

Strategies to minimize nonresponse bias

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Statistics Denmark Survey

About us...

- Full service survey office in National Danish Statistical Institute
- Clients: Universities, researchers, Governmental sector, think tanks etc.
- 40-50 surveys a year
 - Household, personal school and business surveys

Specialists in data collection

- Counselling on survey methodology
- Sample & frame on basis of official Danish registers
- Questionnaire design
- Testing
- Contact to respondents
- Data management
 - Survey data can be linked to registers at anonymized micro-level



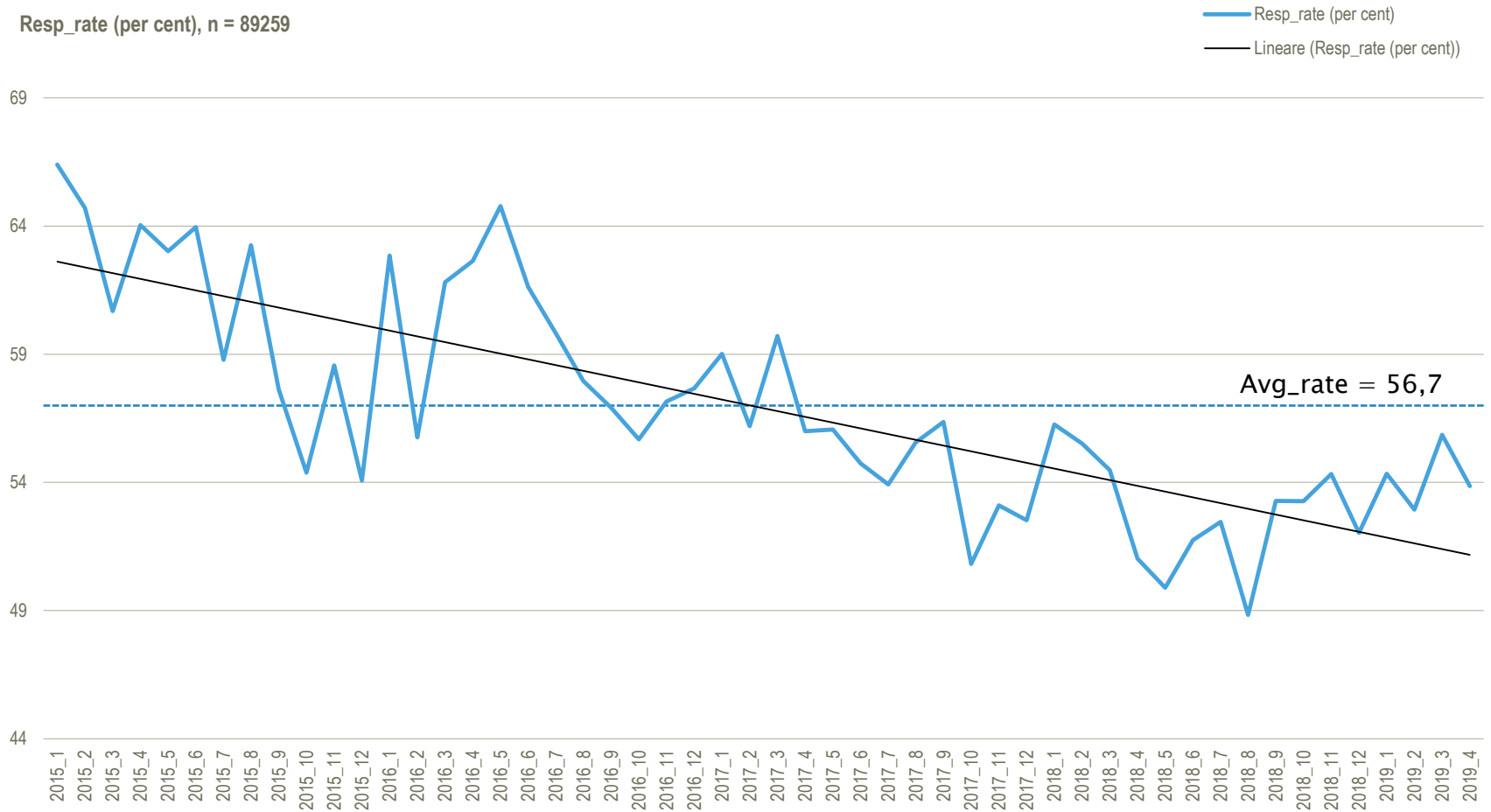
Background

- With full knowledge of register-based background data of our samples and frames we can map and analyse response patterns for certain types of respondents or segments.
- Statistics Denmark's Survey Office (SD Survey) aim to map the characteristics of the respondents and nonrespondents of the Danish Omnibus Survey.
- The basis of the mapping exercise is roughly 90.000 records from the past 4 years.
- The aim is to optimize the data collection and reduce the nonresponse bias.



The response rate

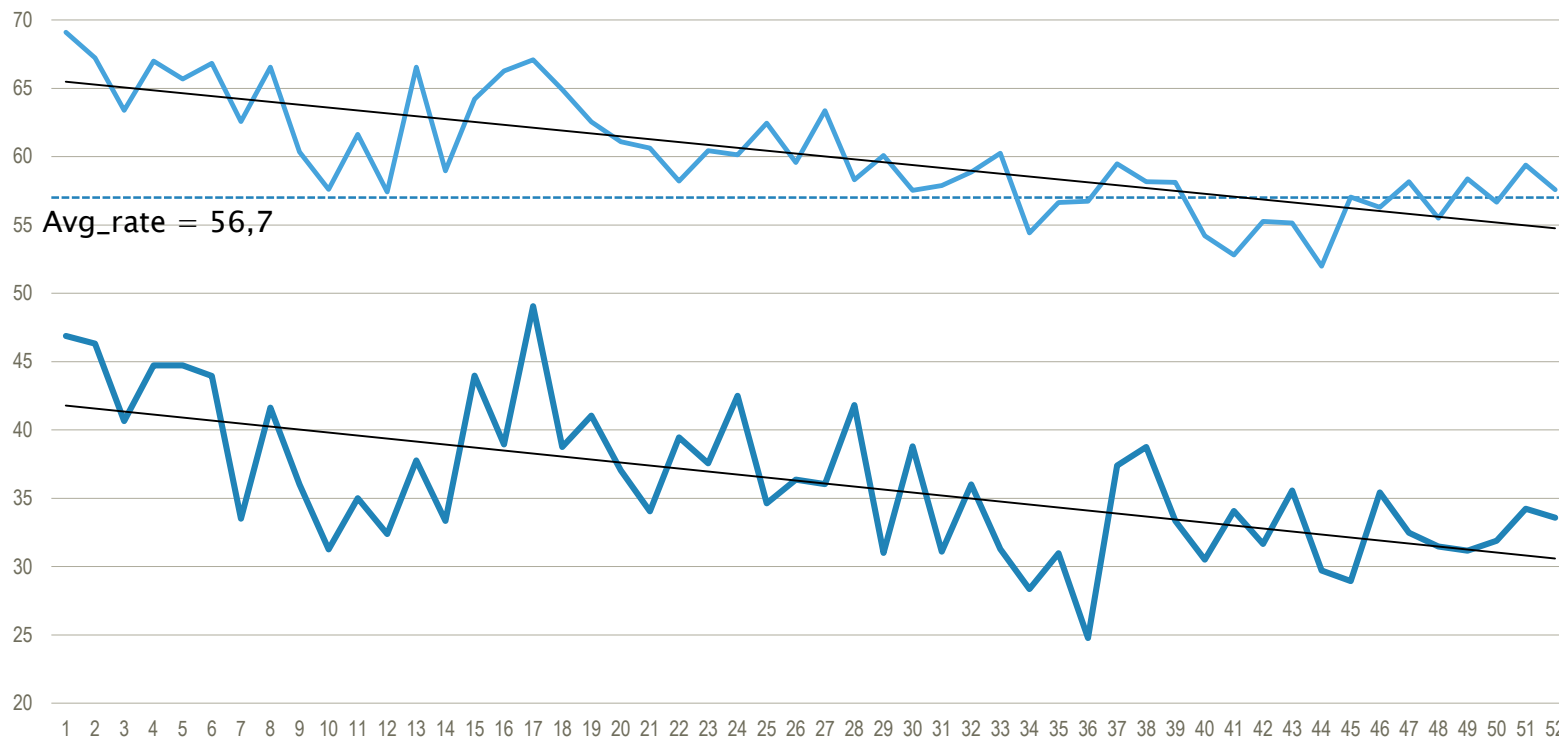
Resp_rate (per cent), n = 89259



Response rate, by origin

Resp_rate (per cent), n = 89259

— Danish Origin — Other origin — Lineare (Danish Origin) — Lineare (Other origin)



WHY?

...We don't know 😞

- Survey fatigue
- Wrong communication
- Fewer phonenumberbers
- Data security issues
- Less trust to the public sector

What we do know is that a lower response rate means lower data quality and increased uncertainty...



About the data source for the project

The Danish Omnibus Survey (the Bus)

- Monthly data collection
- General questions, mainly about the society
 - Basis of a core questionnaire
 - ...and new questions for a few months

CAWI + CATI (70/30)

Online Survey: digital letters, paper letters and telephone interviewing

- Simple random sample (N = 1.850 R's)
 - Age: 16-74 years
- ~1.000 responses per month
 - ~ 55 per cent response rate



Data collection for one month

- Data collection starts as we send a digital letter aprox. 25th in the previous month
- CATI starts the 5th.
- Data collection ends aprox 15th-17th in the specific month

December	
L	1
S	2
M	3
T	4
O	5 Cati start
T	6 Rykker-brev
F	7
L	8
S	9
M	10
T	11
O	12
T	13 Rykker - DP
F	14
L	15
S	16 Cati slut
M	17
T	18
O	19 Levering
T	20
F	21
L	22
S	23
M	24 Juleaften
T	25 1. Juledag
O	26 2. Juledag
T	27
F	28
L	29
S	30
M	31 Nytårsaften

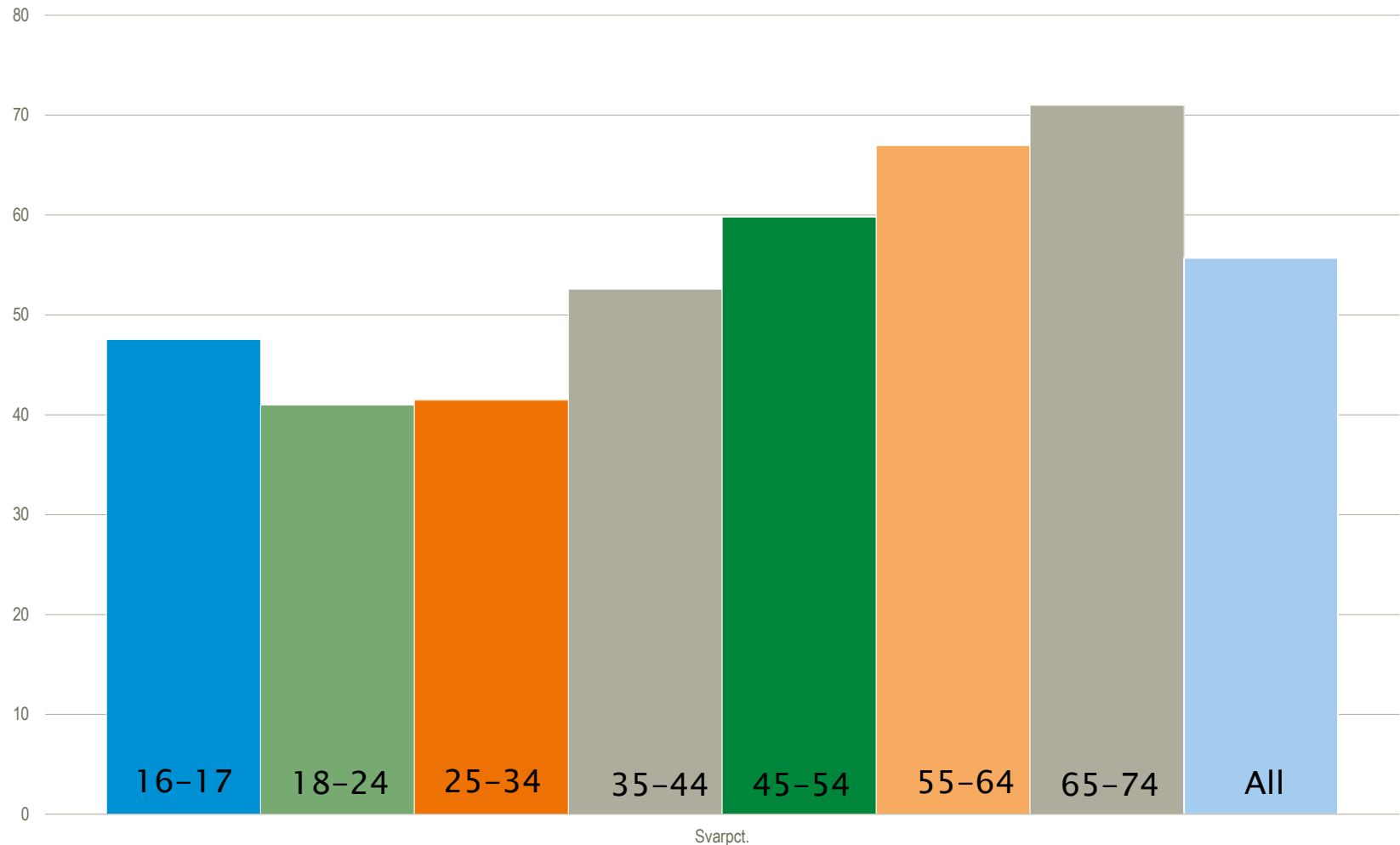


Data source

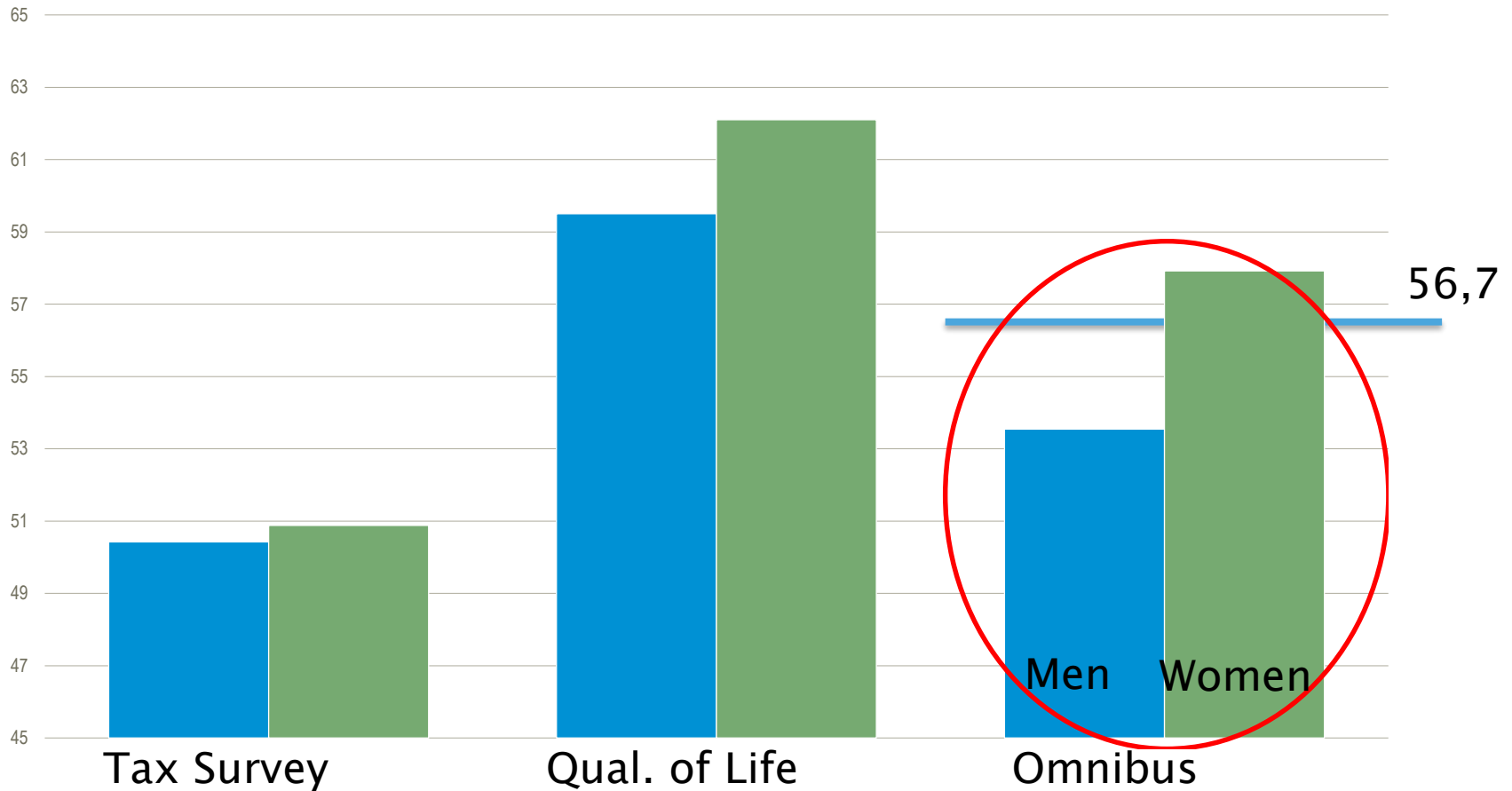
- 52 surveys
 - 90.000 records
- SRS
- Same mode
- Same contact
- Repeated questionnaire with some changes form month to month
- Full knowledge from official registers
- + paradata



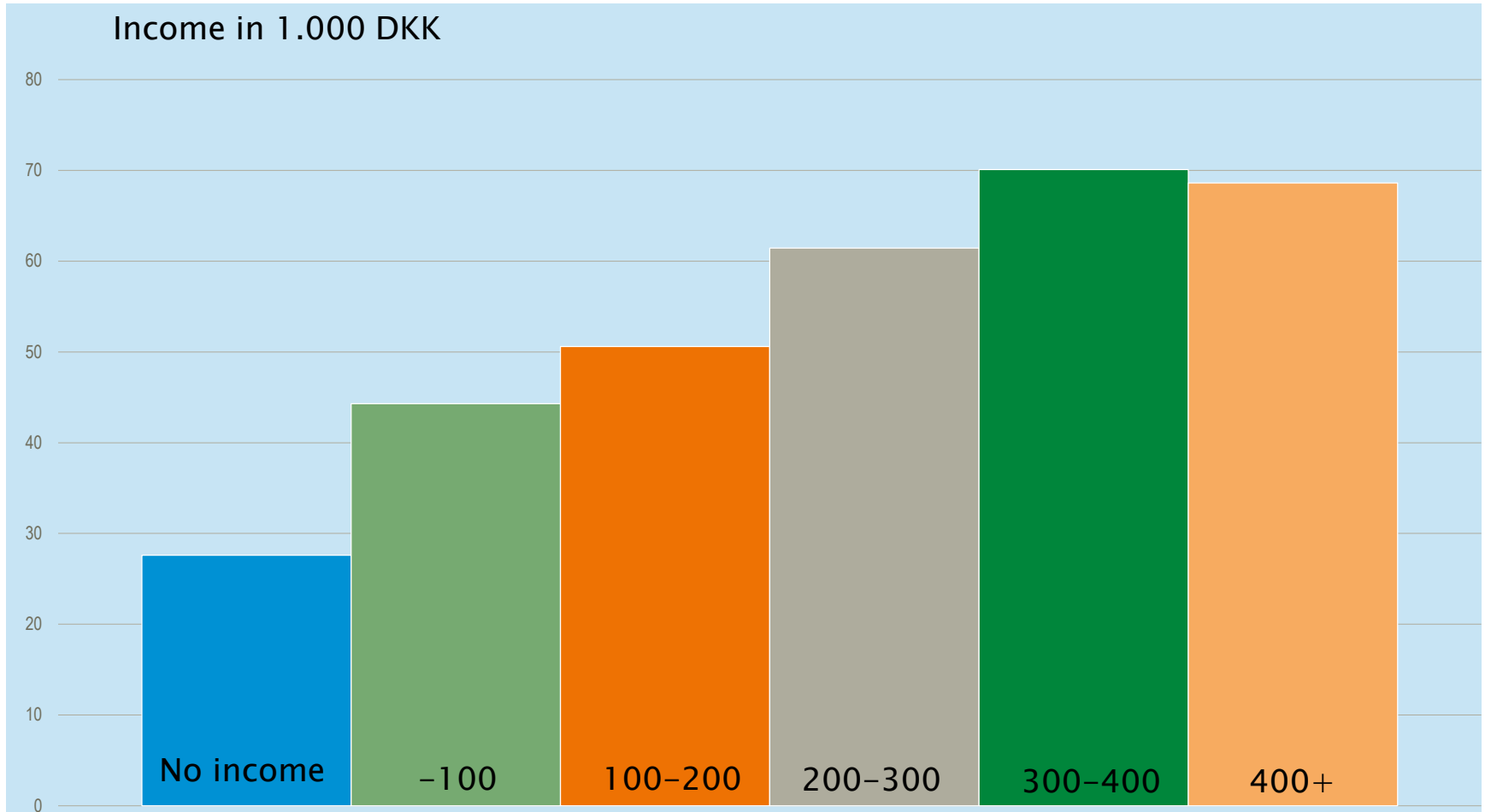
Response rates: By age



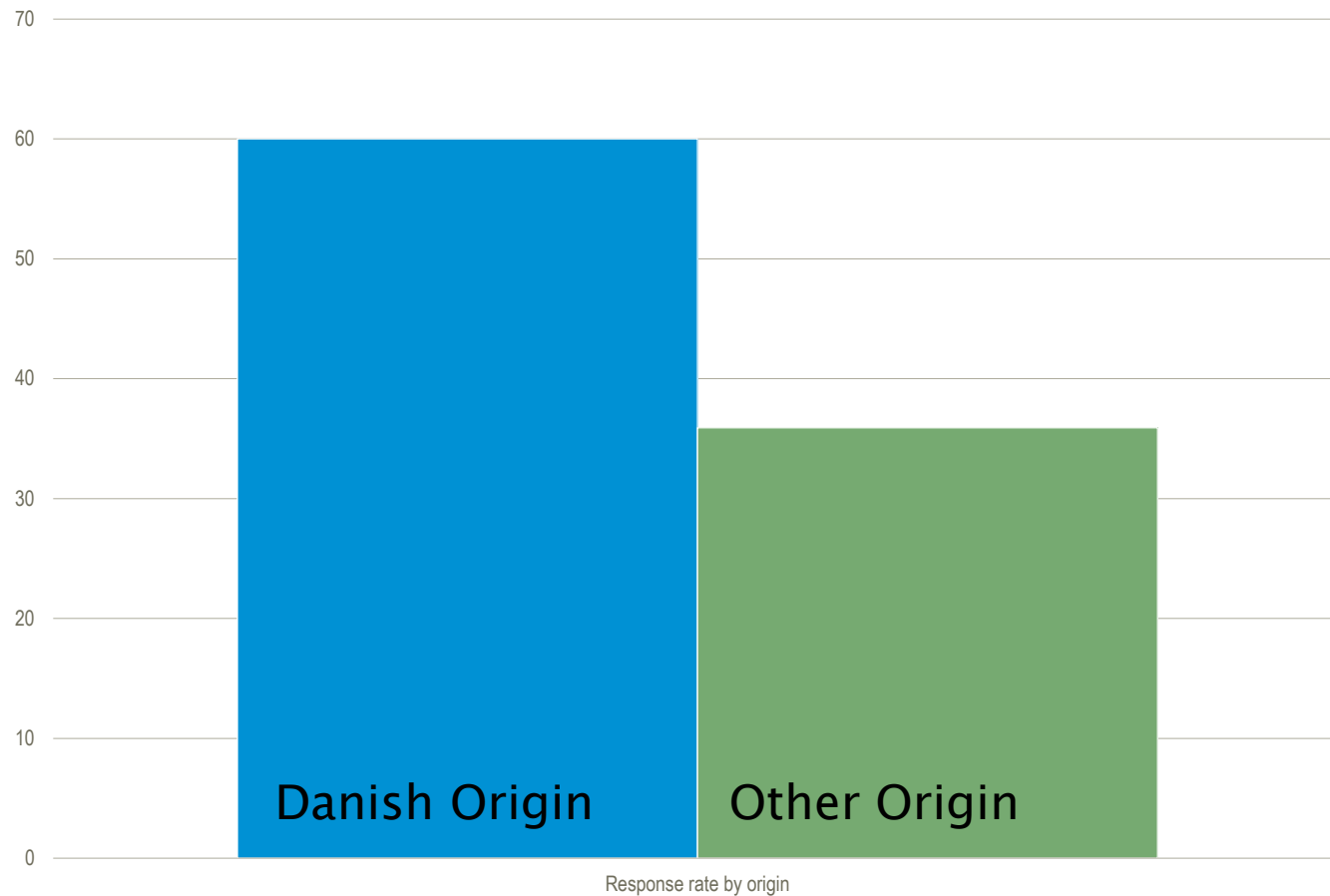
Response rates: By sex



Response rates: By income

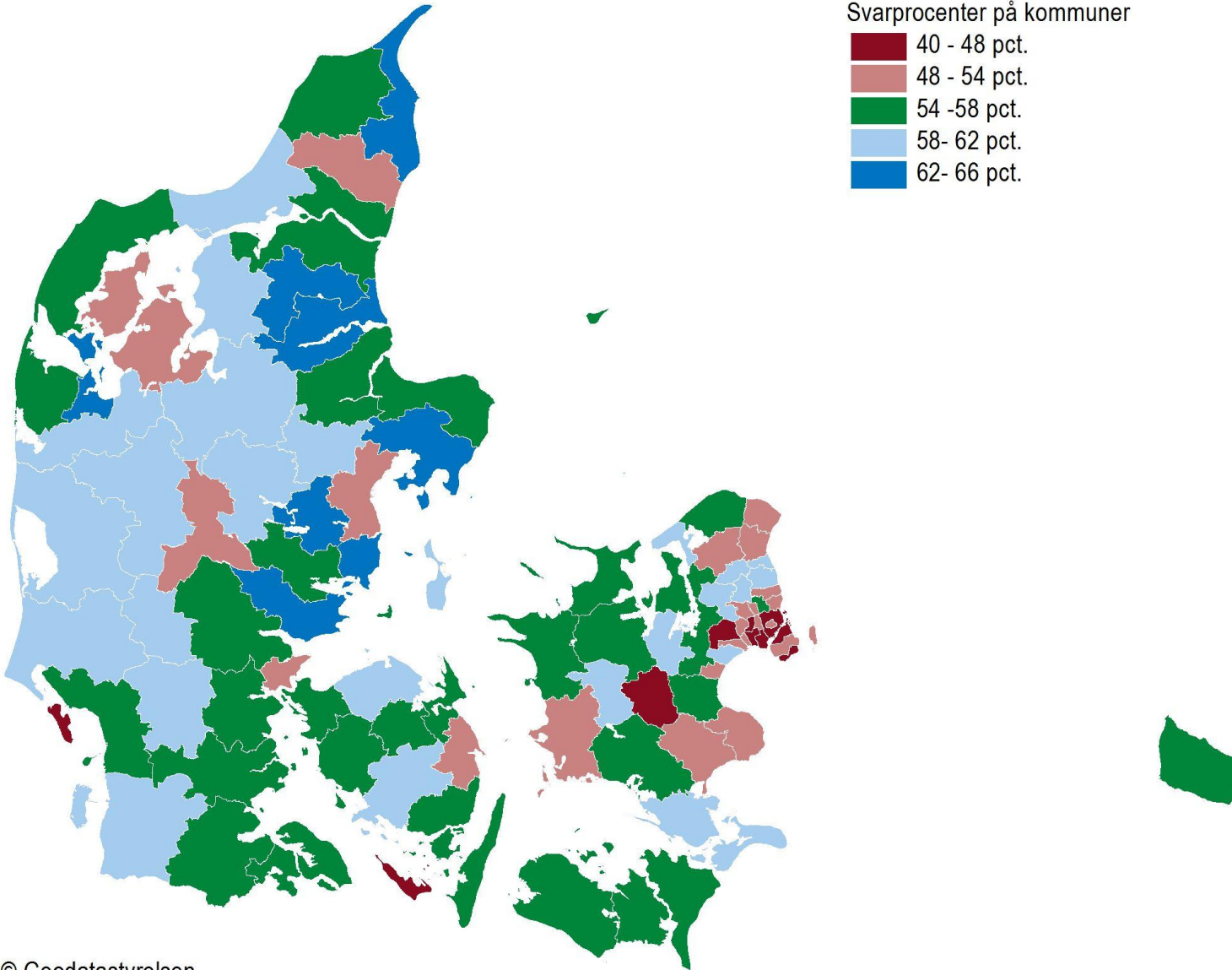
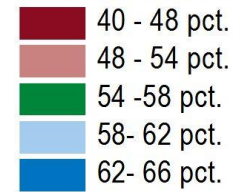


Response rates: By origin

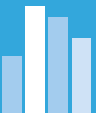


Response rates: by municipality level

Svarprocenter på kommuner

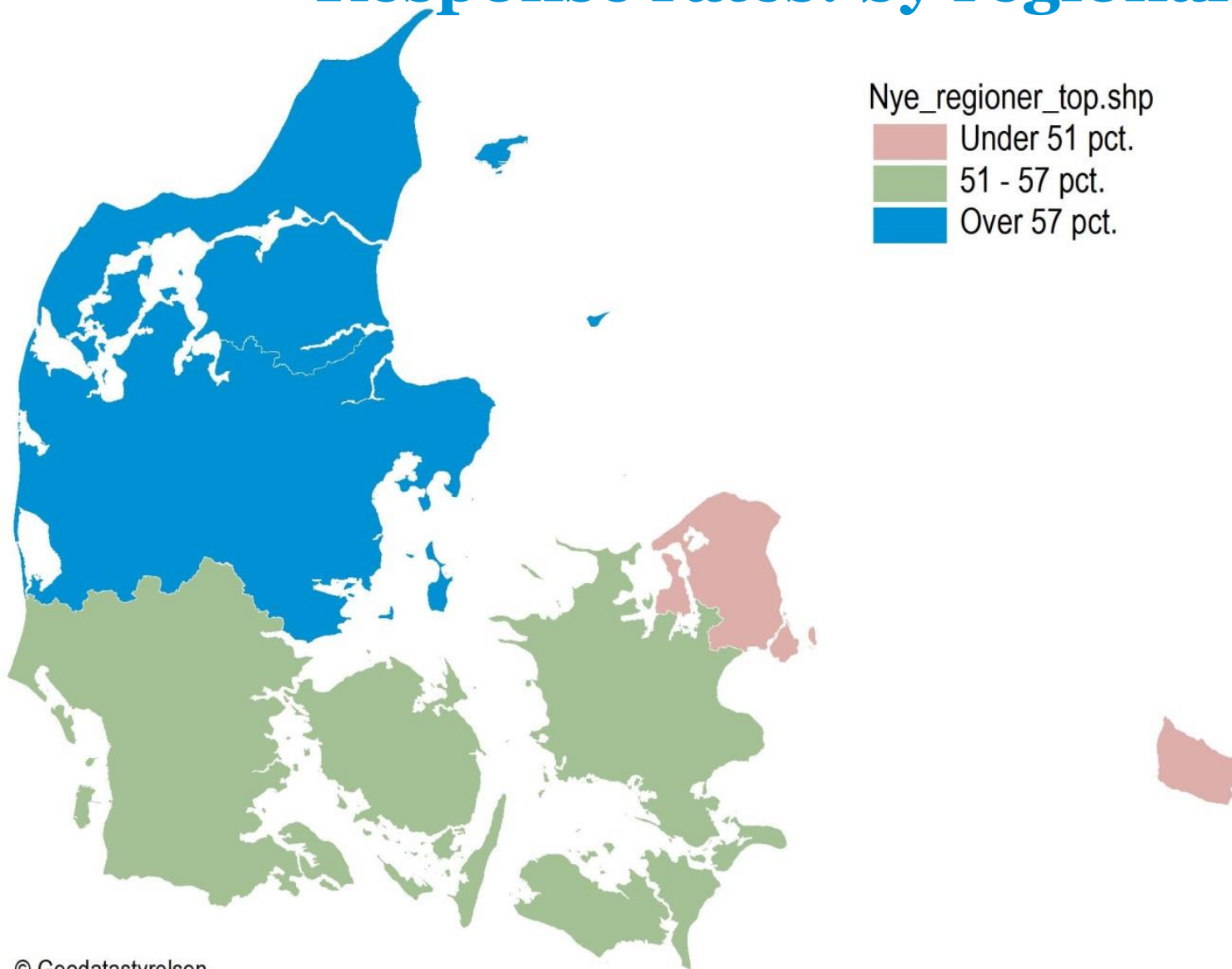


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Response rates: by regional Level

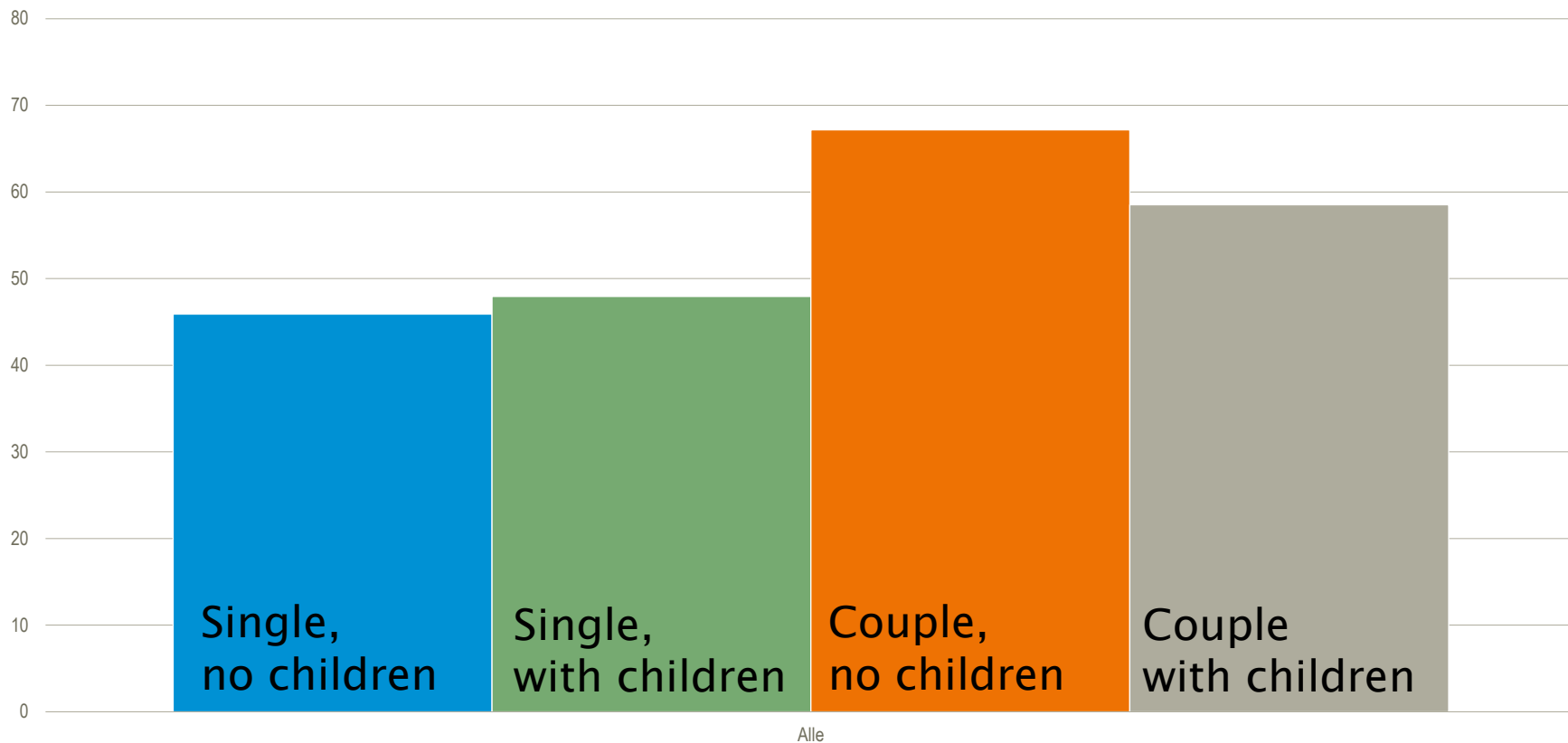
Nye_regioner_top.shp



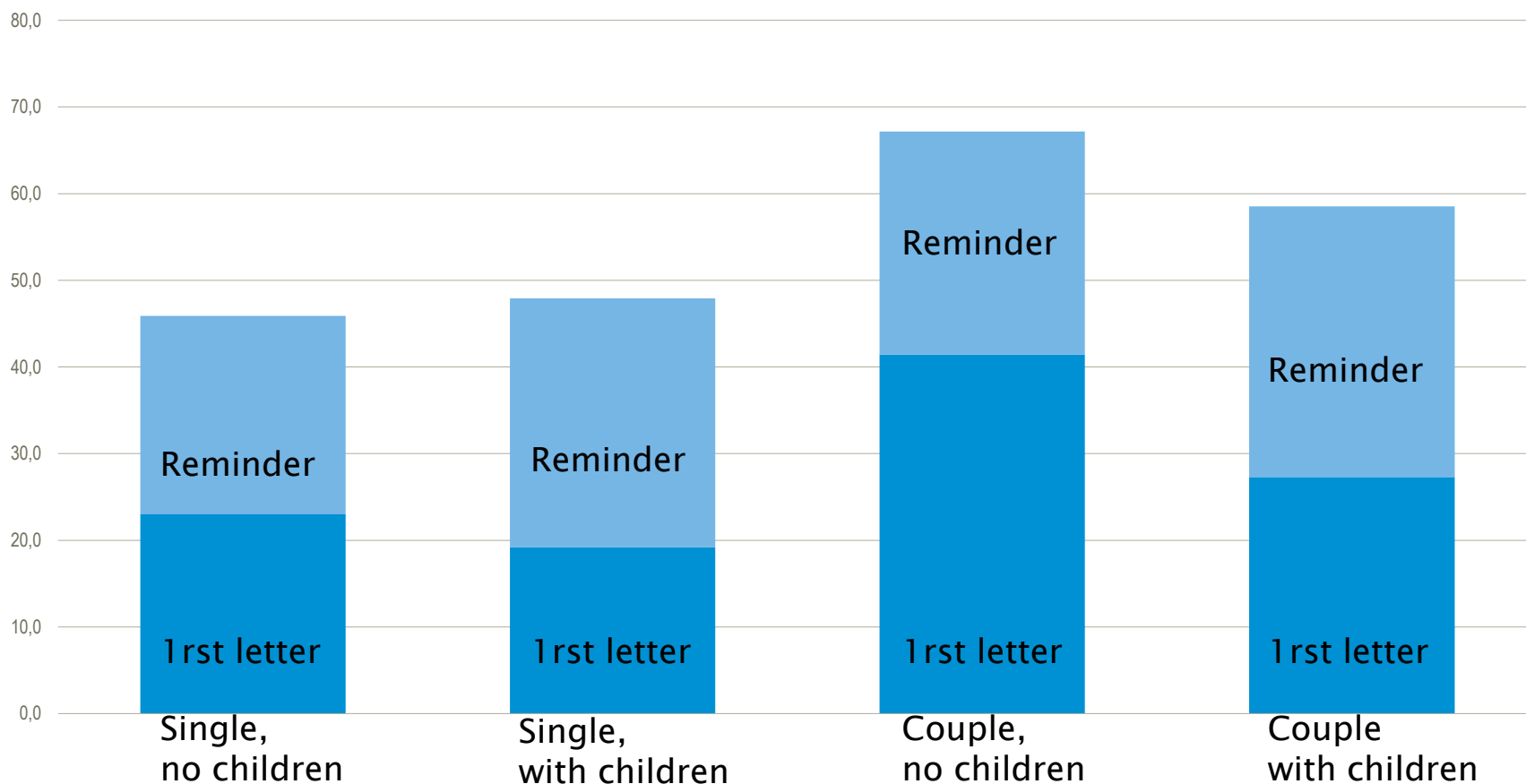
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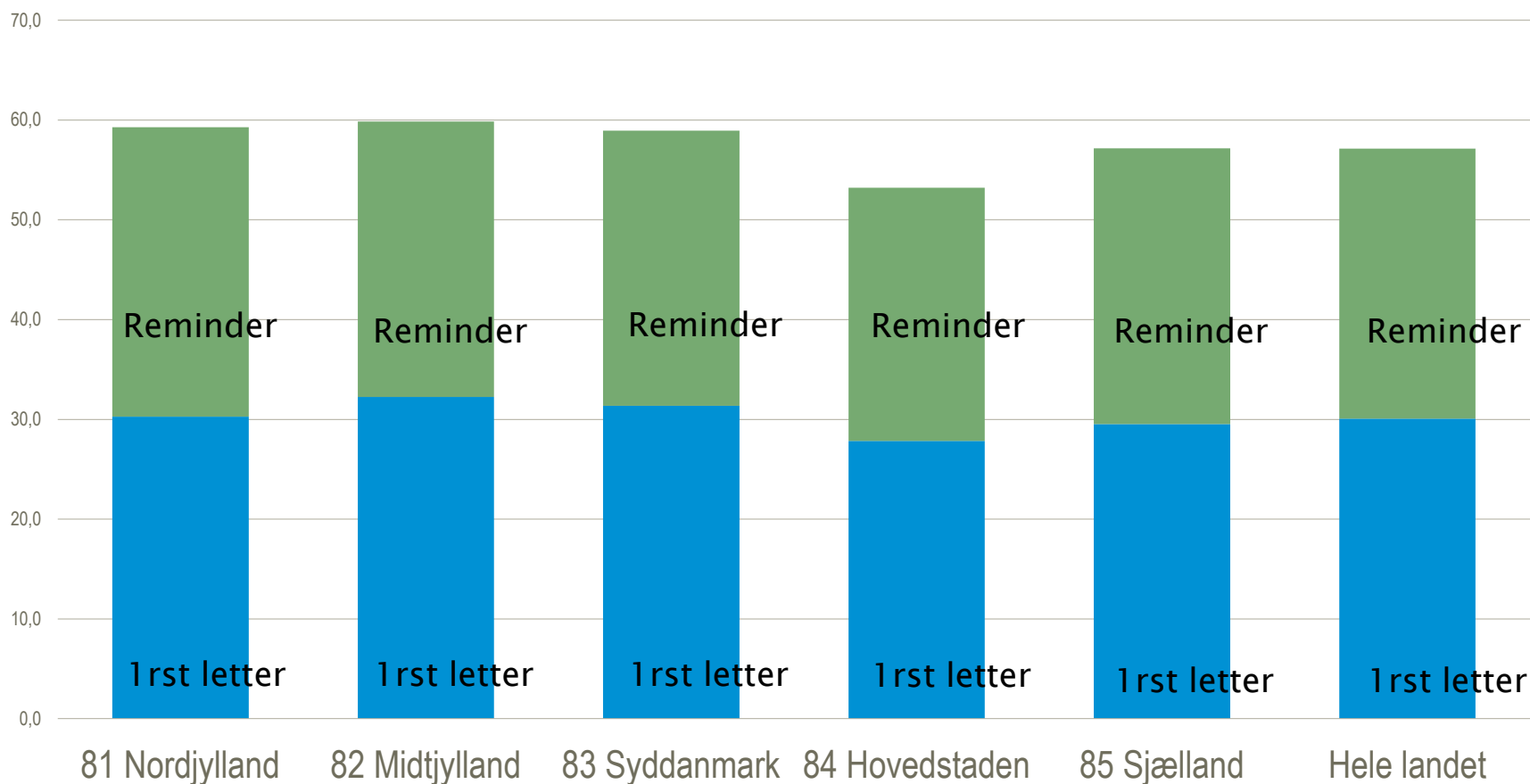
Response rates: By type of family



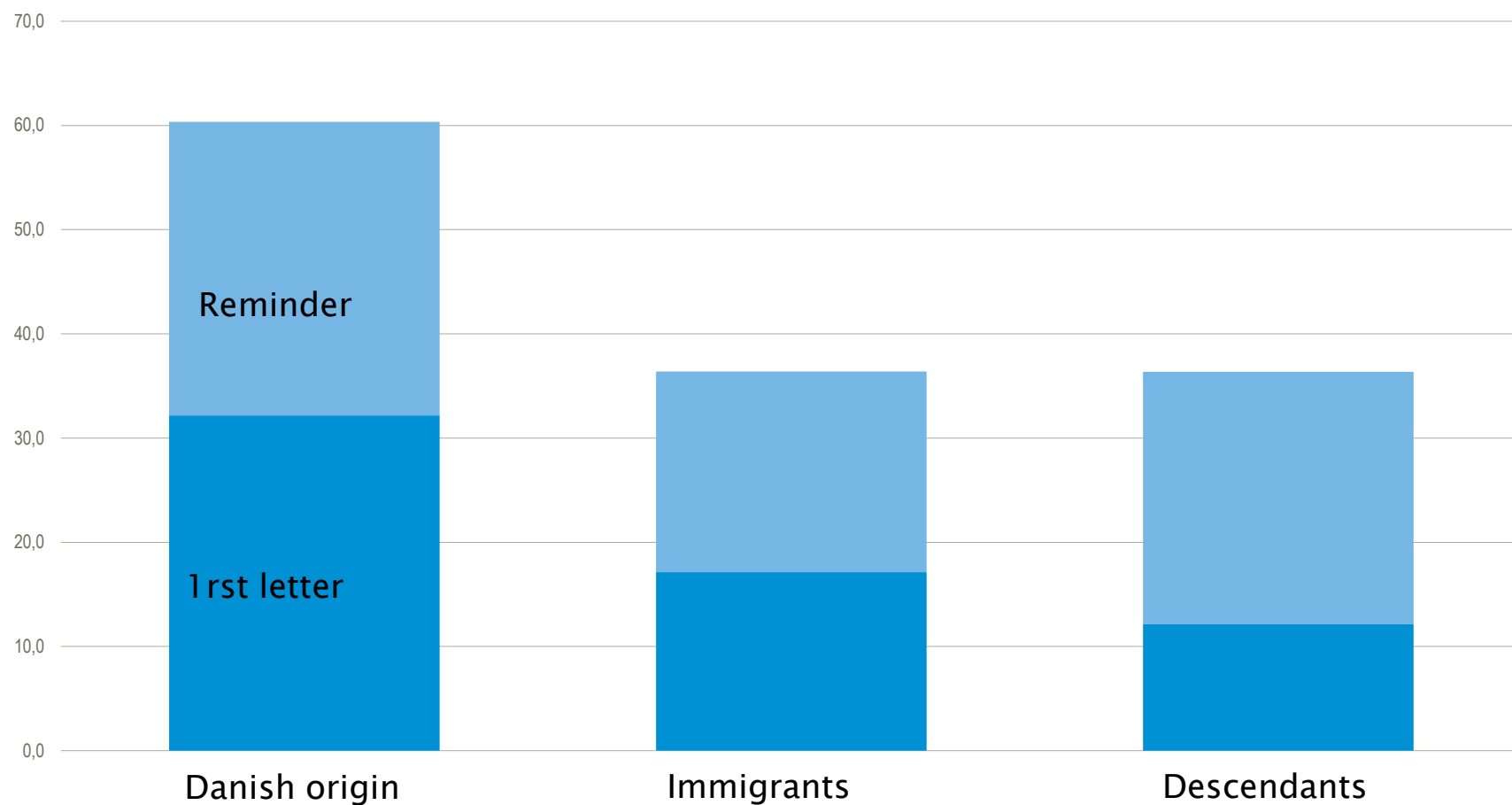
Response rate, effect of 1st letter: Type of family



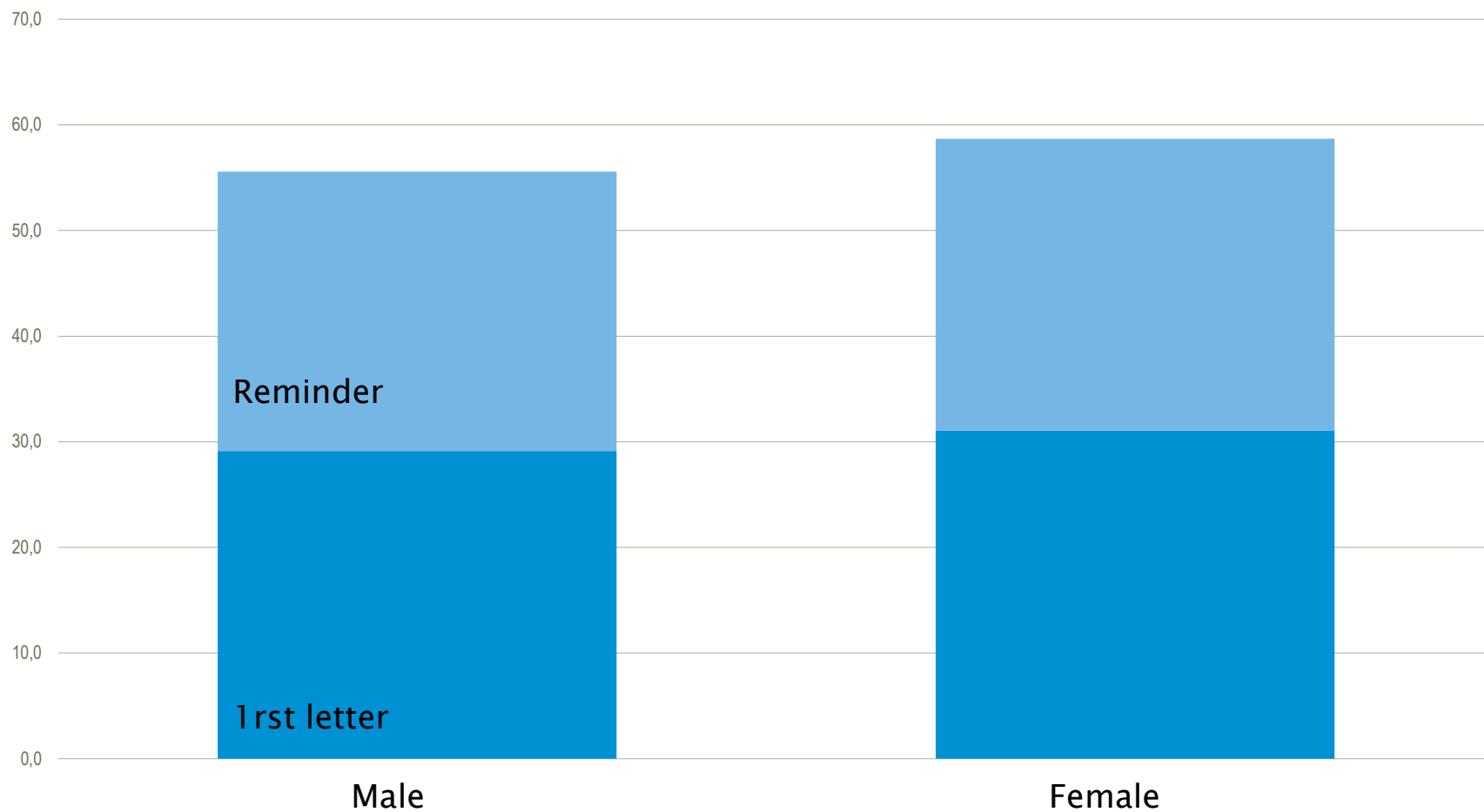
Response rate, effect of 1rst letter: Regional level



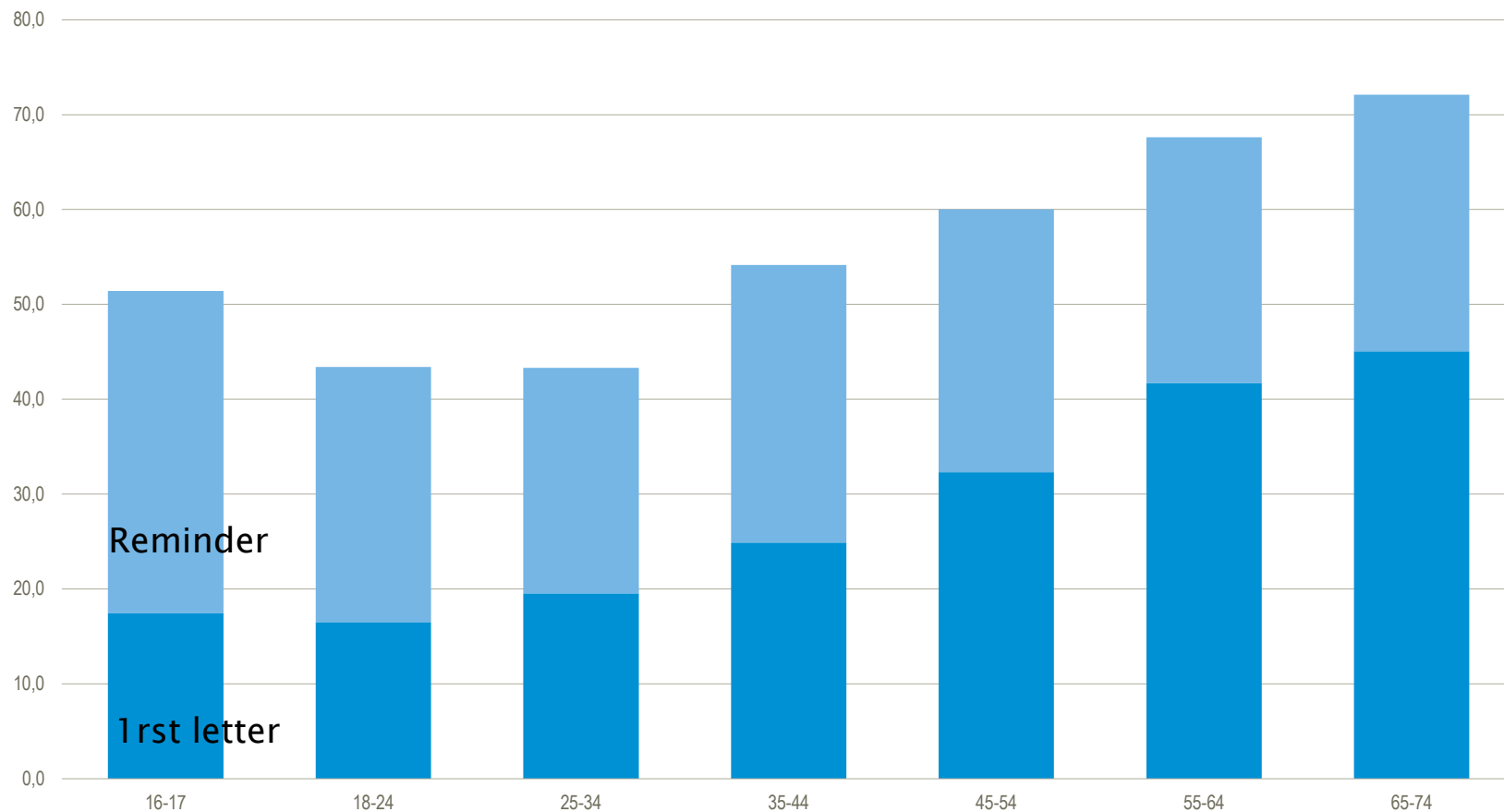
Response rate, effect of 1rst letter: By origin



Response rate, effect of 1rst letter: by sex



Response rate, effect of 1st letter: By age

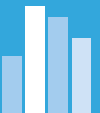


Strategies to minimize the share of nonrespondents

- Reminders → Some groups need to be reminded. It can be overwhelming with too many inquiries in a short period of time
- CATI → With phone interviews we reach people who are not responding to letters.
- Optimizing the data collection → eg sending reminders per group, group specific communication
- Translation to reach immigrants
- Face 2 face interviews
- Prizes!
- Fewer questions, shorter questionnaires
- Higher relevance!

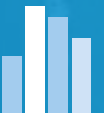
Strategies to minimize the share of nonrespondents

- New modes of contact
- New modes of adaptive questionnaire design
- More...



Thank you 😊

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The questions

Do you have any explanations to the decline in response rates?

Do you have knowledge of new innovative ways to increase the respond rates?

