

Second-hand clothing discovery

A Business Case Study
Data Analysis

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The goal

Help the Coutura brand enhance its strategy for positioning second-hand stores in Italy.



Method

Data analysis of a survey (N=401), where D'Alamo and Colasante (2021) collected self-reported data from Italian customers related to their behaviours and attitudes towards fashion sustainability.



Results

We present quantitative insights, strategic recommendations and target segments that can help Coutura in their decision-making and next steps.

AGENDA

- Executive summary
- Method
- Overview
- Insights
- Recommendations





01

Executive summary



BUSINESS CONTEXT

Coutura is a start-up focused on selling second-hand clothing. Its approach combines physical stores with digital experiences, offering high quality second-hand and sustainable clothing and attractive designs at affordable prices, fostering a sense of community among its customers, and promoting sustainability.

The start-up aims to open its first stores in Italy and is outlining a strategy to reach their future customers.

Our goal is to detect **opportunities** for their business, **identify key customer targets** and to define a **value proposition**.



RESEARCH QUESTIONS

1. What are the key opportunity areas concerning sustainability and the sale of second-hand clothing?
2. How can we prioritize the regions for opening stores based on factors such as demand, demographics, and sustainability behaviours and attitudes?
3. Who are the key user segments, and how can we prioritize them to focus our value proposition effectively?

RESULTS

1. What are the key opportunity areas concerning sustainability and the sale of second-hand clothing?

Opportunities include increasing the awareness of customers towards the importance of buying clothes using environmental friendly processes, and focus our value proposition into high quality, cleanliness and convenience.

2. How can we prioritize the regions for opening stores based on factors such as demand, demographics, and sustainability behaviours and attitudes?

We recommend prioritizing the physical shops opening in south, center or north-east regions in Italy.

3. Who are the key user segments, and how can we prioritize them to focus our value proposition effectively?

Our key segments are women and men between 20 and 50 years, who primarily live in south, center and north-east regions of Italy. Our key segments are women and men between 20 and 50 years, who primarily live in south, center and north-east regions of Italy.

INSIGHTS

Users don't consider environment as a priority when buying clothes

Only 38% of respondents considered that it's important for them that a cloth has been produced in an environmental respectful manner when buying a cloth for themselves.



INSIGHTS

Second-hand clothes buyers are motivated by higher quality, pollute reduction and economic reason.

50.12% of customers have expressed buying second-hand clothes in the past. The main motivations are the quality of the product(64%), reduce pollution related to the production of new cloths(51%), and economic reasons(49%).



INSIGHTS

Main barriers that prevent customers not to buy second-hand clothes are poor hygiene and availability.

Customers who have not bought second-hand clothes express that **poor hygiene (63%)**, difficulties to find **proper size (50%)** and **poor availability of dedicated shops (45%)** are the top barriers for them not to buy these type of clothes.



RECOMMENDATIONS

- ✓ Focus the value proposition on **high quality of clothes** that are **respectful for the environment**, the **cleanliness** of the products and process, **availability** of shops and ease to find trendy and convenient clothes.
- ✓ Focus the physical shops openings in **south, center or north-east** regions in Italy.
- ✓ Target women and men between **10 and 50 years**, who are living with **3-4 people** in the same house.





02

Method



Data analysis steps

1. Prepare the datasets
2. Clean and model the data
3. Exploratory Data Analysis (EDA)
4. Principal Components Analysis (PCA)
5. Clustering method (K-Means)
6. Insights & Storytelling



Google Sheets

DATA COLLECTION

DOWNLOAD OPEN DATA

Self-reported data about sustainability and fashion attitudes and behaviours, collected in an **online survey**, during 2021.

Source: [Elsevier](#)

WEB SCRAPING

Demographic and political data about Italy regions.

Source: [Wikipedia](#)



SECONDARY DATA: CUSTOMERS' PERCEPTIONS AND BEHAVIOURS

Method: Online Survey

- 402 Italian people
- 35 items

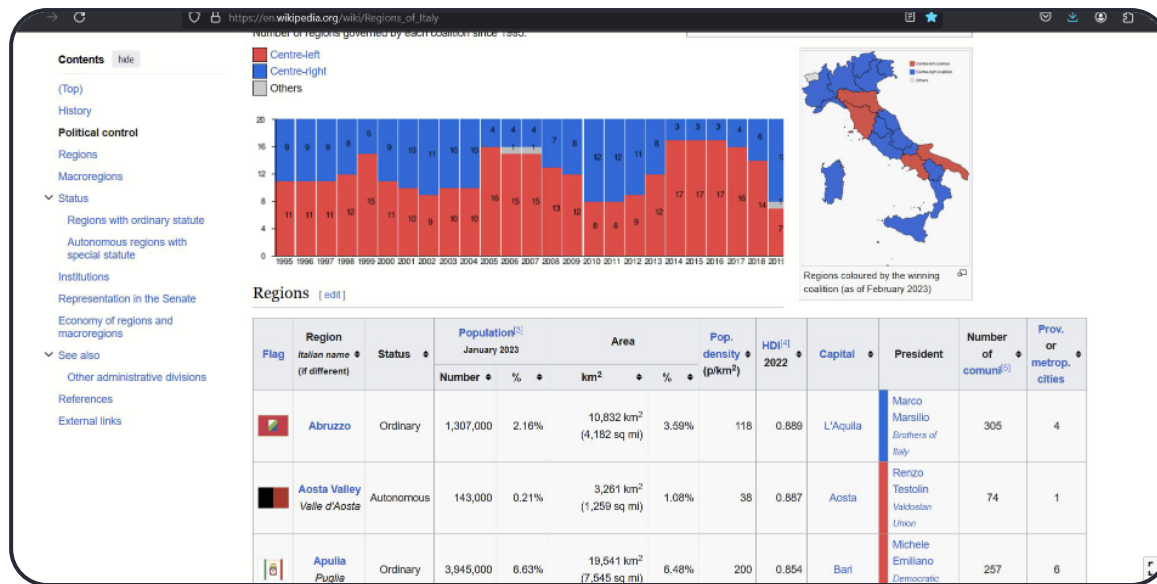
Structure

- Group A: focused on perceptions of sustainable fashion. Goal: figure out if people are aware of the pollution generated by fashion industry and, furthermore, to determine what are the main characteristics subjects attribute to sustainable fashion.
- Group B: Indeed, this part were useful to investigate individuals purchasing habits about second-hand and/or bio-based clothes. We also ask subjects to provide their main reasons for buying (or not) such kind of clothes. Goal: understand how much people are used to do sustainable shopping and, furthermore, to draw some hints about the key variables to consider for encouraging people to take sustainability more in consideration.
- Group C: willingness to pay (WTP). In particular, WTP for a t-shirt with (potentially) different characteristic (e.g. bio-based or produced with recycled materials)

Reference: [Survey data to assess consumers' attitudes towards circular economy and bioeconomy practices: A focus on the fashion industry.](#)
(D'Adamo & Colasante, 2021)

SECONDARY DATA: GEO-POLITICAL DATA

Method: Web-Scraping using R programming



Reference: [Regions of Italy - Wikipedia](#)



03

Overview



WHO ARE THE SURVEY RESPONDENTS?

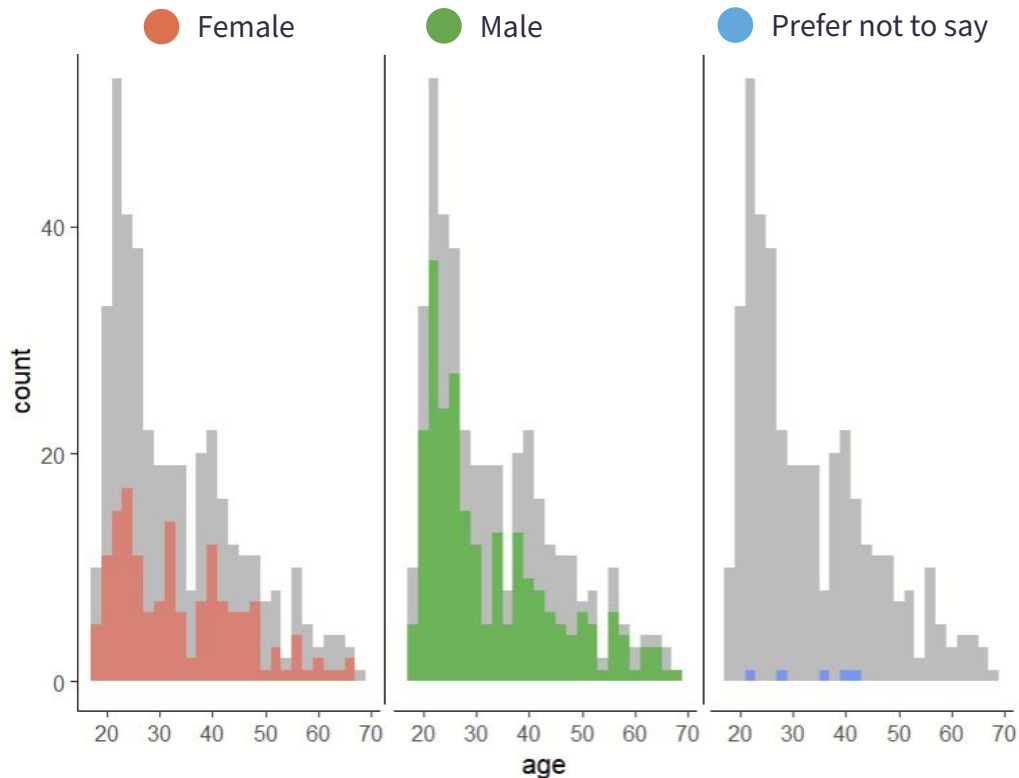
From a total of 402 individuals:

Gender:

- 38.7% woman
- 60.1% man
- 1.2 % prefer not to say

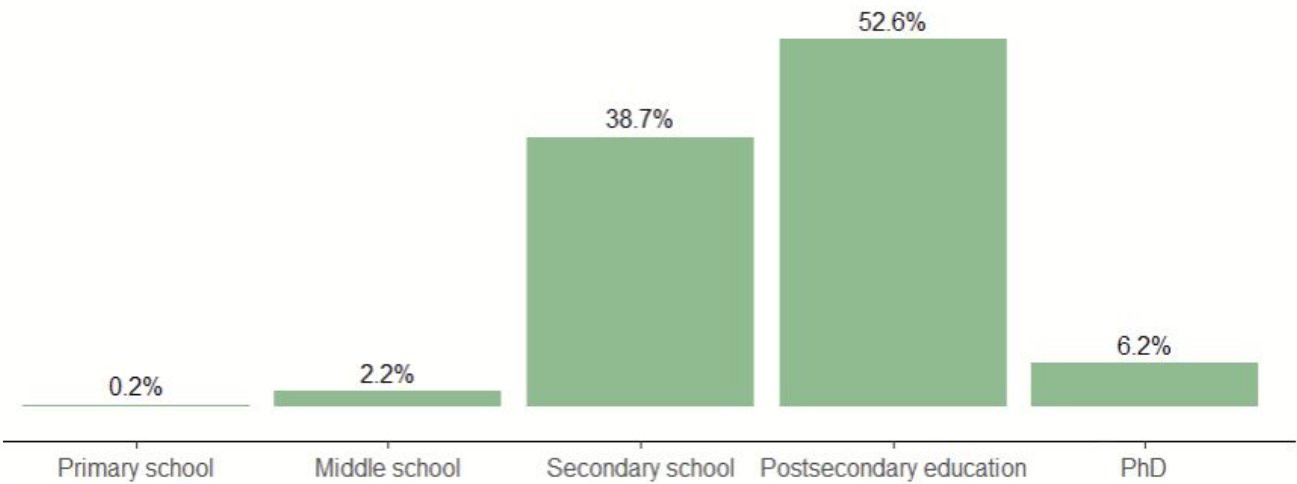
Age

- 17 years(min) - 69 years(max)
- Mean: 33.5 years



WHO ARE THE SURVEY RESPONDENTS?

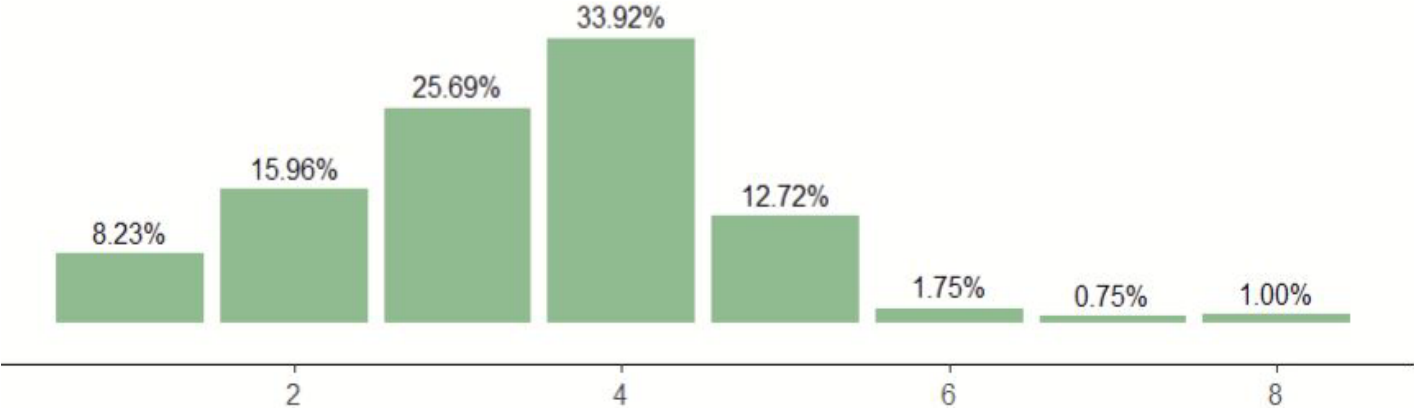
Level of education



Female	0%	44.4%	34.8%	41.7%	36.7%
Male	100%	55.6%	65.2%	65.2%	60.1%

WHO ARE THE SURVEY RESPONDENTS?

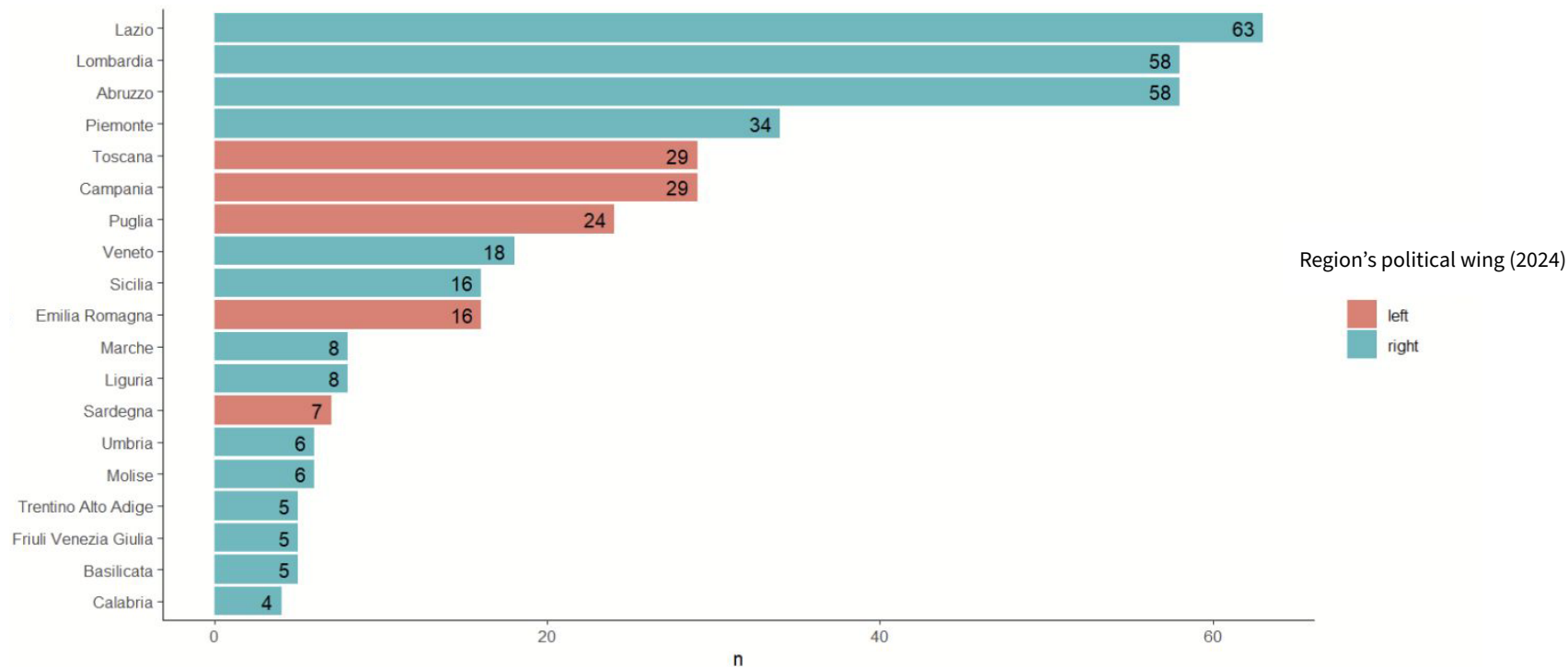
Number of people living with



	1 person	2-3 people	4+ people
0-24 years	1.7%	23.5%	74.8%
25-29 years	9.0%	37.2%	53.8%
30-44 years	10.9%	47.3%	41.9%
45+ years	13.3%	65.3%	21.3%

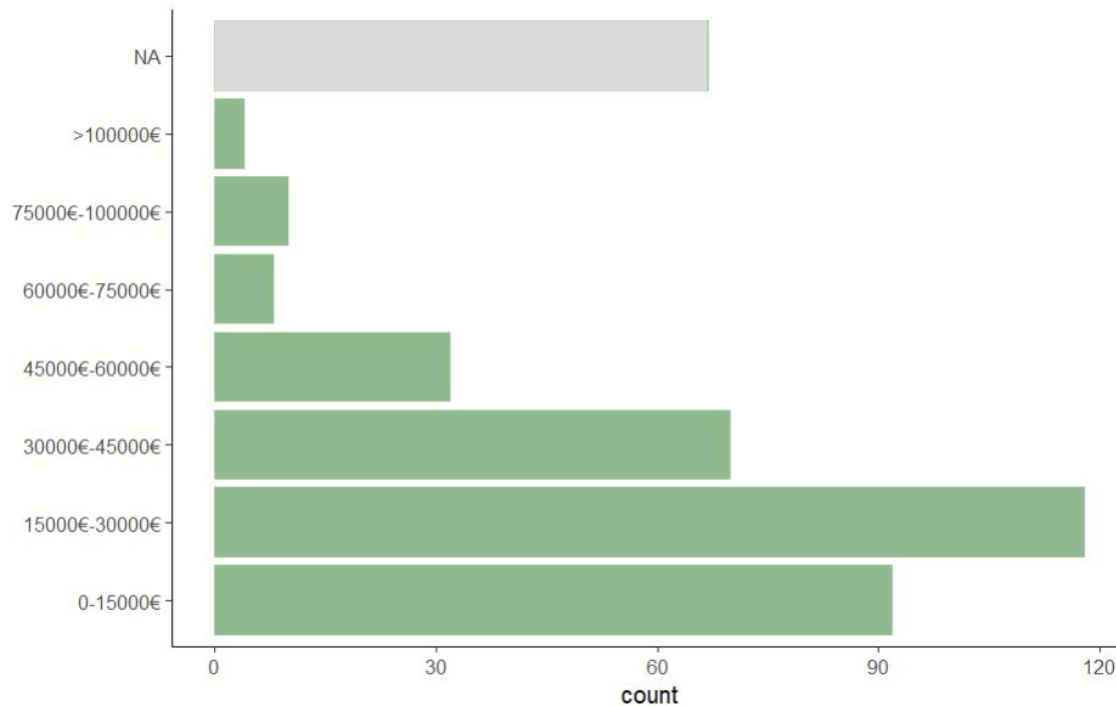
WHO ARE THE SURVEY RESPONDENTS?

Region and political party



WHO ARE THE SURVEY RESPONDENTS?

Income





04

Insights

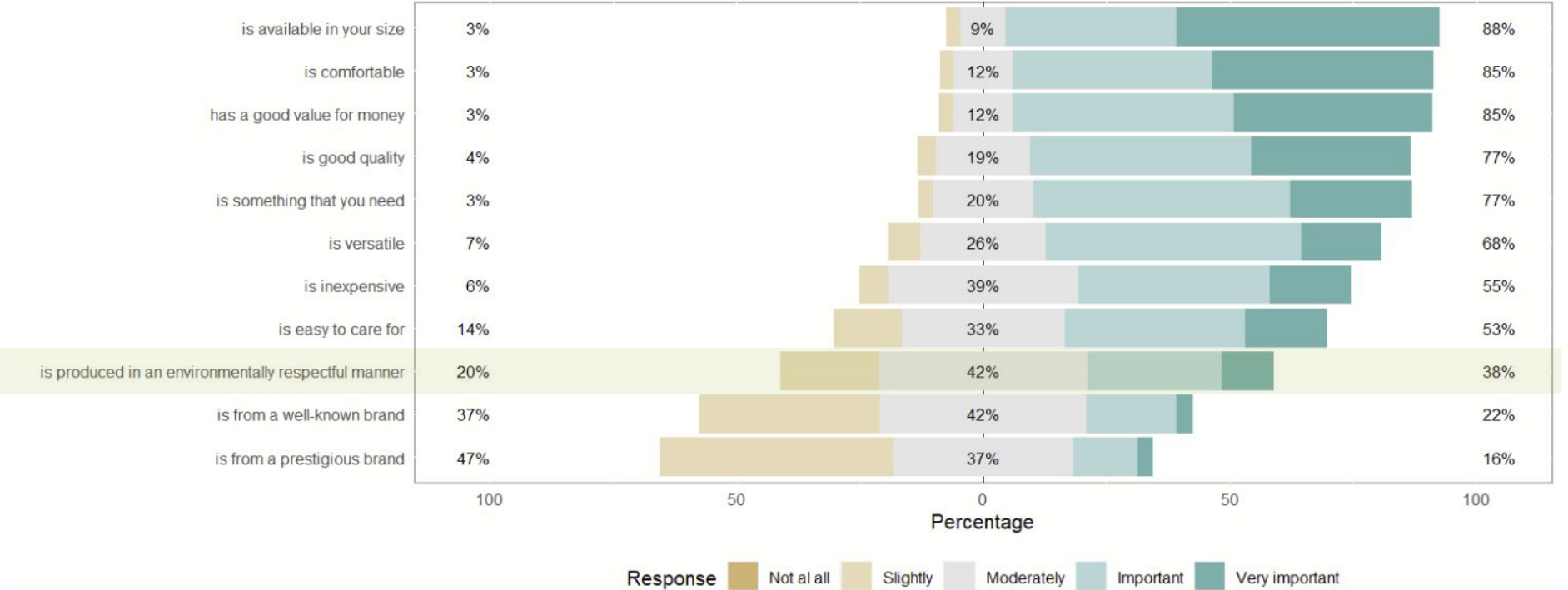


Sustainability and fashion



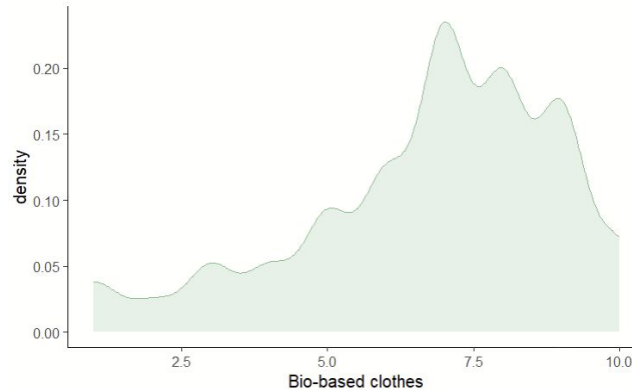
BUYING CLOTHES MOTIVATIONS

When buying a cloth for yourself, how much do you consider the following items important?



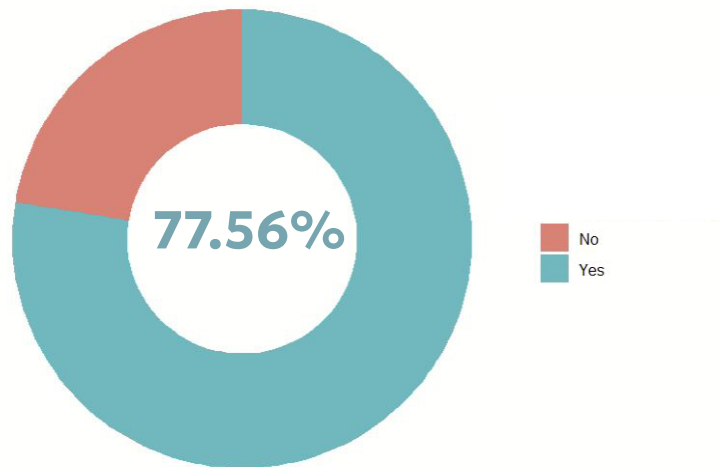
SUSTAINABLE FASHION PERCEPTIONS

In your opinion, which of these products can be classified as belonging to sustainable fashion?

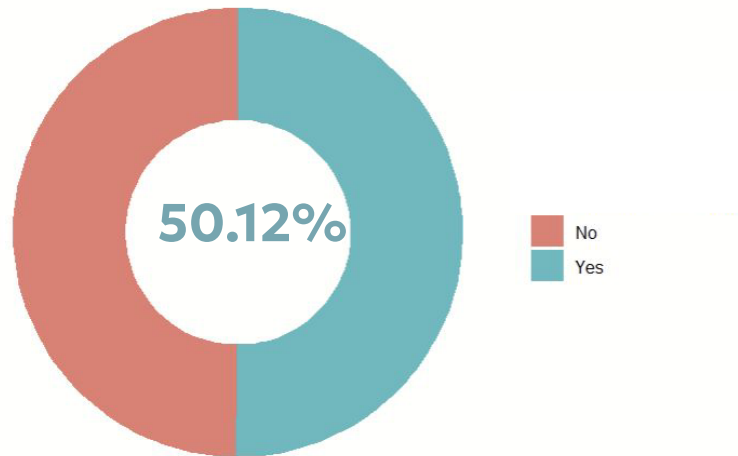


SECOND-HAND BEHAVIOUR

Have you ever bought (at least once)
second-hand items?



Have you ever bought (at least once)
second-hand clothes?



Second-hand clothes perceptions

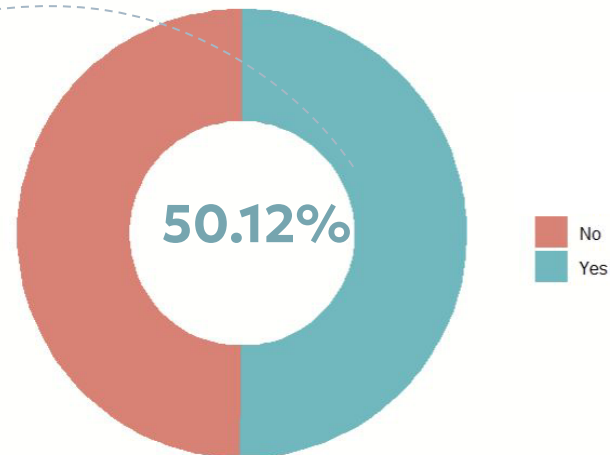


SECOND-HAND BEHAVIOUR

Only 50.12% of respondents have bought second-hand clothes

What are their motivations and fears?

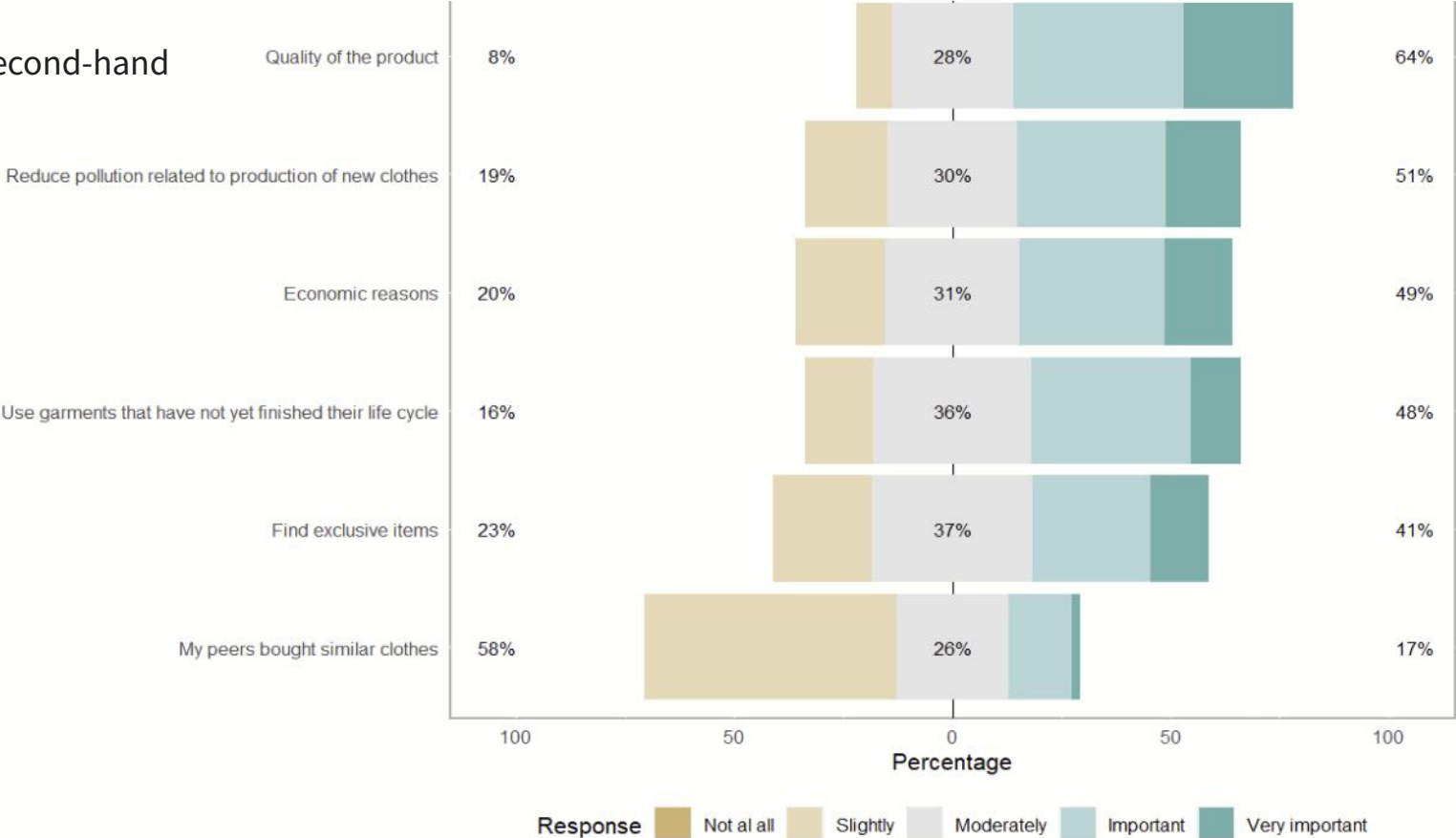
Have you ever bought (at least once) **second-hand clothes**?



SECOND-HAND BUY: WHY?

Motivations

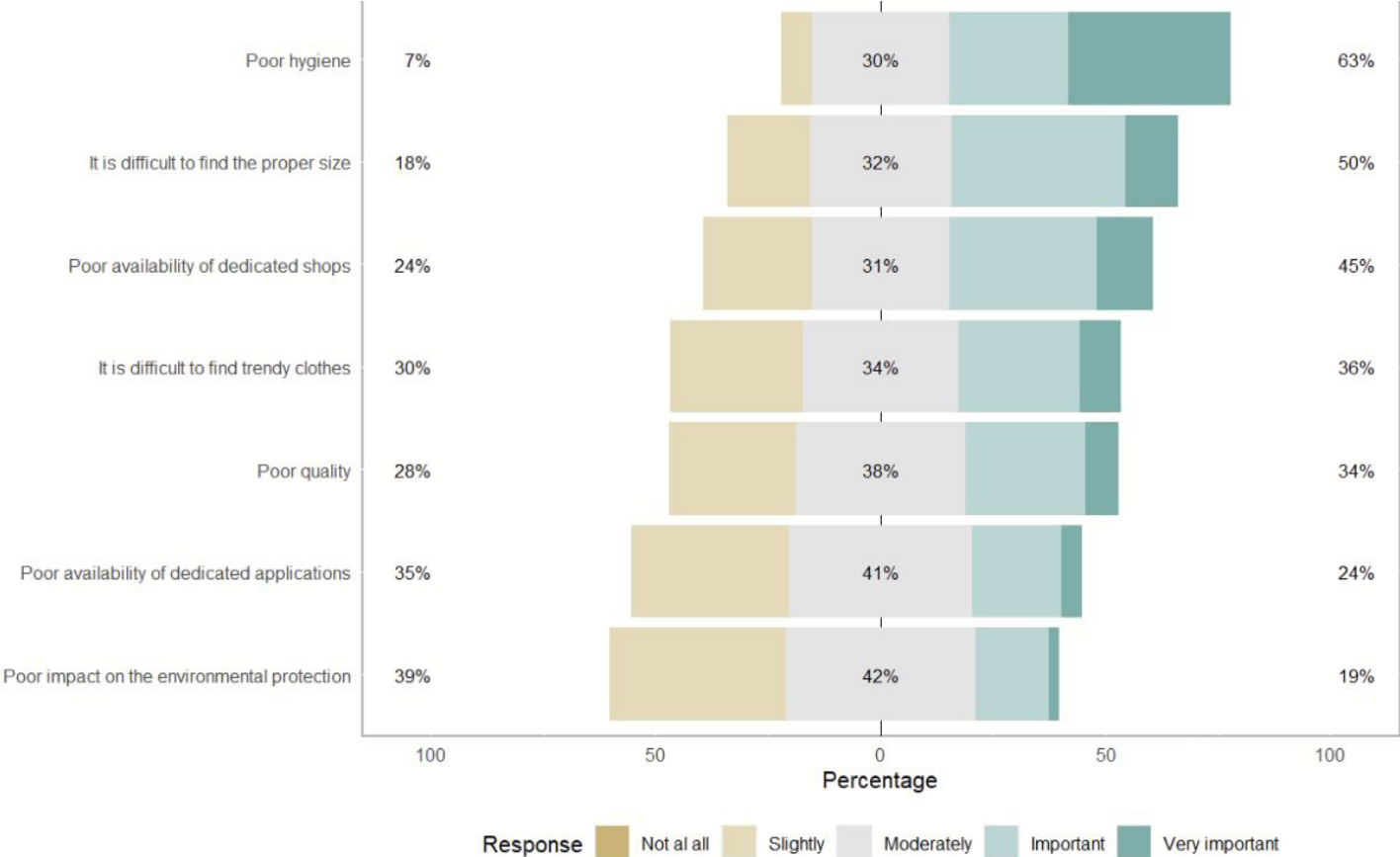
Why do you buy second-hand clothes?



SECOND-HAND BUY: WHY NOT?

Fears

Why do you not buy second-hand clothes?



Key fashion sustainability dimensions



5 DIMENSIONS: PCA ANALYSIS

If we reduce all the responses to the relevant questions in the survey, such as attitudes towards sustainability, willingness to pay, behaviours towards second hand, etc., we find that these questions can be reduced to the following dimensions.

WILLINGNESS TO PAY (IDEAL)

Willingness to pay for sustainable clothing, that have a certificates that make sure of the sustainable origin and conditions of cloth. Aware of sustainability, they pay attention to conditions to which their clothes were made.

ATTENTION TO CLOTHES

Users who rate high in this trait don't pay attention to the characteristics of clothes when they buy. They would be willing to pay for sustainable clothes, but are not aware of sustainable fashion, nor don't care which type of clothes they buy.

WILLINGNESS TO PAY (PRAGMATIC)

Rating high in this trait means willing to pay for sustainable clothes, without certificates. They would care about the size and fit of the clothes.

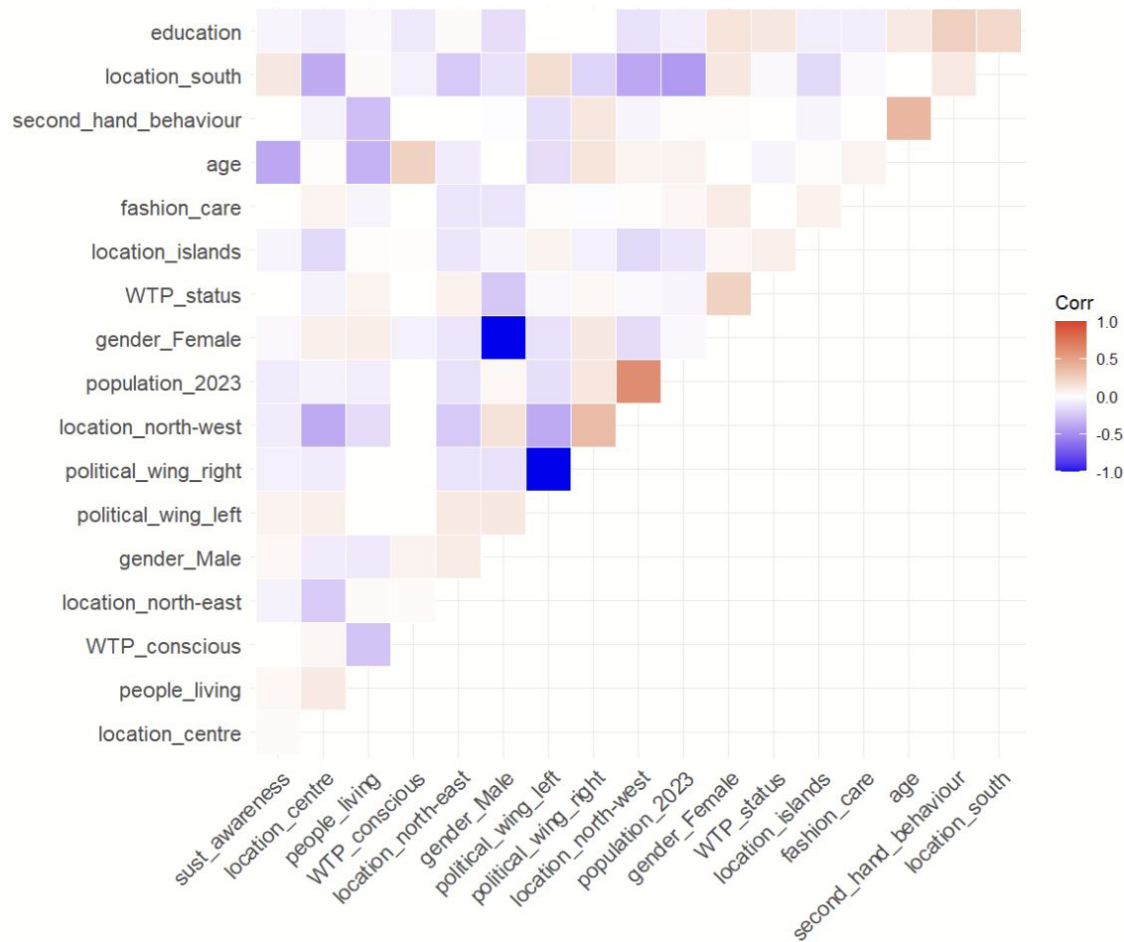
SUSTAINABILITY AWARENESS

High rates mean a high awareness of sustainable fashion, and buying bio clothes.

SECOND-HAND BUYING

Buying second hand clothes, pay attention to ease and quality in clothing, not to price.

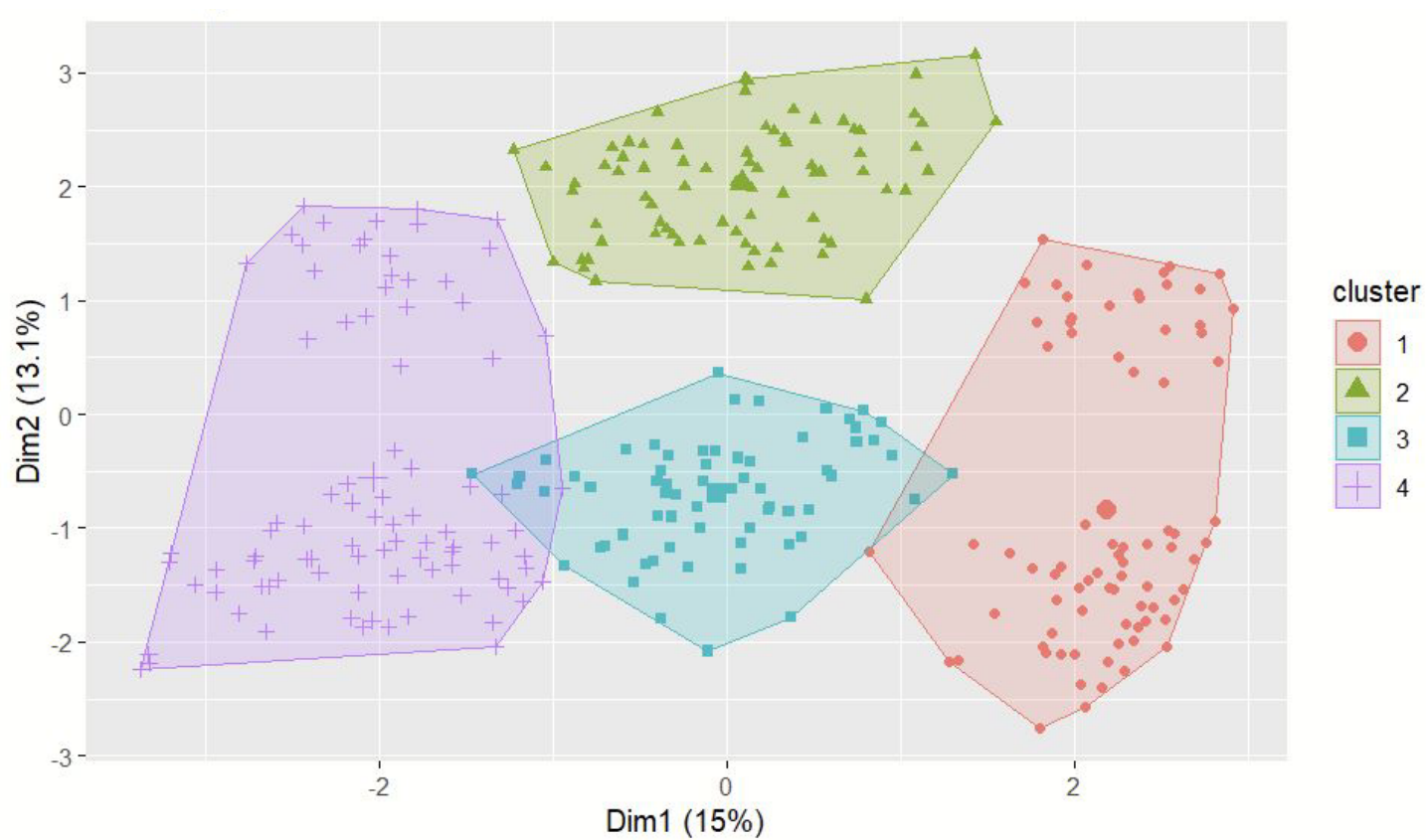
The previous dimensions are responsible for the variability in our sample, hence can be used to divide users into groups, finding relationships with other sociodemographic variables.



Customer segments



CUSTOMER SEGMENTS: K-MEANS ANALYSIS



CUSTOMER SEGMENTS: IN A SNAPSHOT

<p>Segment 1</p> <p>Users who do not buy second hand clothes, and are not willing to pay for second-hand clothes.</p>	<p>Segment 2</p> <p>Users who are willing to pay for second-hand clothes, and it's important for them to see the certificates. They don't pay much attention to clothes characteristics when buying, but they are aware of sustainable fashion.</p>
<p>Segment 3</p> <p>Users who are not willing to pay for certificated sustainable clothing, but they might be willing to pay for sustainable clothes in a pragmatic way. They haven't bought second hand clothes.</p>	<p>Segment 4</p> <p>Not aware about sustainability and don't buy second hand clothes.</p>

CUSTOMER SEGMENTS: WHAT SEGMENTS SHOULD WE TARGET?

Segment 1

Users who do not buy second hand clothes, and are not willing to pay for second-hand clothes.

Segment 2

Users who are willing to pay for second-hand clothes, and it's important for them to see the certificates. They don't pay much attention to clothes characteristics when buying, but they are aware of sustainable fashion.

Segment 3

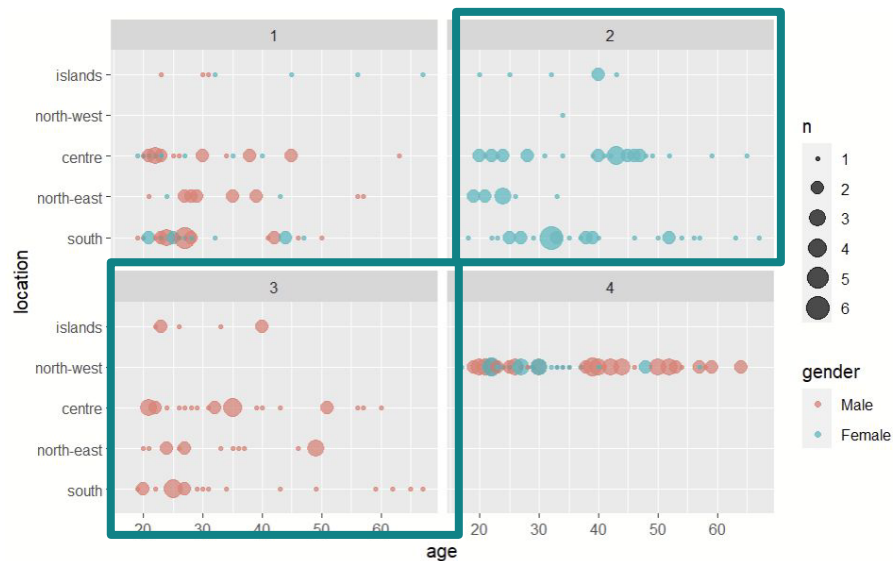
Users who are not willing to pay for certificated sustainable clothing, but they might be willing to pay for sustainable clothes in a pragmatic way. They haven't bought second hand clothes.

Segment 4

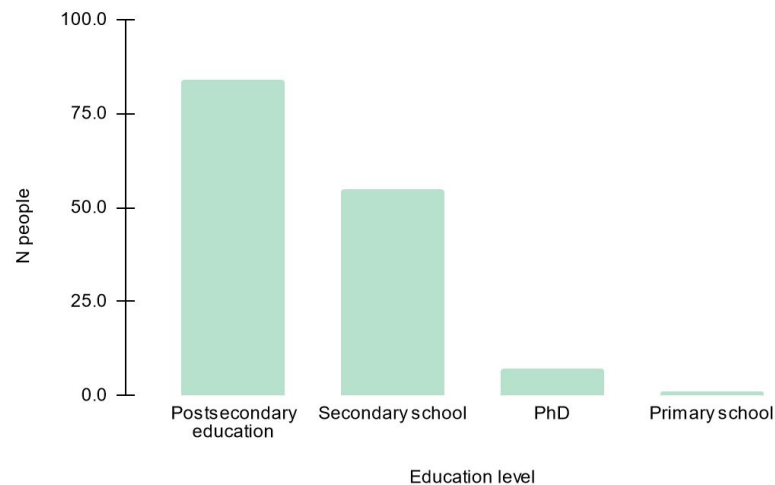
Not aware about sustainability and don't buy second hand clothes.

CUSTOMER SEGMENTS: TARGET DESCRIPTION

Our key segments are **women and men between 20 and 50 years**, who primarily live in **south, center and north-east** regions of Italy.



Our target users have completed **secondary and postsecondary education**, and tend to live with more than **3 people** in the house.





05

Recommendations



Recommendations

- ✓ Focus the value proposition on high quality second-hand clothes that are respectful for the environment, the cleanliness of the products and process, and the availability of shops and easiness to find trendy and convenient clothes.
- ✓ Focus the physical shops opening in south, center or north-east regions in Italy.
- ✓ Target women and men between 10 and 50 years, who are living with 3-4 people in the same house.



Thanks!

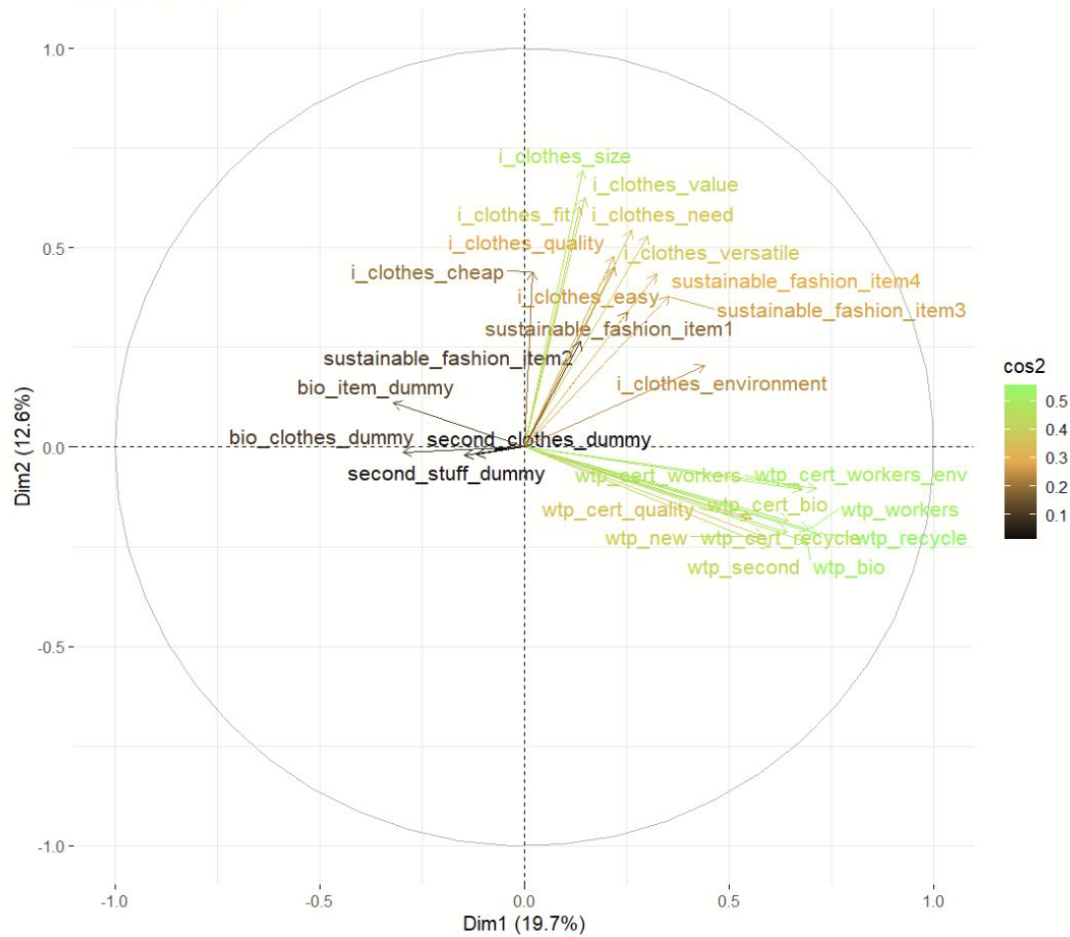
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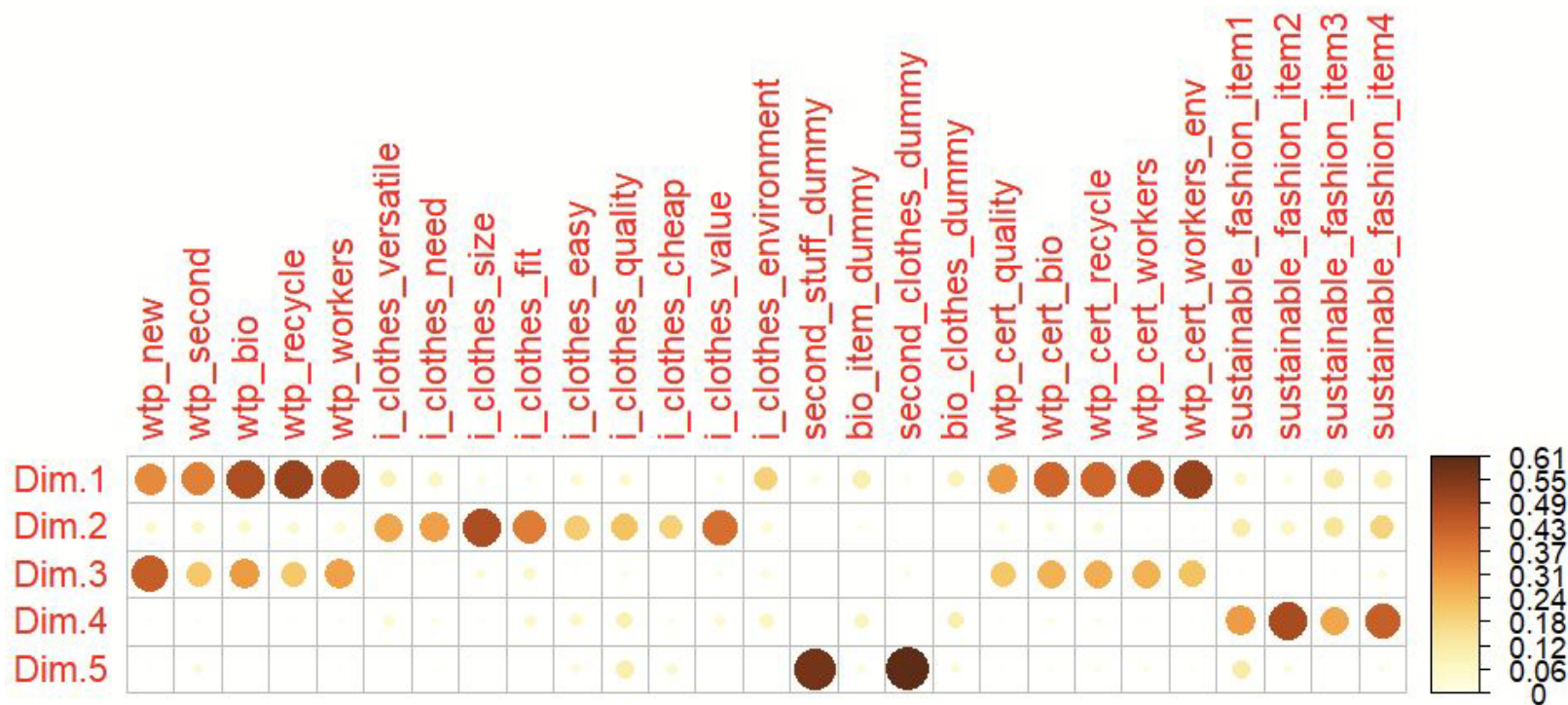


PCA ANALYSIS

Variables - PCA



PCA ANALYSIS: DIMENSIONS CORRELATIONS



PCA ANALYSIS: DIMENSIONS LOADINGS

variable	Comp.1	Comp.2	Comp.3	Comp.4	Comp.5
wtp_new	0.25	0.12	0.38	0.02	0.04
wtp_second	0.26	0.14	0.27	0.06	-0.14
wtp_bio	0.30	0.13	0.32	0.04	0.05
wtp_recycle	0.31	0.12	0.27	0.05	-0.02
wtp_workers	0.30	0.11	0.32	0.05	0.05
i_clothes_versatil	0.13	-0.29	0.04	-0.14	-0.01
i_clothes_need	0.11	-0.30	-0.03	-0.09	-0.08
i_clothes_size	0.06	-0.38	0.11	-0.07	-0.02
i_clothes_fit	0.06	-0.33	0.14	-0.15	0.03
i_clothes_easy	0.10	-0.25	-0.01	-0.17	0.15
i_clothes_quality	0.09	-0.26	0.07	-0.21	0.25
i_clothes_cheap	0.01	-0.24	0.01	-0.09	-0.17
i_clothes_value	0.06	-0.34	0.06	-0.14	-0.03
i_clothes_environ	0.19	-0.11	-0.10	-0.18	0.00
second_stuff_dur	-0.06	0.01	0.03	-0.02	0.58
bio_item_dummy	-0.14	-0.06	0.04	0.19	0.12
second_clothes_	-0.05	0.01	0.07	0.04	0.60
bio_clothes_dum	-0.13	0.01	0.00	0.22	0.15
wtp_cert_quality	0.24	0.10	-0.27	-0.03	-0.06
wtp_cert_bio	0.28	0.10	-0.30	-0.08	0.08
wtp_cert_recycle	0.28	0.12	-0.30	-0.08	0.09
wtp_cert_workers	0.29	0.06	-0.30	-0.04	0.09
wtp_cert_workers	0.31	0.06	-0.28	-0.04	0.08
sustainable_fash	0.11	-0.18	-0.06	0.38	-0.26
sustainable_fash	0.06	-0.14	-0.06	0.48	0.12
sustainable_fash	0.15	-0.20	-0.04	0.36	0.03
sustainable_fash	0.14	-0.23	-0.11	0.45	0.09

CUSTOMER SEGMENTS

<i>cluster_id</i>	MEDIAN of WTP_ideal	MEDIAN of WTP_pragmatic	MEDIAN of clothes_care(-)	MEDIAN of sust_awareness	MEDIAN of second_hand_behaviour
1	-0.093	-0.035	0.165	0.172	-0.444
2	0.771	0.112	0.216	0.215	0.184
3	-0.545	0.062	0.128	0.199	-0.029
4	0.033	-0.070	0.037	-0.072	-0.222