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CATTOLICA
del Sacro Cuore

Impact of Alternative Regulatory Labeling Requirements on Consumer Purchase Intentions for Processed Foods Derived from New Genomic Techniques

Mirta Casati, Alessandro Varacca, Stefanella Stranieri and
Claudio Soregaroli

Scenarios



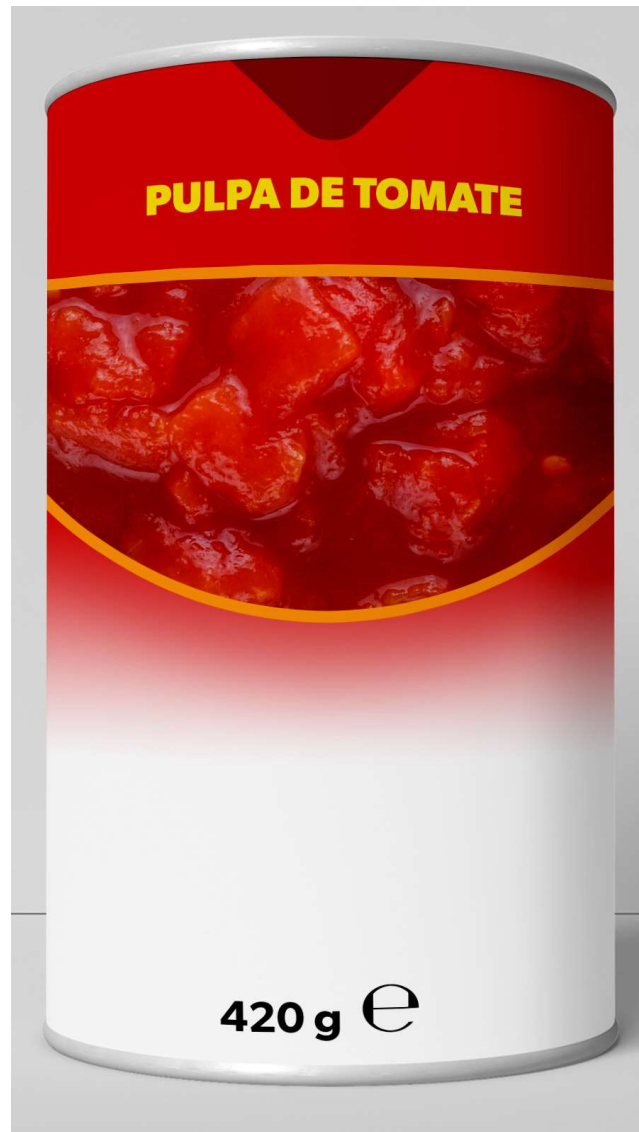
<p>1</p> <p>Status Quo (NGTs as GMOs) (EU Court of Justice)</p>	<p>2</p> <p>NGTs as Conventional Products (EC proposal)</p>
<p>3</p> <p>Distinct NGT Labeling (EU Parliament position)</p>	<p>4</p> <p>Distinct NGT Labeling with Positive Claims (from process to product-based approach → 'factual claim')</p>

Design of the study



- ❑ Countries: Germany and Spain
- ❑ Product: Can of chopped tomatoes
- ❑ Between-subjects design → A participant is exposed to only one type of image
- ❑ 400 participants per type of image and per country
- ❑ 13 different treatments for a total of 10,400 participants

Example of Control Group



Example BOP



Example FOP



PULPA DE TOMATE



• **Uso reducido de pesticidas***

• **Producido con tomates
obtenidos por medio de
nuevas técnicas genómicas**

420 g e

PULPA DE TOMATE

Valores nutricionales medios por 100 g

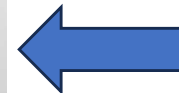
Valor energético:	110 kJ / 26 kcal
Grasas:	0,2 g
de las cuales saturadas:	< 0,1 g
Hidratos de carbono:	3,9 g
de los cuales azúcares:	2,8 g
Proteínas:	1,3 g
Sal:	0,30 g

PULPA DE TOMATE - Ingredientes: tomate*
99,8%, sal. Una vez abierto, conservar
refrigerado y consumir antes de 5 días.
Consumir preferentemente antes del:
véase parte superior o inferior de la lata.

**producido con tomates obtenidos por medio
de nuevas técnicas genómicas*

420g e

412 ml



Sample

Participants had to be "purchasers" of canned tomato products and be >18 years.

Sample is considering quotas for age, gender, education, income, urbanization

Socio demographics can be accessed here



Empirical approach



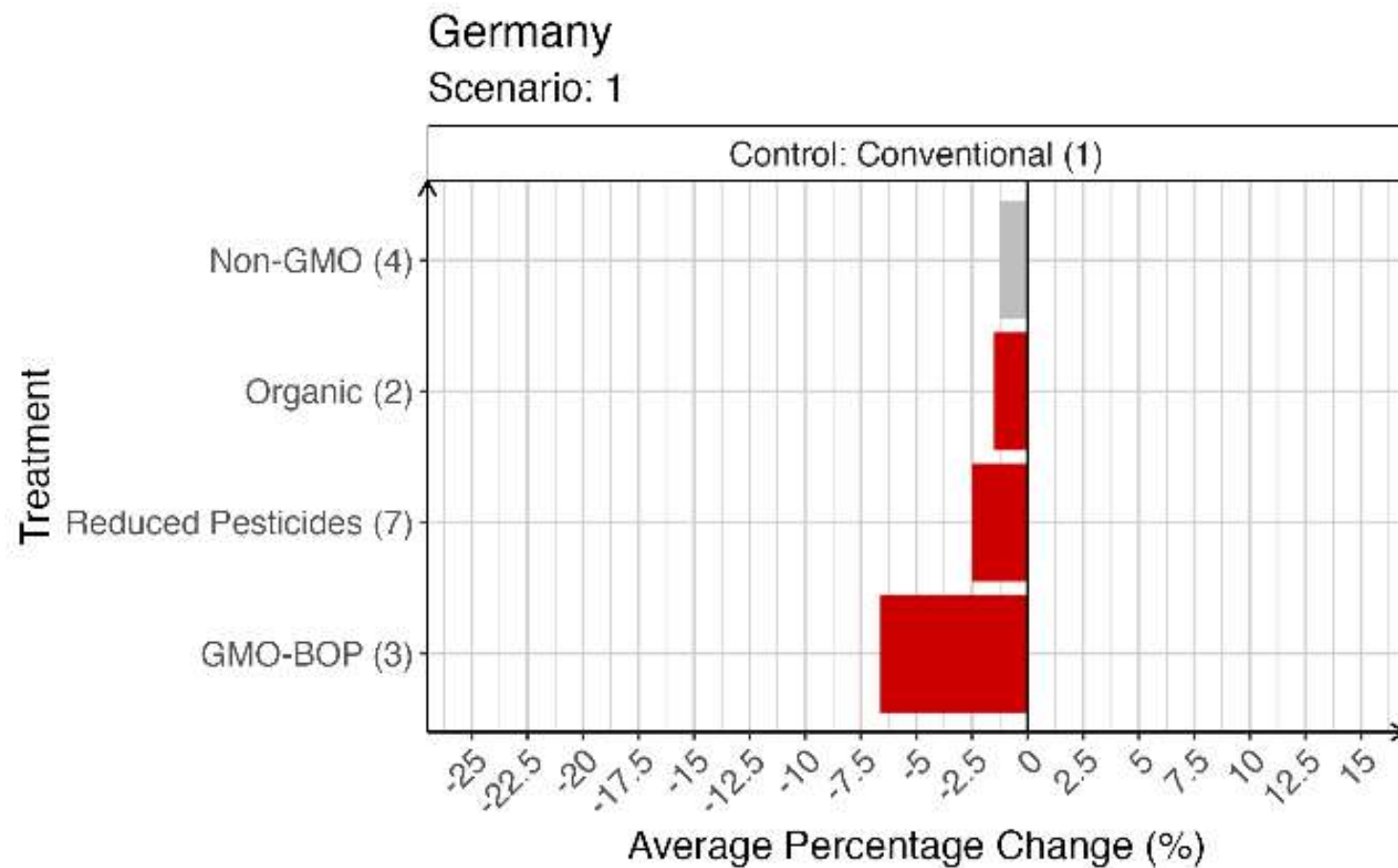
- ❑ Outcome variable (OV): Intention to Purchase
- ❑ Validated 3-Item Likert scale
- ❑ Average score for each participant
- ❑ Empirically, the average treatment effect for each treatment arm estimated as in Negi and Wooldridge (2021):
 - For each treatment-control pair, regress the OV on all the (demeaned) control variables, the treatment indicator, and an interaction between the latter and all the controls;
 - The coefficient associated to the treatment indicator provides the Average Treatment Effect (ATE);
 - We calculate the Average Percentage Change (APC) as the ratio between the ATE and the average in the control group;
 - Standard errors for the APC obtained via delta method.

Results: Scenario 1

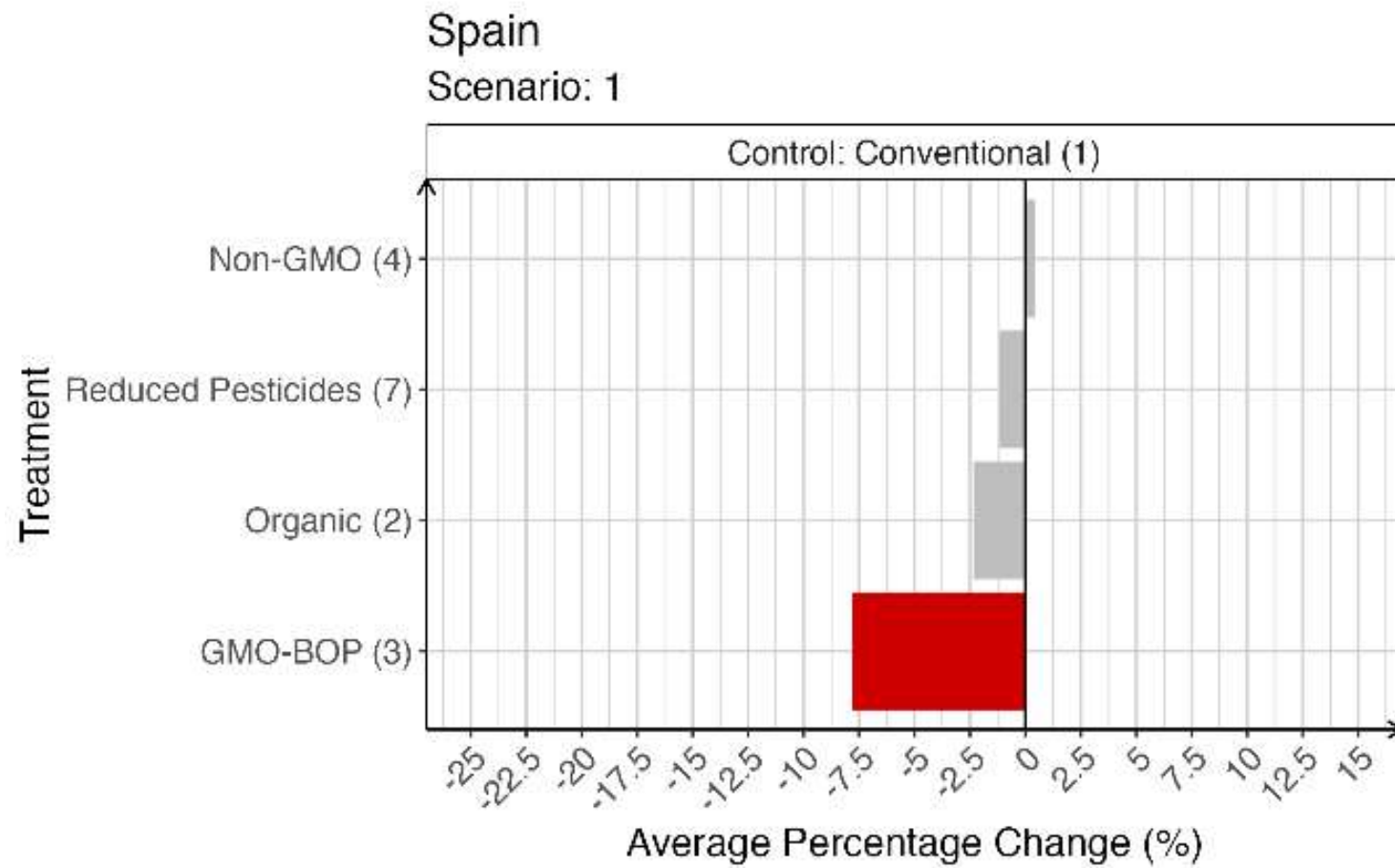


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Results – Scenario 1



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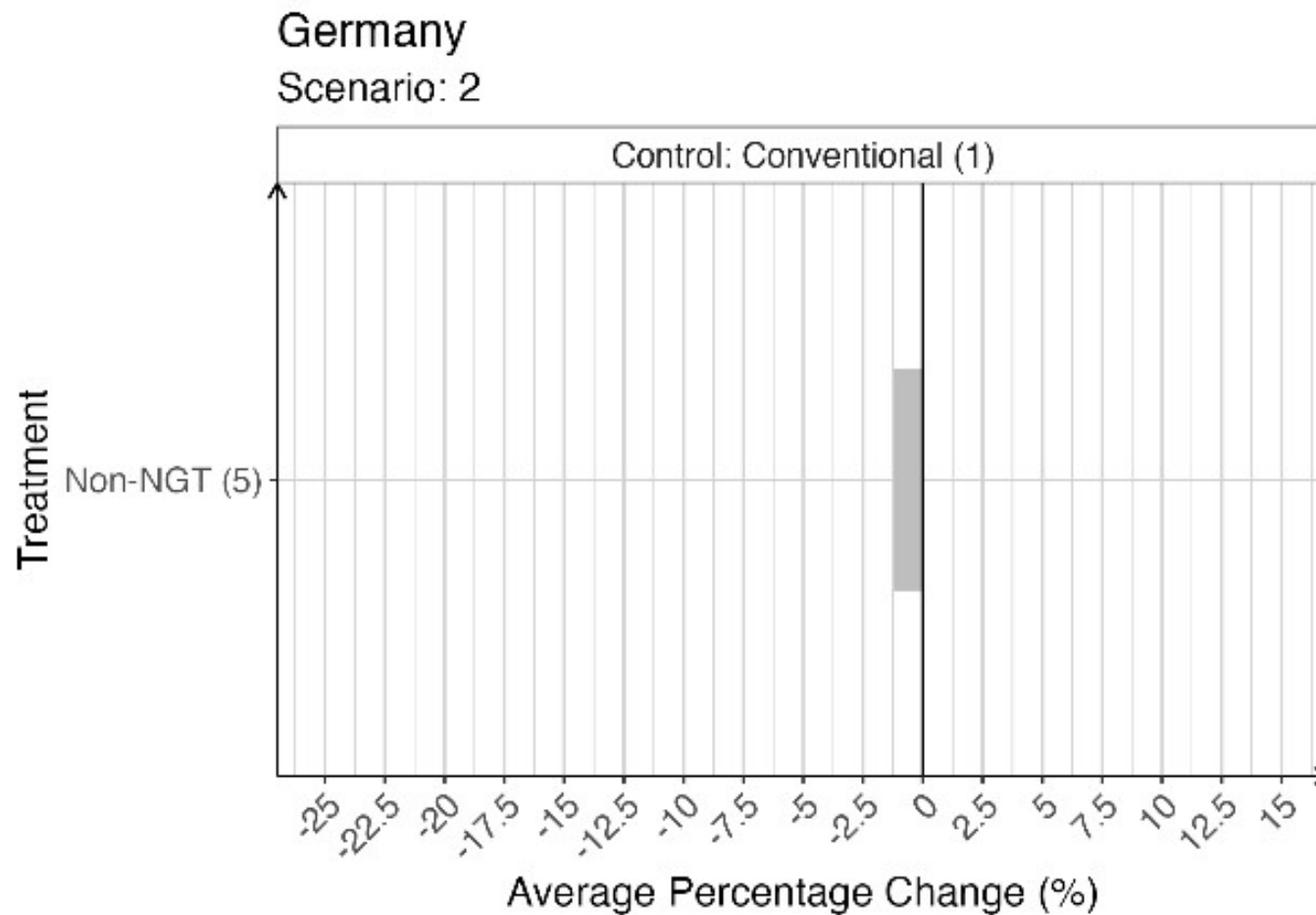


Results: Scenario 2

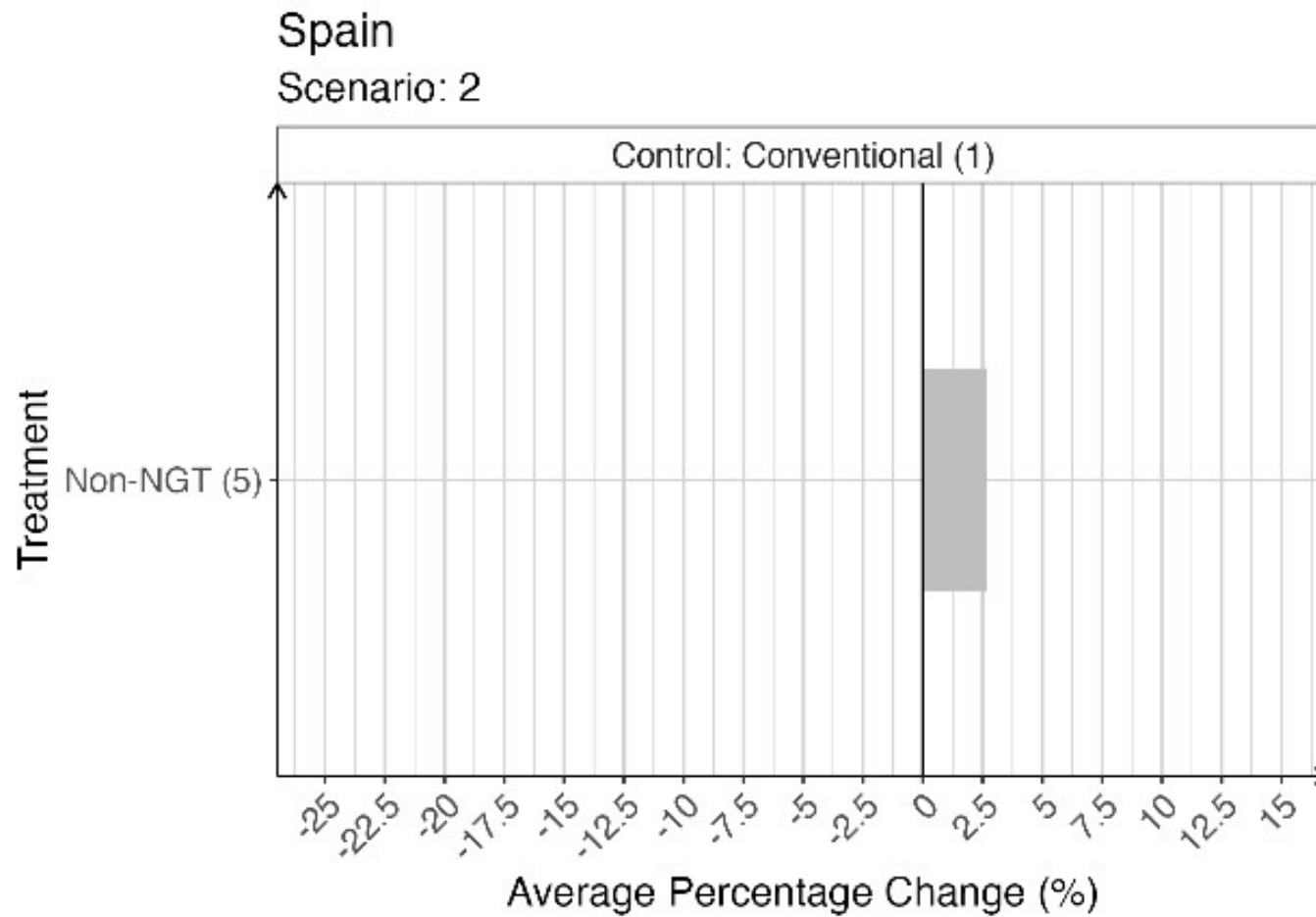


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Results – Scenario 2



Results – Scenario 2

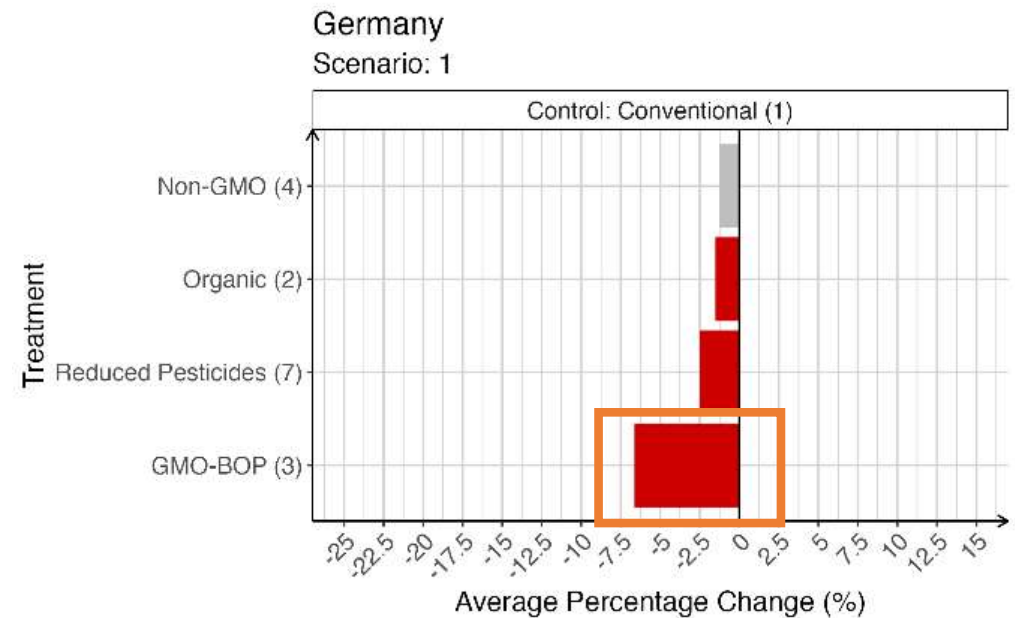
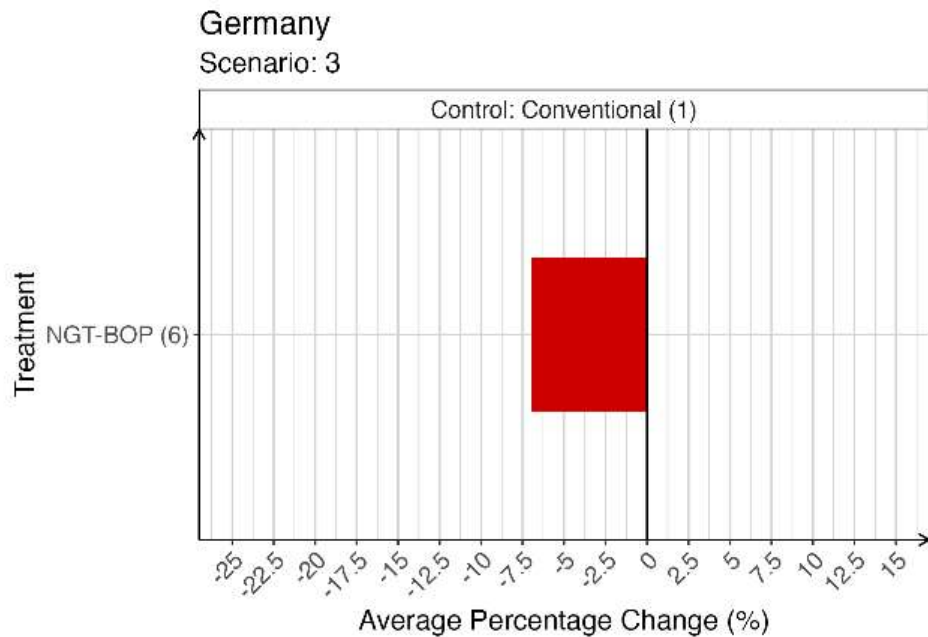


Results: Scenario 3

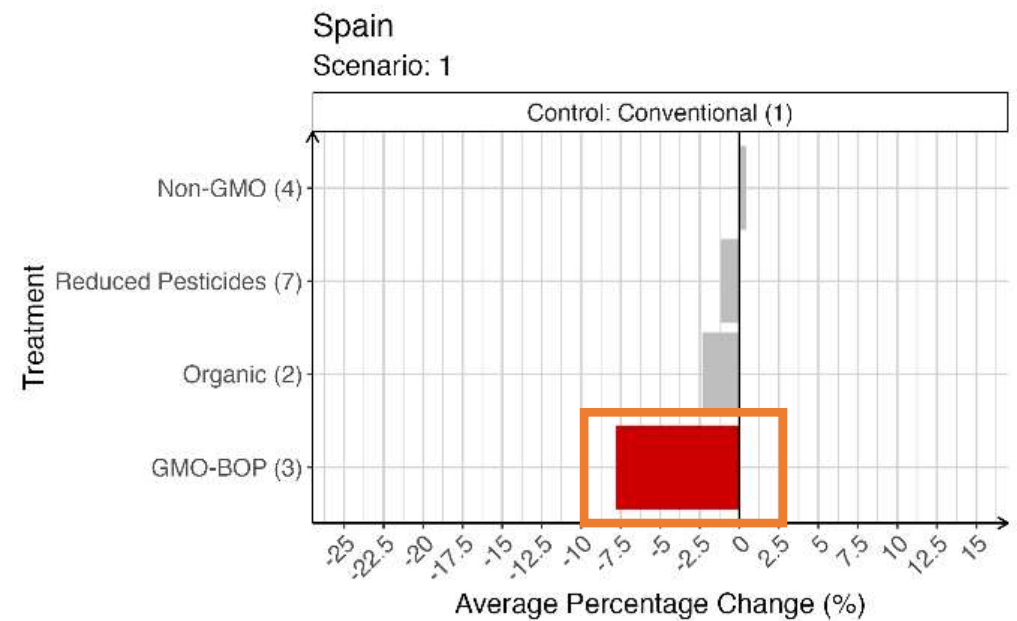
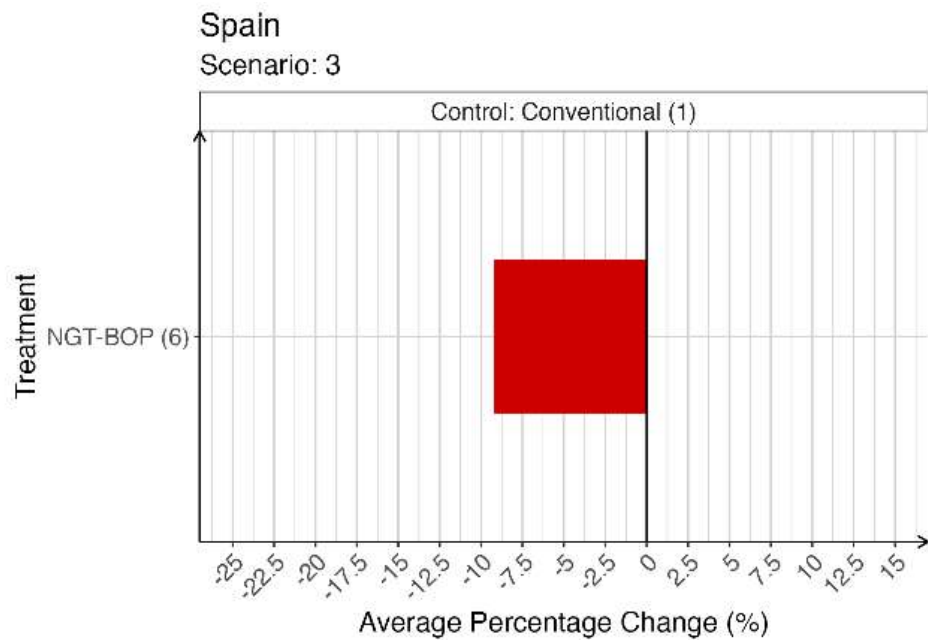


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Results – Scenario 3



Results – Scenario 3



Implication 1

Similar performances of GMO and NGT labels

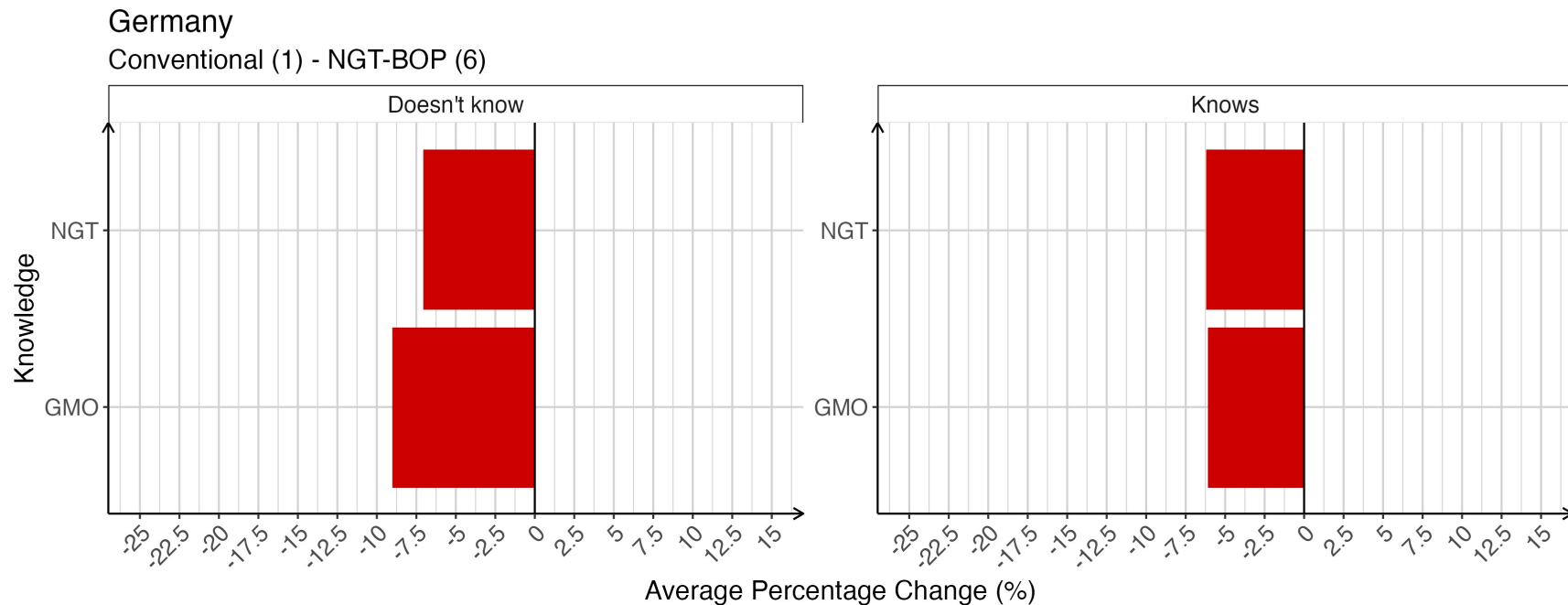
- ❑ BOP labeling of GMOs or NGTs consistently leads to lower purchase intentions.
- ❑ NGT products are likely to perform similarly to GMO-labeled products, even with differentiated labels.

Key Takeaway: Distinguishing labels (Scenario 3) may not improve consumer response or significantly boost sales.

Results – Scenario 3



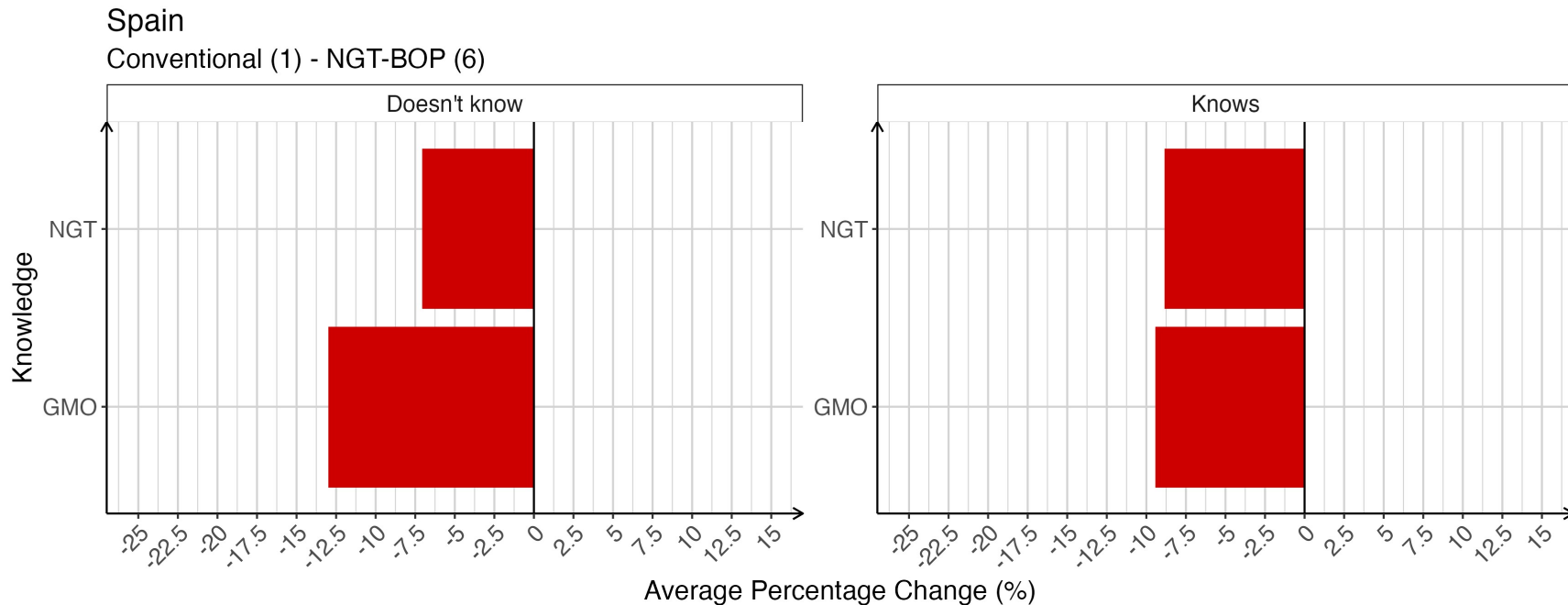
Knowledge about NGTs does not notably increase consumer purchase intentions.



Results – Scenario 3



Knowledge about NGTs does not notably increase consumer purchase intentions.



Implication 2

Limited differences by knowledge

Knowledge about NGTs does not notably increase consumer purchase intentions.

Key Takeaway: Educational campaigns or technology awareness efforts may have minimal impact on sales of NGT-labeled products.

Results: Scenario 4

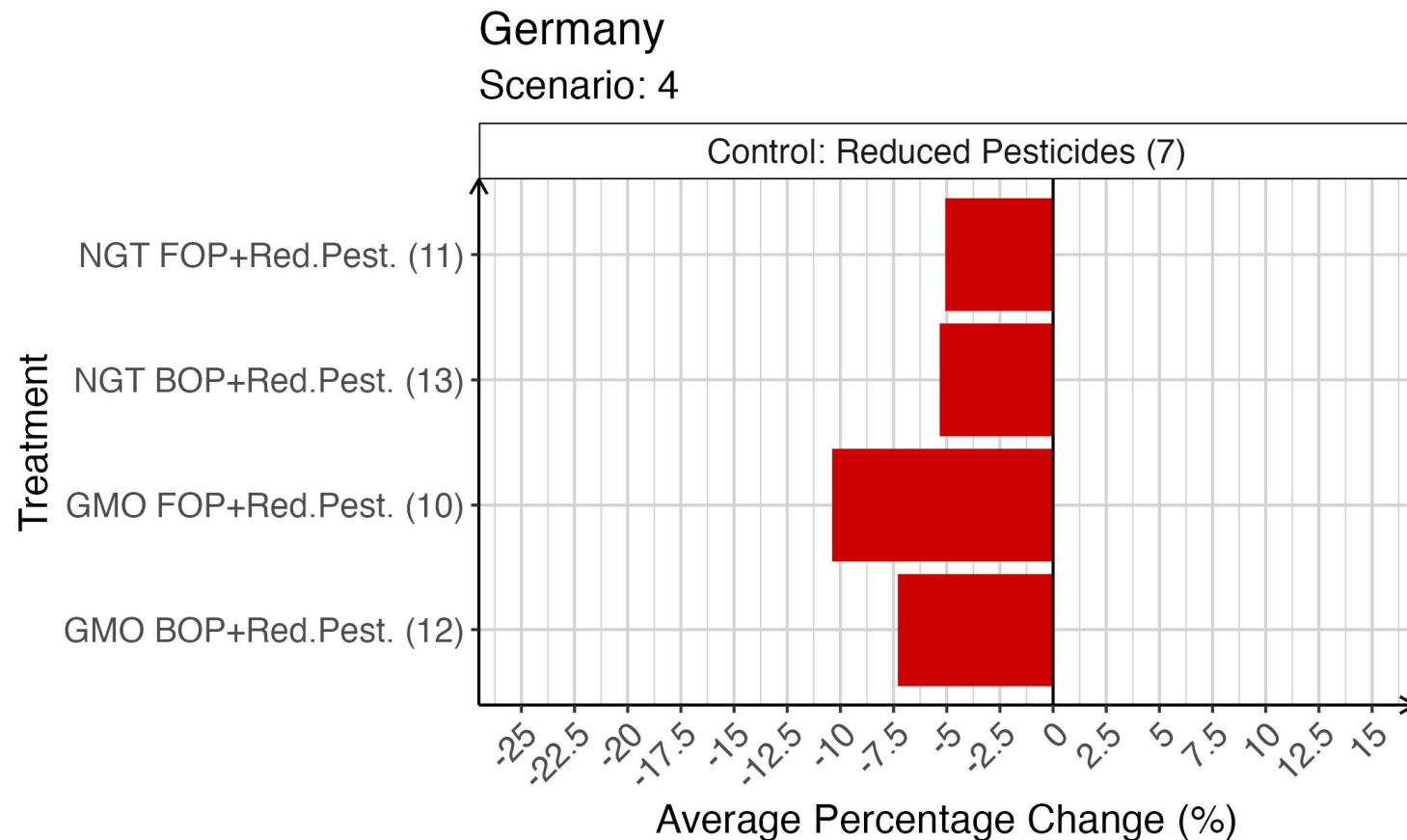


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Results – Scenario 4



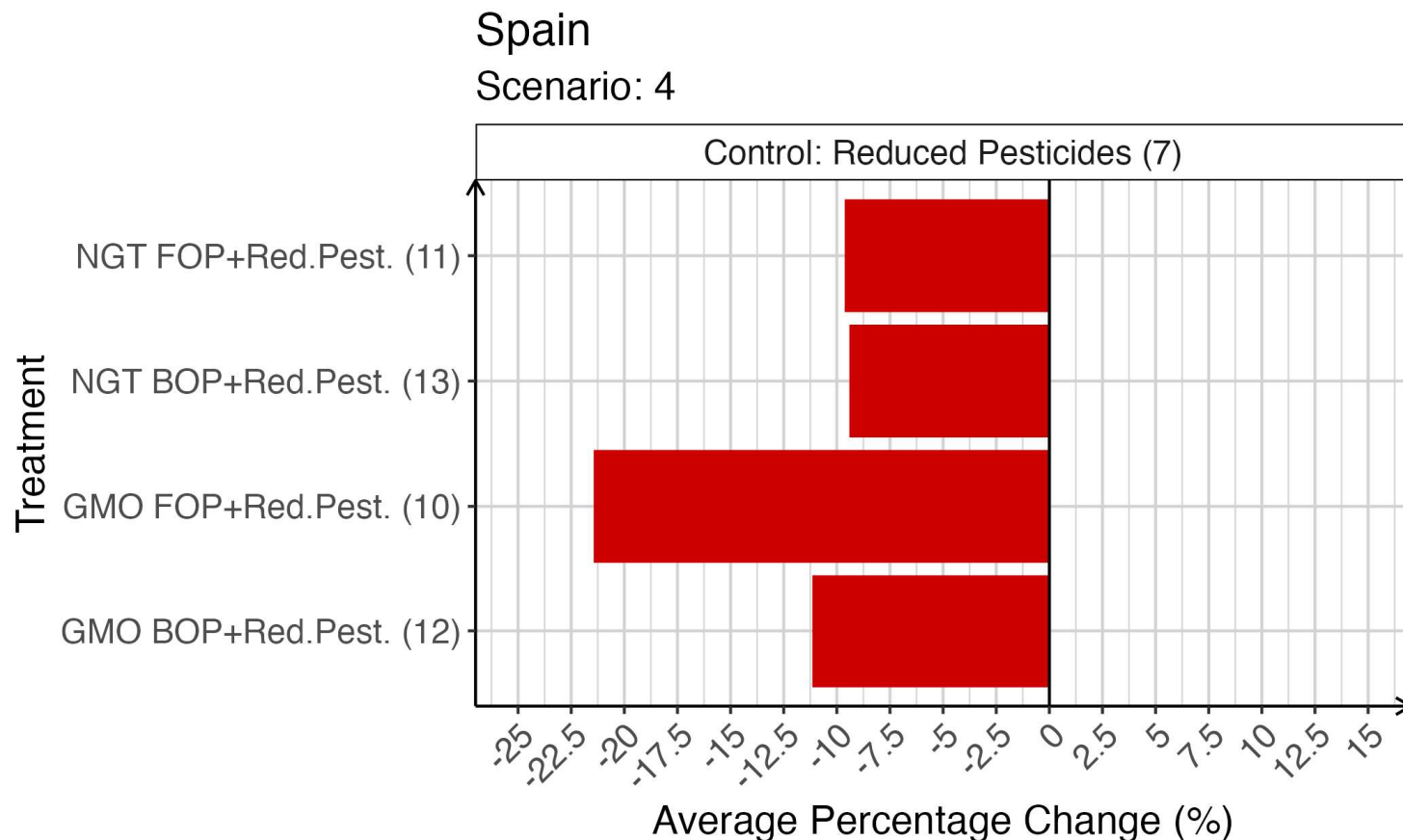
Front-of-package (FOP) positive claims (e.g., reduced pesticides) help mitigate the negative impact of NGT labels more effectively than for GMOs.



Results – Scenario 4



Front-of-package (FOP) positive claims (e.g., reduced pesticides) help mitigate the negative impact of NGT labels more effectively than for GMOs.



Implication 3

Some Potential of Positive Claims on FOP

Front-of-package (FOP) positive claims (e.g., reduced pesticides) help mitigate the negative impact of NGT labels more effectively than for GMOs.

Key Takeaway: Distinct labeling with FOP positive claims, provides more marketing flexibility than the status quo (GMO = NGT).

Concluding...

Best Market Strategy - Scenario 2

Treating NGTs as conventional products, is the most favorable for marketability

Scenario 2 avoids the negative connotations of GM-sounding terms and aligns with consumer expectations for conventional products.

Challenge: EU consumer sentiment is still cautious, they expect product as being non-GM, showing a resistance to genetic modification terminology in general.



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Thank you

claudio.soregaroli@unicatt.it