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KEYWORDS

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Our results show that information treatments—especially those concerning labor conditions—significantly raise consumers' WTP, while certification labels alone have weak or even negative effects. This underscores that credibility matters, with EU labels outperforming brand and NGO ones.
Socio-demographics (gender, income, political orientation) and actual consumption patterns (spending, disposal behavior) strongly shape valuation, while age and education play a marginal role.
Our findings provide evidence to guide policymakers, firms, and non-governmental organizations in designing strategies that can effectively promote ethical and sustainable fashion.

# Willingness-To-Pay for Sustainable and Ethical Fashion

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April 11, 2026

**Abstract**

This paper investigates consumers' willingness to pay (WTP) for sustainable and ethically produced garments using a randomized controlled trial in the Italian Survey on Consumer Expectations (ISCE). We conduct a contingent valuation study with a representative sample of approximately 5,000 Italian individuals, aged 18 to 75 years. Our results show that information treatments, especially on labor conditions, significantly raise consumers' WTP, while certification labels alone have weak or even negative effects, underscoring that credibility matters, with EU labels outperforming brand and NGO ones; and (ii) socio-demographics (gender, income, political orientation) and actual consumption patterns (spending, disposal behavior) strongly shape valuation, while age and education play a marginal role. Our findings provide evidence to guide policymakers, firms, and non-governmental organizations in designing strategies that can effectively promote ethical and sustainable fashion.

Keywords: Sustainable Fashion; Ethical Consumption; Willingness to Pay; Certification Labels; Information Provision; Consumer Trust; Fast Fashion
JEL Codes:D12;Q56
[1]

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# 1 Introduction

Seasonal fashion, which traditionally followed a biannual cycle, was typically driven by luxury brands that emphasised craftsmanship and quality. This resulted in higher prices and, for many consumers, a tendency to keep garments for years. However, in recent decades, this model has been increasingly displaced by mass production, which has driven down prices and encouraged faster garment turnover.
The rise of social media has accelerated this shift. Influencers promote rapidly changing trends, and people often feel pressure to appear in different outfits across posts, further fueling demand for cheap, disposable clothing. The democratization of fashion has made trendy clothing accessible to millions of consumers worldwide, leading to a surge in global market value from an estimated $36 billion in 2019 to a projected $43 billion by 2029 (Wren, 2022). However, this affordability comes at a cost. The market has been inundated with inexpensive garments characterized by poor durability, driving patterns of impulsive overconsumption. This shift has severe environmental and social repercussions. The fast fashion industry accounts for approximately 10% of global carbon emissions, exceeding those from international aviation and shipping combined United Nations Climate Change (2018). Notably, around 70% of the sector's emissions stem from upstream processes such as the production, preparation, and processing of raw materials. The other 30% is linked to downstream stages, such as retail activities, consumer use, and end-of-life disposals (Berg et al., 2020). Another important environmental consequence of fast fashion lies in its resource intensity, as textile manufacturing demands substantial levels of energy, water, and chemicals. Cotton production, for example, is the most pesticide-dependent crop globally. According to Kennedy (2016), a basic cotton T-shirt alone consumes approximately one-third of a pound of pesticides. In India, cotton cultivation occupies only 5% of arable land but accounts for 55% of the country's pesticide use. Additionally, the textile industry is a major contributor to water consumption and pollution: factories in developing countries use around 1.5 billion $m^3$ of water annually, often in regions already facing severe water scarcity. Environmental damage is further exacerbated by the use of synthetic fibers and toxic textile dyes, which release harmful chemicals into water systems, contributing to widespread contamination and posing serious health risks for nearby populations Carbon Trust Policy Advice Team (2011).

A complementary and equally compelling issue associated with fast fashion concerns its social and ethical implications. The industry's globalized production model often relies on labor in the poorest regions of the world, where workers face low wages, unsafe working conditions, and weak labor protections. These inequalities are particularly striking given that consumption is largely concentrated in high-income economies.
This situation derives from the shift of clothing production in the 1970s, when manufacturing moved from Western countries to Asian nations with low labour costs. The relocation allowed firms to realize rock-bottom prices trough economies of scale and wage arbitrage. This phenomenon was aggravated by the emerging trend of the *fast fashion business model*, which prioritizes rapid production cycles at the lowest price.
Despite growing awareness, driven by campaigns led by governments, NGOs and manufacturers themselves, consumers remain insufficiently informed about the ethical issues associated with fast fashion, largely due to the absence of standardized labeling that informs consumers on the social and environmental impacts of their clothing choices (Ozdamar Ertekin and Atik, 2015). Another key issue is the lack of consumer trust in ethical and sustainability claims. Greenwashing and Social Washing, where brands falsely market products as environmentally friendly and/or committed to human rights, are phenomenon which raises concerns about the reliability of sustainability certifications. This brings into question which entity, manufacturers, non-profit organizations, or governmental agencies, should be responsible for certifying ethical and sustainable fashion.

To address this asymmetry of information between producers and consumers, some governments have started introducing new policies. At the supranational level, the European Union has implemented a series of top-down regulatory measures to address the environmental and social impacts of the fast-fashion industry. The EU's "Reset the Trend" policy seeks to reduce over-production and over-consumption of clothing while discouraging the destruction of unsold or returned textiles (TOINCLUDEREFS). Complementing this policy, the "Ecodesign for Sustainable Products Regulation", entered into force in July 2018, introduces mandatory requirements for durability, reparability, and recyclability across product categories, including textiles (TOINCLUDEREFS). Moreover, "the Corporate Sustainability Due Diligence Directive" imposes binding obligations on companies to ensure responsible conduct across their entire value chains. From the perspective of the fast-fashion and textile sectors, this directive places significant pressure on large brands and suppliers to extend oversight beyond their immediate operations to include upstream activities such as raw-material extraction and subcontracted manufacturing, as well as downstream processes like distribution and retail. Importantly, the directive also establishes legal liability mechanisms, enabling victims of environmental or human-rights violations to seek redress, while requiring member states to ensure effective supervision and enforcement of compliance.

At the national level, France has been a pioneer in targeting ultra-fast fashion[2]. In Europe, France became the first country to pass a law specifically designed to curb ultra-fast fashion, marking a historic step toward direct regulation of the sector. The bill targets major fast-fashion producers by banning advertisements and imposing sanctions on companies that receive a low "eco-score." However, the strictest measures apply primarily to large e-commerce firms such as Shein and Temu, while brands like Zara or HM are only required to notify customers about the environmental impact of their products. This law, the first in the world to directly regulate the excesses of ultra-fast fashion, received its final approval on June 10, 2025. In addition, a 2025 Senate-approved bill complements these efforts by introducing an escalating eco-fee on firms that fail to meet environmental benchmarks (€5 per item in 2025, rising to €10 by 2030), assessed across sixteen indicators such as biodiversity, carbon footprint, recyclability, and water use (TPINCLUDEREFS).

Meanwhile, the United States has adopted a more fragmented approach, with notable state-level initiatives such as California's Garment Worker Protection Act, which mandates hourly wages for garment workers, and the proposed New York Fashion Sustainability and Social Accountability Act, which would require large fashion companies to disclose supply-chain practices and report on environmental and labour due diligence (toincluderefs). Together, these measures form an emerging multi-level regulatory framework aimed at realigning the global fashion industry with sustainability and social responsibility objectives.

While movements promoting sustainability, circular consumption, and upcycling have helped raise public awareness,particularly among younger generations, the fast-fashion industry itself shows little sign of slowing down. Actual changes in purchasing behaviour remain largely confined to a niche group of ethically motivated consumers (Hindsley et al., 2020). The literature continues to highlight an enduring attitude–behaviour gap in ethical consumption, where consumers express concern for sustainability yet fail to translate these attitudes into consistent purchasing choices (Ozdamar Ertekin and Atik, 2015).

One key reason for this discrepancy lies in the absence of clear, reliable labelling systems that communicate the sustainability and social responsibility of garments. Unlike the food sector, which benefits from standardized and trusted certifications (e.g., organic, fair

[2]Ultra-fast fashion refers to a business model in the apparel industry characterized by the rapid design, production, and distribution of clothing collections—often within days—driven by real-time consumer data, algorithmic trend forecasting, and highly flexible global supply chains, resulting in extremely high product turnover and significant social and environmental impacts.

trade), the fashion industry offers few verifiable indicators to guide consumer choices. Existing brand-led sustainability claims are often inconsistent, voluntary, or unverifiable, leading to consumer mistrust and confusion. Moreover, increasing product quality or raising environmental and ethical standards typically entails higher production costs, and evidence remains limited as to whether consumers both trust such standards and are willing to pay a premium for ethically and sustainably produced clothing. Consequently, the lack of credible information reinforces the current behavioural inertia, preventing a widespread shift toward sustainable consumption.

In response to this gap, the European Union is introducing the Digital Product Passport (DPP) as part of its broader sustainable product policy framework. The DPP is a digital tool designed to enhance product traceability and transparency throughout the entire lifecycle of goods placed on the EU market. Accessible via a QR code, it will contain standardized information on a product's origin, material composition, repairability, recyclability, environmental footprint, and end-of-life instructions. By making this data publicly available and verifiable, the DPP seeks to reduce information asymmetry between producers and consumers, promote accountability across global supply chains, and enable more informed, sustainable purchasing decisions. In doing so, it represents an essential step toward aligning the fashion industry's information infrastructure with that of more transparent sectors such as food and agriculture, potentially laying the groundwork for genuine behavioural change. In this context, our study provides timely empirical evidence on whether and how consumers value such information in monetary terms, by examining willingness to pay for sustainably and ethically produced garments and the role played by trust in different certifying bodies. This study investigates consumers' WTP for sustainably and/or ethically produced garments in the fashion industry. It explores how trust in the certifying body (brand vs. NGO vs. EU) mediates this willingness and examines the value of information in shaping consumer perceptions and WTP.
We investigate these questions using a nationally representative panel from the Italian Survey on Consumer Expectations (ISCE), which includes approximately 5000 participants aged 18 to 75. Data are collected using a Computer-Assisted Web Interviewing (CAWI) technique. Within this framework, we implement a Randomized Controlled Trial (RCT) to evaluate consumers' WTP for garments certified as sustainable or ethical by different entities. The experimental design also allows us to identify the demographic, ideological, and behavioral determinants shaping such willingness. In addition, we examine whether providing targeted information on sustainability and labor practices influences consumer preferences. Our results show that information treatments, especially on labor conditions, significantly raise consumers' willingness to pay, while certification labels alone have weak or even negative effects, underscoring that credible information, rather than labeling, is key to driving sustainable fashion choices.

This paper contributes to two closely related strands of the literature on ethical and sustainable consumption. The first strand examines the role of labels and certification in influencing consumers'WTP, with particular attention to the fashion industry. A large body of evidence shows that consumers are, on average, willing to pay a premium for products carrying ethical or sustainability certifications. Early contributions document positive WTP for Fair Trade and ethically certified food products (De Pelsmacker et al., 2005; Konuk, 2019), while a recent meta-analysis finds an average premium of 3.8 PPP dollars per kilogram for eco-labeled goods, with particularly strong effects for organic labels (Potter et al., 2021). In the apparel sector, however, evidence suggests that certification effects are more nuanced: although Fair Trade labels improve product evaluations, willingness to pay tends to decline once price premia exceed approximately 15 percent (Rashid and Byun, 2018). Within this literature, the study most closely related to our analysis is Cascavilla et al., who provide experimental evidence on consumers' willingness to pay

for certified fashion products, highlighting the importance of institutional features of labeling schemes. We contribute to this strand by directly comparing different sources of certification: brand self-labels, NGO labels, and EU labels within a unified experimental framework.

The second strand of the literature focuses on the role of information, trust, and social and green washing in shaping consumer decisions. Ethical consumption is often constrained by a well-documented attitude–behavior gap, whereby individuals express strong pro-social or pro-environmental preferences that do not fully translate into actual purchasing behavior (Ozdamar Ertekin and Atik, 2015). A key mechanism underlying this gap is limited trust in firms' sustainability claims. Recent evidence shows that greenwashing perceptions significantly reduce consumer trust and lower willingness to pay for sustainable fashion (Diaz-Bustamante-Ventisca et al., 2025). This literature emphasizes that information alone may be insufficient to change behavior unless it is conveyed through credible and trusted certifying bodies. Our paper contributes to this strand by experimentally disentangling the effects of information provision from the credibility of the certifier, showing how trust in the issuing institution shapes consumers' valuation of ethical and sustainable attributes. Taken together, our findings bridge these two strands by demonstrating that labels influence willingness to pay in the fashion industry primarily when they are issued by trusted third parties and supported by credible information, thereby helping to narrow though not eliminate the attitude–behavior gap in ethical and sustaninable fashion consumption.

The rest of the paper is presented as follows. Section 2 reviews the relevant literature on sustainable and ethical consumption, with a focus on contingent evlaution for environmental goods.Section 3 describes the data and the experimental design. Section 4 reports the main descriptive statistics. Section 5 presents the empirical findings on consumers' WTP for sustainable and ethical clothing, focusing both on certification trust and on the effects of providing targeted information. Section 6 concludes by discussing the implications for policymakers, producers, and future research.

## 2 Methods and Data

We conducted the experiment within the Italian Survey of Consumer Expectations (ISCE), a newly established consumer survey launched in October 2023. The ISCE interviews a sample of Italian individuals on a quarterly basis, collecting comprehensive data on demographic characteristics, household resources (income and wealth), consumption patterns, and expectations regarding both individual (e.g., consumption, income) and aggregate macroeconomic variables (e.g., inflation, unemployment, interest rate, and economic growth). Our experiment was included in the fourth survey wave, conducted in October 2024. [3]

### The Design

The study utilizes an RCT combined with a stated preference technique, specifically a contingent valuation approach with the payment card method, to assess participants' WTP for ethical and sustainable clothing.
The methodology works as follows. All participants first answer a baseline question on their WTP for a generic t-shirt, without any reference to production methods or certifications. The sample is then randomly divided into two sub-groups: one focusing on environmental

[3]For more information on the ISCE, including data coverage and representativeness of the Italian population, please refer to Guiso and Jappelli (2024b)

sustainability, and the other on human rights (see Figure 1).
Each sub-group is further split into two treatment arms, resulting in four treatment groups:

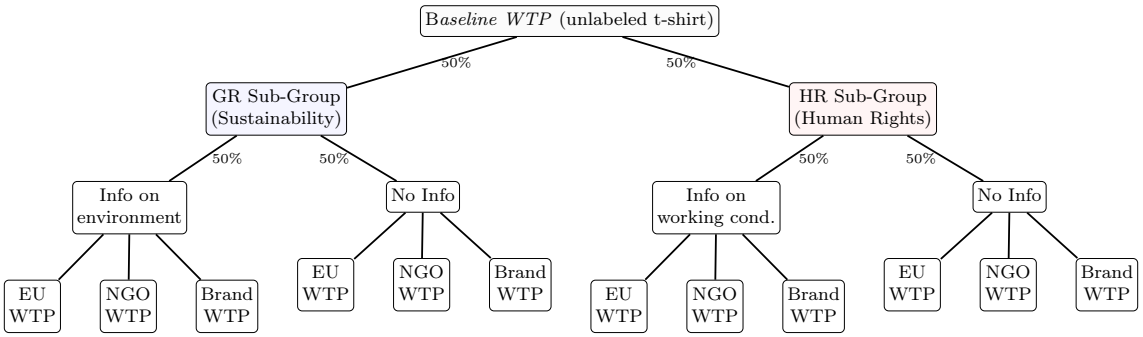
1. No information provided on environmental sustainability. Participants report their WTP, in random order, for a t-shirt certified as sustainably produced by (i) the brand, (ii) an NGO, and (iii) the European Union.

2. Information provided on the environmental impacts of the fashion industry. Then, participants state their WTP, in random order, for a t-shirt certified as sustainably produced by the brand, an NGO, and the European Union.

3. No information provided about workers' rights in the fashion industry. Participants report their WTP, in random order, for a t-shirt certified as ethically produced by the brand, an NGO, and the European Union.

4. Information provided on labor conditions in the fashion industry before being asked, in random order, their WTP for a t-shirt certified as ethically produced by the brand, an NGO, and the European Union.

Following the RCT, all respondents answer additional survey questions aimed at gathering insights into their clothing consumption habits. These include questions about how long they keep garments, their average monthly spending on clothing, and the role of social pressure regarding how others perceive their fashion choices.




*Notes:* Baseline WTP asked first for everyone. At the first stage, respondents are randomly assigned 50/50 to the GR or HR sub-group. Within each sub-group, information is randomized (50/50). Label questions (Brand/NGO/EU) are shown in random order; WTP is recorded for each.

In details, the RCT includes two stages. First, all participants state their baseline WTP for a generic, unlabeled t-shirt. Second, they are randomly assigned to treatment groups that vary by certification type (sustainability vs. human rights), certification source (brand, NGO, EU), and the provision (or not) of additional information on sustainability or labor conditions. WTP is elicited using a contingent valuation method via a payment slider ranging from €0 to €100 on a Likert scale. The survey is organized as follows:

**Baseline Question (L1)**
Suppose you want to buy a simple short-sleeved cotton t-shirt. What is the maximum price you would be willing to pay for it? **(Select a value using the slider, from 0 to 100 €).**

**[Slider: 0 € — 100 €]**

In the first layer of randomization, participants are randomly selected into the two sub-groups (Sustainability label and Human Rights label). A first treatment group receives,

after the *Baseline*, three questions (in random order) eliciting respondents' WTP for a t-shirt labeled as sustainable by the (i) brand itself , (ii) an NGO and (iii) the European Union. These are the three questions posed to those selected in the first group:

**Question (L2)**
*What is the maximum price you would be willing to pay for the same t-shirt, knowing that it is certified by a sustainability label issued by the brand that produces it (e.g., Zara, H7M)?* **(Select a value using the slider, from 0 to 100 €).**

**[Slider: 0 € — 100 €]**

**Question (L3)**
*What is the maximum price you would be willing to pay for the same t-shirt, knowing that it is certified by a sustainability label issued by a Non-Governmental Organization (NGO) such as WWF or Greenpeace?* **(Select a value using the slider, from 0 to 100 €).**

**[Slider: 0 € — 100 €]**

**Question (L4)** *What is the maximum price you would be willing to pay for the same t-shirt, knowing that it is certified by a sustainability label issued by the European Union?* **(Select a value using the slider, from 0 to 100 €).**

**[Slider: 0 € — 100 €]**

The second group of individuals were asked to answer to three questions in random order eliciting their WTP for ethical fashion certification provided by the brand itself (L5), the NGO (L6) and the European Union (L7).

**Question (L5)**
*What is the maximum price you would be willing to pay for the same t-shirt, knowing that it is certified by an ethical practices label issued by the brand that produces it (e.g., Zara, H&M)?*
**(Select a value using the slider, from 0 to 100 €).**

**[Slider: 0 € — 100 €]**

**Question (L6)**
*What is the maximum price you would be willing to pay for the same t-shirt, knowing that it is certified by an ethical practices label issued by a Non-Governmental Organization (NGO) such as Fairtrade or ActionAid?* **(Select a value using the slider, from 0 to 100 €).**

**[Slider: 0 € — 100 €]**

**Question (L7)**
*What is the maximum price you would be willing to pay for the same t-shirt, knowing that it is certified by an ethical practices label issued by the European Union?*
**(Select a value using the slider, from 0 to 100 €).**

**[Slider: 0 € — 100 €]**

In the second layer of randomization participants in the two groups (Sustainability and Human Rights) were randomly assigned to read a statement before answering to the WTP

questions. In the sustainability group half of the respondents were given the following statement:

*"In recent years, the fashion industry has become more conscious of its environmental impact, driven in part by growing consumer awareness of sustainability. Sustainable fashion focuses on minimizing its environmental footprint."*

In the human rights group, if assigned to the treatment group, respondents read:

*"In recent years, the fashion industry has focused more on human rights, adopting better working conditions and wages to protect factory workers."*

# 3 Descriptive Statistics

### *Summary Statistics*

The sample appears well balanced across treatment groups, as shown in Table 1. It reports average demographic characteristics including age, income, family size, gender, geographic distribution, education, political orientation, and employment status, separately for the sustainability and human rights sub-groups. These demographic characteristics of the respondents are useful to get an understanding of how WTP varies across different level of education, location, and ideological view. As it is clear from Table 1, around 53% of the sample is employed, has a high school diploma, and families are in average composed of 3 people.

Table 1: Balance Table: Average Respondent Demographics by Treatment Group

| | **Sustainability Sub-Group** | | | | **Human Rights Sub-Group** | | | |
|---|---|---|---|---|---|---|---|---|
| | *Treatment* | *Control* | *Diff.* | *p-value* | *Treatment* | *Control* | *Diff.* | *p-value* |
| Age | 48.30 | 48.47 | -0.17 | 0.766 | 48.50 | 48.60 | -0.10 | 0.857 |
| Female | 0.51 | 0.52 | -0.00 | 0.871 | 0.50 | 0.51 | -0.00 | 0.842 |
| Employed | 1.48 | 1.46 | 0.02 | 0.277 | 1.46 | 1.47 | -0.00 | 0.938 |
| **Income** | | | | | | | | |
| Low | 0.50 | 0.47 | 0.03 | 0.160 | 0.47 | 0.47 | 0.00 | 0.914 |
| Medium | 0.48 | 0.51 | -0.03 | 0.178 | 0.49 | 0.50 | -0.01 | 0.619 |
| High | 0.02 | 0.02 | -0.00 | 0.855 | 0.03 | 0.02 | 0.01 | 0.241 |
| **Education** | | | | | | | | |
| High | 0.30 | 0.30 | 0.00 | 0.868 | 0.32 | 0.31 | 0.01 | 0.624 |
| Medium | 0.54 | 0.55 | -0.01 | 0.713 | 0.53 | 0.53 | -0.00 | 0.839 |
| Low | 0.16 | 0.16 | 0.00 | 0.768 | 0.15 | 0.16 | -0.01 | 0.729 |
| **Area** | | | | | | | | |
| North | 0.47 | 0.45 | 0.02 | 0.442 | 0.47 | 0.45 | 0.02 | 0.261 |
| Center | 0.20 | 0.20 | 0.00 | 0.796 | 0.18 | 0.21 | -0.02 | 0.184 |
| South/Islands | 0.33 | 0.35 | -0.02 | 0.304 | 0.34 | 0.34 | -0.00 | 0.944 |
| **Political Views** | | | | | | | | |
| Left | 0.45 | 0.45 | -0.00 | 0.954 | 0.42 | 0.44 | -0.02 | 0.394 |
| Center | 0.15 | 0.15 | 0.00 | 0.843 | 0.15 | 0.16 | -0.01 | 0.572 |
| Right | 0.40 | 0.40 | -0.00 | 0.931 | 0.43 | 0.40 | 0.03 | 0.204 |
| **Household size** | | | | | | | | |
| 1 | 0.13 | 0.11 | 0.01 | 0.284 | 0.12 | 0.13 | -0.01 | 0.463 |
| 2 | 0.29 | 0.32 | -0.03 | 0.089* | 0.31 | 0.32 | -0.01 | 0.616 |
| 3 | 0.29 | 0.28 | 0.01 | 0.484 | 0.29 | 0.26 | 0.02 | 0.255 |
| 4 | 0.23 | 0.22 | 0.01 | 0.699 | 0.23 | 0.23 | 0.00 | 0.867 |
| 5 | 0.04 | 0.04 | -0.00 | 0.986 | 0.05 | 0.05 | 0.00 | 0.931 |
| $\geq 6$ | 0.01 | 0.02 | -0.00 | 0.736 | 0.01 | 0.01 | -0.00 | 0.217 |
| **Total** (N=5012) | 1250 | 1254 | | | 1253 | 1255 | | |

Means of binary variables represent proportions. p-values with significance stars: * p<0.10, ** p<0.05, *** p<0.01.

Table 2 reports mean willingness to pay (WTP) for a t-shirt across label and treatment conditions. *Baseline* shows that average price for an unlabeled t-shirt, while *Brand*, *NGO*,

*EU* report WTP for the labeled garment. As it is evident from Table 2, in both sub-groups, the WTP for the unlabeled t-shirt is on average always lower that for a labeled one. For the Sustainability Sub-Group, there is no statistical difference between treatment and control, with small positive effects when being exposed to information and NGO or EU labels. This first descriptive look suggests that providing information on the environmental impacts of the fashion industry does not alter much consumers' stated WTP for sustainability certifications.

However, the Human Rights sub-group shows some treatment effect evidence. Overall WTP is higher in the treatment group relative to the control one. Moreover, all kinds of certifications elicit higher WTP among treated respondents. The negative sign of the t-statistics arises because the calculation is based on "control minus treatment". From this table, it appears that information about labor conditions increases consumers' valuation of ethical certifications, rather than sustainable production practices.

Table 2: Mean Willingness to Pay (WTP) Across Label Certifications

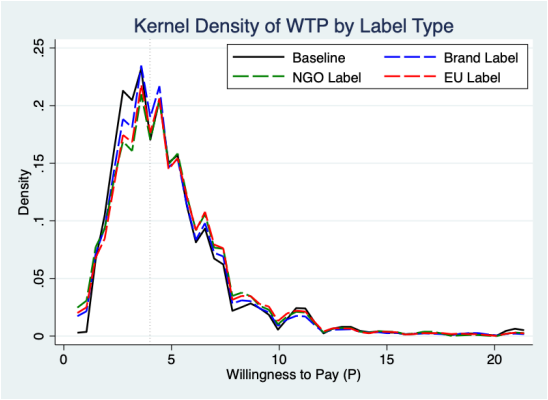
| Label | Control | Treatment | P-value | T-stat | N |
|---|---|---|---|---|---|
| **Sustainability** | | | | | |
| *Baseline* | 5.21 | 5.07 | 0.287 | 1.07 | 2504 |
| | (3.64) | (3.23) | | | |
| *Brand* | 5.39 | 5.36 | 0.818 | 0.23 | 2504 |
| | (4.18) | (3.88) | | | |
| *NGO* | 5.63 | 5.72 | 0.601 | -0.52 | 2504 |
| | (4.37) | (4.16) | | | |
| *EU* | 5.61 | 5.68 | 0.674 | -0.42 | 2504 |
| | (4.34) | (4.06) | | | |
| **Human Rights** | | | | | |
| *Baseline* | 5.12 | 5.37 | 0.082 | -1.74* | 2508 |
| | (3.53) | (3.76) | | | |
| *Brand* | 5.27 | 5.65 | 0.020 | -2.32** | 2508 |
| | (3.93) | (4.22) | | | |
| *NGO* | 5.62 | 5.99 | 0.040 | -2.06** | 2508 |
| | (4.59) | (4.64) | | | |
| *EU* | 5.59 | 5.86 | 0.127 | -1.53 | 2508 |
| | (4.33) | (4.30) | | | |

*Note:* Standard deviations in parentheses. * $p < 0.1$; ** $p < 0.05$.
The price variable is converted as follows: 1=0€, 2=5€, 3=10€, 4=15€, 5=20€, 6=25€, 7=30€, 8=35€, 9=40€, 10=45€, 11=50€, 12=55€, 13=60€, 14=65€, 15=70€, 16=75€, 17=80€, 18=85€, 19=90€, 20=95€, 21=100€.

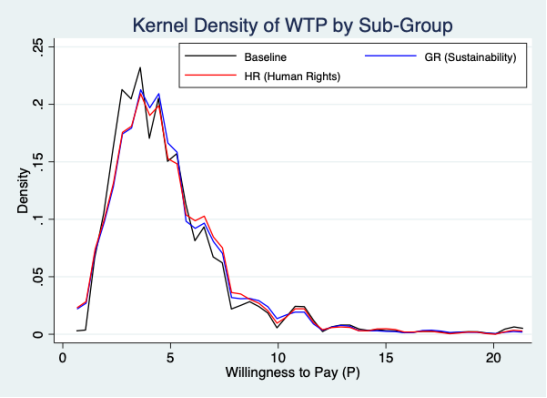
### *Descriptive Graphs*

To illustrate how responses behave with respect to the different labels, panel (a) of Figure 1 plots kernel density of respondents' WTP for a t-shirt, comparing baseline responses with those elicited under different certification labels (brand, NGO, and EU). The curves are similar, with the highest densities concentrated at relatively low WTP values (between €0 and €45, corresponding to the value 10 on the x-axis). This outcome is consistent with expectations, as the market price of a plain cotton t-shirt is relatively low, around €10 (PwC (2023). The baseline distribution (black solid line) and the certification distributions (colored lines) overlap in the €20–€30 range, indicating that the introduction of a label alone has only a limited effect on the overall distribution of WTP. However, there is a

general shift on the right when labels are introduced. Panel (b) of Figure 1 compares baseline responses to those obtained under the sustainability (GR) and human rights (HR) treatments. In both cases, the densities are flatter, with higher frequencies observed at certain lower WTP values (around €10–€20). This pattern indicates that responses are more widespread with respect to the baseline, where most answers are concentrated only at lower values of WTP. Across all sub-groups, the right tail is long but thin, indicating that only a small fraction of respondents are willing to pay very high amounts. This is consistent with the average retail price of basic t-shirts being approximately €10, implying that very high valuations are rare in practice. The next graphs will go into detail for each sub-group and treatment arm.



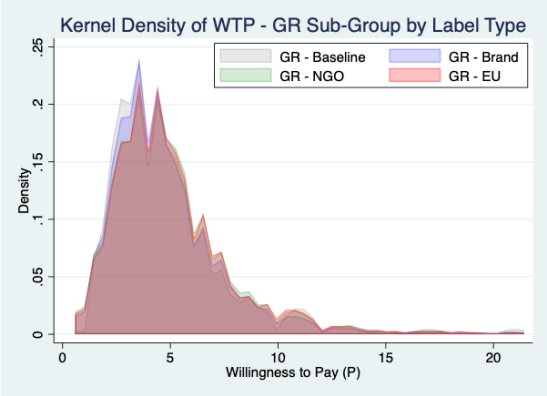

(a) Density of WTP by certification type (including baseline).



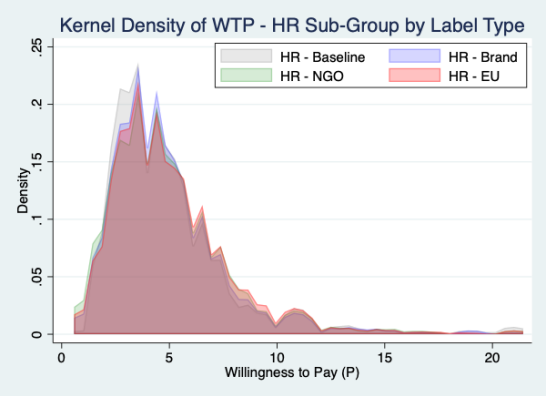

(b) Density of WTP by subgroup.

Figure 1: Kernel density of WTP for sustainable and ethical clothing. Panel (a) shows distributions across certification types, while panel (b) shows distributions by subgroup.

First, Figure 2, panel (a) and (b), shows the density of WTP for t-shirts with certified labels, divided for each sub-group.
In particular, Figure 2(a) shows the comparison in the Sustainability Sub-group between baseline responses with those elicited under brand, NGO and EU certifications. Most of the densities overlap, but there is a rightward shift in the labeled distribution, coherently with the previous graphs.
Figure 2(b) presents a similar pattern for the Human Rights sub-group. The distributions show more dispersion, with a moderately higher density at the interval between the values 5-10 on the x-axis (€20-€40).
Lastly, Figure 3 presents how WTP changes when the Information Treatment is implemented. Panel (a) compares respondents who received information about environmental impacts (green) with those who did not (grey). Providing information shifts the distribution specifically at low values, or intermediately high values. Instead, panel (b) presents the corresponding results for the Human Rights label, contrasting informed (red) and uninformed (grey) respondents. Here, the informed distribution shows a more impactful rightward shift relative to the uninformed group, with somewhat higher density at mid-range WTP values. This indicates that information about labor conditions exerts a modest but noticeable effect, increasing the dispersion of responses and slightly raising average WTP, while sustainability information does not have such a striking effect.

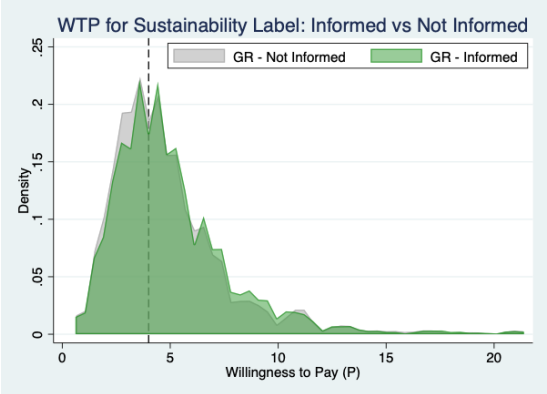



(a) Density of WTP in the Sustainability Sub-Group by Label Type.

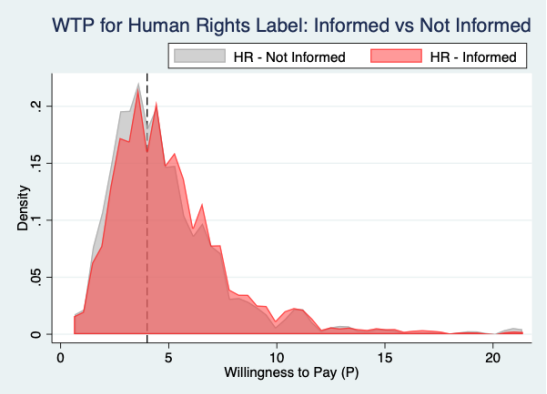



(b) Density of WTP in the Sustainability Sub-Group by Label Type.

Figure 2: Kernel Density of WTP for certified t-shirts by Label type, for the two experimental sub-groups. Panel (a) shows results for the Sustanability Sub-Group, while Panel (b) reports results for the Human Rights Sub-Group.




(a) Density of WTP by Sustainable Information Treatment.




(b) Density of WTP by Human Rights Information Treatment.

Figure 3: Kernel density of WTP by Information Treatment. Panel (a) compares respondents informed vs. not informed about sustainable production, while panel (b) compares respondents informed vs. not informed about ethical production.

These densities suggest that policies or marketing strategies promoting sustainable or ethical production should not rely solely on the presence of certification labels to shift consumer behavior, but rather be complemented by information campaigns or incentives that make such certifications credible to consumers.

# Results

## *Main Findings*

We began the analysis with linear regressions of WTP, expressed on a 21-point payment scale (1 = €0, 2 = €5, ..., 21 = €100), on experimental treatments (information and labels) and respondents' characteristics.
For respondent $i$ in sub-group $d \in \{GR, HR\}$, the specification takes the form:

$$P_{id} = \beta_0 + \beta_1 \,\text{LabelAny}_{id} + \beta_2 \,\text{Info}_{id} + \beta_3' \mathbf{X}_{id} + \varepsilon_{id}, \tag{1}$$

$$\tag{2}$$

where:

(i) $P_{i,d}$ is the stated willingness to pay of individual $i$;

(ii) $\text{LabelAny}_{i,d}$ is a dummy equal to one if the product carries a certification label;

(iii) $\text{Info}_{i,d}$ indicates whether the respondent received the Information Treatment (sustainability or human rights, depending on sub-group assignment);

(iv) $\mathbf{X}_{id}$ is a vector of controls (age, gender, income, education, geographical area, political orientation, clothing attitudes, clothing spending);

(v) $\varepsilon_{id}$ is the error term.

To study the joint effect of information combined with specific certification types, we replace $\text{LabelAny}_{i,d}$ with individual label dummies:

$$P_{id} = \beta_0 + \sum_{l \in \{Brand, NGO, EU\}} \beta_l \,\text{LabelType}_{id} + +\beta_2 \,\text{Info}_{id} + \beta_3' \mathbf{X}_{id} + \varepsilon_{id}, \tag{3}$$

where $\text{Brand}_{id}, \text{EU}_{id}, \text{NGO}_{id}$ are dummies for certification type (baseline = no label).

Finally, we extend the specification to allow for interactions between information and certification type:

$$P_{id} = \beta_0 + \sum_{l \in \{Brand, NGO, EU\}} \beta_l \,\text{LabelType}_{il} + +\beta_2 \text{LabelType}_{il} \times \text{Info}_{id} + \beta_3 \,\text{Info}_{id} + \beta_4' \mathbf{X}_{id} + \varepsilon_{id}, \tag{4}$$

| | (1) GR | (2) GR+ Ctrls | (3) GR+Labels | (4) InfoGR×Label | (5) HR | (6) HR+Ctrls | (7) HR+Labels | (8) InfoHR×Label |
|---|---|---|---|---|---|---|---|---|
| Any Label | 0.0369 | 0.0285 | | | −0.0273 | −0.0398 | | |
| | (0.0384) | (0.0498) | | | (0.0387) | (0.0480) | | |
| Info (GR) | 0.146 | 0.198 | 0.198 | 0.0915 | | | | |
| | (0.106) | (0.121) | (0.121) | (0.138) | | | | |
| Info (HR) | | | | | 0.279*** | 0.213* | 0.213* | 0.152 |
| | | | | | (0.107) | (0.119) | (0.119) | (0.143) |
| Age | | −0.00543 | −0.00542 | −0.00542 | | 0.000869 | 0.000859 | 0.000861 |
| | | (0.00418) | (0.00418) | (0.00418) | | (0.00417) | (0.00417) | (0.00417) |
| Gender | | 0.0758 | 0.0758 | 0.0761 | | −0.240* | −0.240* | −0.240* |
| | | (0.125) | (0.125) | (0.125) | | (0.123) | (0.123) | (0.123) |
| Income | | 0.0346* | 0.0346* | 0.0346* | | 0.0449*** | 0.0449*** | 0.0449*** |
| | | (0.0185) | (0.0185) | (0.0185) | | (0.0171) | (0.0171) | (0.0171) |
| Education | | 0.0299 | 0.0302 | 0.0303 | | 0.0417 | 0.0416 | 0.0416 |
| | | (0.0684) | (0.0684) | (0.0684) | | (0.0678) | (0.0678) | (0.0678) |
| Area | | −0.0171 | −0.0171 | −0.0172 | | −0.0449 | −0.0449 | −0.0450 |
| | | (0.0538) | (0.0539) | (0.0539) | | (0.0514) | (0.0514) | (0.0514) |
| Political views | | −0.198** | −0.198** | −0.198** | | −0.116 | −0.115 | −0.115 |
| | | (0.0798) | (0.0798) | (0.0798) | | (0.0776) | (0.0776) | (0.0776) |
| Disp. for Clothing | | −0.0338 | −0.0340 | −0.0341 | | 0.0731 | 0.0729 | 0.0730 |
| | | (0.0649) | (0.0649) | (0.0649) | | (0.0627) | (0.0627) | (0.0627) |
| Clothing Perception | | −0.143 | −0.143 | −0.144 | | 0.0620 | 0.0621 | 0.0622 |
| | | (0.104) | (0.104) | (0.104) | | (0.103) | (0.103) | (0.103) |
| Clothing Spending | | 1.041*** | 1.041*** | 1.041*** | | 1.294*** | 1.295*** | 1.295*** |
| | | (0.0918) | (0.0918) | (0.0918) | | (0.0832) | (0.0832) | (0.0832) |
| Brand | | | −0.108* | −0.122 | | | −0.143*** | −0.165** |
| | | | (0.0571) | (0.0862) | | | (0.0531) | (0.0705) |
| EU Label | | | 0.109** | 0.0200 | | | 0.0643 | 0.0317 |
| | | | (0.0529) | (0.0756) | | | (0.0520) | (0.0708) |
| NGO Label | | | 0.0845 | −0.0274 | | | −0.0403 | −0.111 |
| | | | (0.0558) | (0.0805) | | | (0.0597) | (0.0835) |
| Info×Brand (GR) | | | | 0.0286 | | | | |
| | | | | (0.114) | | | | |
| Info×EU (GR) | | | | 0.177* | | | | |
| | | | | (0.106) | | | | |
| Info×NGO (GR) | | | | 0.222** | | | | |
| | | | | (0.111) | | | | |
| Info×Brand (HR) | | | | | | | | 0.0436 |
| | | | | | | | | (0.106) |
| Info×EU (HR) | | | | | | | | 0.0643 |
| | | | | | | | | (0.104) |
| Info×NGO (HR) | | | | | | | | 0.140 |
| | | | | | | | | (0.119) |
| Constant | 4.869*** | 4.286*** | 4.285*** | 4.339*** | 4.877*** | 1.740* | 1.739* | 1.770** |
| | (0.0781) | (0.880) | (0.880) | (0.879) | (0.0806) | (0.890) | (0.890) | (0.890) |
| Observations | 9728 | 6496 | 6496 | 6496 | 9700 | 6509 | 6509 | 6509 |

Standard errors in parentheses, clustered at respondent (ID)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Gender: 1 = Male, 2 = Female; Geographical Area: 1 = North-West, 2 = North-East, 3 = Center, 4 = South; Education: 1 = Elementary School, ..., 8 = Master/Phd; Political Orientation: from extreme left to extreme right; Disposal for Clothing: 1 = 1 month, 2 = 6 months, . . . , 6 = 5+ years; Clothing Spending: 1 = €0, 2 = €50, 3 = €100, . . . , 7 = €1000+; Clothing Perception: 1 = I don't worry about others' perception, . . . , 5 = I worry a lot.

*Table 3* presents the main results. The regression analysis of respondents' willingness to pay (WTP) for a t-shirt reveals several significant findings across various demographic and socioeconomic variables, depending on the treatment received. Columns (1)-(4) refer to the Sustainability sub-group, while Columns (5)-(8) refer to the Human Rights one. Within each domain, the first column reports specifications with treatment dummies only, the second adds socio-demographic and behavioral controls, the third column replaces any labels effect with single certification label categories (brand, NGO, EU), using baseline (no label) as the reference group, and lastly, the fourth column add Info x Labels interactions. In the sustainability (GR) sub-group, exposure to information by itself does not significantly shift WTP; however, in the human rights (HR) sub-group, the effect is strong and robust on its own, increasing WTP by around 0.28 scale points, or roughly €1.40. These findings indicate that targeted information raises WTP, with respondents particularly responsive to labor-rights information.

By contrast, certification labels alone show limited or negative effects. In the HR domain, the "any label" indicator reduces WTP, suggesting that labels without accompanying information may even backfire. However, in the GR sub-group, once information is combined with credible third-party certifications, such as NGO or EU labels, the effect becomes both positive and statistically significant. For example, the interaction between Info × NGO raises WTP by about 0.22 scale points, which corresponds to roughly €1.10. Similarly, the interaction with the EU label adds about 0.18 scale points, or just under €1.00. This indicates that information provides the context necessary for consumers to interpret and value these labels, increasing their credibility. As for the brand interactions, in the HR sub-grouos, it is negative: consumers are skeptical when firms themselves claim compliance with labor standards.

Beyond treatment effects, the regressions highlight the importance of socio-economic and behavioral controls. Women report lower WTP than men, while income is positively associated with higher WTP. Age has a small negative sign (–0.005, i.e., –€0.02 to –€0.03 per year), but these effects are not statistically significant, suggesting no strong generational divide. Education shows a slightly positive association (about 0.03 scale points, 0.15), but this too is not significant, indicating that once income and consumption habits are controlled for, education is not a strong predictor. Political orientation is negatively associated with WTP: right-leaning respondents are less supportive of certified clothing. Respondents in the South and Islands display lower WTP relative to the North.

Clothing related behaviours also play an important role in this analysis: people who keep garments longer report lower WTP, consistent with lower clothing turnover reducing the appeal of paying more for certifications. Clothing perception is negatively associated with WTP, meaning that respondents more concerned with image actually state lower WTP for sustainability labels. Finally, clothing spending is positive and highly significant; this is a key control predictor in the model, showing that actual spending behavior is strongly correlated with willingness to pay for certified garments.

Overall, the results highlight three main insights: (i) information is more powerful than labels in raising WTP, especially for human rights; (ii) credibility matters, with EU labels outperforming brand and NGO ones; and (iii) socio-demographics (gender, income, political orientation) and actual consumption patterns (spending, disposal behavior) strongly shape valuation, while age and education play a marginal role.

# 4 Discussion

***Implications.*** These studies extend beyond consumer behavior, offering strategic insights for both policymakers and brands. Regulatory measures, such as the EU's Digital Product

Passport, can help close the information gap, enhancing transparency and consumer confidence. For brands, partnering with credible third-party certifiers may be more effective than relying on self-certification, allowing them to maximize profitability while maintaining ethical commitments. Furthermore, targeted consumer education campaigns could play an important role in increasing awareness and demand for sustainable fashion.
More broadly, our evidence highlights the potential for market-driven solutions to address environmental and social concerns in the fashion industry. By aligning certification strategies with consumer trust and expectations, brands and policymakers can drive meaningful progress toward a more sustainable and responsible fashion ecosystem.

***Limitations.*** While our results suggest that information and credible certification can enhance WTP, our analysis does not allow us to predict consumers' reactions to specific marketing strategies, such as the use of terms like "organic plastics" (as seen in some leggings), or claims such as "made with recycled materials" or "20% of the garment is recyclable". Future work should examine how such claims interact with trust and perceived credibility, and most importantly, how consumers' purchasing behaviour actually changes. Nonetheless, our findings support the idea that bottom-up and top-down strategies can be complementary in addressing consumers' information gaps and encourage a more responsible consumption behaviour.

***Our contribution.*** Our study contributes to the literature by combining experimental survey evidence with detailed consumer-level data to disentangle the effects of information, certification type, and individual heterogeneity. The results show that information treatments consistently increase willingness to pay (WTP), while certification labels alone, particularly those from brands, may even reduce valuations unless supported by credible information. This distinction highlights that consumer skepticism plays a central role in shaping responses to labeling strategies, and that credibility and transparency are essential for certification schemes to be effective. By highlighting both the promise of information campaigns and the risks of credibility gaps, we provide evidence to guide policymakers, firms, and NGOs in designing strategies that can effectively promote ethical and sustainable fashion.

# 5 Conclusions

This paper examined consumers' willingness to pay (WTP) for sustainable and ethical clothing using a randomized controlled trial in the Italian Survey on Consumer Expectations (ISCE). By combining baseline valuations, information treatments, and certification labels, we analyzed how consumers respond to different drivers of credibility and transparency in the fashion industry.
Our results point to three central findings. First, information treatments significantly increase WTP, with larger effects in the human rights domain than in the sustainability domain. This suggests that consumers are more responsive to information about labor conditions than to those about environmental sustainability, possibly because of the difference perception of risk in the two domains. Second, certification labels on their own have weak or even negative effects. In particular, brand and NGO certifications tend to lower WTP, indicating that consumer skepticism about the credibility of such labels may undermine their effectiveness. Only the EU label appears neutral, but not strong enough to shift valuations upward. Third, individual heterogeneity plays a decisive role: men, higher-income respondents, and those who already spend more on clothing display higher WTP, while women, right-leaning, and image-conscious consumers show lower valuations.

These findings highlight that information is more powerful than certification alone in

shaping consumer preferences. They also reveal an asymmetry: consumers appear willing to reward credible, transparent information, but may even get to penalize labels that they perceive as not trustworthy or insufficiently informative. This has important implications for both policy and practice. Regulators seeking to promote sustainable fashion should strengthen transparency frameworks, such as the forthcoming EU Digital Product Passport, while brands and NGOs should focus on building credibility through independent verification and communication strategies that emphasize trust.

Our study is not without limitations. The survey design captures stated rather than revealed preferences, and we cannot fully rule out hypothetical bias. Moreover, we abstract from price dynamics and market-level effects, which could moderate consumer responses in real purchasing contexts. Future research could extend our framework by testing behavioral nudges, combining labels with more detailed product information, or linking experimental responses to actual purchasing data.

Despite these caveats, empirically, we provide robust evidence that targeted information is the most effective tool to increase consumer valuations of sustainable and ethical fashion; methodologically, we develop a framework for integrating survey experiments with consumer-level heterogeneity. By highlighting where and why interventions succeed or fail, we offer guidance for policymakers and brands striving to close the gap between consumer concern and actual market demand for sustainable clothing.

In conclusion, this study shows that information, credibility, and trust are central to closing the gap between consumer concern and consumer action. By aligning regulatory initiatives, certification schemes, and consumer expectations, policymakers and producers can help build a more sustainable and socially responsible fashion ecosystem.

## References


Back, J. (2017). Sustainable and ethical practices for the fast fashion industry.

Berg, A., Granskog, A., Lee, L., and Magnus, K. (2020). Fashion on climate: how the fashion industry can urgently act to reduce its greenhouse gas emissions. *McKinsey & Company*.

Bick, R., Halsey, E., and Ekenga, C. C. (2018). The global environmental injustice of fast fashion. *Environmental Health*, 17(1):92.

Birtwistle, G. and Moore, C. M. (2007). Fashion clothing–where does it all end up? *International Journal of Retail & Distribution Management*, 35(3):210–216.

Carbon Trust Policy Advice Team (2011). International carbon flows — clothing. Technical report, Carbon Trust. Accessed: 2025-09-05.

De Pelsmacker, P., Driesen, L., and Rayp, G. (2005). Do consumers care about ethics? willingness to pay for fair-trade coffee. *Journal of consumer affairs*, 39(2):363–385.

Diaz-Bustamante-Ventisca, M., Carcelén-García, S., Díaz-Soloaga, P., and Kolotouchkina, O. (2025). Greenwashing perception in spanish fast-fashion brands' communication: Modelling sustainable behaviours and attitudes. *International Journal of Fashion Design, Technology and Education*, 18(2):179–189.

Euronews (2025). French senate backs law to regulate ultra-fast fashion giants shein and temu. Accessed: 2025-09-15.

European Commission (2025). Commission launches consultation on the digital product passport. Accessed: 2025-09-15.

Guiso, L. and Jappelli, T. (2024a). Are People Willing to Pay to Prevent Natural Disasters? CSEF Working Papers 723, Centre for Studies in Economics and Finance (CSEF), University of Naples, Italy.

Guiso, L. and Jappelli, T. (2024b). *The italian survey of consumer expectations: Statistical bulletin*. CSEF, Centre for Studies in Economics and Finance, Department of Economics ....

Hindsley, P., McEvoy, D. M., and Morgan, O. A. (2020). Consumer demand for ethical products and the role of cultural worldviews: The case of direct-trade coffee. *Ecological Economics*, 177:106776.

Kennedy, A.-M. (2016). Macro-social marketing. *Journal of Macromarketing*, 36(3):354–365.

Konuk, F. A. (2019). Consumers' willingness to buy and willingness to pay for fair trade food: The influence of consciousness for fair consumption, environmental concern, trust and innovativeness. *Food research international*, 120:141–147.

Munir, S. and Mohan, V. (2022). Consumer perceptions of greenwashing: lessons learned from the fashion sector in the uae. *Asian Journal of Business Ethics*, 11(1):1–44.

Ozdamar Ertekin, Z. and Atik, D. (2015). Sustainable markets: Motivating factors, barriers, and remedies for mobilization of slow fashion. *Journal of Macromarketing*, 35(1):53–69.

Potter, C., Bastounis, A., Hartmann-Boyce, J., Stewart, C., Frie, K., Tudor, K., Bianchi, F., Cartwright, E., Cook, B., Rayner, M., et al. (2021). The effects of environmental sustainability labels on selection, purchase, and consumption of food and drink products: a systematic review. *Environment and behavior*, 53(8):891–925.

PwC (2023). Embracing the fair price for a t-shirt. https://www.pwc.nl/nl/assets/documents/pwc-embracing-the-fair-price-for-a-tshirt.pdf. Accessed: 2025-09-07.

Rashid, M. S. and Byun, S.-E. (2018). Are consumers willing to go the extra mile for fair trade products made in a developing country? a comparison with made in usa products at different prices. *Journal of Retailing and Consumer Services*, 41:201–210.

United Nations Climate Change (2018). Un helps fashion industry shift to low carbon. https://unfccc.int/news/un-helps-fashion-industry-shift-to-low-carbon. Accessed: 2025-09-05.

Wren, B. (2022). Sustainable supply chain management in the fast fashion industry: A comparative study of current efforts and best practices to address the climate crisis. *Cleaner Logistics and Supply Chain*, 4:100032.