

**“Food Quality Labels:
Do they matter for consumers?
Empirical results from
a pan-European study
and policy recommendations”**





Presenter: Prof Monika Hartmann
Head of Department Agricultural and Food Market Research
University of Bonn



Presenter: Dr Ching-Hua Yeh
PhD Student, Department of Agricultural and Food Market Research
University of Bonn



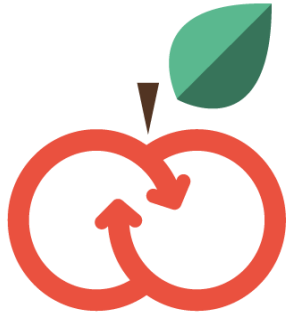
Moderator: Prof Matthew Gorton
Professor in Marketing and Strength2Food Project Coordinator
Newcastle University Business School



Organiser: Mr Carlos Abundancia
Senior Manager Social Media and Communication
EUFIC



Organiser: Dr Barbara Tocco
Research Associate and Strength2Food Project Manager
Newcastle University



**STRENGTH
2FOOD**

**FOOD QUALITY
FOR SUSTAINABILITY
AND HEALTH**

Strength2Food Webinar:

**Food Quality Labels: Do they matter for consumers?
Empirical results from a pan-European study and
policy recommendations**

19 September 2019 at 10 CEST, Bonn, Germany

In cooperation with University of Bonn, the European Food Information Council
and Newcastle University

*Monika Hartmann^a, Ching-Hua Yeh^a, Virginie Amilien^b, Jelena Filipović^c, Georges Giraud^d, Matthew Gorton^e,
Davide Menozzi^f, Gun Roos^b, Monia Saidi^d, Barbara Tocco^e, Áron Török^g, Mario Venezian^f*

*^aUniversity of Bonn, Germany, ^bOslo Metropolitan University Norway, ^cUniversity of Belgrade, Serbia, ^dINRA-AgroSup Dijon, France,
^eNewcastle University, UK, ^fUniversity of Parma, Italy, ^gEco-Sensus and Corvinus University of Budapest, Hungary*



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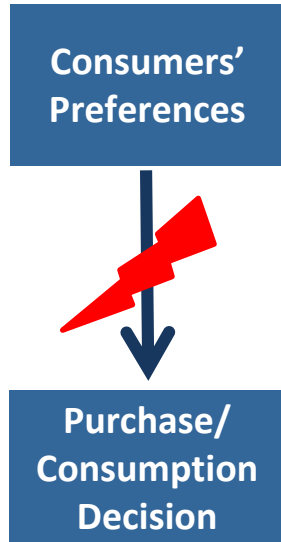


Agenda

1. Labels as a Solution for the Lemon Problem
2. Strength2Food: Two Pan-European Surveys
 - a. What Do Consumers Care About?
 - b. Are Labels Effective in Informing Consumers?
 - c. Can We Improve Label Perception?
3. Policy Recommendations



1. Labels as a Solution for the Lemon Problem



Assuming consumers are able to make informed choices, but ...

- Information is characterized by a high degree of asymmetry (e.g. organic, animal friendly production, regional)
- Information search is costly (time, effort, money) even in times of Web 2.0¹



Pixabay.com



**Food Quality Labels
as a means to ease informed choice**

1) Swinnen J, Dries L, Negash M, Vandemoortele T: Consumers and EU agricultural and food policies. In: Oskam A, Meester G, Silvis H: EU policy for agriculture, food and rural areas. Wageningen Academic Publishers 2010.

2. Strength2Food: Two pan-European Surveys

 = France  = Italy  = Germany  = Norway  = Hungary  = United Kingdom  = Serbia

Web survey I:

- Sept/Oct 2017
- 7 countries, N=800/country

Best Worst Scaling (BWS)

4 EU labels and 14 national/regional labels

- Recognition and Use
- Perception



Open Questions

For which product characteristics do we need labels?
What do consumers care about?

Are labels effective in informing consumers?

Can we improve label perception?



Web survey II:

- July/Aug 2018
- 7 countries, N=800/country

Discrete Choice Experiments

Attitude, Social Norms, ...

Label Modification

- Perception

2. Strength2Food: Two pan-European Surveys

 = France  = Italy  = Germany  = Norway  = Hungary  = United Kingdom  = Serbia

Web survey I:

- Sept/Oct 2017
- 7 countries, N=800/country

Best Worst Scaling (BWS)




For which product characteristics do we need labels?
What do consumers care about?



What Do Consumers Care About?

Best Worst Scaling

Country	Product 1
France	Cheese 
Germany	
Hungary	
Italy	
Norway	
Serbia	
UK	



6 choice sets

2b. How important are the following criteria for you when buying cheese?
















From the following five criteria please indicate which one is the Least Important and which one is the Most Important for you? You may click on the criterion to obtain more information.
(1 of 6)

Least Important	Criteria	Most Important
<input type="radio"/>	My knowledge of the producer	<input type="radio"/>
<input checked="" type="radio"/>	Brand	<input type="radio"/>
<input type="radio"/>	Product's region of origin	<input type="radio"/>
<input type="radio"/>	Fair trade	<input type="radio"/>
<input type="radio"/>	Nutritional value of the product	<input checked="" type="radio"/>

Each choice set
5 attributes

14 Attributes

What Do Consumers Care About?

Country	Product 1	Product 2	Product 3
France	Cheese 	Fresh meat 	Fresh fruits 
Germany		Processed vegetables 	Fresh vegetables 
Hungary		Processed meat 	Fresh vegetables 
Italy		Processed meat 	Fresh vegetables 
Norway		Fresh fish 	Fresh fruits 
Serbia		Processed meat 	Processed vegetables 
UK		Fresh meat 	Fresh fish 



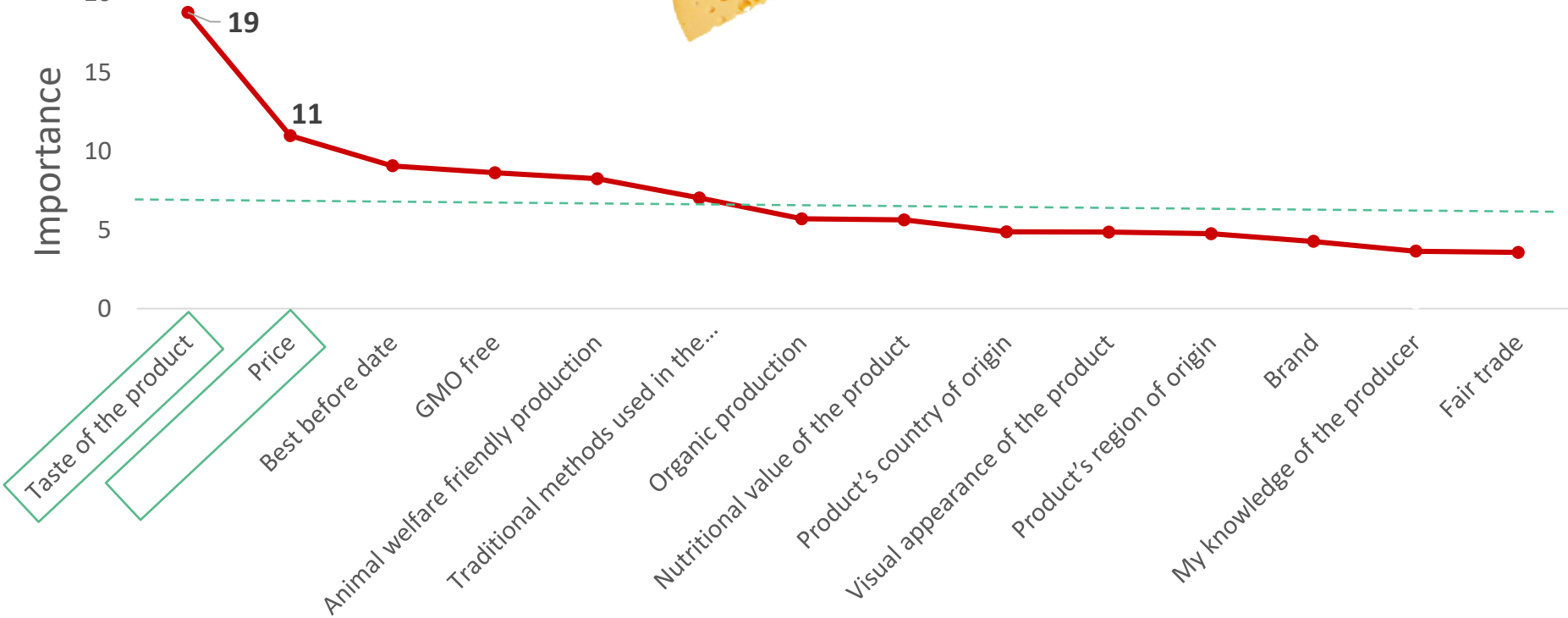
 = France
  = Italy
  = Germany
  = Norway
  = Hungary
  = UK
  = Serbia

1) Avg. rescaled utility scores estimated based on Hierarchical Bayesian estimation of BWS data

Taste Most Relevant¹ for Consumers when Buying Cheese, Price Takes 2nd Place



Importance

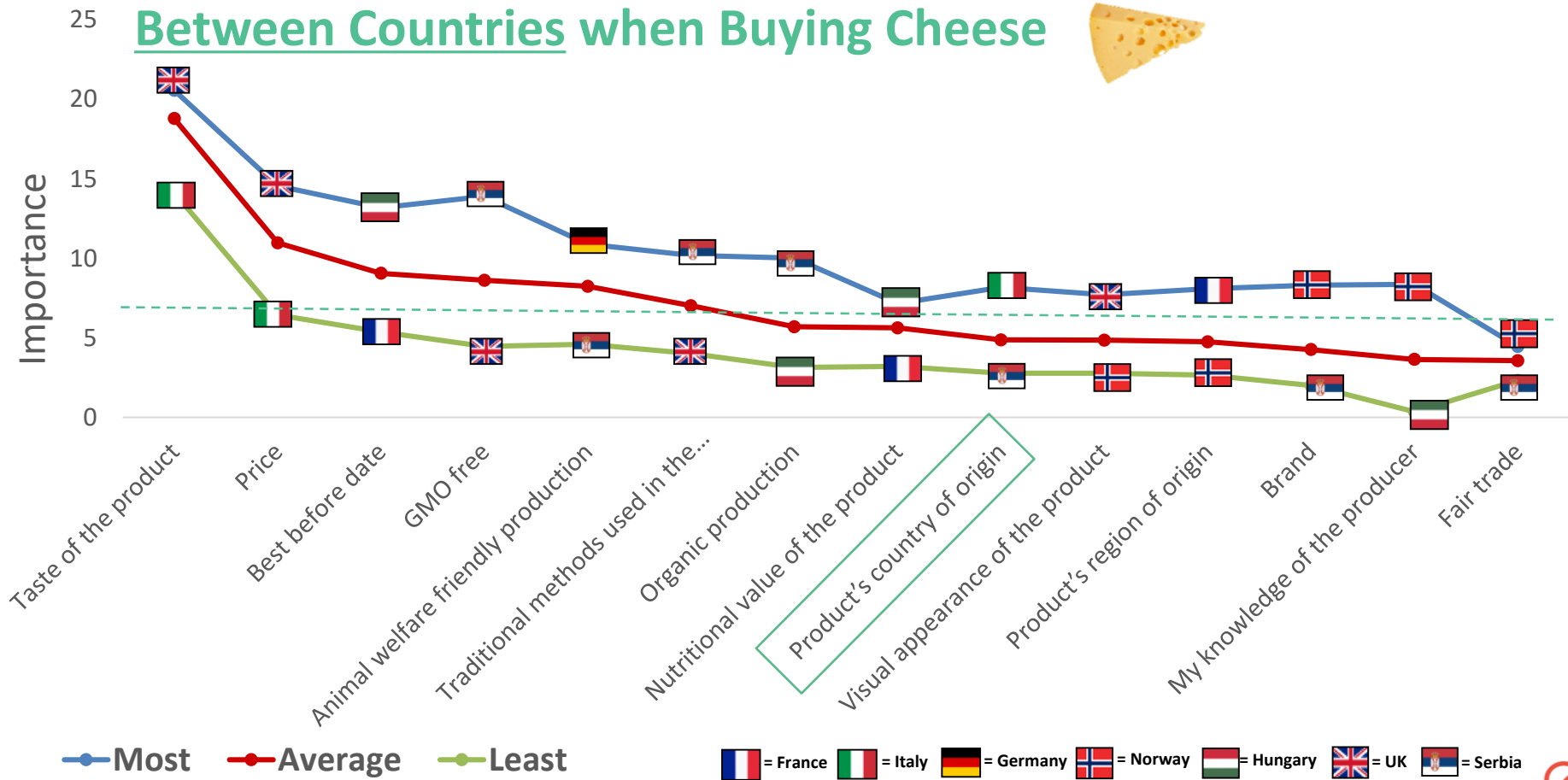


● **Average**

 = France
 = Italy
 = Germany
 = Norway
 = Hungary
 = UK
 = Serbia

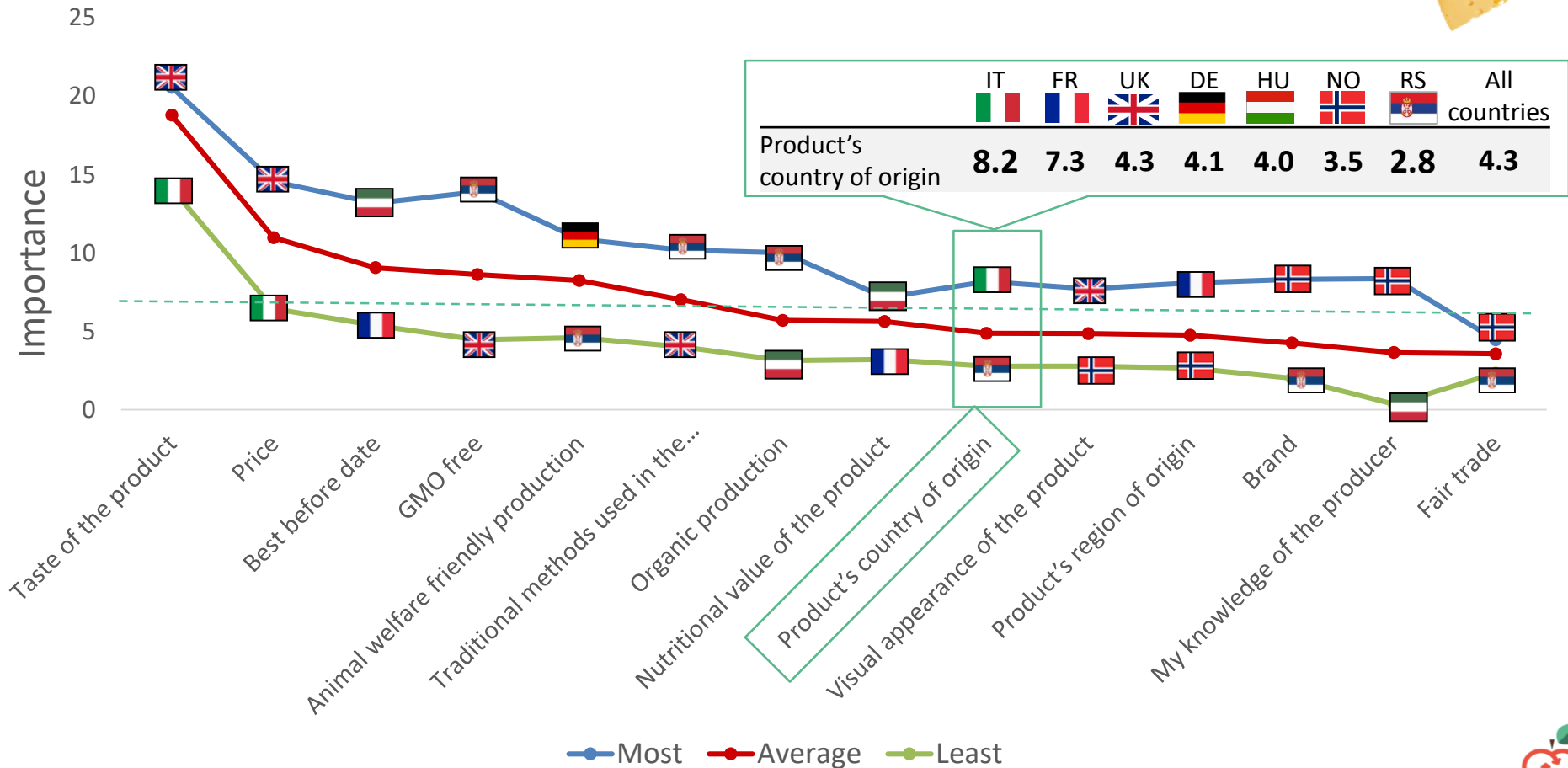
1) Avg. rescaled utility scores estimated based on Hierarchical Bayesian estimation of BWS data: Add up to 100 over all 14 attributes

Considerable Differences in Attribute Importance¹ Between Countries when Buying Cheese



1) Avg. rescaled utility scores estimated based on Hierarchical Bayesian estimation of BWS data: Add up to 100 over all 14 attributes

High Relevance¹ of Country of Origin in Italy and France



1) Avg. rescaled utility scores estimated based on Hierarchical Bayesian estimation of BWS data: Add up to 100 over all 14 attributes

Segments with Similar Preferences¹ Across Countries though ...

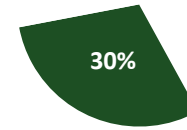


France 

Germany 

Hungary 

Italy 

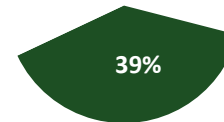


Norway 

Serbia 

UK 

■ Seg. 1: Region and Country of Origin



1) Avg. rescaled utility scores estimated based on Latent Class Analysis of BWS data: Add up to 100 over all 14 attributes

Segments with Similar Preferences¹ Across Countries though Size of Segments and Absolute Attribute Importance Differs



France 

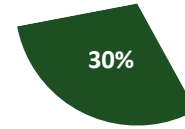
Germany 

Hungary 

Italy 

Imp. Score
 • Avg: 7
 • Seg. 1: 23

Imp. Score
 • Avg: 15
 • Seg. 1: 31

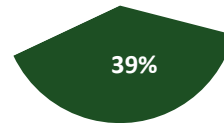


Norway 

Serbia 

UK 

 Seg. 1: Region and Country of Origin

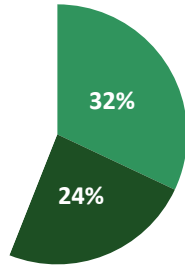


1) Avg. rescaled utility scores estimated based on Latent Class Analysis of BWS data: Add up to 100 over all 14 attributes

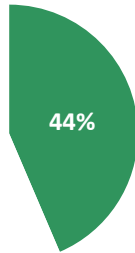
Segments with Similar Preferences¹ Across Countries



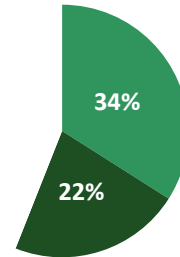
France 



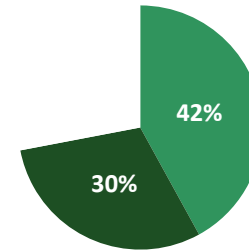
Germany 



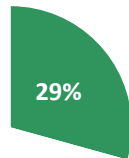
Hungary 



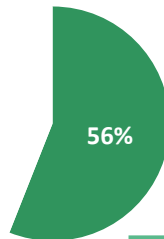
Italy 



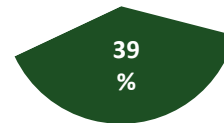
Norway 




Serbia 



UK 



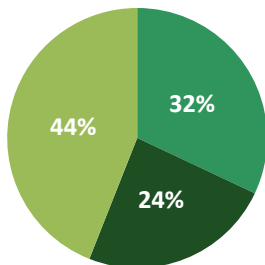
-  Seg. 1: Region and Country of Origin
-  Seg. 2: Natural and traditional (Organic, GMO-free, Animal Welfare, Traditional)

1) Avg. rescaled utility scores estimated based on Latent Class Analysis of BWS data: Add up to 100 over all 14 attributes

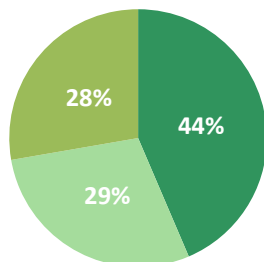
Segments with Similar Preferences¹ Across Countries



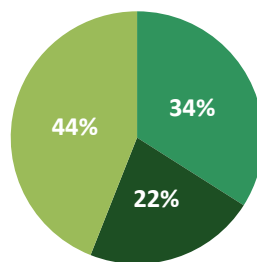
France 



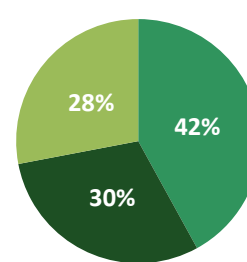
Germany 



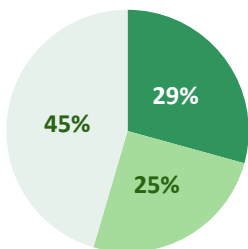
Hungary 



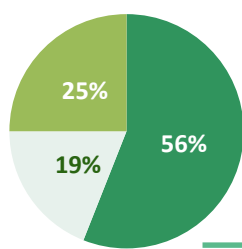
Italy 



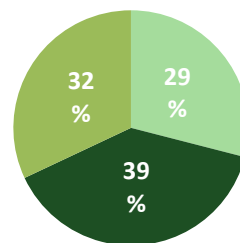
Norway 








Serbia 


















UK 



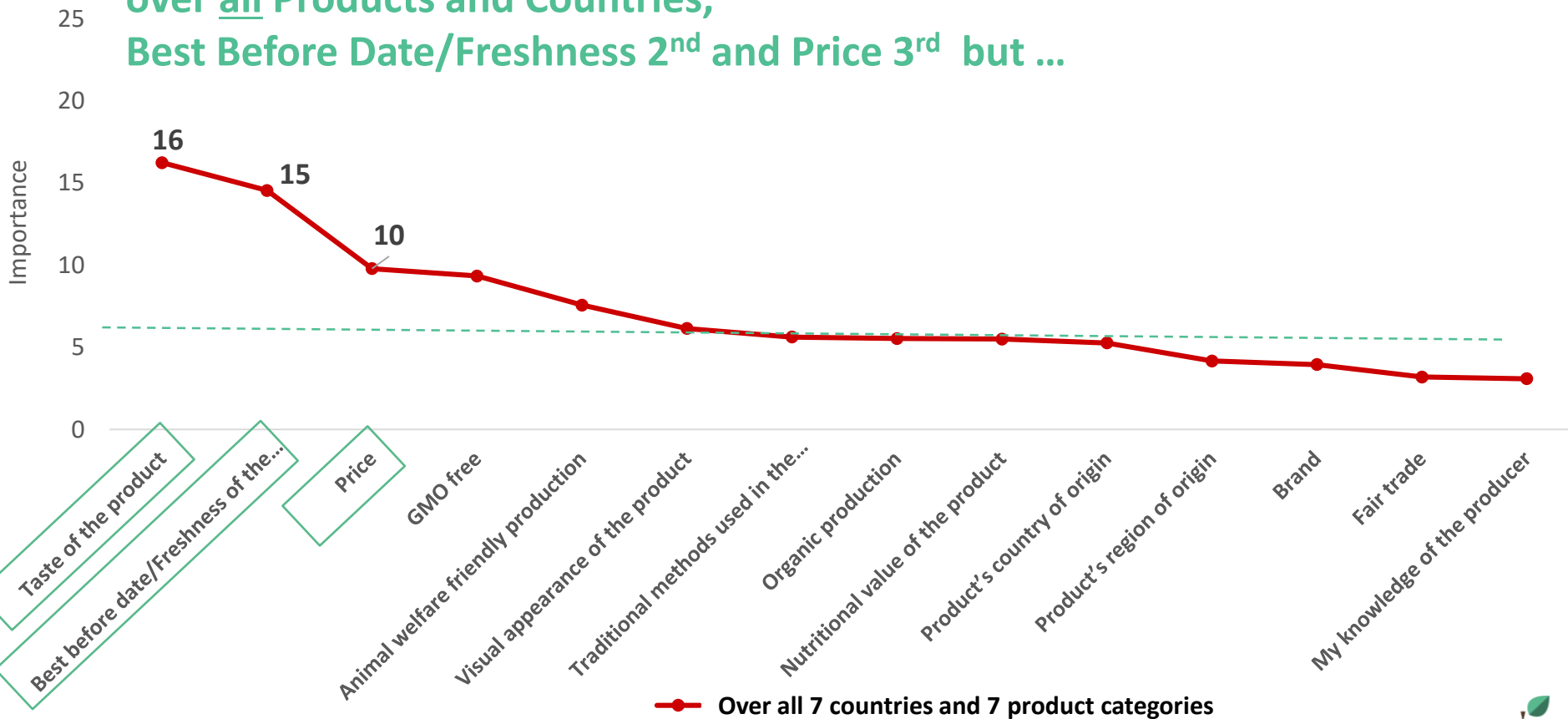
-  Seg. 1: Region and Country of Origin
-  Seg. 2: Natural and traditional (Organic, GMO-free, Animal Welfare, Traditional)
-  Seg. 3: Appearance, Freshness, Price
-  Seg. 4: Freshness, Price, Nutrition
-  Others

1) Avg. rescaled utility scores estimated based on Latent Class Analysis of BWS data: Add up to 100 over all 14 attributes

What Do Consumers Care About?

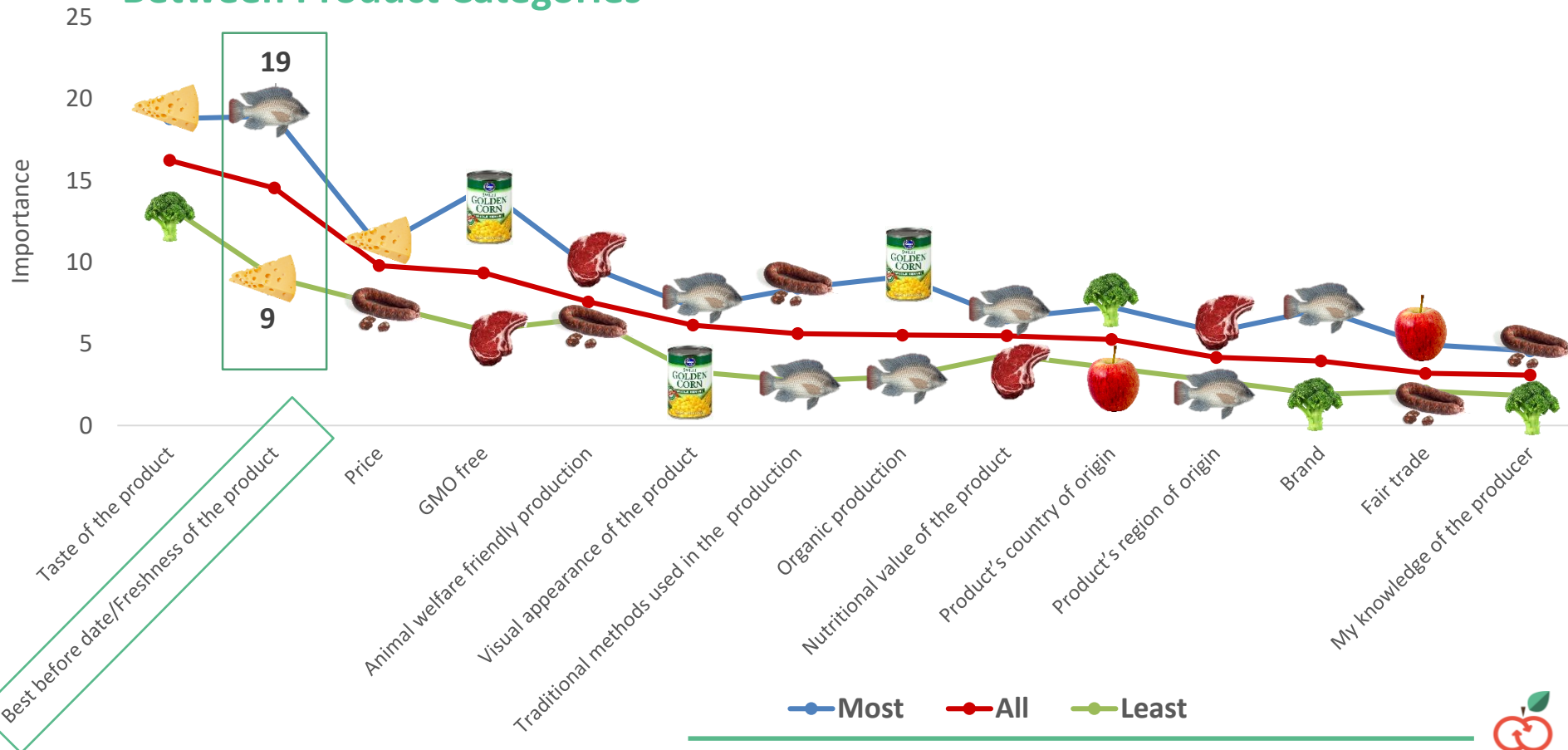
Country	Product 1	Product 2	Product 3
France	Cheese 	Fresh meat 	Fresh fruits 
Germany		Processed vegetables 	Fresh vegetables 
Hungary		Processed meat 	Fresh vegetables 
Italy		Processed meat 	Fresh vegetables 
Norway		Fresh fish 	Fresh fruits 
Serbia		Processed meat 	Processed vegetables 
UK		Fresh meat 	Fresh fish 

Taste Most Relevant¹ Attribute for Consumers over all Products and Countries, Best Before Date/Freshness 2nd and Price 3rd but ...



1) Avg. rescaled utility scores estimated based on Hierarchical Bayesian estimation of BWS data: Add up to 100 over all 14 attributes

... Considerable Differences in Attribute Importance Between Product Categories¹



1) Avg. rescaled utility scores estimated based on Hierarchical Bayesian estimation of BWS data: Add up to 100 over all 14 attributes

What Do Consumers Care About?



First Conclusions

- Product taste most important attribute for consumers, price often 2nd
- Relevance of other attributes depends on product type and country
- Considerable differences in consumers' preferences between countries
- But existence of segments with similar preferences over countries
 - Traditional and natural products (e.g. organic, GMO free)
 - National and regional products



High Degree of Information Asymmetry
Food Quality Labels Important

2. Strength2Food: Two pan-European Surveys

 = France  = Italy  = Germany  = Norway  = Hungary  = United Kingdom  = Serbia

Web survey I:

- Sept/Oct 2017
- 7 countries, N=800/country

4 EU labels and
14 national/regional
labels

- Recognition and Use
- Perception



Are labels effective in
informing
consumers?



Are Labels Effective in Informing Consumers?

4 EU Labels



PDO (Protected Designation of Origin):



PGI (Protected Geographical Indication):



TSG (Traditional Speciality Guaranteed):



Organic



**Recognition and Use
Perception**

14 National/Regional Labels



France



Germany



Hungary



Italy



UK



Norway



SRPSKI
KVALITET

Serbia

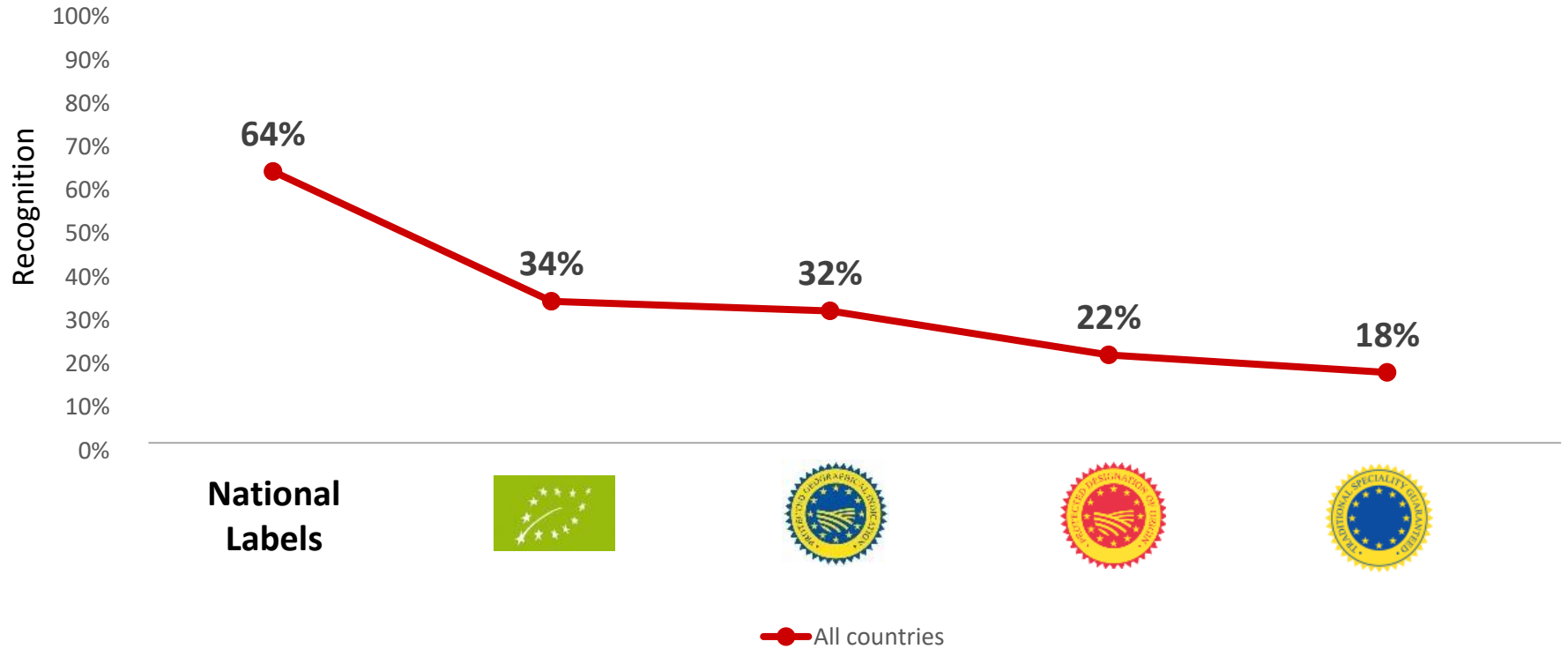


Do you recognize this label?

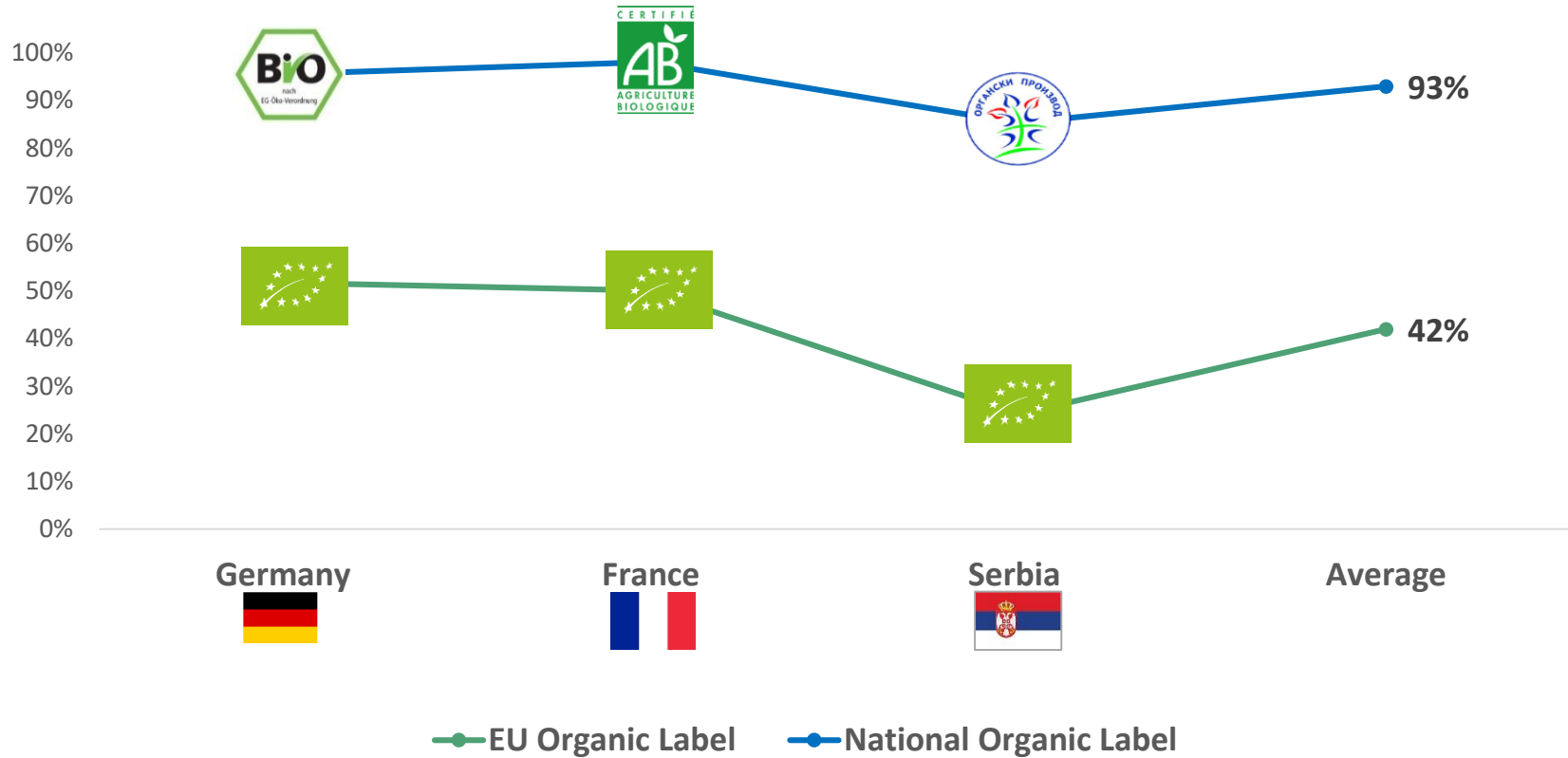
Yes

No

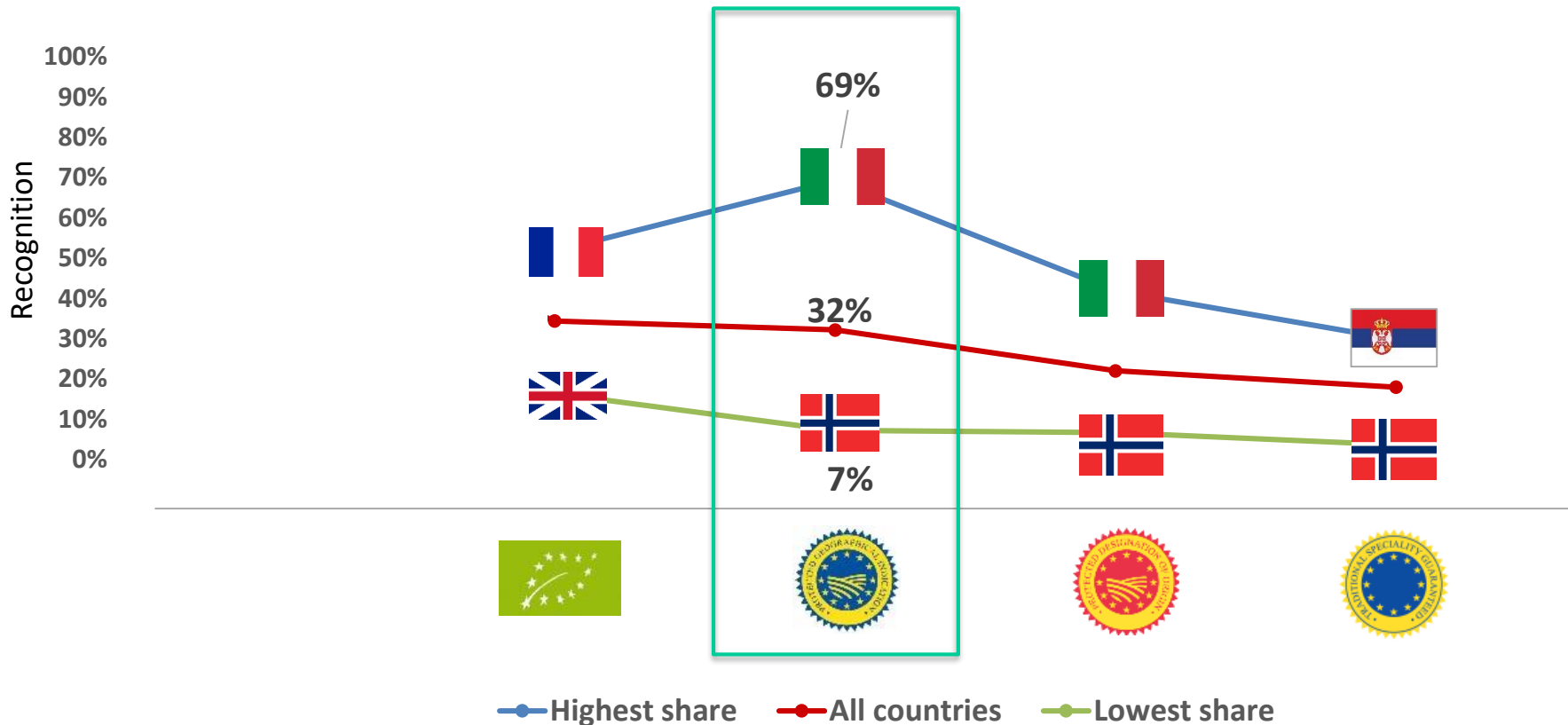
Low Overall Recognition of EU Food Quality Labels Compared to National Labels



Difference in Recognition also Between EU and National Organic Label

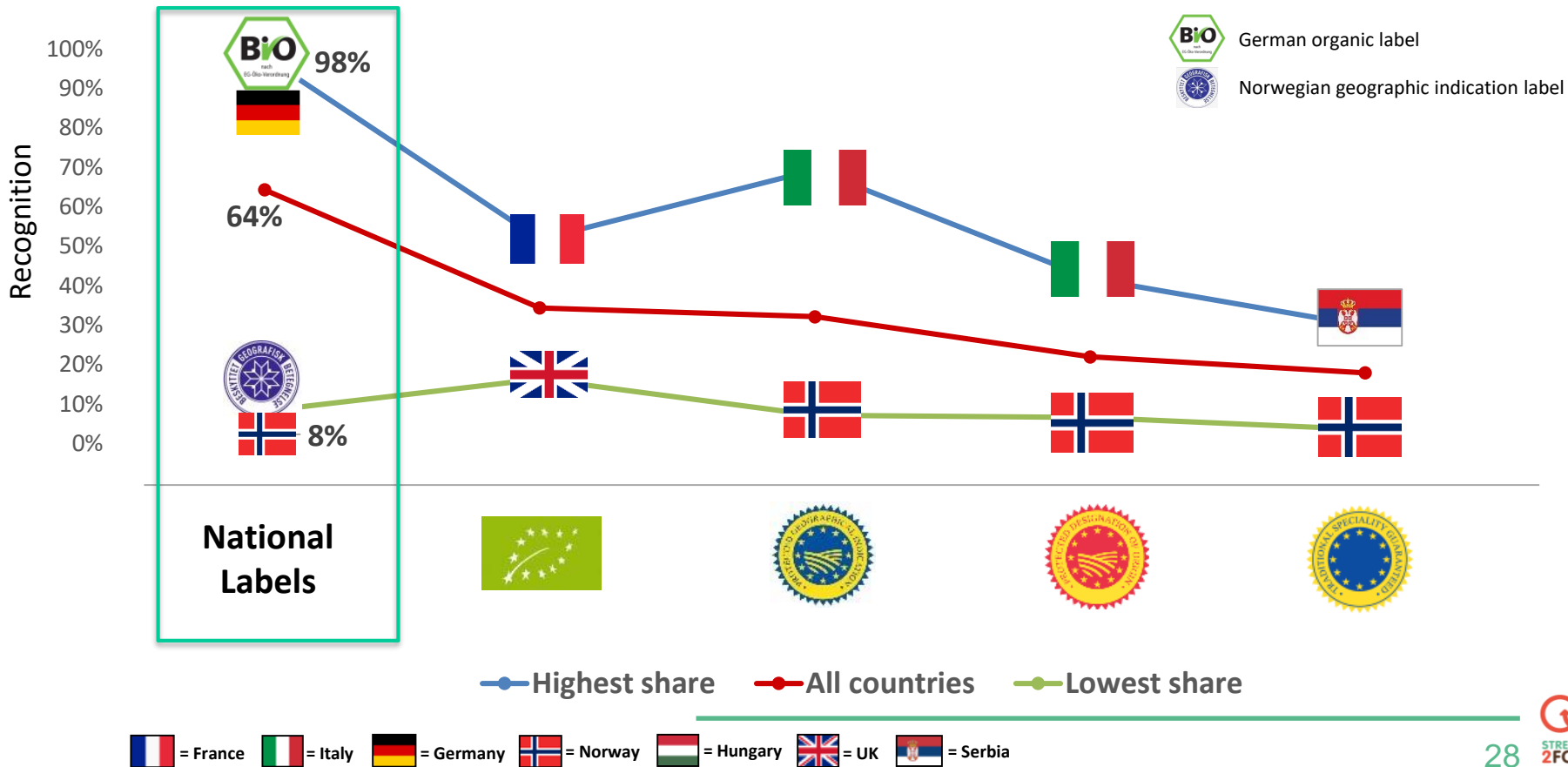


Considerable Differences in Recognition of EU Labels by Country and ...



= France
 = Italy
 = Germany
 = Norway
 = Hungary
 = UK
 = Serbia

... also Considerable Differences in Recognition of National Label

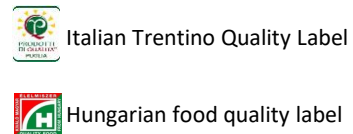
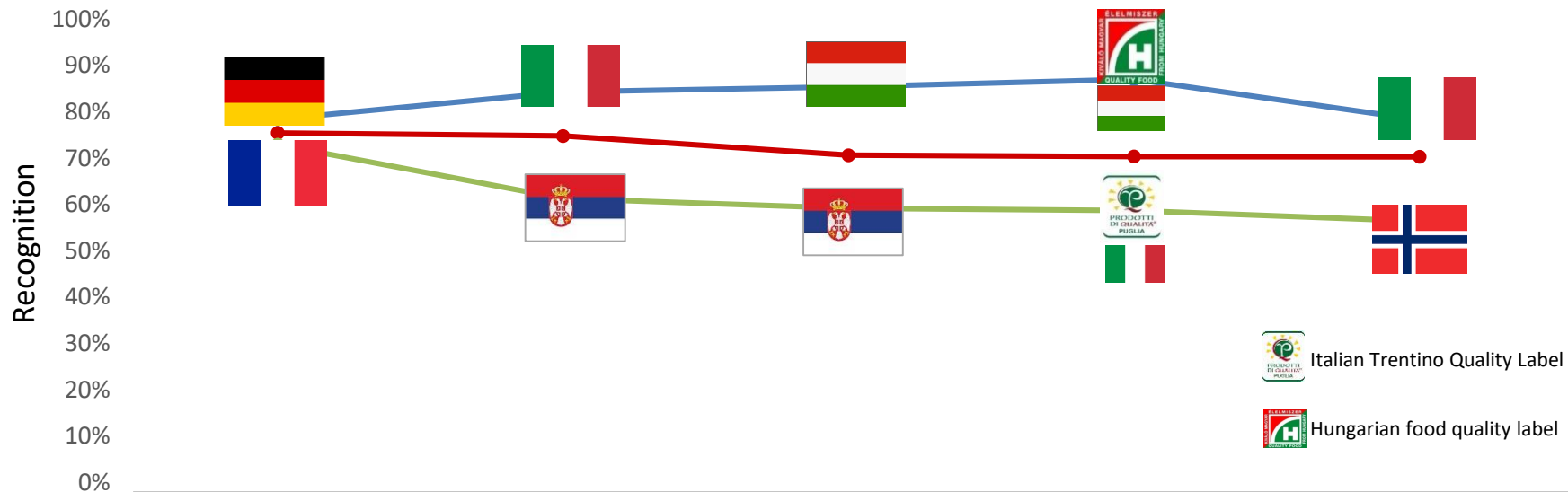


How Many of Those Recognizing a Label at Least Sometimes Use it when Doing their Grocery Shopping?

To what extent do you take this label into account when you do your grocery shopping?

	Never	Almost never	Sometimes	Almost every time	Every time
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

About 70% of Those Recognizing a Label Take the Label at Least Sometimes into Account when Doing Their Grocery Shopping



—●— Highest share —●— All countries —●— Lowest share

= France
 = Italy
 = Germany
 = Norway
 = Hungary
 = UK
 = Serbia

Measuring Perception of a Label ...



17. Here are several statements concerning your perception of the label above.

Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being „Don't agree at all" and 5 being „Completely agree".

The label is easy to understand

The label has a clear logo/symbol

The label is attractive

The label is more than just a means of advertising

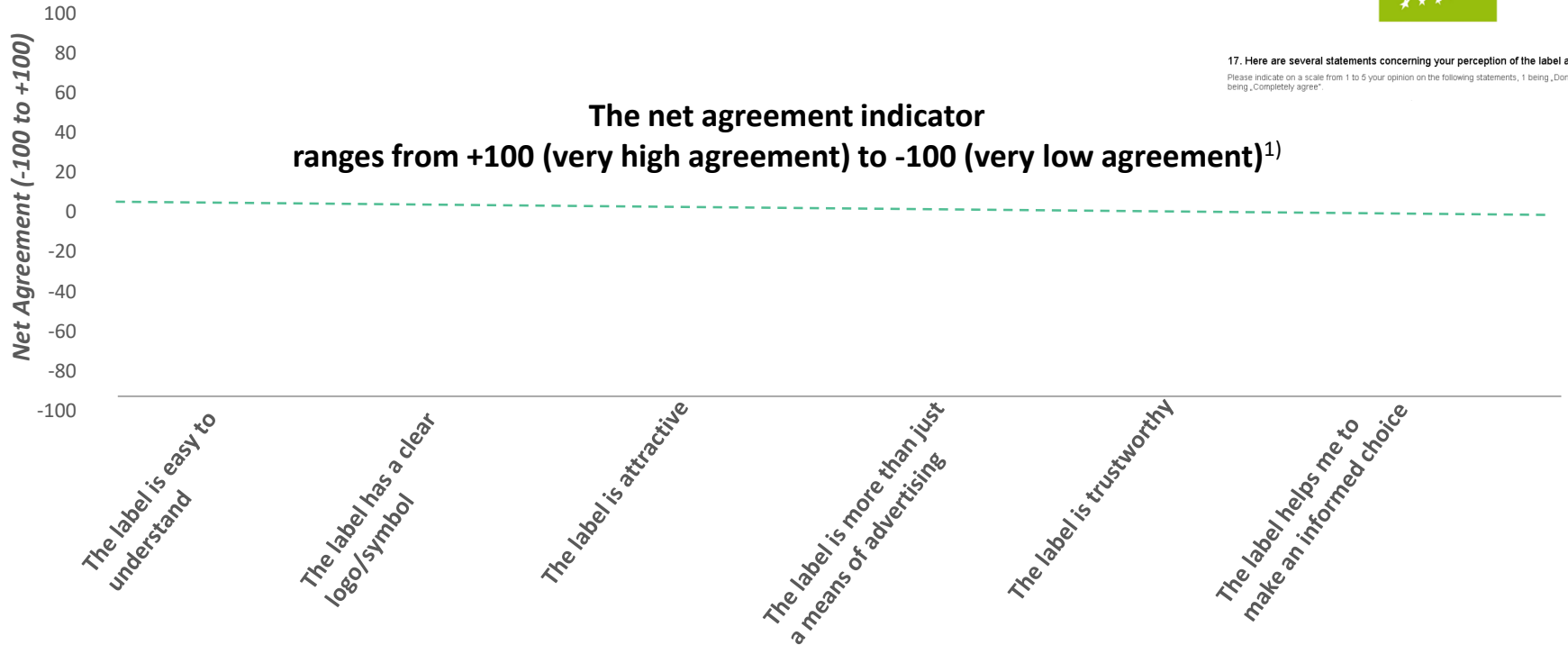
The label is trustworthy

The label helps me to make an informed choice

Measuring Perception of a Label with Net Agreement Scale

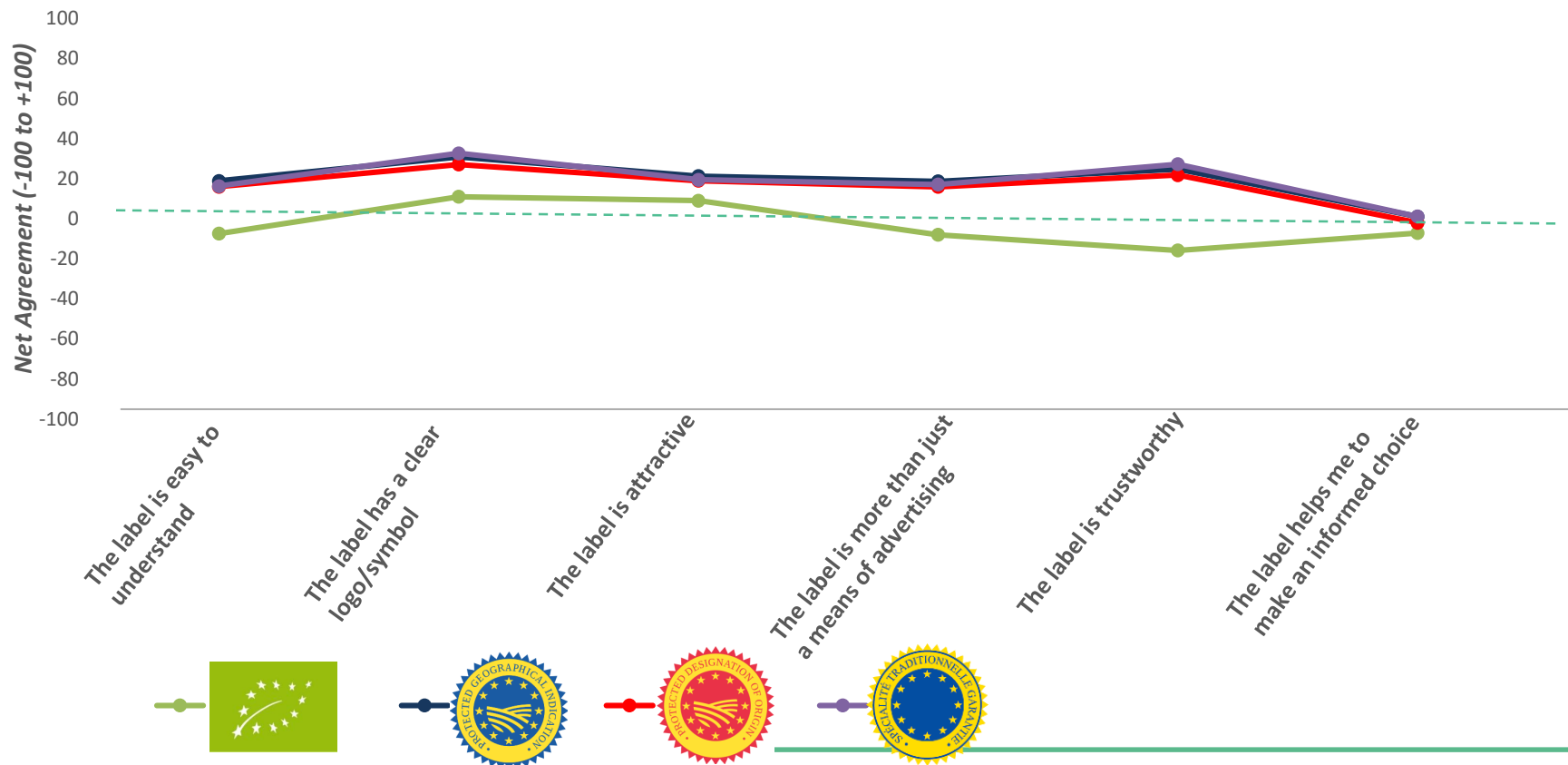


17. Here are several statements concerning your perception of the label above.
Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being „Don't agree at all” and 5 being „Completely agree”.



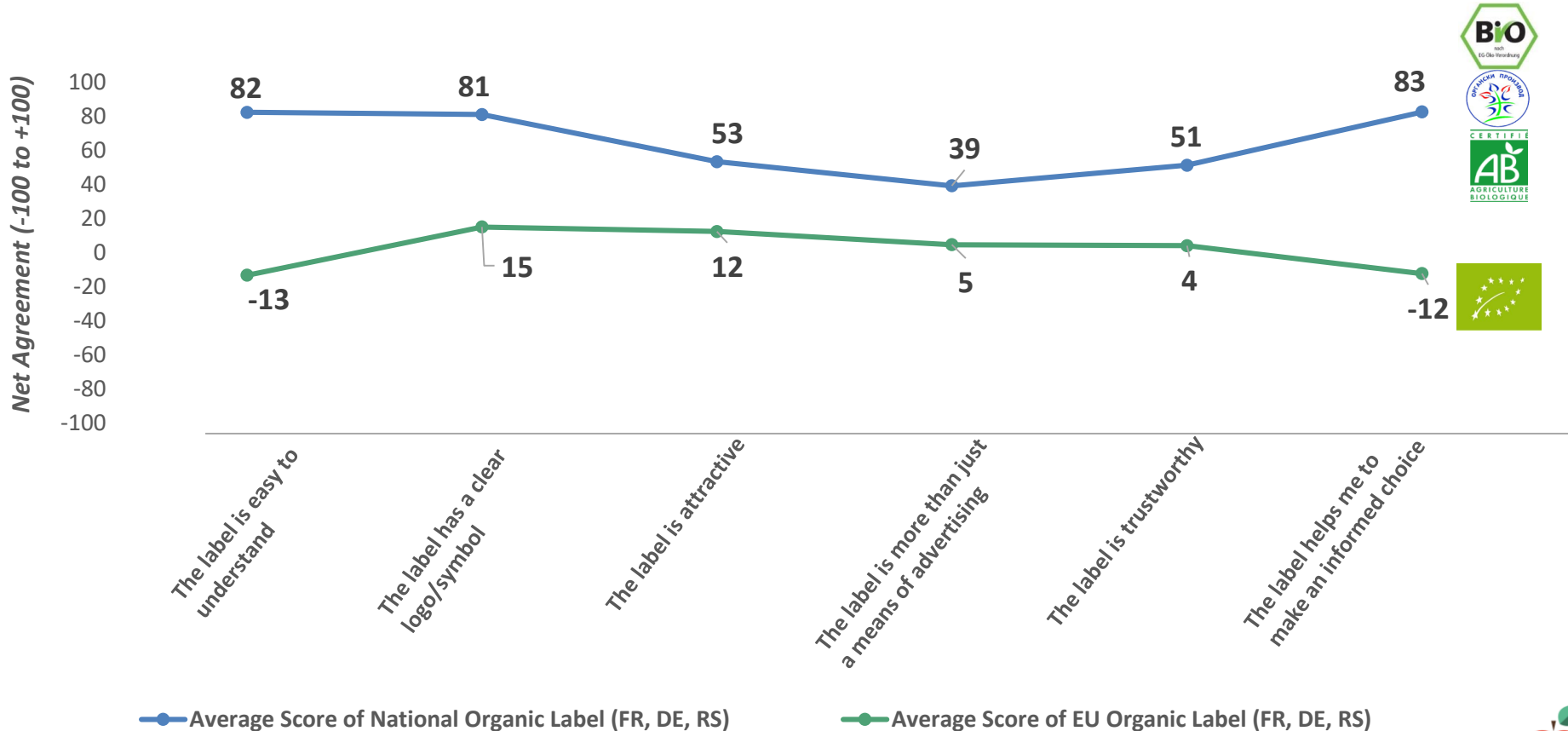
1) The number of unfavorable responses (1 and 2) is subtracted from the number of favorable responses (4 and 5) on a scale of from „Don't agree at all” (1) to „Completely agree” (5). The result is divided by the total number of responses and multiplied by 100 (Roselius, 1971).

Slightly Positive Perception of all EU Labels but the Organic Label Over All Seven Countries

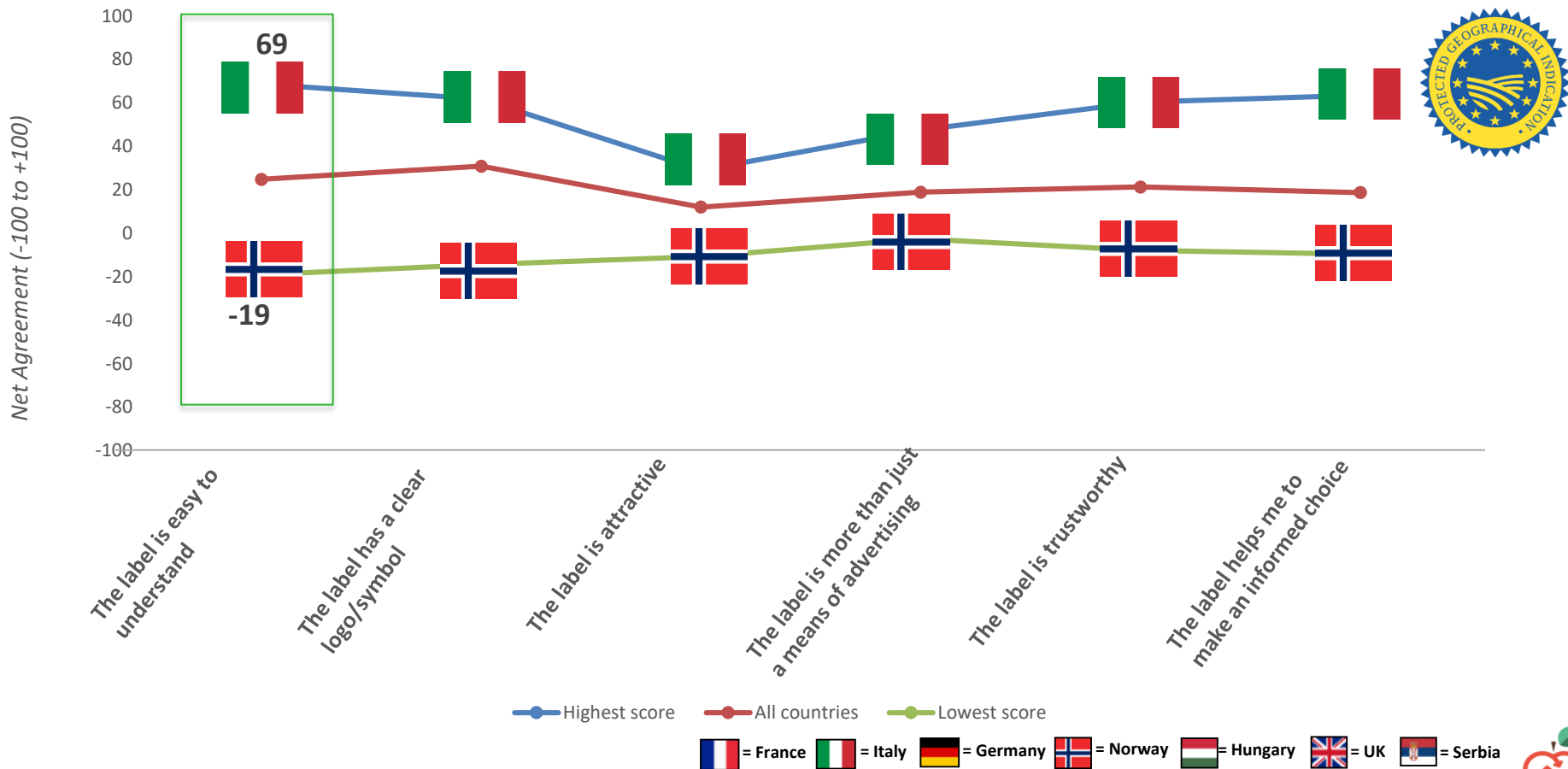


The number of unfavorable responses (1 and 2) is subtracted from the number of favorable responses (4 and 5) on a scale of from „Don't agree at all” (1) to „Completely agree” (5). The result is divided by the total number of responses and multiplied by 100. The net agreement indicator ranges from **+100 (very high agreement)** to **-100 (very low agreement)** (Roselius, 1971).

National Organic Labels are in Contrast Positive Perceived

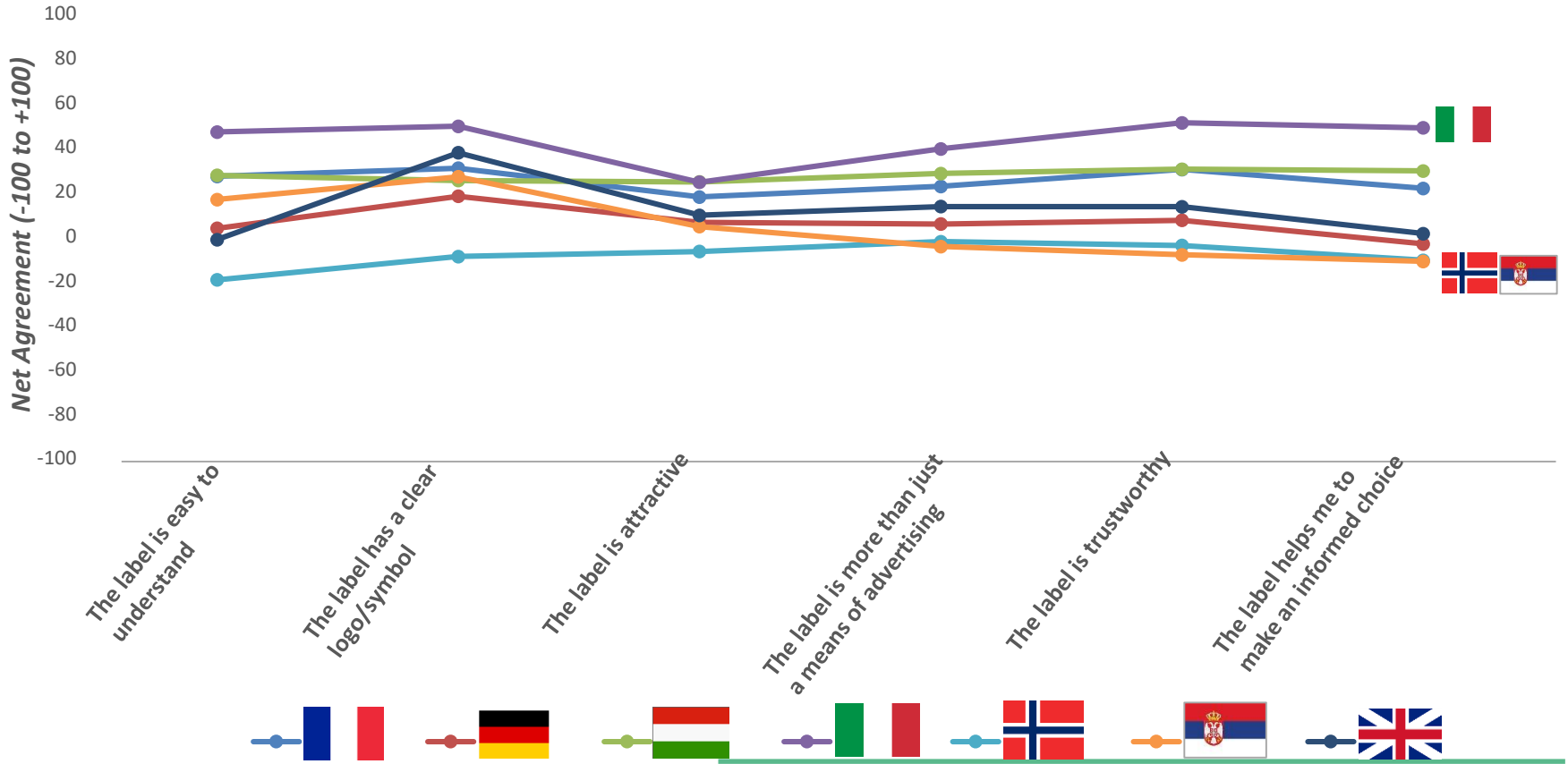


Considerable Differences in Label Perception Between Countries

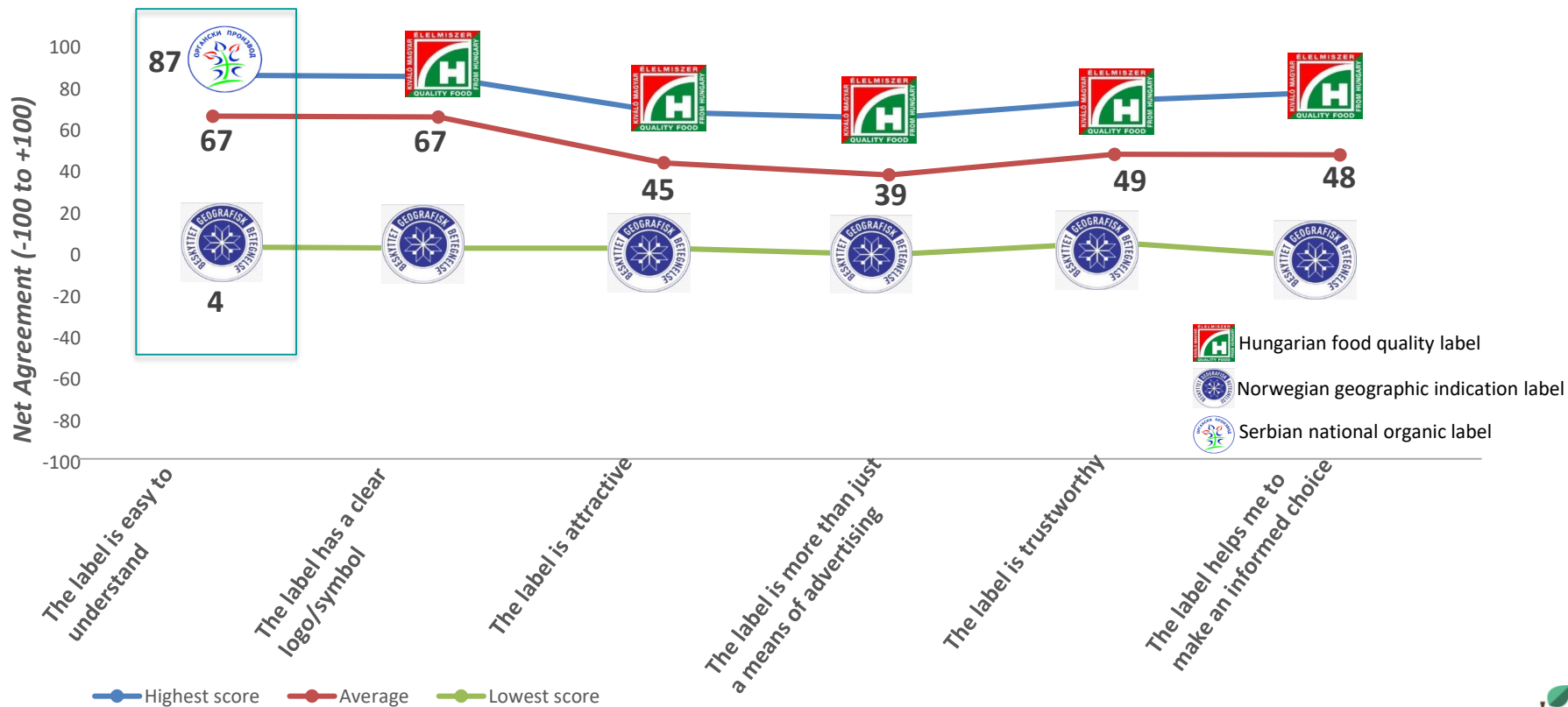


The number of unfavorable responses (1 and 2) is subtracted from the number of favorable responses (4 and 5) on a scale of from „Don't agree at all” (1) to „Completely agree” (5). The result is divided by the total number of responses and multiplied by 100. The net agreement indicator ranges from **+100 (very high agreement)** to **-100 (very low agreement)** (Roselius, 1971).

More Positive Perception in Italy and a More Negative One in Norway and Serbia over all EU Labels



National Labels on Average More Positive Perceived Though Considerable Differences Between National Labels



The number of unfavorable responses (1 and 2) is subtracted from the number of favorable responses (4 and 5) on a scale of from „Don't agree at all” (1) to „Completely agree” (5). The result is divided by the total number of responses and multiplied by 100. The net agreement indicator ranges from **+100 (very high agreement)** to **-100 (very low agreement)** (Roselius, 1971).

Are Labels Effective in Informing Consumers?



First Conclusions

- Recognition high for most of the national labels and low for EU labels
 - high heterogeneity between EU countries
- Most of those who recognize a label use it at least sometimes
- High heterogeneity in perception of food quality labels
 - More positive for national compared to EU Labels
 - More positive especially in Italy compared to other countries
 - Among EU food quality labels perception is least positive for the organic label



**Can we Improve the Perception of the Organic Label
by Modification?**

2. Strength2Food: Two pan-European Surveys

 = France  = Italy  = Germany  = Norway  = Hungary  = United Kingdom  = Serbia

Web survey I:

- Sept/Oct 2017
- 7 countries, N≈800/country



Web survey II:

- July/Aug 2018
- 7 countries, N≈800/country

Original Label

- Perception

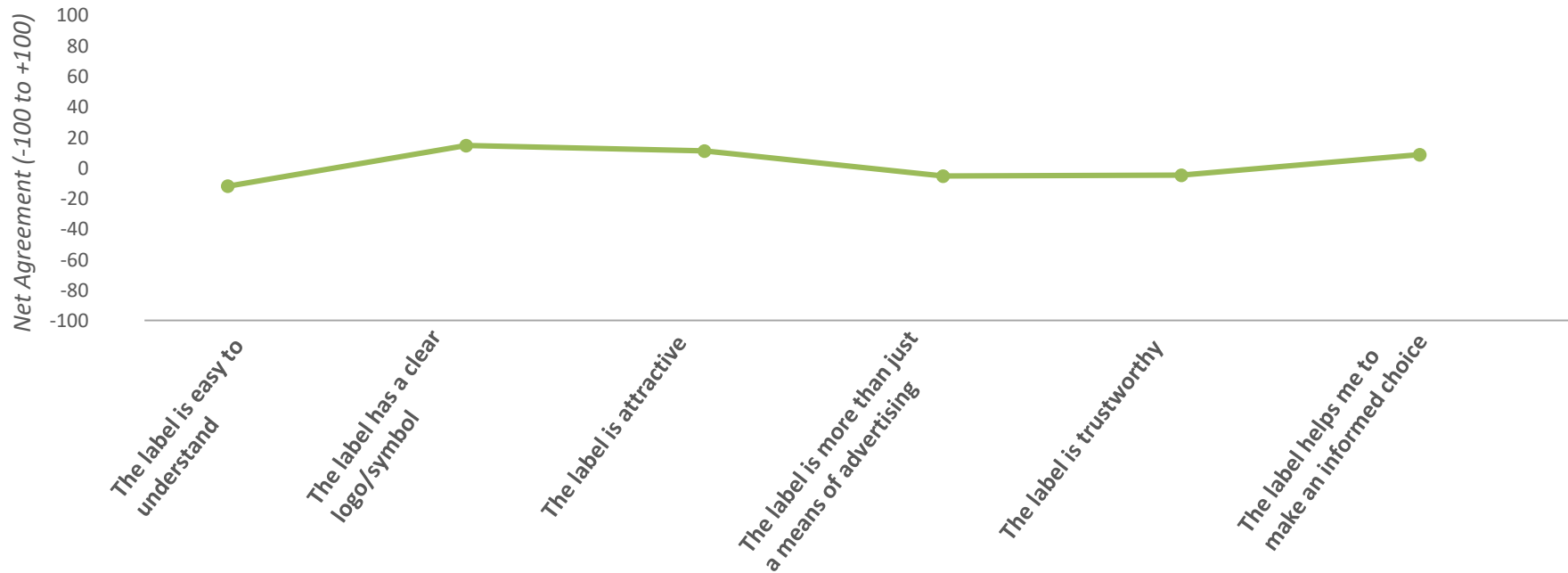


Can we improve
label perception?



Label Modification

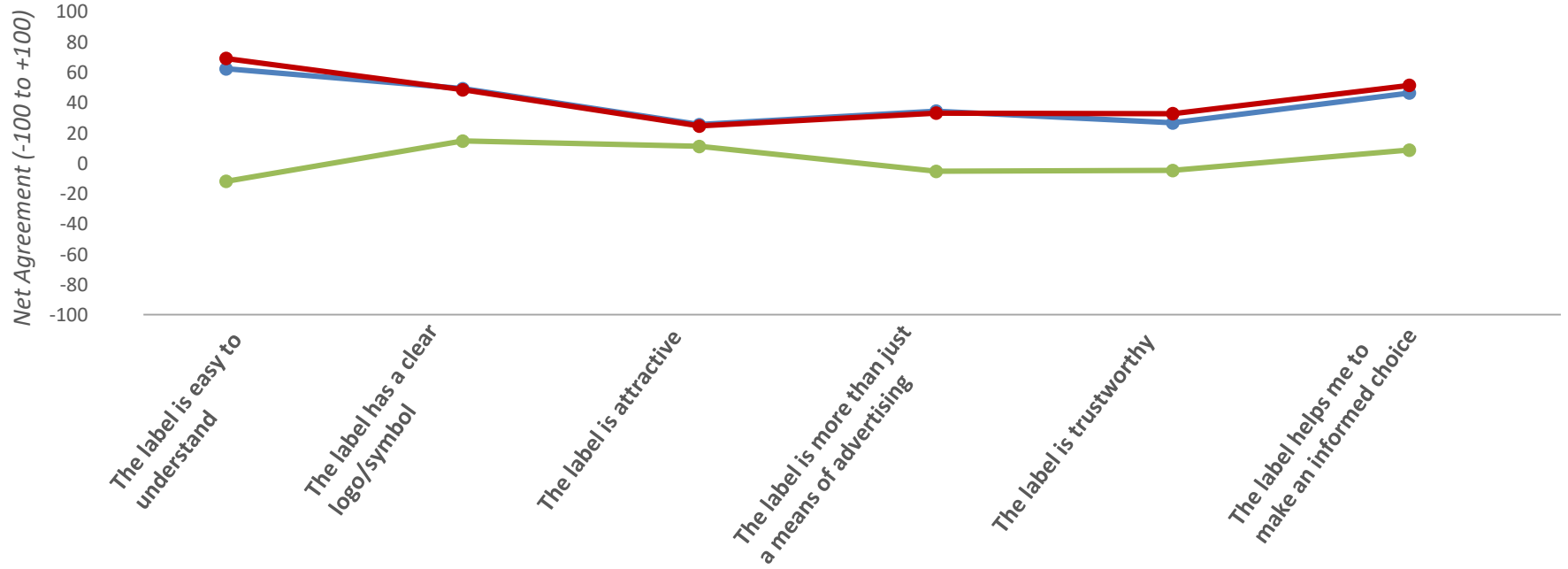
- Perception



● Evaluation of Original EU Label



Both Modifications of the EU Organic Label Improve Perception Compared to Original Label



— Evaluation of Modification 1



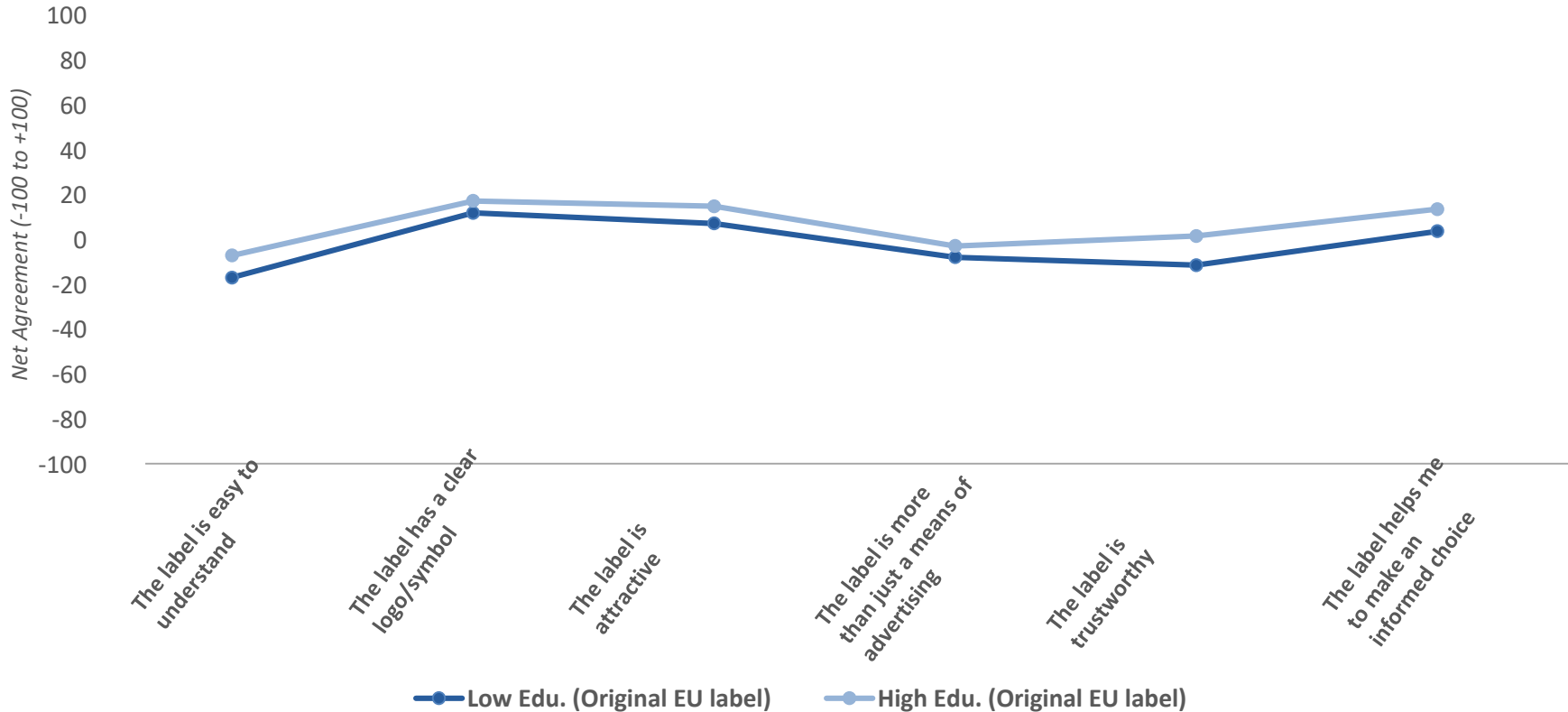
— Evaluation of Modification 2



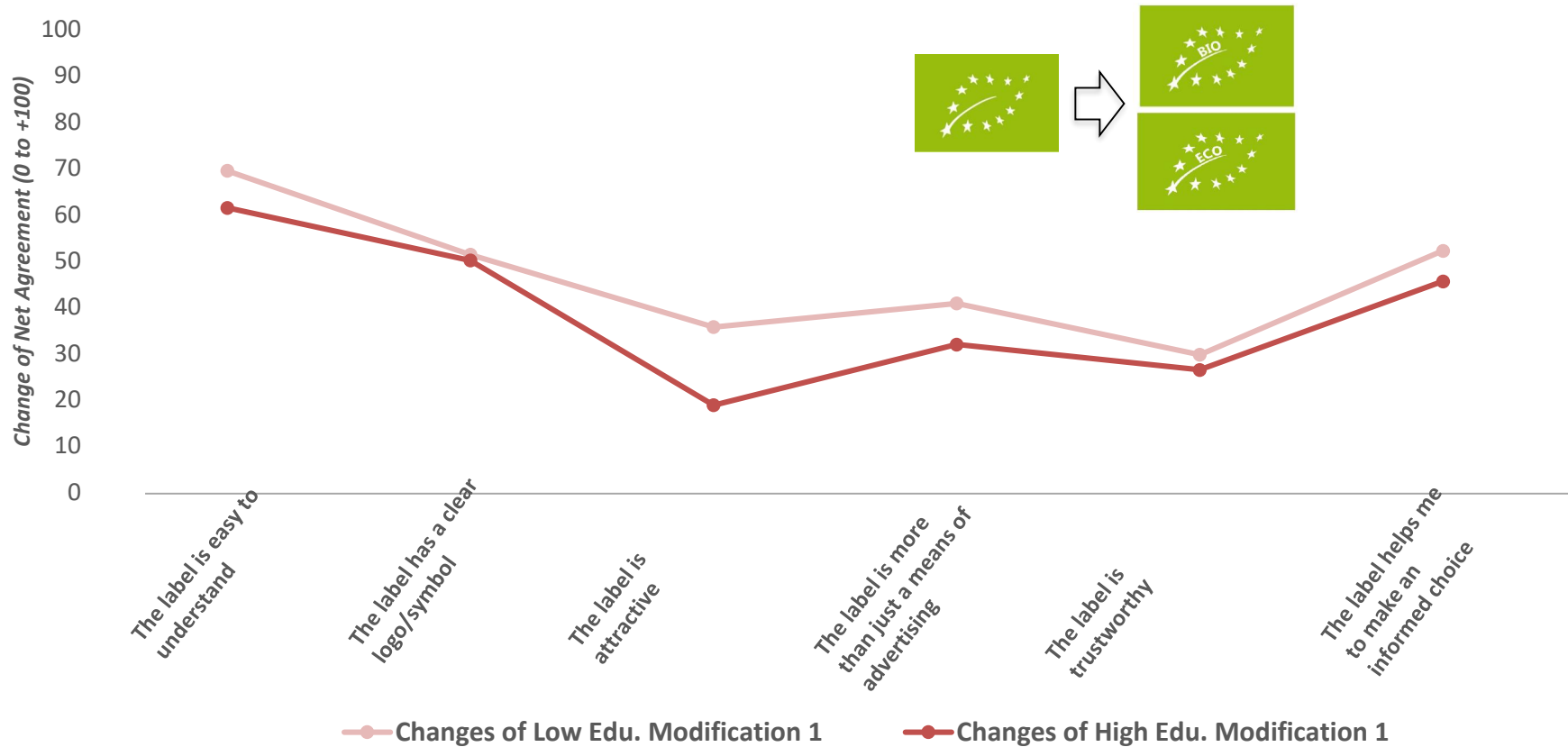
— Evaluation of Original EU Label



Lower Educated Consumers Perceive Original EU Label Less Positive Compared to Higher Educated Consumers

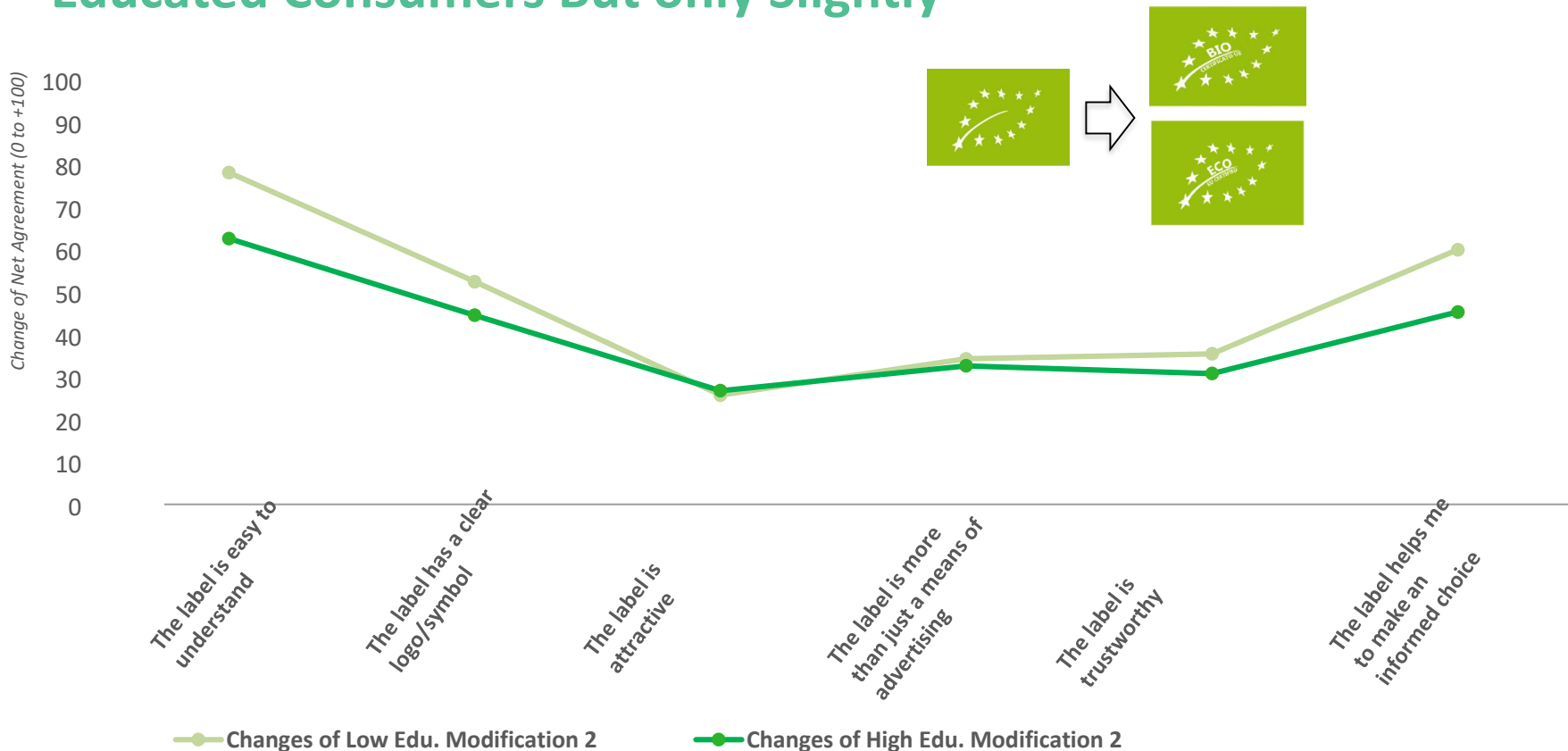


Modification 1 Improves Perception Especially for Lower Educated Consumers



The number of unfavorable responses (1 and 2) is subtracted from the number of favorable responses (4 and 5) on a scale of from „Don't agree at all“ (1) to „Completely agree“ (5). The result is divided by the total number of responses and multiplied by 100. The net agreement indicator ranges from +100 (very high agreement) to -100 (very low agreement) (Roselius, 1971).

Also Modification 2 Improves Perception More for Lower Educated Consumers But only Slightly



Can we improve label perception?

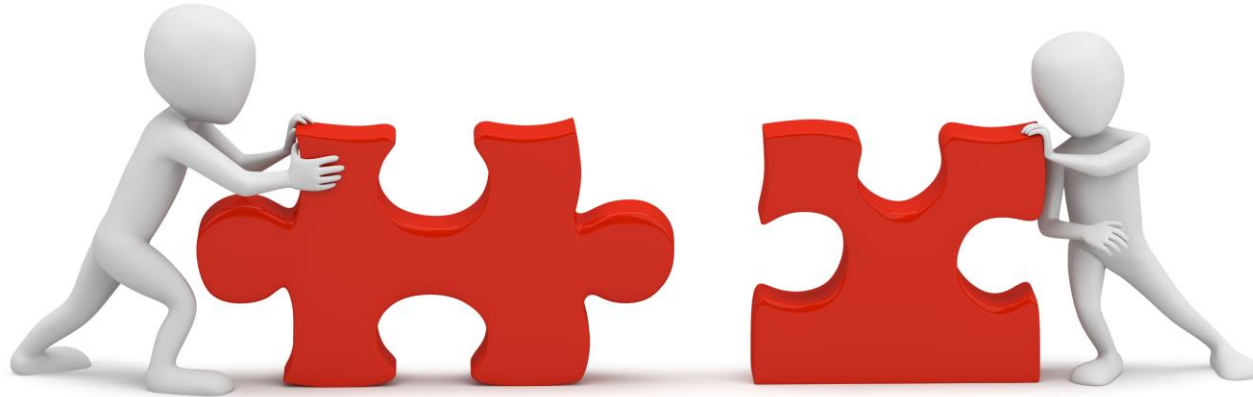


First Conclusions

- A slight modification of the EU organic label is effective in improving consumers' perception
 - Holds for both tested modifications
 - Effect of label modification is especially for modification 1 stronger for those respondents that are less educated

What can we learn from this?

Policy Implications



Policy Implications

- Well-designed communication campaigns are needed as a tool to raise consumer awareness of EU Food Quality labels
- Particularly for labels such as the EU organic one, which is far from self-explanatory, a modification should be considered
 - It has the potential to increase consumers' understanding and trust in the label
 - It seems especially supportive for lower educated consumers



Source picture: <https://www.colourbox.de/bild/info-bild-5172177>



**STRENGTH
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**FOOD QUALITY
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AND HEALTH**

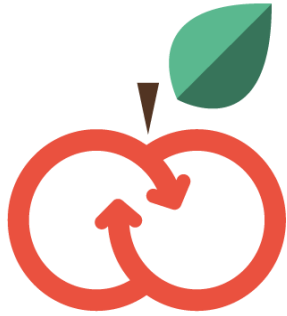
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PARTNERS





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FOR SUSTAINABILITY
AND HEALTH**

Your Questions Are Welcomed



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 678024.



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