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A Meeting Place

May 14 - 17, 2015
The Diplomat • Hollywood, Florida
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Is it Worth the Effort? Contact Attempts and Nonresponse Bias Reduction in a Large-Scale Cross-National Survey

Presented at AAPOR 2015

Hollywood, FL

May 16, 2015

Background



- Response rates have traditionally been used as an indicator of survey quality.
- A continuous decline of response rates raises the question of decreased survey quality.
- Various methods are used to raise response rates, e.g., incentives, advance letters, refusal conversion, and above all, increased number of contact attempts.
- However, increasing the response rate may not necessarily decrease nonresponse bias, and a lower response rate may not necessarily increase nonresponse bias (Peytchev, 2013).

Key Questions



- Are high response rates by itself actually a reliable indicator of high data quality?
- Or, more precisely, does a high response rate actually imply low nonresponse bias?
- How does the number of contact attempts and potential increases in the response rate affect nonresponse bias?

Data Basis

European Social Survey (ESS)



- ESS is a biennial face-to-face survey of attitudes, beliefs and behavioral patterns first conducted in 2002
- Up to 36 European countries were involved until Round7 in 2014
- Total net sample size of 92,315 in Round6 in 2012
- High quality standards:
 - target minimum response rate of 70%
 - target maximum noncontact rate of 3%
 - random probability sampling
- ESS contact form data recording details of every contact attempt

European Social Survey

Selected Countries (R1 – R6)



	<i>Sample Size (net) – R6</i>	<i>Response Rate (%) – R6</i>		<i>Sample Size (net) – R6</i>	<i>Response Rate (%) – R6</i>
Albania	1,528	79	Kosovo	1,920	67
Austria	x	x	Latvia	x	x
Belgium	3,182	59	Lithuania	4,251	50
Bulgaria	3,024	75	Luxembourg	x	x
Croatia	x	x	Netherlands	3,349	55
Cyprus	1,454	77	Norway	2,957	55
Czech Republic	2,937	68	Poland	2,535	75
Denmark	3,363	49	Portugal	2,789	77
Estonia	3,509	68	Romania	x	x
Finland	3,266	67	Russia	3,707	67
France	3,781	52	Slovakia	2,493	74
Germany	8,762	34	Slovenia	2,177	58
Greece	x	x	Spain	2,688	70
Hungary	3,121	65	Sweden	3,522	52
Iceland	1,376	55	Switzerland	2,886	52
Ireland	3,868	68	Turkey	x	x
Israel	3,213	78	Ukraine	3,685	59
Italy	2,664	36	UK	4,308	53

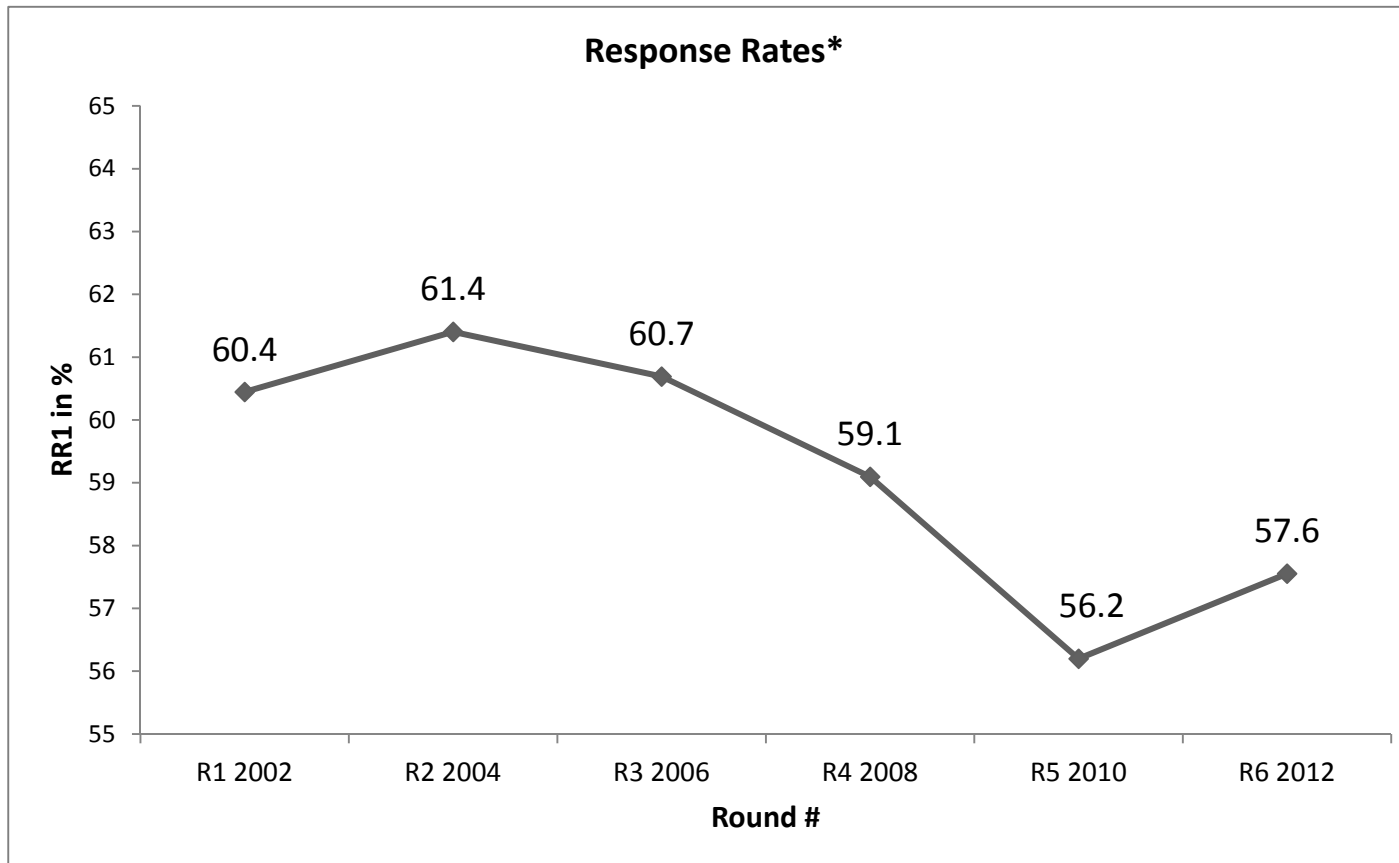
Calculation of Response Rate



Response Rate 1 (RR1) is the number of complete interviews divided by the number of interviews plus the number of non-interviews plus all cases of unknown eligibility.

$$RR1 = \frac{I}{(I + P) + (R + NC + O) + (UH + UO)}$$

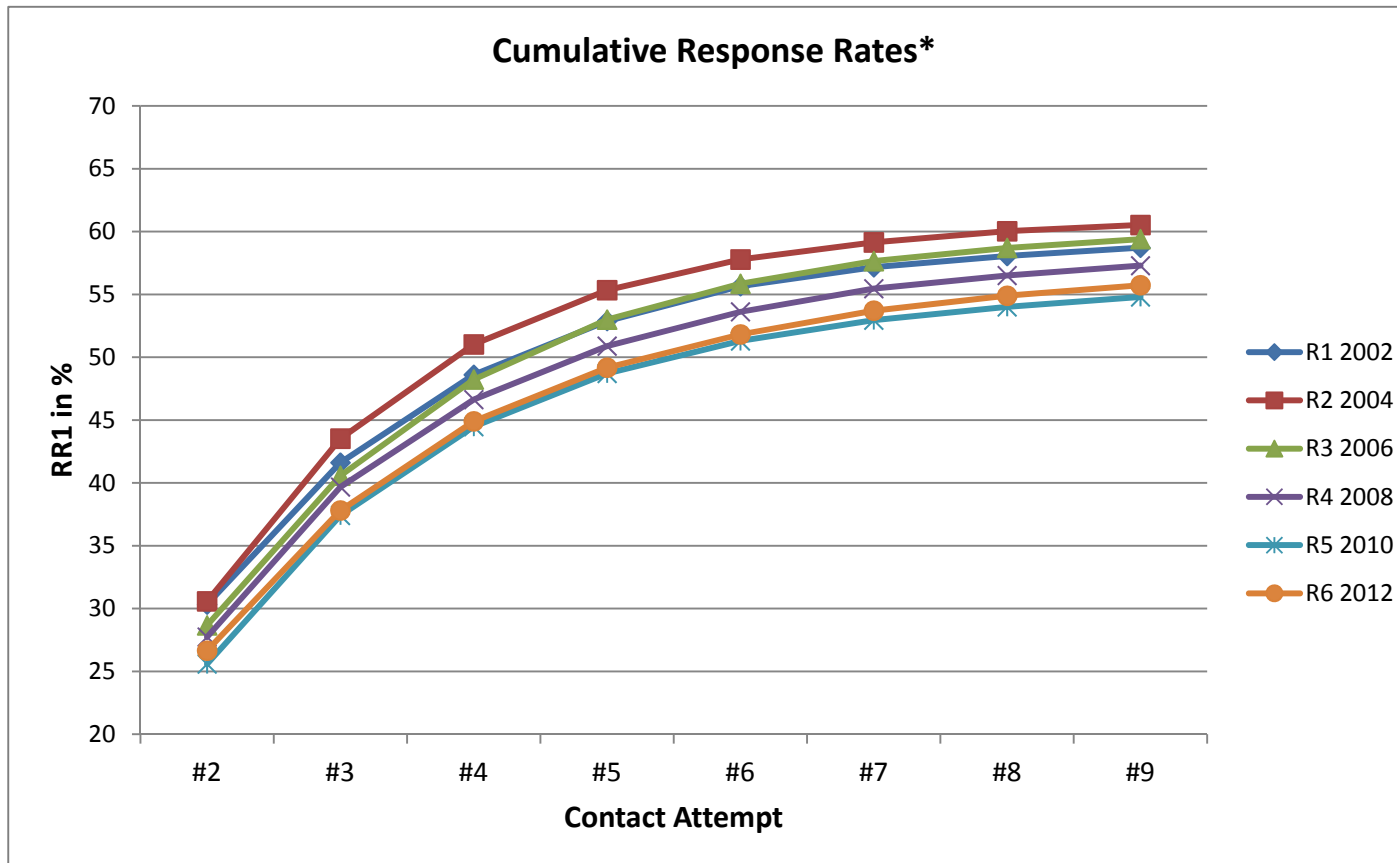
Final Response Rates (R1 – R6)



Note. *averaged over 9 countries.

Response Rates

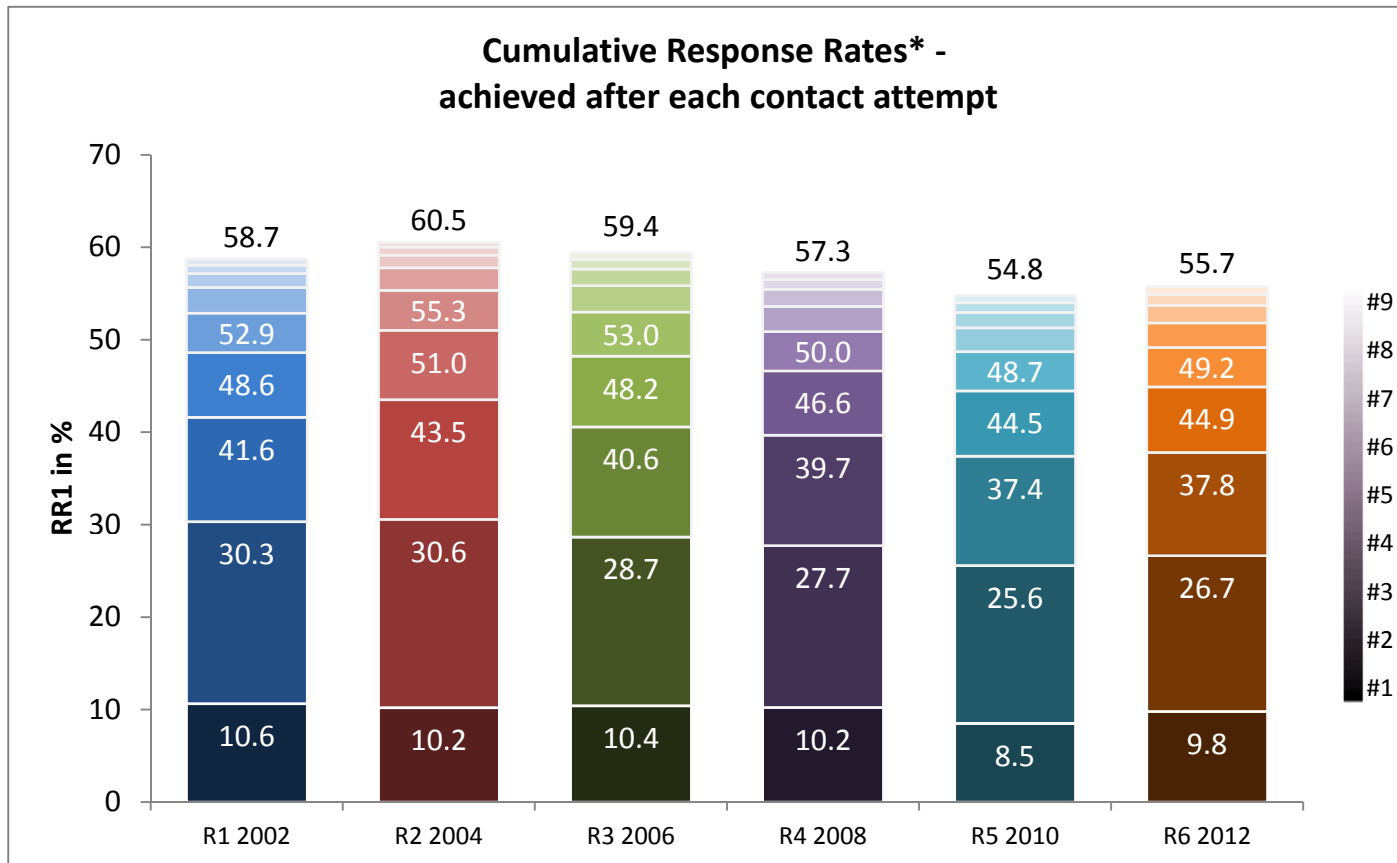
Up to 9 contact attempts



Note. *averaged over 9 countries.

Response Rates

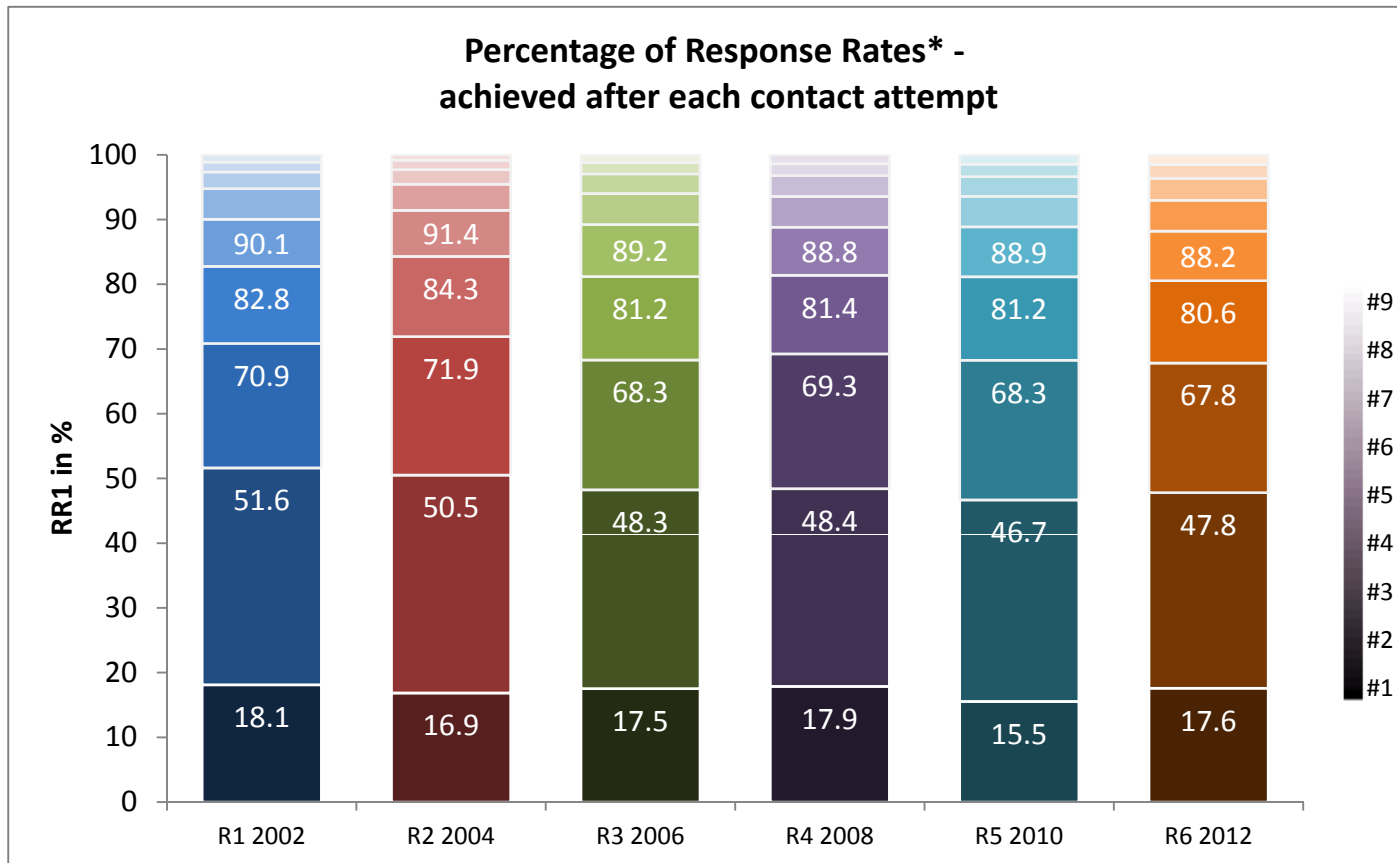
Up to 9 contact attempts



Note. *averaged over 9 countries.

Response Rates

Up to 9 contact attempts



Note. *averaged over 9 countries.

Calculation of Nonresponse Bias



Nonresponse bias is the difference between the design weighted estimate (after each contact attempt), and the estimate, when design and post-stratification weights are applied:

$$\text{Absolute relative bias} = \left| \frac{\bar{y}_{dn} - \bar{y}_{dn+ps}}{\bar{y}_{dn+ps}} \right| * 100$$

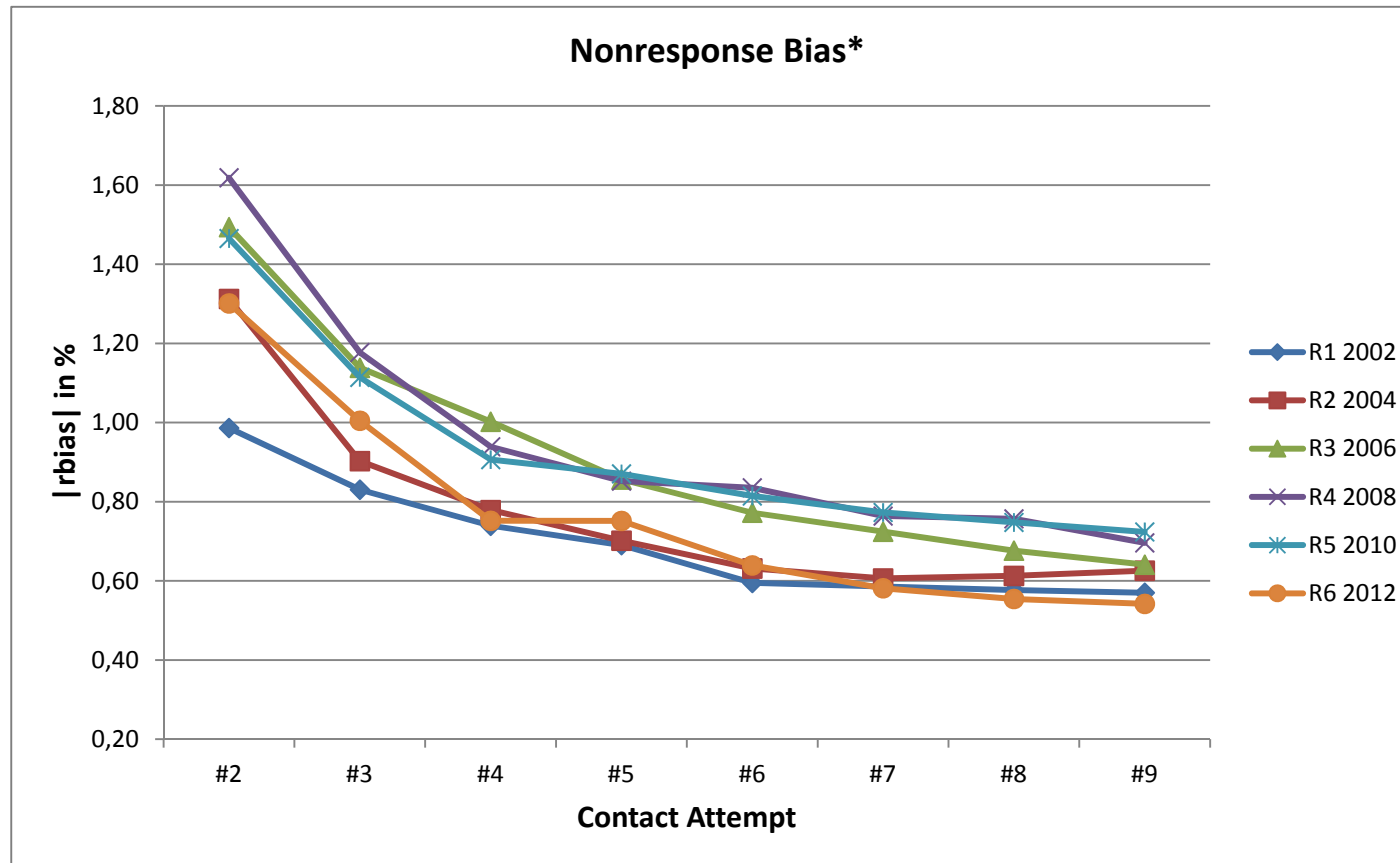
9 Selected Variables



- 1 Most people can be trusted (10) or you can't be too careful (0)
- 2 Most people try to take advantage of you (0), or try to be fair (10)
- 3 Mostly people are helpful (10) or looking out for themselves (0)
- 4 Trust in the European Parliament (0 no trust at all, 10 complete trust)
- 5 Placement on left (0) right (10) scale
- 6 Satisfaction with life (0 extremely dissatisfied, 10 extremely satisfied)
- 7 Satisfaction with present state of economy in country (as above)
- 8 Satisfaction with the national government (as above)
- 9 Satisfaction with the way democracy works in country (as above)

Nonresponse Bias

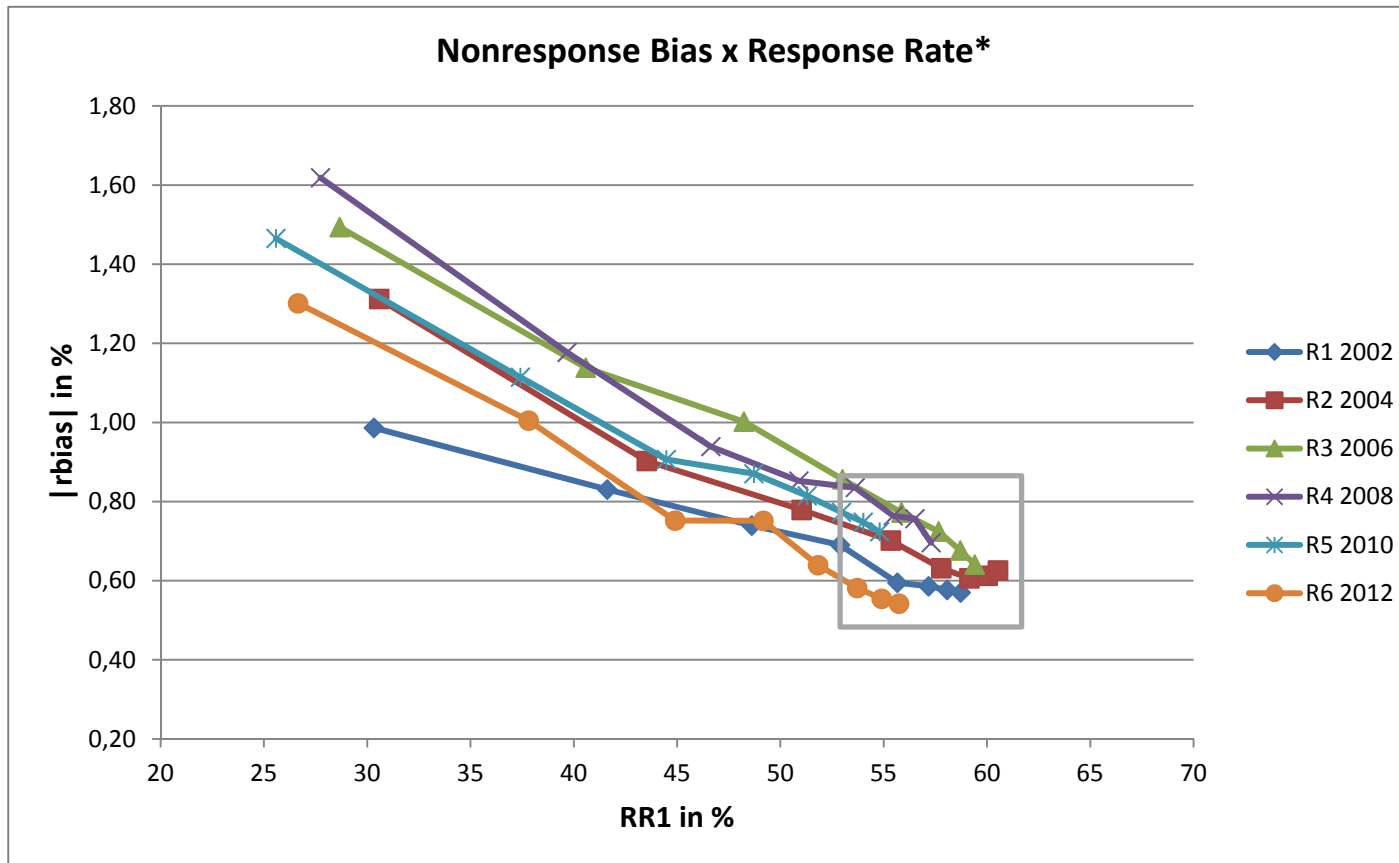
Up to 9 contact attempts, including 9 variables



Note. *averaged over 9 countries.

Nonresponse Bias x Response Rate

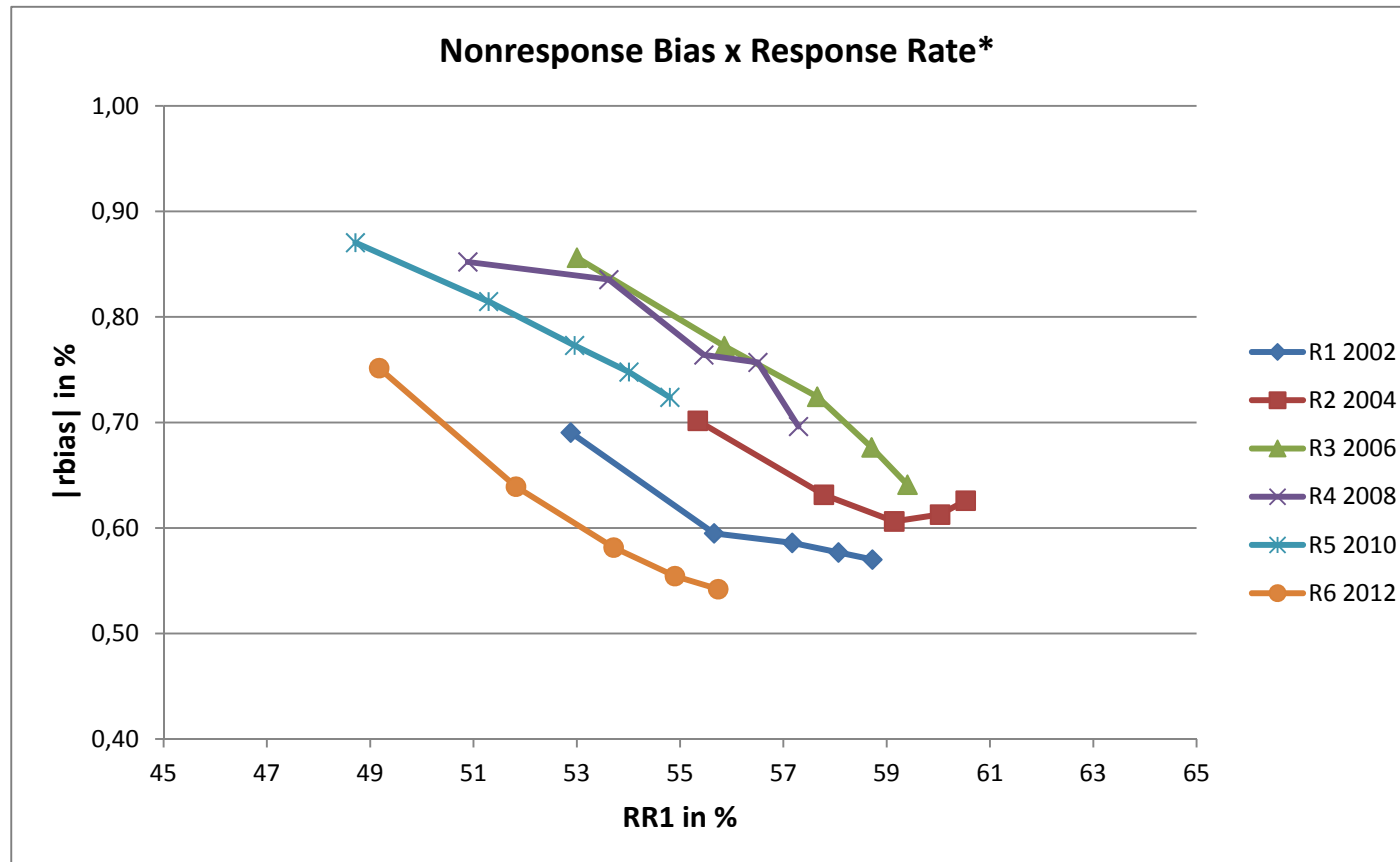
Up to 9 contact attempts, including 9 variables



Note. *averaged over 9 countries.

Nonresponse Bias x Response Rate

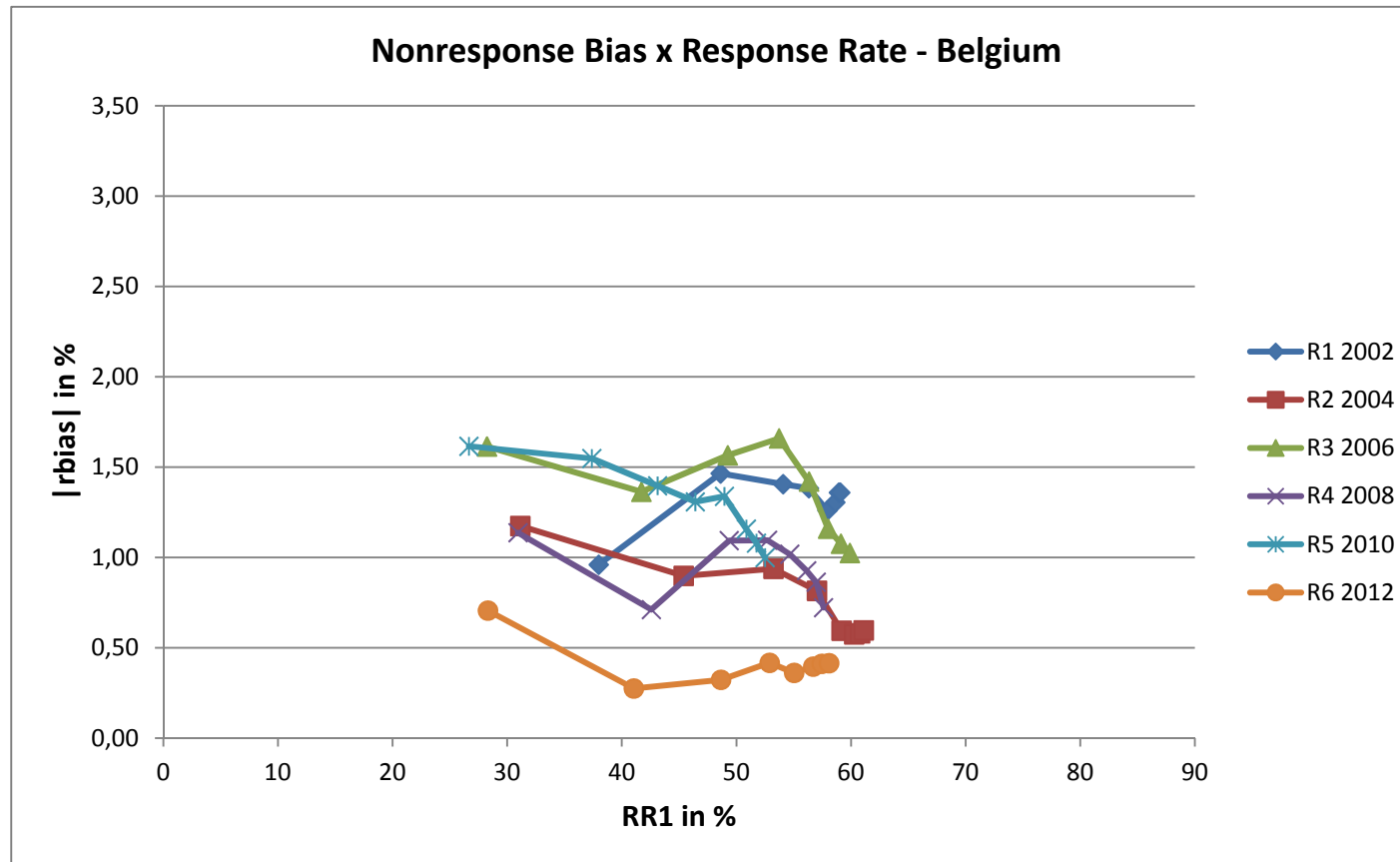
5 to 9 contact attempts, including 9 variables



Note. *averaged over 9 countries.

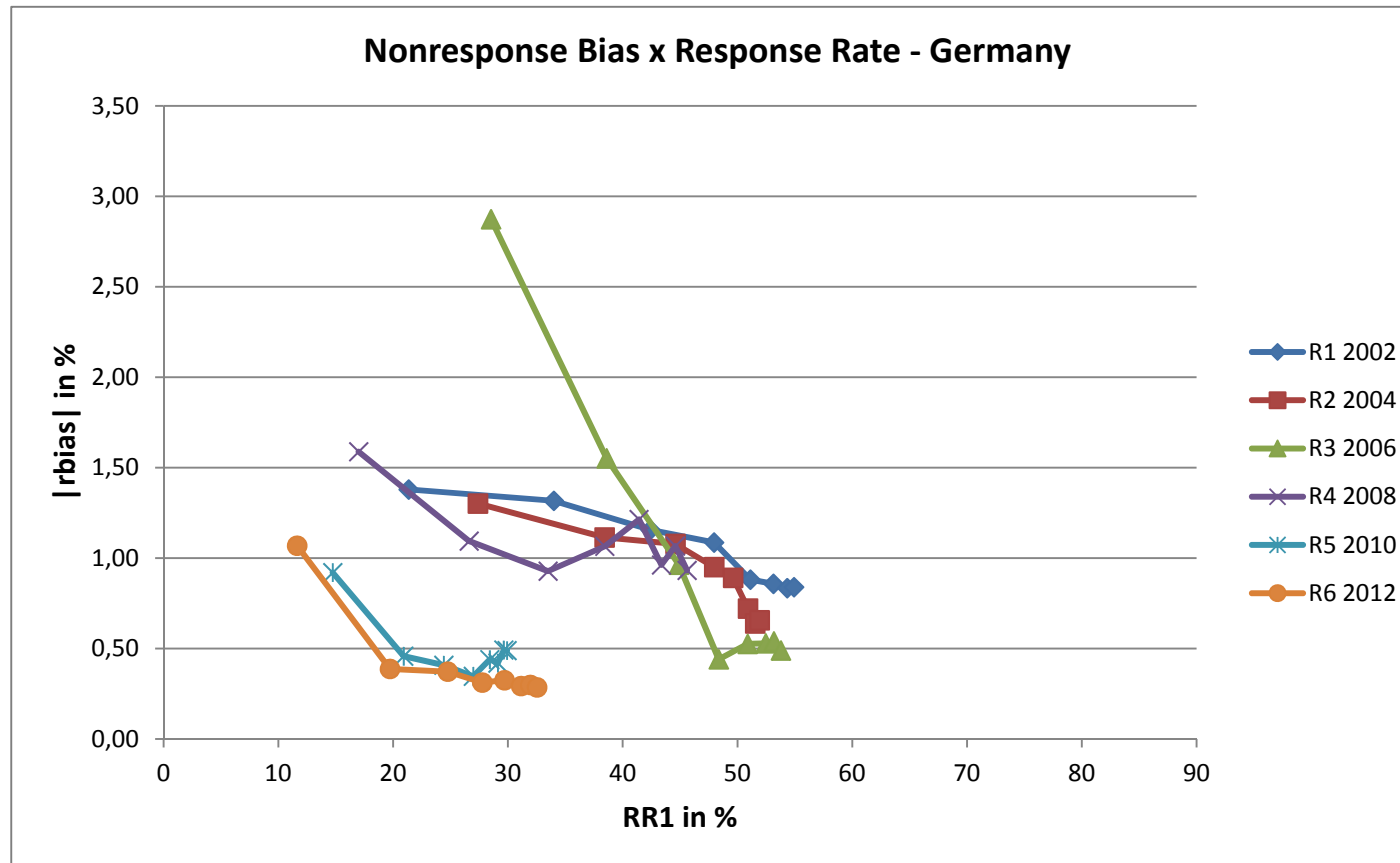
Nonresponse Bias x Response Rate

Up to 9 contact attempts, including 9 variables



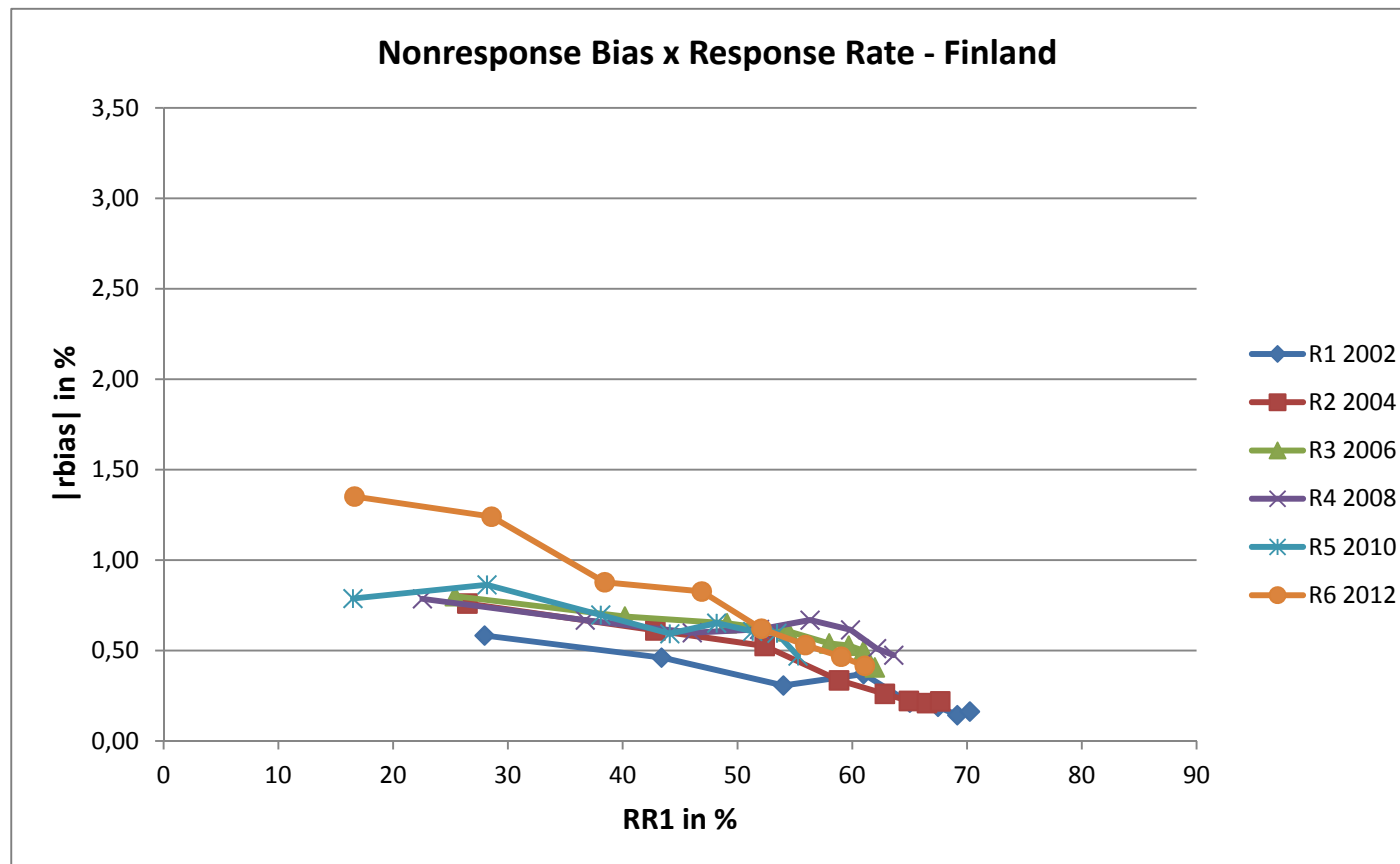
Nonresponse Bias x Response Rate

Up to 9 contact attempts, including 9 variables



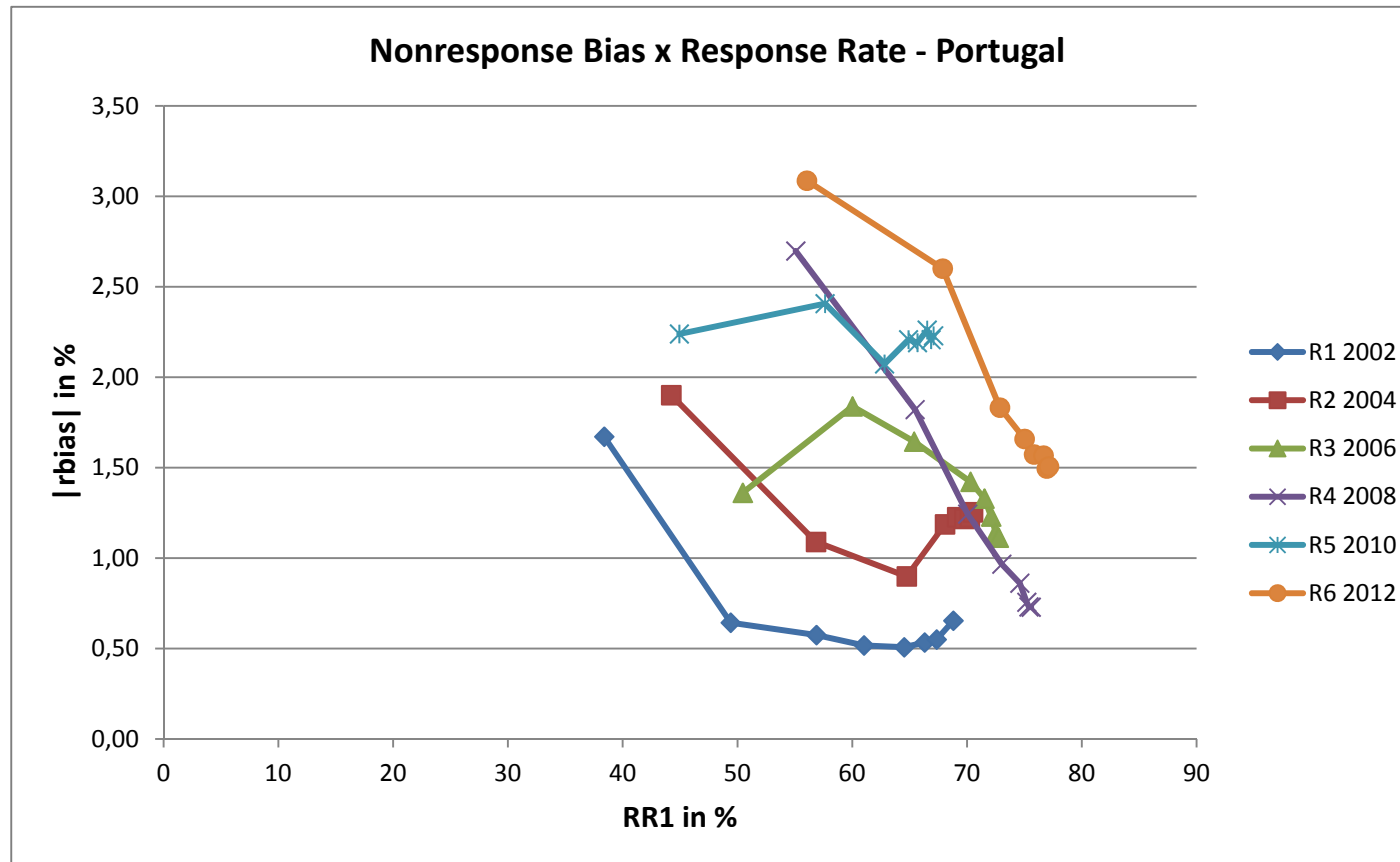
Nonresponse Bias x Response Rate

Up to 9 contact attempts, including 9 variables



Nonresponse Bias x Response Rate

Up to 9 contact attempts, including 9 variables



Summary & Conclusions



- In recent years, response rates and the success of each contact attempt have declined.
- A higher number of contact attempts increases response rates.
- On average, higher response rates result in lower nonresponse bias, even though the relationship is rather weak.
- Both effects are less pronounced in later contact attempts (from the 5th contact attempt onwards).



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Thank you.

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