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RESEARCH ARTICLE

Transparency of local government financial statements: Analyzing citizens' perceptions

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Abstract

Worldwide, open data initiatives aim at making information publicly available and transparent. Increasingly, local governments (LGs) are publishing financial statements in order to inform citizens, in their function as both service recipients and resource providers, about the LGs' financial situation. However, it remains questionable as to whether LG financial statements are appropriate mechanisms of public accountability: it is debated, on the one hand, whether citizens are interested in accounting information, and on the other hand, if they are able to understand the information presented in financial statements. This study is the first of its kind applying the think aloud method to analyze citizens' perceptions of LGs' financial statements in a sample of 30 German citizens with diverse socio-demographic characteristics. The paper explores citizens' general interest in accounting information and their ability to extract basic financial information from these statements so that increased transparency can be assumed. This explorative study reveals that although citizens demand transparency and financial information, they find it challenging to understand financial statements. Citizens seem to be overwhelmed by the information and call for delegation of the tasks or simplified reporting formats.

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KEYWORDS

citizens, financial statements, local government, think aloud, transparency

1 | INTRODUCTION

Worldwide, open data initiatives of public sector organizations aim at making information publicly available and transparent (O'Leary, 2015). Thereby, an account is given to the general public (Bovens, Goodin, & Schillemans, 2014), whereas accountability is defined as "a relationship between an actor and a forum in which the actor is obliged to explain and justify his conduct, the forum can pose questions, pass judgment and the actor may face consequences" (Bovens, 2007, p. 452). The publication of (accrual-based) financial statements at different levels of government is one example of increasing public accountability (Stanley, Jennings, & Mack, 2008). But in spite of the New Public Management reforms and the transformation from cash accounting to accrual accounting, there remains an information gap between citizens and governments (Jordan, Yusuf, Mayer, & Mahar, 2016).

By focusing on the general public, the concept of public accountability is closely linked to "openness" or "transparency" (Bovens, Goodin, & Schillemans, 2014). But the publication of abundant information (openness) does not necessarily lead to transparency (Heald, 2006b). There is an ongoing debate about users of accounting information and suitable reporting formats of public sector accounting information, and citizens are an especially under-researched user group (van Helden & Reichard, 2019). It has been noted that citizens lack sufficient accounting knowledge and they are hence unable to understand LG financial accounting information (Eckersley, Ferry, & Zakaria, 2014; Hepworth, 2017; Yusuf, Jordan, Neill, & Hackbart, 2013), that transparency and accountability by citizens is not enhanced. This is alarming insofar as citizens, in their role as service recipients and resource providers, have been identified as primary users of General Purpose Financial Reporting (GPFR) in IPSASB's Conceptual Framework (IPSASB, 2013).

This research turns to the question of whether financial statements really can lead to more transparency perceived by citizens. To address this issue, this paper mobilizes agency theory and the Biondi and Lapsley (2014) framework which involves three levels of transparency. According to Heald (2006b), there is a "transparency illusion" (Heald, 2006b), that is, a dichotomy between nominal and effective transparency. Although nominal transparency increases by just publishing more accounting data, effective transparency requires that the public is capable of "processing, digesting, and using the information" (Heald, 2006b, p. 35). This research aims to contribute to the understanding of the information published in public sector financial statements by examining (1) the specific citizens' interest in accounting information and (2) the ability of citizens to extract basic financial information.

This paper focuses on citizens and financial statements at the local government (LG) level, since the local level is of the most direct concern for citizens. The research is conducted in Germany, since as both researchers are based in Germany, in a region where accrual-based municipal financial reporting is mandatory and alternative financial reporting is non-existent, as is the case in many other countries. The local level of public administration in Germany contains around 11,000 LGs. In general, they are self-governing, but the legal framework of the budgeting and accounting system is set by one of the 16 federal states in which the LGs are located. For many decades, a form of cash-based budgeting and accounting, called "cameral" accounting, was used throughout the German governmental sector. In 1998, a reform of the budgeting and accounting system for the local level was initiated, which was passed in 2000 and authorized to varying degrees by each state until 2004, which still persists. Between the federal states, accounting rules partly differ for specific balance sheet transactions at the municipal level, but the composition of the financial statements is identical. Other, more simplified reports (such as popular reports) are neither mandatory nor widespread in Germany. This makes Germany a relevant country for studying LGs' financial statements.

An explorative multimethod approach is applied, including a qualitative research method not commonly used in accounting research: the think aloud method. It is a technique for analyzing the information processing of

individuals by making subjects verbalize their thoughts on a specific task or problem (Ericsson & Simon, 1998; Konrad, 2010). Thereby, citizens were provided with original, but anonymized and shortened, LG financial statements and were asked to find three different types of basic financial information. The study of a sample of 30 German citizens with diverse socio-demographic characteristics contains the full think aloud method: introductory interviews, the think aloud procedure itself, and retrospective interviews.

We aim to contribute to gaps in public sector accounting research literature in several ways. First, we provide insights into citizens' interests regarding the financial accounting information of their LGs. Second, we reveal to what extent citizens are able to extract basic financial information from LG financial statements. Thereby, we use the think aloud technique, which has—to the best of the authors' knowledge—not yet been used in this context before. This study adds to the discussion of a suitable financial reporting format for citizens (Aversano & Christiaens, 2014; Daniels & Daniels, 1991; Robbins, 1984).

In the next section, the relevant literature is reviewed and three research questions (RQs) are developed. In Section 3, financial statements are modeled from an agency theory perspective as one information system in the public sector. In addition, the Biondi and Lapsley (2014) framework of transparency is explained. This is followed by outlining the research methods. In Section 5, the analysis and findings are set out, followed by a discussion and conclusion in the final Section 6.

2 | LITERATURE REVIEW AND RESEARCH QUESTIONS

Jones (1992) claims that public sector accounting is likely to be a matter for government officials. A benefit of the information disclosed might occur, if any pressure group (e.g., NGOs, action groups) can take advantage of it. In other cases “the public has no interest” (Jones, 1992, p. 262). This view extended so far that in his study, Christensen (2002) even suggested removing the “general public” from Lüder's (1992) public sector reform model. Challenging this view, Brusca and Montesinos (2006, p. 209) show that budgetary and financial ratios published by Spanish LGs can influence electoral votes and argue that citizens are “important users of LG financial reporting even when that reporting is not produced with them in mind.” Lapsley (1992) suggests that a more simplified form of financial reporting is required for the general public. In the same notion, the Governmental Accounting Standards Board (GASB) in the United States concludes that citizens are a “group of low-involvement consumers of financial information” and recommends presenting only “relevant information” in an understandable manner (GASB, 1992, p. 32). Hence, US LGs were encouraged to publish simplified reports, the so-called popular reports (GASB, 1992). This move has gained traction in the US (Manes-Rossi, Aversano, & Tartaglia Polcini, 2020) and popular financial reporting is also increasingly applied in European countries (Biancone, Secinaro, & Brescia, 2016; Cohen & Karatzimas, 2015). Citizens value the information provided in popular reports in different reporting formats, but especially in a web format (Cohen, Mamakou, & Karatzimas, 2017). But by no means can the popular financial report be perceived as a neutral accountability tool (Bracci, Biondi, & Kastberg, 2021), since the different preparer groups involved (e.g., finance aldermen, mayors, public officials) have diverging objectives and thus have an influence on the content of the reports and its perception by stakeholders.

Although LG financial statements are not the ultimate means of accountability toward citizens, they are compiled in a comparable and uniform manner according to the respective accounting law. We therefore focus on LG financial statements, since these are obligatorily published by many LGs across the globe, whereas popular financial reports are still evolving and mainly less easily comparable. The research gap to be explored by this article is whether financial statements really can lead to more transparency perceived by citizens, especially by investigating to what extent they are able to understand basic information provided in LG financial statements. This issue has been addressed in previous research already (e.g., Brusca and Montesinos, 2006; Jordan et al. 2016; Langella et al. 2021), but so far not by confronting citizens with the full set of financial statements and by actually letting them go through and read the information. Thereby, this paper uses the think aloud method, a qualitative research method that has to our understanding not yet been used in public sector accounting research.

The laying open of new information by governments does not necessarily lead to increased access by citizens (Holsen & Pasquier, 2012). In the public accountability model, the information demand of citizens refers to information “that is suitable to uses in political mobilization and oversight, and is linked with issues of importance or interest to the population at large” (Berliner, Bagozzi, & Palmer-Rubin, 2018, p. 223). There must be any interest at all in the information so that the timing of the introduction of transparency is of relevance (Heald, 2006b) to even allow for entering the next level of transparency (the understanding; explained in Section 3.2). The demand for information is an integral feature of responsiveness, that is, unidirectional reaction to citizens’ demands, but government officials and politicians are uncertain in satisfying a vague public will (Vigoda, 2002). Research into citizen participation and especially participatory budgeting showed that citizens predominately only seem to be interested in topics that directly relate to their individual living conditions and hence are driven by self-interest (Haselswerdt, 2020). Besides self-interest, further studies also address sociotropic (i.e., community) concerns as drivers of citizens’ interest (van der Does & Kantorowicz, 2021). Since financial statements provide a rather general view of the LGs’ financial conditions, we follow Jordan et al.’s (2016) argument to identify the information demand:

(RQ 1) What type of accounting information of their LG are citizens interested in?

For public transparency initiatives a prerequisite is “simple enough in its essentials that citizens can readily understand how and what it [the government] is doing” (Dahl, 1998, p. 126). Even if citizens show interest in financial statements, doubts remain regarding their ability to process this information (Ferry & Eckersley, 2015; Hepworth, 2017; Yusuf et al., 2013). Information that is (too) detailed can create frustration and disappointment, and as a result diminish perceived legitimacy (da Cruz et al., 2016). In the extreme, even improved accounting information can resolve in uncertainty of citizens as these are not familiar with ‘professional mystiques’ (Heald, 2006a).

Langella et al. (2021) show that content clarification in terms of a glossary of accounting terms and graphical and visual representations in financial reports lead to an improved objective and subjective understanding by citizens. However, the combined effect of both was statistically unclear, presumably since it increases complexity. Since only questions regarding the statement of revenue and expenses of financial reports were analyzed in a student sample, Langella et al. (2021) call for the analysis of actual behaviors of citizen readers. Thus, we turn to citizens’ information processing capabilities regarding financial statements.

(RQ 2) How do citizens handle LG financial statements when asked to extract basic financial information?

The ability of citizens to extract financial data does not necessarily mean that any citizen also understands all the information. The access to raw data, here the financial statements (compared with popular reports), is crucial for finding clues about anything that might be wrong and to work as a “fire alarm.” The fire alarm metaphor (Meijer, 2014) means that some citizens or pressure groups contribute to holding governments to account by publicly warning the accountability forum (i.e., all citizens) when there is an indication of misconduct (Fox, 2007). A readability analysis of Lutz, Marsh, and Montondon (2011) showed that for the Management’s Discussion and Analysis (the summary portion of the governmental annual report), the average US citizen would not be able to read and comprehend the data. Hence, they call for the analysis of certain citizen groups. Thus, we aim to find out whether citizens could come into question in regard to strengthening accountability:

(RQ 3) To what extent are citizens able to extract basic financial information from LG financial statements?

3 | THEORETICAL FRAMING

3.1 | An agency theory perspective on the role of financial statements

Agency theory (also known as principal-agent theory) describes strategic interactions between at least two parties (i.e., the principal and the agent). Both are linked in a contractual relationship, in which the principal delegates a task to the agent by specifying desired outcomes. The agent acts on behalf of the principal by choosing their own actions, but thereby pursues self-interests (Eisenhardt, 1989; Jensen & Meckling, 1976). A range of problems can result: there

might be differences in the goals and also in the level of information between two parties (Eisenhardt, 1989). Hence, the agent might take different actions than needed to achieve the principal's outcomes. But the principal is unable to fully monitor these actions (moral hazard), or the principal may choose the wrong agent because the agent's skills or characteristics are actually different than initially claimed by the agent (adverse selection) (Eisenhardt, 1989).

Naturally, the agent will have more information about his/her own actions and characteristics, so that information asymmetries occur between the contractual parties. This leads to agency costs occurring from the contract, including (1) monitoring costs for the principal to ensure the agent acts as desired, (2) bonding costs for the agent to guarantee that no actions will be taken to harm the principal or to compensate in case this happens, and (3) a residual loss in terms of a divergence between the decisions of the agent and those which would have led to the principal's maximum welfare (Jensen & Meckling, 1976).

The assumptions of the agency problem are particularly applicable to the context of public sector accountability in which citizens can be modeled as (ultimate) principals with the government acting as agent on behalf of the citizens (Greiling & Spraul, 2010). One of the measures for reducing information asymmetries is the implementation of information systems by the principal to monitor the agent's behavior so that the likelihood of the agent acting in the interest of the principal is increased (Fama, 1980). Financial statements represent one of these information systems. However, complex accountability mechanisms apply in the public sector since there are (at least) three actors and thus more than one accountability level: citizens, governments and the administration (Gailmard, 2014). Thereby, we focus on institutional instead of individual accountability (Fox, 2007) and the relationship between government and citizens. Financial statements have not been directly implemented as a result of the citizens' will, but rather as an initiative of governments to monitor the administration. As such, their suitability for citizens has been questioned. In the public sector in particular, accounting can only offer an incomplete picture of the agent's actions since the definition and measurement of outputs is difficult (Kure, Nørreklit, & Røge, 2021) due to the great complexity, high scope of discretion, and peculiarities of public services (Kaplan, 2001; van de Walle, 2008).

It has been recommended that users and user needs be analyzed before reporting and that narrative and nonfinancial information be considered as well (Lapsley, 1992). Citizens are named as one main group of addressees of GPF (GASB, 1987; IPSASB, 2013) and indeed the highest importance of financial accrual information is seen in accountability and transparency to the public since it serves an important social political role to "influence perceptions of citizens and employees regarding the municipality's financial health" (Kobayashi, Yamamoto, & Ishikawa, 2016, p. 159). As such, financial statements could serve to reduce the citizens' (i.e., principals') monitoring costs in assessing whether the agent acted in the best interest of the municipality's financial wellbeing. Following the assumptions of agency theory, the government would have an incentive to provide an inadequate level of information, that is, either an information overload or a reluctance to disclose information, to obscure the actual financial situation of the municipality (Greiling & Spraul, 2010). For example, important mandatory information is hidden in a large amount of voluntary information or relevant voluntary information is not provided. Hence, creating transparency is central to reducing agency costs and thus to enabling accountability. Still, there is danger in believing in the perfection of transparency (Roberts, 2009) and publishing data purely for its own sake (Eckersley et al., 2014).

3.2 | Levels of transparency

Of the various definitions of transparency (Ball, 2009; Heald, 2006a, 2006b), it is applied here as a procedural construct, that is, a mechanism of accountability (Ball, 2009). Transparency is a precondition for public accountability (da Cruz, Tavares, Marques, Jorge, & Sousa, 2016). In their discussion of accounting for heritage assets, Biondi and Lapsley (2014) model transparency as represented by three different levels. It is presumed that transparency is achieved when (quoted from Biondi & Lapsley, 2014, p. 150, with further references):

level 1 "access to information is provided";

level 2 “there is a genuine level of *understanding* of the phenomenon disclosed”;

level 3 “where a sophisticated level of understanding, which extends to *shared meanings*, is held by potentially interested parties in the phenomenon disclosed.”

The difference between the first level and the second and third levels can be interpreted as what Heald (2006b, p. 35) describes as the “transparency illusion,” that is, a dichotomy between nominal and effective transparency. Although nominal transparency increases through the publication of financial statements (i.e., level 1), effective transparency would require that the public is capable of “processing, digesting, and using the information” (Heald, 2006b, p. 35) (i.e., levels 2 and 3). So far, level 1 transparency has been discussed in research with respect to accounting for heritage assets, showing that its mixed approach to accounting is insufficient to achieve level 1 (Biondi & Lapsley, 2014). All three levels have been explored with regard to budgeting, in the form of government budgeting and internal transparency toward politicians (Lapsley & Ríos, 2015) and participatory budgeting as a mediating instrument between governments and citizens (Brun-Martos & Lapsley, 2017). This study uses the three-level model to analyze financial statements as tools for public accountability.

Accountability contains three phases: information, debating, and consequences/sanction (Mulgan, 2003). With regard to financial statements, the levels of transparency can be matched to these phases: in the information phase, the agent provides reports about his/her conduct and the principal has access (level 1 transparency). The monitoring costs of the principal can only be reduced if the principal can understand the information provided (level 2 transparency). To our understanding, this represents the transition from the information phase to the debating phase of accountability and represents a prerequisite to enter the latter. Engagement of the principal in consultations and discussions about the LG’s financial health (debating) would then reflect sophisticated understanding and shared meanings between the parties (level 3 transparency). There is a need for an “intelligent” accountability, where citizens are (made) able to question and discuss published data with the persons in charge (Roberts, 2009), allowing an initial step into dialogic instead of monologic accounting (Lorson & Hausteин, 2020). Consequences or sanctions could then follow. The model is shown in Figure 1.

Level 1 transparency is provided by publishing the financial statements. Central to our study is entering the level 2 of transparency of the Biondi and Lapsley (2014) framework: since there are so many doubts in research about whether citizens even care (Jones, 1992; Lapsley, 1992) or are able to understand the information (Eckersley et al., 2014), for us it represents the hurdle to accessing the further phases of accountability. A reduction of the principal’s monitoring costs is possible only if there is some extent of understanding. Given the propositions of citizens’ low interest in public sector accounting information, it is outside the scope of this study to determine whether the third level of transparency is being achieved by publishing the financial statements. We therefore address, as highlighted in the dotted square, the move from level 1 to 2 within three RQs by analyzing (1) information interest, (2) how citizens handle the financial statements when given a specific task, and (3) their ability to extract basic financial information.

4 | RESEARCH METHODS AND SAMPLE COMPOSITION

4.1 | Sample composition

The city of Rostock was selected as the site for the study, since when the study was conducted in June 2016, the city was legally obliged but not yet ready to present its financial statements. This way, the inhabitants invited to this study were not influenced by seeing any previous financial statements of the city before. In 2016, Rostock had 204,000 inhabitants and thus was one of the larger municipalities in Germany and the largest city and economic center of the federal state Mecklenburg-Western Pomerania. For setting up the sample, we aimed to, at least approximately, have a cross-section of Rostock’s inhabitants. The choice of subjects was closely connected to the assumption that, as ultimate addressees of LG financial statements, any citizen is a potential reader and user of LG financial statements. The

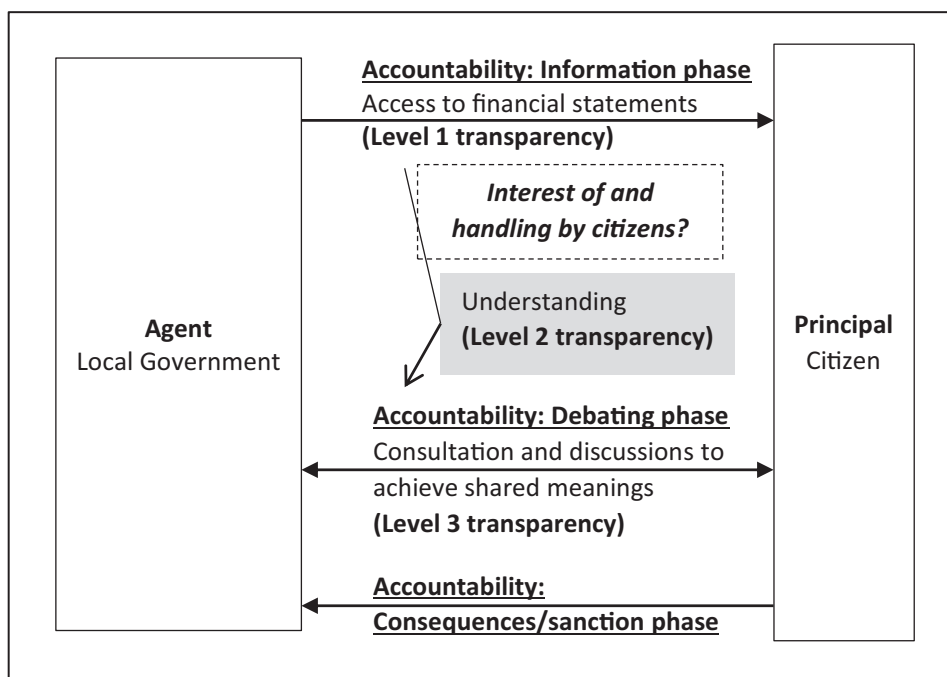


FIGURE 1 Levels of transparency linked to accountability phases

following individual characteristics of citizens were considered for setting up the sample, since these were identified as important determinants in the financial literacy literature (Lusardi & Mitchell, 2011): age, gender, income, and level of education. These socio-demographic characteristics were used for judgmental sampling (Babbie, 2010). Thereby, the respondents' occupational status served as a proxy. These proxies also considered the composition of Rostock's inhabitants by distinguishing six groups with five citizens in each group (i.e., 30 participants):

- Group 1: employees (university graduates),
- Group 2: employees (others),
- Group 3: unemployed persons,
- Group 4: pensioners,
- Group 5: pupils and students (minimum age 16¹),
- Group 6: self-employed persons.

For every group, each respondent was selected from each of the five voting districts in Rostock, as these reflect different living areas, to ensure a range of social backgrounds. A further requirement was for at least two persons in each group to be male and female, respectively. These groups allowed for approximately considering the above-mentioned socio-demographic characteristics. Anonymity and the use of the data for the research project only were assured. Research data are therefore not shared. Table 1 shows the composition of the sample.

In the sample, there is a bias toward young, male and highly qualified interviewees,² who predominantly perceive themselves as familiar with financial statements. There might be some self-selection bias, that is, only those persons who agreed to contribute to an accounting-related study were those who also have some accounting knowledge. This bias will be considered in the analysis and discussion of the interviews. The following code is used: R(espondent)Group_Number (e.g., R1_1).

TABLE 1 Sample description (N = 30)

Gender	Male: 20	Female: 10
Age	Range: 22–82 years, Average: 38 years	
Education	At least qualification for university entrance	87%
Individual monthly pretax income	Between 1000€ and 3000€	53%
Self-rating	Familiar with accounting	77%
	Read financial statements before	63%
	Active interest in LG's press articles	43%

4.2 | Research methods

Our study contained four consecutive elements commonly applied in think aloud studies. The actual think aloud method is surrounded by other ways of data collection for interpretation of the data:

1. introductory interview,
2. think aloud method when presenting a set of LG financial statements,
3. retrospective interview,
4. short questionnaire.

Although step 1 has a primary focus on RQ 1, steps 1–3 are used for analyzing RQs 2 and 3. Step 4 was added as a way to collect the characteristics of respondents and to recheck the group compositions.

1) Introductory interview

An open interview format with four main questions served as “warm-up” allowed for asking in more detail when something especially interesting was revealed. We interviewed the citizens regarding their (1) expectations and (2) experiences with their LG and administration. In addition, it was asked (3) what information citizens would like to obtain, how it would be used, and what needs to be checked, and (4) what are the expectations toward LG information.

2) Think aloud method

Addressing RQs 2 and 3, the think aloud method was implemented. To investigate the handling of financial statements, it is necessary to gain insights into the citizens' thought processes when being confronted with these statements. A common technique to get these insights is the “think aloud” method (Ericsson & Simon, 1999; Konrad, 2010). This method makes subjects verbalize their thoughts on a specific task or problem. It allows the researcher to understand the methods of problem solving, when the subject is verbalizing and thinking concurrently (Ericsson & Simon, 1999). To perform this method, it is necessary to instruct the subjects to “think aloud” without interpreting or explaining their thoughts because this could change the methods of problem solving (Ericsson & Simon, 1999). The subjects should “simply verbalize the information they attend to while generating the answer” (Ericsson & Simon, 1999). Though there is an ongoing discussion on the validity issues of think aloud protocols (Konrad, 2010), Ericsson and Simon (1998) and Durning (2013) showed that the method and result of problem solving does not differ between subjects who think aloud and those who do not. However, Konrad (2010) suggests triangulating different methods to

get a holistic view of a problem. Therefore, we decided to add a prospective and a retrospective interview surrounding the think aloud tasks.

In our research, citizens dealt with original (anonymized) financial statements of a German city (240,000 inhabitants) that was not the city of Rostock in which the study was conducted. Comparability was assessed by a comparable size, a location at the sea, a similar economic relevance, history, and traditions. Since Rostock was not yet ready to publish own financial statements at that date, documents of an anonymized comparable city (inter alia also located at the Baltic Sea) were provided and the respondents were informed about this. This way, citizens were not influenced by their perception of the city of Rostock when making their analysis.

The financial statements were original, except for the elimination of the management commentary,³ detailed information on partial budgetary accounts and the audit opinion (in total around 200 pages). Thus, the sample set of financial statements, composed of the statement of financial position (balance sheet), the statement of financial performance, the cash flow statement, and nearly all the notes, consisted of 64 pages. In order to reveal whether citizens are able to extract basic financial information from the LG financial statements, they had to solve the following tasks:

- a. Please describe the composition of assets as accurately as possible.
- b. Please search for facts and figures which show how the municipality is financed.
- c. Please search for facts and figures which tell you whether and whereby the municipality makes profit or loss.

Respondents were given a maximum of 10 min to go through the financial statements per task. This time restriction is recommended in the think aloud literature (e.g., Fleck & Weisberg, 2004), in order to not strain the respondents' information-processing capabilities. Before starting the survey, to make sure all subjects understood the think aloud technique, they were asked to solve a mathematical task mentally (Ericsson & Simon, 1999) and verbalize how they proceeded.⁴ Afterward, they were instructed to solve the three tasks and were motivated to verbalize their thoughts, whenever they forgot to do so.

3) Retrospective interview

This is an additional tool recommended in think aloud research (Konrad, 2010). Subjects are asked how they perceived handling the tasks in order to triangulate the think aloud survey results and to give the subject an opportunity to reflect on their actions and expressions. If applicable, the subjects are also confronted with specific observations made during task completion, for instance, by being asked for specific activities or expressions (e.g., breaking up task responses or exclamations of interest or overload).

4) Short questionnaire

In analyzing transparency initiatives, according to Heald (2006a), the "habitat of transparency" is of particular importance. This also encompasses specific information regarding the respondents. Therefore, a one-page questionnaire was presented to collect data about demographics (e.g., age, gender, income level, education), the level of financial literacy, self-perception of having knowledge of accounting and active interest in municipal activities.

Each of the study's steps was conducted by two persons in a location preferred by the interviewee (for instance, the premises of the interviewer or interviewee, or a public place like a coffee shop). One person was in charge of interviewing and the other for taking observations and notes. The interviewers were trained ahead of time in order to diminish potential interviewer bias. The interviews were recorded and transcribed based on the transcription rules of Kuckartz (2014). The analysis of the 190-page interview protocol was undertaken based on rules of the qualitative content analysis of Mayring (2014), which is a strictly rule-guided procedure containing a qualitative analysis (by assigning categories to text passages) complemented by quantitative steps (e.g., analysis of category frequencies) by using the software QCAmap.

5 | ANALYSIS AND FINDINGS

5.1 | RQ 1: Citizens' interest in LG accounting information

One of the main expectations stated initially by citizens regarding municipal information was transparency, in order to be able to contribute to public life:

"If one wants to involve the citizens in shaping life here in the city, then - and this request comes again and again - you also provide proper information." (R4_4)

Citizens appreciate the fact that LGs publish financial statements because municipal actions become more transparent. Citizens would like to receive information in the form of a general financial overview and details about how money is used by their municipal administration. In addition, there is also a need for nonfinancial information such as that about actions taken by and strategies of the LG:

"Much greater transparency, so ... how a municipality handles the funds. This means on the one hand really the numbers. But on the other hand also what has been achieved with the money and what the municipality is concentrating on and where the problems are and what measures they are taking as well." (R1_2)

"Well, general information about what the municipality stands for. So what they want to achieve, who is perhaps behind it. (R5_2)"

The introductory interviews were analyzed through an inductive qualitative content analysis by looking for "emerging themes." Table 2 contains the three main themes with further subthemes and exemplary meaning units. Overall, 90 phrases were coded (with multiple coding per respondent possible) and the table only shows the number of respondents being counted for the category. The coding was done independently by two researchers and cross-checked.

Predominantly, citizens would like to receive financial accounting information regarding the LG. Citizens are particularly interested in how the LG's funds are spent (i.e., budgetary issues) and whether resources are handled carefully and are spent reasonably and conscientiously. In addition, for citizens in their role as taxpayers, it is of importance to know what the sources of finance are.

In addition, citizens expect general information on their LG, such as information about service delivery, public order, and security. Few persons require general insights into the economic situation of their LG. Third, there is a demand for information on municipal activities, particularly completed or ongoing projects or with respect to individual living conditions of each respondent, such as education, childcare, and recreational activities.

With respect to RQ 1, overall, a moderate demand for several themes of LG information was detected in the data, so that it seems that citizens do not perceive a strong role as an accountability forum. However, the highest information demand was claimed for the allocation of resources, which refers to budgetary reporting but also to financial reporting to some extent. The call for a general financial overview is rather small.

5.2 | RQ 2: Citizens' handling of the financial statements

RQ 2, regarding the respondents' ability to extract basic financial information, was distinguished between three different tasks to be solved during the think aloud survey: asset composition (2a), sources of finance (2b), and profit or loss

TABLE 2 Themes of citizens' interest (RQ 1)

Theme	Subtheme	No. of respondents interested in the subtheme (% of all respondents)	Exemplary meaning units
General information	General overview on municipality	11 (37%)	Authority matters Recreational activities Persons in the LG/ authority
	General financial overview	5 (17%)	General economic situation Financial comparison with others
	Personnel policy	1 (3%)	Recruitment processes
Financial information	Allocation of resources	19 (63%)	Use of money/taxes Distribution of funds
	Efficiency	6 (20%)	Comparison of costs and benefits Cost-output relation Responsible use of funds
	Outcomes	4 (13%)	Achievements with given funds
	Source of funds	6 (20%)	Lenders/funders Source of taxes
	Implementation of decisions, municipal projects	6 (20%)	New projects Realization of decisions
Information on municipal activities	Individual services	3 (10%)	Waste disposal Municipal funds for own sports club
	Social services	6 (20%)	Kindergartens School services Activities for refugees
	Control/accountability	1 (3%)	Monitoring mechanisms and audits

occurred in the reporting period (2c). The analysis was conducted based on a deductive qualitative content analysis, by distinguishing whether the respondents answered correct, incorrect, or were uncertain. The correct answers were the following: task 2a aimed at a description of the asset side of the balance sheet. Task 2b could either be answered correctly by referring to the liabilities side of the balance sheet or cash inflows of the cash flow statement, since in the German language, the wording "finance" can synonymously refer to both, that is, equity versus debt financing or cash inflows. The deficit (task 2c) was shown in both, the balance sheet's equity position or the statement of financial performance.

Answers were assigned to be incorrect if the answer did not contain phrases from the above stated correct answers. Some respondents answered inconclusively, and a final, unanimous answer was not provided. These answers were assigned to be "uncertain." Results are shown in Table 3.

We now turn specifically to how the citizens dealt with the financial statements. With respect to task 2a, most respondents were able to provide a description. A main reason for the easy handling of this task was basically that the term "assets" can be directly found in either the table of contents or the asset side of the balance sheet. Few respondents added that they found such an overview of assets to be very interesting. However, although respondents managed this task successfully, some respondents did not have a clear idea of the term asset. As an exception, R5_2 even recognizes one peculiarity in the notes concerning the assets of schools. Due to restricted capacities during the initial inventory of all assets, only assets in the administrative offices but not in the classrooms (tables, chairs, blackboards, etc.) had been inventoried so far. When reading this in the notes, R5_2 states: "That is, everything is misrepresented concerning schools. This is quite interesting."

TABLE 3 Analysis of think aloud tasks (RQ 2)

Task	Category		Respondents	% of respondents
2a Asset composition	Correct		23	77%
	Incorrect		1	20%
	Uncertain		6	3%
2b Sources of finance	Correct	Total	19	64%
		Liabilities	5	
		Cash inflows	13	
		Both	1	
	Incorrect		7	23%
	Uncertain		4	13%
2c Profit or loss	Correct		11	36%
	Incorrect		17	57%
	Uncertain		2	7%
Total	Correct		53	59%
	Incorrect		25	28%
	Uncertain		12	13%

When describing the sources of finance, the majority of respondents focused on the cash flow statement. This might be due to the German public sector accounting term “Finanzrechnung” (literally in English “finance calculation”) that is used for the cash flow statement in private sector accounting and therefore directed respondents to that overview in the table of contents. Most respondents then answered the question explaining where cash inflows come from (i.e., taxes or allocation of funds from the federal state) and where cash outflows appear. Only one respondent referred to both possibilities when answering this question.

Most respondents were not able to solve task 2c, about whether the LG reported profits or losses. Respondents tried to extract the terms from the table of contents, but were not able to find either of the terms profit or loss. The reason for this fact is the renaming of the term “profit and loss statement” in the German private sector into “earnings statement”⁵ for the German public sector. Respondent R1_1 stated that they found this renaming odd: “This would be a case in which I would search for the profit and loss statement. What’s another term for profit and loss statement?” Thus, most respondents could not find the term and were not able to provide an answer. Only few citizens with some knowledge about financial accounting found the information. Hence, if aiming for the transparency and comprehensibility of financial data for citizens, one would expect terms to be known by citizens, such as the terms that have some tradition in private sector financial statements. Only very few respondents got into details of the different terms used. For example, respondent R5_5, one of the few knowledgeable persons, questions whether the term “equity” is appropriate in the public sector and whether figures such as the equity ratio or annual deficit can be interpreted as analogous to those of private companies. When searching for profit or loss, R1_1 ended up investigating the increase in reserve funds of the municipality, mistaking the term for profits, and added: “I would say, it is well managed, they have set aside 72 Mio. Euro – that would be the purported profit.” Thus, a person with little knowledge of accounting might misinterpret figures and therefore start doubting, if the figures found do not match their own expectations.

Most respondents simply used the table of contents in order to find information, which was also perceived as a “saving anchor” (R5_1, R6_1). However, one respondent even says the table of contents did not help a lot, because there were too many technical terms. Many problems specifically occurred concerning the expert terms used. Thus, a glossary with technical terms is demanded (e.g., R2_2, R5_4, R6_4) or a subject index (R5_4). Further respondents (R5_2, R2_1) missed explanations for abbreviations. Even the overall usefulness of the information is doubted by one of the

pensioner respondents (R4_3): "Who benefits from this?" This stands in contrast to the expressed need for information in the introductory interviews. There seems to be a trade-off between the complexity of the information provided and the perceived need for information. However, some respondents also positively commented on the mere existence of the LG financial statements and some even wanted to go into more details or some more information (e.g., comparative figures).

Although most respondents requested transparency during the introductory interviews, interestingly, others handle the financial statement as, for example, R4_2 determines: "In detail, that is something for experts. They should make up their mind about it" (R4_2). Also, the question of addressees of financial statements is challenged: "This mass of numbers is only provided to those persons who have to work with it, isn't it?" (R4_3). One citizen even jokes that the financial statements are picked with abbreviations and (technical) expert terms intentionally, because the report preparers might think: "Whoever looks at these documents – their own fault!" (R2_1). Thus, another issue often mentioned is the comprehensibility of data, as, for example, R2_1 expresses: "The prerequisite, of course, is that it is prepared in such a way that even a layperson can read and understand it."

The length of the financial statements is criticized for being useful for "an ordinary citizen." Thus, several citizens recommend publishing a short leaflet with some key information only (e.g., R1_1). After being presented with the financial statements, most respondents soon showed symptoms of being overwhelmed by the mass of information confronted with for the first time, although a reduced version of the financial statements was presented. For example, although explicitly expecting transparency from public institutions, R1_1 stated when being confronted with the financial statements:

"As a citizen, I would not actually read these 50 pages. I would very much like, if I have the first three pages and I am bombed with numbers here, I would very much like that also it is clearly stated what is what ... (*sighs*) and that I do not have to read a 50-page glossary."

R3_3 also confirmed that she were "so overwhelmed by all these numbers and words contained [in the statements] and by these rather poorly accentuated things in the tables [...]."

In order to handle information, respondents showed a tendency to simplify topics. For instance, R1_2 stated that he was only interested in the totals of the balance sheet, instead of going into any details (even positions worth more than 1 billion Euro): "So, I would [...] probably only look at the totals and not all these individual little items because they mean nothing to me." One respondent assumed that there seems to be a trade-off between the mass of information and its usability by citizens (R5_5).

Still, one respondent clearly said that, if someone really wants transparency, this is the right type of information. Another person even argued that if citizens are interested in financial information of their LGs, they need to collect this information by themselves. It is not the LGs' task to send information to citizens, as R6_5 pointed out: "I think you have to act on your own, if you make demands on something, then obviously you have to get the information by yourself and cannot expect an incoming call or an e-mail that informs you about the financial statements. Rather, it will probably be published on a corresponding Internet platform."

One of the respondents argued that the comprehensibility of financial information is also a "learning process" for citizens, that is, after instructions and over a longer period of time, citizens need to get used to this type of information (R5_5). Still, citizens are expected simply not to have the time to get into the details of financial statements (R1_1, R4_5).

5.3 | RQ 3: Ability to extract basic financial information

Considerable efforts were taken in the study to compile a sample that represents differing citizen groups in terms of age, gender, education, income levels, and living areas in the city. Irrespective of the different groups, the

TABLE 4 Respondents with entirely correct/incorrect answers

Answered all three tasks	Group	Respondent	Accounting knowledge?	Read financial statement before?	Active interest?
Correctly	Employees (Other)	R 2_1	Yes	Yes	Yes
		R 2_3	Yes	Yes	No
	Unemployed	R 3_5	Yes	Yes	No
	Pensioners	R 4_4	Yes	Yes	n/a
		R 4_5	Yes	n/a	No
Self-employed	R 6_4	Yes	No	Yes	
Incorrectly	Unemployed	R 3_3	Yes	Yes	No
		R 3_4	Yes	Yes	No
	Pensioners	R 4_1	Yes	Yes	Yes
		R 4_3	Yes	Yes	Yes

TABLE 5 Group analysis of think aloud tasks

Group	Number of answers (of 5 × 3 per group)			Number of respondents (of 5 per group)		
	Correct	Incorrect	Uncertain	Accounting knowledge	Read financial statement before	Active interest
Employees (university graduates)	10	3	2	3	4	3
Employees (others)	11	2	2	2	3	2
Unemployed persons	6	8	1	5	4	0
Pensioners	7	5	3	5	4	3
Pupils and students	10	3	2	3	1	1
Self-employed persons	9	4	2	5	3	4

majority of respondents were not able to successfully complete the tasks that were part of the think aloud study. For the whole sample, 59% of the tasks were solved correctly (see Table 3), but this pass rate cannot be directly traced back to the accounting knowledge of citizens. During task completion, citizens tried to excuse themselves for not being able to tackle the tasks as their education level or their profession does not cover financial accounting. Many of the answers provided to the tasks were delivered with a guess, instead of a determined answer. Only six respondents solved each of the three tasks successfully, whereas four persons failed each task (see Table 4). Interestingly, all of those ten respondents identified themselves as knowledgeable in accounting. As such, citizens might overestimate their knowledge, especially given that the tasks were only to extract some basic financial information. Only two persons that successfully completed the tasks also indicated that they had an active interest in information published by their LG. Presumably only these two persons (out of 30) could qualify as a fire alarm (Meijer, 2014) in the public accountability relationship.

The analysis with respect to the different groups regarding the occupational status showed the following results (Table 5).

The groups with the most correct answers belonged to the employed persons, with the group with no university degree achieving the best results. Persons who are either unemployed or pensioners gave the most incorrect or uncertain answers. Strikingly, all respondents from both latter groups perceived themselves to be knowledgeable in accounting. Thus, there seems to be a gap in self-assessment and actual knowledge when being confronted with LG

financial statements. Eventually, due to their age, three of the five pensioners were completely overstrained by the financial statements. Two of them even put the financial statement aside after trying to complete task 2a and then referred to the remaining questions in a general manner without looking into the study material. This finding could be explained by drawing on the literature on financial literacy, revealing that the elderly tend to be less financially literate (Lusardi & Mitchell, 2011). Interestingly, the self-employed persons, who one would expect to be responsible for the financial wellbeing of their own business, were also not among the most successful groups.

6 | DISCUSSION AND CONCLUSION

By applying a rarely used explorative research design, the think aloud method, this paper contributes to the accounting literature by setting the focus on an analysis of citizens using LG financial statements. With respect to our RQs, the following summary can be drawn. RQ 1 aimed to figure out which type of accounting information provided by their LG citizens are interested in. Findings show that citizens express a moderate demand for a general financial overview on their municipality and particular information about the use of money. As in the study of Jordan et al. (2016), the revenues of the LG were of highest interest. However, interest going beyond this was expressed and there is indeed an at least moderate call for transparency. As such, citizens can be assumed to be aware of their monitoring role as principals and they also call for financial information to be provided. In addition, there seems to be a higher demand for institutional accountability than for individual accountability (Fox, 2007): citizens are keener to know what happens in the LG as a whole than in specific individual behavior or positions. The interest in general information was higher than for specific, individual topics so that the self-interest proposition found in studies on citizen participation (Haselswerdt, 2020) does not hold here. Thus, future studies could look into the distinction of self-interest versus sociotropic reasons for citizens being interested for LG information. Overall, interest as a minimum entry barrier for level 2 transparency according to the Biondi and Lapsley (2014) framework, that is, to show a certain extent of understanding of the underlying information, is required and given.

How citizens handle LG financial statements when extracting basic financial information was addressed in RQ 2 by conducting think aloud tasks. The findings show that when being confronted with a realistic set of financial statements of a German municipality (of 64 pages), individuals are able to trace 59% of the basic financial information needed – although primarily guided by the table of contents and otherwise seeming to be somewhat lost in the documents. A table of contents seems to be a usual part of LG financial statements (Haustein, Lorson, Oulasvirta, & Sinervo, 2021) and it can be expected that without such an overview the results would have been worse. After claiming transparency first, citizens now demand others (intermediates) are responsible for reading and understanding the data. These empirical findings are in line with the theoretical predictions of Eckersley et al. (2014). Thus, important prerequisites of effective transparency need to be questioned and it needs to be challenged whether the LG financial statements are a good mechanism for public accountability. Instead, the role of auditing institutions or the press in signaling problems needs to be stressed, as depicted in the model of van Helden and Reichard (2019). Public institutions should not only be responsive to citizens' needs by providing any mass of documents, but also by making them collaborators (Vigoda, 2002). That would "require a complete change in the role of a civil servant" (Hepworth, 2017, p. 141).

With respect to RQ 3, that is, the extent to which citizens were able to successfully extract basic financial information, out of 30 citizens, six solved each task correctly and four not one. All of these 10 persons claimed to have accounting knowledge, so that there seems to be some kind of self-misjudgment. Only two persons that successfully completed the tasks also indicated to have an active interest in LG information, so that they could potentially serve as fire alarms in public accountability relations.

In the light of the transparency discussion, our findings indicate that at least the majority of basic financial information could be found, although if this really means "effective transparency," that is, that citizens do really understand accounting figures and can interpret these, is to be doubted. Reflecting this with regard to entering level 2

transparency (understanding of the underlying information) of the Biondi and Lapsley (2014) framework, even a basic prerequisite of a genuine understanding is to be questioned. Even those citizens who failed at all the three tasks claim to have accounting knowledge. As such, citizens might overestimate their knowledge, especially given that the tasks were only to extract some basic financial information. The hurdle to real understanding would be much higher. Overall, for our theoretical model it looks like only very few citizens would be able to understand the information and thus enter the level 2 of transparency and thus exert their role as principals. As such, the appropriateness of the agency theory needs to be questioned here to explain the accountability relationships with the financial statements as an accountability mechanism. Also, we need to consider here that accountability in the public sector is a multilevel phenomenon also involving relationships to the administration (e.g., Greiling & Spraul, 2010). As a first step, the model provided in Figure 1 could be extended by accentuating the knowledgeable and interested citizens and linking them to the debating phase, so levels 2 (understanding) and 3 (shared meaning) of transparency. This specific and small group of citizens might act as a fire alarm to inform the citizens when the financial conditions worsen or misconduct becomes apparent. Overall, empirical findings are provided with regard to the general propositions in the literature that the financial statement might not be an appropriate accountability mechanism for citizens as principals.

Thus, as a practical contribution of our study, an Integrated Report, also providing nonfinancial information, a Popular Report (Cohen & Karatzimas, 2015), or even an Integrated Popular Report (Manes-Rossi, 2019) as concise short versions of financial statements or integrated reports might be better suited for the majority of citizens. As specifically regards financial statements, these could be improved, for example, by adding tables of contents and glossaries of accounting terms, less jargon, and adding more narrative (also nonfinancial) information with explanations on the condition of the municipality. A limitation of our theoretical framework lies in the fact that accounting norms and reporting formats for LGs are not set by the principals (the citizens) but by the agent (the government). So, as a practical contribution, it could be worthwhile to involve citizens into the design of suitable reporting formats and to develop respective accounting norms. Also, we do not claim to provide a complete insight into citizens' heads with our study. However, the think aloud approach proved to be a fruitful endeavor for investigating how citizens handle accounting documents and whether they can find specific financial information. Still, we cannot rule out that some of the data might be influenced by self-selection, interviewer biases or biases due to different interview locations. Although we took considerable effort to make up a judgmental sample, men and persons with a higher education were overrepresented in the sample. In addition, the tables have been set up for some descriptive data. These explicitly do not allow for any generalizations. In the end, the findings provide an in-depth view into how 30 individuals in one German city handle LG financial statements. In order to ensure international comparability, however, the composition of the set of financial statements was adopted to international standards by, for example, leaving out a management commentary.

Further research could conduct longitudinal studies with few citizens in order to reveal learning processes that might occur when handling the data over a longer period of time. Also, large-scale surveys in different countries might be helpful to assess whether citizens' perceptions differ internationally or depend on the cultural context.

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DATA AVAILABILITY STATEMENT

To gain access to citizens, we had to assure our interviewees absolute anonymity and the use of the data for our research project only. Research data are therefore not shared.

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NOTES

¹The minimum voting age in local government elections in Germany.

²Compared with, for example, Rostock's inhabitants, which are 49% male and 45 years old on average (City of Rostock, 2016).

³The management commentary is obligatory in German public sector financial statements. For the sake of international comparability, it was removed from the original financial statement.

⁴The task was to solve $(12 + 3) \times 5$.

⁵German municipalities use "Ergebnisrechnung" instead of "Gewinn- und Verlustrechnung."

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