

# Long-Run Effects of a Behavioral Intervention: Experimental Evidence from Meat Consumption

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# Motivation

- Meat consumption has huge negative impact on climate and environment
  - ▶ Livestock farming produces 14.5% of global carbon emissions (BUND, 2019)
- Reducing meat consumption may play an important role mitigating climate change and environmental damage
- Barriers to reducing meat consumption
  - ▶ Choosing meat out of habit or pleasure, or due to high costs of meat substitutes (e.g., Zur and Klöckner, 2014, Van Den Berg et al., 2022, Valli et al., 2019, Hosie, 2017, Gardner et al., 2011)
  - ▶ Lack of knowledge and cooking skills (Randers et al., 2021)
  - ▶ Lack of awareness about the positive environmental impacts associated with a reduction in meat consumption (Bailey et al., 2014, P. Lohmann et al., 2022, Macdiarmid et al., 2016)

# Literature

- Habits play important role in nutritional behavior and are among the main barriers to reducing meat consumption (Allom & Mullan, 2012; Gardner et al., 2011; Rees et al., 2018; Schösler et al., 2014; Stoll-Kleemann & Schmidt, 2017; van't Riet et al., 2011)
- Changing habitual behavior is difficult and 'must be viewed as a long-term process' (Gardner & Rebar, 2019, p.2)
- Educational programs on preparing vegetarian dishes can help reduce meat consumption, but need for experimental studies to evaluate long-term effects (Kwasny et al., 2022)
- Only few studies have focused on interventions targeting habit change and skill development (Kwasny et al., 2022)
- While several previous studies have targeted meat consumption via information on its environmental and health-related impacts, their results are inconclusive (Carfora et al., 2019; Dannenberg & Weingärtner, 2023; Epperson & Gerster, 2021; Jalil et al., 2020; P. Lohmann et al., 2022; P. M. Lohmann et al., 2024; Perino & Schwirplies, 2022; Wolstenholme et al., 2020)

# Research Question & Contribution

## Research question

- Can the longer-term provision of (supportive) information on more environmentally and climate-friendly diets help to reduce meat consumption in the short and the long run?

## Contribution

- Long-term study (1 year) with longer-term intervention (4 months) to address the long-term nature of changing eating behavior: follow-up surveys one, four, seven, and 15 months after baseline
- Target two barriers to reducing meat consumption via newsletters: lack of awareness about environmental impacts and lack of cooking skills
  - ▶ address intention to reduce meat consumption
  - ▶ facilitate behavior change by kind of educational program on preparing vegetarian dishes

# Experimental Design

# Experimental Design

- Data collection:
  - ▶ Online survey experiment in Germany
  - ▶ Collect data on meat consumption using a Meat Frequency Questionnaire
  - ▶ Baseline and four follow-up surveys
- Interventions: newsletter via e-mail
  - ▶ Information newsletter
  - ▶ 'Support' newsletter (recipes)
- 4 experimental groups (exclusion of vegetarians/vegans):
  - ▶ Group Information
  - ▶ Group Support
  - ▶ Group Information + Support
  - ▶ Control group

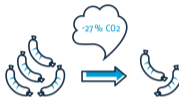
# Timetable



## Did you know ... Wussten Sie, ...

... dass Sie Ihre ernährungsbedingten **CO<sub>2</sub>-Emissionen** bereits um **27% senken** können, wenn Sie beispielsweise Ihren **Fleischkonsum** halbieren und anstelle von vier nur zwei Bratwürste pro Woche essen?

... you can **reduce** your diet-related **CO<sub>2</sub> emissions** by already **27%** if, for example, you halve your **meat consumption** and eat two bratwursts per week instead of four.



5.785 kg CO<sub>2</sub>



... dass Sie **20 Portionen Gemüse** essen können und dabei **weniger CO<sub>2</sub>-Emissionen** verursachen als wenn Sie **eine Portion Rind- oder Lammfleisch** essen?

... that eating **20 servings of vegetables** causes less CO<sub>2</sub> emissions than one serving of beef or lamb?

... dass Sie die **CO<sub>2</sub>-Emissionen**, die durch Ihre Ernährung entstehen, durchschnittlich von **1,75 Tonnen** auf **1,3 Tonnen** pro Jahr **senken** können, wenn Sie sich für eine **vegetarische Ernährungsweise** entscheiden?

... that you can **decrease** the **CO<sub>2</sub> emissions** generated through your diet from an average of **1.75 tons** to **1.3 tons** by choosing a **vegetarian diet**?



<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4161666/>

Thiran, David, and Michael Clark-Gonzalez. "Global diet for environmental sustainability and human health." *Nature* 515, no. 7538: 308-312.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4161666/>

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5.785 kg CO<sub>2</sub>



... dass Sie **20 Portionen Gemüse** essen können und dabei **weniger CO<sub>2</sub>-Emissionen** verursachen als wenn Sie **eine Portion Rind- oder Lammfleisch** essen?

... that eating **20 servings of vegetables** causes less **CO<sub>2</sub> emissions** than one serving of **beef or lamb**?

## Tips for a more environmentally and climate friendly diet



### Tips of the Week:

- At breakfast it is especially easy to eat in a more environmentally and climate friendly way (e.g. by skipping meat. Have you ever tried a vegetarian spread? By now there is a wide selection of different spreads in supermarkets. Come and try something new once in a while!
- Avocado, too, is a great fit for a breakfast sandwich. [Here](#) you can find a recipe for avocado bruschetta.



### 🕒 Patatas bravas

🕒 Duration: 30 min | Difficulty: easy

Ingredients for 4 servings: 1kg Waxy Potatoes | 1 Onion | 1 Clove of Garlic | 1 Red Bell Pepper | 1 Hot Pepper | 1 Tbsp Tomato Paste | 400g Can of Diced Tomatoes | 1 Tsp Mild Red Paprika



### 🕒 Skewers with Peach, Mint and Pine Nuts

🕒 Duration: 10 min (Total Time: 20 min) | Difficulty: easy

Ingredients for 4 servings: 3 Peaches | 1 Tsp ground coffee | 1 Tsp Soma | 1 Tsp Avls | 60 g Pine Nuts | 2 Tbsp Mint Leaves

Tip: You can also season 600g of tofu or seitan cubes with 2 Cloves of Garlic, 2 Tsp chili flakes, 1 Tsp turmeric, ½ Tsp cumin and 1 Tsp fennel and skewer them with the peach pieces. [Here](#) you can find a basic recipe for seitan skewers.



### 🕒 Feta Cheese Packets (perfect for barbecuing)

🕒 Duration: 10 min (Total Time: 30 min) | Difficulty: easy

Ingredients for 4 servings: 1 Onion | 1 Red Bell Pepper | 2 Vine-Ripened Tomatoes | 80g Green Olives | 400g Feta | 1 Tsp dried Oregano

Tip: Feta Cheese Packets pair perfectly with baguette or green salad. Instead of wrapping the feta cheese and vegetables in aluminum foil you can also use a baking dish or a reusable grilling tray.



### 🕒 Herb Polenta with Braised Tofu in Vegetable-Red-Wine Sauce

🕒 Duration: 60 min | Difficulty: advanced

Ingredients for 4 servings: 400g Firm Tofu | 3 Tbsp Soy Sauce | 1 Tbsp Tomato Ketchup | 4 Tbsp Olive Oil | 3 Carrots | 1 Zucchini | 1 Medium Root Parsley | 150g Brown Button Mushrooms | 1 Onion | 1 Clove of Garlic | 125ml Red Wine | 375ml Vegetable Broth | 1 Tsp Mild Red Paprika | 1 Tsp Tomato Paste | ½ Tsp Dried Thyme | 1 ½ Tsp Vegetable Broth Powder | 1 Tsp Herb Salt | 20g Margarine | 2 Tbsp Yeast Flakes | 2 Tbsp Fresh Basil | 2 Tbsp Fresh Parsley | 2 Tbsp Fresh Chives | 250g Polenta

Tip: If you don't like tofu, you can just use more vegetables. However, you shouldn't skip the ingredients for the marinade (soy sauce and tomato ketchup). Instead of herb polenta you can also serve herb potato paneer with the braised tofu. Simply boil potatoes, mash them, and mix them with the herbs and spices for the polenta along with some margarine.



### 🕒 Colourful Buddha Bowl with Curcuma-Sweet-Potatoes and a poached Egg

🕒 Duration: 30 min | Difficulty: easy

Ingredients for 4 servings: 2 Big Sweet Potatoes | 2 Tsp Curcuma | 2 Cloves of Garlic | 480ml Vegetable Broth | 1 Tbsp Olive Oil | 4 Eggs | 120g Brown Rice | 4 Handful of Baby Spinach | 50g Potatoes | 60ml Lemon Juice | 1 Tbsp Maple Syrup | 4 Twigs of Parsley

# Meat Frequency Questionnaire

- How many portions of meat did you eat in the past four weeks?
- 9 categories of fish and meat, e.g.
  - ▶ Cold cuts, sausage spread, ham
  - ▶ Bratwurst, boiled sausages
  - ▶ Doner kebab, gyros, burgers
  - ▶ Fish and seafood

Categories

- Give examples for size of one portion incl. pictures as well as additional information on how to fill out the questionnaire

**Kategorie 5: Döner, Gyros, Burger und Ähnliches mit Fleisch oder Wurst**

Beispielbilder für eine Portion:



### Kategorie 5: Döner, Gyros, Burger und Ähnliches mit Fleisch oder Wurst ⓘ

Dönerfleisch, Gyros, Pulled Pork, Hackfleisch/Frikadelle/Burger-Patty oder Ähnliches, z.B. in einem Fladenbrot/Rollo/Wrap/Taco/Burger oder auf einem gemischten Teller mit Beilagen (Dönerteller, Gyrosteller, etc.)

Hinweis: Eine Portion entspricht in etwa einer Dönertasche bzw. einem Dönerteller. Falls Sie eine Portion mit doppelt Fleisch gegessen haben, zählt dies als zwei Portionen.

Portionen pro

Habe ich nicht gegessen

weiß nicht / keine Angabe

# Sample

# Sample

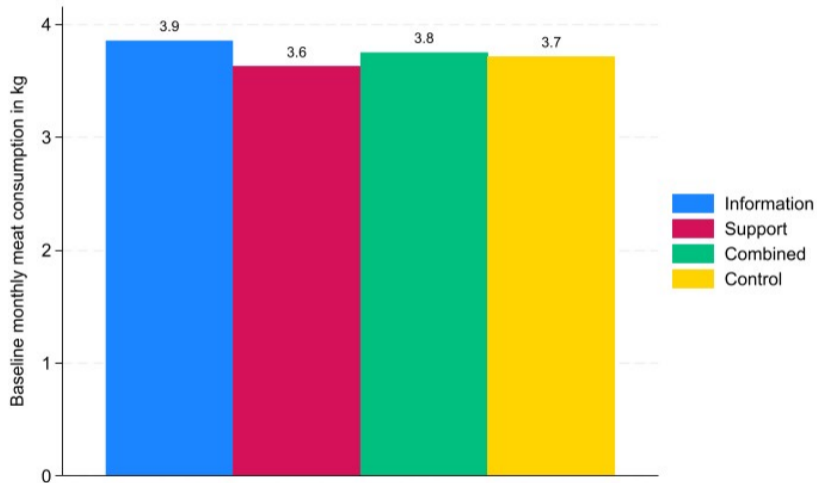
	Total	Info	Support	Combined	Control
<b>Unbalanced panel</b>					
Baseline	2586	642	645	648	651
Follow-up 1	2242	555	560	565	562
Follow-up 2	2064	507	522	528	507
Follow-up 3	1908	481	482	474	471
Endline	1985	502	489	497	497
<b>Balanced panel</b>	<b>1398</b>	<b>353</b>	<b>360</b>	<b>349</b>	<b>336</b>
<b>Endline only</b>	<b>2370</b>	–	–	–	–

- 2,586 individuals participated in baseline and at least one follow-up survey
- 1,398 took part in all four surveys
- Equally split across groups [Balance Table](#)
- 2,370 new participants in endline survey

# Treatment uptake

	Information		Support		Combined	
	No. obs	%	No. obs	%	No. obs	%
Assigned to receive NL	353	100.0	360	100.0	349	100.0
Accepted to receive NL	297	84.1	317	88.1	288	82.5
Unsubscribed from NL	39	13.1	55	17.4	47	16.3
Reported to have read in FU1	229	64.9	232	64.4	213	61.0
Reported to have read in FU2	260	73.7	263	73.1	241	69.1
Opened NL until FU1	126	35.7	92	25.6	72	20.6
Opened NL until FU2	152	43.1	111	30.8	85	24.4

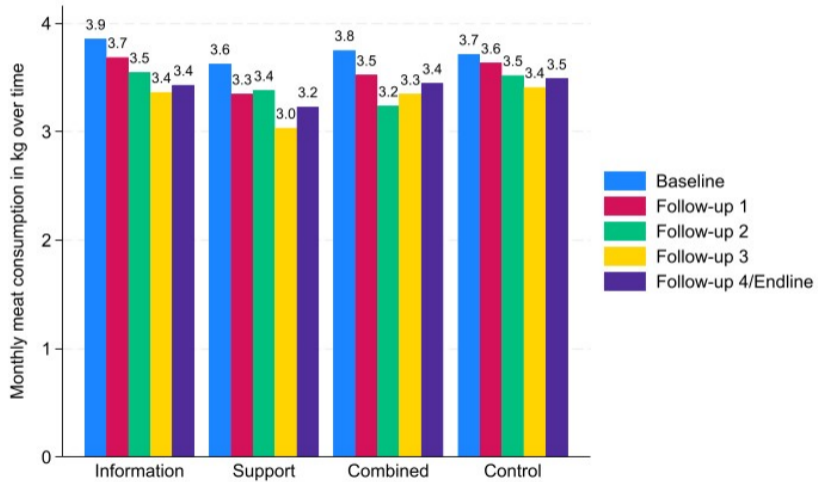
# Baseline meat consumption



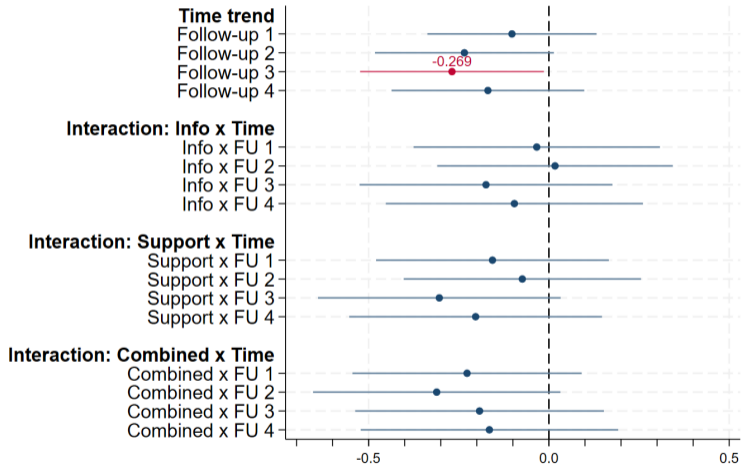


# Main Results

# Meat consumption over time

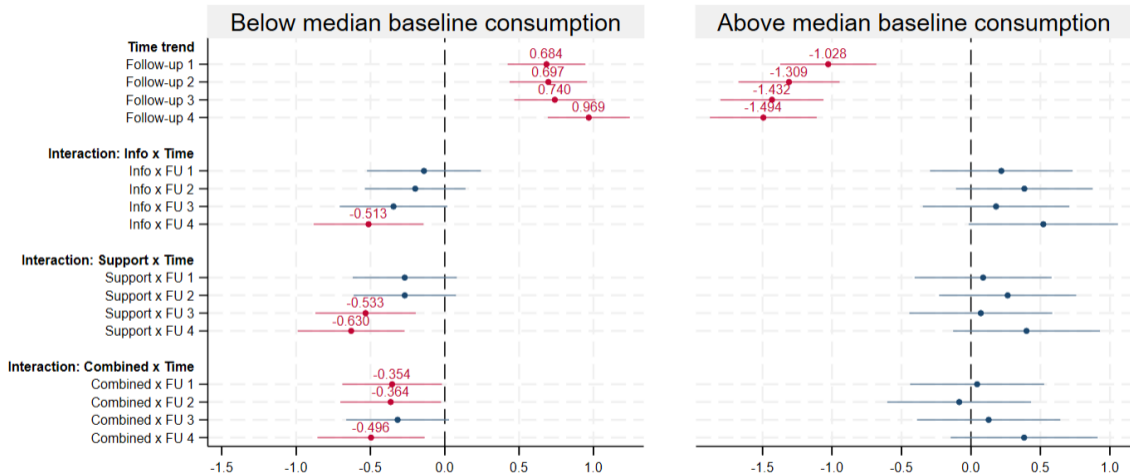


# FE regression results



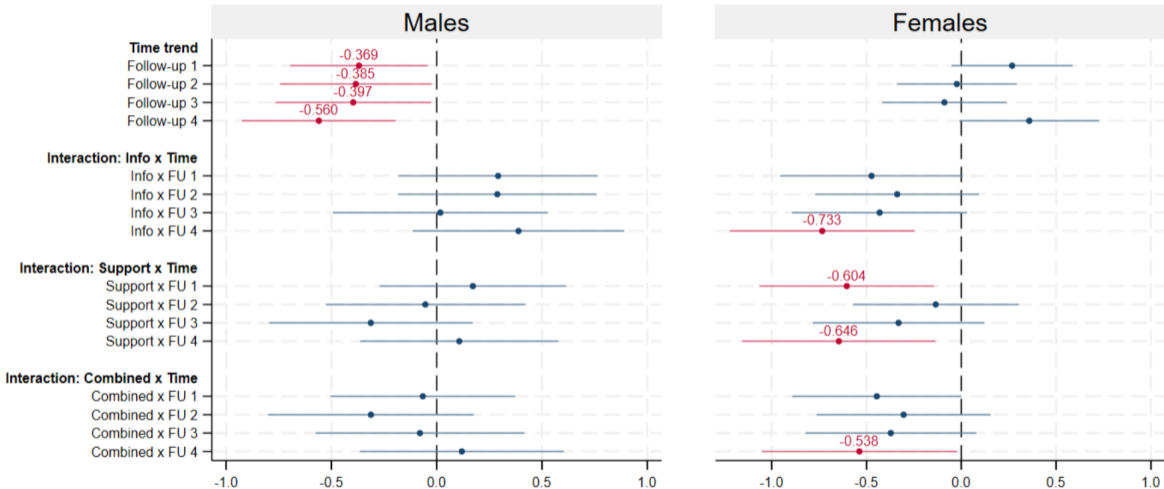
Note: Outcome: monthly meat consumption in kg; point estimates and 95% confidence intervals.

## Baseline consumption heterogeneity



Note: Outcome: monthly meat consumption in kg; point estimates and 95% confidence intervals.

# Gender heterogeneity



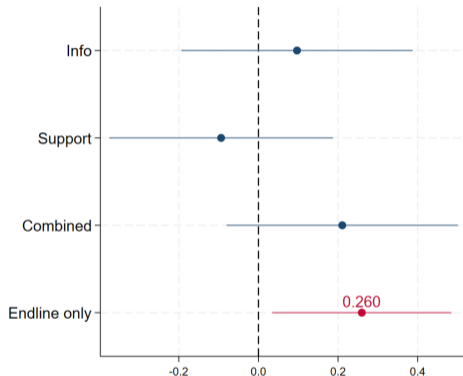
Note: Outcome: monthly meat consumption in kg; point estimates and 95% confidence intervals.

# Additional Analyses

## Additional Analysis I - Effect of repeated surveys on meat consumption

- 1 Compare meat consumption of experimental groups and new participants in last survey wave to check whether decrease over time in control group is due to general time trend or due to regular survey of meat consumption in experimental groups

## OLS results - Meat consumption in endline survey



Note: Outcome: monthly meat consumption in kg; point estimates and 95% confidence intervals.

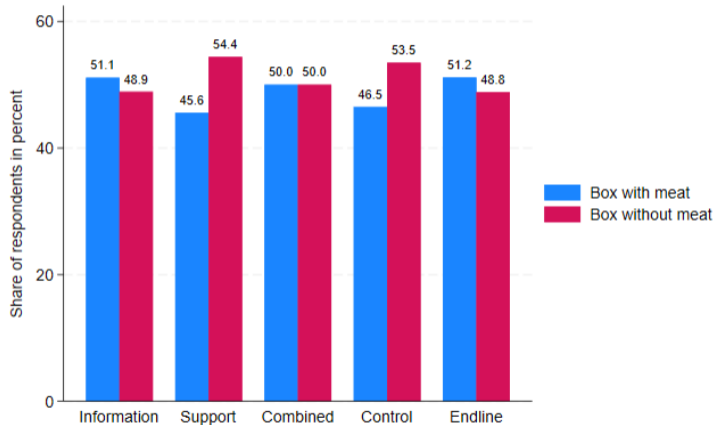
- New participants reported significantly higher meat consumption than experimental groups
- Repeated surveys may have led to reduction in meat consumption



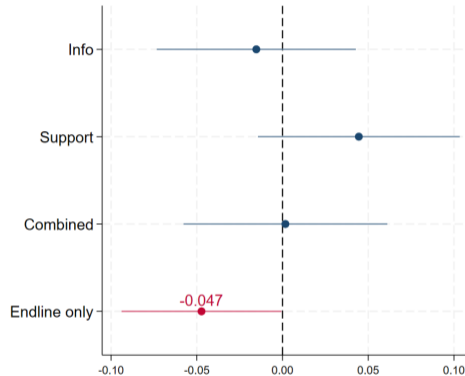
## Additional Analysis II - Choice of vegetarian/vegan meal box

- Choice between voucher for vegetarian/vegan meal box or meal box with meat and fish in endline survey

# Voucher choice



## OLS results - Voucher choice in endline survey



Note: Binary outcome: 1 - vegetarian/vegan meal box, 0 - meal box with meat and fish; point estimates and 95% confidence intervals.

- New participants are significantly less likely to choose the vegetarian or vegan meal box

## Conclusions

- Meat consumption tends to decrease over time in all groups, including the control group
- No effect of newsletter intervention on full sample
- Baseline meat consumption heterogeneity
  - ▶ Significant reduction when baseline consumption is low
  - ▶ Reduction increases over time
  - ▶ Combined newsletter more effective in short run
- Females reduce their meat consumption in the long-run, males don't

⇒ **Changing eating behavior takes time and is easier for those who are already used to having meals without meat**

- New participants report a significantly higher meat consumption and are less likely to choose the vegetarian/vegan meal box in the endline survey

⇒ **Negative trend in meat consumption may result from increased awareness due to regular surveys**



# Appendix



Im Rahmen unseres Forschungsprojektes interessieren wir uns für Ihren **Fleisch- und Fischkonsum** und möchten Sie bitten, auf der folgenden Seite anzugeben, wie viel Fleisch und Fisch Sie **in den letzten vier Wochen** gegessen haben. Für unsere Studie ist es egal, ob Sie viel oder wenig Fleisch und Fisch gegessen haben. Wichtig ist nur, dass sie ehrlich und möglichst genau antworten.

Um es Ihnen leichter zu machen, Ihren Fleisch- und Fischkonsum anzugeben, haben wir verschiedene Fleisch- und Fischprodukte sowie Gerichte, die Fleisch, Wurst bzw. Fisch enthalten, **in 9 Kategorien** unterteilt:

**Kategorie 1:** Aufschnittwurst, Streichwurst, Schinken(würfel) und Ähnliches

**Kategorie 2:** Bratwurst, Brühwurst und Ähnliches

**Kategorie 3:** Schnitzel, Steak und Ähnliches

**Kategorie 4:** Geflügel

**Kategorie 5:** Döner, Gyros, Burger und Ähnliches mit Fleisch oder Wurst

**Kategorie 6:** Pizza, Pide, Quiche und Ähnliches mit Fleisch oder Wurst

**Kategorie 7:** Gemischte Gerichte wie Salate, Suppen oder Reisgerichte mit Fleisch oder Wurst

**Kategorie 8:** Schnelle Zwischenmahlzeiten/Snacks mit Fleisch oder Wurst

**Kategorie 9:** Fisch und Meeresfrüchte



You recently took part in a survey on climate and environmental protection. As part of a sub-project of this survey project, which is being carried out by the RWI - Leibniz Institute for Economic Research ([www.rwi-essen.de](http://www.rwi-essen.de)), you have agreed to receive that we may send you newsletters with recipes and tips as well as and information for a climate and environmentally friendly diet by e-mail. This is the first of eight e-mails on this topic.

We are very interested in your opinion on our newsletters. We would therefore be delighted if you would take a close look at this and the following and the following newsletters and let us know your opinion in the upcoming follow-up surveys.

To access the first newsletter, please click on the preview or the link below.





## When designing the information newsletters we tried to . . .

- Use gain framing / pronounce advantages (e.g., Carfora et al., 2019)
- Avoid fear-based messages (may backfire) (Sanchez-Sabate and Sabaté, 2019)
- Use prefactual messages (*if . . . then*) (e.g., Bertolotti et al., 2016)
- Address individuals directly (e.g., *your* behavior)
- Avoid information overload (Cole et al., 1997)





## Balance Table

	Info (1)	Support (2)	Combined (3)	Control (4)	Total	1 vs 4 (p)	2 vs 4 (p)	3 vs 4 (p)
Male	0.556	0.551	0.585	0.579	0.568	0.123	0.061	0.704
Age	58.749	59.158	59.092	59.744	59.184	0.023	0.181	0.137
At least technical college	0.377	0.426	0.417	0.426	0.412	0.001	0.976	0.545
Employed	0.512	0.470	0.506	0.485	0.493	0.067	0.324	0.149
Has children	0.614	0.605	0.632	0.639	0.622	0.095	0.019	0.650
Income								
Income < 1, 200 Euro	0.059	0.076	0.058	0.064	0.064	0.520	0.133	0.401
Income 1,200 - 2,700 Euro	0.322	0.298	0.300	0.306	0.307	0.256	0.600	0.677
Income 2,700 - 4,200 Euro	0.322	0.339	0.321	0.309	0.323	0.388	0.044	0.435
Income > 4, 200 Euro	0.296	0.287	0.322	0.321	0.306	0.094	0.018	0.949
Existence of climate change	0.919	0.940	0.959	0.944	0.941	0.001	0.556	0.025
Trust in government	2.391	2.461	2.431	2.393	2.419	0.938	0.003	0.099
Environmental attitude	3.838	3.907	3.886	3.808	3.860	0.276	0.000	0.004
Social desirability	3.983	4.004	3.979	3.954	3.980	0.052	0.000	0.089
Locus of control	5.118	5.235	5.227	5.143	5.181	0.435	0.002	0.005
Baseline meat consumption	4.151	4.015	4.184	4.140	4.122	0.903	0.153	0.639
Number of observations	2244	2273	2282	2228	9027	4472	4501	4510

Note: The last three columns present p values for tests on the equality of means across the respective groups.

Sample

## FE regression results - total meat consumption

	Coeff.	SE	95% CI
Follow-up 1	-0.103	(0.120)	[-0.337,0.132]
Follow-up 2	-0.234	(0.127)	[-0.483,0.014]
Follow-up 3	-0.269*	(0.130)	[-0.524,-0.014]
Follow-up 4	-0.169	(0.136)	[-0.436,0.098]
Info x FU1	-0.034	(0.174)	[-0.375,0.308]
Info x FU2	0.017	(0.167)	[-0.310,0.344]
Info x FU3	-0.175	(0.179)	[-0.525,0.176]
Info x FU4	-0.096	(0.182)	[-0.452,0.261]
Support x FU1	-0.157	(0.165)	[-0.479,0.166]
Support x FU2	-0.074	(0.168)	[-0.403,0.255]
Support x FU3	-0.304	(0.172)	[-0.641,0.033]
Support x FU4	-0.203	(0.179)	[-0.554,0.147]
Combined x FU1	-0.227	(0.162)	[-0.545,0.091]
Combined x FU2	-0.311	(0.175)	[-0.654,0.032]
Combined x FU3	-0.192	(0.176)	[-0.537,0.153]
Combined x FU4	-0.165	(0.182)	[-0.522,0.192]
Constant	3.731***	(0.039)	[3.654,3.808]
No. of observations	6420		

Note: Cluster-robust standard errors in parentheses; \*, \*\* and \*\*\* indicate statistical significance at the 5%, 1% and 0.1% level, respectively.



## FE regression results - baseline consumption heterogeneity

	Below median		Above median	
	Coeff.	SE	Coeff.	SE
Follow-up 1	0.684***	(0.133)	-1.028***	(0.176)
Follow-up 2	0.697***	(0.133)	-1.309***	(0.185)
Follow-up 3	0.740***	(0.139)	-1.432***	(0.189)
Follow-up 4	0.969***	(0.140)	-1.494***	(0.196)
Info × FU1	-0.140	(0.195)	0.219	(0.261)
Info × FU2	-0.199	(0.172)	0.385	(0.250)
Info × FU3	-0.345	(0.184)	0.181	(0.269)
Info × FU4	-0.513**	(0.188)	0.521	(0.274)
Support × FU1	-0.269	(0.178)	0.088	(0.251)
Support × FU2	-0.269	(0.175)	0.264	(0.251)
Support × FU3	-0.533**	(0.172)	0.071	(0.262)
Support × FU4	-0.630***	(0.183)	0.400	(0.269)
Combined × FU1	-0.354*	(0.171)	0.044	(0.246)
Combined × FU2	-0.364*	(0.173)	-0.084	(0.264)
Combined × FU3	-0.317	(0.176)	0.127	(0.263)
Combined × FU4	-0.496**	(0.184)	0.383	(0.269)
Constant	1.695***	(0.035)	5.714***	(0.060)
No. of observations	3116		3304	

Note: Cluster-robust standard errors in parentheses; \*, \*\* and \*\*\* indicate statistical significance at the 5%, 1% and 0.1% level, respectively.



## FE regression results - unbalanced sample

	Coeff.	SE
Follow-up 1	-0.074	(0.091)
Follow-up 2	-0.196*	(0.096)
Follow-up 3	-0.277**	(0.102)
Follow-up 4	-0.209	(0.108)
Info x FU1	-0.092	(0.132)
Info x FU2	-0.005	(0.133)
Info x FU3	-0.151	(0.147)
Info x FU4	-0.111	(0.148)
Support x FU1	-0.186	(0.125)
Support x FU2	-0.070	(0.131)
Support x FU3	-0.226	(0.136)
Support x FU4	-0.159	(0.145)
Combined x FU1	-0.161	(0.127)
Combined x FU2	-0.159	(0.134)
Combined x FU3	-0.001	(0.143)
Combined x FU4	0.028	(0.147)
Constant	3.724***	(0.029)
Observations	9816	

Note: Cluster-robust standard errors in parentheses; \*, \*\* and \*\*\* indicate statistical significance at the 5%, 1% and 0.1% level, respectively.



## FE regression results - unbalanced sample - baseline meat consumption heterogeneity

	below median		above median	
	Coeff.	SE	Coeff.	SE
Follow-up 1	0.635***	(0.100)	-0.903***	(0.141)
Follow-up 2	0.621***	(0.101)	-1.153***	(0.150)
Follow-up 3	0.682***	(0.113)	-1.350***	(0.150)
Follow-up 4	0.935***	(0.117)	-1.505***	(0.153)
Info × FU1	-0.054	(0.147)	-0.037	(0.203)
Info × FU2	-0.057	(0.139)	0.169	(0.207)
Info × FU3	-0.168	(0.155)	-0.006	(0.220)
Info × FU4	-0.434**	(0.160)	0.360	(0.220)
Support × FU1	-0.152	(0.134)	-0.103	(0.193)
Support × FU2	-0.090	(0.144)	0.098	(0.199)
Support × FU3	-0.388**	(0.143)	0.043	(0.205)
Support × FU4	-0.533***	(0.156)	0.362	(0.214)
Combined × FU1	-0.187	(0.134)	0.046	(0.197)
Combined × FU2	-0.253	(0.136)	0.112	(0.212)
Combined × FU3	-0.156	(0.157)	0.325	(0.214)
Combined × FU4	-0.343*	(0.155)	0.612**	(0.215)
Constant	1.732***	(0.027)	5.653***	(0.044)
No. of observations	4756		5060	

Note: Cluster-robust standard errors in parentheses; \*, \*\* and \*\*\* indicate statistical significance at the 5%, 1% and 0.1% level, respectively.



## OLS results - experimental groups versus new participants in endline survey

	Coeff.	SE
Information	0.097	(0.148)
Support	-0.094	(0.143)
Combined	0.211	(0.148)
Endline only	0.260*	(0.115)
Age	0.009***	(0.003)
Male	0.359***	(0.076)
A-levels	-0.297***	(0.078)
Medium income	0.020	(0.204)
High income	0.240	(0.202)
Very high income	0.225	(0.204)
Intention	0.163***	(0.034)
Perceived behavioral control	-0.135*	(0.056)
Meat-eater identity	0.922***	(0.036)
Environmental awareness	-0.231***	(0.040)
Locus of control	-0.024	(0.038)
Constant	1.233**	(0.430)
Observations	3102	

Note: Robust standard errors in parentheses; \*, \*\* and \*\*\* indicate statistical significance at the 5%, 1% and 0.1% level, respectively.



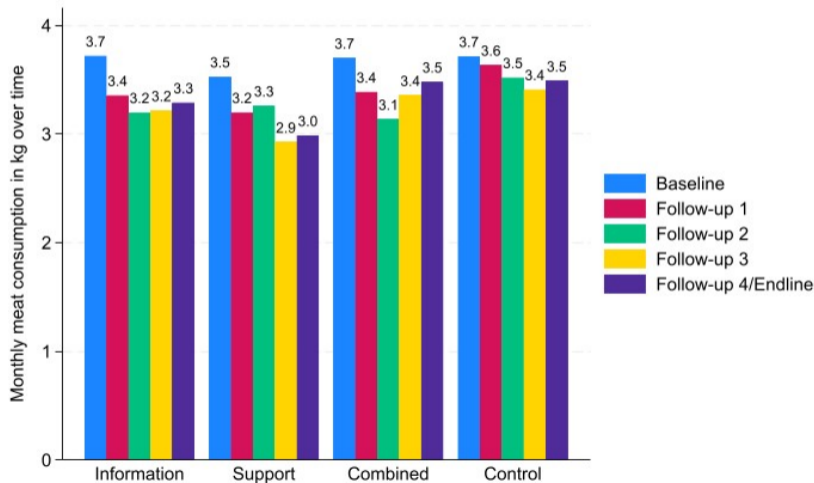
## OLS results - voucher choice in endline survey

	Coeff.	SE
Information	-0.015	(0.030)
Support	0.045	(0.030)
Combined	0.002	(0.030)
Endline	-0.047*	(0.024)
Age	-0.004***	(0.001)
Male	-0.029	(0.016)
A-levels	0.072***	(0.016)
Medium income	0.027	(0.039)
High income	0.053	(0.039)
Very high income	0.073	(0.040)
Intention	0.095***	(0.007)
Perceived behavioral control	0.039***	(0.011)
Meat-eater identity	-0.178***	(0.007)
Environmental awareness	0.070***	(0.008)
Locus of control	0.014	(0.007)
Constant	0.439***	(0.087)
Observations	2905	

Note: Robust standard errors in parentheses; \*, \*\* and \*\*\* indicate statistical significance at the 5%, 1% and 0.1% level, respectively.








## Meat consumption over time - control group versus individuals who opened newsletter until FU2 (ATT)
















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