# The Importance of Being Private: A Research Note on How the Presence of Others Can Bias Survey Responses

Michelle Dion<sup>a</sup> and Guillem Riambau<sup>1b</sup>

<sup>a</sup>McMaster University

<sup>b</sup>Universitat de Barcelona and Institut d'Economia de Barcelona, Spain

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#### Abstract

Surveys are a key instrument to learn about people's attitudes and beliefs. In this paper we analyze a potential source of misreporting of own preferences: the presence of others at the time of the survey. The Asian Barometer survey includes information on whether the interview took place in private, or whether others were present. We use waves 4 (N=20,667, 14 countries) and 5 (N=8,648, 7 countries) to analyze to what extent expressed views on sensitive issues may change when others are present. In wave 4, we find that when a party or government official is present, views tend to be more favorable towards the system and its rulers in imperfect democracies and autocracies. In addition, when parents or in-laws are present, views also tend to be more favorable towards the system and its leaders, but mostly only in autocracies. In contrast, none of these patterns are replicated using wave 5, which includes only half as many countries. This highlights the need to include and pay attention to such survey instruments when trying to understand public views on sensitive issues, in particular in countries where democracy is lacking or imperfect.

Keywords: Surveys; Asia; Asian Barometer; Survey Design; Social Desirability Bias.

<sup>&</sup>lt;sup>1</sup>Corresponding author. Email: griambau@gmail.com.

# 1 Introduction

Social desirability bias has typically been one of the most problematic challenges in survey data collection: That is, respondents have the tendency to provide socially acceptable answers, thereby hiding (or misleading) their true opinions, particularly when the questions are on socially sensitive topics. In order to prevent this, surveyors try to protect as much as possible the privacy and anonymity of respondents. Nonetheless, complete privacy is not always possible, in particular when surveys are done in person in the field; other household members or relatives may be present in the house (not necessarily the same room) or acquaintances or neighbours stop or walk by, thereby reducing the respondent's sense of privacy. Even if the presence of others is only temporary in time and not within personal reach, respondents may systematically hide their true beliefs and preferences if they perceive the conversation may be overheard.

We address this issue and exploit the fact that the Asian Barometer surveys systematically ask enumerators to code in detail the presence of others while the survey takes place. We analyze to what extent respondents disguise their preferences when others (relatives or others) may possibly eavesdrop the conversation. We exploit the fact that the Asian Barometer provides data for different countries in order to further analyze which questions are more likely to be sensitive to the presence of others under different regime types.

This study contributes to the literature on motivated misreporting (Tourangeau & Yan, 2007), that has amply shown that a fraction of respondents tend to provide socially desirable answers, especially to questions on sensitive topics. This paper extends the study on motivated misreporting to a particular context and adds another layer of misreporting due to the presence of others at the time of the survey. As several studies show in the context of health, mental health, and family research, some respondents may provide truthful answers to interviewers, but they may be less keen to do so in the presence of a third party (W. Aquilino, 1997, Cialdini and Goldstein, 2004, Tourangeau and Yan, 2007, Z. M. Mneimneh et al., 2015a, Z. N. Mneimneh et al., 2018, Krumpal, 2013). In this paper, we extend the analysis to surveys on political attitudes and beliefs.

Zimbalist, 2022 is likely the closest study to this one. It uses Afrobarometer data from 34 countries to examine the effect of third parties onto expressed answers, focusing on spouses, children and by-standers who are not relatives (e.g., neighbours). The study finds that the presence of non-familial others is correlated with lower satisfaction of democracy, higher fear

of political intimidation, higher perceptions of corruption, and lower evaluations of politicians. On the other hand, the presence of familial bystanders is not significant in most occasions, and, when it is, it is in the opposite direction —i.e.,correlated with more positive perceptions of how democracy works, institutions, and politicians.

We use data from waves 4 and 5 of the Asian Barometer survey. Wave 4 includes slightly more than twenty thousand interviews from fourteen different countries, collected between 2014 and 2016, and wave 5 includes more than 8,000 interviews in seven countries collected in 2018 or 2019. We first examine patterns of non-response to potentially sensitive questions about the political system, and then consider potential response bias in responses among those who provide an answer when someone else is present at the time of the interview. We also look at response bias in other sensitive questions about institutional trust or corruption. We then examine whether these patterns vary across different types of political regimes. We extend to Asia insights from the handful of studies that examine potential non-response and social desirability bias with regard to political questions when others are present at face-to-face interviews (Zimbalist, 2022 Zimbalist, 2018

Overall, in wave 4, we find that evaluations of the system and its main actors tend to be higher when the parents/in-laws or officials watch the interview. While these results hold overall, they seem to be driven by respondents' behavior in autocracies. We show that the magnitude of the bias may be sizable: omitting information on the presence of others in the analysis can bias results in a similar way as omitting education or place of residence would do. In contrast, in our analysis of wave 5 interviews, none of these patterns hold. It is unclear whether these differences are due to sample difference, differences in how bystander presence is coded, or in the model specifications. Nonetheless, our preliminary results highlight the need to consider interview contexts when trying to understand public views on sensitive issues, in particular in countries where democracy is lacking or imperfect.

## 2 Background

The presence of bystanders during a face-to-face interview can contribute non-response bias, including both unit (entire survey) and item (question) non-response as well as bias in reported responses. Item non-response and bias in reported responses have been studied most extensively in psychology, health, and sociology, where researchers want to understand sensitive health or mental health behaviors (e.g., W. S. Aquilino, 1993, W. Aquilino, 1997, Smith, 1997) or family practices and beliefs (e.g., Schröder and Schmiedeberg, 2020 ZIPP and TOTH, 2002 Pollner and Adams, 1997). The findings across these studies, mostly in advanced industrialized democracies, have been mixed, and only recently has the focus shifted toward understanding how non-response and response bias in sensitive personal questions may be influenced by economic prosperity or cross-national differences in attitudes or values (e.g., Z. M. Mneimneh et al., 2015b and Z. N. Mneimneh et al., 2018). Similar research in a handful of countries focusing on a wide range of attitudes about technology has found little evidence that bystander presence consistently influence non-response or response values (Lau et al., 2017.

Political scientists have also examined these questions as they relate to social and political attitudes and behavior. For example, with regard to unit non-response, Berinsky (Berinsky, 2002 shows how item non-response related to sensitive racial attitudes have changed across decades, as people become more reluctant to express less socially desirable racial attitudes, in the United States. Also looking at racial attitudes in the United States, Kryzan (KRYSAN, 1998) varies the level of privacy in the mode of administration for the sensitive questions; respondents answer face-to-face, self-administer a paper questionnaire and return to the enumerator, or mail-in a paper questionnaire. She finds that respondents are more likely to express less liberal attitudes with regard to racial attitudes and related policy issues when they have more privacy.<sup>1</sup>

Zimbalist, 2022 uses AfroBarometer data to examine general questions of non-response and response bias across a wide range of political attitudes when different types of bystanders are present for face-to-face interviews in 34 countries. He finds that the presence of both family and non-family bystanders are generally associated with higher item non-response rates, though the strength of association varies by item with the largest non-response for more sensitive questions. Zimbalist also finds that respondents were *more* likely to express *critical* attitudes toward government when bystanders, particularly non-family, were present during interviews, suggesting that social desirability can run counter to naive assumptions that pro-government positions are universally desirable.

Zimbalist, 2018 and Tannenberg, 2022 also illustrate the ways in which political context likely influences response biases, particularly in authoritarian contexts. Both show that Afro-Barometer respondents in authoritarian regimes who believe that enumerators have been sent

<sup>&</sup>lt;sup>1</sup>We set aside innovations in experimental designs, like list experiments, that indirectly measure attitudes or behaviors to avoid social desirability bias related to sensitive attitudes.

by the government (as opposed to being sent by an independent research institute) are more likely to hide their true opinions on questions regarding trust, approval, and corruption. Both studies uncover an endogenous phenomenon: those respondents who believe that the government is sending enumerators to track them are also generally more likely to believe in conspiracy theories (similarly, see Ostwald and Riambau, 2021). Therefore, Zimbalist, 2018 and Tannenberg, 2022 show how individuals with a particular set of beliefs respond differently from others to sensitive questions.

Potentially cross-cutting psychological and social pressures may explain these differences. On the one hand, much of the research in this area suggests that respondents will feel pressure to align their responses with socially acceptable or prevalent attitudes in the presence of bystanders (e.g., Berinsky, 2002, Zimbalist, 2022). On the other hand, the pressure to align a response may also be influenced by *who* is present and *what they already know* about the respondent's likely answer to a sensitive question. That is, respondents may feel social pressure not to express a socially popular or acceptable attitude or behaviour but one that will not challenge the bystander's beliefs about the respondent (W. Aquilino, 1997, Zimbalist, 2022). We might expect, *ceteris paribus*, for non-family members to exert the former type of influence, and family members to mostly exert the latter.

At the same time, we might expect different types of family relationships to be associated with varying intensities and directions of response bias. For example, respondents may feel less pressure to misreport in the presence of their children than their parents. To the extent that elders tend to be more supportive of regimes and political leadership (e.g., Christensen and Lægreid, 2005), we might expect respondents to express more pro-government or politician positions in the presence of their parents or parents-in-law, compared to their children or spouses.<sup>2</sup> Finally, if these social pressures become too cognitively or emotionally demanding, respondents may instead opt to not respond to a question instead, creating item non-response bias.

While we cannot fully disentangle which mechanisms are most prevalent, we consider both item non-response and the size and direction of response bias across different types of bystanders. Therefore, we build upon and extend the existing insights by considering differences across *types* of bystanders among wave 4 and 5 Asian Barometer respondents. In addition, we consider how

<sup>&</sup>lt;sup>2</sup>These patterns could also arise from a sample selection issue: Those adults who are more likely to live with their parents/in-laws, and hence more likely to have them present at the time of the interview, could be more conservative and supportive of the regime in nature. Similarly, those more likely to hang out with officials (and therefore more likely to be interviewed in the presence of one) could in principle be more supportive of the regime and their leaders.

	(no one		Own	Parents	Neighbours	Government or
Observations	else)	Spouse	children	or in-laws	or passers-by	party officials
Count	10,220	3,320	2,379	1,090	1,784	118
% of the total	52.98%	17.21%	12.33%	5.65%	9.25%	0.61%
Max. (in $\%$ )	87.14%	27.21~%	27.59%	12.38%	24.94%	5.35%
	(Japan)	(Philippines)	(Mongolia)	(Myanmar)	(Myanmar)	(Indonesia)
Min. (in $\%$ )	26.61%	3%	1.50%	0.50%	0.28%	0%
	(Myanmar)	(Korea)	(Korea)	(Korea)	(Japan)	$(various^1)$

Interview in the presence of...

Table 1: Frequency and types of the presence of others during the interviews (wave 4). 381 (1.97% of the total) were carried out in the presence of "others", where these others did not fall into any of the defined categories. (1) Countries where no interview had the presence of a party or government official: Japan, Korea, Singapore, Vietnam, Cambodia, Malaysia, Myanmar (with only one such case: Thailand, Mongolia, Philippines).

these patterns of item non-response and response bias vary across regime types, comparing the evidence in autocracies, imperfect democracies, and democracies. The next section describes the evidence we bring to bear on these questions.

# 3 The Data

We use data from the the two most recent waves of the Asian Barometer, one of few multicountry surveys on political attitudes and beliefs that includes detailed indicators for the the presence of others during the interview.<sup>3</sup> Wave 4 includes 20,667 observations from 14 different countries.<sup>4</sup> The range of respondents by country is 1,200–1,600, with the exceptions of China (4,068), Japan (1,081) and Singapore (1,039). Most data were collected in 2014, although for a few countries extended collection into 2015 or 2016 (see the Asian Barometer wave 4 webpage for all details). From wave 5, we have 8,648 interviews conducted in one of seven Asian countries in 2018 or 2019.<sup>5</sup> All regressions include cross country weights provided by the Asian Barometer.<sup>6</sup> In wave 4, the presence of others was coded for 19,292 surveys (all countries except Hong

Kong). Nearly half the surveys (47%) had at some point the presence of someone beyond the

<sup>&</sup>lt;sup>3</sup>ESS to be included in a later iteration of this project.

<sup>&</sup>lt;sup>4</sup>Japan, Hong Kong, Korea, China, Mongolia, Philippines, Taiwan, Thailand, Indonesia, Singapore, Vietnam, Cambodia, Malaysia, and Myanmar.

<sup>&</sup>lt;sup>5</sup>South Korea, Malaysia, Mongolia, Philippines, Taiwan, Thailand, Vietnam. Other country datasets are not yet publicly available.

<sup>&</sup>lt;sup>6</sup>Except the mixed effects models by level of democracy using wave 5.

	All	Korea	Thailand	Malay.	Philipp.	Taiwan	Vietnam	Mongolia
	prop.	prop.	prop.	prop.	prop.	prop.	prop.	prop.
Any present?	0.43	0.08	0.40	0.43	0.51	0.53	0.60	0.72
Spouse	0.13	0.02	0.09	0.09	0.20	0.23	0.19	0.21
Children	0.16	0.01	0.14	0.11	0.23	0.16	0.14	0.37
Parents	0.07	0.01	0.04	0.07	0.10	0.13	0.14	0.05
Passers-by	0.14	0.05	0.13	0.21	0.14	0.18	0.31	0.10
N	6821	1235	1139	1231	1196	923	263	834

Table 2: Proportion of interviews with types of the presence of others (wave 5). Parents includes in-laws. Passers-by includes neighbors and others. Only 11 (8 in the estimation sample) interviews had government or party officials present, about 0.13% of the total. Korea and the Philippines had no interviews with the presence of a party or government official. Other countries had 1-3 each. Estimation sample.

interviewer and the respondent (see Table 1). The remaining were carried out in the presence of the spouse (17%), children (12%), parents or in-laws (6%), neighbours or passers-by (9%), or government/party officials (slightly less than 1%).<sup>7</sup> While this was rare in some countries (13% in Japan, 15% in Korea, 22% in Cambodia or 24% in Singapore), others appeared quite often in others (nearly 75% in Myanmar, around two thirds of the time in Mongolia and the Philippines, or 56% of times in China). While direct family members and relatives can account for most of the occasions in which an outsider was present, there are still around ten percent of interviews where a non-family member was present (usually a neighbour or a by-stander, but sometimes (0.61% of the times) a government or party official. Government or party official presence took place in a subset of countries: China (11 surveys where an official was present), Taiwan (22), and Indonesia (82). In the remaining countries, the presence of government or party officials happened either only once or never.

In wave 5, indicators for whether and who was present during the interview are included for 8,354 of 8,648 interviews (see Table 2). About 43% of all interviews had someone else present, though the variation between countries is quite large. Only 8% of interviews in South Korea had another person present, compared to 72% in Mongolia. Countries also varied in the share of interviews at which a spouse, children, parents or parents-in-law, or passers-by (which, here, includes neighbors and others). Unlike wave 4, only 11 (8 in the estimation sample) interviews

<sup>&</sup>lt;sup>7</sup>In the wave 4 merged dataset, the indicator for who is present includes mutually exclusive categories. It is possible that some respondents answered in the presence of say, both parents and children, but the merged survey data only includes mutually exclusive categories.

	(no one		Own	Parents	Neighbours	Government or	
Variable	else)	Spouse	children	or in-laws	or passers-by	party officials	
% Female	49.50%	42.72%	67.13%	50%	51.91%	48.31%	
Age (years)	45.27	48.70	45.01	31.52	44.65	46.67	
Education $(0-4)$	2.54	2.11	2.19	2.86	2.06	1.97	
% Urban	58.65%	44.33%	46.01%	49.22%	36.79%	44.07%	
Religiosity $(0-4)$	2.01	1.84	1.94	2.15	2.20	2.91	
Total	10,220	3,320	2,379	1,090	1,784	118	

Table 3: Balance table for the composition of subsamples in the presence of others during the interviews (wave 4). Female is binary coded in the Asian Barometer surveys (only 4 respondents have this information missing). Education has five categories: (0) No formal education; (1) Primary education at most; (2) Incomplete secondary education; (3) Complete secondary education; (4) At least some university (and above). Urban is a dummy variable (1=urban, 0=rural). Religiosity captures attendance to religious services and it has five categories: (0) Not religious; (1) Less than once per month; (2) At least once per month; (3) At least once per week; (4) At least once per day.

had government or party officials present, about 0.13% of the total. Korea and the Philippines had no interviews with the presence of a party or government official. Other countries had 1-3 each.

Bystanders are not randomly distributed across respondents. During wave 4, spouses are less likely to be present when men were interviewed, while children were more likely to be present when women were interviewed. Parents were more likely to be present when respondents were slightly younger than those who were interviewed alone (see Table 3). Similar patterns are evident for wave 5 as well (Table 4). These patterns are generally consistent with those reported in other international or non-North American studies of bystander presence (Z. N. Mneimneh et al., 2018, Diop et al., 2015).

To assess unit non-response and response bias, We select a variety of potentially sensitive questions, which may be largely grouped in three topics: (i) evaluations of the political system (e.g., agreement with one's country being a democracy; satisfaction with how democracy works); (ii) trust in different institutions (such as the police, the military, the government or the courts); and (c) perceptions on corruption (e.g., frequency by which local/state officials break the law; personally witnessing corrupt behavior). Responses to questions about the political system and trust in different institutions are coded such that more positive values represent more progovernment positions. Corruption questions are the reverse; larger values represent answers

	None	Spouse	Children	Parents	Passers-by	Officials
	mean	mean	mean	mean	mean	mean
Woman $(0/1)$	0.51	0.45	0.63	0.52	0.49	0.62
Education $(0-4)$	2.82	2.60	2.69	3.12	2.58	2.50
Age $(0-3)$	1.57	1.79	1.52	0.76	1.43	1.38
Urban $0/1$	0.57	0.46	0.45	0.44	0.44	0.38
Religiosity $(0-4)$	2.33	2.23	2.31	2.25	2.42	3.12
Interv. woman $(0/1)$	0.73	0.66	0.64	0.64	0.62	0.25
Interv. age diff (-3-3)	-0.54	-0.99	-0.86	-0.10	-0.89	-1.25
Observations	3867	916	1084	461	960	8

Table 4: Balance table for the composition of subsamples in the presence of others during the interviews (wave 5). Female is binary coded in the Asian Barometer surveys. Education has five categories: (0) No formal education; (1) Primary education at most; (2) Incomplete secondary education; (3) Complete secondary education; (4) At least some university (and above). Age has four categories: (0) under 30; (1) 30-44; (2) 45-59; (3) 60 and over. Urban is a dummy variable (1=urban, 0=rural). Religiosity captures attendance to religious services and it has five categories: (0) Not religious; (1) Less than once per month; (2) At least once per month; (3) At least once per week; (4) At least once per day. Interviewer woman is a coded dummy for interviewer binary gender. Interviewer age difference is the difference between the respondent and interviewer age, when both are coded into four categories (as described above); it ranges from -3 to 3. Estimation sample.

consistent with more perceived corrupt behavior. Most have response ranges of 0-4 or 0-6, with no middle category, but also include options for "Don't understand", "Can't choose", or "Declined." We first consider whether the presence of others affects respondents' likelihood to answer sensitive questions about the political system in general. Then, We then analyse whether responses *per se* actually vary with the presence of others across the three types of questions. Finally, we revisit these questions across regime type, allowing for heterogeneous associations across different levels of democracy.

In the multivariate analyses that follow, we include a number of controls that may correlate with bystander presence and response biases. See Tables 3 and 4 for the variable definitions for these controls.

## 4 Results

#### 4.1 Unit non-response for sensitive questions

We first look at willingness to answer five different sensitive questions in the presence of others. All questions revolve around the quality of the democracy in the country (e.g., to what extent this country is a democracy, satisfaction with how democracy works). In wave 4, we construct a dummy that takes value 1 if the respondent refuses to answer the question, and 0 otherwise. Hence, it is a 'strict' refusal to answer, since those who (claim they) do not understand the question, and those who do not know are not coded as "refuses to answer". In order to assess how the presence of others affects respondents willingness to answer in wave 4, we run the following regression (with weights as provided by the Asian Barometer):

$$y_i = \alpha + Others_k \beta_k + X\gamma + \mathbb{1}_c + \varepsilon_i, \tag{1}$$

where  $y_i$  is the outcome variable of interest (in this case, whether respondent refused to provide perceptions about democracy), Others<sub>k</sub> is a categorical variable that can take seven values (no others; spouse; children; parents or in-laws; neighbours or passers-by; government or party officials; and uncategorised others), X is a vector of controls that includes a dummy for women, formal education, age, a dummy for urban, and religiosity, and  $\mathbb{1}_c$  are country dummies.

We find that this is only affected in one case: when officials are present, respondents are





(c) Parents or in-laws are present

(d) Neighbours or passers-by are present

.01





(e) Party/Gov. officials are present

Figure 1: Likelihood to refuse to answer the referred questions in the presence of others (wave 4). The five questions are (1) "In your opinion how much of a democracy is the country?" (1=Not a democracy – 4=A full democracy); (2) "On the whole, how satisfied or dissatisfied are you with the way democracy works in this country?" (1=Not at all satisfied – 4=Very satisfied); (3) "Over the long run, our system of government is capable of solving the problems our country faces" (1=Strongly disagree – 4=Strongly agree); (4) "I would rather live under our system of government than any other that I can think of." (1=Strongly disagree – 4=Strongly agree): (5) "How likely is it that the government will solve the most important problem you identified within the next five years?" (1=Not at all – 4=Very likely)

more likely to answer sensitive questions (see Figure 1. For the first question<sup>8</sup>, overall, 1.15% of respondents refused to answer when others were present. However, when looking only at the subset of respondents who took this question in the presence of a party or government official, we can see that *all 118 of them* answered this question. A similar story goes with the other questions: for instance, when asked about how satisfied they are with how democracy works, only 0.89% of respondents refuse to answer, while *all 118* who were asked in the presence of a party/government official did answer the question. In other words, respondents may feel more compelled to answer these sensitive questions when party of government officials are present. This is not the case for the presence of any other type of by-stander, for any particular question.

Because presence is coded as a separate dummy for each type of potential bystander in wave 5, we estimate variations of the equation above, including separate regressions each with a dummy for each type of bystander.<sup>9</sup> In addition, the outcome is coded such that any non-response, including "don't understand the question", "can't choose", and refusing to provide any answer, are all coded as unit non-responses. In these models, we also include interviewer gender and relative age to respondent (see note to Table 4 for definitions) and estimate random effects by interviewer.

Despite these differences in model specifications and outcome indicators, the general pattern of substantively small and statistically insignificant associations between bystander presence and unit non-response in wave 5 (see Figure 2. The direction of the association is also often different across both questions and type of bystander presence. In wave 5, only parent or parent-in-law presence has a statistically significant association with refusing to answer a question that asks responses the extent to which they agree that they would prefer to live under their system of government more than any other. Respondents are also less likely to answer a question that asks whether they believe the country is a democracy in front of neighbours, passers-by, or others at conventional levels of statistically significance.

#### 4.2 Response bias in system evaluations

Next, we turn to potential bias in the answers given to the very same set of questions when respondents choose to provide a meaningful answer. Here, we want to understand whether respondents are more (or less) likely to provide positive evaluations of government in the presence

<sup>&</sup>lt;sup>8</sup> "In your opinion how much of a democracy is the country?" (1=Not a democracy -4=A full democracy)

 $<sup>^{9}</sup>$ We do not analyze unit non-response in the presence of government or party officials because there were too few interviews for meaningful analysis.



(e) Any person present

Figure 2: Likelihood of refusing to answer (0/1) the referred questions in the presence of others (wave 5). Coefficients from mixed effects logistic regression models. The five questions are (1) "In your opinion how much of a democracy is the country?" (1=Not a democracy – 4=A full democracy); (2) "On the whole, how satisfied or dissatisfied are you with the way democracy works in this country?" (1=Not at all satisfied – 4=Very satisfied); (3) "Over the long run, our system of government is capable of solving the problems our country faces" (1=Strongly disagree – 4=Strongly agree); (4) "I would rather live under our system of government than any other that I can think of." (1=Strongly disagree – 4=Strongly agree): (5) "How likely is it that the government will solve the most important problem you identified within the next five years?" (1=Not at all – 4=Very likely)



#### (c) Parents or in-laws are present



Evaluations of the political system in the presence of govt./party officials



(e) Party/Gov. officials are present

Figure 3: Answer to questions on the quality of the political system in the presence of others(wave 4). The five questions are (1) "In your opinion how much of a democracy is the country?" (1=Not a democracy – 4=A full democracy); (2) "On the whole, how satisfied or dissatisfied are you with the way democracy works in this country?" (1=Not at all satisfied – 4=Very satisfied); (3) "Over the long run, our system of government is capable of solving the problems our country faces" (1=Strongly disagree – 4=Strongly agree); (4) "I would rather live under our system of government than any other that I can think of." (1=Strongly disagree – 4=Strongly agree): (5) "How likely is it that the government will solve the most important problem you identified within the next five years?" (1=Not at all – 4=Very likely).

bystanders. Therefore, we exclude respondents who did not understand the question, could not choose between the alternatives presented, or refused to answer the question. Figure 3 shows the results for wave 4. It is immediately apparent that the presence of parents (or in-laws) and the presence of party/government officials is strongly correlated with the way people evaluate how the country works overall. On the other hand, the presence of the spouse, children, or passers-by has seemingly no impact on people's answers. Admittedly, only two of the five coefficients for parents' presence are significant at a 5% level. However, two others barely miss significance (p values of 0.054 and 0.067), so the overall impression when looking at the results for parents/in-laws (panel a) is that indeed there seems to be a positive effect on to the views expressed by respondents. The direction of both effects is the same: in the presence of parents and officials, respondents are more likely to share favorable views of their political system. As one could probably expect, however, the magnitude of the effect of the presence of officials is at least twice as large (and for some questions, even larger) than that of the presence of parents.

In contrast, in wave 5, where we again estimate separate regressions for each type of bystander including controls for interviewer and interviewer random effects, there is seldom a significant association between the presence of someone else and more positive or negative evaluations of the political system. This is despite including the same outcome questions and coding as well as some overlap in country coverage.

#### 4.3 Response bias in trust in institutions

We further analyze how responses to questions on trust in different institutions may be affected by the presence of others during the interview. We choose six (wave 4) or seven (wave 5) state and political institutions, and we also include trust in neighbours (both waves) and trust in relatives (wave 4 only). The latter two allows us to perform a sort of robustness check, since those who the question refers to may be present in the interview. The formal, state-level institutions are the Prime Minister (or President in some cases), the military, the police, the courts, the civil service, and (in wave 5) the election commission. Again, we exclude from the analysis those who cannot answer the question and those who cannot choose a precise answer ("can't choose"). In all cases, there are four categories of trust: "none" (the lowest value), "not very much", "quite a lot", and "a great deal" (the highest value).

Figure 5 shows the results for wave 4. In this case, the overall picture suggests that respondents are more likely to express trust in state institutions if their relatives are present (either



(c) Parents or in-laws are present



Evaluation of political system in the presence of others (all)



(e) Any person present

Figure 4: Answer to questions on the quality of the political system in the presence of others (wave 5). Coefficients from mixed effects linear regression models. The five questions are (1) "In your opinion how much of a democracy is the country?" (1=Not a democracy – 4=A full democracy); (2) "On the whole, how satisfied or dissatisfied are you with the way democracy works in this country?" (1=Not at all satisfied – 4=Very satisfied); (3) "Over the long run, our system of government is capable of solving the problems our country faces" (1=Strongly disagree – 4=Strongly agree); (4) "I would rather live under our system of government than any other that I can think of." (1=Strongly disagree – 4=Strongly agree): (5) "How likely is it that the government will solve the most important problem you identified within the next five years?" (1=Not at all – 4=Very likely).











Trust in different institutions in the presence of govt./party officials

(e) Party/Gov. officials are present

Figure 5: Answer to questions on trust in different institutions in the presence of others (wave 4). Trust levels are defined as (1) "None"; (2) "Not very much"; (3) "Quite a lot"; (4) "A great deal". Respondents who could not choose, did not answer, or did not understand the question are not included.

their spouse, their children or their parents), as well as when officials are present. The picture is however not all that clear. While the presence of party officials seems to induce respondents to express higher levels of trust overall, the effects are only significant at a 5% level with the courts and the civil service. With other institutions, it barely falls out of significance levels —with p-values such as 0.063 (the military); 0.134 (the police); or 0.125 (government)— or it has no effects altogether.

For the case of relatives, the presence of the spouse or children seems to also trigger systematically higher levels of expressed trust. In each case, it significantly increases in half the occasions. The presence of parents/in-laws, on the other hand, seems to have a much larger and consistent effect: expressed trust significantly increases in all cases, with the effect being twice as large in magnitude compared to that of spouse/children presence. Still, the larger effects are those of government/party officials. Lack of systematic significance in the latter case likely arises because of the very small number of such cases in our sample. When it comes to trust in neighbours and relatives, we find that the presence of passers-by/neighbours significantly increases expressed trust in them (and *only* in their presence). On the other hand, expressed trust in relatives is not affected by the presence of the spouse, children or the parents/in-laws.

Again, the results for wave 5 (see Figure 14) suggest that others' presence is not significantly nor substantively associated with the expression of trust in political institution or neighbors. It unclear whether these differences are due to different specifications, samples, or some combination of both, but they beg further investigation.

#### 4.4 Response bias in evaluations of corruption

Finally, we explore how perceptions on corruption vary with the presence of others at the time of the interview. We use up to eight different measures of corruption, misbehavior and impunity at various levels of government. The details for the questions used are all in Figure 15, which also shows the results for wave 4. In this case, effects are hardly general. The presence of the spouse, children or neighbours has no systematic effects on expressed perceptions of corruption. Parents' presence, however, once more, seems to systematically bias answers in favour of the system (or, in this case, those who lead or are part of the system). In six out of the eight cases, corruption perceptions are significantly lower than those expressed in the absence of others. In the remaining two, clearly effects push in the same direction but do not reach conventional significant levels.





(d) Neighbours or passers-by are present



(e) Any person present

Figure 6: Answer to questions on trust in different institutions in the presence of others (wave 5). Coefficients from mixed effects linear regression models. Trust levels are defined as (1) "None"; (2) "Not very much"; (3) "Quite a lot"; (4) "A great deal". Respondents who could not choose, did not answer, or did not understand the question are not included.



Figure 7: Perceptions of corruption among local leaders and government officials in the presence of others (wave 4). (1) "Do officials who commit crimes go unpunished?"; (2) "How often do government officials withhold important information from the public view?"; (3) "How often do you think government leaders break the law or abuse their power?". (4) "How widespread do you think corruption and bribe-taking are in your local/municipal government?" [(4) " (...) in the national government [in capital city]?"] (6) "In your opinion, is the government working to crack down on corruption and root out bribery?" (7) "Have you or anyone you know personally witnessed an act of corruption or bribe-taking by a politician or government official in the past year?" (8) "You can generally trust the people who run our government to do what is right." All answers are coded such that the higher the number, the worse/more unethical the perceived behavior of politicians. See Appendix 1 for all details.

Perceptions on officials' corruption in the presence of children





.15 .2 .25



(c) Parents or in-laws are present

Perceptions on officials' corruption in the presence of parents



Perceptions on officials' corruption in the presence of others (all)





Figure 8: Perceptions of corruption among local leaders and government officials in the presence of others (wave 5). Coefficients from mixed effects linear regression models. (1) "Do officials who commit crimes go unpunished?"; (2) "How often do government officials withhold important information from the public view?"; (3) "How often do you think government leaders break the law or abuse their power?". (4) "How widespread do you think corruption and bribe-taking are in your local/municipal government?" [(4) "(...) in the national government [in capital city]?"] (6) "In your opinion, is the government working to crack down on corruption and root out bribery?" (7) "Have you or anyone you know personally witnessed an act of corruption or bribe-taking by a politician or government official in the past year?" (8) "You can generally trust the people who run our government to do what is right." All answers are coded such that the higher the number, the worse/more unethical the perceived behavior of politicians. See Appendix 1 for all details.

Last, contrary to what one would expect given the results shown above in Figures 1 and 3, the presence of officials seems to have little effect in this case. In fact, perceptions of impunity and of officials withholding important information from the public *increase* with the presence of officials. Most other results lack significance, and there are only two cases in which the bystanding official seems to induce the respondent to provide a more favorable view: respondents are extremely less likely to regard local officials as corrupt, and they are also significantly less likely to admit to having witnessed a corrupt episode.

Again, during wave 5, presence of bystanders is seldom associated with bias in reported perceptions of corruption or experience with corrupt behaviours (see Figure 16. Even the exceptions are too few and consistent across types of bystanders or questions to suggest systematic patterns of response bias. As suggested before, different specifications or sample bias (wave 5 have half as many countries) could explain some of these differences.

#### 4.5 Results by regime type

Next, we analyse whether the patterns observed hold generally in all countries, or hold particularly in a subset of countries with similar their regime types. We use Vdem scores, particularly the Liberal Democracy Index (V-Dem Institute, 2017, first column in Table 1, page 44), from 2017 (the closest to the time of wave 4, and one or two years prior to wave 5) to divide the countries into three categories: autocracies, imperfect democracies, and democracies. China (169), Thailand (155), Cambodia (149), Vietnam (129), Malaysia (127), and Myanmar (114) are categorized as "autocracies" (in parenthesis, their position in the global Liberal Democracy Index ranking). Singapore (98), Philippines (86), Indonesia (66) and Mongolia (64) fall into "imperfect democracies". Last, South Korea (37), Japan (34), and Taiwan (33) are grouped into "democracies". We repeat the same analyses as above, but estimating each regression separately for each subgroup of countries. We use weights in the wave 4 regressions, while wave 5 models include interviewer characteristics and random effects. The goal is to assess whether results seen thus far are driven by a particular group of countries, or if, on the contrary, hold constant across all groups.

#### 4.5.1 Item non-response in system evaluations by regime type

Figure 9 shows the results for item non-response in the presence of others across different regimes types in wave 4. We can only see some significant effects for neighbours and officials. As panel











Figure 9: Likelihood to refuse to answer the referred questions in the presence of others, by regime type (wave 4). Following Vdem sores from 2017, autocracies are China, Thailand, Cambodia, Vietnam, Malaysia, and Myanmar. Imperfect democracies are Singapore, Philippines, Indonesia, and Mongolia. Democracies are South Korea, Japan, and Taiwan. The five questions are (1) "In your opinion how much of a democracy is the country?" (1=Not a democracy – 4=A full democracy); (2) "On the whole, how satisfied or dissatisfied are you with the way democracy works in this country?" (1=Not at all satisfied – 4=Very satisfied); (3) "Over the long run, our system of government is capable of solving the problems our country faces" (1=Strongly disagree – 4=Strongly agree); (4) "I would rather live under our system of government than any other that I can think of." (1=Strongly disagree – 4=Strongly agree): (5) "How likely is it that the government will solve the most important problem you identified within the next five years?" (1=Not at all -4=Very likely)

(d) shows, respondents are sometimes more likely to give an answer to questions on the quality of the system in the presence of others in both imperfect democracies and democracies — this effect is however nowhere to be seen in autocracies. When it comes to the presence of officials (panel e), we can clearly see a differential effect across regime types: respondents are much more likely to answer sensitive questions on the quality of democracy in autocracies when officials are present. The effect is present (but smaller) in imperfect democracies, and even smaller in democracies.

We repeat the analysis for wave 5, and fail to find any significant correlations between the presence of various types of bystanders and item non-response (see Figure 10).

#### 4.5.2 Response bias in system evaluations by regime type

Figure 11 shows the results on evaluations of the political system by regime type. We can see no systematic differences in the presence of children or the spouse. However, we do note that, in the presence of parents (or in-laws), respondents in autocratic countries tend to provide higher evaluations than otherwise. There is no such effect in democracies, imperfect or not. The presence of neighbours/passers-by (panel d) seems to incentivize respondents to give better evaluations of the system in imperfect democracies —however, the effect is significant at a 5% level for one of the five cases. Where we can see systematic differences across regime types is in the presence of officials. Their presence is negligible in democracies (we find four very wellspecified null effects, and one negative effect), but it encourages much more positive responses in imperfect democracies (in four out of the five cases, significant increases). In the case of autocracies results are mostly null —likely because in this case, we only have nine cases in which an official was watching the interview.

In wave 5, we observe some significant correlations between presence of a spouse and evaluation of the political system in autocracies and democracies for two questions: whether the country is a democracy (only in democratic regimes) and satisfaction with democracy (in both) (see Figure 12). These results are not consistent with those reported for wave 4.

#### 4.5.3 Response bias in trust in institutions by regime type

Figure 13 shows that, for questions on trust, there are clear and systematic differences across regime types. Out of the six state-created institutions, expressed trust in them increases in the presence of the spouse (four times), of children (three times), and of the parents/in-laws







Figure 10: Likelihood to refuse to answer the referred questions in the presence of others, by regime type (wave 5). Coefficients from mixed effects logistic regression models. Following Vdem sores from 2017, autocracies are Thailand, Vietnam, and Malaysia. Imperfect democracies are the Philippines and Mongolia. Democracies are South Korea and and Taiwan. The five questions are (1) "In your opinion how much of a democracy is the country?" (1=Not a democracy – 4=A full democracy); (2) "On the whole, how satisfied or dissatisfied are you with the way democracy works in this country?" (1=Not at all satisfied – 4=Very satisfied); (3) "Over the long run, our system of government is capable of solving the problems our country faces" (1=Strongly disagree – 4=Strongly agree); (4) "I would rather live under our system of government than any other that I can think of." (1=Strongly disagree – 4=Strongly agree): (5) "How likely is it that the government will solve the most important problem you identified within the next five years?" (1=Not at all -4=Very likely)









(e) Party/Gov. officials are present

Figure 11: Answer to overall questions on the system in the presence of others, by regime type (wave 4). Following Vdem sores from 2017, autocracies are China, Thailand, Cambodia, Vietnam, Malaysia, and Myanmar. Imperfect democracies are Singapore, Philippines, Indonesia, and Mongolia. Democracies are South Korea, Japan, and Taiwan. The five questions are (1) "In your opinion how much of a democracy is the country?" (1=Not a democracy - 4=A full democracy); (2) "On the whole, how satisfied or dissatisfied are you with the way democracy works in this country?" (1=Not at all satisfied – 4=Very satisfied); (3) "Over the long run, our system of government is capable of solving the problems our country faces" (1=Strongly disagree – 4=Strongly agree); (4) "I would rather live under our system of government than any other that I can think of." (1=Strongly disagree – 4=Strongly agree): (5) "How likely is it that the government will solve the most important problem you identified within the next five years?" (1=Not at all - 4=Very likely)



(c) Parents or in-laws are present







Figure 12: Answer to questions on the quality of the political system in the presence of others, by regime type (wave 5). Coefficients from mixed effects linear regression models. Following Vdem sores from 2017, autocracies are Thailand, Vietnam, and Malaysia. Imperfect democracies are the Philippines and Mongolia. Democracies are South Korea and and Taiwan. The five questions are (1) "In your opinion how much of a democracy is the country?" (1=Not a democracy -4=Afull democracy); (2) "On the whole, how satisfied or dissatisfied are you with the way democracy works in this country?" (1=Not at all satisfied - 4=Very satisfied); (3) "Over the long run, our system of government is capable of solving the problems our country faces" (1=Strongly disagree – 4=Strongly agree); (4) "I would rather live under our system of government than any other that I can think of." (1=Strongly disagree – 4=Strongly agree): (5) "How likely is it that the government will solve the most important problem you identified within the next five years?" (1=Not at all - 4=Very likely)

(always). Being watched by neighbours also has similar effects on the answers given —even though in no case the increase is significant, the p-values are remarkably close to 0.05 (0.10 for the prime minister/president; 0.10 for the military; 0.06 for the government; 0.78 for the police; and 0.14 for the courts). Results seem to indicate a similar pattern when being watched by officials, but again the smaller sample yields too large standard errors in some cases to make more precise conclusions.

Expressed trust in institutions is not affected in other countries in a similar fashion. Holding the interview with the parents beside seems to increase reported trust in the military and the government in imperfect democracies, but this result does not extend to all other institutions. Only the presence of officials seems to systematically affect expressed trust in imperfect democracies, although none of the coefficients is significant at a 5% level. As in the previous case, we find that evaluations of neighbours are influenced by the presence of neighbours, which we find re-assuring. This, however, happens only in autocracies. The effect is nowhere to be found in democracies, imperfect or not.

In wave 5, bystander presence continues to be generally unrelated to expressions of trust in institutions at all levels of democracy (see Figure 14). Potential exceptions include evaluations of the president or prime minister in the presence of children or parents in imperfect democracies.

#### 4.5.4 Response bias in perceptions of corruption by regime type

Last, we turn into perceptions on corruption by regime type. Figure 15 shows the results. We only find systematic effects for respondents in autocracies. In that case, when parents are watching, respondents tend to give a more ethical account of officials' behavior —notably, this happens for all eight questions we use. This effect is not as prominent in the presence of other people. Overall, we find that respondents tend to portray officials in a better way when others are listening, but this effect is not consistent across all questions we use.

We should note that there are two questions that seem especially sensitive. When asked about whether members of the local government or the national government are corrupt, respondents in autocracies always express lower concerns when others are present, be them the spouse, children, parents or in-laws, neighbors, by-standers or officials (with only one exception: when asked about corruption of government members in the capital in the presence of officials).

Finally, we can see in panel (e) that being watched by officials seems to have divergent effects in imperfect democracies: while respondents are *more* likely to complain corrupt officials





(e) Party/Gov. officials are present

Figure 13: Trust in different institutions in the presence of others, by regime type (wave 4). Following Vdem sores from 2017, autocracies are China, Thailand, Cambodia, Vietnam, Malaysia, and Myanmar. Imperfect democracies are Singapore, Philippines, Indonesia, and Mongolia. Democracies are South Korea, Japan, and Taiwan. Trust levels are defined as (1) "None"; (2) "Not very much"; (3) "Quite a lot"; (4) "A great deal". Respondents who could not choose, did not answer, or did not understand the question are not included.





(d) Neighbours or passers-by are present



(e) Any person present

Figure 14: Trust in different institutions in the presence of others, by regime type (wave 5). Coefficients from mixed effects linear regression models. Following Vdem sores from 2017, autocracies are Thailand, Vietnam, and Malaysia. Imperfect democracies are the Philippines and Mongolia. Democracies are South Korea and and Taiwan. Trust levels are defined as (1) "None"; (2) "Not very much"; (3) "Quite a lot"; (4) "A great deal". Respondents who could not choose, did not answer, or did not understand the question are not included.

go unpunished and that officials keep relevant information from the public, they are *less* likely to admit to having witnessed corruption episodes and less likely to consider local officials to be corrupt.

When we revisit this question in wave 5, we find that only in democracies do people tend to express less critical perceptions of corruption when people are asked whether officials keep key information from the public in the presence of spouses and parents or parents-in-law, in particular. Otherwise, the general pattern of no significant response bias in the presence of bystanders across regime type continues.

### 5 Discussion

Our analyses generally suggest that the presence of bystanders may have heterogeneous, and perhaps even idiosyncratic, effects across different types of bias (item non-response vs. bias in responses), type of political questions, types of bystanders, and the quality of democracy.

In wave 4, we find that Willingness to answer sensitive questions dramatically increases in the presence of party or government officials. This effect happens overall in all countries, although it's larger in magnitude in autocracies. On the other hand, respondents' willingness to answer does not change when relatives, acquaintances or passers-by are watching. Further, Evaluations of the political system tend to be higher when parents are present. This does not seem to be driven by a particular set of countries, although results suggest that the effect is larger in autocracies. They are also more positive in the presence of officials. This effect is clearly driven by imperfect democracies, although we suspect that the same happens in autocracies (we likely do not find systematic results in the latter because of the small number of times officials visit surveys in autocracies). The presence of neighbours or passers-by seems to have heterogeneous effects across countries. Although not conclusive, patterns suggest that in imperfect democracies evaluations are biased upwards, whereas the opposite happens in democracies. Questions on trust in different institutions yield most insightful results. Overall, the presence of relatives (spouse, children, parents or in-laws) and that of officials is correlated with higher expressed level of trust. While in the case of officials no set of countries is driving the effect, for relatives it seems clear that most of the effect takes place in autocracies. In fact, when looking at interviews with neighbours present, we can further see that in autocracies, expressed levels of trust are also inflated in their presence. Last, we find similar patterns when we look at evaluations of







Figure 15: Answer to questions on perceptions of corruption among local leaders and government officials in the presence of others (wave 4). Trust levels are defined as (1) "None"; (2) "Not very much"; (3) "Quite a lot"; (4) "A great deal". Respondents who could not choose, did not answer, or did not understand the question are not included.





(d) Neighbours or passers-by are present



(e) Any person present

Figure 16: Answer to questions on perceptions of corruption among local leaders and government officials in the presence of others, by regime type (wave 5). Coefficients from mixed effects linear regression models. Following Vdem sores from 2017, autocracies are Thailand, Vietnam, and Malaysia. Imperfect democracies are the Philippines and Mongolia. Democracies are South Korea and and Taiwan. Trust levels are defined as (1) "None"; (2) "Not very much"; (3) "Quite a lot"; (4) "A great deal". Respondents who could not choose, did not answer, or did not understand the question are not included.

officials' honesty. In autocracies, the presence of others results in better evaluations of officials' performance and conduct (especially when parents are present), whereas this effect dissipates in democracies (imperfect or not).

In contrast, in wave 5, using the same outcomes of interest, but slightly different operationalizations of bystander presence and model specifications, none of the wave 4 findings persist. At this point, we are unsure whether these null findings are driven by fewer countries included in the analyses or the different operationalization of bystander presence, which does not treat categories as mutually exclusive, meaning that each category of presence is analyzed separately, or differences in specification. All these differences could contribute to the null findings, but further investigation is needed to rule out some of these possibilities.

We hope to resolve these inconsistencies by better aligning the coding and specifications across our analyses and including surveys from other regions. If responses to sensitive questions are significantly associated with item non-response bias and social desirability bias when others are present, these biases may impact other inferences or model results based upon these indicators. For example, significant item non-response may bias samples and suggest that methods of multiple imputation to estimate missing values may be preferable to listwise deletion. At a minimum, researchers should pay attention to item non-response to potentially sensitive questions and consider multiple imputation if non-response is widespread. Social desirability bias in volunteered responses may be trickier, even in instance when bystander presence is coded. If a sensitive item is the outcome in a regression analysis, including indicators for bystander presence may mitigate some bias, but only if presence is not correlated with other observable or unobservable characteristics – a tall order. Social desirability bias in regression covariates may be even more difficult to address, particularly if the bias results in heteroskedastic errors. We also hope to consider some of these issues in a future iteration of this project.

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# Supplementary materials

#### Appendix 1. Coding of the variables used for the analysis

Variables used for Figure 15 (Note that we have some answers so that in all cases the higher the number the worse the perception on officials' behavior):

(a) "Do officials who commit crimes go unpunished?" (1) Rarely; (2) Sometimes; (3) Most of the times; (4) Always.

(b) "How often do government officials withhold important information from the public view?"

(1) Rarely; (2) Sometimes; (3) Most of the times; (4) Always.

(c) "How often do you think government leaders break the law or abuse their power?" (1) Rarely;
(2) Sometimes; (3) Most of the times; (4) Always. (d) "How widespread do you think corruption and bribe-taking are in your local/municipal government?" (1) Hardly anyone is involved; (2) Not a lot of officials are corrupt; (3) Most officials are corrupt; (4) Almost everyone is corrupt.
(e) "How widespread do you think corruption and bribe-taking are in the national government [in capital city]?". (1) Hardly anyone is involved; (2) Not a lot of officials are corrupt; (3) Most officials are corrupt; (4) Almost everyone is involved; (2) Not a lot of officials are corrupt; (3) Most officials are corrupt; (4) Almost everyone is corrupt.

(f) "In your opinion, is the government working to crack down on corruption and root out bribery?" (1) Doing nothing; (2) It is not doing much; (3) It is doing something; (4) It is doing its best.

(g) Have you or anyone you know personally witnessed an act of corruption or bribe-taking by a politician or government official in the past year? (1) Neither me nor anyone around me; (2) Told about it by a friend or family member who personally witnessed; (3) Personally witnessed.
(h) You can generally trust the people who run our government to do what is right" (1) Strongly agree; (2) Somewhat agree; (3) Somewhat disagree; (4) Strongly disagree. [Coded so that higher numbers imply worse perceptions of officials].