# Online Supplement

Table S1. LPP Survey Questions used in the Mode (Design) Experiment

|  |  |  |
| --- | --- | --- |
| **Variable** | **Question Text** | **Answer Categories** |
| Teleworking | Do you work from home for your employer – even if only occasionally? | 1: Yes  2: No |
| General trust | On the whole one can trust people. | 1: Fully applies  2: Largely applies  3: Neutral  4: Does rather not apply  5: Does not apply at all |
| Household size | How many people live in your household, children and yourself included? | Number: \_\_\_\_\_ |
| Big Five categories | I see myself as someone who …  A: does a thorough job  B: is communicative, talkative  C: is sometimes somewhat rude to others  D: is original, comes up with new ideas  E: worries a lot  F: has a forgiving nature  G: tends to be lazy  H: is outgoing, sociable  I: values artistic, aesthetic experiences  J: gets nervous easily  K: does things effectively and efficiently  L: is reserved  M: is considerate and kind to others  N: has an active imagination  O: is relaxed, handles stress well  P: is eager for knowledge | 1: Fully applies  2: Largely applies  3: Neutral  4: Does rather not apply  5: Does not apply at all |
| Employee linkage consent | In order to not have to query all your professional career information in the next interview again and not needlessly increase its length, we would like to include excerpts from other data in the analysis of the survey. These data are available at the Institute for Employment Research in Nuremberg. This is, for example, information about previous periods of employment. However, the inclusion of these data requires your agreement. For the purpose of merging these data with the survey data, the Data Protection Law requires your agreement, for which I kindly ask you. When evaluating this information, it is absolutely certain that all data protection regulations are strictly adhered to. Of course, your agreement is voluntary.  You can withdraw it at any time. | 1: Yes, agreement granted  2: No, agreement not granted |

Table S2. LPP Survey Questions Coding and Handling Information

|  |  |
| --- | --- |
| **Variable** | **Information about coding and handling missing values** |
| Teleworking | The teleworking variable is taken from wave 3, unless it was missing (N=1) in which case it is taken from wave 2 or wave 1. |
| General trust | As only a few respondents used the low trust answer categories, we recoded the trust variable to low trust (answer categories: neutral, does rather not apply, does not apply at all) and high trust (answer categories: fully applies, largely applies). One missing value in the general trust variable was allocated to the lowest trust category. |
| Household size | Missing values (N=4) on the household variable (which was also taken from wave 3) were replaced with wave 2 and wave 1 responses. However, we changed the metric coding to 3 categories (household members, 1, 2, 3+) to estimate nonresponse bias. |
| Big Five categories | The Big Five are a system of five personality traits (openness to new experience, conscientiousness, extraversion, agreeableness, and neuroticism) developed by psychologists [1, 2]. The LPP collects the Big Five by using BFI-S, which contains up to four five-point scale questions (1= fully apply; 5= does not apply at all) for each personality trait [3, 4]. The Big-Five category scores are computed by first recoding all items in the same direction (some are negative and some are positively formulated) and second by taking the mean of the items’ scores on the relevant subdomain [2, 5]. Before we applied this system, missing values (each question includes between 1 and 23 missing values) were imputed by using the R-package mice. The imputation models were identical to those used in the LPP weighting procedure. For instance, if the third question of the Big-Five trait openness was missing, it was imputed by using the first, second and fourth openness-questions as predictors. All employees were allocated to one of three categories (low, medium, high) on each Big-Five trait (openness to new experience, conscientiousness, extraversion, agreeableness, and neuroticism) depending on their scores on the respective scale. We note that the answer distribution varies between each Big Five question. For instance, many people have high values on openness and low on neuroticism. Thus, we cannot allocate the sample by using the same classification system for each category. Categories are generated as follows: Big Five: Extraversion (low: <10, medium: 10-12, high: 13+), Agreeableness (low: <11, medium: 11-12, high: 13+), Openness (low: <11, medium: 12-16, high: 17+), Conscientiousness (low: <11, medium: 12, high: 13+) and Neuroticism (low: 0-7, medium: 8-10, high: 11+). |
| Employee linkage consent | Answering the employee linkage consent question is mandatory in the LPP employee survey. Employees were assigned to two groups on the employee linkage consent variable (yes, no), depending on their responses in wave three to the employee linkage consent question. |

[1] O. P. John and S. Srivastava, The Big Five Trait Taxonomy: History, Measurement, and Theoretical Perspec-tives.”. In: L.A. Pervin and O.P. John, editors. Handbook of Personality: Theory and research. 1999, pp. 102–138.

[2] O.P. John, E.M. Donahue, R.L. Kentle, Big Five Inventory (BFI) [Database record]; 1991.

[3] J.-Y. Gerlitz, J. Schupp, Zur Erhebung der Big-Five-basierten Persönlichkeitsmerkmale im SOEP (The measurement of the Big Five personality traits in the SOEP). Working paper. DIW, Berlin: DIW; 2005

[4] F. R. Lang, D. John, O. Lüdtke, J. Schupp, G. G. Wagner, Short assessment of the big five: robust across survey methods except telephone interviewing, *Behavior Research Methods***43**; 2011, 548–567.

[5] D. Danner, B. Rammstedt, M. Bluemke, C. Lechner, S. Berres, T. Knopf, et al, Das Big Five Inventar 2 Validierung eines Persönlichkeitsinventars zur Erfassung von 5 Persönlichkeitsdomänen und 15 Facetten, *Diagnostica*. **65** (3); 2009, 121–132.

Table S3. Variable Distributions, by Mode and Mode Design

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Administrative**  **Variables** | **Single-Mode**  (Groups A and C) | | **Mixed-Mode**  (Groups B, D and E) | | |
| Sample  (%) | Resp.  Tel. (%) | Sample (%) | Resp. Web (%) | Resp.  Web-Tel. (%) |
| **Demographics** |  |  |  |  |  |
| **Sex** |  |  |  |  |  |
| Male | 70.51 | 69.96 | 70.94 | 73.49 | 71.33 |
| Female | 29.49 | 30.04 | 29.06 | 26.51 | 28.67 |
| **Age** |  |  |  |  |  |
| <40 | 16.15 | 14.15 | 16.26 | 10.99 | 14.15 |
| 40-55 | 41.71 | 45.35 | 42.24 | 45.77 | 45.33 |
| 56+ | 42.14 | 40.50 | 41.49 | 43.25 | 40.52 |
| **German citizenship** |  |  |  |  |  |
| Yes | 97.58 | 97.67 | 98.00 | 98.99 | 98.09 |
| No | 2.42 | 2.33 | 2.00 | 1.01 | 1.91 |
| **Secondary education** |  |  |  |  |  |
| Less than university entrance | 62.03 | 57.27 | 62.93 | 51.71 | 58.87 |
| University entrance | 37.97 | 42.73 | 37.07 | 48.29 | 41.13 |
| **Higher education** |  |  |  |  |  |
| Less than university degree | 77.55 | 73.55 | 76.05 | 66.83 | 72.86 |
| University degree | 22.45 | 26.45 | 23.95 | 33.17 | 27.14 |
| **Employment** |  |  |  |  |  |
| **Employment contract** |  |  |  |  |  |
| Full-time | 86.28 | 84.88 | 85.05 | 85.79 | 84.71 |
| Part-time | 13.72 | 15.12 | 14.95 | 14.21 | 15.29 |
| **Daily earnings** |  |  |  |  |  |
| <93 | 32.69 | 29.55 | 32.82 | 21.77 | 29.77 |
| 93-141 | 32.20 | 31.10 | 33.84 | 32.76 | 32.39 |
| 142+ | 35.11 | 39.34 | 33.34 | 45.46 | 37.85 |
| **Occupation** |  |  |  |  |  |
| Production | 45.00 | 43.70 | 43.82 | 40.52 | 41.78 |
| Business/Administration | 30.31 | 31.59 | 30.20 | 37.00 | 32.66 |
| Other | 24.68 | 24.71 | 25.98 | 22.88 | 25.56 |
| **Years working for employer** |  |  |  |  |  |
| <10 | 24.64 | 23.55 | 23.79 | 17.94 | 22.01 |
| 10-19 | 36.81 | 36.43 | 38.35 | 38.81 | 38.61 |
| 20+ | 38.55 | 40.02 | 37.86 | 43.25 | 39.38 |
| **Benefits** |  |  |  |  |  |
| **Benefits last 10 years** |  |  |  |  |  |
| No | 79.78 | 83.33 | 78.34 | 87.10 | 81.49 |
| Yes | 20.22 | 16.67 | 21.66 | 12.90 | 18.51 |
| **Job seeking last 10 years** |  |  |  |  |  |
| No | 61.11 | 63.47 | 61.62 | 72.38 | 65.21 |
| Yes | 38.89 | 36.53 | 38.38 | 27.62 | 34.79 |
| **Geodata** |  |  |  |  |  |
| **Region** |  |  |  |  |  |
| North | 14.26 | 14.34 | 14.95 | 14.21 | 15.46 |
| West | 29.63 | 30.23 | 28.53 | 31.05 | 28.89 |
| South | 30.41 | 32.85 | 31.28 | 35.38 | 32.99 |
| East | 25.70 | 22.58 | 25.23 | 19.35 | 22.67 |
| **Urbanicity** |  |  |  |  |  |
| <13,000 | 42.05 | 41.18 | 40.71 | 39.92 | 39.92 |
| 13,000-119,999 | 40.40 | 41.18 | 41.62 | 42.44 | 42.60 |
| 120,000+ | 17.56 | 17.64 | 17.67 | 17.64 | 17.48 |
| **Commute** |  |  |  |  |  |
| <17 | 55.72 | 54.55 | 55.73 | 53.93 | 54.12 |
| 17+ | 44.28 | 45.45 | 44.27 | 46.07 | 45.88 |
| **Fast internet** |  |  |  |  |  |
| <50 | 13.09 | 12.21 | 13.61 | 11.90 | 13.16 |
| 50-100 | 86.91 | 87.79 | 86.39 | 88.10 | 86.84 |
| **Survey data** |  |  |  |  |  |
| **Teleworking** |  |  |  |  |  |
| No | 79.10 | 76.45 | 78.30 | 69.76 | 75.59 |
| Yes | 20.90 | 23.55 | 21.70 | 30.24 | 24.41 |
| **General trust** |  |  |  |  |  |
| Low | 32.49 | 31.98 | 34.13 | 28.43 | 32.22 |
| High | 67.51 | 68.02 | 65.87 | 71.57 | 67.78 |
| **Household size** |  |  |  |  |  |
| Single | 13.58 | 13.08 | 12.50 | 10.28 | 11.47 |
| 2 Person | 36.37 | 34.98 | 36.39 | 37.40 | 34.35 |
| 3+ Person | 50.05 | 51.94 | 51.11 | 52.32 | 54.18 |
| **Big Five: Openness** |  |  |  |  |  |
| Low | 9.99 | 9.98 | 9.75 | 8.87 | 10.38 |
| Medium | 67.60 | 67.54 | 69.08 | 72.48 | 69.31 |
| High | 22.41 | 22.48 | 21.17 | 18.65 | 20.32 |
| **Big Five: Extraversion** |  |  |  |  |  |
| Low | 22.65 | 24.61 | 22.28 | 26.11 | 24.85 |
| Medium | 51.84 | 50.48 | 52.23 | 50.81 | 51.61 |
| High | 25.51 | 24.90 | 25.49 | 23.08 | 23.54 |
| **Big Five: Agreeableness** |  |  |  |  |  |
| Low | 16.00 | 15.79 | 15.58 | 16.62 | 15.46 |
| Medium | 42.30 | 42.34 | 42.64 | 44.35 | 43.53 |
| High | 41.61 | 41.86 | 41.79 | 41.03 | 41.02 |
| **Big Five: Conscientiousness** |  |  |  |  |  |
| Low | 11.69 | 13.57 | 11.71 | 12.10 | 12.07 |
| Medium | 24.15 | 23.74 | 22.81 | 24.40 | 23.81 |
| High | 64.16 | 62.69 | 65.48 | 63.51 | 64.12 |
| **Big Five: Neuroticism** |  |  |  |  |  |
| Low | 42.87 | 43.51 | 42.41 | 44.96 | 42.71 |
| Medium | 42.00 | 41.18 | 41.00 | 38.81 | 40.47 |
| High | 15.13 | 15.31 | 16.59 | 16.23 | 16.82 |
| **Employee linkage consent** |  |  |  |  |  |
| No | 8.10 | 6.68 | 7.30 | 6.55 | 6.34 |
| Yes | 91.90 | 93.32 | 92.70 | 93.45 | 93.66 |
| **Paradata** |  |  |  |  |  |
| **Contact attempts wave 3** |  |  |  |  |  |
| <4 | 41.61 | 45.74 | 43.19 | 45.16 | 45.33 |
| 4-8 | 35.21 | 33.62 | 34.59 | 33.67 | 33.97 |
| 9+ | 23.18 | 20.64 | 22.22 | 21.17 | 20.70 |
| **First interview wave** |  |  |  |  |  |
| Wave 1 | 40.49 | 37.89 | 37.96 | 33.47 | 34.52 |
| Wave 2 | 33.32 | 33.72 | 33.48 | 33.06 | 33.59 |
| Wave 3 | 26.19 | 28.39 | 28.57 | 33.47 | 31.90 |
| **Item nonresponse wave 3** |  |  |  |  |  |
| 0 | 46.51 | 48.93 | 50.20 | 54.44 | 52.21 |
| 1-2 | 40.93 | 40.02 | 38.51 | 35.89 | 37.68 |
| 3+ | 12.56 | 11.05 | 11.29 | 9.68 | 10.10 |
| **Employer linkage wave 3** |  |  |  |  |  |
| No | 48.35 | 48.31 | 65.22 | 63.71 | 64.28 |
| Yes | 51.65 | 51.69 | 34.78 | 36.29 | 35.72 |
| N | 2,062 | 1,032 | 3,056 | 992 | 1,831 |

Table S4. Final Disposition Codes, by Mode Design

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Final Disposition Codes** | **Single-Mode** (Groups A and C) | | **Mixed-Mode** (Groups B, D and E) | |
| **Telephone** | | **Web-Telephone** | |
| Freq. | Percent | Freq. | Percent |
| **Completed interview** | 1,033 | 50.10 | 1,831 | 59.91 |
| **Refusal** |  |  |  |  |
| **Respondent-level** |  |  |  |  |
| Respondent refusal (T/C) | 336 | 16.29 | 312 | 10.21 |
| Language problem (T/C) | 1 | 0.05 | 7 | 0.23 |
| Broken appointment (T) | 287 | 13.92 | 392 | 12.83 |
| Partial Interview (T/W) | 12 | 0.58 | 25 | 0.82 |
| New invitation letter requested (T) | 1 | 0.05 | 6 | 0.20 |
| Out of the target group (e.g. retired) (T/W/C) | 114 | 5.53 | 178 | 5.82 |
| **Household-level** |  |  |  |  |
| Household-level refusal (T) | 25 | 1.21 | 30 | 0.98 |
| Household-level language problem (T) | 11 | 0.53 | 16 | 0.52 |
| Respondent deceased (T/C) | 6 | 0.29 | 12 | 0.39 |
| Respondent moved (T/C) | 1 | 0.05 |  |  |
| **Non-contact** |  |  |  |  |
| Always busy (T) | 3 | 0.15 |  |  |
| No answer (T) | 63 | 3.06 | 29 | 0.95 |
| Invitation returned undelivered (T/W) | 29 | 1.41 | 16 | 0.52 |
| Fax data line (T) | 3 | 0.15 | 5 | 0.16 |
| Non-working number (T) | 98 | 4.75 | 174 | 5.69 |
| Wrong number (T) | 29 | 1.41 | 19 | 0.62 |
| Telephone answering device (T) | 10 | 0.48 | 4 | 0.13 |
| N | 2,062 | 100 | 3,056 | 100 |

Notes: Most final disposition codes are available only for the telephone (T) mode. Three disposition codes are also available for the web (W) mode. Some sample units and household members contacted the survey institute or the IAB after they received the invitation letter or reminder (C). These employee contacts are assigned to the phase in which they occurred.

Table S5. Outcome Rates for Telephone-Single Mode, Web Starting Mode and Full Web-Telephone Design, by Linkable Employees

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Single-Mode**  (Group A) | **Mixed-Mode**  (Group B) | |
| **Telephone** | **Web Starting Mode** | **Web-Telephone** |
| Sample size | 1,065 | 1,063 | 1,063 |
| Respondents | 534 | 360 | 654 |
| Telephone | 534 | 0 | 294 |
| Web | 0 | 360 | 360 |
| Response (%) | 50.14 | 33.87 | 61.52 |
| Contact (%) | 88.45 | N/A | 88.70 |
| Cooperation (%) | 56.69 | N/A | 48.04 |

Notes: the response rates differ significantly (*χ*2 tests: *p* = 0.000) between the telephone single-mode vs. web starting mode and the telephone single-mode vs. web-telephone mixed mode design. While contact rate differences between the telephone single-mode and telephone follow-up stage of the mixed-mode design (*p* = 0.875) are not evident, the cooperation rate varies significantly between both designs (*p* = 0.001).

Table S6. Outcome Rates for Telephone-Single Mode, Web Starting Mode and Full Web-Telephone Design, by Non-Linkable Employees

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Single-Mode**  (Group C) | **Mixed-Mode**  (Groups D and E) | |
| **Telephone** | **Web Starting Mode** | **Web-Telephone** |
| Sample size | 997 | 1,993 | 1,993 |
| Respondents | 499 | 360 | 1,177 |
| Telephone | 499 | 0 | 817 |
| Web | 0 | 360 | 360 |
| Response (%) | 50.05 | 31.71 | 59.06 |
| Contact (%) | 88.77 | N/A | 86.90 |
| Cooperation (%) | 56.69 | N/A | 48.04 |

Notes: the response rates differ significantly (*χ*2 tests: *p* = 0.000) between the telephone single-mode vs. web starting mode and the telephone single-mode vs. web-telephone mixed mode design. While contact rate differences between the telephone single-mode and telephone follow-up stage of the mixed-mode design (*p* = 0.177) are not evident, the cooperation rate varies significantly between both designs (*p* = 0.001).

Table S7. Average Absolute Nonresponse Bias (AANB) and Average Absolute Relative Nonresponse Bias (AARNB), by Variable Group and Overall (linkable cases)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable Groups** | **Single-Mode**  (Group A) | | **Mixed-Mode**  (Group B) | | | |
| **Telephone** | | **Web Starting Mode** | | **Web-Telephone** | |
| AANB (%) | AARNB (%) | AANB (%) | AARNB (%) | AANB (%) | AARNB (%) |
| Demographics | 2.29 | 8.56 | 5.32 | 27.67 | 2.10 | 10.40 |
| Employment | 1.49 | 4.39 | 5.35 | 16.94 | 2.34 | 7.09 |
| Benefits | 2.10 | 9.99 | 7.08 | 35.45 | 3.00 | 15.63 |
| Geodata | 0.96 | 3.28 | 1.78 | 6.57 | 0.95 | 3.09 |
| Overall | 1.62 | 5.91 | 4.59 | 19.34 | 1.99 | 8.06 |

Table S8. Average Absolute Nonresponse Bias (AANB) and Average Absolute Relative Nonresponse Bias (AARNB), by Variable Group and Overall (non-linkable cases)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable Groups** | **Single-Mode**  (Group C) | | **Mixed-Mode**  (Groups D and E) | | | |
| **Telephone** | | **Web Starting Mode** | | **Web-Telephone** | |
| AANB (%) | AARNB (%) | AANB (%) | AARNB (%) | AANB (%) | AARNB (%) |
| Demographics | 2.66 | 9.39 | 4.93 | 22.80 | 2.42 | 8.84 |
| Employment | 2.56 | 7.63 | 4.93 | 15.47 | 1.51 | 4.62 |
| Benefits | 2.43 | 12.07 | 7.08 | 27.80 | 2.12 | 7.77 |
| Geodata | 1.48 | 6.29 | 2.34 | 9.39 | 1.19 | 4.73 |
| Overall | 2.23 | 8.35 | 4.52 | 17.35 | 1.72 | 6.12 |

Table S9. Estimates of Nonresponse Bias (NB), Absolute Nonresponse Bias and Absolute Relative Nonresponse Bias (ARNB) for Each Variable Category (linkable cases)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Administrative**  **Variables** | **Single-Mode**  (Group A) | | **Mixed-Mode**  (Group B) | | | |
| **Telephone** | | **Web Starting Mode** | | **Web-Telephone** | |
| NB(ANB)  (%) | ARNB  (%) | NB(ANB)  (%) | ARNB  (%) | NB(ANB)  (%) | ARNB  (%) |
| **Sex** |  |  |  |  |  |  |
| Female | -(0.54) | 2.02 | -(1.34) | 5.20 | -(0.09) | 0.35 |
| **Age** |  |  |  |  |  |  |
| <40 | -(2.11) | 12.91 | -(6.65) | 40.62 | -(3.07) | 18.75 |
| 40-55 | (3.53) | 8.34 | (0.22) | 0.49 | (0.02) | 0.04 |
| 56+ | -(1.42) | 3.44 | (6.43) | 16.55 | (3.05) | 7.85 |
| **German citizenship** |  |  |  |  |  |  |
| No | -(0.10) | 4.26 | -(1.71) | 60.64 | -(0.53) | 18.79 |
| **Secondary education** |  |  |  |  |  |  |
| University entrance | (4.57) | 11.93 | (11.00) | 29.91 | (3.89) | 10.58 |
| **Higher education** |  |  |  |  |  |  |
| University degree | (3.87) | 17.03 | (9.89) | 40.29 | (4.04) | 16.46 |
| **Employment contract** |  |  |  |  |  |  |
| Full-time | -(1.56) | 1.77 | (0.20) | 0.23 | -(0.63) | 0.72 |
| **Daily earnings** |  |  |  |  |  |  |
| <93 | -(3.16) | 11.81 | -(8.17) | 32.89 | -(2.82) | 11.35 |
| 93-141 | -(0.18) | 0.57 | -(3.40) | 10.18 | -(2.97) | 8.89 |
| 142+ | (3.35) | 8.09 | (11.56) | 27.68 | (5.78) | 13.84 |
| **Occupation** |  |  |  |  |  |  |
| Production | (0.43) | 0.91 | -(5.67) | 11.77 | -(1.99) | 4.13 |
| Business/Administration | -(1.76) | 6.42 | (7.61) | 26.70 | (2.69) | 9.44 |
| Other | (1.33) | 5.31 | -(1.94) | 8.32 | -(0.70) | 3.00 |
| **Years working for employer** | |  |  |  |  |  |
| <10 | -(0.44) | 1.83 | -(6.66) | 29.25 | -(2.28) | 10.01 |
| 10-19 | -(1.14) | 2.98 | -(0.83) | 2.05 | -(0.64) | 1.58 |
| 20+ | (1.58) | 4.19 | (7.48) | 20.39 | (2.91) | 7.93 |
| **Benefits last 10 years** |  |  |  |  |  |  |
| Yes | -(2.77) | 14.12 | -(8.53) | 46.74 | -(3.72) | 20.38 |
| **Job seeking last 10 years** |  |  |  |  |  |  |
| Yes | -(2.17) | 5.53 | -(10.95) | 29.77 | -(3.75) | 10.20 |
| **Region** |  |  |  |  |  |  |
| North | (0.52) | 3.26 | -(1.80) | 12.11 | -(0.33) | 2.22 |
| West | (1.60) | 5.36 | (3.04) | 9.94 | (0.93) | 3.04 |
| South | (0.20) | 0.72 | (1.27) | 4.14 | (0.37) | 1.21 |
| East | -(2.32) | 8.82 | -(2.50) | 10.46 | -(0.95) | 3.98 |
| **Urbanicity** |  |  |  |  |  |  |
| <13,000 | -(0.78) | 1.88 | -(2.33) | 5.58 | -(1.71) | 4.09 |
| 13,000-119,999 | (0.72) | 1.73 | (1.29) | 3.11 | (1.02) | 2.46 |
| 120,000+ | (0.04) | 0.24 | (1.03) | 6.15 | (0.68) | 4.06 |
| **Commute** |  |  |  |  |  |  |
| 17+ | (2.13) | 4.93 | (2.50) | 6.04 | (2.49) | 6.02 |
| **Fast internet** |  |  |  |  |  |  |
| <50 | (0.34) | 2.55 | -(0.22) | 1.56 | (0.11) | 0.78 |

Table S10. Estimates of Nonresponse Bias (NB), Absolute Nonresponse Bias and Absolute Relative Nonresponse Bias (ARNB) for Each Variable Category (non-linkable cases)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Administrative**  **Variables** | **Single-Mode**  (Group C) | | **Mixed-Mode**  (Groups D and E) | | | |
| **Telephone** | | **Web Starting Mode** | | **Web-Telephone** | |
| NB(ANB)  (%) | ARNB  (%) | NB(ANB)  (%) | ARNB  (%) | NB(ANB)  (%) | ARNB  (%) |
| **Sex** |  |  |  |  |  |  |
| Female | (1.67) | 5.15 | -(3.12) | 10.13 | -(0.48) | 1.56 |
| **Age** |  |  |  |  |  |  |
| <40 | -(1.72) | 10.78 | -(4.50) | 27.76 | -(1.60) | 9.87 |
| 40-55 | (3.67) | 8.95 | (5.31) | 12.99 | (4.73) | 11.57 |
| 56+ | -(1.95) | 4.53 | -(0.81) | 1.89 | -(3.14) | 7.32 |
| **German citizenship** |  |  |  |  |  |  |
| No | -(0.11) | 4.38 | -(0.61) | 39.10 | (0.14) | 8.97 |
| **Secondary education** |  |  |  |  |  |  |
| University entrance | (5.08) | 13.51 | (11.35) | 30.49 | (4.15) | 11.15 |
| **Higher education** |  |  |  |  |  |  |
| University degree | (4.08) | 18.40 | (8.81) | 37.28 | (2.71) | 11.47 |
| **Employment contract** |  |  |  |  |  |  |
| Full-time | -(1.18) | 1.40 | (0.98) | 1.17 | -(0.22) | 0.26 |
| **Daily earnings** |  |  |  |  |  |  |
| <93 | -(3.15) | 8.07 | -(12.40) | 33.44 | -(3.01) | 8.12 |
| 93-141 | -(2.14) | 6.56 | (0.27) | 0.79 | -(0.60) | 1.76 |
| 142+ | (5.28) | 18.60 | (12.13) | 42.05 | (3.61) | 12.51 |
| **Occupation** |  |  |  |  |  |  |
| Production | -(3.65) | 8.62 | -(2.10) | 5.06 | -(2.16) | 5.20 |
| Business/Administration | (5.08) | 15.21 | (6.39) | 20.54 | (2.36) | 7.59 |
| Other | -(1.42) | 5.85 | -(4.30) | 15.69 | -(0.21) | 0.77 |
| **Years working for employer** | |  |  |  |  |  |
| <10 | -(1.83) | 7.24 | -(5.35) | 21.98 | -(1.49) | 6.12 |
| 10-19 | (0.36) | 1.02 | (1.11) | 2.99 | (0.71) | 1.91 |
| 20+ | (1.46) | 3.70 | (4.24) | 11.02 | (0.77) | 2.00 |
| **Benefits last 10 years** |  |  |  |  |  |  |
| Yes | -(4.23) | 20.28 | -(8.76) | 37.31 | -(2.75) | 11.71 |
| **Job seeking last 10 years** |  |  |  |  |  |  |
| Yes | -(2.45) | 6.36 | -(10.60) | 27.01 | -(3.47) | 8.84 |
| **Region** |  |  |  |  |  |  |
| North | -(0.42) | 3.38 | -(0.13) | 0.87 | (0.97) | 6.47 |
| West | (3.28) | 10.58 | (4.73) | 14.94 | (2.15) | 6.79 |
| South | (1.18) | 3.75 | (3.14) | 11.46 | (0.30) | 1.09 |
| East | -(4.04) | 16.11 | -(7.74) | 29.84 | -(3.43) | 13.22 |
| **Urbanicity** |  |  |  |  |  |  |
| <13,000 | -(1.05) | 2.47 | (0.05) | 0.12 | -(0.29) | 0.72 |
| 13,000-119,999 | (0.96) | 2.45 | (0.55) | 1.32 | (0.95) | 2.28 |
| 120,000+ | (0.08) | 0.44 | -(0.60) | 3.30 | -(0.66) | 3.63 |
| **Commute** |  |  |  |  |  |  |
| 17+ | (0.05) | 0.11 | (1.50) | 3.27 | (1.17) | 2.55 |
| **Fast internet** |  |  |  |  |  |  |
| <50 | -(2.22) | 17.29 | -(2.59) | 19.40 | -(0.78) | 5.84 |

Table S11. Log-Odds Ratios of Survey Participation: Telephone Single-Mode vs. a) Web Starting Mode and b) Web-Telephone Mixed-Mode (linkable cases)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Telephone vs. Web Starting Mode** | | **Telephone vs. Web-Telephone** | |
| (Groups A vs. B) | | (Groups A vs. B) | |
| Main effects  model | Interaction  model | Main effects  model | Interaction  model |
|  | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) |
| **Intercept** | -0.09(.40) | 0.71(.54) | 0.59(.40) | 0.71(.54) |
| **Experimental group (EG)** | |  |  |  |
| (Ref. Telephone-Only) |  |  |  |  |
| Web | -0.75(.09)\*\*\* | -2.66(.83)\*\*\* | 0.48(.09)\*\*\* | 0.18(.80) |
| **Sex** |  |  |  |  |
| (Ref. Male) |  |  |  |  |
| Female | -0.07(.14) | -0.02(.19) | 0.01(.14) | -0.02(.19) |
| **Age** |  |  |  |  |
| (Ref. <40) |  |  |  |  |
| 40-55 | 0.35(.15)\* | 0.31(.20) | 0.24(.14) | 0.31(.20) |
| 56+ | 0.25(.16) | 0.06(.22) | 0.19(.15) | 0.06(.22) |
| **German citizenship** |  |  |  |  |
| (Ref. Yes) |  |  |  |  |
| No | -0.49(.32) | -0.29(.43) | -0.27(.29) | -0.29(.43) |
| **Secondary education** |  |  |  |  |
| (Ref. Less than university entrance) |  |  |  |  |
| University entrance | 0.28(.14)\* | 0.33(.19) | 0.15(.14) | 0.33(.19) |
| **Higher education** |  |  |  |  |
| (Ref. Less than university degree) |  |  |  |  |
| University degree | 0.18(.16) | 0.09(.22) | 0.19(.16) | 0.09(.22) |
| **Employment contract** |  |  |  |  |
| (Ref. Part-time) |  |  |  |  |
| Full-time | -0.31(.18) | -0.54(.25)\* | -0.39(.18)\* | -0.54(.25)\* |
| **Daily earnings** |  |  |  |  |
| (Ref. <93) |  |  |  |  |
| 93-141 | 0.22(.14) | 0.21(.19) | 0.11(.14) | 0.21(.19) |
| 142+ | 0.31(.16) | 0.25(.22) | 0.32(.16)\* | 0.25(.22) |
| **Occupation** |  |  |  |  |
| (Ref. Production) |  |  |  |  |
| Business/Administra- tion | -0.09(.13) | -0.46(.19)\* | -0.16(.13) | -0.46(.19)\* |
| Other | 0.04(.12) | 0.03(.17) | 0.01(.12) | 0.03(.17) |
| **Years working for employer** |  |  |  |  |
| (Ref. <10) |  |  |  |  |
| 10-19 | -0.13(.14) | -0.34(.20) | -0.22(.14) | -0.34(.20) |
| 20+ | 0.07(.16) | -0.14(.22) | -0.04(.15) | -0.14(.22) |
| **Benefits last 10 years** |  |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes | -0.45(.16)\*\* | -0.41(.22) | -0.45(.16)\*\* | -0.41(.22) |
| **Job seeking last 10 years** |  |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes | -0.03(.13) | 0.08(.18) | 0.06(.13) | 0.08(.17) |
| **Region** |  |  |  |  |
| (Ref. North) |  |  |  |  |
| West | 0.07(.15) | 0.06(.20) | 0.02(.14) | 0.06(.20) |
| South | 0.03(.15) | 0.01(.21) | 0.01(.15) | 0.01(.21) |
| East | -0.01(.16) | -0.08(.22) | -0.01(.16) | -0.08(.22) |
| **Urbanicity** |  |  |  |  |
| (Ref. <13,000) |  |  |  |  |
| 13,000-119,999 | 0.06(.11) | 0.03(.15) | 0.09(.11) | 0.03(.15) |
| 120,000+ | 0.07(.15) | -0.03(.20) | 0.12(.14) | -0.03(.20) |
| **Commute** |  |  |  |  |
| (Ref. <17) |  |  |  |  |
| 17+ | 0.10(.10) | 0.18(.14) | 0.18(.10) | 0.18(.14) |
| **Fast internet** |  |  |  |  |
| (Ref. 50-100) |  |  |  |  |
| <50 | 0.14(.14) | 0.13(.20) | 0.14(.14) | 0.13(.20) |
| **Teleworking** |  |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes | 0.37(.13)\*\* | 0.25(.18) | 0.25(.13) | 0.25(.18) |
| **General trust** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| High | 0.11(.10) | 0.11(.14) | 0.04(.10) | 0.11(.14) |
| **Household size** |  |  |  |  |
| (Ref. 3+ Person) |  |  |  |  |
| 2 Person | 0.14(.11) | 0.10(.15) | -0.03(.11) | 0.10(.15) |
| Single | 0.15(.16) | 0.03(.22) | -0.04(.15) | 0.03(.22) |
| **Openness** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | 0.09(.16) | -0.06(.22) | -0.21(.16) | -0.06(.22) |
| High | 0.16(.19) | 0.13(.25) | -0.12(.18) | 0.13(.25) |
| **Extraversion** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | -0.30(.12)\*\* | -0.28(.17) | -0.28(.12)\* | -0.28(.17) |
| High | -0.30(.14)\* | -0.25(.20) | -0.43(.14)\*\* | -0.25(.20) |
| **Agreeableness** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | 0.09(.14) | 0.24(.20) | 0.23(.14) | 0.24(.20) |
| High | 0.20(.14) | 0.39(.20)\* | 0.25(.14) | 0.39(.20)\* |
| **Conscientiousness** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | 0.00(.17) | -0.24(.23) | -0.05(.17) | -0.24(.23) |
| High | -0.00(.15) | -0.26(.21) | -0.06(.15) | -0.26(.21) |
| **Neuroticism** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | -0.06(.10) | -0.09(.14) | -0.01(.10) | -0.09(.14) |
| High | 0.10(.14) | 0.01(.21) | 0.01(.14) | 0.01(.21) |
| **Item nonresponse wave 3** | |  |  |  |
| (Ref. 0) |  |  |  |  |
| 1-2 | -0.10(.10) | -0.02(.14) | -0.04(.10) | -0.02(.14) |
| 3 | -0.41(.16)\*\* | -0.35(.21) | -0.45(.15)\*\* | -0.35(.21) |
| **Contact attempts wave 3** | |  |  |  |
| (Ref. <4) |  |  |  |  |
| 4-8 | -0.19(.11) | -0.31(.15) | -0.26(.11)\* | -0.31(.15)\* |
| 9+ | -0.46(.12)\*\*\* | -0.55(.17)\*\* | -0.53(.12)\*\*\* | -0.55(.17)\*\* |
| **First interview wave** |  |  |  |  |
| (Ref. Wave 1) |  |  |  |  |
| Wave 2 | -0.08(.13) | 0.09(.18) | -0.08(.13) | 0.09(.18) |
| Wave 3 | -0.19(.12) | -0.25(.16) | -0.28(.11)\* | -0.25(.16) |
| **Interactions** | Estimate | Std. Error | Estimate | Std. Error |
| **Sex x EG** |  |  |  |  |
| (Ref. Male) |  |  |  |  |
| Female |  | -0.03(.29) |  | 0.10(.28) |
| **Age x EG** |  |  |  |  |
| (Ref. <40) |  |  |  |  |
| 40-55 |  | 0.12(.31) |  | -0.16(.29) |
| 56+ |  | 0.49(.33) |  | 0.33(.31) |
| **German citizenship x EG** |  |  |  |  |
| (Ref. Yes) |  |  |  |  |
| No |  | -0.54(.71) |  | 0.11(.58) |
| **Secondary education x EG** | |  |  |  |
| (Ref. Less than University entrance) | |  |  |  |
| University entrance |  | -0.10(.29) |  | -0.39(.29) |
| **Higher education x EG** |  |  |  |  |
| (Ref. Less than University degree) | | |  |  |
| University degree |  | 0.25(.32) |  | 0.29(.32) |
| **Employment contract x EG** | |  |  |  |
| (Ref. Part-time) |  |  |  |  |
| Full-time |  | 0.43(.37) |  | 0.27(.36) |
| **Daily earnings x EG** |  |  |  |  |
| (Ref. <93) |  |  |  |  |
| 93-141 |  | 0.11(.29) |  | -0.19(.28) |
| 142+ |  | 0.22(0.33) |  | 0.17(.32) |
| **Occupation x EG** |  |  |  |  |
| (Ref. Production) |  |  |  |  |
| Business/Administration | | 0.77(.26)\*\* |  | 0.66(.26)\* |
| Other |  | -0.04(0.25) |  | -0.11(.25) |
| **Years working for employer x EG** | |  |  |  |
| (Ref. <10) |  |  |  |  |
| 10-19 |  | 0.48(.30) |  | 0.23(.28) |
| 20+ |  | 0.49(.33) |  | 0.22(.31) |
| **Benefits last 10 years x EG** | |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes |  | -0.18(.35) |  | -0.06(.32) |
| **Job seeking last 10 years x EG** | |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes |  | -0.18(.26) |  | -0.02(.26) |
| **Region x EG** |  |  |  |  |
| (Ref. North) |  |  |  |  |
| West |  | 0.01(.30) |  | -0.05(.30) |
| South |  | -0.02(.31) |  | 0.02(.30) |
| East |  | 0.06(.33) |  | 0.13(.32) |
| **Urbanicity x EG** |  |  |  |  |
| (Ref. <13,000) |  |  |  |  |
| 13,000- 119,999 |  | 0.07(.22) |  | 0.14(.22) |
| 120,000+ |  | 0.24(.30) |  | 0.34(.29) |
| **Commute x EG** |  |  |  |  |
| (Ref. <17) |  |  |  |  |
| 17+ |  | -0.13(0.20) |  | 0.07(.20) |
| **Fast internet x EG** |  |  |  |  |
| (Ref. 50-100) |  |  |  |  |
| <50 |  | -0.02(.29) |  | -0.03(.28) |
| **Teleworking x EG** |  |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes |  | 0.24(.26) |  | 0.04(.27) |
| **General trust x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| High |  | 0.00(.21) |  | -0.15(.20) |
| **Household size x EG** |  |  |  |  |
| (Ref. 3+ Person) |  |  |  |  |
| 2 Person |  | 0.02(.22) |  | -0.34(.22) |
| Single |  | 0.18(.32) |  | -0.20(.31) |
| **Openness x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | 0.34(.33) |  | -0.35(.33) |
| High |  | 0.10(.39) |  | -0.55(.38) |
| **Extraversion x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | -0.05(.24) |  | -0.03(.24) |
| High |  | -0.16(.30) |  | -0.42(.29) |
| **Agreeableness x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | -0.30(.29) |  | -0.04(.28) |
| High |  | -0.44(.29) |  | -0.34(.28) |
| **Conscientiousness x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | 0.55(.34) |  | 0.46(.34) |
| High |  | 0.66(.32) |  | 0.51(.31) |
| **Neuroticism x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | 0.09(.21) |  | 0.18(.21) |
| High |  | 0.12(.29) |  | -0.01(.29) |
| **Item nonresponse wave 3 x EG** | |  |  |  |
| (Ref. 0) |  |  |  |  |
| 1-2 |  | -0.09(.21) |  | 0.02(.20) |
| 3 |  | -0.11(.33) |  | -0.22(.30) |
| **Contact attempts wave 3 x EG** | |  |  |  |
| (Ref. <4) |  |  |  |  |
| 4-8 |  | 0.25(.22) |  | 0.12(.22) |
| 9+ |  | 0.19(.25) |  | 0.07(.25) |
| **First interview wave x EG** | |  |  |  |
| (Ref. Wave 1) |  |  |  |  |
| Wave 2 |  | -0.40(.27) |  | -0.35(.27) |
| Wave 3 |  | 0.11(.24) |  | -0.06(.23) |
| N | 2,128 | 2,128 | 2,128 | 2,128 |
| AIC | 2,776.793 | 2,805.481 | 2,846.729 | 2,888.233 |
| BIC | 3,025.962 | 3,292.494 | 3,095.898 | 3,375.246 |
| Wald-Test () | 180.64 | 215.04 | 145.99 | 178.91 |
| Wald-Test (p-value) | <0.00 | <0.00 | <0.00 | <0.00 |
| Random effect (establishment) | <0.00 | <0.00 | <0.00 | <0.00 |
| ICC (empty model) | 0.02(.016) | 0.02(.016) | 0.02(.014) | 0.02(.014) |

Note: Significant codes: \*\*\* = 0.001, \*\* = 0.01, \* = 0.05

Table S12. Log-Odds Ratios of Survey Participation: Telephone Single-Mode vs. a) Web Starting Mode and b) Web-Telephone Mixed-Mode (non-linkable cases)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Telephone vs. Web Starting Mode** | | **Telephone vs. Web-Telephone** | |
| (Groups C vs. D and E) | | (Groups C vs. D and E) | |
| Main effects  model | Interaction  model | Main effects  model | Interaction  model |
|  | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) |
| **Intercept** | 0.22(.34) | 0.64(.55) | 0.73(.32)\* | 0.64(.55) |
| **Experimental group (EG)** | |  |  |  |
| (Ref. Telephone-Only) |  |  |  |  |
| Web | -0.83(.08)\*\*\* | -1.57(.70 )\* | 0.38(.08)\*\*\* | 0.48(.68) |
| **Sex** |  |  |  |  |
| (Ref. Male) |  |  |  |  |
| Female | -0.04(.11) | 0.19(.18) | 0.00(.11) | 0.19(.18) |
| **Age** |  |  |  |  |
| (Ref. <40) |  |  |  |  |
| 40-55 | 0.29(.13)\* | 0.25(.21) | 0.26(.12)\* | 0.25(.21) |
| 56+ | 0.05(.14) | 0.06(.23) | -0.07(.13) | 0.06(.23) |
| **German citizenship** |  |  |  |  |
| (Ref. Yes) |  |  |  |  |
| No | -0.30(.30) | -0.03(.43) | 0.09(.29) | -0.03(.43) |
| **Secondary education** |  |  |  |  |
| (Ref. Less than university entrance) |  |  |  |  |
| University entrance | 0.32(.12)\*\* | 0.19(.20) | 0.24(.12)\* | 0.19(.20) |
| **Higher education** |  |  |  |  |
| (Ref. Less than university degree) |  |  |  |  |
| University degree | 0.22(.13) | 0.27(.23) | 0.13(.13) | 0.27(.23) |
| **Employment contract** |  |  |  |  |
| (Ref. Part-time) |  |  |  |  |
| Full-time | -0.08(.14) | 0.06(.23) | -0.01(.13) | 0.06(.23) |
| **Daily earnings** |  |  |  |  |
| (Ref. <93) |  |  |  |  |
| 93-141 | 0.14(.11) | -0.15(.19) | -0.05(.11) | -0.15(.19) |
| 142+ | 0.39(.14)\*\* | 0.22(.23) | 0.17(.14) | 0.22(.23) |
| **Occupation** |  |  |  |  |
| (Ref. Production) |  |  |  |  |
| Business/Administration | 0.18(.11) | 0.24(.19) | 0.22(.11)\* | 0.24(.19) |
| Other | -0.06(.11) | -0.03(.18) | 0.09(.10) | -0.03(.18) |
| **Years working for employer** | |  |  |  |
| (Ref. <10) |  |  |  |  |
| 10-19 | 0.03(.12) | 0.02(.19) | 0.00(.11) | 0.02(.19) |
| 20+ | 0.05(.13) | 0.07(.22) | 0.01(.13) | 0.07(.22) |
| **Benefits last 10 years** |  |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes | -0.39(.14)\*\* | -0.60(.23)\*\* | -0.27(.13)\* | -0.60(.23)\*\* |
| **Job seeking last 10 years** |  |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes | -0.01(.12) | 0.29(.19) | 0.02(.11) | 0.29(.19) |
| **Region** |  |  |  |  |
| (Ref. North) |  |  |  |  |
| West | 0.08(.13) | 0.19(.23) | -0.04(.13) | 0.19(.23) |
| South | 0.03(.13) | 0.04(.23) | -0.14(.13) | 0.04(.23) |
| East | -0.19(.14) | -0.18(.24) | -0.28(.13)\* | -0.18(.24) |
| **Urbanicity** |  |  |  |  |
| (Ref. <13,000) |  |  |  |  |
| 13,000-119,999 | -0.02(.09) | 0.03(.16) | 0.04(.09) | 0.03(.16) |
| 120,000+ | -0.13(.12) | -0.04(.21) | -0.11(.12) | -0.04(.21) |
| **Commute** |  |  |  |  |
| (Ref. <17) |  |  |  |  |
| 17+ | -0.02(.08) | 0.01(.14) | 0.04(.08) | 0.01(.14) |
| **Fast internet** |  |  |  |  |
| (Ref. 50-100) |  |  |  |  |
| <50 | -0.28(.13) | -0.34(.21) | -0.18(.12) | -0.34(.21) |
| **Teleworking** |  |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes | 0.09(.11) | -0.12(.19) | 0.01(.11) | -0.12(.19) |
| **General trust** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| High | 0.02(.09) | -0.29(.15) | 0.01(.08) | -0.29(.15) |
| **Household size** |  |  |  |  |
| (Ref. 3+ Person) |  |  |  |  |
| 2 Person | -0.03(.09) | -0.23(.16) | -0.23(.09)\*\* | -0.23(.16) |
| Single | -0.18(.13) | 0.20(.21) | -0.22(.12) | -0.20(.21) |
| **Openness** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | 0.11(.14) | 0.07(.23) | -0.00(.13) | 0.07(.23) |
| High | -0.11(.16) | -0.07(.27) | -0.06(.15) | -0.07(.27) |
| **Extraversion** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | -0.20(.11) | -0.03(.18) | -0.25(.10)\* | -0.03(.18) |
| High | -0.23(.13) | 0.02(.21) | -0.27(.12)\* | 0.02(.21) |
| **Agreeableness** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | 0.05(.12) | -0.17(.20) | -0.11(.12) | -0.17(.20). |
| High | 0.10(.12) | -0.19(.20) | -0.07(.12) | -0.19(.20) |
| **Conscientiousness** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | -0.20(.14) | -0.44(.25) | -0.15(.14) | -0.44(.25) |
| High | -0.14(.13) | -0.32(.22) | -0.14(.13) | -0.32(.22) |
| **Neuroticism** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium | -0.09(.09) | -0.07(.15) | -0.06(.09) | -0.07(.15) |
| High | -0.04(.12) | -0.06(.20) | 0.04(.12) | -0.06(.20) |
| **Item nonresponse wave 3** |  |  |  |  |
| (Ref. 0) |  |  |  |  |
| 1-2 | -0.13(.09) | -0.09(.15) | -0.16(.08) | -0.09(.15) |
| 3 | -0.13(.13) | -0.19(.21) | -0.15(.13) | -0.19(.21) |
| **Contact attempts wave 3** |  |  |  |  |
| (Ref. <4) |  |  |  |  |
| 4-8 | -0.18(.09) | -0.22(.16) | -0.21(.09)\* | -0.22(.16) |
| 9+ | -0.21(.10)\* | -0.36(.17)\* | -0.32(.10)\*\* | -0.36(.17)\* |
| **First interview wave** |  |  |  |  |
| (Ref. Wave 1) |  |  |  |  |
| Wave 2 | 0.03(.10) | -0.01(.16) | 0.02(.09) | -0.01(.16) |
| Wave 3 | -0.21(.11) | -0.22(.18) | -0.32(.10)\*\*\* | -0.22(.18) |
| **Interactions** | Estimate | Std. Error | Estimate | Std. Error |
| **Sex x EG** |  |  |  |  |
| (Ref. Male) |  |  |  |  |
| Female |  | -0.34(.23) |  | -0.25(.23) |
| **Age x EG** |  |  |  |  |
| (Ref. <40) |  |  |  |  |
| 40-55 |  | 0.05(0.27) |  | 0.02(.26) |
| 56+ |  | -0.04(.29) |  | -0.21(.28) |
| **German citizenship x EG** |  |  |  |  |
| (Ref. Yes) |  |  |  |  |
| No |  | -0.60(.64) |  | 0.26(.59) |
| **Secondary education x EG** | |  |  |  |
| (Ref. Less than University entrance) | |  |  |  |
| University entrance |  | 0.25(.25) |  | 0.10(.25) |
| **Higher education x EG** |  |  |  |  |
| (Ref. Less than University degree) | |  |  |  |
| University degree |  | -0.08(.29) |  | -0.21(.29) |
| **Employment contract x EG** | |  |  |  |
| (Ref. Part-time) |  |  |  |  |
| Full-time |  | -0.19(.29) |  | -0.07(.28) |
| **Daily earnings x EG** |  |  |  |  |
| (Ref. <93) |  |  |  |  |
| 93-141 |  | 0.46(.24) |  | 0.16(.23) |
| 142+ |  | 0.28(.30) |  | -0.06(.29) |
| **Occupation x EG** |  |  |  |  |
| (Ref. Production) |  |  |  |  |
| Business/Administration |  | -0.11(.23) |  | -0.06(.23) |
| Other |  | -0.06(.23) |  | 0.16(.22) |
| **Years working for employer x EG** | |  |  |  |
| (Ref. <10) |  |  |  |  |
| 10-19 |  | -0.01(.25) |  | -0.05(.24) |
| 20+ |  | -0.02(.27) |  | -0.09(.27) |
| **Benefits last 10 years x EG** | |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes |  | 0.35(.29) |  | 0.50(.28) |
| **Job seeking last 10 years x EG** | |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes |  | -0.50(.24)\* |  | -0.41(.23) |
| **Region x EG** |  |  |  |  |
| (Ref. North) |  |  |  |  |
| West |  | -0.18(.28) |  | -0.34(.27) |
| South |  | -0.01(.28) |  | -0.27(.28) |
| East |  | -0.03(.30) |  | -0.16(.29) |
| **Urbanicity x EG** |  |  |  |  |
| (Ref. <13,000) |  |  |  |  |
| 13,000- 119,999 |  | -0.09(.20) |  | -0.00(.19) |
| 120,000+ |  | -0.12(.26) |  | -0.11(.25) |
| **Commute x EG** |  |  |  |  |
| (Ref. <17) |  |  |  |  |
| 17+ |  | -0.05(.18) |  | 0.04(.17) |
| **Fast internet x EG** |  |  |  |  |
| (Ref. 50-100) |  |  |  |  |
| < 50 |  | 0.13(.27) |  | 0.24(.26) |
| **Teleworking x EG** |  |  |  |  |
| (Ref. No) |  |  |  |  |
| Yes |  | 0.28(.23) |  | 0.17(.23) |
| **General trust x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| High |  | 0.49(.19)\*\*\* |  | 0.44(.18) |
| **Household size x EG** |  |  |  |  |
| (Ref. 3+ Person) |  |  |  |  |
| 2 Person |  | 0.31(.20) |  | 0.01(.20) |
| Single |  | -0.05(.27) |  | -0.04(.26) |
| **Openness x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | 0.10(.30) |  | -0.06(.29) |
| High |  | -0.01(.34) |  | 0.06(.33) |
| **Extraversion x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | -0.27(.22) |  | -0.32(.22) |
| High |  | -0.38(.26) |  | -0.45(.26) |
| **Agreeableness x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | 0.32(.25) |  | 0.09(.24) |
| High |  | 0.42(.26) |  | 0.15(.25) |
| **Conscientiousness x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | 0.37(.31) |  | 0.41(.30) |
| High |  | 0.30(.28) |  | 0.28(.27) |
| **Neuroticism x EG** |  |  |  |  |
| (Ref. Low) |  |  |  |  |
| Medium |  | -0.03(.19) |  | 0.00(.18) |
| High |  | 0.02(.26) |  | 0,12(.25) |
| **Item nonresponse wave 3 x EG** | |  |  |  |
| (Ref. 0) |  |  |  |  |
| 1-2 |  | -0.07(.18) |  | -0.09(.18) |
| 3 |  | 0.08(.27) |  | 0.08(.27) |
| **Contact attempts wave 3 x EG** | |  |  |  |
| (Ref. <4) |  |  |  |  |
| 4-8 |  | 0.03(.19) |  | 0.01(.19) |
| 9+ |  | 0.24(.22) |  | 0,09(.21) |
| **First interview wave x EG** | |  |  |  |
| (Ref. Wave 1) |  |  |  |  |
| Wave 2 |  | 0.08(.20) |  | 0.05(.20) |
| Wave 3 |  | 0.01(.22) |  | -0.16(.22) |
| N | 2,990 | 2,990 | 2,990 | 2,990 |
| AIC | 3,745.28 | 3,785.029 | 4,003.557 | 4,060.315 |
| BIC | 4,009.413 | 4,301.29 | 4,267.691 | 4,576.575 |
| Wald-Test () | 268.89 | 297.50 | 170.29 | 193.03 |
| Wald-Test (p-value) | <0.00 | <0.00 | <0.00 | <0.00 |
| Random effect (establishment; SE) | <0.00 | <0.00 | <0.00 | <0.00 |
| ICC (empty model) | 0.04(.017) | 0.04(.017) | 0.017(.014) | 0.017(.014) |

Note: Significant codes: \*\*\* = 0.001, \*\* = 0.01, \* = 0.05

Table S13. Variable Distributions of the Invitation Letter Experiment, by Mode and Mode Design

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Administrative**  **Variables** | **Mixed-Mode**  (Group D)  (Telephone mode not mentioned) | | | **Mixed-Mode**  (Group E)  (Telephone mode mentioned) | | | ***χ*2 test (*p*-value)** | | |
| Sample | Resp.  Web | Resp.  Web-Tel. | Sample | Resp. Web | Resp.  Web-Tel. | Samples | Resp.  Web | Resp.  Web-Tel. |
| **Demographics** |  |  |  |  |  |  |  |  |  |
| **Sex** |  |  |  |  |  |  |  |  |  |
| Male | 69.21 | 72.53 | 69.48 | 69.18 | 72.08 | 69.85 | 0.988 | 0.899 | 0.891 |
| Female | 30.79 | 27.47 | 30.52 | 30.82 | 27.92 | 30.15 |
| **Age** |  |  |  |  |  |  |  |  |  |
| <40 | 15.15 | 12.35 | 15.17 | 17.27 | 11.04 | 14.07 | 0.274 | 0.727 | 0.858 |
| 40-55 | 40.42 | 44.75 | 45.52 | 41.37 | 47.73 | 45.73 |
| 56+ | 44.43 | 42.90 | 39.31 | 41.37 | 41.23 | 40.20 |
| **German citizenship** | |  |  |  |  |  |  |  |  |
| Yes | 98.19 | 99.07 | 97.93 | 98.69 | 99.03 | 98.66 | 0.367 | 0.950 | 0.333 |
| No | 1.81 | 0.93 | 2.07 | 1.31 | 0.97 | 1.34 |
| **Secondary education** | |  |  |  |  |  |  |  |  |
| Less than university entrance | 61.79 | 50.31 | 57.41 | 63.76 | 52.60 | 59.80 | 0.363 | 0.565 | 0.406 |
| University entrance | 38.21 | 49.69 | 42.59 | 36.24 | 47.40 | 40.20 |
| **Higher education** | | |  |  |  |  |  |  |  |
| Less than university degree | 75.73 | 66.36 | 73.10 | 77.01 | 68.83 | 74.20 | 0.501 | 0.507 | 0.668 |
| University degree | 24.27 | 33.64 | 26.90 | 22.99 | 31.17 | 25.80 |
| **Employment** |  |  |  |  |  |  |  |  |  |
| **Employment contract** | |  |  |  |  |  |  |  |  |
| Full-time | 84.25 | 86.11 | 83.97 | 83.73 | 83.77 | 83.58 | 0.753 | 0.410 | 0.859 |
| Part-time | 15.75 | 13.89 | 16.03 | 16.27 | 16.23 | 16.42 |
| **Daily earnings** |  |  |  |  |  |  |  |  |  |
| <93 | 37.11 | 25.00 | 33.79 | 37.05 | 24.35 | 34.34 | 0.960 | 0.931 | 0.895 |
| 93-141 | 33.80 | 33.64 | 33.10 | 34.34 | 35.06 | 33.84 |
| 142+ | 29.09 | 41.36 | 33.10 | 28.61 | 40.58 | 31.83 |
| **Occupation** |  |  |  |  |  |  |  |  |  |
| Production | 41.42 | 42.59 | 39.31 | 41.57 | 36.04 | 39.36 | 0.675 | 0.219 | 0.643 |
| Business / Administration | 30.39 | 34.88 | 32.41 | 31.83 | 40.26 | 34.51 |
| Other | 28.18 | 22.53 | 28.28 | 26.61 | 23.70 | 26.13 |
| **Years working for employer** | | |  |  |  |  |  |  |  |
| <10 | 23.17 | 17.28 | 22.41 | 25.50 | 20.78 | 23.28 | 0.323 | 0.511 | 0.756 |
| 10-19 | 38.62 | 38.58 | 38.97 | 35.74 | 37.99 | 36.85 |
| 20+ | 38.21 | 44.14 | 38.62 | 38.76 | 41.23 | 39.87 |
| **Benefits** |  |  |  |  |  |  |  |  |  |
| **Benefits last 10 years** | |  |  |  |  |  |  |  |  |
| No | 76.53 | 84.57 | 78.45 | 76.51 | 86.04 | 80.07 | 0.990 | 0.602 | 0.493 |
| Yes | 23.47 | 15.43 | 21.55 | 23.49 | 13.96 | 19.93 |
| **Job seeking last 10 years** | | |  |  |  |  |  |  |  |
| No | 61.08 | 69.44 | 62.93 | 60.44 | 73.38 | 65.49 | 0.769 | 0.274 | 0.359 |
| Yes | 38.92 | 30.56 | 37.07 | 39.56 | 26.62 | 34.51 |
| **Geodata** |  |  |  |  |  |  |  |  |  |
| **Region** |  |  |  |  |  |  |  |  |  |
| North | 16.15 | 15.43 | 17.24 | 13.86 | 14.29 | 14.74 | 0.294 | 0.502 | 0.584 |
| West | 26.18 | 28.09 | 26.72 | 28.61 | 33.12 | 28.64 |
| South | 32.50 | 36.73 | 34.31 | 30.82 | 36.04 | 33.33 |
| East | 25.18 | 19.75 | 21.72 | 26.71 | 16.56 | 23.28 |
| **Urbanicity** |  |  |  |  |  |  |  |  |  |
| <13,000 | 39.02 | 38.27 | 38.97 | 41.27 | 42.21 | 40.70 | 0.582 | 0.593 | 0.819 |
| 13,000-119,999 | 42.63 | 43.83 | 43.10 | 40.76 | 40.58 | 42.21 |
| 120,000+ | 18.36 | 17.90 | 17.93 | 17.97 | 17.21 | 17.09 |
| **Commute** |  |  |  |  |  |  |  |  |  |
| <17 | 52.46 | 50.31 | 50.34 | 55.92 | 55.19 | 55.61 | 0.120 | 0.219 | 0.070 |
| 17+ | 47.54 | 49.69 | 49.66 | 44.08 | 44.81 | 44.39 |
| **Fast internet** |  |  |  |  |  |  |  |  |  |
| <50 | 13.64 | 12.04 | 13.62 | 13.05 | 9.42 | 11.56 | 0.699 | 0.288 | 0.286 |
| 50-100 | 86.36 | 87.96 | 86.38 | 86.95 | 90.58 | 88.44 |
| N | 997 | 324 | 580 | 996 | 308 | 597 |  |  |  |

Table S14. Median Absolute Nonresponse Bias (MANB) and Median Absolute Relative Nonresponse Bias (MARNB), by Variable Group and Overall

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable Groups** | **Single Mode**  (Groups A and C) | |  | **Mixed-Mode**  (Groups B, D and E) | | | |
| **Telephone** | |  | **Web Starting Mode** | | **Web-Telephone** | |
| MANB (%) | MARNB (%) |  | MANB (%) | MARNB (%) | MANB (%) | MARNB (%) |
| Demographics | 2.00 | 8.73 |  | 3.53 | 30.27 | 2.11 | 7.32 |
| Employment | 1.29 | 3.61 |  | 4.35 | 13.08 | 1.65 | 4.47 |
| Benefits | 2.96 | 11.81 |  | 9.76 | 34.24 | 3.37 | 11.95 |
| Geodata | 0.87 | 2.07 |  | 1.71 | 4.95 | 0.79 | 3.31 |
| Overall | 1.23 | 3.85 |  | 3.20 | 12.25 | 1.57 | 4.39 |

Table S15. Estimates of Nonresponse Bias (NB), Absolute Nonresponse Bias and Absolute Relative Nonresponse Bias (ARNB) for Each Variable Category

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Administrative**  **Variables** | **Single-Mode**  (Groups A and C) | | **Mixed-Mode**  (Groups B, D and E) | | | |
| **Telephone** | | **Web Starting Mode** | | **Web-Telephone** | |
| NB(ANB)  (%) | ARNB  (%) | NB(ANB)  (%) | ARNB  (%) | NB(ANB)  (%) | ARNB  (%) |
| **Sex** |  |  |  |  |  |  |
| Female | (0.55) | 1.87 | -(2.55) | 8.77 | -(0.39) | 1.34 |
| **Age** |  |  |  |  |  |  |
| <40 | -(2.00) | 12.38 | -(5.27) | 32.41 | -(2.11) | 12.98 |
| 40-54 | (3.64) | 8.73 | (3.53) | 8.36 | (3.09) | 7.32 |
| 56+ | -(1.64) | 3.89 | (1.76) | 4.24 | -(0.97) | 2.34 |
| **German citizenship** |  |  |  |  |  |  |
| No | -(0.09) | 3.72 | -(0.99) | 49.50 | -(0.09) | 4.50 |
| **Secondary education** |  |  |  |  |  |  |
| University entrance | (4.76) | 12.54 | (11.22) | 30.27 | (4.06) | 10.95 |
| **Higher education** |  |  |  |  |  |  |
| University degree | (4.00) | 17.82 | (9.22) | 38.50 | (3.19) | 13.32 |
| **Employment contract** |  |  |  |  |  |  |
| Full-time | -(1.40) | 1.62 | (0.74) | 0.87 | -(0.34) | 0.40 |
| **Daily earnings** |  |  |  |  |  |  |
| <93 | -(3.14) | 9.61 | -(11.05) | 33.67 | -(3.05) | 9.29 |
| 93-141 | -(1.10) | 3.42 | -(1.08) | 3.19 | -(1.45) | 4.28 |
| 142+ | (4.23) | 12.05 | (12.12) | 36.35 | (4.51) | 13.53 |
| **Occupation** |  |  |  |  |  |  |
| Production | -(1.30) | 2.89 | -(3.30) | 7.53 | -(2.04) | 4.66 |
| Business/Administration | (1.28) | 4.22 | (6.80) | 22.52 | (2.46) | 8.15 |
| Other | (0.03) | 0.12 | -(3.10) | 11.93 | -(0.42) | 1.62 |
| **Years working for employer** | |  |  |  |  |  |
| <10 | -(1.09) | 4.42 | -(5.85) | 24.59 | -(1.78) | 7.48 |
| 10-19 | -(0.38) | 1.03 | (0.46) | 1.20 | (0.26) | 0.68 |
| 20+ | (1.47) | 3.81 | (5.39) | 14.24 | (1.52) | 4.01 |
| **Benefits last 10 years** |  |  |  |  |  |  |
| Yes | -(3.55) | 17.56 | -(8.76) | 40.44 | -(3.15) | 14.54 |
| **Job seeking last 10 years** |  |  |  |  |  |  |
| Yes | -(2.36) | 6.07 | -(10.76) | 28.04 | -(3.59) | 9.35 |
| **Region** |  |  |  |  |  |  |
| North | (0.08) | 0.56 | -(0.74) | 4.95 | (0.51) | 3.41 |
| West | (0.60) | 2.02 | (2.52) | 8.83 | (0.36) | 1.26 |
| South | (2.44) | 8.02 | (4.10) | 13.11 | (1.71) | 5.47 |
| East | -(3.12) | 12.14 | -(5.88) | 23.31 | -(2.56) | 10.15 |
| **Urbanicity** |  |  |  |  |  |  |
| <13,000 | -(0.87) | 2.07 | -(0.79) | 1.94 | -(0.79) | 1.94 |
| 13,000-119,999 | (0.78) | 1.93 | (0.82) | 1.97 | (0.98) | 2.35 |
| 120,000+ | (0.08) | 0.46 | -(0.03) | 0.17 | -(0.19) | 1.08 |
| **Commute** |  |  |  |  |  |  |
| 17+ | (1.17) | 2.64 | (1.80) | 4.07 | (1.61) | 3.64 |
| **Fast internet** |  |  |  |  |  |  |
| <50 | -(0.88) | 6.72 | -(1.71) | 12.56 | -(0.45) | 3.31 |