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Trust in public performance information: The effect of data accessibility and data source

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Abstract

Building on transparency literature, we theorize that information characteristics such as accessibility of raw data and data source provision influence citizens' trust in public performance information. Next to the question of whether providing a data source matters, we argue that information provision from a non-government actor can compensate for the information asymmetry between citizens and public sector organizations due to a stronger symmetric data exchange relationship. Integrating and elaborating these theoretical assumptions of principal-agent theory with bureaucratic reputation theory, the organization's reputation, rather than the stakeholder group the information provider is belonging to, may explain varying trust. We conduct eight online experiments in large-N data collections in Austria and Germany and find that data accessibility and source provision increase trust in performance information. Whereas citizens have more trust in government-provided data compared to data provided by other citizens, source reputation matters dominantly for building trust in performance information.

Evidence for Practice

- Providing users with the possibility to access raw data improves their trust in statements on public performance.
- Citizens have more trust in statements on public performance if there is a source provided.
- The reputation of who shares the information is decisive for citizens' trust in performance information.
- Considerations based on the bureaucratic reputation theory are more successful than the principal-agent theory, with respect to explaining citizens' trust in public performance information.

Following the open government principles (Grimmelikhuijsen & Feeney, 2017; Liu, 2017; Moon, 2020; Young, 2020), governments increasingly invest in leveraging digital technology to release public performance information. These efforts of strengthening government transparency should improve public accountability and enhance citizens' perception of government activities including trust in government and performance evaluation (Cucciniello et al., 2017; Ingrams, Piotrowski, & Berliner, 2020; McDermott, 2010; Schmidthuber et al., 2021). However, these intended outcomes might only become effective if citizens believe that public information can be trusted (Mizrahi & Minchuk, 2020; Moynihan & Ingraham, 2004). This is why we are interested in the antecedents of citizens' trust in public performance information, defined as a characteristic of a trustor (Grimmelikhuijsen & Knies, 2017).

First, in line with current debates on open data (Park & Ramon Gil-Garcia, 2022) and building on recent works on the credibility of performance information (James & Van Ryzin, 2017; Meier et al., 2022), we argue that a transparent presentation of public performance improves trust in that performance data. Concretely, we

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focus on providing access to raw data and adding the data source as cornerstones of transparency. These elements can create trust in public performance information, which in turn can strengthen the citizens' beliefs about an organization's intention to share performance information (Herbig et al., 1994; Metzger & Flanagin, 2013).

Next to "how information is presented," second, we argue that the source type influences citizens' trust in public performance information. We combine the question of whether a source is provided or not with "who is the source sharing the information." By drawing on principal-agent theory (Eisenhardt, 1989; Jensen & Meckling, 1976; Ross, 1973), we assume and test that information asymmetries in the citizen-government relationship can be lowered through the disclosure of performance information on government service delivery by citizens or a third party. In addition, we integrate principal-agent theory with bureaucratic reputation theory (Salomonsen et al., 2021) to elaborate on how the reputation of the information provider is potentially a stronger explaining factor for reducing information asymmetries.

The main article's contributions are three-fold. First, we contribute to research on how public performance information is perceived by citizens. Recent work in public administration has focused on the effect of performance information content on citizens' evaluation (Olsen, 2017; Porumbescu et al., 2021), public managers' willingness to use performance information (Mikkelsen et al., 2021), and the effect of performance information on management decision-making (Hansen & Nielsen, 2022). This study improves our understanding of citizens' expectations about how performance information should be provided and who should evaluate government performance (Ho, 2008). In doing so, we can learn about how performance information can strengthen democracy in the end (Pollitt, 2006).

Second, our study explores the theoretical dynamics and contextual conditions of the transparency-trust relationship by contrasting the principal-agent theory and bureaucratic reputation theory. More specifically, we compare the differences between how citizens perceive the information provider's role (principal vs. agent) with the information provider's own reputation. In particular, we test how the general role and specific reputation differently matter for building trust in information provision. This was a finding that emerged during our first set of four experiments, which we explored in further detail by conducting additional experiments to verify this emerging finding. This cumulative approach is explained in more detail in our method section. We thereby contribute to literature discussing the role of reputation in a principal-agent relationship in the public sector context (Bertelli & Busuioc, 2021) and emphasizing the effect of source type on transparency outcomes (Meier et al., 2022).

Third, this study contributes to research on the outcomes of open data adoption (Young, 2020) by investigating factors that shape transparency outcomes (Cucciniello et al., 2017). By highlighting the role of data accessibility and source availability, we contribute to the discussion on how the format of information presentation affects the citizen-government relationship (Baekgaard et al., 2019; Choi & Gil-Garcia, 2022; Matheus & Janssen, 2020). The focus on citizens' expectations concerning data accessibility and data sources has also considerable relevance for practice. For policy makers, it is crucial to understand which characteristics of information provision can increase the credibility of public information.

LINKING DATA ACCESSIBILITY, DATA SOURCE, AND TRUST IN PERFORMANCE INFORMATION

Citizens have access to a broad range of information. Triggered by fake news discussions and digital misinformation, they might read (online) information with more skepticism and assess the credibility—perceptions about the believability (O'Keefe, 2002)—of the content and the information provider first. Content credibility relates to the perceived quality, accuracy, and currency of the information itself (Metzger et al., 2003). Accordingly, we argue that adding information on the accessibility and source of the data can build trust in performance information. Source credibility refers to the extent to which the communicator can be believed with respect to the information provided. Here, we distinguish between the information providers' overall role in a principal-agent relationship and the specific reputation of the information provider.

Accessibility of raw data

Data accessibility is an open data principle, meaning that raw data of the information presented can be received. Citizens might have an interest in the availability of machine-readable data due to the ability to delve into the topic with the potential for learning and knowledge accumulation. Whereas new public management reforms put emphasis on publishing good results (Dunleavy & Hood, 1994; Pollitt & Bouckaert, 2004), open government policies expect trust to increase along with the level of information and type of data made available to citizens (Janssen et al., 2012; Schmidthuber et al., 2021). Consequently, we argue that the type of providing performance information determines citizens' trust in the information in itself (i.e., a performance statement), as information influences decision-making processes and individuals make decisions based on the available information (Connelly et al., 2011; Spence, 2002).

Performance information provision only is argued to be insufficient for enhancing citizen trust, whereas information about data accessibility accords credibility to the information so that positive outcomes in terms of citizens'

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attitudes towards the information can be expected. In line with the open data literature, transparency has to go hand in hand with the accessibility of raw data (Janssen et al., 2012). This means that open data increases the credibility of public information, and the possibility to replicate the information enhances trust in the information. Concretely, it shows that the agent is not concerned about being questioned that the performance information might report his/her performance in a biased way (Saam, 2007). Providing raw data to download might send a signal to the citizens: the other party does not keep the more detailed information from citizens. In contrast, withholding information makes citizens feel that the organization has to hide information. As an open culture and ready availability of data signal credibility, we can assume a positive effect in terms of citizens' trust (Gonzálvez-Gallego et al., 2020; Grimmelikhuijsen & Meijer, 2014; Hood, 2006). Then, citizens are able to analyze the data themselves and are trusted to use the data for other purposes. Data accessibility can thus be considered as a signal that represents a promise of quality that citizens must take on faith. Consequently, we hypothesize that citizens trust public performance information more if they have access to raw data.

> **Hypothesis 1.** *(H1). The better the data accessibility, the more citizens trust the performance information*.

Provision of data source

Next to data accessibility, source provision can be an important factor influencing trust in public performance information. Sources of the content are also described as a feature of "real news" compared to "fake news," whereas a lack of sources is related to fabricated news (Molina et al., 2021). Consequently, although the main purpose of transparency is on the content, the source information must not be neglected. Hence, we argue that a performance statement is more trusted if it is supplemented with information on the data source, such as explicitly mentioning the organization sharing the information. In contrast, a lack of information sources increases doubts about the content of the information as well as uncertainty about the responsibility for the data (Metzger & Flanagin, 2013; Rieh & Danielson, 2007; Sundar, 2008). This argumentation is also supported by previous research; for example, Kim and Dennis (2019) found that highlighting the source instead of the headline of a social media article makes readers less likely to believe the article's content, arguing that the article's design can nudge readers to be more skeptical about its content. However, Fogg et al. (2003) also found that visual design elements instead of content and source information are decisive for the credibility assessment of online information. Hence, we hypothesize:

> **Hypothesis 2.** *(H2). Citizens have more trust in the performance information if a source is provided*.

THE ROLE OF SOURCE TYPE: THE INTERPLAY OF PRINCIPAL-AGENT THEORY AND BUREAUCRATIC REPUTATION THEORY

Next to the question of whether a source is provided, we argue that the *type* of the source is relevant for citizens' trust in performance information. In general terms, improved transparency should enhance the relationship between two parties: the political-administrative system and the citizens. Drawing on the principal-agent theory (Jensen & Meckling, 1976; Ross, 1973), this relationship is characterized by asymmetries that result from the division of labor. Citizens, as the principals, mandate public organizations to deliver public services and contribute to the common good. In contrast, public sector institutions perform as agents of the desired activities on the citizens' behalf. Thereby, the agents have an informational advantage over the principal regarding the tasks they perform and the respective outcomes (Davis et al., 1997). These informational asymmetries in favor of the agent mean that principals are not able to monitor the agent's competencies, intentions, knowledge, and actions. This is a common situation in the public sector, where citizens have to rely on information from those institutions that are responsible for the services on which data is provided. However, and in line with the knowledge-based view (Lewicki & Bunker, 1996; Thomas, 1998), the government has an interest in lowering this information asymmetry by disclosing performance information, as thereby public accountability and citizens' understanding of government processes can be increased (Eisenhardt, 1989; Jensen & Meckling, 1976).

However, given their agency role, the possibility remains that information asymmetry is not fully mitigated by sharing information. In such a setting, the government still controls how exactly the performance of a public sector agency is reported. This is inherent to principal-agent settings, and when citizens are aware of this, in combination with potential expectations that public organizations might have incentives to be perceived better, it can affect the extent that citizens trust the information (Bouckaert, 1998; Han, 2020).

Understanding public service delivery through the lens of principal-agent theory means that when the government provides information about its own performance, the information asymmetry is reinforced by an *asymmetric information provision* from agent to principal. In contrast, more *symmetric information provision* would occur when principals themselves or non-government sources collect data on the agent's performance.

Whereas government internal data are gathered behind closed doors, citizen-generated data are characterized by

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participative data collection processes (Sieber & Johnson, 2015), such as crowdsourcing platforms, e-participation platforms, or social media (Brabham, 2008; Meijer & Potjer, 2018; O'Brien et al., 2017). This innovative form of performance evaluation, in line with the public governance perspective (Osborne, 2006, 2009), is based on multi-actor collaborations between different stakeholders in the public context (Meijer & Potjer, 2018). Furthermore, a third party such as a non-profit organization can also evaluate the government institution's performance from an independent perspective (Van Ryzin & Lavena, 2013). In contrast to a government organization that is reporting on its own performance, the performance information provided by a third actor might be seen as more objective and less asymmetric.

This reasoning is also supported by prior research. Whereas Van Ryzin and Lavena (2013) found that the credibility of performance information does not significantly differ across sources such as a local government, a sanitation department, or a nonprofit institute, findings indicate that high-income participants have more credibility in reports from a non-government source compared to a government-issued performance report. Walker et al. (2018) found that respondents are more satisfied with the organization's performance when provided with external-archival data instead of perceptual and self-reported data. A study by James and Petersen (2018) indicates that international sources perform better than national governments in terms of the credibility of e-government performance rankings. This contributes to the assumption that non-government sources are more credible than government sources in terms of government performance. Citizens seem to be more doubtful about good performance reported by the government itself compared to independent sources with high reputations. Nevertheless, previous research has found a "weak indication of a source main effect" (James & Van Ryzin, 2017, p. 32). Conducting a survey experiment among public high school teachers, Petersen (2020) found that frontline employees' perception to use performance information for learning purposes increases, when the information source is horizontal—for example, with co-workers—rather than vertical. The inherent asymmetry in this performance reporting could explain these empirical findings.

We, thus, assume that trust in performance information depends on the stakeholder group that is providing information on government performance. If the information provider is the agent in a principal-agent relationship, trust in performance information might be lower compared to a source that is an external stakeholder. Consequently, we hypothesize:

> **Hypothesis 3.** *(H3). Citizens have more trust in the performance information based on data provided by (H3a) citizens or (H3b) an independent third actor (symmetric information provision), compared to the government (asymmetric information provision).*

However, previous research does not provide a clear picture of the effect of performance information originating from a third party on the information's credibility and assumes that a lack of variation in credibility results from insufficiently knowing the sources and their independence (James & Van Ryzin, 2017). Consequently, we develop additional hypotheses to Hypothesis 3 by integrating the principal-agent theory with bureaucratic reputation theory (Salomonsen et al., 2021) and test if the reputation of the organization providing the information rather than the affiliation to a group (i.e., principals or agents) is decisive for citizens' evaluation of performance information.

Organizational reputation can be defined as a "set of beliefs about an organization's capacities, intentions, history, and mission that are embedded in a network of multiple audiences" (Carpenter & Krause, 2012, p. 26). Reputation is "the collective sum of perceptions" individuals have towards an individual or organization that is influenced by "past actions and achievements and its ability to deliver valuable results to multiple stakeholders" (Bustos, 2021, p. 735; Christensen & Lægreid, 2020, p. 715). Different facets of organizational reputation affect the stakeholders' reactions and behavior (Carpenter & Krause, 2012; Lee & Van Ryzin, 2020) such as building or maintaining trust (Baekkeskov, 2017; Christensen & Lægreid, 2020).

A good moral reputation of an organization might be decisive for stakeholders' trust when releasing performance information. Accordingly, actors with high reputations might be more trusted to present credible information, whereas those with low reputations might be accused of cheating or falsifying performance information (e.g., van Zoonen & van der Meer, 2015). Metzger et al. (2010) identified source reputation as a key heuristic through which credibility assessments are made. Accordingly, the reputation heuristic signals the reliance on prior organizational reputation and familiarity as sources of credibility. This means that an organization's name is used to evaluate the credibility of information shared by this organization. Next to organizations' benevolence and honesty in sharing information, individuals' perceived reputation of actors (Maor, 2016) is related to the organization's competencies to provide reliable data one can trust.

In line with this theorizing, previous research has empirically shown the positive effect of reputation on trust. Analyzing data from a Dutch Internet survey, Beldad et al. (2012) found that organizational reputation can increase trust in government organizations about how to process and use citizens' personal data. Organizations with a high reputation are assumed to be more credible, act honestly, and involve the interests of other stakeholders in decision-making, which also means not acting opportunistically (Herbig et al., 1994). Based on two survey experiments, Kim and Dennis (2019) found that source reputation ratings positively affect the believability of articles.

Consequently, alternative to the perspective that focuses on the principal-agent stakeholder type issuing

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the performance information (Hypothesis 3), in Hypothesis 4, not the role but the particular reputation of an organization is focused on for individual trust in information. This actor-centric approach puts more emphasis on a single organization's reputation, rather than—or even regardless—the role of a government organization, citizen, or third party.

> **Hypothesis 4.** *(H4). Citizens' trust in the performance information is positively related to the reputation of the actor reporting the performance information.*

We test Hypothesis 4 to see if reputation—in the context of the principal-agent theory—is a substituting, complementary, or moderating factor in explaining citizen trust in performance information. As a substitute factor, reputation would consistently explain trust in performance information, while the role that a data-sharing organization has in the principal-agent setting would be insignificant or inconsistent in explaining citizen trust. This would mean that the bureaucratic reputation theory is a dominant alternative to the principal-agent theory in explaining citizen trust. As a complementary factor, reputation would additionally explain trust, meaning in addition to the role that a data-sharing organization has in the principal-agent setting: a principal, an agent, or a third party. This would mean that both the principal-agent theory as well as the bureaucratic reputation theory can valuably contribute to explaining citizen trust in public performance information. As a third option, reputation could be differently relevant depending on the role an actor has in the principal-agent setting. Accordingly, reputation as an explaining factor for citizen trust matters differently depending on the role an actor has in the principal-agent setting, for example, the reputation of third-party data sharers is more relevant than the reputation of public sector organizations or citizens. In the cases of complementarity and/or moderation (H5b and H5c), there would be substantial theoretical value in further integrating both theoretical perspectives. Hence, we formulate:

> **Hypotheses 5.** (H5). *Reputation of a specific actor (*i.e.*, a principal, an agent, or a third party) is either (H5a) a substitute or (H5b) a complementary, and/or (H5c) a moderating factor, in relation to its principal agent role, for explaining citizen trust in the performance information.*

EXPERIMENTAL DESIGN AND METHODS

In total, we conducted eight experiments in two data collections. The results of the first four experiments were known before collecting data in experiments 5–8. We decided to perform four experiments each time in parallel to test the main hypotheses in different concrete contexts. This supports the generalizability of findings and the robustness of the effects. The results of the first four experiments led to the theoretical elaboration on reputation (see above: Hypotheses 4 and 5). However, for parsimoniousness, and because experiments 5–8 are an elaboration of experiments 1–4, we report the design of both sets of experiments combined.

Experimental strategy

We conducted four related experiments in Austria, in April 2020, and four experiments in Germany, in November 2020. In all eight experiments, respondents were shown some sort of performance information of a local or national government, including information about the data accessibility and data source (Vignettes are reported in Data S1). Table 1 provides an overview of the setting and the specific performance statement used in each experiment. We chose various public performance settings that are different with respect to the (local) government level, as well as performance areas. Some of these areas are the direct responsibility of specific public sector organizations, such as public service waiting times and streetlight defects, while for other areas, public organizations play a major coordinating role in the public governance networks of various partner organizations, such as for COVID infections or affordable housing in a city. This allows for assessing the generalizability and robustness of hypotheses and findings in the broad range of citizen encounters with public performance information. The actual performance statement was based on real available data, and it was not varied across experimental groups. We did vary data sources and data accessibility.

In each experiment, there was one passive control group, where only an overall statement on the performance was provided in the form of a one-sentence statement (no source or data accessibility options were reported). An example of such a statement is (for Experiment 1): "Public transport in the city of Vienna, 2018: Punctuality of city buses: 89.4 %." In each experiment, there were six more vignettes based on the two treatments: *data accessibility* and *source type*.

In experiments 1–4, there were three data accessibility options and two source types; in experiments 5–8, there were two data accessibility options and three source types.

Data accessibility had three variations in experiments 1–4, inspired by Meijer et al. (2012): (1) "data not available," (2) "data available on request," and (3) "data directly downloadable." Experiments 5–8 focused only on (1) "data not available" and (3) "data directly downloadable." This was a choice made based on the results of experiments 1–4, which showed no significant difference between the second and the third group. Comparing these groups with each other allows for testing Hypothesis 1.

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TABLE 1 Overview of experiments

Experiment	Performance statement	Context	Source of information (public, citizen, third party)
Data Collection I (Austria)			
Experiment 1	Punctuality of public transport	City of Vienna, Austria	(a) Statistics of the City of Vienna (b) Commuter-reported
Experiment 2	Average waiting time	City of Vienna, Austria	(a) Statistics of the City of Vienna (b) Citizen-reported
Experiment 3	Number of infrastructural defects per day	City of Klagenfurt, Austria	(a) Statistics of the City of Klagenfurt (b) Citizen-reported
Experiment 4	Average rent in €/m^2	City of Salzburg, Austria	(a) Statistics of the City of Salzburg (b) Rent payer reported
Data Collection II (Germany)			
Experiment 5	Punctuality of passenger trains	German Railways, Federal level	(a) German Railways (b) Rail rider reported[a] (c) Frankfurter Allgemeine Zeitung
Experiment 6	Average amount of student allowance	German social services for students	(a) Federal Ministry of Education and Research (b) Reported by recipients of benefit[b] (c) German Red Cross
Experiment 7	Number of COVID-19 reports in one week	Situation of COVID-19 pandemic in Germany	(a) Robert Koch Institute (b) Citizen reported by the app (c) Tagesspiegel
Experiment 8	Number of heat days in Berlin	Climate reporting in the case of Germany	(a) Federal Environment Agency (b) Public campaign (c) Greenpeace

Note: All experiments had each time the same performance statement.
[a]The following note was added in the vignette (translated to English): "Representative survey among recipients conducted by the Mannheim Centre for European Social Research."
[b]The following note was added in the vignette (translated to English): "Representative survey among rail passengers conducted by Fraunhofer."

In experiments 1–4, the source was either the public sector organization itself or citizens, while for experiments 5–8, the third source type was an independent third party such as a newspaper, a nonprofit organization, or a research institute. Based on the findings from the first set of experiments, we provided more details on data collection in the second set of experiments. For example, in terms of the citizen source, we added to the performance information a note about the representativeness of the public opinion survey and/or the research institute that conducted the opinion poll (more details can be found in Table 1). As the passive control group did not report any source, comparisons of each of these groups with the passive control group give an indication of the role of providing a source (Hypothesis 2), while comparison between the groups allows testing Hypothesis 3.

For experiments 5–8, we started the data collection—before any vignette was shown—with a reputation assessment of the sources used in the vignettes. We built on the approach of Willems et al. (2019), which means that we first asked for all 12 potential data sources that were used in the vignettes if respondents knew the organization or initiative (yes or no); If "yes," they were asked to rate the reputation of the organization or initiative (from −2 for a bad reputation to +2 for a good reputation, with 0 as the neutral middle option); If "no," the reputation score was set at "0." This means that no reputation (based on the fact that the respondent did not know the organization) is then considered equal—at least from a measurement perspective—to a neutral reputation, as both a non-existing and neutral reputation are assumed to have no additional effect on citizen trust. This approach builds on the notion that reputation is an emergent concept, meaning that reputation can only exist and influence individuals' decisions once people have received sufficient information about the organization (directly or indirectly) (Petkova et al., 2014; Rindova et al., 2005; Rindova et al., 2007). Hence it contains the assumption that reputation can only be influential in decisions towards organizations when two elements are in

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place: People need to know the organization, and their knowledge of the organization (i.e., built-up reputation) should be relevant for future decisions and interactions. In other words, when they do know the organization, their opinion about the organization should not be neutral, or indifferent to their actions and decisions (Lange et al., 2011; Petkova et al., 2014; Rindova et al., 2005; Rindova et al., 2007). Against that background, we acknowledge that not knowing an organization is conceptually different from having a neutral opinion about it. Nevertheless, the construction of this measure builds on the theoretical assumption that in both cases the organization has no influence on people's decisions and actions, which is operationalized in both cases with the value 0. With such measure as an exogenous variable for the respective experiments, the additional effect of a source's reputation can be evaluated, to test Hypotheses 4, 5a,b, while the interaction with the source treatment groups tests the moderation (H5c).

As a dependent variable, we asked respondents for the extent they trusted the information provided to them, measured by a seven-point Likert scale ranging from "trust not at all" (1) to "trust totally" (7) and relates to the information provided to the respondent. We also included two additional measures, respectively focusing on the credibility of the information and the perceived performance. As these measures highly correlate with our main dependent variable, and as results for these dependent variables are (almost) identical to the results of the main variable "trust in public performance information," we refrain from reporting them in this article. However, the full analysis of these additional variables and further clarifications are elaborated in Data S1.

Samples

As each experiment has seven treatment groups, we aimed for at least 100 observations per group, which would allow us to uncover a small to medium effect size in the overall comparison (power analysis: f = 0.140; for a balanced one-way analysis of variance power calculation, seven groups (k), sig. level = 0.05, power = 0.8). For the six-group comparison without the passive control group, the minimal effect size can be found to be similar (power analysis: f = 0.147; for six groups [k], sig. level = 0.05, power = 0.8) (Champely et al., 2020).

We relied on a professional panel provider (Qualtrics panels) to address representative samples in Austria and Germany. The applied representativeness criteria were gender per age category and region (*Bundesland*). Each respondent answered—for a random selection and in random order—one, two, or three of the four vignettes in the respective data collections. Both data collections were integrated into a large omnibus-data collection process. More information on the full data collection is given in Data S1.

To ensure that respondents had read the performance information, we added straightforward attention questions for each vignette, about (1) the content of the performance information, (2) if raw data was available, and (3) from whom the information originated. When respondents could not answer these questions correctly for a particular vignette, the evaluation decision taken for that vignette was not considered for further analysis, based on the assumption that they paid no or insufficient attention to the vignette. For the different experiments, correct attention questions ranged between 65 to 70% of the observations: Experiment 1 (67.60%), Experiment 2 (64.89%), Experiment 3 (69.60%), Experiment 4 (67.51%), Experiment 5 (87.41%), Experiment 6 (72.81%), Experiment 7 (74.52%), and Experiment 8 (76.16%).

In sum, considering the randomization of one, two, or three vignettes per respondent and the application of our response quality approach, the eight experiments were answered respectively by (1) 838, (2) 778, (3) 776, (4) 800, (5) 1437, (6) 1197, (7) 1214, and (8) 1243 respondents. The number of respondents per treatment group in each experiment is reported in Table 2a–h, along with mean and confidence intervals for the main dependent variable.

In this article, we discuss for reasons of parsimoniousness results for the eight experiments separately but refer to Data S1 for descriptive statistics on background variables and for additional robustness analyses. These additional analyses include (1) the analysis of two other, highly related dependent variables, and (2) an integrated, multi-level analysis that controls for the nested structure, as several respondents answered more than one of the four experiments in a batch of experiments. For this analysis, it has to be noted that the intra-class correlation is around 0.35 for the different multi-level regression models tested, suggesting that about 35% of the variation is related to respondent-related variance, while about 65% is related to the differences in cases, as well as the different treatments that were possible between different cases that respondents answered. A third complementary analysis (3) reports the results for the full sample, that is, without deleting respondents that did not pay (sufficient) attention to the vignettes. In sum, the results for these complementary analyses are consistent with the findings reported based on the analyses described below.

RESULTS

Table 2a–h reports the mean and confidence intervals of the dependent variable per treatment group for each of the eight experiments. These data are also reported in Figure 1a–h, providing an overall insight into the mean differences per treatment group. From these results, it is clear that Hypothesis 2 is supported in all eight experiments, meaning that the mentioning of a source (i.e., the six treatment groups) induces higher trust compared to a

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TABLE 2 (a–h) Trust in public performance information

	Treatment: Source	Treatment: Available	*N*	Mean	SEM	CI-LB	CI-UB
(a) Experiment 1—Vienna public transport							
1	(No information)	(No information)	113	2.752	0.135	2.489	3.016
2	Public	Not available	143	4.042	0.125	3.796	4.288
3	Public	On request	120	4.517	0.130	4.262	4.772
4	Public	Download	130	4.708	0.121	4.471	4.945
5	Citizens	Not available	133	3.602	0.135	3.336	3.867
6	Citizens	On request	90	4.411	0.177	4.065	4.757
7	Citizens	Download	109	4.165	0.144	3.882	4.448
(b) Experiment 2—Vienna public service waiting times							
1	(No information)	(No information)	82	3.085	0.176	2.740	3.431
2	Public	Not available	128	4.055	0.137	3.786	4.323
3	Public	On request	109	4.624	0.135	4.359	4.889
4	Public	Download	122	4.779	0.139	4.506	5.051
5	Citizens	Not available	129	3.628	0.131	3.371	3.885
6	Citizens	On request	106	4.179	0.126	3.932	4.427
7	Citizens	Download	102	4.304	0.136	4.038	4.570
(c) Experiment 3—Klagenfurt street light defects							
1	(No information)	(No information)	99	2.970	0.158	2.661	3.279
2	Public	Not available	142	4.049	0.126	3.802	4.297
3	Public	On request	109	4.835	0.138	4.565	5.105
4	Public	Download	101	4.614	0.143	4.333	4.895
5	Citizens	Not available	122	3.623	0.138	3.353	3.893
6	Citizens	On request	87	4.356	0.156	4.051	4.662
7	Citizens	Download	116	4.259	0.142	3.981	4.537
(d) Experiment 4—Salzburg house rent prices							
1	(No information)	(No information)	114	2.632	0.133	2.372	2.891
2	Public	Not available	139	4.180	0.137	3.911	4.449
3	Public	On request	108	4.926	0.143	4.646	5.206
4	Public	Download	118	4.958	0.133	4.697	5.219
5	Citizens	Not available	92	3.946	0.153	3.645	4.246
6	Citizens	On request	124	3.492	0.145	3.208	3.776
7	Citizens	Download	105	4.219	0.135	3.954	4.484
(e) Experiment 5—Punctuality of German trains							
1	(No information)	(No information)	184	2.527	0.108	2.315	2.739
2	Not available	Public	209	3.493	0.120	3.258	3.728
3	Not available	Citizens	212	3.910	0.120	3.675	4.145
4	Not available	Third party	208	3.803	0.118	3.572	4.034
5	Download	Public	217	3.903	0.115	3.677	4.129
6	Download	Citizens	200	4.815	0.113	4.593	5.037
7	Download	Third party	207	4.502	0.114	4.278	4.727
(f) Experiment 6—Monthly student support in Germany							
1	(No information)	(No information)	148	3.581	0.122	3.343	3.820
2	Not available	Public	155	4.671	0.124	4.428	4.914
3	Not available	Citizens	158	4.563	0.109	4.350	4.777
4	Not available	Third party	186	4.215	0.129	3.962	4.468
5	Download	Public	179	5.453	0.095	5.267	5.638
6	Download	Citizens	172	4.965	0.103	4.763	5.168
7	Download	Third party	199	4.935	0.107	4.725	5.144

(Continues)

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TABLE 2 (Continued)

	Treatment: Source	Treatment: Available	*N*	Mean	SEM	CI-LB	CI-UB
(g) Experiment 7—Corona infection in Germany							
1	(No information)	(No information)	161	2.988	0.136	2.722	3.253
2	Not available	Public	175	5.069	0.120	4.833	5.304
3	Not available	Citizens	155	3.800	0.145	3.515	4.085
4	Not available	Third party	169	4.231	0.124	3.987	4.475
5	Download	Public	183	5.426	0.117	5.198	5.655
6	Download	Citizens	188	4.447	0.131	4.190	4.704
7	Download	Third party	183	4.639	0.110	4.424	4.855
(h) Experiment 8—Heat days in Berlin							
1	(No information)	(No information)	158	3.532	0.135	3.267	3.796
2	Not available	Public	156	4.968	0.121	4.730	5.206
3	Not available	Citizens	183	4.082	0.123	3.841	4.323
4	Not available	Third party	184	4.505	0.124	4.262	4.749
5	Download	Public	189	5.619	0.091	5.441	5.797
6	Download	Citizens	183	4.831	0.116	4.604	5.057
7	Download	Third party	190	4.926	0.107	4.717	5.135

Abbreviation: CI-LB/UB, 95% confidence interval lower-bound (LB) and upper-bound (UB).

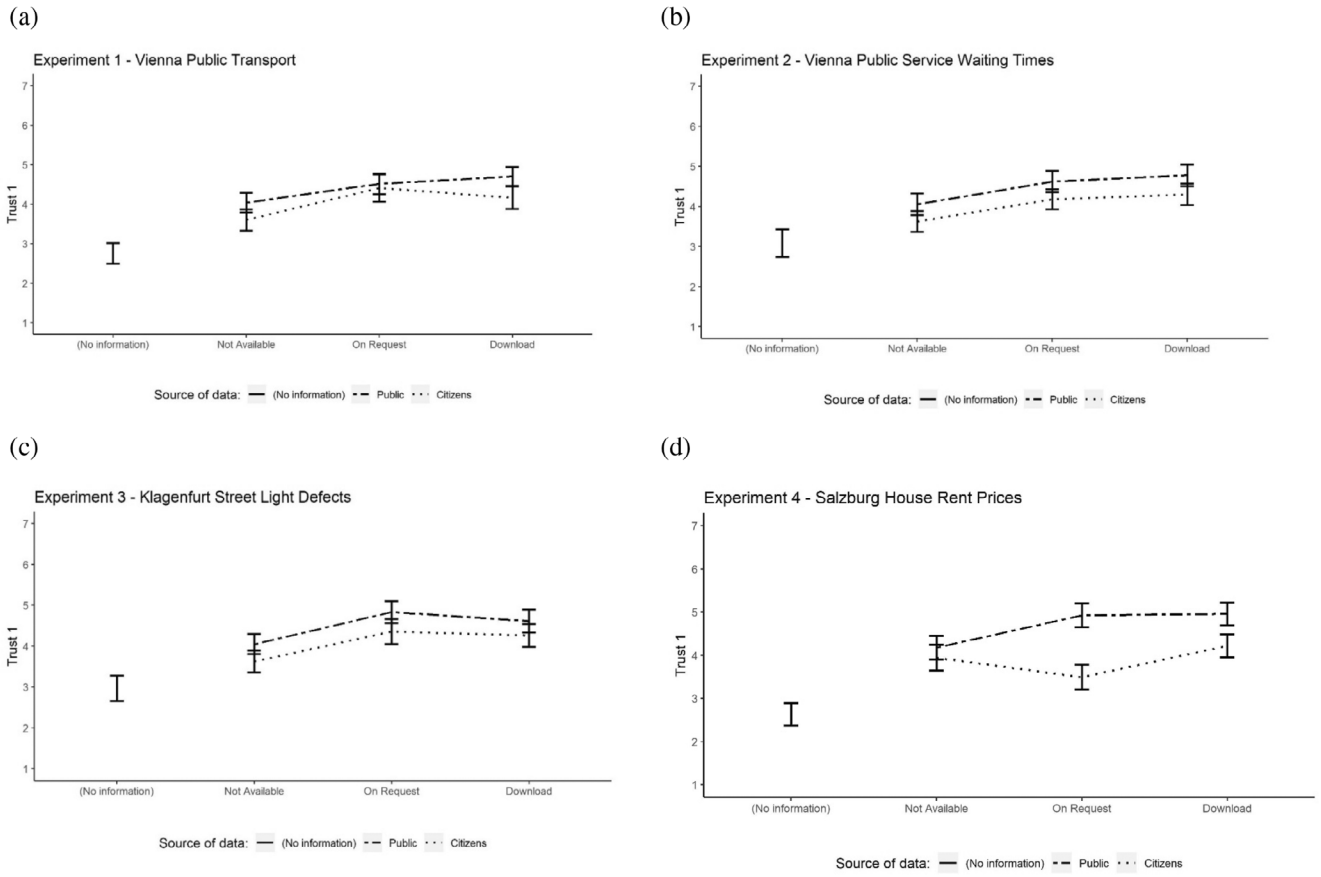


FIGURE 1 (a–h) The effect of data accessibility on trust in public performance information under different sources of data. (a) Vienna Public Transport. (b) Vienna Public Service Waiting Times. (c) Klagenfurt Street Light Defects. (d) Salzburg House Rent Prices. (e) Punctuality of German trains. (f) Monthly student support in Germany. (g) Corona infection in Germany. (h) Heat days in Berlin

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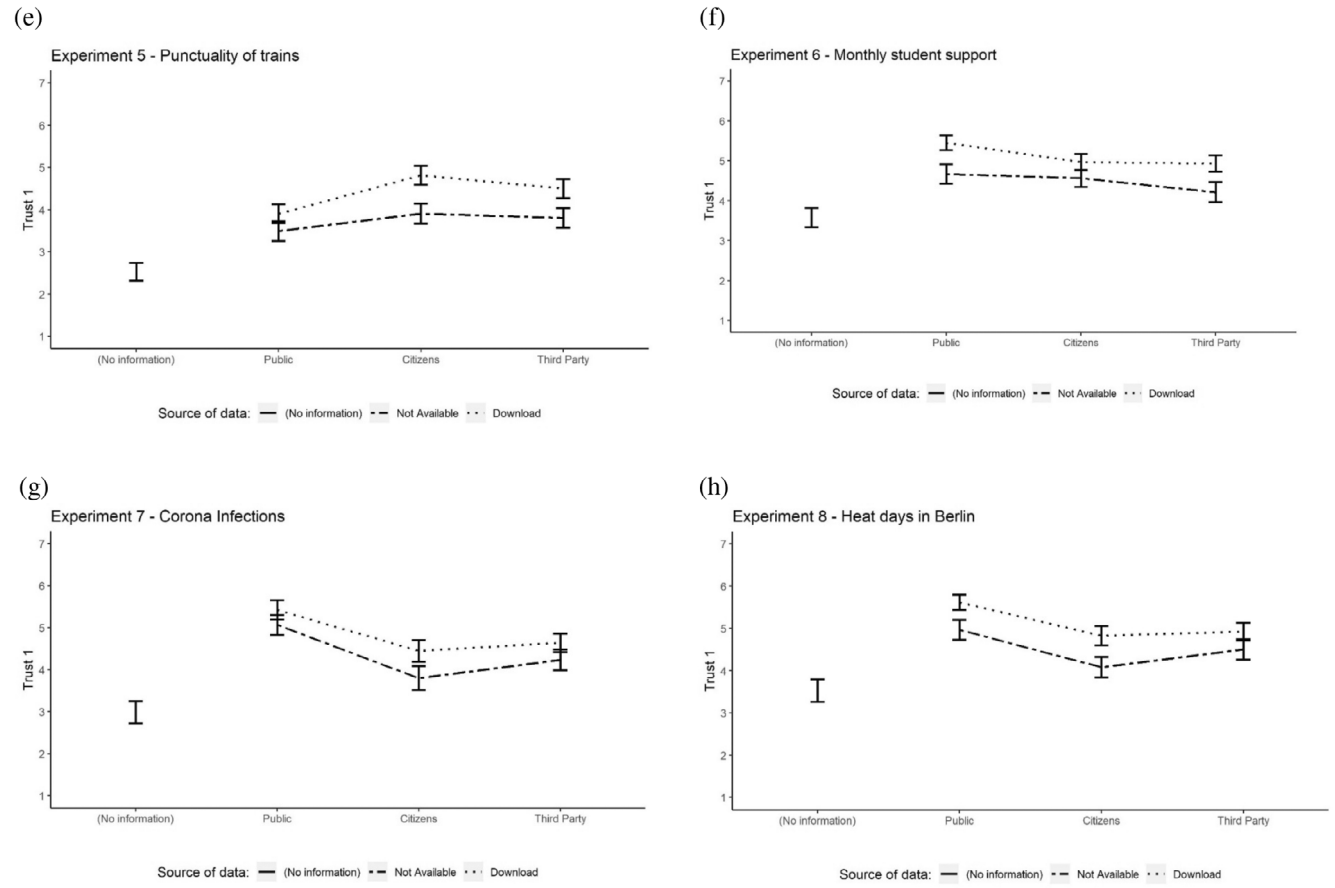


FIGURE 1 (Continued)

situation where no source is given (i.e., the passive control group, depicted in Figure 1a–h for each experiment as the 95% confidence interval on the left in each graph).

Tables 3 and 4 report the ordinary least squares (OLS) regressions for experiments 1–4 and experiments 5–8, respectively, for the sample without the passive control group, hence with the model specified according to the six-group experimental design. Results in Table 3 show data accessibility has a positive effect on citizen trust in public performance information. When data are available on request or directly downloadable, trust is significantly higher, compared to when data are not available. For "available on request," the estimates for the four experiments are, respectively, 0.47 ($p < .05$), 0.57 ($p < .01$), 0.79 ($p < .001$), and 0.75 ($p < .001$). For "available by download," the estimates for the four experiments are, respectively, 0.67 ($p < .001$), 0.72 ($p < .001$), 0.56 ($p < .01$), and 0.78 ($p < .001$). Hence, Hypothesis 1 is supported. However, as shown in Table 2a–d and Figure 1a–d, there are no significant and/or noteworthy differences between "available on request" and "available by download." For that reason, in experiments 5–8, only the difference between "not available" and "available by download" was tested again. Also for experiments 5–8, Hypothesis 1 is supported, based on the respective significant estimates: 0.41 ($p < .05$), 0.78 ($p < .001$), 0.36 ($p < .05$), and 0.65 ($p < .001$) (Table 4).

However, results for the source treatment only support Hypothesis 3 in one out of eight experiments, and only partially (H3a), as the estimate is only significant for citizens as source (Experiment 5; 0.42 for citizens; $p = .01$) and not for the third party. In most other experiments, trust in performance information from citizen initiatives is substantially more negative, which is the case in Experiment 1 (-0.44, $p < .05$), Experiment 2 (-0.43, $p < .05$), Experiment 3 (-0.43, $p < .05$), Experiment 7 (-1.27, $p < .001$), and Experiment 8 (-0.89, $p < .001$). Moreover, for Experiment 4, it is strongly negative in interaction with "data available on request" (interaction term: -1.20, $p < .001$), and it is not significant in Experiment 6. Hence, Hypothesis 3a is not supported. Moreover, the rather consistent negative effect of citizens as a source suggests that the principal-agent perspective (alone) is likely not suitable for explaining citizen trust in public information. Based on this interpretation from the results of experiments 1–4, the third party as a source was also tested in experiments 5–8, along with the role of source reputation.

However, third party as a source is not significant in Experiment 5, and it is significantly negative—in contrast

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TABLE 3 OLS results for experiments 1–4

Predictors	Experiment 1			Experiment 2			Experiment 3			Experiment 4		
	Estimates	CI	*p*	Estimates	CI	*p*	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	4.04	3.80 to 4.29	**<.001**	4.05	3.80 to 4.31	**<.001**	4.05	3.80 to 4.29	**<.001**	4.18	3.93 to 4.43	**<.001**
Treatment_Source [Publ. org] (Ref. cat.)												
Treatment_Source [Citizens]	−0.44	−0.80 to −0.09	**.015**	−0.43	−0.78 to −0.07	**.019**	−0.43	−0.79 to −0.07	**.02**	−0.23	−0.63 to 0.17	.25
Treatment_Available [Not available] (Ref. cat.)												
Treatment_Available [On Request]	0.47	0.11 to 0.84	**.011**	0.57	0.20 to 0.94	**.003**	0.79	0.41 to 1.16	**<.001**	0.75	0.36 to 1.13	**<.001**
Treatment_Available [Download]	0.67	0.31 to 1.02	**<.001**	0.72	0.36 to 1.08	**<.001**	0.56	0.18 to 0.94	**.004**	0.78	0.41 to 1.15	**<.001**
[Citizens] × [On Request]	0.33	−0.21 to 0.88	.227	−0.02	−0.55 to 0.51	.947	−0.05	−0.60 to 0.50	.853	−1.20	−1.76 to −0.64	**<.001**
[Citizens] × [Download]	−0.10	−0.62 to 0.42	.701	−0.05	−0.57 to 0.47	.857	0.07	−0.46 to 0.61	.795	−0.50	−1.07 to 0.06	.08
Observations	725			696			677			686		
R^2/R^2 adjusted	0.058/0.052			0.067/0.060			0.066/0.059			0.108/0.101		

Note: Experiments are done with sample selections of the six (2 × 3) treatment groups, removing cases in the passive control group. Bold *p* values indicate $p < 0.5$. Abbreviation: OLS, ordinary least squares.

to Hypothesis 3b—in Experiment 6 (−0.46, $p < .05$), Experiment 7 (−0.84, $p < .001$), and Experiment 8 (−0.46, $p < .001$). Hence, Hypothesis 3 remains not supported, meaning that a less asymmetric relationship compared to the relationship between public organizations (agent) and citizens (principal) does not increase trust in the performance information. In fact, our results strongly support the opposite claim. This requires further exploration, theorizing, and testing, mainly towards finding a valid alternative for the principal-agent theory to explain trust in public performance information.

For experiments 5–8, each time, a second model is reported including the respondent's reputation score of the particular source reported in the vignette. This means that we do not only look at the type of source—like citizens (principal), public organization (agent), or third party—but additionally include the prior reputation of that particular source for each respondent. In other words, when respondents saw a specific public sector organization as a source for performance data, their answer to the reputation question for that particular organization is the value for this independent variable. This way of operationalizing source reputation (as an exogenous variable, measured before vignettes were presented) means that the main effect estimate of this measure has to be interpreted as an additional effect of reputation, given the source that was presented. The main effect of this estimate tests Hypothesis 4. The combined interpretation of this reputation effect with the effects of the experimental treatments—and the change in *R*-square (adjusted) between the models—is valuable for testing Hypotheses 5a,b. The interaction terms of this reputation measure with the source treatment groups test Hypothesis 5c, focusing on whether the reputation of a data provider is differently relevant depending on the role of that provider in the principal-agent setting.

The main effects for the reputation measure are significant for Experiment 5 (0.64, $p < .001$), Experiment 6 (0.47, $p < .001$), and Experiment 7 (0.84, $p < .001$), lending support to Hypothesis 4, meaning that source reputation positively influences trust in the performance information of that source. The main effect is not significant in Experiment 8, but the interaction of reputation with a third party as a source is significant (interaction term: 0.46, $p < .001$). Reputation in the case of citizens for Experiment 5 is even negatively significant. Hence, there is only partial and contrasting support for Hypothesis 5c, which again suggests little value of the principal-agent theory in explaining citizen trust in public performance information. In other words, the reputation of a data provider is clearly more relevant for explaining trust in data rather than the principal-agent role the data provider has.

Moreover, the change in *R*-square for both models per experiment shows that reputation is a much better explanatory variable than the classification based on the role in the principal-agent setting. *R*-square (adjusted) values range between 0.061 and 0.088 in the basic model

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TABLE 4 OLS results for experiments 5–8

	Experiment 5			Experiment 6			Experiment 7			Experiment 8		
Predictors	**Estimates**	**CI**	***p***	**Estimates**	**CI**	***p***	**Estimates**	**CI**	***p***	**Estimates**	**CI**	***p***
(Intercept)	3.49	3.26 to 3.72	**<.001**	4.67	4.44 to 4.90	**<.001**	5.07	4.82 to 5.31	**<.001**	4.97	4.73 to 5.21	**<.001**
Treatment_Source [Publ. org.] (ref. cat.)												
Treatment_Source [Citizens]	0.42	0.09 to 0.74	**.01**	−0.11	−0.44 to 0.22	.52	−1.27	−1.63 to −0.91	**<.001**	−0.89	−1.21 to −0.56	**<.001**
Treatment_Source [Third Party]	0.31	−0.01 to 0.63	.06	−0.46	−0.77 to −0.14	**.01**	−0.84	−1.19 to −0.49	**<.001**	−0.46	−0.79 to −0.14	**.01**
Treatment_Available [Not available] (ref. cat.)												
Treatment_Available [Download]	0.41	0.09 to 0.73	**.01**	0.78	0.46 to 1.10	**<.001**	0.36	0.02 to 0.70	**.04**	0.65	0.33 to 0.98	**<.001**
[Citizens] × [Download]	0.49	0.04 to 0.95	**.04**	−0.38	−0.83 to 0.07	.10	0.29	−0.20 to 0.78	.25	0.10	−0.35 to 0.55	.67
[Third Party] × [Download]	0.29	−0.17 to 0.75	.22	−0.06	−0.50 to 0.37	.78	0.05	−0.43 to 0.54	.84	−0.23	−0.68 to 0.22	.32
Observations	1253			1049			1053			1085		
R^2/R^2 adjusted	0.065/0.061			0.065/0.061			0.092/0.088			0.088/0.084		
(Intercept)	3.7	3.47–3.92	**<.001**	4.45	4.21–4.70	**<.001**	4.33	4.07 to 4.59	**<.001**	4.94	4.70 to 5.17	**<.001**
Treatment_Source [Publ. org.] (ref. cat.)												
Treatment_Source [Citizens]	−0.12	−0.47 to 0.23	.50	0.13	−0.20 to 0.46	.44	−0.50	−0.84 to −0.15	**.01**	−0.90	−1.22 to −0.59	**<.001**
Treatment_Source [Third Party]	−0.21	−0.53 to 0.12	.22	−0.67	−1.01 to −0.33	**<.001**	-0.30	−0.64 to 0.04	.08	−0.84	−1.17 to −0.51	**<.001**
Treatment_Available [Not available] (ref. cat.)												
Treatment_Available [Download]	0.41	0.10 to 0.72	**.01**	0.83	0.52 to 1.15	**<.001**	0.39	0.05 to 0.73	**.02**	0.57	0.26 to 0.89	**<.001**
Reputation	0.64	0.49 to 0.80	**<.001**	0.47	0.28 to 0.65	**<.001**	0.84	0.68–0.99	**<.001**	0.12	−0.07 to 0.31	.22
[Citizens] × [Download]	0.52	0.04 to 0.99	**.03**	−0.47	−0.91 to −0.02	**.04**	0.29	−0.17 to 0.75	.22	0.25	−0.18 to 0.69	.25
[Third Party] × [Download]	0.34	−0.12 to 0.79	.15	−0.09	−0.53 to 0.34	.67	0.02	−0.42 to 0.46	.94	−0.23	−0.66 to 0.20	.29
[Citizens] × Reputation	−0.21	−0.43 to −0.00	**.05**	−0.11	−0.44 to 0.22	.52	−0.11	−0.30 to 0.07	.24	0.24	−0.06 to 0.53	.11
[Third Party] × Reputation	−0.08	−0.28 to 0.12	.41	−0.01	−0.22 to 0.19	.90	−0.19	−0.43 to 0.04	.11	0.46	0.26 to 0.67	**<.001**
[Download] × Reputation	−0.04	−0.21 to 0.13	.66	−0.03	−0.22 to 0.16	.78	−0.04	−0.20 to 0.13	.67	0.18	−0.01 to 0.37	.06
Observations	1253			1049			1053			1085		
R^2/R^2 adjusted	0.172/0.166			0.133/0.126			0.296/0.290			0.184/0.177		

Note: Experiments are done with sample selections of the six (2 × 3) treatment groups, removing cases in the passive control group. Bold *p* values indicate $p < 0.5$.
Abbreviation: OLS, ordinary least squares.

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specification, while in the models taking source reputation into account, *R*-square (adjusted) values range between 0.126 and 0.290. This, in combination with the insignificant or even opposing effects for the hypotheses formulated based on the principal-agent theory, suggests that reputation is rather a substitute variable to explain citizen trust (H5a supported) instead of a complementary variable (H5b not supported).

This is also confirmed in the integrated model in Data S1, with nested decisions within respondents. The marginal *R*-square—clarifying predictive power of the fixed effects in the model—is 0.078 for the model without reputation, while the marginal *R*-square in the full models including reputation (marginal *R*-square is 0.179) and interaction terms (marginal *R*-square is 0.180) is substantially higher. Moreover, in these multi-level models, the conditional *R*-square—clarifying the predictive power of the fixed and random effects in the model—is around 0.450, indicating that a substantial part of the observed variance is attributed to respondent-level rather than case-level variance. Hence, we can assume that—despite the very different settings in which we tested our hypotheses—that the results are robust and that individual reputation perception indeed matters in explaining citizen trust in performance information.

DISCUSSION AND AVENUES FOR FURTHER RESEARCH

Public administration research has been investigating the effects of increased government transparency on citizen trust (Grimmelikhuijsen et al., 2013; Ingrams, Kaufmann, & Jacobs, 2020; Kim & Lee, 2012) and how this relationship is influenced by contextual factors (Grimmelikhuijsen et al., 2021; James & Van Ryzin, 2017). This study contributes to this research stream by adding a new perspective. In more detail, this article examines the theoretical dynamics and contextual conditions that affect transparency outcomes. By emphasizing the information asymmetry between government and citizens, first, we examine "how" public performance information is shared by investigating the effect of data accessibility and source provision on citizens' trust in performance information. Second, shedding light on the principal-agency perspective and reputation literature, we focus on "who" is sharing this information.

Triggered by open government discussions (Moon, 2020; Schmidthuber et al., 2021), government organizations increasingly attach value to information provision and data-sharing practices. Whereas these organizational efforts to increase transparency are time-consuming, they are assumed to result in higher open data usage, including economic growth and innovation efforts, as well as improve citizens' attitudes towards the public sector (Ingrams, Piotrowski, & Berliner, 2020; Janssen et al., 2017; Mergel et al., 2018). These positive outcomes, however, might only become effective if citizens accord credibility to public performance information. In this section, we discuss the two main contributions of our findings. In addition, we provide recommendations for future research to validate and expand this study's results.

Organizational reputation instead of principal-agency dichotomy

Drawing on the classical principal-agent theory with its inherent information asymmetries, findings from multiple services and types of performance reports indicate that citizens trust the information provided by the government more than data provided by citizens or a third party. Whereas we argue that the information asymmetry between citizens and the government can be compensated by a symmetric information provision, this study draws a different picture. In contrast to previous research indicating that the credibility of performance information is not influenced by the data source (Van Ryzin & Lavena, 2013), we found that government sources are more trusted than sources from a third party. In addition, our findings indicate that citizen sources are less trusted than government sources. Accordingly, citizens seem to perceive information based on citizen-generated data as less reliable compared to government data and have some skepticism about citizen-generated data and information, even if raw data are available. Clearly, citizen-generated data are new types of data sources, whereas government data are the main data source of open government data (Meijer & Potjer, 2018; Sieber & Johnson, 2015). Besides, James and Van Ryzin (2017) argue that a lack of variation in credibility results might be explained by insufficiently knowing the sources. As individuals might not be familiar with these new types of sources, they might trust data from well-known organizations more, such as the city government. Accordingly, familiarity with an organization that is already known to be credible might create trust in its activities (Gulati, 1995). Additionally, this might also concern the information asymmetry, which might be not evident to citizens.

This reasoning is in line with the findings of Hypothesis 4 showing that the perceived reputation of the source matters in terms of trust in performance information. Apparently, citizens are more concerned about knowing and having good experiences with the reporting organization rather than the inherent asymmetry. This study contributes to research on the bureaucratic reputation theory by focusing on the effects of individuals' perception of organizational reputation with respect to different administrative contexts (Bustos, 2021). Following an actor-centric approach, findings indicate that the perceived reputation of the data-providing organization matters for building trust in performance information.

Open data as a catalyst for citizen trust

Findings indicate that the possibility to access raw data is sufficient for building/triggering positive attitudes

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towards the performance information. There seems to be no great difference in the minds of citizens regarding if they are able to download the data immediately or have to request data access first. Similar to data accessibility, information on the data source generally increases trust in public information. Some studies found no difference in individual perception of information between source provision and a lack of source information. For example, findings from Van Ryzin and Lavena (2013) indicate that individuals did not perceive information from a government or nonprofit organization source as more believable compared to when no source was mentioned. Also conducting survey experiments, Petersen (2020) compared information based on management-sourced data and information without a source, and there is no significant difference in terms of teachers' willingness to use the information. Contrary to this previous research, trust in performance information is significantly higher when information on the data source is available.

However, in terms of the type of data source, citizen-generated data are perceived as a low-trustworthy source compared to government data which is against our initial expectations. In fact, this could be troublesome, as the number of crowdsourcing and citizen science projects focusing on leveraging collective intelligence to broaden the knowledge base is increasing. Nevertheless, these initiatives might, thus, be hampered by less public trust, despite the goal of many of these projects to make the reporting relationship less asymmetric. Consequently, this result has important implications for the literature on citizen-generated data (Meijer & Potjer, 2018; Sieber & Johnson, 2015) and crowdsourcing research (Liu, 2017). Whereas (potential) contributors' trust in the crowdsourcing process has already been determined to be a significant factor for participation intention (Garcia Martinez, 2017), the role of platform operators' and external stakeholders' trust in the contributions of the online community has to be studied. Importantly, future research is recommended to explore why citizen-generated data are accorded lower credibility and to find appropriate measures to increase trust and awareness among citizens. One possible avenue for future research would be to test if credibility in citizen-generated data is dependent on the different dimensions of crowdsourcing initiatives such as sector, actors running the platform, type of data, the role of citizens, or sample size (Meijer & Potjer, 2018). Given the dominant role of reputation shown in our second set of experiments, the interaction with—or even the need to develop—a credible reputation could be further investigated to increase the impact of citizen data initiatives. Furthermore, the credibility of government data versus citizen-generated data could be investigated from a cultural perspective, as the effects of transparency have already been shown to be culturally dependent (Grimmelikhuijsen et al., 2013).

Limitations

The present analysis is not without limitations. Although the research design focuses on presenting government performance using a variety of public services and performance metrics, citizens might have more doubts regarding—or the government could more easily game or manipulate—certain areas of public service delivery. In addition, this study was performed in Austria and Germany, both parliamentary republics—founded on democratic principles and the separation of powers—and characterized by a comparatively high level of trust in the public system. To generate more general conclusions, future research is recommended to also consider other political and cultural contexts. Another interesting aspect would be to explore if there are differences in terms of trust in information and to question what comes first: trust in government or trust in information. Finally, whereas this study focuses on trust in the public performance statement, investigating the role of credibility of public information from a theoretical and empirical perspective in more detail is a pertinent research area.

CONCLUSION

In recent years, government transparency is not just equated with information disclosure, but also goes towards releasing raw data to provide citizens with the ability to monitor government performance. Discussions about government transparency are, thus, closely linked to releasing open and reusable data, and the characteristics of information provision.

In this article, we hypothesized that the accessibility of data and the disclosure of data sources are positively related to citizens' trust in public performance information. In other terms, we evaluate citizens' expectations in terms of public information provision and the perceived value of open data principles. We designed randomized survey experiments to test these hypotheses and found that information on data accessibility and source provision increases citizen trust in public information, compared to no information. Citizens attach high value to data accessibility in terms of being able to directly download or having the option to request data. Furthermore, findings indicate that citizens have more trust in information that is based on government internal data compared to citizen-generated data. However, the organizational reputation of the data source matters for building trust in performance information.

The effects that we identified are consistent with the assumption that the transparency-trust relationship is context-specific. This article contributes to this literature stream by highlighting the role of information presentation in shaping citizens' attitudes toward public information and performance. Our findings have important implications for open data research, crowdsourcing

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literature, and research on how to increase citizen trust. This study also provides several avenues for future research in terms of data accessibility, the credibility of citizen-generated data, and open data usage.

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