

Public Attitudes toward Surveys and
Personal Data:
Evidence from an In-person Survey of Taiwan

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Motivation and Purposes

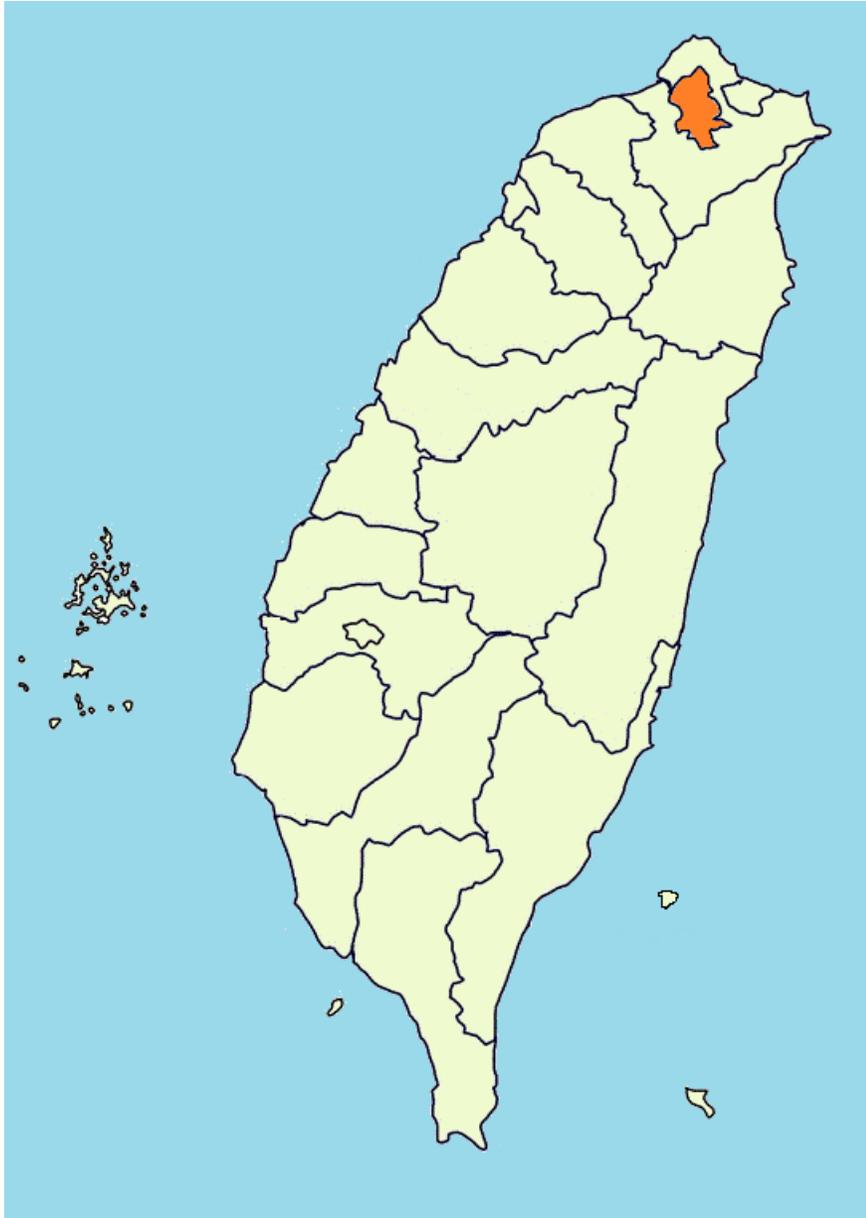
Motivation

- Response rates have been decreasing over time, and survey data quality is often found to be associated with respondent's willingness to participate in surveys
- Some survey researchers claimed that, through investigating public attitudes toward surveys, we can better understand people's decisions to participate in surveys and responding behaviors
 - People who hold negative attitudes toward surveys are more likely to turn down survey invitations
 - Respondents who hold negative attitudes toward surveys are more likely to exhibit low data quality

Purposes

- By conducting an in-person survey, this study explores Taipei adult residents' attitudes toward
 - General surveys
 - Survey organizations
 - Personal information/data
- In addition, this study analyzes the effects of attitudes toward surveys/data on
 - Respondents' cooperation during interview
 - Quality of completed survey data

In-person Survey on Surveys and Data: A Brief Description



Taipei, Taiwan

Taipei, officially known as Taipei City, is the capital city of Taiwan

In April 2018, the population of Taipei City is about 2.68 million

Taipei City contains 12 administrative districts

In-person Survey: Questionnaire

The questionnaire contains

- Attitudes toward general surveys and survey organizations
- Assessment for sensitivity of personal information
- Some sensitive questions (e.g., voting behavior, political party preference, income)
- Personal basic information (e.g., gender, birth year, education, work condition)
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In-person Survey: Population and Sampling

- Survey population is those who were born in 1943-92 (aged 21-70 in survey year), and who were registered residents of Taipei city
- Stratified two-stage probability proportional to size sampling was adopted
 - Population with registered records in Taipei was first stratified to 12 administrative districts
 - PSUs were “li’s” (basic administrative unit of Taiwan), and SSUs were individuals
- Sampling frame was registration records provided by the Ministry of Interior, Taiwan
- Survey was conducted by Center for Survey Research at Academia Sinica, under the funding of Ministry of Science of Technology, Taiwan

In-person Survey: Implementation and Outcomes

- Interviewer training was conducted on March 16-17 and 23-24, 2013
- Field period was from March 25 to June 10, 2013
- 23 Interviewers had been participated in the survey
- Complete interviews were 897 cases, with the response rate (RR1) being 42.7%, and refusal rate (REF1) being 21.7%
- Variables used in raking included sex, age, educational levels, and regions

In-person Survey: Rich Paradata

Along with this survey, rich paradata had been collected

- Interviewer assessment for completed interviews (e.g., respondent ever tried to quit during interview, ever showed impatience during interview)
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Preliminary Findings: Attitudes toward Surveys

Figure 1 Distribution of Answers to “For our country as a whole, do you think the benefits of opinion surveys exceed their harms, or the harms exceed benefits?” (n = 883)

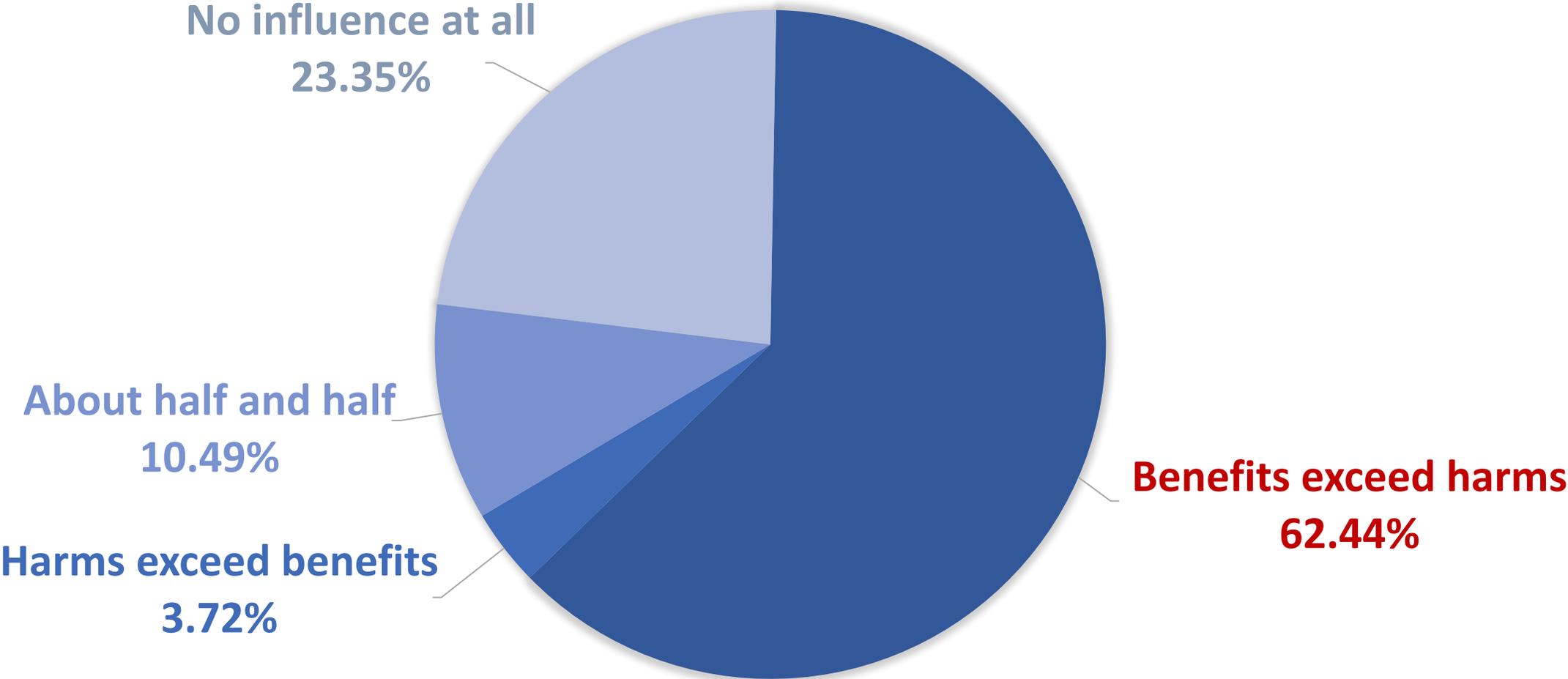


Table 1 Public Attitudes toward Surveys

| | Scale of Agreement (%) | | | | | Mean Value |
|---|------------------------|-------|-------|-------|-------|-------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Opinion surveys have made the society more democratic | 3.99 | 12.43 | 24.03 | 36.60 | 22.89 | 3.62 (n = 894) |
| Government policy making should be based primarily on the outcomes of opinion surveys | 4.09 | 8.30 | 23.57 | 38.56 | 25.47 | 3.73 (n = 889) |

Brief Summary: Attitudes toward Surveys

- For adult individuals who resided in Taipei, a majority of people regarded that
 - Opinion surveys are beneficial for the country
 - Opinion surveys have made the society more democratic
 - Government should formulate policies based on survey outcomes

In general, people held positive attitudes toward opinion surveys

Preliminary Findings:
Attitudes toward Survey Organizations

Figure 2 Mean Values of Trust toward Various Survey Organizations (1-5), n = 852

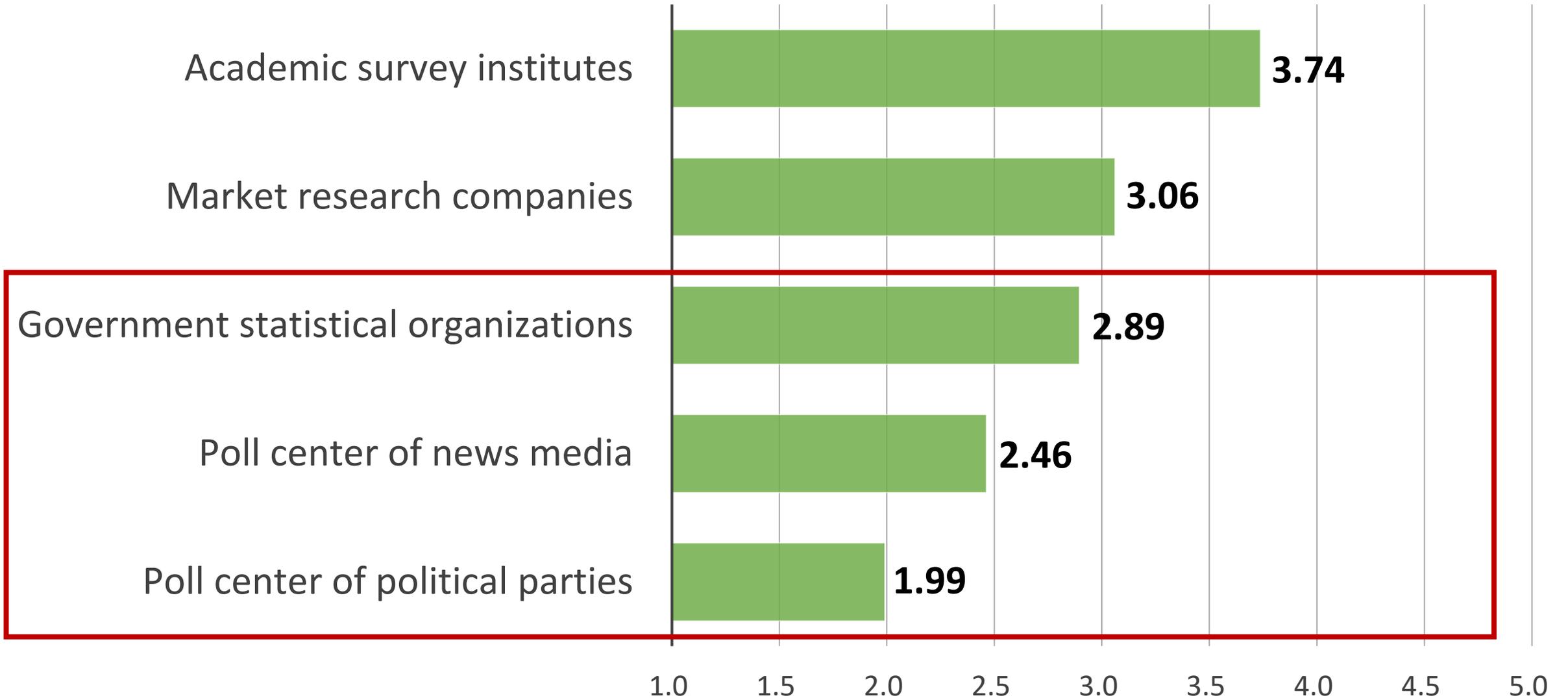
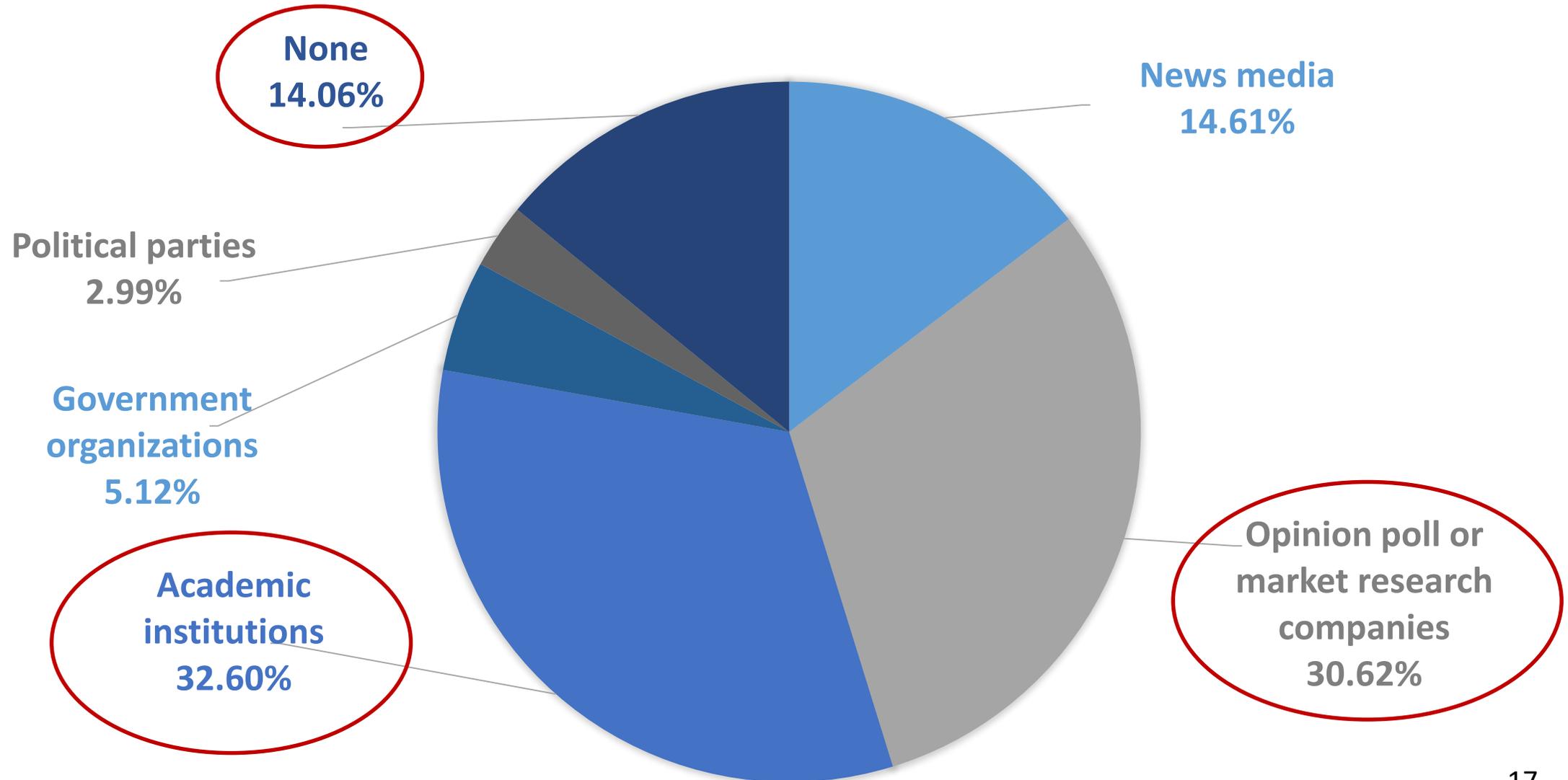


Figure 3 Distribution of Answers to "Concerning election polls conducted by the following organizations, which do you think is the most credible?" (n = 841)



Brief Summary: Attitudes toward Survey Organizations

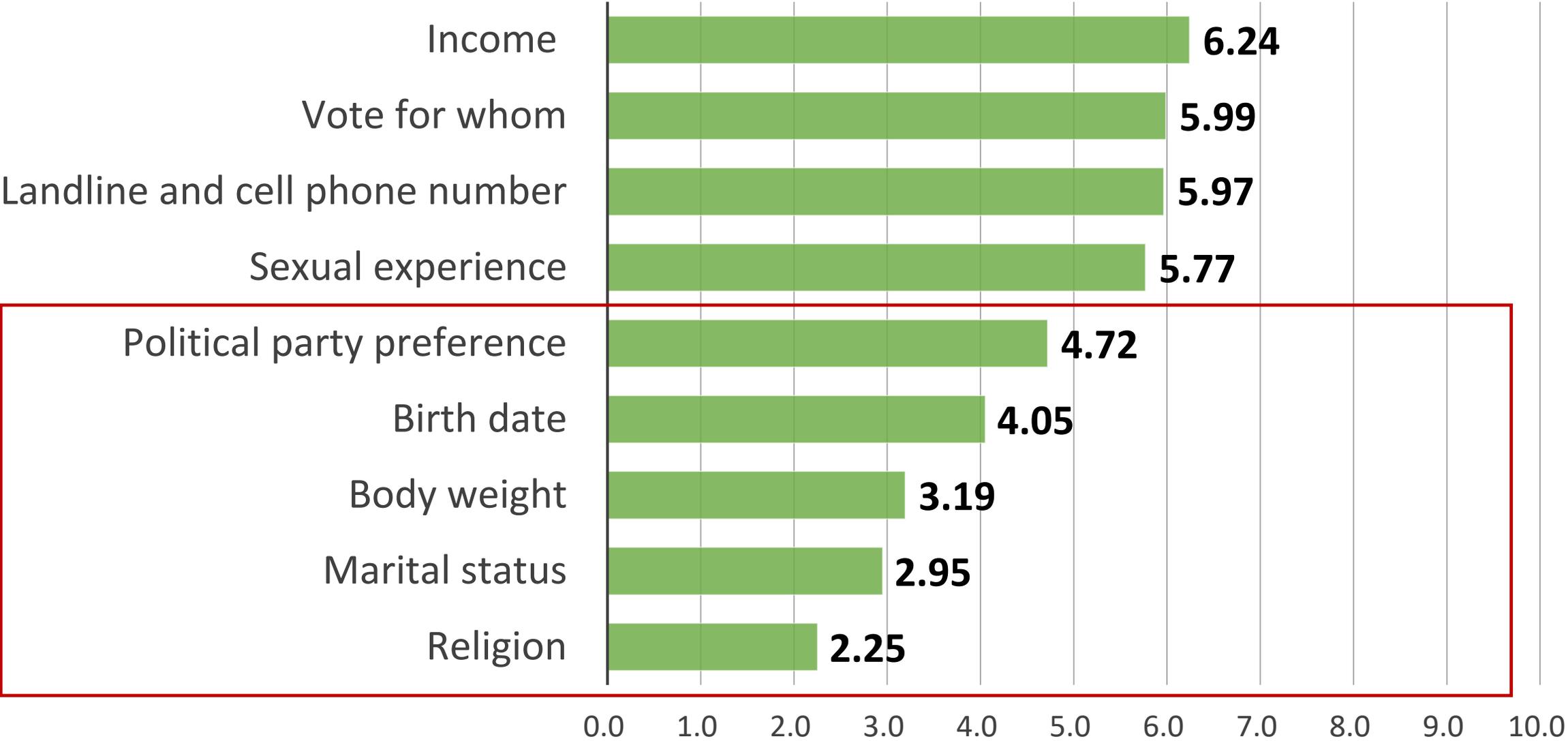
For adult individuals who resided in Taipei

- Even though people tended to hold positive attitudes for surveys, their attitudes toward survey organizations were found to be relatively negative
- In general, ranking of trust toward survey organizations,
 - Academic survey institutes > Opinion poll/market research companies
 - > Government statistical organizations /
Poll centers of news media
 - > Poll centers of political party

Still, many people did not trust any kind of survey organization (14% with respect to election polls)

Preliminary Findings:
Attitudes toward Data and Question Sensitivity

Figure 4 Means of Respondents' Assessment on Sensitivity of Personal Information (0-10), n = 888



Brief Summary: Attitudes toward Personal Data

Ranking of sensitivity of personal information:

Income

Voting behavior

Phone number

Sexual experience

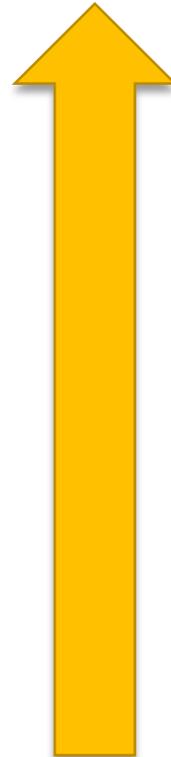
Political party preference

Birth date

Body weight

Marital status

Religion



Further Analysis:

Effects of Attitudes toward Surveys and Personal Data
on Survey Cooperation and Data Quality

Hypotheses

- Attitudes toward surveys/data on **survey cooperation**
 - If a respondent holds more positive attitudes toward surveys, he/she is less likely to be a reluctant respondent
 - If a respondent is more sensitive about personal information, he/she is more likely to be a reluctant respondent
- Attitudes toward surveys/data on **data quality**
 - If a respondent holds more positive attitudes toward surveys, his/her number of non-substantial answers would be lower
 - If a respondent is more sensitive about personal information, his/her number of non-substantial answers would be higher

Fixed-effects Model: Respondent Reluctance

- Respondent i interviewed by interviewer j ,

$$Y_{ij}^* = \alpha_j + \sum_k \beta_k \cdot X_{k,ij} + \sum_l \gamma_l \cdot Z_{l,ij} + \varepsilon_{ij}$$

Y: Whether showed reluctance during interview

X: Measure of positive attitudes toward surveys, measure of sensitivity of personal information

Z: Controlled variables (respondent's gender, age, education, health condition, holding a full-time job or not, residing in urban area or not)

~ Fixed-effects logit model (interviewer effects controlled)

Fixed-effects Model: Number of Item-nonresponse

- Respondent i interviewed by interviewer j ,

$$Y_{ij} = \alpha_j + \sum_k \beta_k \cdot X_{k,ij} + \sum_l \gamma_l \cdot Z_{l,ij} + \varepsilon_{ij}$$

Y : Number of item-nonresponse

X : Measure of positive attitudes toward surveys, measure of sensitivity of personal information

Z : Controlled variables (respondent's gender, age, education, health condition, holding a full-time job or not, residing in urban area or not)

~ Fixed-effects regression model (interviewer effects controlled)

Measurement: Dependent Variables

- Whether showed reluctance during interview: = 1 if respondent ever attempted to terminate interview or showed impatience during interview; = 0 otherwise (based on interviewer's subjective assessment after the interview)
- Number of item-nonresponse: Number of "don't know" or "refusal" answers (0-42)

Measurement: Explanatory Variables

- Measure of positive attitudes toward surveys: Mean value of respondent's answers to "opinion surveys have made the society more democratic" and "government policy making should be based primarily on the outcomes of opinion surveys" (1-5)
- Measure of sensitivity of personal information: Mean value of respondent's assessment of sensitivity of 9 personal information items (0-10)

Table 2 Fixed-effects Logit Model: Respondent Reluctance (dummy)

| Variables | Odds Ratio |
|--|------------|
| Positive attitudes toward surveys | 0.77** |
| Sensitivity of personal information | 1.18*** |
| Male | 1.09 |
| Age groups (>=55 as reference) | |
| Age <= 34 | 0.67 |
| Age 35-44 | 0.49** |
| Age 45-54 | 0.69 |
| Education (junior high or less as reference) | |
| High school | 0.32*** |
| College/university or above | 0.29*** |
| Health condition being good or very good | 0.63* |
| Whether holding a full-time job | 1.52* |
| Whether residing in urban area | 1.59 |
| Number of observations | 833 |
| Log likelihood | -222.36 |

*** p < 0.01, ** p < 0.05, * p < 0.1

Table 3-1 Fixed-effects Regression Model: # Item-nonresponse (0-42)

| Variables | Coefficients |
|--|--------------|
| Positive attitudes toward surveys | -0.14*** |
| Sensitivity of personal information | 0.06** |
| Male | -0.03 |
| Age groups (>=55 as reference) | |
| Age <= 34 | -0.28** |
| Age 35-44 | -0.46*** |
| Age 45-54 | -0.25* |
| Education (junior high or less as reference) | |
| High school | -0.55*** |
| College/university or above | -0.77*** |
| Health condition being good or very good | -0.40*** |
| Whether holding a full-time job | -0.20** |
| Whether residing in urban area | 0.08 |
| Number of observations | 876 |
| R-squared | 0.11 |

*** p < 0.01, ** p < 0.05, * p < 0.1

Table 3-2 Fixed-effects Poisson Model: # Item-nonresponse (0-42)

| Variables | Incident Rate Ratio |
|--|---------------------|
| Positive attitudes toward surveys | 0.84*** |
| Sensitivity of personal information | 1.06*** |
| Male | 0.95 |
| Age groups (>=55 as reference) | |
| Age <= 34 | 0.72*** |
| Age 35-44 | 0.54*** |
| Age 45-54 | 0.79** |
| Education (junior high or less as reference) | |
| High school | 0.64*** |
| College/university or above | 0.50*** |
| Health condition being good or very good | 0.65*** |
| Whether holding a full-time job | 0.79*** |
| Whether residing in urban area | 1.12 |
| Number of observations | 876 |
| log-likelihood | -1024.77 |

*** p < 0.01, ** p < 0.05, * p < 0.1

Brief Summary: Effects on Survey Cooperation/Data Quality

- Respondents who hold more positive attitudes toward surveys
 - Tend to be more cooperative during interview
 - Tend to exhibit lower number of item-nonresponse
- Respondents who are more sensitive about personal information
 - Tend to be less cooperative during interview
 - Tend to exhibit higher number of item-nonresponse

In the analysis, interviewer fixed-effects have been controlled

Concluding Remarks

Main Findings (1/2)

- In general, Taipei adult residents hold positive attitudes toward opinion surveys
- Yet, people's attitudes toward survey organizations are found to be relatively negative
- People's ranking of sensitivity of personal information,
Income > Voting behavior > Phone number > Sexual experience
> Political party preference > Birth date > Body weight
> Marital status > Religion

Main Findings (2/2)

- Respondents who hold more positive attitudes toward surveys tend to be more cooperative during interview, and exhibit higher quality of survey data
- Respondents who are more sensitive about personal information tend to be less cooperative during interview, and exhibit lower quality of survey data
- Trust toward survey organizations (either academic survey institutes or survey institutes in general) does not matter for survey cooperation/data quality

Implications (1/2)

- If people's attitudes toward surveys become more positive, both response rate and data quality of surveys would be improved
- To improve response rate and data quality, survey researchers and organizations should try hard to make the public to perceive the benefits and contributions of opinion surveys

Implications (2/2)

- If people are less sensitive about personal information, both response rate and data quality of surveys would be improved
- Self-discipline and ethical codes should be widely adopted by survey organizations in Taiwan in order to reduce people's concerns for data confidentiality

Thank you for your listening!