



**EARLY RESPONDENTS, LATE
RESPONDENTS AND NON-RESPONDENTS
IN A CROSS-NATIONAL PUSH TO WEB
BUSINESS SURVEY**

ESRA 2021

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EUROPEAN COMPANY SURVEY 2019

Survey of (HR) managers and employee representatives (ER) in European establishments

- Most senior person in charge of HR in the establishment (MM)
- Official employee representative (works council/trade union)

Jointly commissioned by two European Agencies (Eurofound and Cedefop), carried out by Ipsos

Three previous editions: 2004/5, 2009, 2013

Fourth edition objectives:

- Provide evidence relevant to the agencies' stakeholders and support policies for EU competitiveness and EU initiatives
- Cover broadly the same topics as the ECS 2013 (work organisation, human resource management, direct employee participation and social dialogue) but provide more detail with regard to skills utilisation and skills strategies as well as digitalisation
- Linking these issues to business strategy and performance

SURVEY DESIGN

- Probability-based samples of establishments with at least 10 employees, carrying out market activities
- All EU Member States, target sample sizes between 250 in Malta and 1,500 in France
- Push-to-web approach
 - Establishments contacted by telephone (screener interview)
 - Identifying manager (MM) and employee representative (ER) respondent
 - Request to administer questionnaires online
- MM questionnaire in all establishments, ER questionnaire in those establishment where an ER is present and willing to participate
- State-of-the-art procedures with regard to questionnaire translation, quality assurance, and quality monitoring

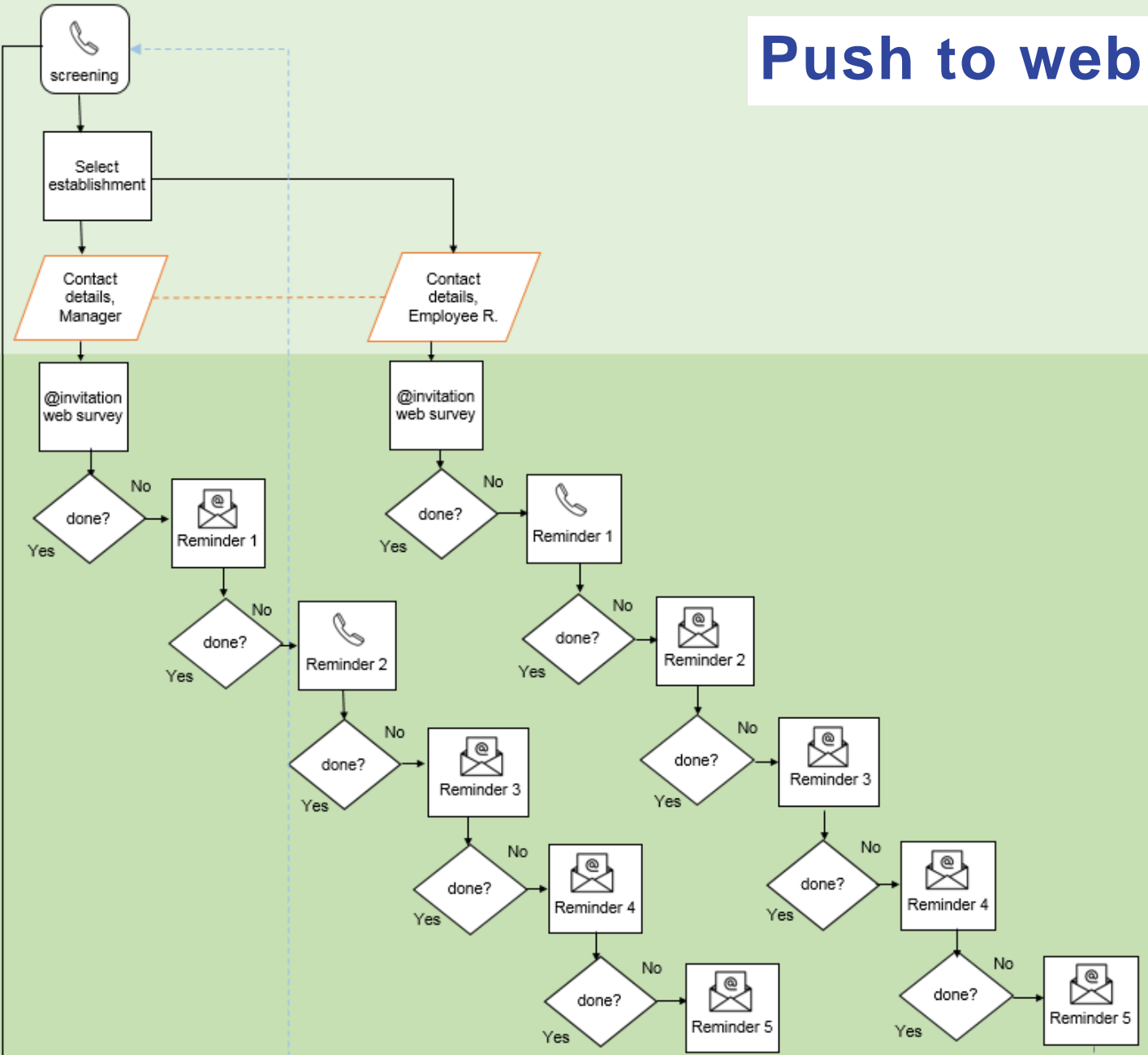
NONRESPONSE IN ECS 2019



Push to web

Recruitment

Web survey



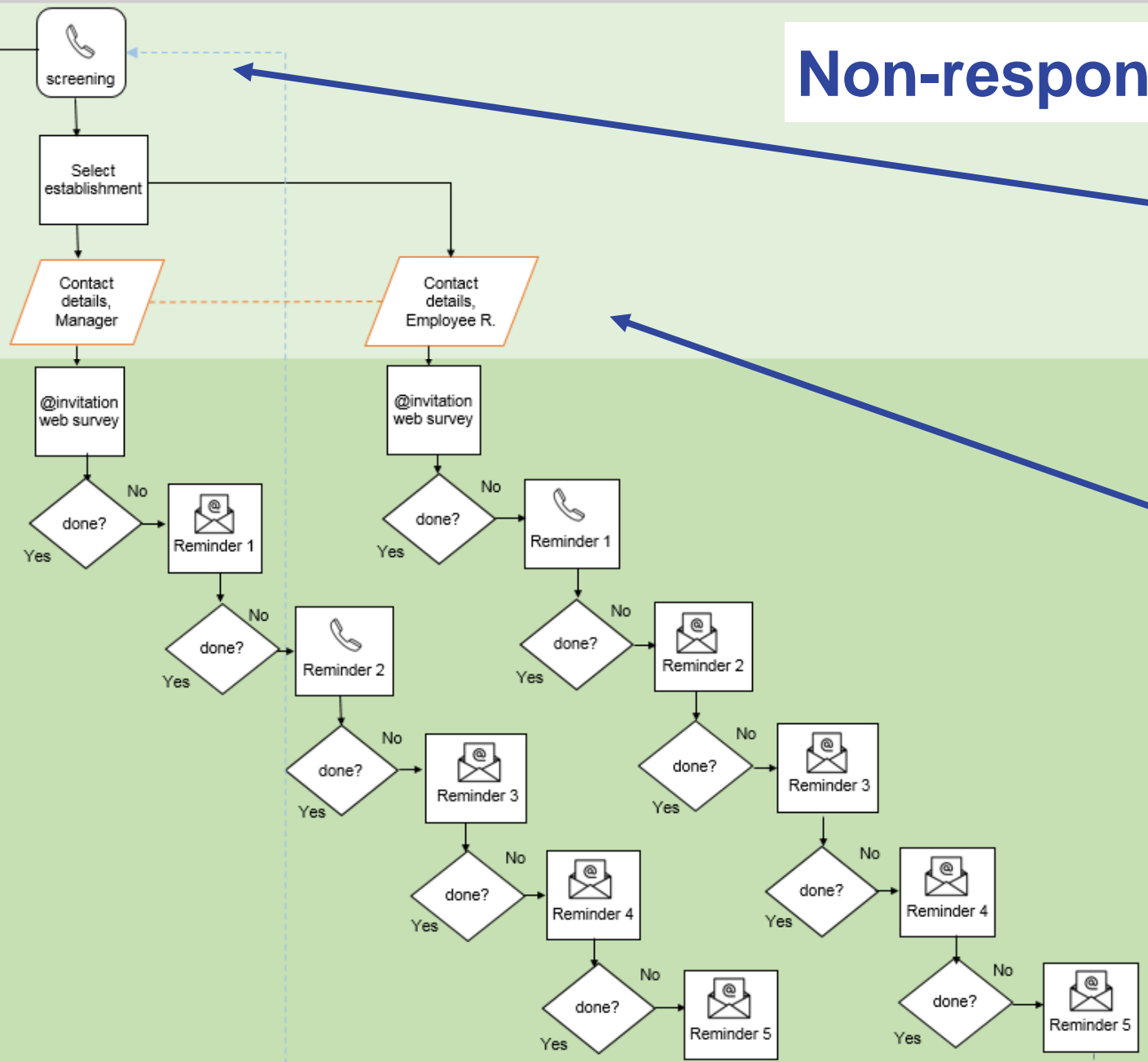
CATI recruitment

Push to web with email and CATI reminders

Non-response in ECS 2019

Recruitment

Web survey



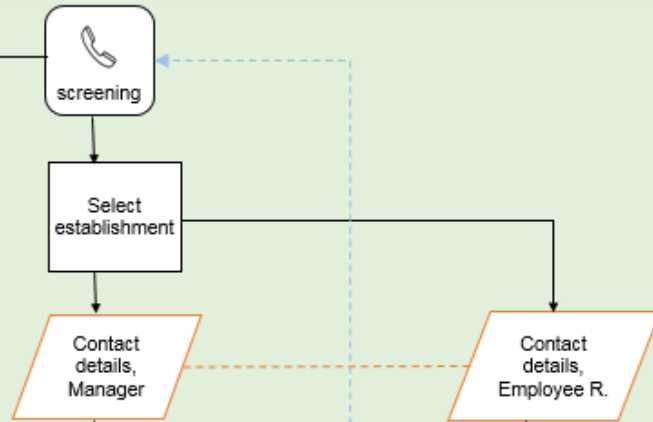
Non-contact and refusals to respond to screener questions (CATI interview) (+ sample step)

Refusal to give email address to receive survey invitation

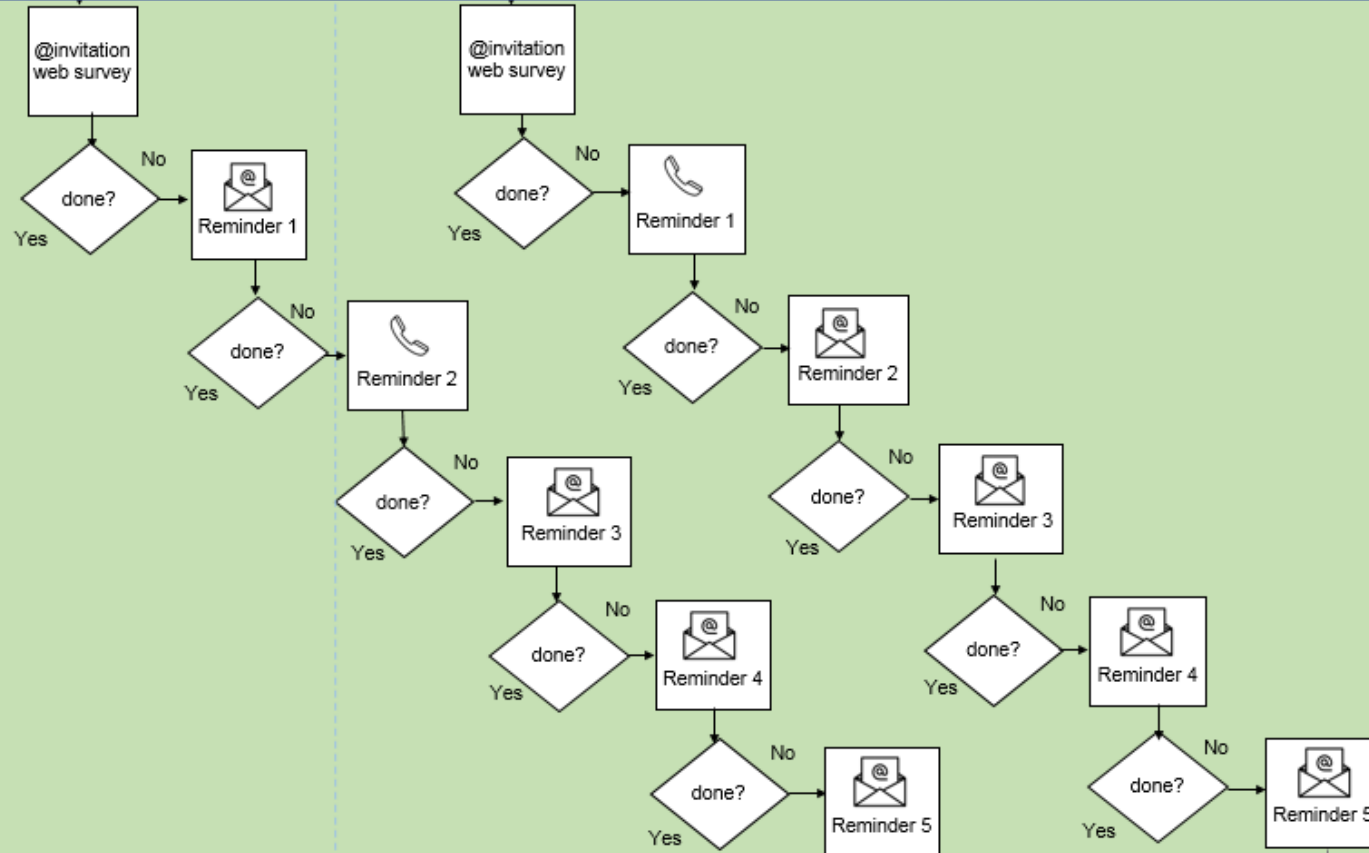
Non-participation in online survey (after survey invitation, CATI and email reminders)

Invitation and reminders

Recruitment



Web survey



Number of reminder:

4 @reminders

1 CATI reminder

Time between @reminders:

4 working days

Timing of CATI reminder:

after 2nd @reminder

RESPONSE RATES IN ECS 2019

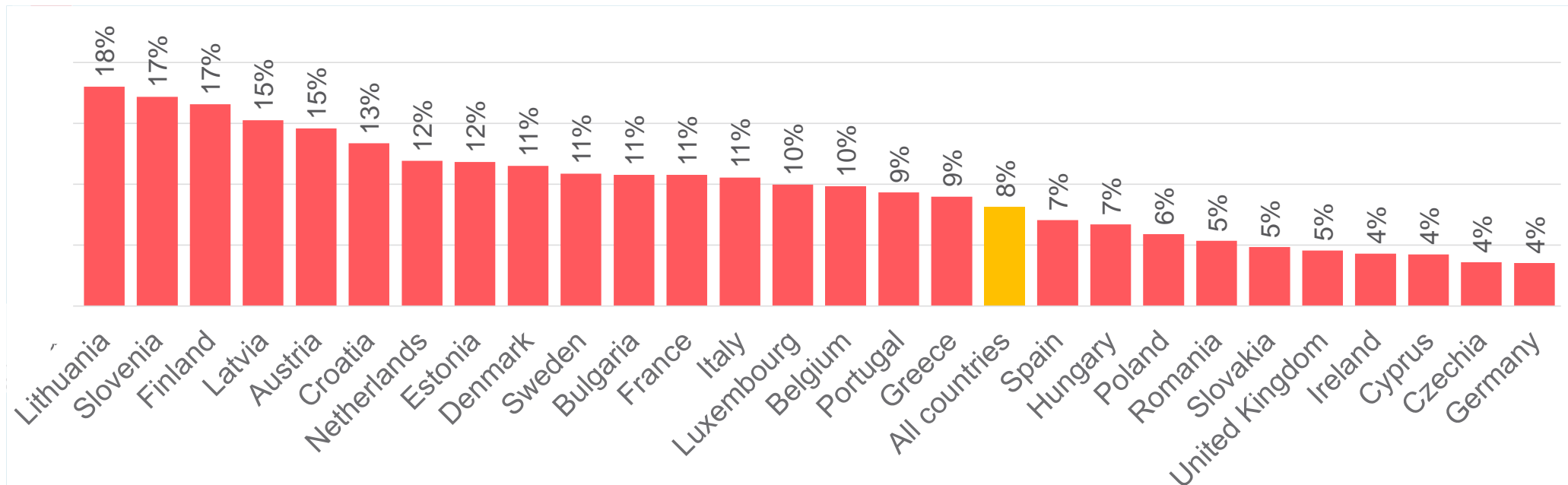


RESPONSE RATES

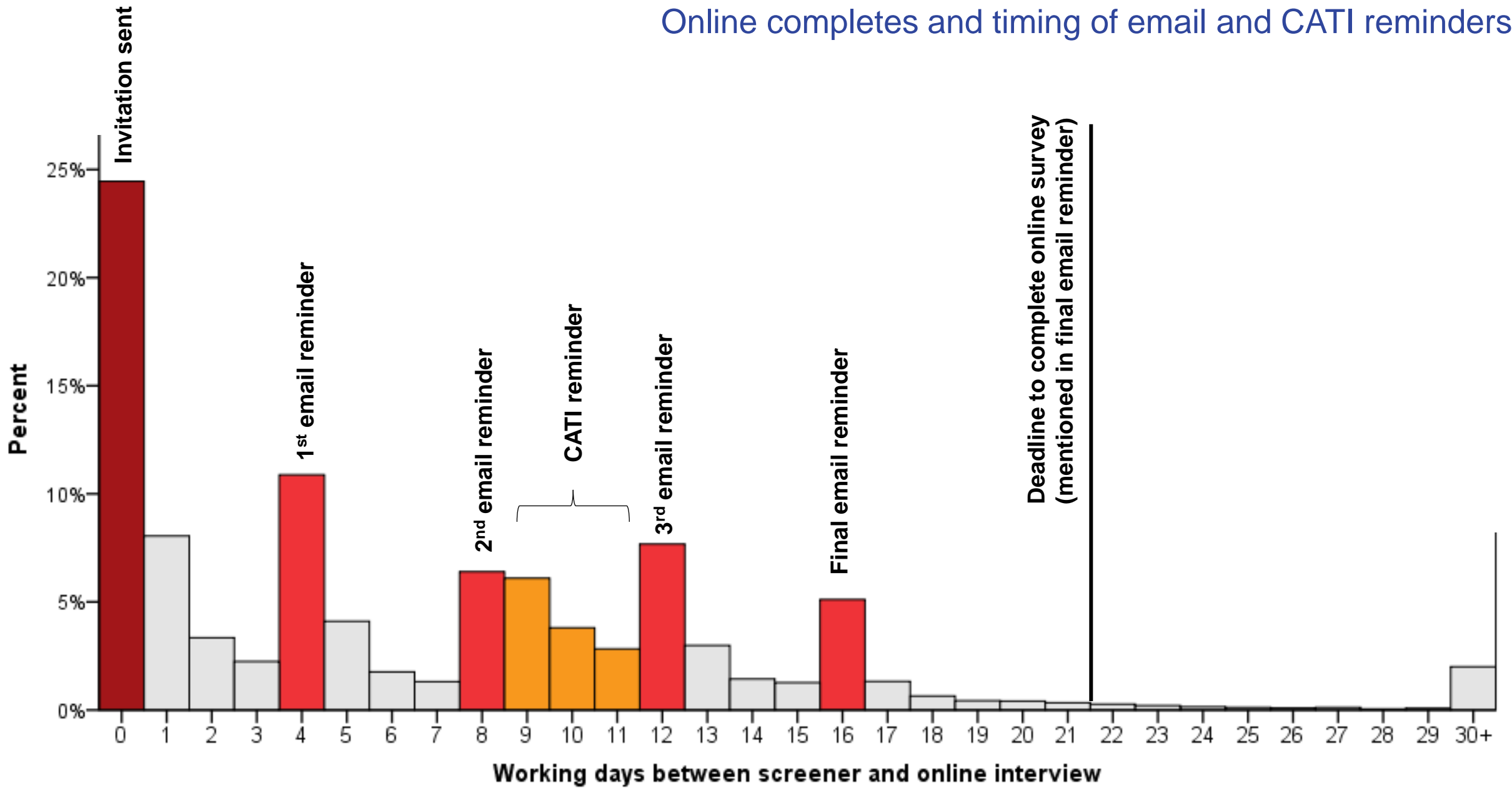
Combined response rate (CATI screener and online survey)

- Response rate CATI screener: 8% and 54%
- Cooperation rate online survey: 20% to 49%

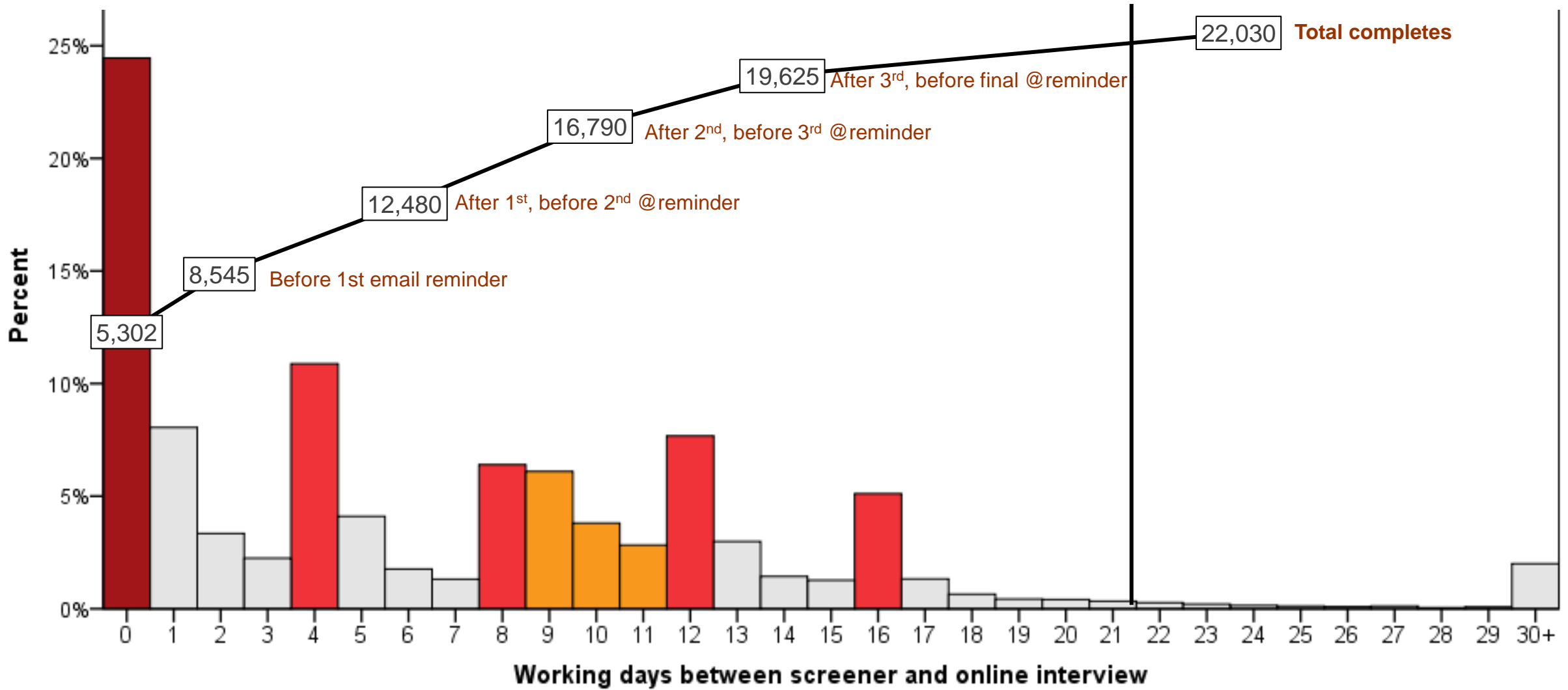
Overall response rate ECS 2019, by country



Online completes and timing of email and CATI reminders



Cumulative number of completes



NON-RESPONSE BIAS

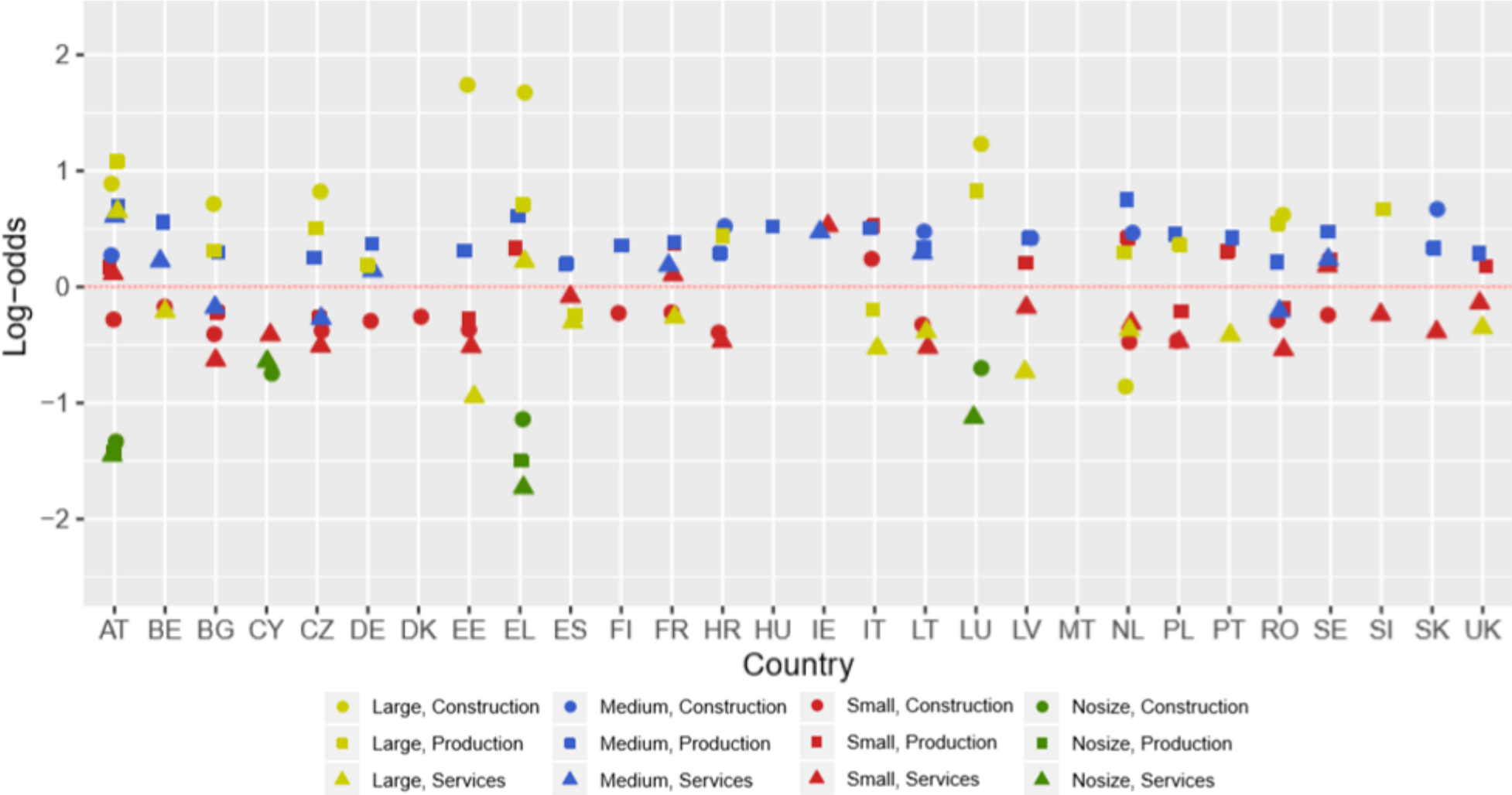


NON-RESPONSE BIAS IN CATI SCREENER

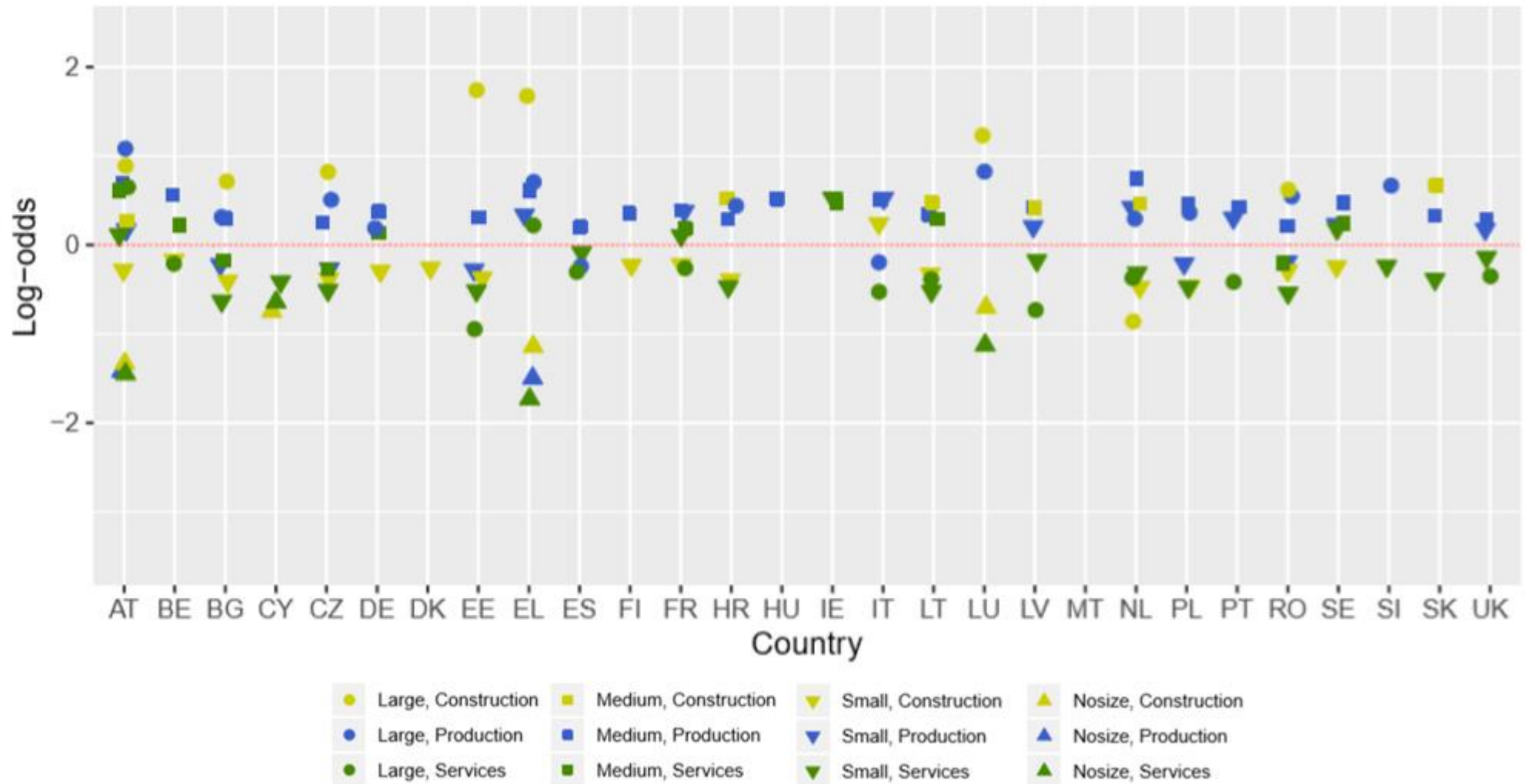
Logistic regression to predict response in the CATI screener

- **Base: all management respondents that completed a screener interview**
- “Drop-outs” before providing email address: 4% of screeners completed
- Estimated by country
- Predictors (from sample frames):
 - size of the establishment (or company) in terms of number of employees
 - main sector of economic activity (recoded from NACE rev. 2 categories).

NON-RESPONSE MODELS FOR THE CATI SCREENER



NON-RESPONSE MODELS FOR THE CATI SCREENER

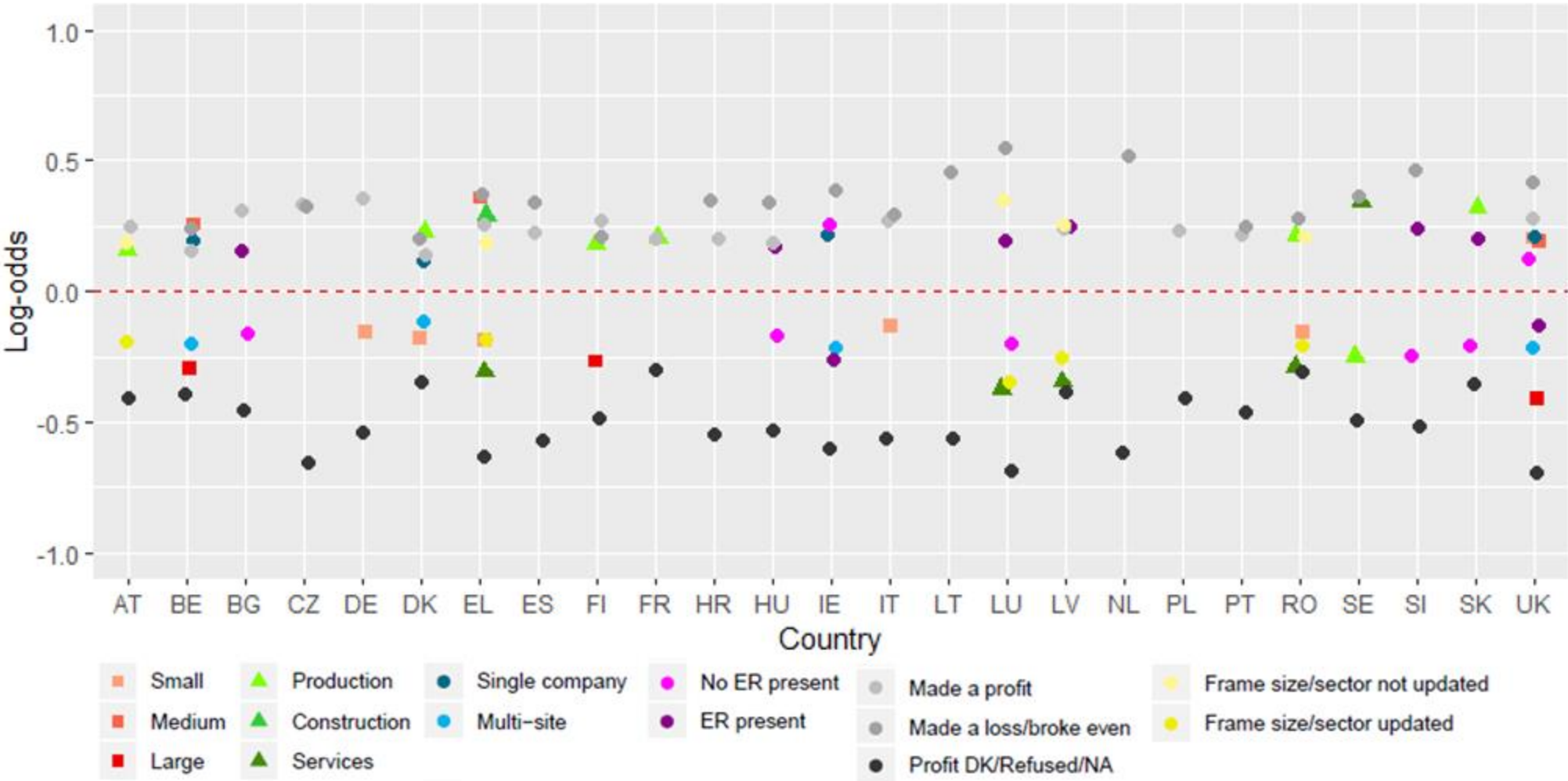


NON-RESPONSE BIAS IN THE ONLINE SURVEY

Logistic regression to predict response in the online survey

- **Base: all respondents in CATI screener who provided an email address**
- Estimated by country
- Predictors (information collected during screener interview):
 - size of establishment (number of employees: 10-49 empl., 50-249 empl., 250+ employees);
 - NACE sector;
 - type of establishment (single-site company, headquarters, subsidiary);
 - presence of employee representative in establishment;
 - response to PROFIT question (Did this establishment make a profit in 2018?)
 - frame size/sector information updated in screener

NON-RESPONSE MODELS FOR THE ONLINE SURVEY



EARLY RESPONDENTS AND LATE RESPONDENTS



DIFFERENCES BETWEEN EARLY AND LATE RESPONDENTS

		Before 2 nd @reminder (n=14,480)	After 2 nd @reminder, before 4 th @reminder (n=7,145)	P-value	After 4 th @reminder (n=2,405)	P-value
NACE sector	<i>Production</i>	27%	28%	ns.	28%	ns.
	<i>Construction</i>	10%	11%	ns.	10%	ns.
	<i>Services</i>	62%	62%	ns.	63%	ns.
Establishment size	<i>Small (10-49)</i>	63%	62%	ns.	60%	<0.01
	<i>Medium (50-249)</i>	27%	28%	ns.	28%	ns.
	<i>Large (250+)</i>	10%	11%	ns.	12%	<0.01
Profit in 2018	<i>Yes, made a profit</i>	79%	79%	ns.	77%	<0.05
	<i>No, made a loss</i>	10%	10%	ns.	12%	<0.05
	<i>Broke even</i>	11%	11%	ns.	11%	ns.

STRATEGY FOR IDENTIFYING CASES WITH POOR DATA QUALITY

Data quality indicators used in the calculation of overall quality score per respondent

- **Survey length** – short surveys are flagged
- **Missing data** (% of item non-response)
- Number of **consistency checks** shown
- **Non-response** at two-digit NACE sector question (mainact2d)
- **Straight-lining** (no. of straight-lined question sets)
- **Speeding** (no. of sections respondent speeded)
- **Implausible answers – inconsistency** between reported number of non-managerial employees and numbers reported in the follow-up questions about employees (e.g., questions empperm, and skills questions)
- Implausible answers – **out of range** responses to ranking questions (e.g., the ranking question including pmstrat, training and hiratt)
- Implausible answers – number of **hierarchical levels** reported by organizations (hiera)

STRATEGY FOR IDENTIFYING CASES WITH POOR DATA QUALITY

		Retained completes (n=21,869)	Bad quality cases (n=161)
Survey length and speeding	<i>LOI (mm:ss)</i>	27:05	16:09
	<i>Average number of sections speeded</i>	0.08	2.3
	<i>% Speeding in 2+ sections</i>	1%	47%
Item non-response	<i>% Item non-response</i>	2%	38%
	<i>Non-response on 2-digit NACE</i>	12%	81%
Consistency checks	<i>Average number of consistency checks shown</i>	0.9	5.4
Straight-lining	<i>Average sections straight-lined</i>	1.7	1.6

DIFFERENCES BETWEEN EARLY AND LATE RESPONDENTS

		Before 2 nd @reminder (n=14,480)	After 2 nd @reminder, before 4 th @reminder (n=7,145)	P-value	After 4 th @reminder (n=2,405)	P-value
Survey length and speeding	<i>LOI (mm:ss)</i>	26:48	27:36	<0.01	26:57	ns.
	<i>Average number of sections speeded</i>	0.1	0.1	ns.	0.1	ns.
	<i>% Speeding in 2+ sections</i>	1.4%	1.7%	ns.	1.9%	ns.
Item non-response	<i>% Item non-response</i>	1.8%	2.3%	<0.01	2.4%	<0.01
	<i>Non-response on 2-digit NACE</i>	11.5%	13.2%	<0.01	13.2%	<0.05
Consistency checks	<i>Average number of consistency checks shown</i>	.9	1.0	<0.01	1.0	<0.01
Straight-lining	<i>Average sections straight-lined</i>	18%	19%	<0.01	19%	<0.01

CONCLUSIONS



CONCLUSIONS AND QUESTIONS

Non-response bias in ECS 2019

- No evidence found of large non-response bias with respect to the available predictor variables
- This does not exclude non-response bias linked to other (non-observed) characteristics of establishments

Early and later respondents

- Repeated reminders essential to reach target number of completes
- Minor (non-sign.) differences between early respondents and late respondents
- No evidence that repeated reminders lower degree of non-response bias
- Lower quality score for late respondents (but still acceptable quality)

**BE
SURE.
ACT
SMARTER.**

GAME CHANGERS

