

## Marketing research

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1. Product attributes affecting purchase decision
  - 1.1. Performance
  - 1.2. Battery life
  - 1.3. Design
  - 1.4. Repairability & software support
  - 1.5. Price
  - 1.6. Features
  - 1.7. Packaging
  - 1.8. Labor policies
  - 1.9. Recycling
  - 1.10. Supplier sustainability
  - 1.11. Supplier quality
  - 1.12. Sustainability certifications
2. Advertising
  - 2.1. Long term advertising effect
  - 2.2. Advertising effectiveness research
  - 2.3. Distribution channel preferences
3. Sustainability scoring
  - 3.1. Environmental
    - 3.1.1. Longevity
    - 3.1.2. Design and Packaging
    - 3.1.3. Production
  - 3.2. Social
  - 3.3. Governance

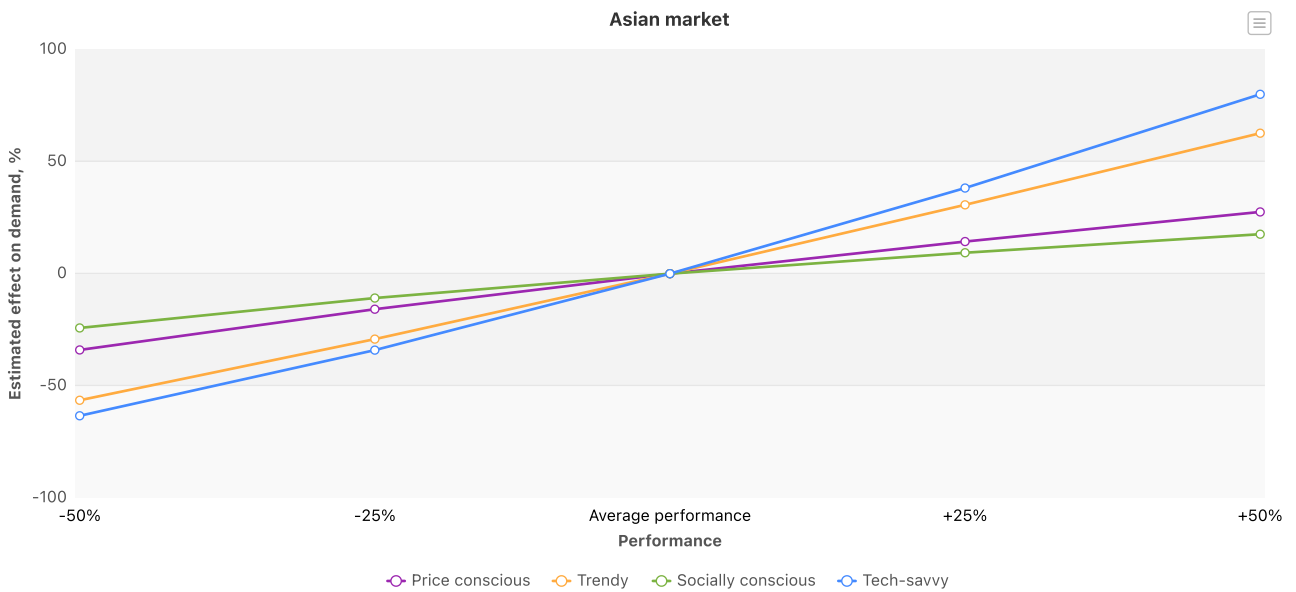
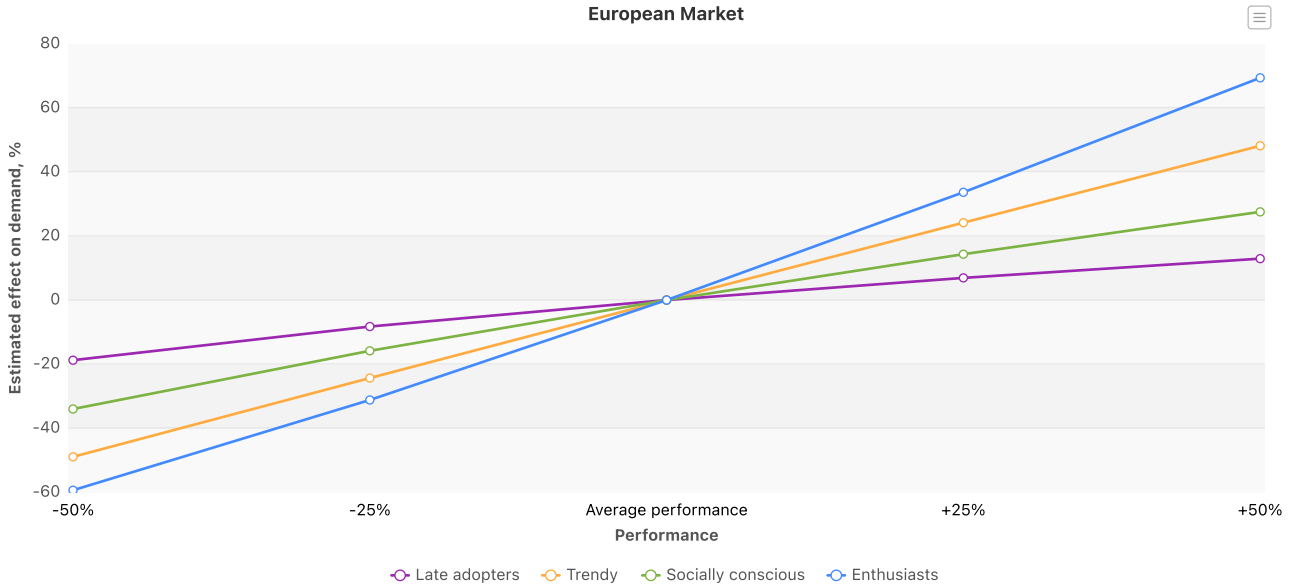
# 1. Product attributes affecting purchase decision

Marketing research has produced results on product attributes affecting purchase decision. These attributes include price, performance, battery life, design, number of features, repairability & software support, packaging, labor policies, recycling, supplier selection, and sustainability certifications.

Included are part-worth analyses of the utilities for the different levels of each of the attributes. A higher positive utility depicts more value to the customer and hence can be related to higher demand.

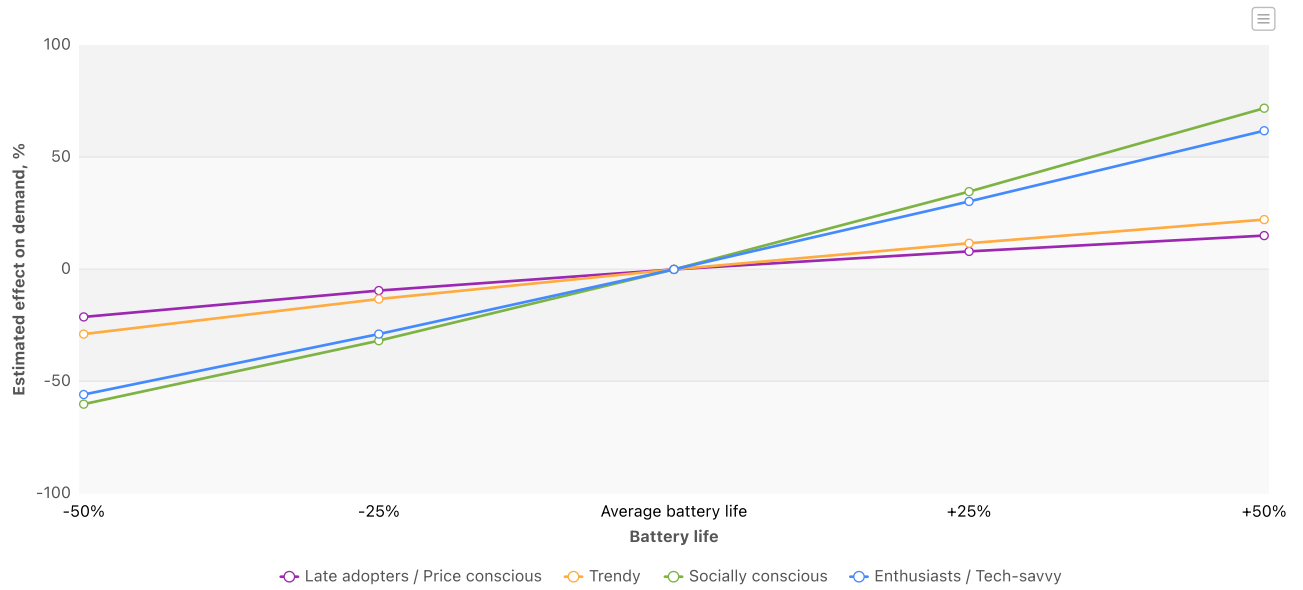
Part-worth utility functions of attributes:

## 1.1. Performance



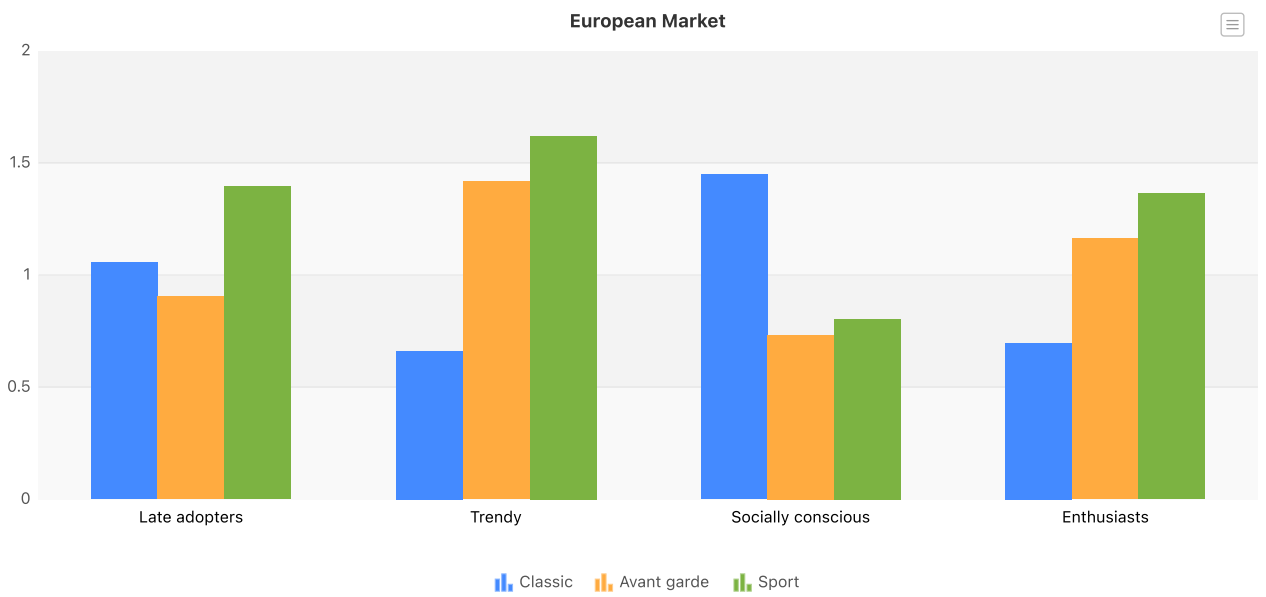
The performance index is presented on the x-axis and the relative demand effect on the y-axis. Hence we can see the effects on demand for the different segments when the performance is increased.

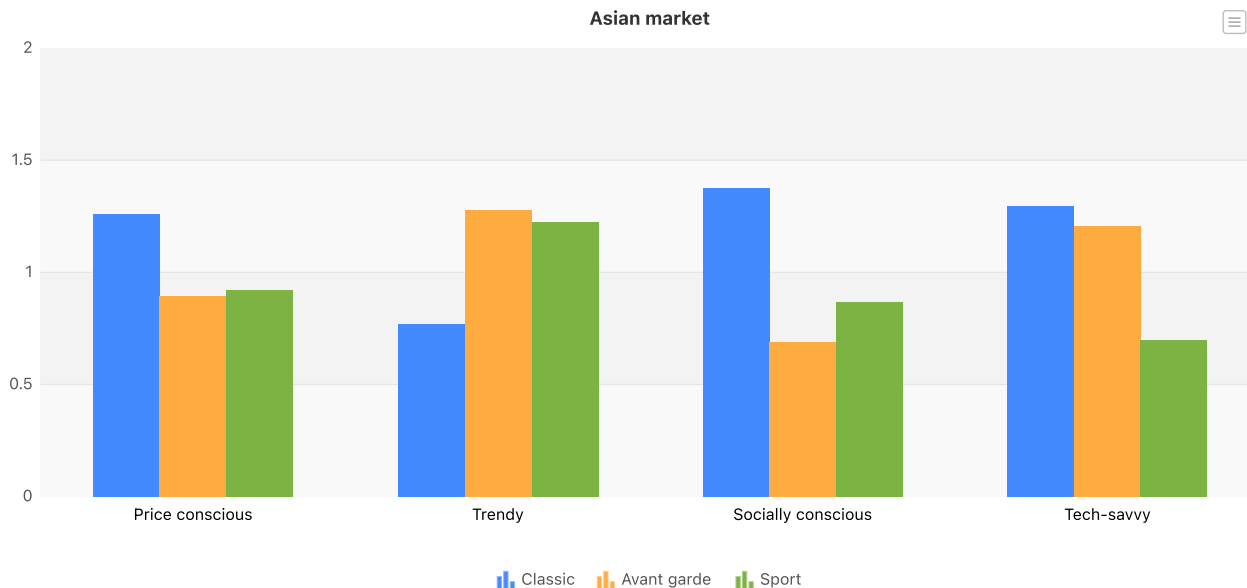
### 1.2. Battery life



In this chart we have the battery life index on the x-axis and relative demand effect on the y-axis. European and Asian customers have very similar views concerning the importance of battery life. Because of the great similarities, the marketing agency has provided a graph that represents both markets equally.

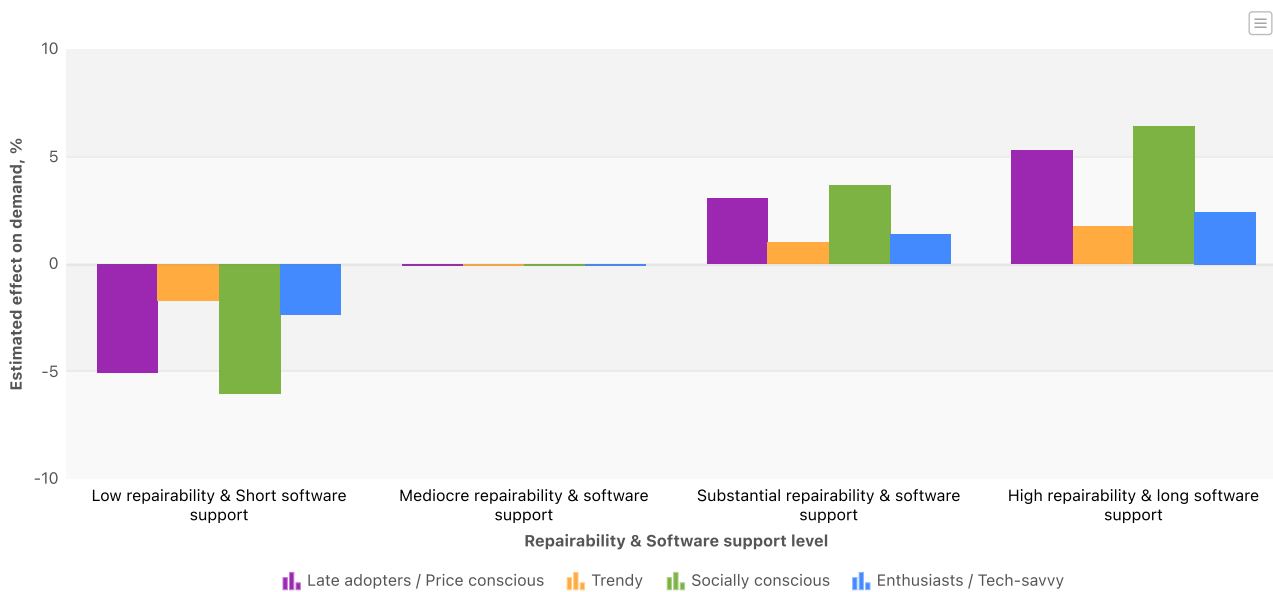
### 1.3. Design





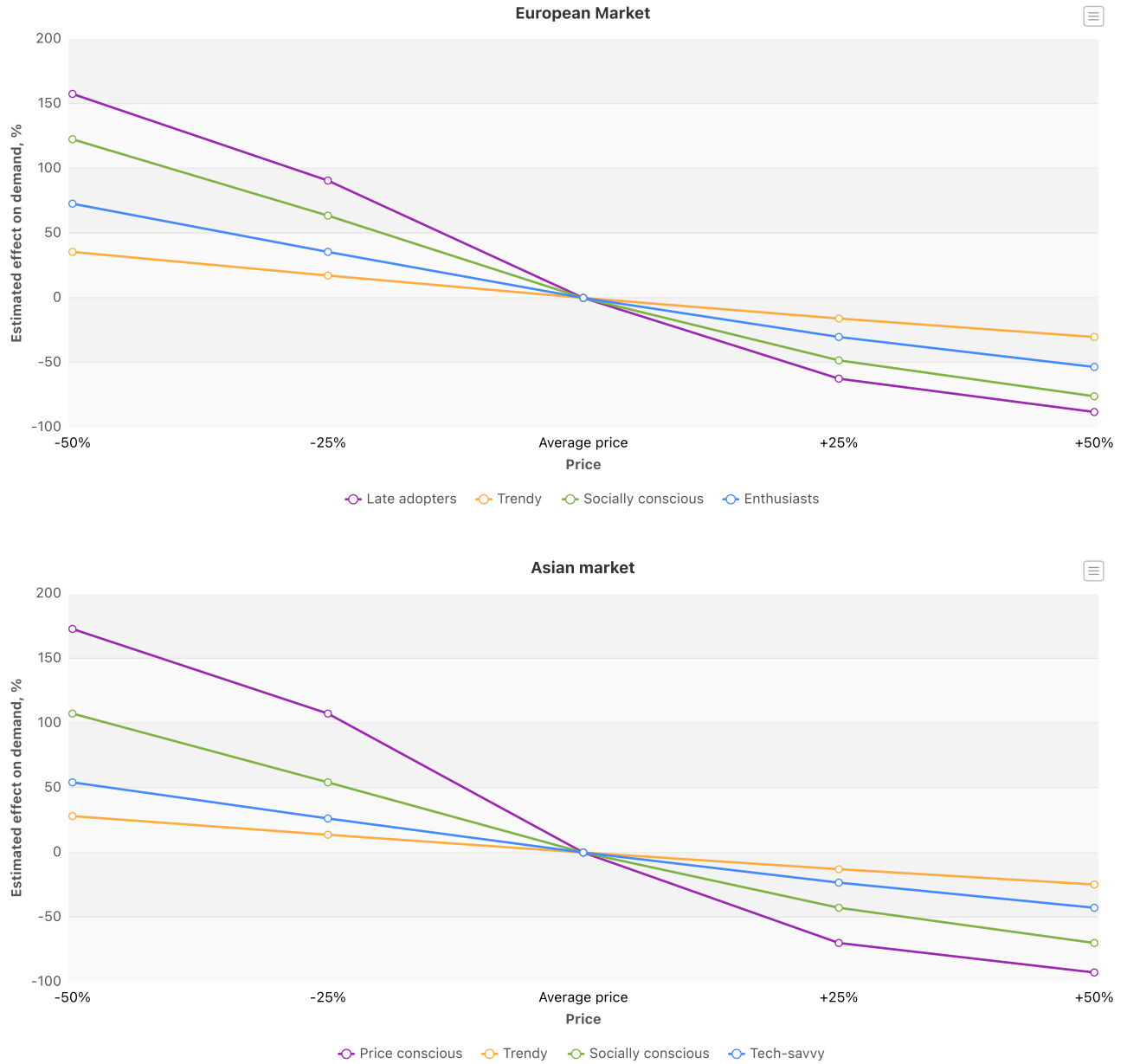
Here on the x-axis we have all of the segments. The bars represent how well a certain design suits that segment. On the y-axis we have the relative preferences of the designs.

### 1.4. Repairability & software support



Different customer segments have different views on the importance of repairability & software support. Research indicates that having an above average repairability & software support can increase demand. In this graph we have the effect on demand on the y-axis and repairability & software support levels on x-axis. Market average repairability & software support level here was Mediocre repairability & software support.

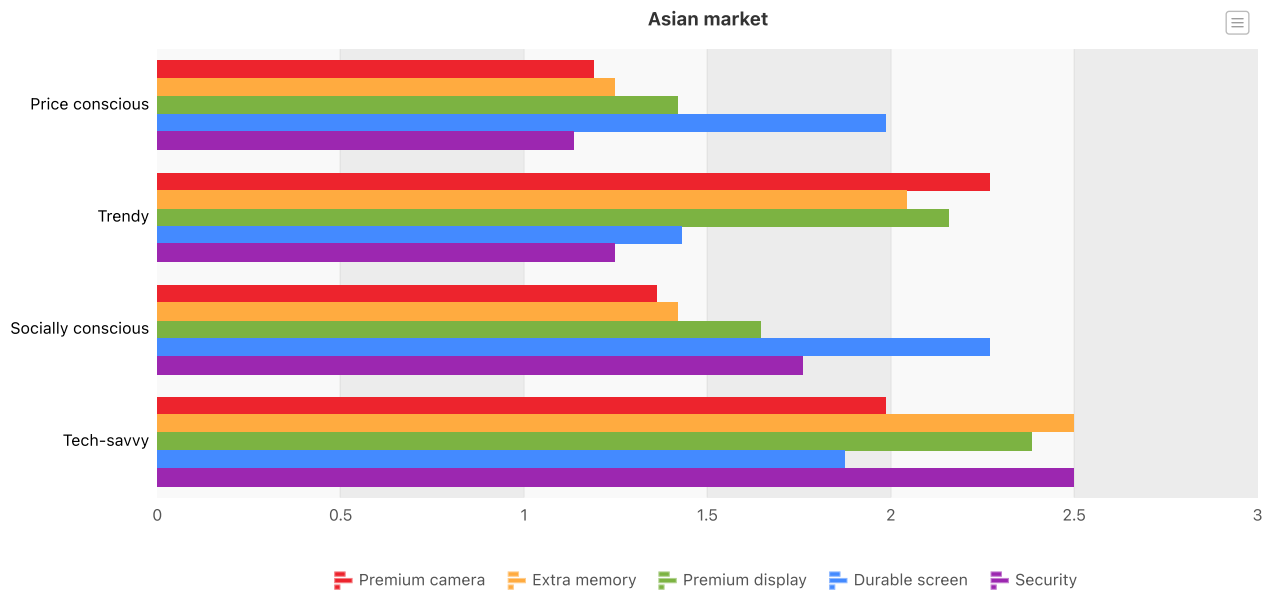
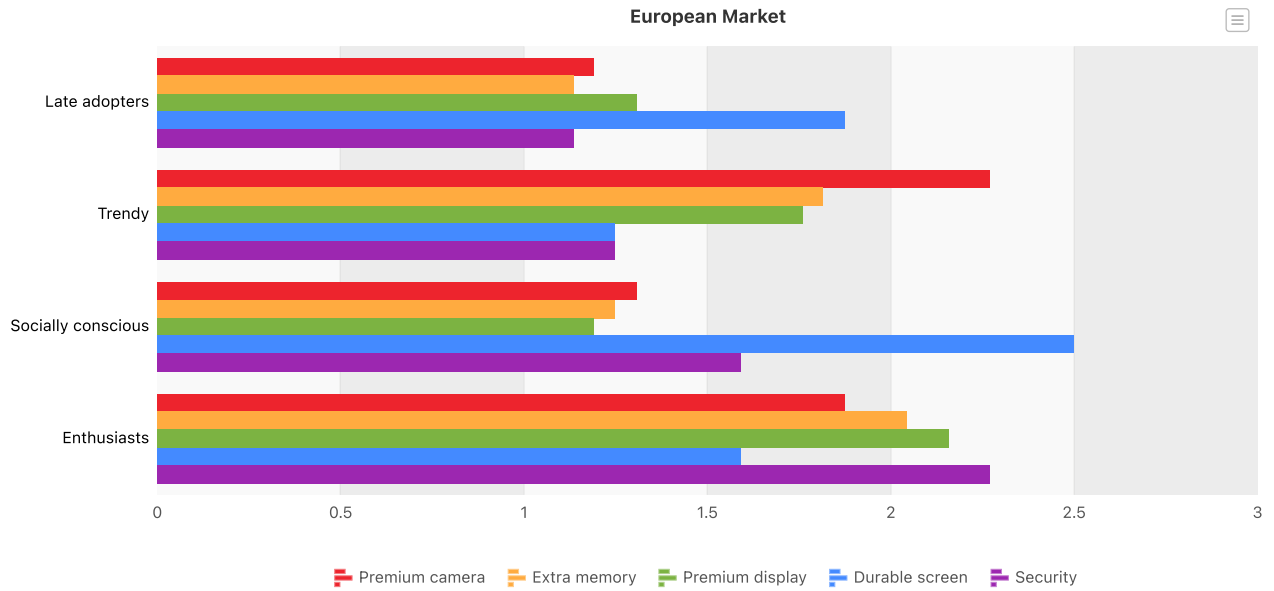
### 1.5. Price



This graph displays the demand index on the y-axis and price level on the x-axis. The demand index only reflects the elasticity of different segments and it does not depict real demand exactly.

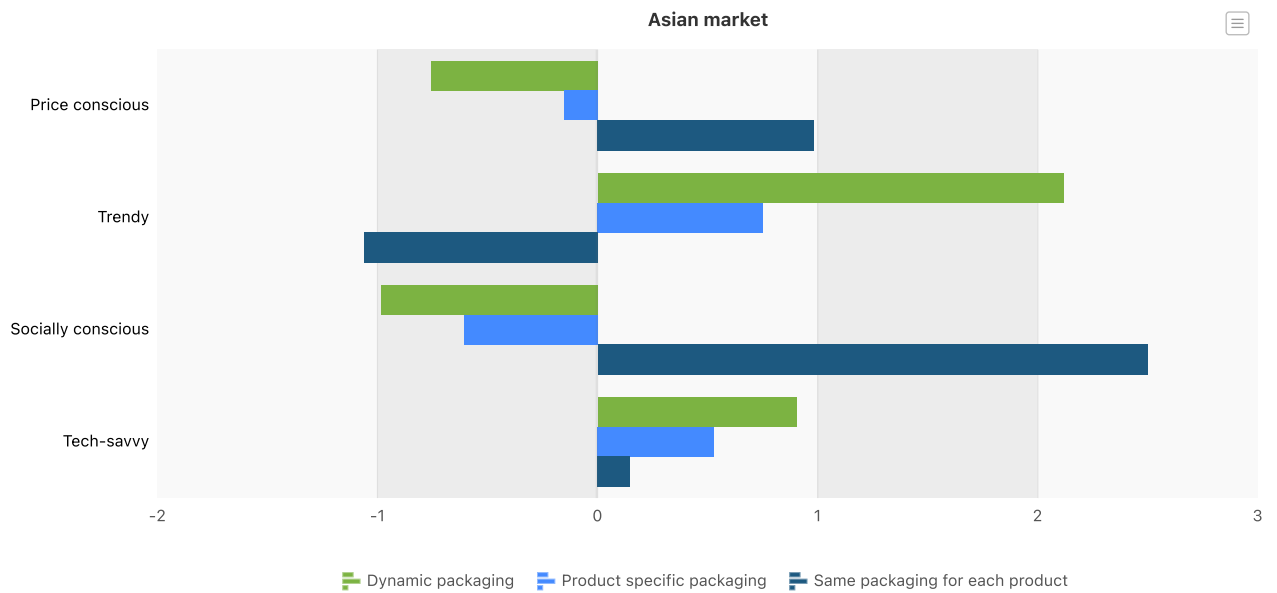
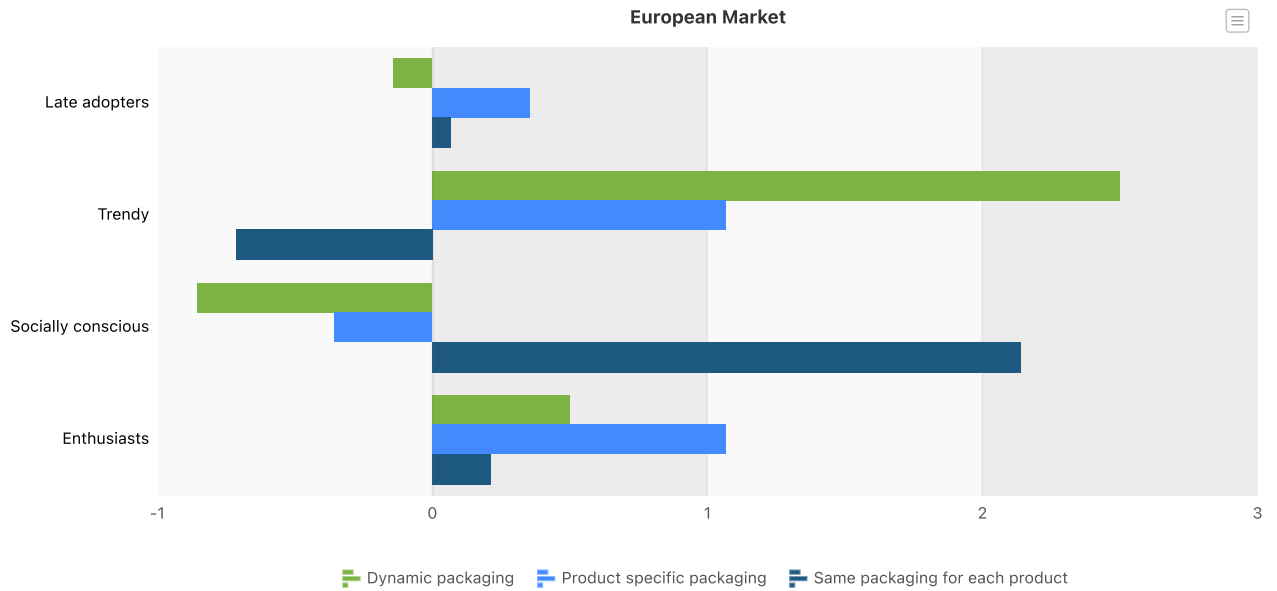
### 1.6. Features

Marketing research using a questionnaire survey has produced results on the relative desirability of different features on a smartphone. The features included in the study were Premium camera, Extra memory, Premium display, Durable screen and Security. Consumers on both European and Asian segments were asked to rate the importance of the different features on Likert scale from 'Not important' to 'Very important'. The following graphs illustrate the importance of each of the features for different segments.



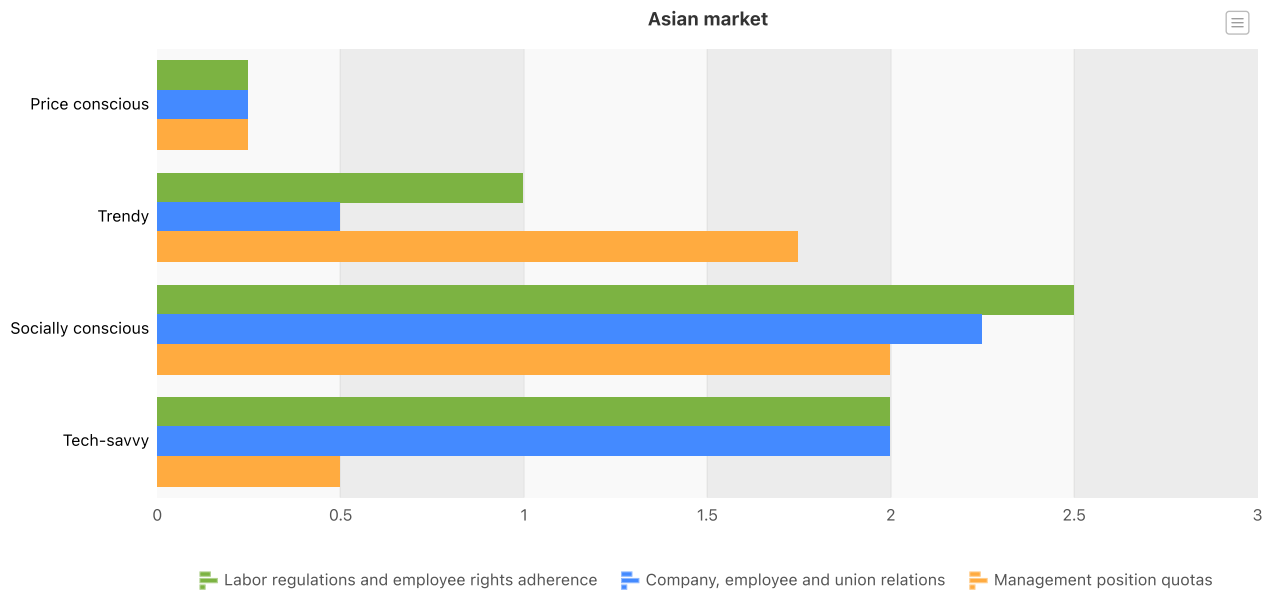
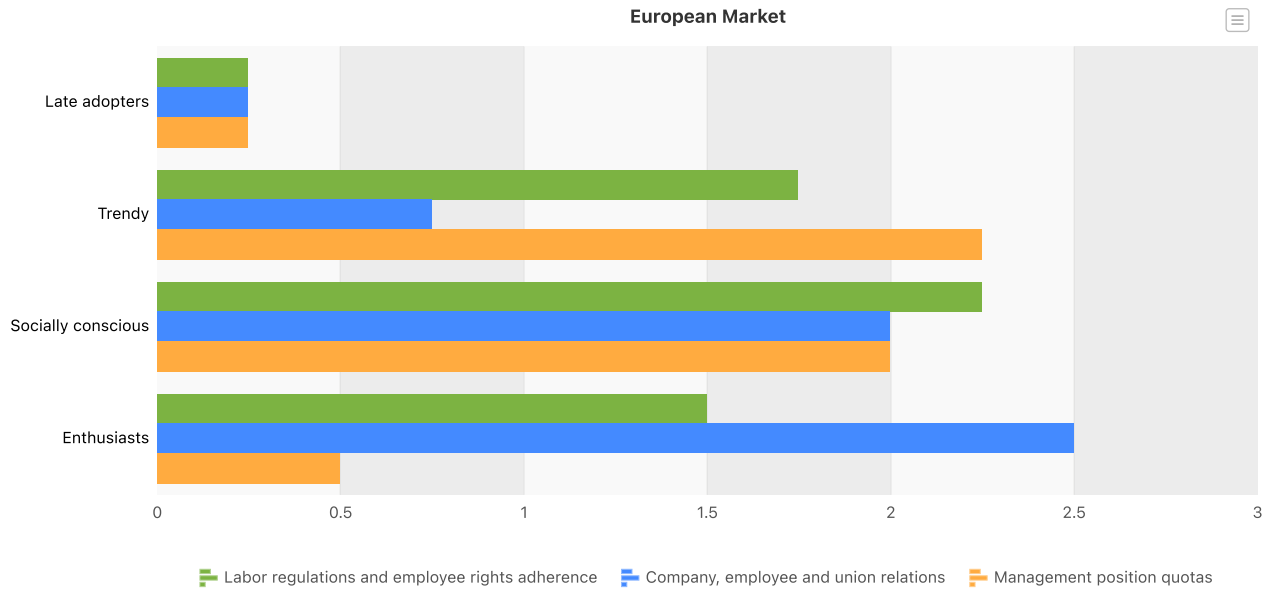
## 1.7. Packaging

The consumers in both European and Asian segments were asked to rate the desirability of each packaging policy on Likert scale from "Strongly dislike" to "Strongly prefer". The following graphs illustrate the relative desirability of different packaging policies: the higher the value, the more preferred the given packaging policy is for the segment.



## 1.8. Labor policies

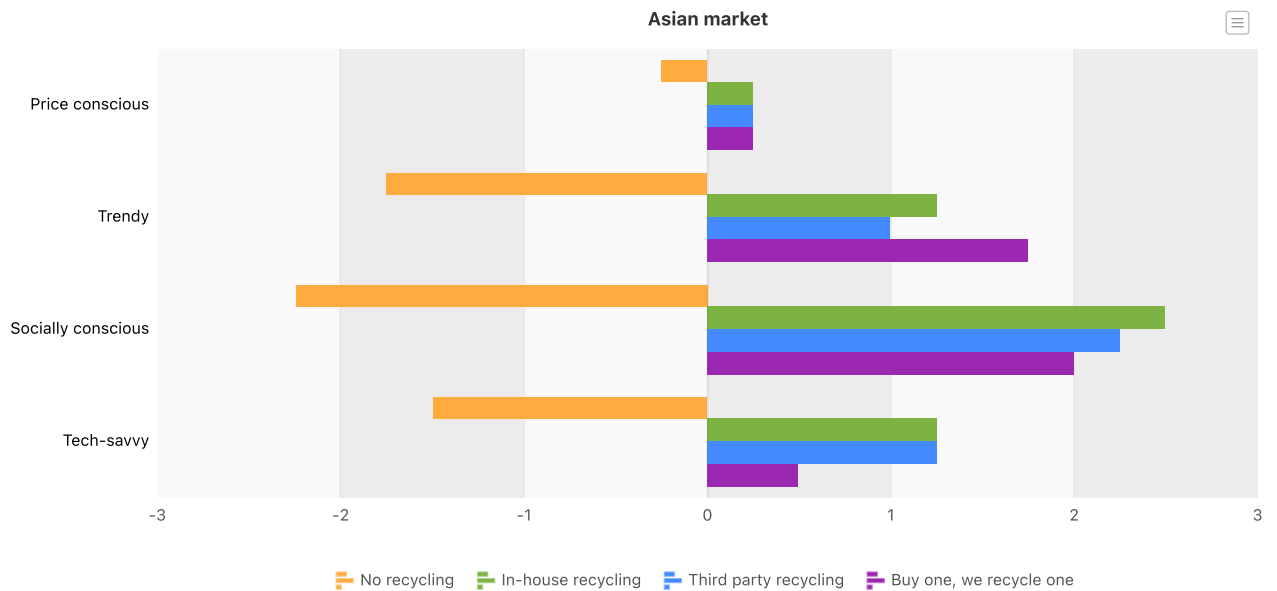
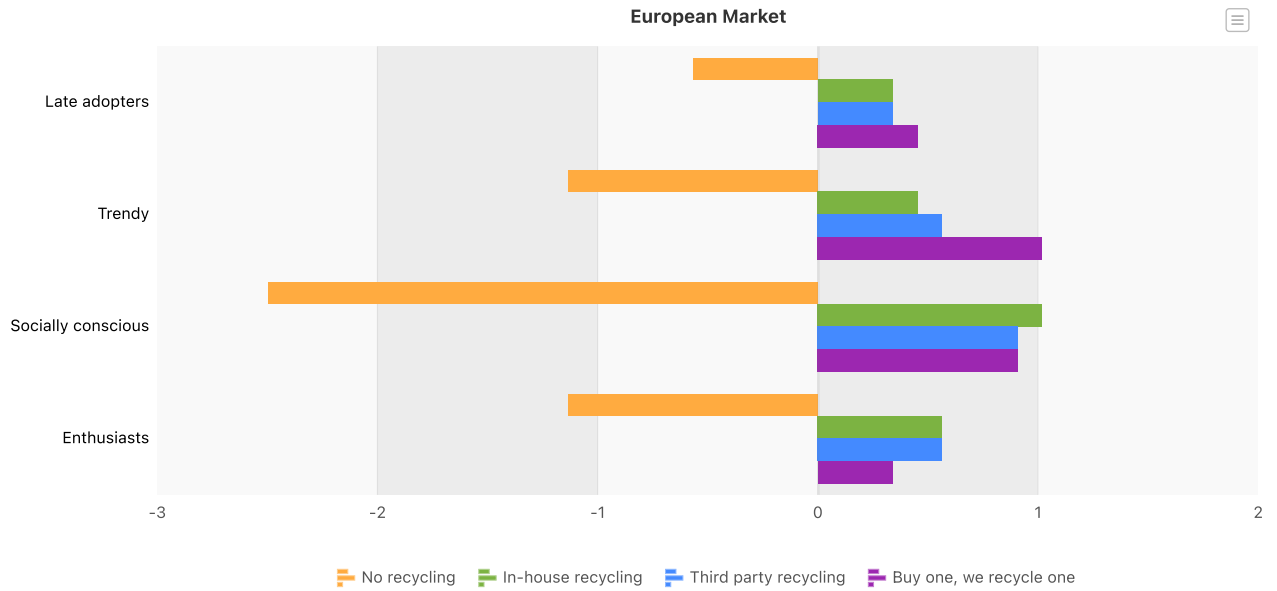
The consumers in both European and Asian segments were asked to rate the importance of each labor policy on Likert scale from "Not important" to "Very important". The following graphs illustrate the relative importance of different labor policies: the higher the value, the more important the given labor policy is for the segment.



## 1.9. Recycling

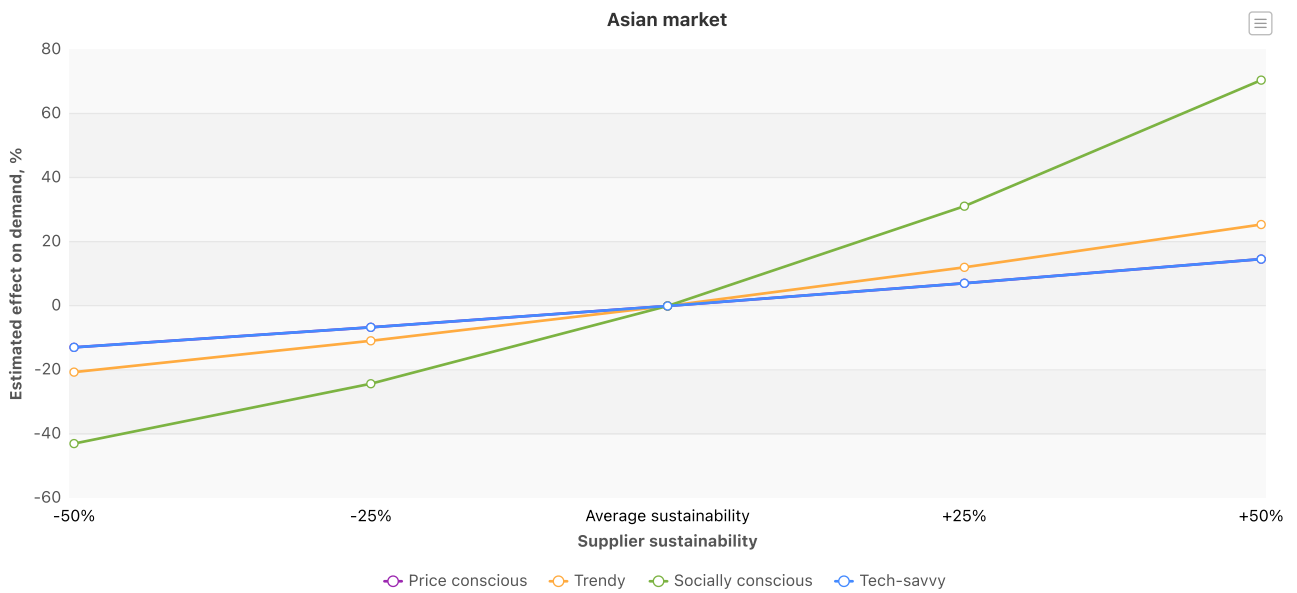
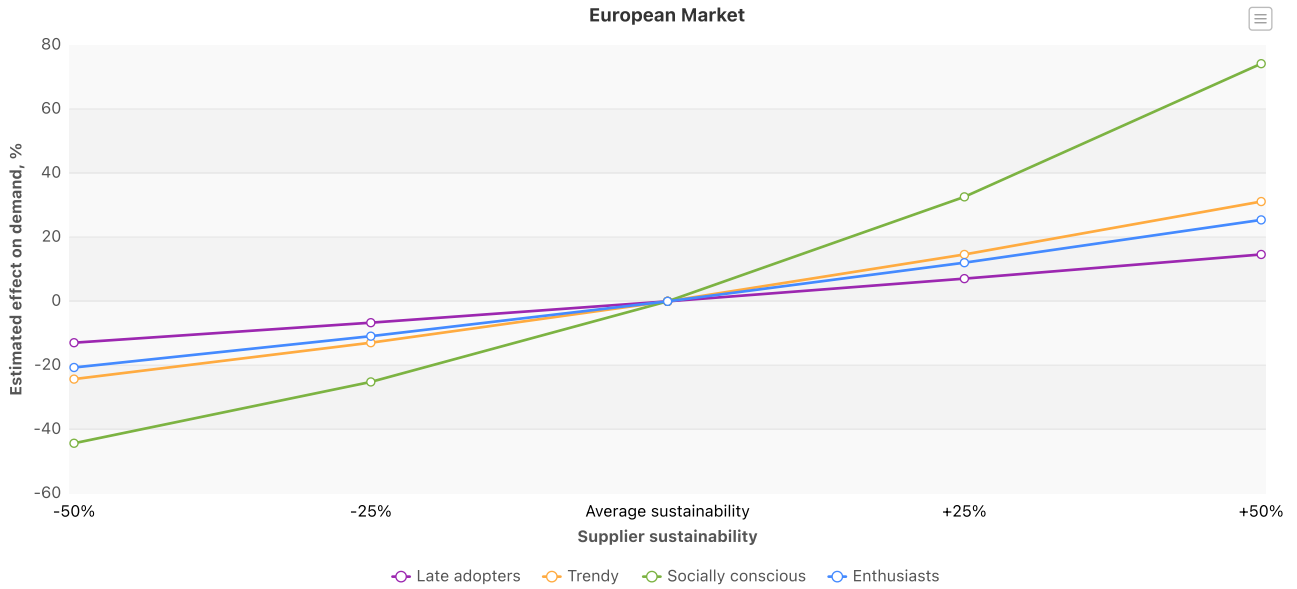
The consumers in both European and Asian segments were asked to rate the desirability of each recycling program on Likert scale from "Strongly dislike" to "Strongly prefer". The following graphs illustrate the relative desirability of different recycling programs: the higher the value, the more preferred the given recycling program is for the segment.





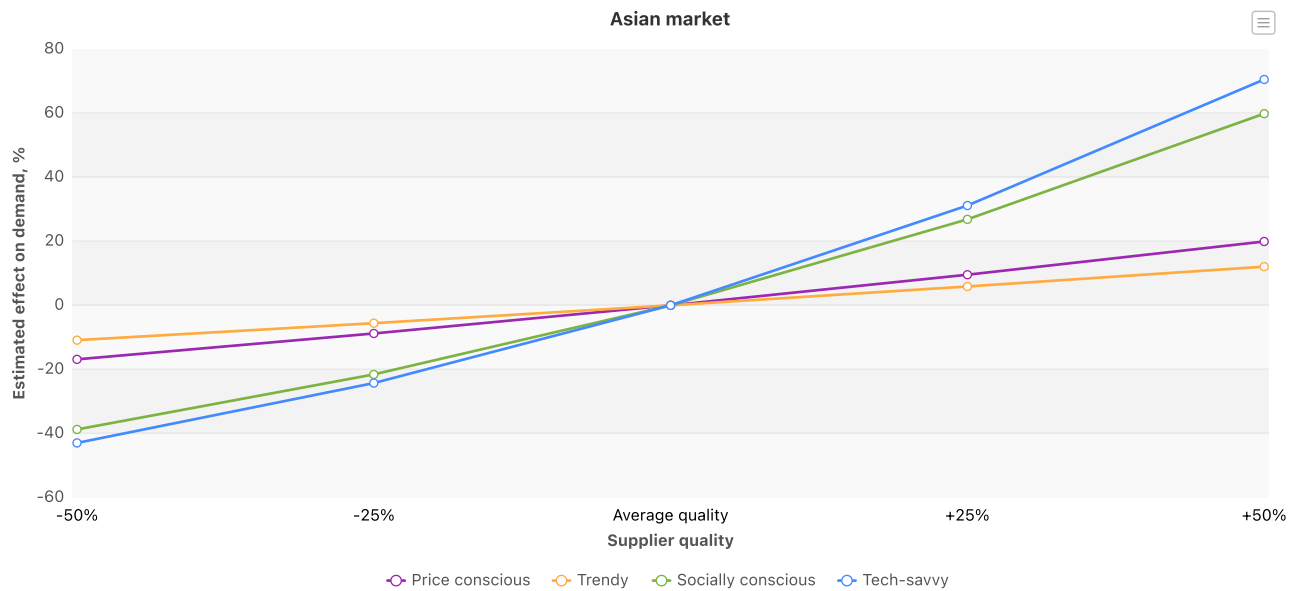
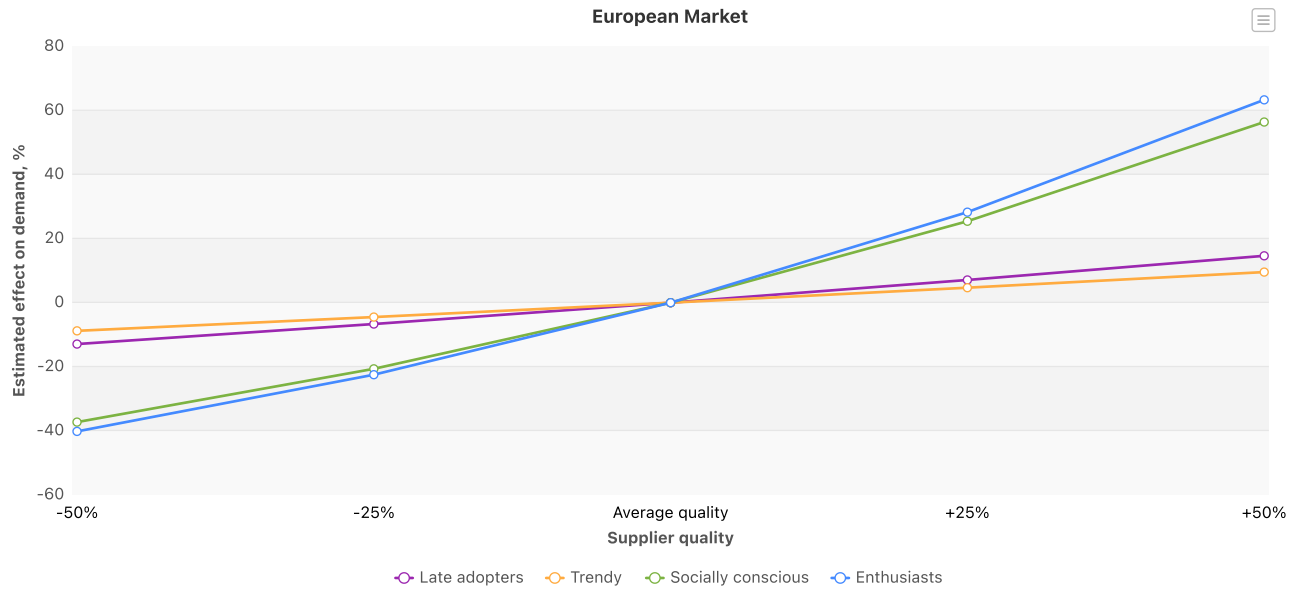
### 1.10. Supplier sustainability

The following graphs illustrate the customers' reaction to supplier sustainability in relation to the market average. The supplier sustainability is shown on the x-axis, and the demand effect of each segment is shown on the y-axis. The graph only reflects the elasticity of different segments, and it does not depict real demand exactly.



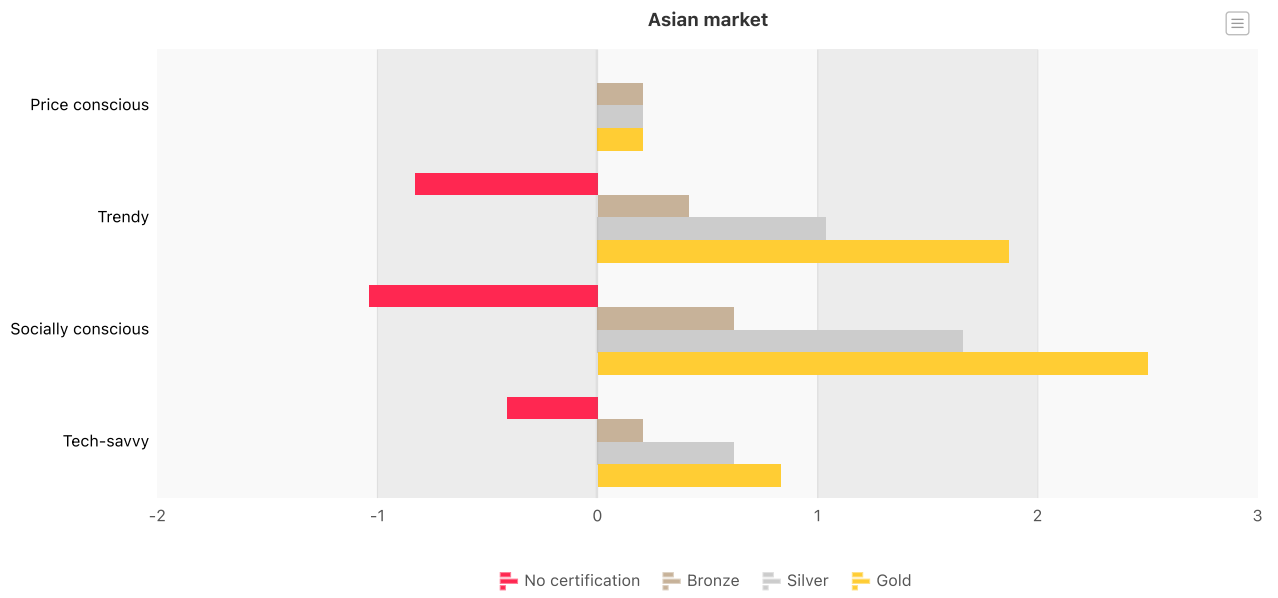
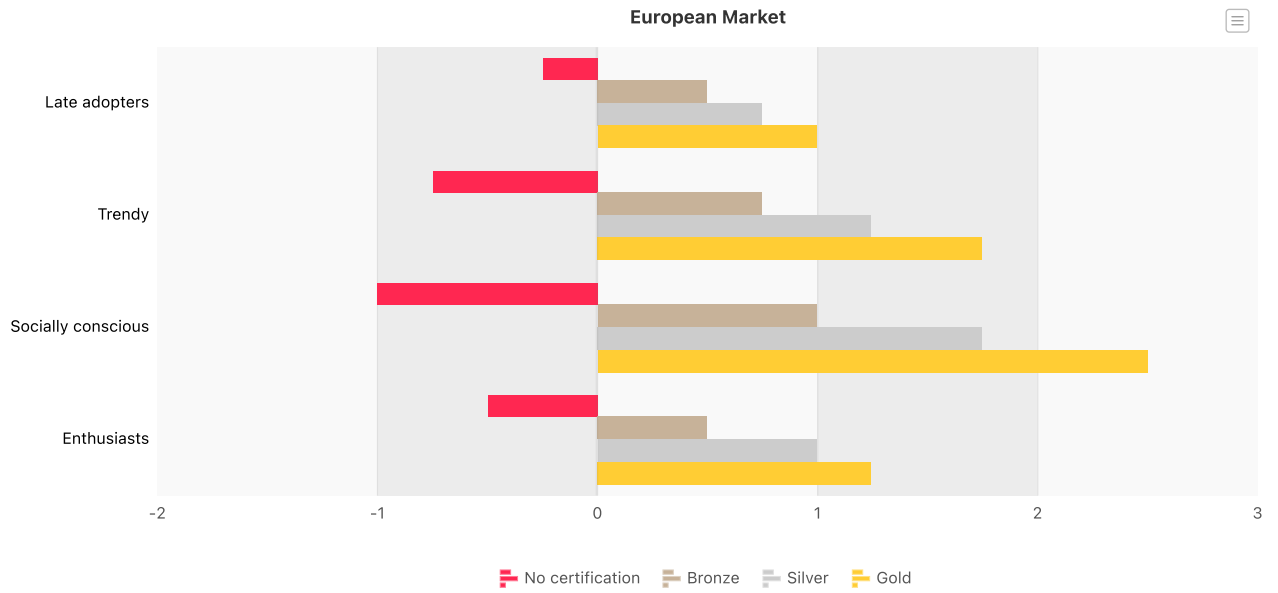
### 1.11. Supplier quality

The following graphs illustrate the customers' reaction to supplier quality in relation to the market average. The supplier quality is shown on the x-axis, and the demand effect of each segment is shown on the y-axis. The graph only reflects the elasticity of different segments, and it does not depict real demand exactly.



### 1.12. Sustainability certifications

The consumers in both European and Asian segments were asked to evaluate how each sustainability certification level affects their purchase decision on Likert scale from "Affects negatively" to "Affects positively". The following graphs illustrate the relative desirability of different sustainability certification levels: the higher the value, the more preferred the given certification level is for the segment.



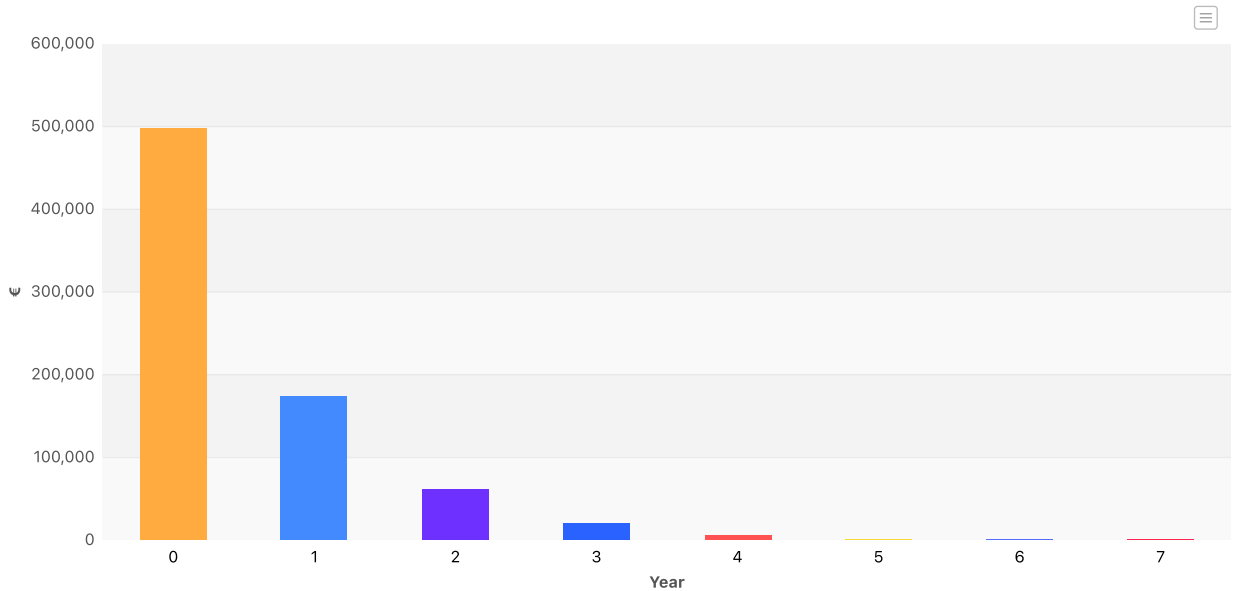
## 2. Advertising

### 2.1. Long term advertising effect

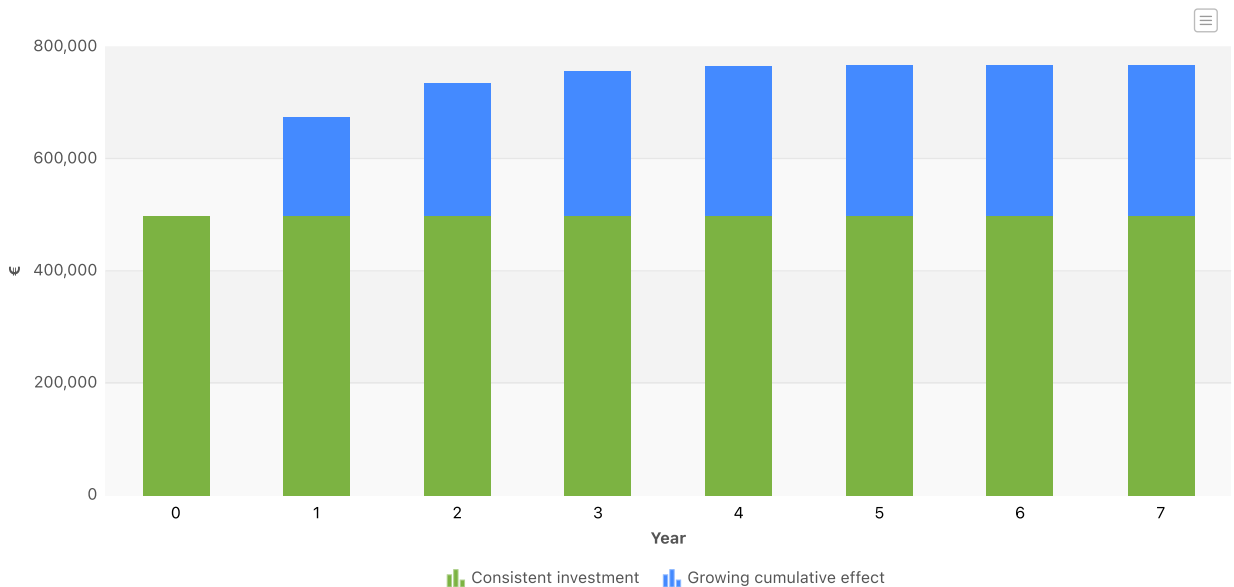
Research has indicated that advertising has an effect not only in the current period but on the demand of later periods also. There can be a lead time to a sale to happen. Another cause for the carryover effect is that a customer that has made a purchase based on advertising will more likely repurchase the same brand when the re-buy situation actualizes.

The following graph show an example of how carryover works.

1. One 500 000€ investment in the first period, a constant decay of the accumulated effort in time.



2. Consistent 500 000€ investments: a growing cumulative effect.



### 2.2. Advertising effectiveness research

The ad agency your company is using has provided you with results of their advertising effectiveness. With it they are trying to convince you of the positive effects increasing advertising budget will have on product demand.

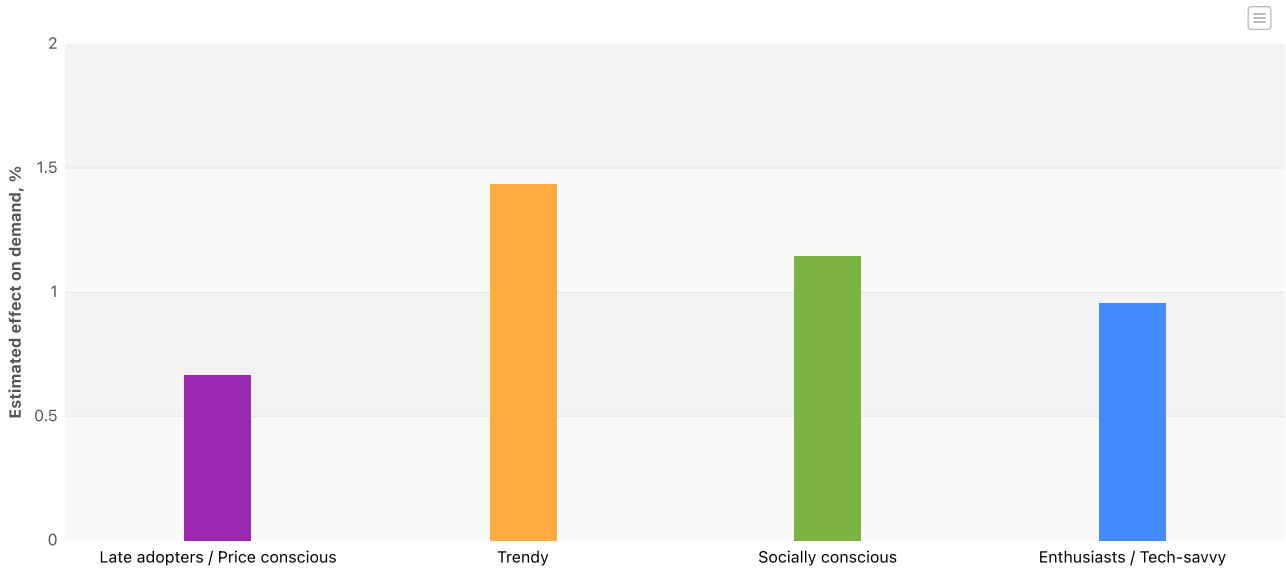
Advertising increases consumer awareness of your products. The more consumers that are aware of your product, the more likely they are to purchase it. The AIDA-model (Attention, Interest, Desire, Action) of consumer behavior sheds some light on how attention can lead to action ('action' meaning purchase in this case).

Example of AIDA model with a generic product:

- Attention – 100 consumers
- Interest – 20 consumers
- Desire – 10 consumers
- Action – 5 consumers (sales)

So, increasing the number of consumers that are aware of your product will most likely increase the number of sales. But remember it's not only advertising that makes the sale, the product must be desirable enough for the target consumer to actually buy it.

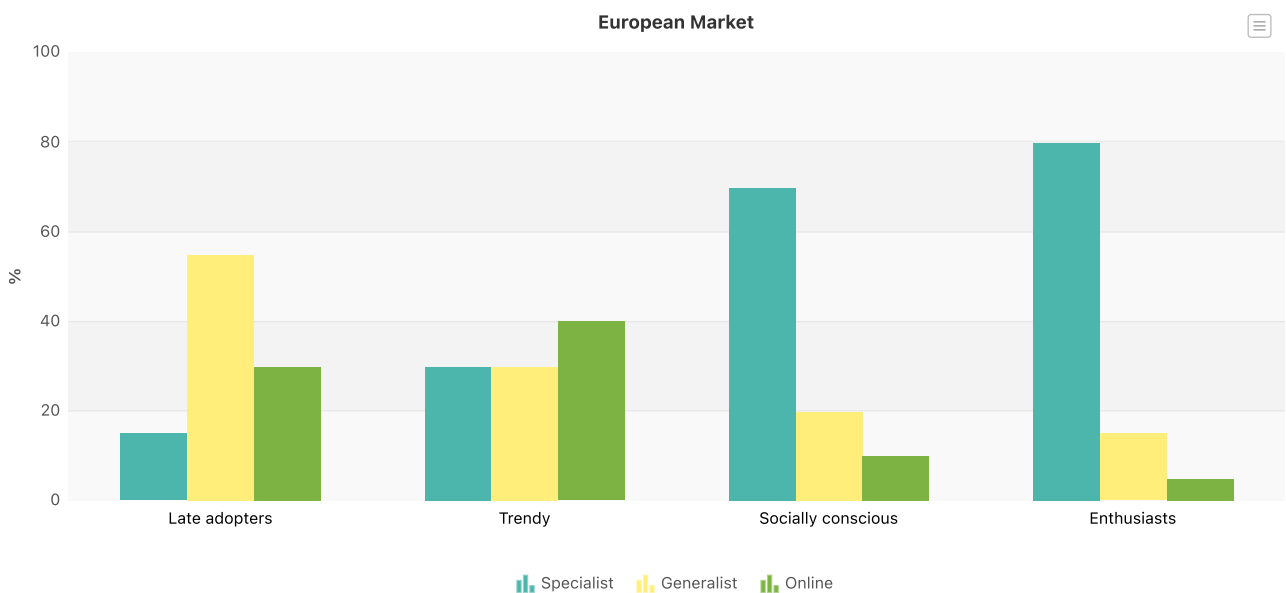
There are differences in how effectively advertising can reach the different customer segments. The following graph demonstrates how a 10% increase in the targeted advertising budget is estimated to increase the number of customers reached in each segment:

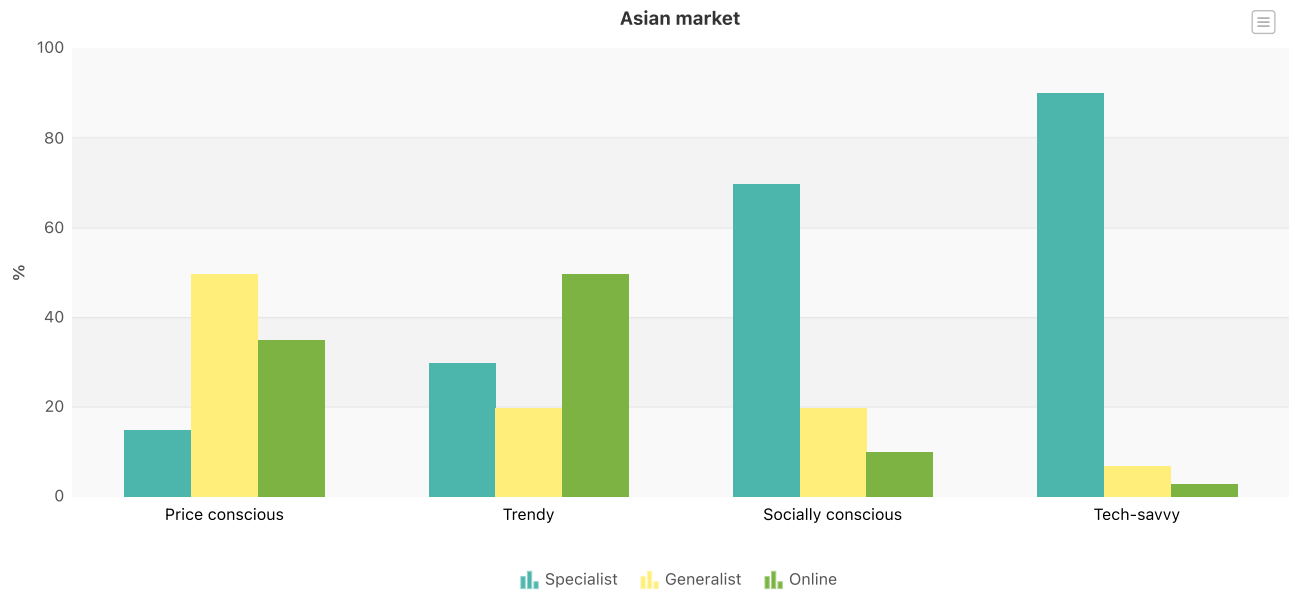


The estimated effects are the same for both markets.

### 2.3. Distribution channel preferences

The marketing intelligence has studied the sales channel preferences of the customer segments. The following graphs describe the preferences of the customer segments regarding the sales channels. Each bar represents the share of customers preferring the given sales channel in each segment.





The marketing intelligence has also noted that each segment in both markets is showing strong signs about the preferences moving towards online channels.

### 3. Sustainability scoring

There is a third-party company scoring your products and activities based on your sustainability performance compared to your competitors. The scores themselves won't affect demand directly, but having a high enough score enables you to purchase a sustainability certification offered by the company, which can lure customers your way.

The following graphs present how the company assesses various factors.

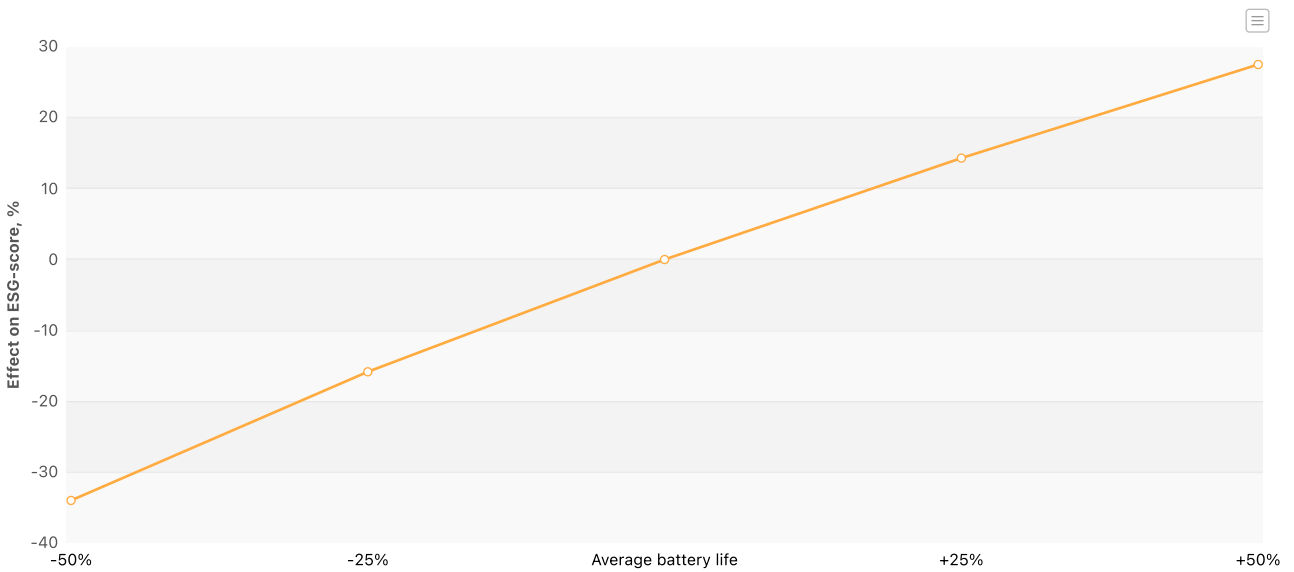
#### 3.1. Environmental

The company is evaluating the environmental factors of each of your product and scoring it based on the product Longevity, Design & Packaging, and Production:

##### 3.1.1. Longevity

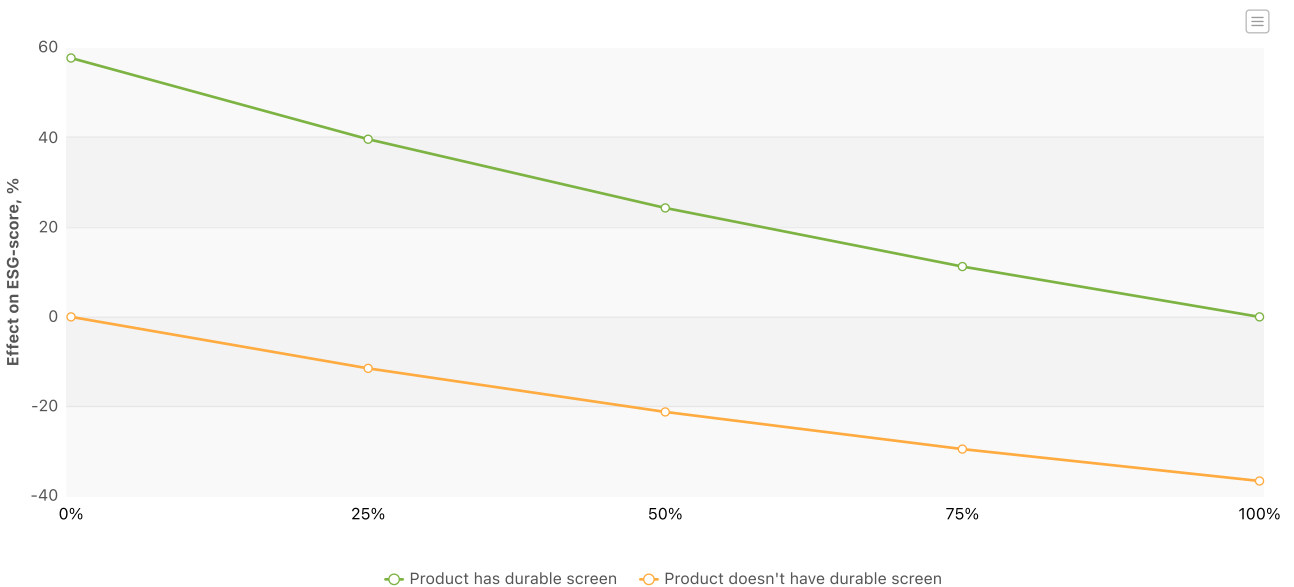
- Battery life

The following graph illustrates the effect of battery life on ESG score in relation to the market average. The battery life is shown on the x-axis, and the effect on ESG score is shown on the y-axis. The graph only reflects the elasticity, and it does not depict real scoring exactly.



- Durable screen

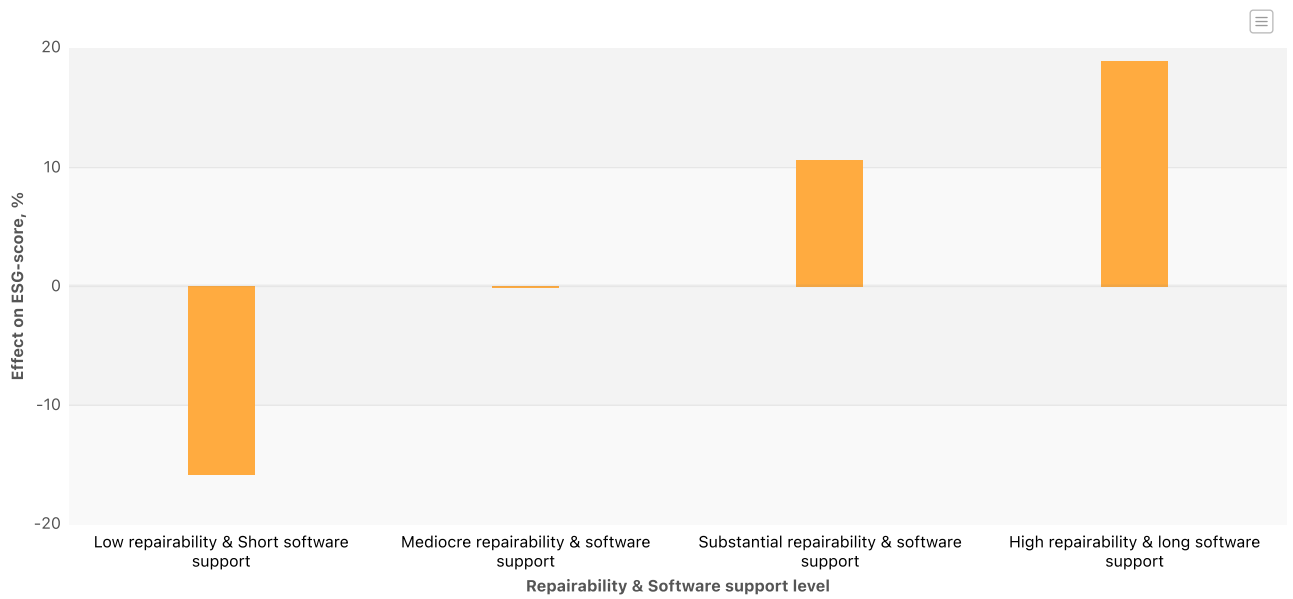
The following graph portrays the effect of having durable screen on the ESG score relative to the share of other phones on the market that have durable screen. The y-axis shows the effect on the ESG-score, and the x-axis shows the percentage of phones on the market that have durable screen. Note that the magnitude of the effect depends on how many products there are on the market; in this example, the market has a total of 10 products.





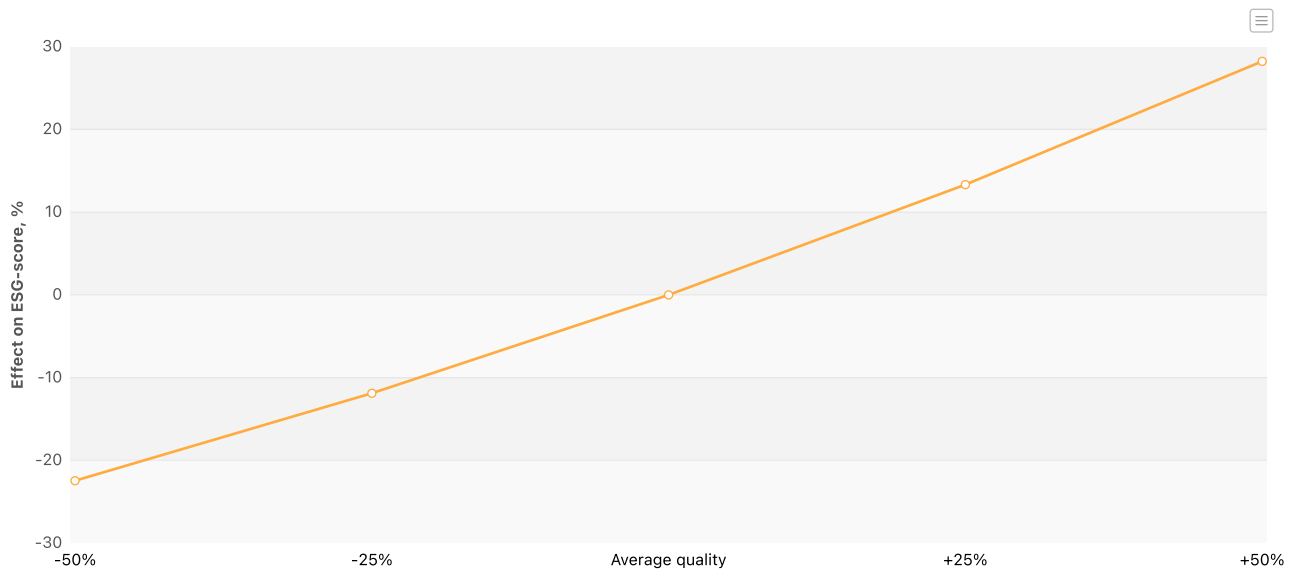
- Repairability & software support

The following graph portrays the effect of offered repairability & software support level on ESG score compared to the market average. In this example, Mediocre repairability & software support was the average level.



- Quality of supplier

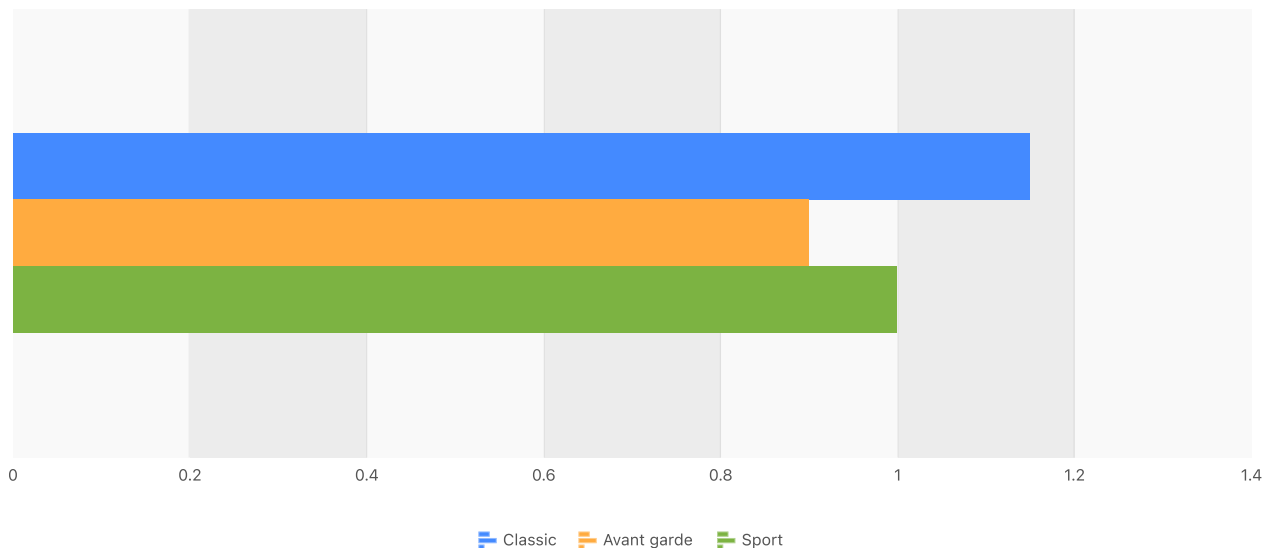
The following graph illustrates the effect of supplier quality rating on ESG score in relation to the market average. The supplier quality rating is shown on the x-axis, and the effect on ESG score is shown on the y-axis. The graph only reflects the elasticity, and it does not depict real scoring exactly.



### 3.1.2. Design and Packaging

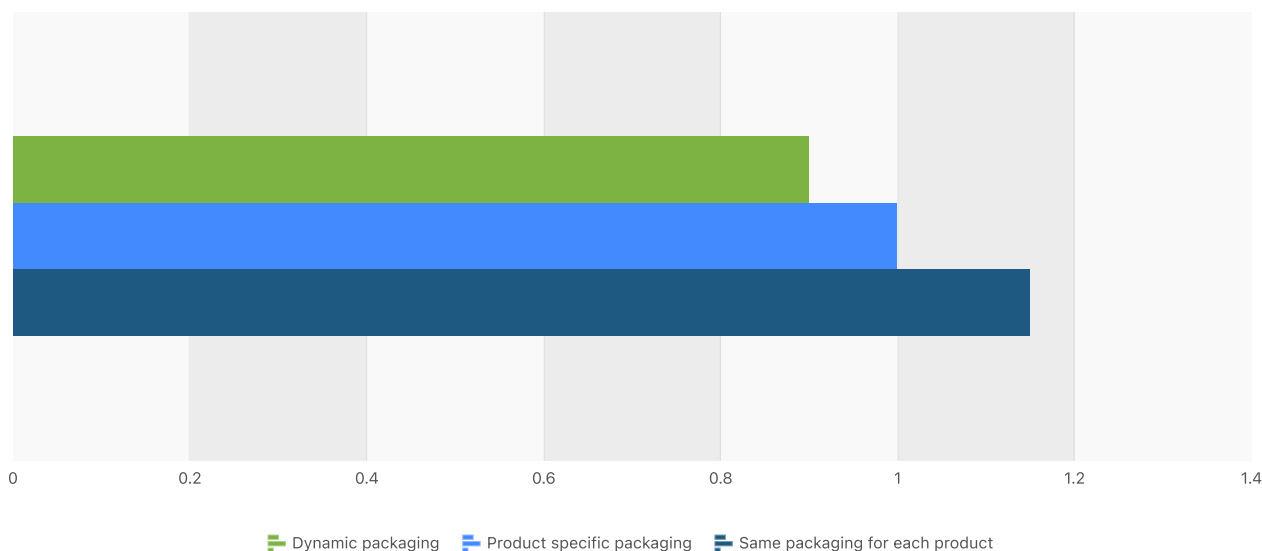
- Design

Due to raw materials used in the designs, the company evaluates the sustainability of the designs as follows (0 being the least sustainable, 2 being the most sustainable). The chart only represents the design sustainability scores. The final scoring is done by comparing each product to other products on the market. So, for example, if each product on the market has the least sustainable design, each product gets the same score.



• Packaging

The company evaluates the sustainability of packaging policies as follows (0 being the least sustainable, 2 being the most sustainable):

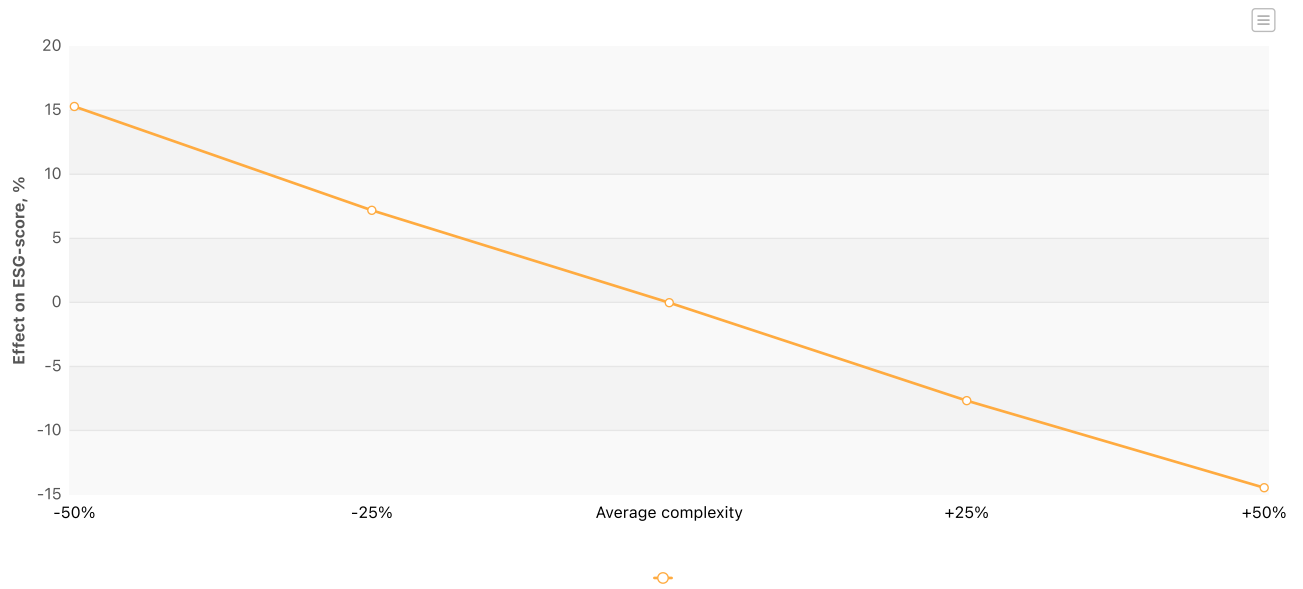


**3.1.3. Production**

• Complexity of product

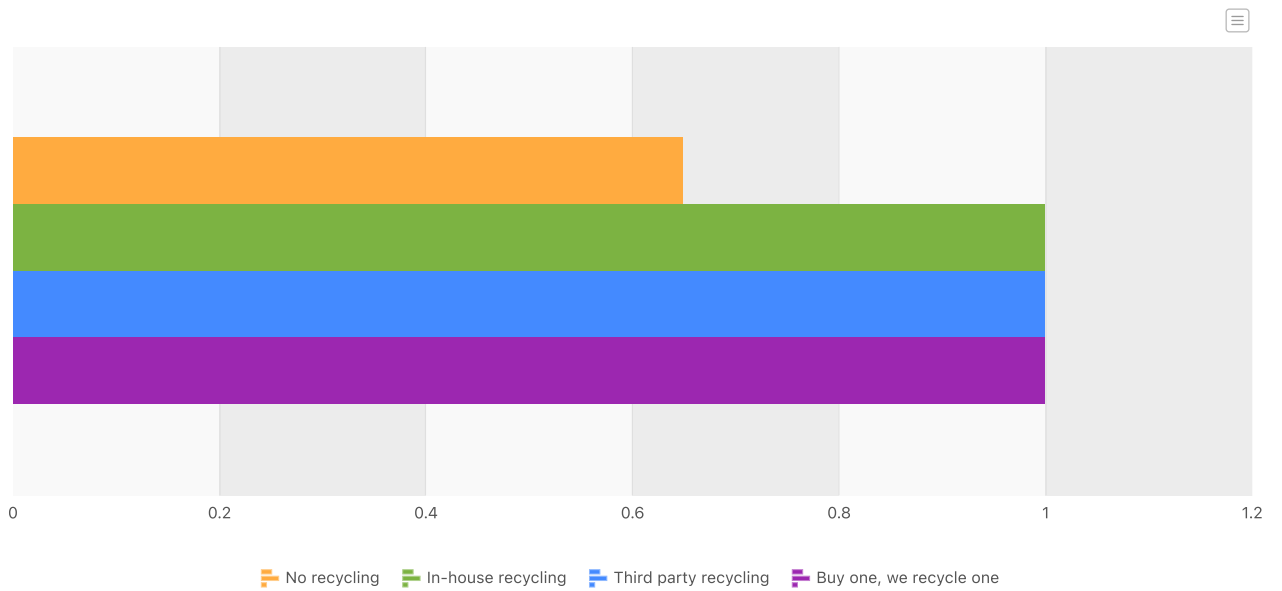
The complexity of each product is evaluated. More complex products require more complex production, which is considered less sustainable. Product complexity is calculated by comparing product performance, battery life, and number of features.

The following graph illustrates the effect of product complexity on ESG score in relation to the market average. Product complexity is shown on the x-axis, and the effect on ESG score is shown on the y-axis. The graph only reflects the elasticity, and it does not depict real scoring exactly.



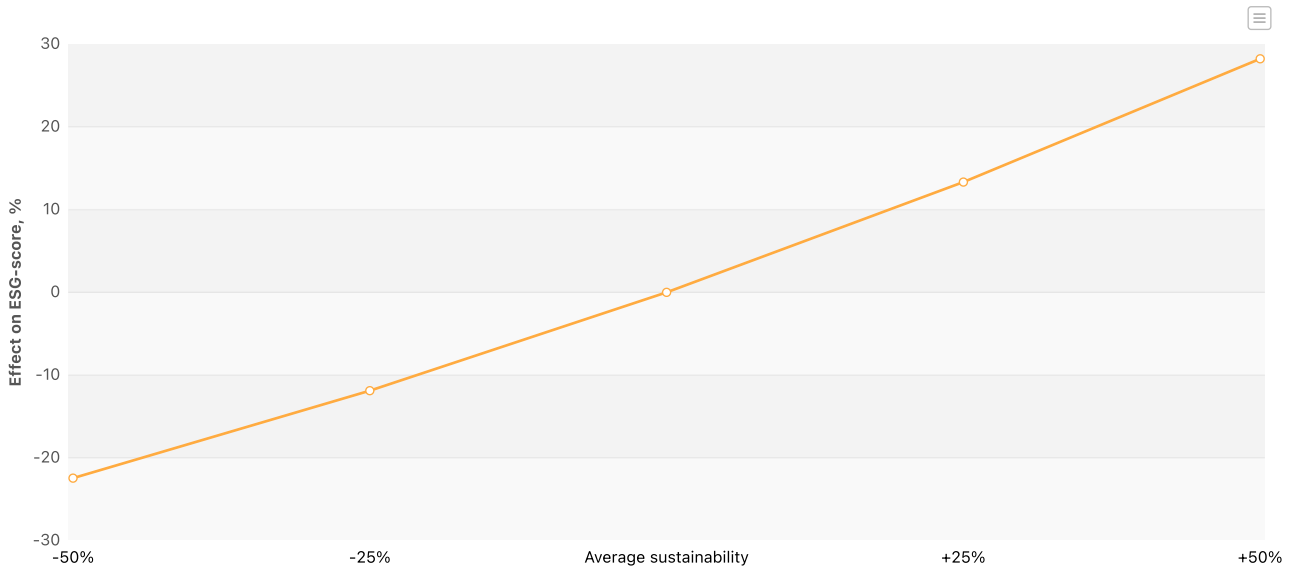
- Recycling

The company evaluates the desirability of recycling options as follows (the higher the score, the more desirable the option is):



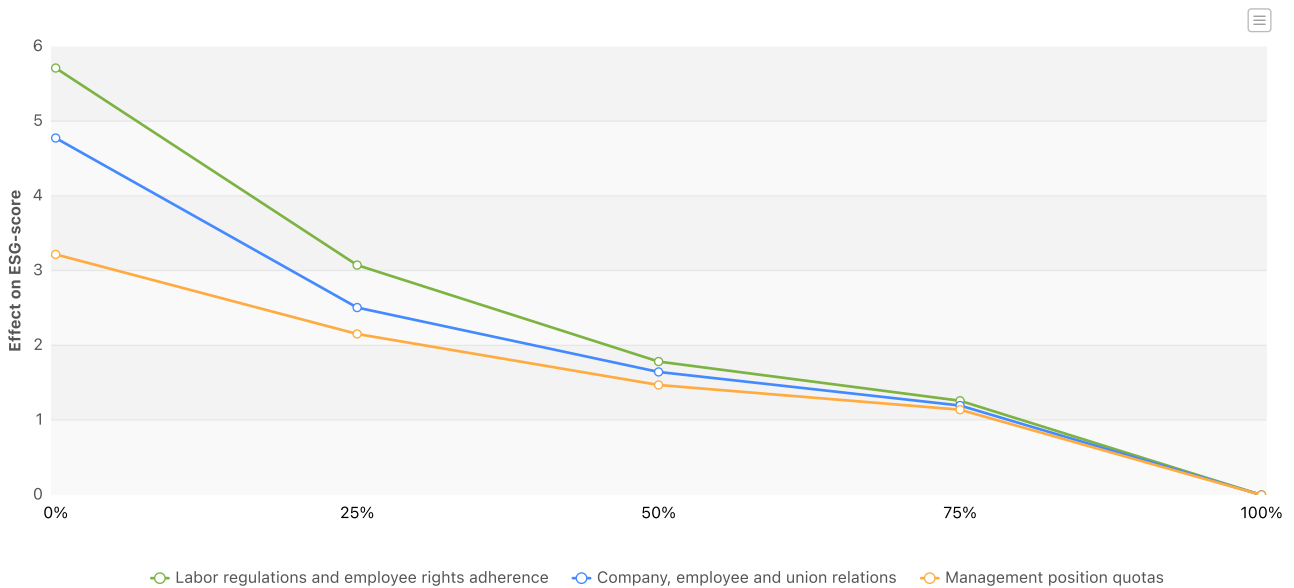
- Sustainability of supplier

The following graph illustrates the effect of supplier sustainability rating on ESG score in relation to the market average. The supplier sustainability rating is shown on the x-axis, and the effect on ESG score is shown on the y-axis. The graph only reflects the elasticity, and it does not depict real scoring exactly.



### 3.2. Social

The following graph portrays the effect of different labor policies on the ESG score relative to the share of other teams on the market abiding by the same labor policies. The y-axis shows the effect on the ESG-measure compared to the market average. So, for example, a value of 2 would indicate that your score for the given measure is 2 times higher than the values on average. The x-axis shows the percentage of teams on the market that abide by the given policy. Note that the magnitude of the effect depends on how many teams there are on the market; in this example, the market has a total of 12 teams.



### 3.3. Governance

Collecting data without compliance causes a negative effect on your ESG score. The following graph portrays the effect of collecting data without compliance on the ESG score relative to the share of other teams on the market collecting data without compliance. The y-axis shows the effect on the ESG-score compared to the market average. So, for example, a value of 0.5 would indicate that your score for the given measure is 0.5 times lower than the values on average. The x-axis shows the percentage of teams on the market collecting data without compliance. Note that the magnitude of the effect depends on how many teams there are on the market; in this example, the market has a total of 12 teams.

