECE) distinguishes four main steps in production, from raw materials to the final garment, referred as "tiers": Tier 1 corresponds to the final product's manufacturing and assembly, Tier 2 to materials manufacturing, Tier 3 to raw material processing, and Tier 4 to raw material agriculture, farming, or extraction [10].

The study conducted by Insch and McBride [6] demonstrated that the listing of COOs involved in the production of a good went on to influence consumers' evaluation of the product. In addition, upcoming regulations have been announced with stringent

requirements on consumer information. Most notably, a recent binding decree of the Anti-Waste and Circular Economy (AGEC) law in France has compelled the listing of COOs for importers and marketers of certain products [11]. This mandates disclosure of the geographic location of the products' assembly, the fabric's weaving, as well as the dyeing and finishing stages. However, there is still a lot of information that we do not know about the perception of COOs involved in the manufacture of hybrid products, such as fashion goods. In fact, "there may be a differing COO effect in the case of fashion or style-related products as opposed to more generic or purely functional products" [6] (p. 263). For example, the effect of country-of-design on consumers' perception of quality is greater in the case of fashion products [6]. However, in reaction to increasing transparency expectations, some authors have also called attention to the abundant supply of COO information. Ospital et al. [12] advised that data restitution adapted to consumers' profiles is key. Nevertheless, they suggested that defining a standard list of data that can be collected and communicated while taking into account fashion brands' positioning and consumers' profile remains an important challenge.

Therefore, to address those concerns, this paper aims to expand upon previous works by determining the obstacles and the action levers to the understanding of COO information of garments to consumers. Basically, and as exploratory research, it intends to explore avenues of response to the following two research questions:

RQ1: How can consumers perceive COO information regarding production steps of a garment ?

RQ2: How could this information be transmitted to enhance intelligibility for consumers?

To answer these research questions, a questionnaire survey with a panel of 103 consumers was conducted. Additionally, web-product pages accessible through a QR code were trialled with nine other consumers. The contributions of this article rely on the advancement of the existing COO literature, by exploring fashion consumers' reception of COO patterns elaborated upon in the production of a garment, i.e., country of fabric's dyeing, fabric's weaving or knitting, and garment's final assembly.

Section 1 briefly reviews the evolution of the prevailing COO literature. Section 2 explains the research methods of the initial consumers' survey and the additional web-product pages' experiment. The findings are presented in Section 3 and discussed in Section 4. Finally, the last section of the paper concludes and highlights the study's limitations, as well as opportunities for future research.

## 2. Literature Review

According to the methodology developed by Tranfield et al. [13], a systematic literature review was conducted to explore the existing literature on consumers' reception of COO information in the fashion and apparel sector. The research was performed on Scopus, using the following combination of keywords and boolean connectors: (country of origin OR provenance) AND (consumer OR purchase) AND (perception OR knowledge OR understanding OR information) AND (fashion OR clothing OR textile), which were applied to titles, abstracts, and keywords. A total of 93 articles resulted from this equation. Titles and abstracts were checked to provide an initial selection. At this stage, off-topic papers, essentially related to research on COB or investigating other sectors, and out-of-context papers, essentially related to socio-demographic comparison or historic perspective of COO, were excluded. After removing duplicates, this selection process resulted in 44 references. In-depth reading was carried out reducing the final sample to 17 articles. In addition, to make sure no important publications were omitted, 6 references of the final sample were added, following a snowballing process or via a Google Scholar search for a total of 23 references.

### 2.1. From "Made in" to COOs Polysemic Concept

Consumer studies on COOs published in the 1980s distinguished between domestic and imported products [14,15]. This forged two major preconceptions that we still have

today. The first is the idea that the COO is synonymous with “made in”. The second is that there are two types of products: products from one’s own country, or from countries with close socio-cultural relationships, and the “others”. However, as Garg and Mathew [5] suggested “the concept of COO [...] has transformed into a multidimensional concept that encompasses several components, such as country of parts, manufacture, brand, and design” (p. 48). Indeed, the context of hyper globalisation has led to the proliferation of “hybrid products” processed in several countries of origin. In fact, it has become complex for consumers to understand information on COOs to evaluate products [7], especially since it will be even more complex in a context of 4.0 Industry, where the information will be made available for the brand and may be communicated to consumers [16]. Indeed, each stage of processing has different effects on consumers’ perception. For example, “Country of manufacturing may be associated with serviceability, workmanship, and economy; country of assembly may affect consumers’ evaluations of products on functional aspects (e.g., performance and reliability); whereas, country of design may influence products’ image, aesthetics, and other aspects” [17] (p. 232).

### *2.2. COOs Effects and Influence on Consumers*

As a hybrid product, clothing has been included into the broader phenomenon of globalisation. The information on its fragmented and delocalized production has repercussions for the perception and behaviour of consumers. Stolz [9] defined this COOs effect as “the influence of a product’s origin on the way consumers perceive this product and how the origination information affects the buying decision process” (p. 102). The first mechanism of influence is normative. It is the ethnocentrism of consumers [18–20], or the belief in the superiority of an ethnic or cultural group over another [21], especially for so-called developed countries [22]. The second mechanism of influence is cognitive. It is the set of “mythologies” and stereotypes associated with COOs [23] (p. 232). This ethnocentrism of the consumers has been studied in national contexts across different regions of the world, and especially in European countries associated with a certain know-how, such as Italy [24]. The third and last mechanism of influence is affective and is defined as the “country animosity”, i.e., the fact that “consumers may avoid/reject products from a specific COO because of their disapproval of the foreign country’s environmental policies and practices” [25] (p. 168). These influence mechanisms increase for foreign products and “can lead to a reduced willingness to buy, boycotts, or other forms of anti-consumption” [26] (p. 1165).

### *2.3. COO Information and Communication to Consumers*

With these factors in mind, Martin et al. [27] recommended that communication campaigns should be developed to break these negative stereotypes regarding quality [28]. To this end, it is necessary to create a bond of familiarity between consumers and the product or brand. Indeed, if consumers are more familiar with the product or the brand, there are fewer risks that the COOs involved in the product’s manufacturing will be perceived negatively [29,30]. Thus, some studies proposed creating a link by communicating the country-of-design (COD) and/or the country-of-brand (COB), since they both would make it possible to suggest added values as a simulacrum of these countries of origin [18,31]. In addition, although most people have enough knowledge to identify the country of manufacturing, it is recommended “that symbols should be used to a greater extent because it would reduce language barriers that may be experienced by consumers” [32] (p. 23). Especially, in the context of globalisation, providing information on geographical origin is no longer unique and is now confusing [7]. In light of the existing contradictions between previous studies, Insch and McBride [6] recommended advancing research in this area to address the lack of knowledge regarding COO construction and its generalizability across different product situations.

### 3. Research Method

This exploratory research, as recommended in the literature review [12], is based on two steps. A consumer survey was developed and submitted to a panel of 103 respondents. This initial research was conducted to evaluate consumers' expectations regarding COO information in order to provide a preliminary list of recommendations. Based on the resulting findings, COO communications were designed in the form of fictitious web-product pages. Those pages were then exposed to the opinion of another panel of 9 consumers to experiment with those recommendations and identify the obstacles and levers for the intelligible communication of COOs information to consumers.

As respondents were asked to give us their opinions, the survey questionnaire allows us to obtain preliminary answers to the first research question, namely how consumers perceive COO information regarding production steps of a garment. By giving us an overview of the respondents' understanding, the survey questionnaire also partially answers our second research question. Finally, the test of the web product pages allows us to verify in practice whether the results of the survey questionnaire are valid. In fact, this verification seems necessary since there is a gap between the intentions and the practices of the respondents. Finally, the test part allows us to answer the second research question more precisely since we can identify which web product pages are the most intelligible, and therefore, to determine what the characteristics of this model are.

#### 3.1. Questionnaire Survey

As previously mentioned, a first survey was conducted to gauge consumers' expectations regarding COOs information. The questionnaire was elaborated accordingly:

- The first section introduced the purpose of the research and included preliminary questions to evaluate the respondents' buying behaviour when it comes to clothing;
- The second section intended to determine respondents' knowledge and interest of the different production stages and locations involved in the production of a garment. The frequency and the motivations of consumers to consult COO information and its impact on purchasing decisions were also examined;
- The third section aimed to underline the additional information on clothes' origin the respondents would like to access, and the way to effectively communicate regarding information accessibility, preferred format (text, photograph and pictogram) and time granted. Finally, the last part was used to collect socio-demographic data.

Three academics in the field of information and communication sciences, consumer sciences and traceability in the clothing and textile sector were consulted to ensure the questionnaire's validity. To conduct this survey, respondents were recruited in Parisian shopping districts, such as the Marais, Saint-Germain-des-Prés, the streets surrounding the Printemps, Citadium, and Galeries Lafayette department stores, as well as the Westfield Forum des Halles shopping centre. The questionnaire was submitted to 103 respondents. The answers were directly collected by the first author to make sure all the questions were comprehensible and to ensure data quality in the responses.

#### 3.2. Design and Testing of Experimental Web-Product Pages

Based on the findings obtained from the initial consumers' survey, the second research step aimed to test different COO informational models. To this end, three fictitious brands (Bout-s, Cutesy and Happy Kids) were created with their own graphic identities. Web-product pages were designed considering recommendations expressed by consumers in their responses from the previous questionnaire. These product webpages were developed by consulting existing ones from brands with disclosures of COO information, following a dedicated benchmark. For each fictitious brand and its associated product, authentic production scenarios were created by using three corresponding French fashion brands as models. Sustainability directors and managers from those brands were also consulted to design maximally realistic mock-ups, and to improve the fictitious brands' communication attempts.

Therefore, as highlighted in Table 1, three genuine production patterns were tested for the represented products of each fictitious brand, corresponding to a total of 9 scenarios. Figure 1 displays the experimented product webpages.

**Table 1.** Breakdown of the production scenarios tested for each web-product page.

Product Page Brand	Model 1	Model 2	Model 3
Boot-s Black oversize tee-shirt	Knitting: Bangladesh Dyeing: Bangladesh Assembly: Bangladesh	Knitting: China Dyeing: China Assembly: China	Weaving: India Dyeing: India Assembly: India
Cutesy White lace panty	Spinning: China/Europe Knitting: China Dyeing: China Assembly: Tunisia	Spinning: unknown Knitting: France Dyeing: France Assembly: Bangladesh	Spinning: China/Europe Knitting: Sri Lanka Dyeing: Sri Lanka Assembly: Sri Lanka
Happy Kids Blue denim blouse	Raw material: India Dyeing: China Weaving: China Assembly: Bangladesh	Raw material: India Dyeing: Bangladesh Weaving: Bangladesh Assembly: Bangladesh	Raw material: India Dyeing: Bangladesh Weaving: Bangladesh Assembly: Bangladesh

Using these product webpages, an experimental study was conducted in the form of semi-directed interviews following an open questionnaire organised as follows:

- Once again, the purpose of the research was first introduced to the respondents and preliminary questions aimed to evaluate the respondents' buying behaviour when it comes to clothing;
- Respondents were asked to react and provide their opinion on the product webpage they had access to through a QR code;
- Respondents had to classify by order of preference the product webpages available to them;
- Finally, the respondents had the opportunity to make suggestions to enhance the product webpages.

Socio-demographic data were also collected to track the different participating respondents' profiles.

In total, 9 respondents were recruited in the streets of Paris surrounding the Westfield Forum des Halles shopping centre and had one of the three models displayed in Table 1 at their disposal, accessible via a QR code. Data from respondents were transcribed on a phone by the first author, using a semi-directed face-to-face questionnaire of 25 min (+/− 5 min).

### 3.3. Sample Considerations

The sample was clothing consumers in France only, since they are the individuals impacted by the decree of the Anti-Waste and Circular Economy (AGEC) law in France since January 2023. Knowing that there was no claim to the exhaustiveness of our sample, all respondents agreeing to answer our survey were able to participate. This explains why our sample is not representative of the French population.

All the necessary ethical considerations were considered in carrying out this study, and all the respondents expressly agreed to answer the questionnaires. The survey was conducted in French. It was decided not to share the survey verbatim so as not to influence the results during the survey.

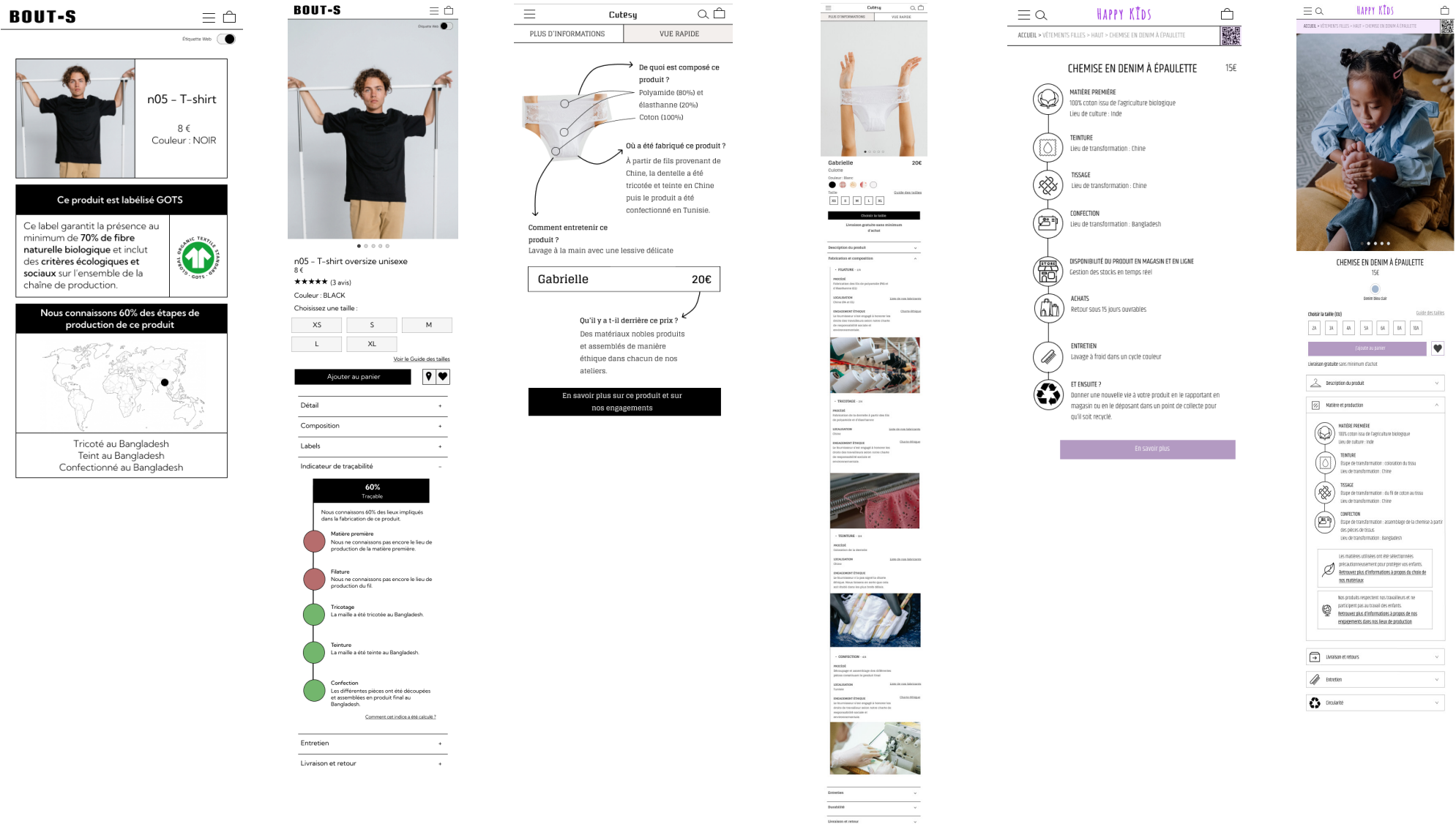


Figure 1. Display of the experimented product webpages tested.

## 4. Results

As exploratory research, the results presented in this section are tentative but highlight new research perspectives on the perception of all the COOs involved in the production chain of a garment.

### 4.1. Demographic and General Information

As highlighted in Table 2, the majority of respondents during Stages 1 and 2 were female and under the age of 40. A negligible portion of respondents ( $n_1 = 7$ ) had not purchased any clothes in the past six months. The most notable difference between the two groups of respondents is that the first shopped mainly in stores (69%) compared to the second, which shopped online ( $n_3 = 7/9$ ).

**Table 2.** Demographic profile of the consumers' panel.

Variables	STEP 1 Questionnaire Survey		STEP 2 Product Webpages
	Number of Respondents	%	Number of Respondents
Gender			
Male	20	19.1%	2
Female	81	78.6%	7
Other	2	1.9%	0
Age			
<19 years	17	16.5%	0
20–29 years	39	37.9%	4
30–39 years	13	12.6%	2
40–49 years	8	7.8%	0
50–59 years	11	10.7%	2
60–69 years	7	6.8%	1
70–79 years	6	5.8%	0
>80 years	2	1.9%	0
Education			
Without diploma	7	6.8%	0
High school diploma	19	18.4%	0
Bachelor's degree	35	34%	5
Master's degree and PhD	38	36.9%	4
Another diploma	4	3.9%	0

### 4.2. Consumers' Questionnaire Survey (Step 1)

Most respondents failed to precisely describe the characteristics of the fabric's weaving as the stages of interweaving textile yarns to produce fabrics and the final garment manufacturing (assembly) stages, defined as fabric-based article assembly operations, as 96.1% and 83.5%, respectively, were not able to specify those steps or had misconceptions. On the other hand, respondents had a clear understanding of the dyeing step as the action of dyeing by fixing a colouring matter, with 96.1% referring to the staining of tissues or yarns.

The three COOs associated with these processing stages that interested respondents the most were the country of the product's final assembly (63/103), the country of the original raw materials (61/103) and the county of the fabric's weaving (57/103). Nearly 70% of respondents stated that they always or often inquire about COO information. Among that group, 58 of the 72 respondents inquired so they could find out more about the working conditions under which the product was manufactured. In stores, 88% of respondents looked for this information on the sewn label and online, 56% of respondents searched in the description of the product webpage. A small majority of 58.2% of respondents claimed that COO information influences their buying decision. When asked about the countries that could negatively influence their clothing purchase decision, China (83/103), India (56/103) and the other Asian countries (60/103) were the most popular the responses.

Only 16.5% believed that they have the necessary amount of information about the origin of the clothes they buy. Moreover, if additional information was to be made available, they declared that information on working conditions would be the first that they would consult (91/103). Regarding information accessibility, most of respondents considered that information on the geographical origin is currently not easily accessible (68.9%). If a label with a QR code would be used to access the information on the origin of the manufacturing steps of garments, 64% would use it. A total of 63% would like the QR code to lead to a text-based page rather than photo or video. Finally, half of the respondents estimated that they would devote a maximum of up to 5 min to consult such information (50.5%).

Table 3 shows the results of the questionnaire.

**Table 3.** Results of consumers' questionnaire survey.

Question	Answers	Results
What do you understand by "manufacturing"?	Assembly	16.5%
	Doesn't know	72.8%
	Other	10.7%
What do you understand by "weaving"?	Intertwining of yarns	3.9%
	Doesn't know	76.7%
	Other	19.4%
What do you understand by "dyeing"?	Staining of tissues or yarns	96.1%
	Doesn't know	0%
	Other	3.9%
Which of these geographical indications would interest you most? (Several answers possible)	Country of weaving	57/103
	Country of dyeing	34/103
	Country of assembly	63/103
	Country of spinning	26/103
	Country of raw material	61/103
When country of manufacture information is available, how often do you become aware?	Always/Often	69.9%
	Never/Rarely	30.1%
If often or always why are you aware of the place of manufacture of the clothes you buy? (Several answers possible)	Know-how	15/72
	Quality	27/72
	Working conditions	58/72
	Environmental externalities	25/72
	Local product	28/72
Where do you look for this information when shopping in stores?	Tag	88.3%
	Doesn't know	4.9%
	Other	6.8%
Where do you look for this information when shopping online?	In the description	56.3%
	Doesn't know	29.1%
	Other	14.6%
Does the place of manufacture influence your decision to buy clothes?	Always/Often	58.2%
	Never/Rarely	41.8%
Do one or more of these manufacturing locations negatively influence your clothing purchase decision? (Several answers possible)	China	83/103
	India	56/103
	Others Asian countries	60/103
	France	0/103
	Eastern European countries	11/103
	North Africa	12/103
	None	15/103



**Table 3.** *Cont.*

Question	Answers	Results
Do you have all the necessary information about the origin of your clothes when you buy?	Yes	16.5%
	No	83.5%
What information, if made available, would you consult regularly?	Know-how	23/103
	Workers	55/103
	Factory	37/103
	Environmental qualities	75/103
	Working condition	91/103
Do you find that information on the geographical origin of clothing is easily accessible?	Yes	31.1%
	No	68.9%
Would you scan a QR code label to see the information on the origin of the manufacturing steps of clothing?	Yes	64.1%
	No	35.9%
What support do you prefer for information?	Video/Audio	10.7%
	Photo	21.4%
	Text	63.1%
	Other	4.8%
What is the maximum time to learn about the origin of the manufacturing steps of the clothes you buy?	Instantly	40.8%
	<5 min	50.5%
	>5 min	8.7%

#### 4.3. Test of the Experimental Product Webpages (Step 2)

##### 4.3.1. Opinion of Consumers Regarding the Product Webpages

Among the three product webpages of the fictitious brands, “Boot-s” received distinctively negative feedback. In fact, eight out of the nine respondents had a negative impression of the production graphic chain, deploring the fact that the brand only knew 60% of the production steps of the product.

“Cutesy’s” product webpages were less targeted in the comments. However, some respondents considered that there was too much information (four out of nine). Others revealed that they did not realise that the production of a garment was so fragmented or that its carbon impact was so significant (four out of nine). Finally, some estimated that the specified ethical engagements through a dedicated charter by the brand were not sufficient to ensure good working conditions (five out of the nine).

Opinions regarding “Happy Kids” product webpages were mixed. A total of 6/9 of respondents believed that all the necessary information was available, whereas 3/9 thought that they were incomplete or lacking precision.

##### 4.3.2. Ranking of the Product Webpages

Finally, as previously mentioned, all respondents had to rank the product webpages from one to three, with three being the favourite and the maximum number of points. “Happy Kids” product webpages were respondents’ favourite (20 points), followed by Cutesy (18 points) and Boot-s (16 points).

##### 4.3.3. Additional Suggestions to Improve the Product Webpages

The respondents suggested that the brands should make the names of the manufacturers available (four out of the nine), and that the information transmitted should be certified by a label (two out of the nine) in order to give credibility to the claims. Respondents prefer labelled and non-superfluous information.

## 5. Discussion

This section comprehensively discusses the findings from the preliminary questionnaire survey (Step 1) and the test of the product webpages (Step 2).

### 5.1. Consumers' Perception of the Manufacturing Steps and COO Effects

Overall, most respondents had a poor understanding of the final product assembly and the fabric weaving stages. They defined them by their synonym or by analogy. In contrast, 96% of respondents were able to correctly characterise the dyeing stage. The consumers' perception of these manufacturing stages was also linked to a certain number of "definite ideas and stereotypes" [5] (p. 48), since the stages of assembly and weaving had pejorative connotations. These processes were assimilated to mass industrial practices and polluting transforming phases. Therefore, the study corroborates previous research suggesting that there are different effects depending on the COO of the transforming step, such as the effect of country of assembly or the effect of the country of design [17]. Indeed, a majority of respondents considered that the manufacturing country indicates the working conditions (80%). Moreover, respondents associated the dyeing country with negative environmental externalities. It emerged that respondents tended to associate COOs with quality (27 of the 72 respondents of the first survey) and the sustainable characteristics (25 of the 72 respondents of the first survey) of a product. Additionally, Asian countries were often mentioned as countries that negatively influence the decision to purchase clothes, as highlighted previously by Ortega-Egea and García-de-Frutos [33]. When several COOs were involved in the production steps of the tested products webpages in the final research step, respondents regretted, or even were alarmed that the products were produced in three or more countries (Model 1), or that the products were initially woven and dyed afterwards in Europe (Model 2) and then assembled in Asia. Finally, when the indication of the geographical origin for one of the production steps was missing in the tested product webpages, it was systematically observed and mostly disapproved, thereby corroborating previous findings from the study conducted by Chapa et al. [34].

### 5.2. Consumers' Attitude–Behavior Gap in Terms of Information Related to COOs

According to the first questionnaire's survey, most respondents claimed to look at the COOs of the clothes they buy. In fact, 70% of them indicated that they often or systematically paid attention to this information, and 46% stated that this information often influences their purchasing decisions. However, even if the panel of respondents was different during the second research step, it is interesting to note that the information on the geographical indication of the production steps, made available on the product webpages, exerted a relatively modest influence. In fact, respondents did not necessarily pay attention to the COO information and were more attentive to additional information. Blas Riesgo et al. [22] described this phenomenon as an "attitude–behaviour gap" consisting of people claiming to consider characteristics but not applying them. This phenomenon was reiteratively observed between the two research steps. A total of 84% of respondents claimed to lack information and that they would like to know the origin of the raw materials involved in the production of their clothes (60%). Yet, during the testing phase of the product webpages, the respondents did not notice when this information was missing.

### 5.3. Lack of Accessibility of COO Information to Consumers

During the first research step, respondents considered that the amount of information available on the origin of the clothes is generally incomplete (84%) and lacks accessibility (69%). In total, 89% of respondents knew where to look for this information when shopping in stores, while 30% of respondents believed they did not know where to find this information when shopping online. This lack of information accessibility online when it comes to COOs could be explained by the fact that brands do not systematically communicate such information on their websites. Indeed, most of the brands communicate information relating to COOs only on the composition label, and, in fact, it is not systematically made

available online [12]. The lack of access to information related to COOs encountered by consumers is also encountered by brands at a logistic level. In fact, brands do not have total visibility on the origin of the different stages related to their merchandise and have difficulty obtaining this information [10]. Especially in the context of globalisation, the multiple sourcing practices, according to which “there are advantages to having business relationships with a variety of suppliers, including dispersal of risk and the opportunity for ongoing evaluation, monitoring and editing” [35] (p. 274) is widespread in the fashion industry. To compensate for the lack of information, consumers learned about the origin of their product through alternative means, such as familiarity with the brand, discussions with relatives and friends, the news media, and the media platforms (Meta, Twitter, TikTok and Snapchat) [29,32,36].

#### 5.4. *The QR Code Linked to the Product Page for Communicating Origin Information*

Knowing that 64% of respondents would scan a QR code during their in-store purchases if it were made available, the use of a QR code was tested during the product page testing phase. This also allowed for standardising the amount of information made available online and in stores. The product pages linked to the QR code were also all available bimodally, a web-product page format and a web-label format. This test allowed us to see that the use of the QR code is not necessarily viable and relevant. Indeed, consumers had difficulty understanding the particularities and differences between the web label and the classic product page. Additionally, a good number of respondents believed that they would scan the QR code label first, but they would quickly get tired of it. Finally, some feared that this format would not be viable in practice as it requires an internet connection in store. Therefore, it seems that more conventional methods could be used to ensure the transmission of information, such as printed information on product labels.

#### 5.5. *Repercussions of the Uyghur Scandal*

Except for few respondents (15%), all believed that China is a COO that negatively influences their perception and purchasing decision. Informal discussions during the questionnaire and feedback during the test phase of the product webpages demonstrated the influence of the Uyghur scandal on respondents’ impressions of “made in China” products. Indeed, many of them expressed suspicion of the People’s Republic because of the exploitation and oppression of the Uyghur workforce. According to Angutayeva [37], this awareness of the scandal among the population has been maintained by several campaigns to protect the Uyghurs, such as anti-sweatshop campaigns, boycott campaigns or even activist speeches by the Member of European Parliament (MEP)/activist Raphaël Glucksmann. This massive media coverage, particularly on social media, likely had significant repercussions on respondents who supported and/or were attentive to this cause. However, this effect may well dissipate like the repercussions of previous industrial scandals. Indeed, less than 4% of respondents mentioned Bangladesh or India as having a negative impact on their perception due to industrial disasters; yet, the case of the Dhaka garment factory’s collapse remains one of the deadliest disasters in the history of the fashion industry.

#### 5.6. *Is Ethical Information Purpose-Washing?*

Most respondents (88%) would like to have more information on the working conditions of the labour force that manufactures their products. We can assume that this reflects the repercussions specific to industrial scandals, and that these data reflect the fact that a given manufacturing country can be correlated with certain working conditions (Rashid et al., 2016). However, providing this information is in fact challenging. Indeed, during the product webpages test phase, various communication modes were implemented, such as labels authenticating working conditions (Bout-s), ethical charters signed at different levels (Cutesy) and constituent organisational values (Happy Kids); yet, none seemed to meet the expectations expressed. In fact, the respondents during the test phase were

attentive to these data, and found that this information on the working conditions and the places of origin were contradictory, even irreconcilable with the countries of origin. Some believed that products whose one of the production steps occurs in China or other Asian countries cannot be associated with this type of claim, since these countries would not necessarily respect them. In fact, respondents were wary of this type of product since the claims made seemed misleading to them. This phenomenon could be qualified by consumers as “purpose washing”, i.e., the fact that brands voluntarily make misleading claims, at all levels, even concerning ethical information, such as working conditions [38].

### 5.7. *To Be or Not to Be Transparent*

The study illustrated that respondents wanted more visibility into the qualities and features of the clothes they buy. However, this requirement for transparency comes up against a major difficulty, that of the necessary and sufficient informational threshold. In fact, as the questionnaire and the product webpages test phase demonstrated, the time and attention given by respondents to find out about the origin of the clothes they buy are limited. Respondents favour other aspects in their purchasing decision, and this is partly why information on COOs must be immediately visible [29]. During the test phase, Cutesy’s product page was the target of criticism for its format, which was deemed too long. However, less detailed models also received criticism for their informational shortcomings. In fact, finding the necessary and sufficient information threshold constitutes a challenge for communicating information related to the COOs. Finally, a paradox was observed in communication strategies based on data transparency. In fact, Bout-s, stating that 60% of the production chain was known was met with virulent criticisms. Yet, consumers also said that they value brands’ honesty and found themselves in a bit of a dilemma in their preference for transparency models. For Farooq and Wicaksono [39], it would be the silent brand model that would win this dilemma because consumers prefer companies that limit their claims, as they invoke less consumer scepticism than those that promote sustainability.

## 6. Conclusions, Implications, Limitations and Perspectives

The first section of our conclusion answers our first research question about how consumers perceive COO information regarding the production steps of a garment. Most respondents did not consider themselves sufficiently informed in terms of COOs information, probably because fashion brands do not systematically make this information available. Even if it is not the same panel, the number of people who inquire about the place of origin during the test phase is much lower compared to the number of respondents who claim to do so during the questionnaire. It is, therefore, obvious that respondents are not as attentive to information relating to COOs as they claim. Lack of information leads to consumers demanding more information, but traceability difficulties prevent brands from communicating it and cognitive biases imply that consumers would not use this information because they would remain locked into their COO thought patterns.

The second section of our conclusion answers our second research question: “How should this information be transmitted to ensure intelligibility for consumers?”. To ensure intelligibility and for practical application, communication regarding provenance must be at least accessible, readable, and adapted to the product range. To this end, accessibility will be achieved if the information related to the COOs involved in the transformation of a garment is systematically available online and in store. To ensure information readability, it seems obvious that the use of a format understandable by all is preferred, such as symbols, pictograms or even photography that allow a real immersion in the production process. Finally, communication must offer origin information that is adapted to the brand’s range of products, and therefore, to their range of consumers. Indeed, a luxury brand is expected to have a much sharper communication on the origin of the product as a guarantee of price, quality, heritage, and know-how compared to an average or low-end brand. To gain credibility, brands must communicate labelled claims, such as the name of the manufacturer and official labels. For the most advanced brands in terms of COO

information and transparency, leads and preferences were also expressed by consumers, such as having indicators on the characteristics of the labels, the kilometres travelled by the products or an explanation of the price of the product.

The implications of this research are both theoretical and practical. At the theoretical level and for academics, this investigation contributes to the literature by exploring avenues for response and reflection about consumers' perception of COOs information of the different stages of the production chain of a garment and its intelligibility. In fact, no research to our knowledge has studied the perception of consumers and the intelligibility of the information of several countries of origin according to the stages of production for a single product, such as a garment. At the practical level and for the government and fashion brands, this study explores the implications of such informational transparency and accessibility. This is particularly important in the context of the implementation of legislation on provenance information, such as the decree of the Anti-Waste and Circular Economy (AGEC) law in France.

However, this research has some limitations. First, the number of web product page tests can be improved. Indeed, according to Griffin and Hauser [40], 8 to 10 respondents reveal 70 to 80% of the information. It is, therefore, possible to achieve a more optimal collection of information. In addition, the population studied in this study mainly comprises young female graduates. It would, therefore, be interesting to include a larger and more homogeneous sample. This would allow the differences across demographic groups, such as age groups, to be explored. In addition, this study is a contextualized analysis specific to a sector of activity: the field of fashion, whose target is mostly female. It remains difficult to extend the conclusions to other sectors, with other customer profiles. Therefore, it would be interesting to carry out similar work in other areas to expand the results of our research. The last limitation is due to the explanatory nature of this research; indeed, the findings of this investigation are tentative. However, this exploratory study constitutes a first research base and makes it possible to highlight new research perspectives on the perception of all the COOs involved in the production chain of a garment.

On the exploratory aspect of this research, future research could address the limitations raised and explained in the previous section. Future research could also extend beyond the mechanisms of the perceptions of dyeing, weaving/knitting and assembly. Therefore, future research could explore the mechanisms of the perception of the entire clothing production chain, involving the countries of origin of the raw material, spinning, dyeing, weaving and making. However, this future research could encounter limitations that we have glimpsed in this exploratory investigation. Indeed, confusion and dissatisfaction can be expected from consumers regarding production scenarios involving three or more countries of origin, which involve a local circuit and then are finished in Asia, or products coming from China. Complex situations in the articulation of additional information about countries of origin are also expected when the additional information contradicts the preconceived notions that consumers have about the countries of origin. Therefore, it would also be interesting to research these complex situations, which are encountered when studying the perception of the different COOs involved in the production chain of a garment. As Insch and McBride observed, this model of COO decomposition can "help the marketer answer the important question: What is our image and why is it so?" [6] (p. 264).

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