# Appendix A: Contingency Table – Relationship between Age Groups and Inflation Aversion

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Age categories | | | | | |  |
| Inflation aversion |  | 29 and below | 30-39 | 40-49 | 50-59 | 60-69 | 70 and above | Total |
| No |  | 26 | 24 | 42 | 26 | 29 | 32 | 179 |
|  |  | 14.44 | 13.26 | 15.05 | 11.02 | 9.57 | 10.53 | 12.07 |
| Yes |  | 154 | 157 | 237 | 210 | 274 | 272 | 1304 |
|  |  | 85.56 | 86.74 | 84.95 | 88.98 | 90.43 | 89.47 | 87.93 |
| Total |  | 180 | 181 | 279 | 236 | 303 | 304 | 1483 |

# Appendix B: Robustness Check and Related Analyses of Table 2 (Voter’s Age and Inflation Preference)

## B1: Standard Errors Clustered by Region and Addition of Squared and Cubit Terms

### Table B1: Regression Table



Note: The unit of analysis is individuals (survey respondents). Models 1, 2, 3, and 4 correspond to Models 2, 4, 6, and 8 in Table 2 (logit with control variables). Model 5 of this table adds the squared term of the continuous age variable, while Model 6 adds the squared and cubic terms. Models 7-12 parallel Models 1-6 with the addition of dummy variables for regions where the respondent lives. Regions are broader geographical units which encompass multiple prefectures (except Hokkaido, which consists of one prefecture). Standard errors are clustered by regions. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### Figure B1: Predicted Probabilities of Inflation Aversion



Note: The figures report predicted probabilities of inflation aversion (the respondent agrees with the view that keeping prices under control is the government’s responsibility) based on Model 7, which includes regional dummies and the continuous age variable, and Model 12, which includes regional dummies and the squared and cubic terms of the age variable. *margins* command in Stata is used to obtain the predicted probabilities; for each integer from 20 to 85, we calculate the predicted probability for each observation in the dataset. For each value of the age variable from 20 to 85, we calculate the average of the predicted probabilities from all the observations. The other independent variables take the values as observed.

## B2: Ordered Logit



Note: The unit of analysis is individuals (survey respondents). Results of ordered logit regressions are reported. The dependent variable is the four-point ordinal variable indicating responses to the following question: "On the whole, do you think it should be or should not be the government’s responsibility to keep prices under control." The answer choices are coded as an ordinal variable: “definitely should be” (4), “probably should be” (3), “probably should not be” (2), and “definitely should not be” (1). Those who selected "can't choose" or "no answer" are not included in the analysis. Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## B3: Multinomial Logit



## B3: Multinomial Logit (continued)



Note: The unit of analysis is individuals (survey respondents). Results of multinomial logit regressions are reported. The dependent variable is the four-point ordinal variable indicating responses to the following question: "On the whole, do you think it should be or should not be the government’s responsibility to keep prices under control." The answer choices include: “definitely should be”, “probably should be”, “probably should not be”, and “definitely should not be”. Those who selected "can't choose" or "no answer" are not included in the analysis. The outcome "probably should not be" is used as a base outcome (the number of those who selected "definitely should not be" was very small). Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## B4: Inflation Aversion – Comparison with OECD Countries



Note: The percentages of those who are inflation-averse among all the respondents, elderly respondents (65 and above), and non-elderly respondents (64 and below) are reported. The question in the ISSP survey is: "On the whole, do you think it should be or should not be the government's responsibility to keep prices under control." Those who selected "definitely should be" and "probably should be" are categorized into inflation averse, while those who selected "probably should not be" and "definitely should not be" are categorized into those who are not inflation averse.

# Appendix C: Contingency Table – Relationship between Age Groups and Opinion on QE

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Age group | | | | | |  |
|  |  | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70 and above | Total |
| Opinion on QE | Disapprove | 3 | 8 | 23 | 23 | 46 | 29 | 132 |
|  | 3.37 | 5.44 | 11.98 | 9.54 | 15.18 | 8.24 | 9.97 |
| Somewhat disapprove | 12 | 19 | 30 | 48 | 58 | 56 | 223 |
|  | 13.48 | 12.93 | 15.63 | 19.92 | 19.14 | 15.91 | 16.84 |
| Neither | 55 | 80 | 98 | 104 | 137 | 179 | 653 |
|  | 61.8 | 54.42 | 51.04 | 43.15 | 45.21 | 50.85 | 49.32 |
| Somewhat approve | 15 | 32 | 34 | 54 | 42 | 70 | 247 |
|  | 16.85 | 21.77 | 17.71 | 22.41 | 13.86 | 19.89 | 18.66 |
| Approve | 4 | 8 | 7 | 12 | 20 | 18 | 69 |
|  | 4.49 | 5.44 | 3.65 | 4.98 | 6.6 | 5.11 | 5.21 |
|  | Total | 89 | 147 | 192 | 241 | 303 | 352 | 1,324 |
|  |  | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

# Appendix D: Robustness Check of Table 3 (Voters’ Age and Support for QE)

## D1: OLS with Alternative Standard Errors



Note: The unit of analysis is individuals (survey respondents). OLS is used. The dependent, independent, and control variables are the same as Table 3. Standard errors clustered by prefectures (Models 1-4) and single-member districts in the House of Representatives (Models 5-8) are reported in parentheses.

## D2: Ordered Logit



Note: The unit of analysis is individuals (survey respondents). Results of ordered logit regressions are presented. The dependent variable is the same as in Table 3, which indicates response to the question asking their opinion on QE. Here we consider it as an ordinal variable and use ordered logit model. The independent and control variables are the same as in Table 3. Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## D3: Multinomial Logit





Note: The unit of analysis is individuals (survey respondents). Results of multinomial logit regressions are reported. For each model, the outcome variable is support for QE measured in the five-point ordinal scale. “Neither approve nor disapprove” is used as a base outcome. Four measures of age/elderly are used as in Table 3; the control variables are also the same as in Table 3. Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## D4: Logit



Note: The unit of analysis is individuals (survey respondents). Results of the logit regressions are reported. The dependent variable is a binary variable which takes the value of one if the respondent selected “somewhat disapprove” or “disapprove” to the question asking whether they approve or disapprove monetary easing by the Bank of Japan. Independent and control variables are the same as in Table 3. Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## D5: Interaction

### Table D5: Regression Table



Note: The unit of analysis is individuals (survey respondents). Results of OLS (Models 1-3) and logit (Models 4-6) regressions are reported, which parallel Models 3, 6, and 9 in Table 3 and Models 1, 2, and 3 in Appendix B4. Interaction terms between age/elderly and some variables are included. Coefficients on some interaction terms are significant, implying that the effect of age may be moderated by other factors. Below we plot graphs of predicted probabilities. Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### Figure D5 (1): Support for the LDP



Note: The predicted probabilities of disapproving QE as one’s age changes are plotted for those who consider themselves as LDP supporters (regardless of their vote choice in the 2016 upper house election) and those who do not. The regression result is not reported in tables.

### Figure D5 (2): Perception of the Current Economic Condition



Note: The predicted probabilities of disapproving QE as one’s age changes are plotted for those who perceive that the current economic condition is good, bad, and neither bad nor good, separately. The figure is based on Model 4 in Table D5.

# Appendix E: Contingency Table – Opinion on QE by Party

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | LDP | Komei | JCP | SDP | Hope | CDP | Ishin | Other |  | Independent | Total |
| Disagree | 1 | 0 | 196 | 12 | 21 | 23 | 1 | 2 |  | 24 | 280 |
|  | 0.37 | 0 | 95.15 | 63.16 | 10.66 | 36.51 | 2.13 | 4.88 |  | 35.29 | 30.47 |
| Somewhat disagree | 24 | 0 | 6 | 2 | 121 | 24 | 5 | 3 |  | 17 | 202 |
|  | 8.92 | 0 | 2.91 | 10.53 | 61.42 | 38.1 | 10.64 | 7.32 |  | 25 | 21.98 |
| Neither | 48 | 4 | 3 | 5 | 35 | 11 | 35 | 8 |  | 12 | 161 |
|  | 17.84 | 44.44 | 1.46 | 26.32 | 17.77 | 17.46 | 74.47 | 19.51 |  | 17.65 | 17.52 |
| Somewhat agree | 176 | 4 | 0 | 0 | 15 | 3 | 3 | 21 |  | 11 | 233 |
|  | 65.43 | 44.44 | 0 | 0 | 7.61 | 4.76 | 6.38 | 51.22 |  | 16.18 | 25.35 |
| Agree | 20 | 1 | 1 | 0 | 5 | 2 | 3 | 7 |  | 4 | 43 |
|  | 7.43 | 11.11 | 0.49 | 0 | 2.54 | 3.17 | 6.38 | 17.07 |  | 5.88 | 4.68 |
| Total | 269 | 9 | 206 | 19 | 197 | 63 | 47 | 41 |  | 68 | 919 |
|  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  | 100 | 100 |

Note: Frequency distribution of the opinion on QE from the survey of politicians prior to the 2017 lower house election is reported. LDP – Liberal Democratic Party; Komei – Kometo; JCP – Japan Communist Party; SDP – Social Democratic Party; Hope – Party of Hope; CDP – Constitutional Democratic Party; Ishin – Japan Innovation Party (Nippon Ishin no Kai); Other – Those who belong to other political parties.

# Appendix F: Robustness check of Table 4 (Elderly in the Single-Member Constituency and Candidate’s Support for QE)

## F1: Share of the Elderly in the Constituency and Candidate’s Support for QE – Analyses in Table 4 with More Specifications



Note: The unit of analysis is candidates in the 2017 Lower House elections who ran in the single-member constituencies. Results of OLS regressions are reported. This is a full table of Table 4 in the main text. Here we report baseline models without any control variable, models with another constituency-level variable, and models with constituency-level and candidate-level control variables. The dependent variable is responses to the following question: “*Do you agree or disagree with quantitative easing by the Bank of Japan, including the purchase of government bonds?*” The answer choices are presented in a five-point ordinal scale, with larger values indicating greater degrees of agreement. Three measures of the elderly are used: (1) percentage of those who are 60 years old and above in the constituency, (2) percentage of those who are 65 and above, and (3) percentage of those who are 70 and above. Robust standard errors are reported in parentheses. Results for all the candidates (Models 1-9) and results for those candidates who are elected in the single-member constituency (Models 10-18) are reported. Since none of the candidates in the dataset running from non-major parties (indicated as “Other”) were elected, they are not included in the analyses with only elected candidates. \*\*\* p <0.01, \*\* p < 0.05, \* p < 0.10.

## F2: Ordered Logit



Note: The unit of analysis is candidates in the 2017 Lower House elections who ran in the single-member constituencies. Results of ordered logit regressions are reported. The dependent variable is responses to the following question: “*Do you agree or disagree with quantitative easing by the Bank of Japan, including the purchase of government bonds?*” The answer choices are presented in a five-point ordinal scale, with larger values indicating greater degrees of agreement. We treat it as an ordinal variable and use ordered logit model. The independent and control variables are the same as in Table 4. Results for all the candidates (Models 1-3) and results for those candidates who are elected in the single-member constituency (Models 4-6) are reported. Since none of the candidates in the dataset running from non-major parties (indicated as “Other”) were elected, they are not included in the analyses with only elected candidates (Models 4-6). Robust standard errors are reported in parentheses. \*\*\* p <0.01, \*\* p < 0.05, \* p < 0.10.

## F3: Multinomial Logit



## F3: Multinomial Logit (continued)



Note: The unit of analysis is candidates in the 2017 Lower House elections who ran in the single-member constituencies. Results of multinomial logit regressions are reported. The dependent variable is responses to the following question: “*Do you agree or disagree with quantitative easing by the Bank of Japan, including the purchase of government bonds?*” Responses are coded in a five-point ordinal scale, and we consider it as a categorical variable in this analysis. The middle category – neither approve nor disapprove – is used as a base outcome. The independent and control variables are the same as in Table 4. Results for all the candidates (Models 1-3) and results for those candidates who are elected in the single-member constituency (Models 4-6) are reported. Since none of the candidates in the dataset running from non-major parties (indicated as “Other”) were elected, they are not included in the analyses with only elected candidates (Models 4-6). Robust standard errors are reported in parentheses. \*\*\* p <0.01, \*\* p < 0.05, \* p < 0.10.

## F4: Logit



Note: The unit of analysis is candidates in the 2017 Lower House elections who ran in the single-member constituencies. Results of logit regressions are reported. We construct a binary variable equal to one if the respondent disagrees or somewhat disagrees with QE, using the same survey question as in Table 4. The independent and control variables are the same as in Table 4. Results for all the candidates (Models 1-3) and results for those candidates who are elected in the single-member constituency (Models 4-6) are reported. Since none of the candidates in the dataset running from non-major parties (indicated as “Other”) were elected, they are not included in the analyses with only elected candidates (Models 4-6). In Models 1-3, there is no variation in the dependent variable among candidates running from Komeito, while in Models 4-6 there is no variation among candidates running from Komeit, JCP, and SDP, respectively. Robust standard errors are reported in parentheses. \*\*\* p <0.01, \*\* p < 0.05, \* p < 0.10.

## F5: Interaction

### Table F5 (1): OLS



### Table F5 (2): Logit



Note: For the measure of the elderly, we use the percentage of those who are 65 and above in the constituency. Tables F5(1) use OLS with the ordinal dependent variable, while Table F5(2) uses logit model with the binary dependent variable used in Table F4. Models 1 and 2 use all the observations, while Models 3 and 4 use only those candidates who are elected in the single-member constituencies. In Models 1 and 3, control variables are the same as in Table 3, with the addition of the squared term of the elderly variable. In Models 2 and 4, we add interaction terms between: (1) the percentage of the elderly and the percentage of those who work in the manufacturing sector, (2) the percentage of the elderly and the candidate’s vote share in the single-member constituency, (3) the percentage of the elderly and the candidate’s seniority (the number of consecutive terms elected to the Diet prior to the 2017 election, (4) and the percentage of the elderly and the binary variable indicating whether the candidate is running from the LDP or not. Since none of the candidates in the dataset running from non-major parties (indicated as “Other”) were elected, they are not included in the analyses with only elected candidates (Model 3 in both tables). In Models 1 and 3 of Table F5(2), there is no variation in the dependent variable among candidates running from Komeito, while in Models 2 and 4, there is no variation among candidates running from Komeito, JCP, and SDP, respectively. Robust standard errors are reported in parentheses. \*\*\* p <0.01, \*\* p < 0.05, \* p < 0.10.

### Figure F5 (1): Predicted Probability (Squared Term of the Elderly Variable)



Note: The figure plots the predicted probability of the candidate disapproving QE as the percentage of the elderly in the constituency changes, based on Models 1 and 3 in Table F5(2), which includes a squared term of the elderly and uses logit model. Results for all candidates (left) and elected candidates (right) are reported separately.

### Figure F5 (2): Predicted Probability (% Elderly × % Manufacturing Sector)



Note: The figure plots the predicted probability of the candidate disapproving QE as the percentage of the elderly in the constituency changes, based on Models 2 and 4 in Table F5(2), which includes interaction terms and uses logit model. Results for all candidates (left) and elected candidates (right) are reported separately. The predicted probabilities when the percentage of those who work in the manufacturing sector is 5%, 20%, and 35% are reported.

### Figure F5 (3): Predicted Probability (% Elderly × Candidate Vote Share)



Note: The figure plots the predicted probability of the candidate disapproving QE as the percentage of the elderly in the constituency changes, based on Models 2 and 4 in Table F5(2), which includes interaction terms and uses logit model. Results for all candidates (left) and elected candidates (right) are reported separately. The predicted probabilities when the candidate’s vote share is 30%, 40%, 50%, 60%, and 70% are reported.

### Figure F5 (4): Predicted Probability (% Elderly × Candidate Seniority)



Note: The figure plots the predicted probability of the candidate disapproving QE as the percentage of the elderly in the constituency changes, based on Models 2 and 4 in Table F5(2), which uses logit model. Results for all candidates (left) and elected candidates (right) are reported separately. The predicted probabilities when the candidate’s seniority (the number of terms elected to the Diet prior to the 2017 election) is 0 (which means the candidate is a challenger), 1, 3, 5, 7, and 9 terms are reported.

### Figure F5 (5): Predicted Probability (% Elderly × LDP Candidate)



Note: The figure plots the predicted probability of the candidate disapproving QE as the percentage of the elderly in the constituency changes, based on Models 2 and 4 in Table F5(2), which uses logit model. Results for all candidates (left) and elected candidates (right) are reported separately. The predicted probabilities for the LDP and non-LDP candidates are reported.

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