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Article

Determinants of information users in local public accounting

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Determinants of information users in local public accounting

Syed Raziuddin Ahmad¹, Raj Bahadur Sharma², Ijaz Ali³, Asif Baig⁴ and Imran Ahmad Khan^{5*}

Abstract: The purpose of this paper was to identify the information users assumed by the financiers of local governments in India and to empirically clarify the determinants of these users. The Ministry of Finance requires local governments in India to prepare public accounting information based on uniform standards from the fiscal year 2017 and is currently examining how and by whom the prepared accounting information can be utilized. In the U.S., where accrual accounting has already been adopted by states and local governments, the Governmental Accounting Standards Board (GASB) has conducted a survey of financiers and stakeholders to determine the needs of information users for financial reports in the development of accounting standards. Therefore, this paper predicts that when a local government has a large amount of debt (debt hypothesis), when there is a large demand for public goods from citizens (public goods hypothesis), and when the chief executive has experience in using financial statements (upper management hypothesis), local government treasurers will actively consider information disclosure measures in anticipation of outsiders using the information. The results of the questionnaire survey of 1,788 local government financiers indicated that the main information users of public accounting information assumed by local government financiers are government officials. As a result of the factor analysis, we found that information users can be roughly classified into government officials and other information users. We also found that in local governments where financiers assume that information users use accounting information, the chief executive has experience as a corporate officer.

Subjects: Finance; Business, Management and Accounting; Industry & Industrial Studies

Keywords: Public Accounting; Information Users; Accrual Accounting; Debt Ratios; Financiers

JEL Classifications: H72; H83; M40; M41.

1. Introduction

The purpose of this paper is to identify the information users assumed by local government financiers and to empirically clarify the determinants of information users as perceived by financiers under the uniform accounting standards applied to local governments in India (hereinafter referred to as the uniform standards). The Ministry of Finance requires local governments in India to prepare public accounting information based on uniform standards from fiscal 2017 and is currently examining who and how the prepared accounting information can be used. On the other

hand, in the United States, where accrual accounting has already been adopted by states and local governments, the Governmental Accounting Standards Board (GASB) conducted a careful survey of financiers and stakeholders to determine the needs of information users for financial reports in the development of accounting standards (Dopuch & Sunder, 1980). In addition, the information needs between corporate accounting and public accounting were also investigated in detail in higher education institutions (Lane et al., 1987). Later studies have accumulated empirical evidence on the usefulness of accounting information, assuming that citizens and creditors are the main users of information (e.g., Gary Giroux, 1989).

This paper investigates who local government financiers assume to be the information users, given that local government financiers coordinate with stakeholders such as the chief executive, creditors, and citizens, and disclose accounting information. In addition, if the local government has a large amount of debt (debt hypothesis), if the demand for public goods is large (public goods hypothesis), and if the head of the local government has experience in using accrual accounting (upper management hypothesis), the local government financiers are expected to assume that the information users will use the accounting information.¹

In this paper, we conducted a questionnaire survey (collection rate: 40.9%) on the financial personnel of 1,788 local governments. As a result, we found that government officials (Ministry of Finance, central government, chief executives, and councilors) are the main information users of public accounting information assumed by local government financiers, and that information users can be roughly classified into government officials and other information users as a result of factor analysis. In addition, we found that in local governments where financiers assume that information users, such as taxpayers, donors, and beneficiaries, will use the accounting information, the chief executive has experience as a corporate officer rather than as a former government official.² These suggest that the more local governments whose chief executives have experience in using accrual accounting, the more local government finance officers assume that accounting information will be used by outsiders who are not government officials. On the other hand, in additional analysis, we found that the higher the real public debt service ratio of a local government, the more the finance staff assumed that creditors would make use of the financial information.

Based on the empirical evidence in this paper, which identifies the main information users of public accounting information envisioned by local government treasurers, it is suggested that to promote the use of accounting information from external users envisioned in the reform of the local public accounting system, it is necessary to promote the understanding of financial statements not only among public officials but also among chief executives. In addition, since local governments with high real public debt cost ratios are thought to be actively considering disclosure to creditors, the implication is that careful consideration should be given to the nature of accounting disclosure to creditors, as shown in empirical results in other countries.

The structure of this paper is as follows. In the next section, we summarize the local public accounting reform and explain our hypotheses. Section 3 sets up the research design, and Section 4 presents the empirical results. Finally, Section 5 presents conclusions and future issues.

2. Local public accounting system reform and hypothesis

2.1. Overview of the reform of the local public accounting system

Budgetary and accounting reforms have been accompanied by significant changes in the role attributed to local government. Gradually, local entities have become important social and economic agents, and their current situation is characterized by: a) the legal and jurisdictional strengthening of local authorities at the national and community levels, and b) the introduction of important reforms in the way they perform their functions, with terms such as service quality, deregulation and decentralization, or the professionalization and privatization of management gaining prominence. These changes have aroused the interest of a large number of groups,

interested in knowing what tasks the local authority performs, how it performs them and at what price.

For a long time, the accounting information prepared in the public sector has been aimed at individuals or entities within the Administration itself, and this fact has been highlighted as a differentiating feature in relation to the business sector. As Ratcliffe (1979, p. 45) points out, “most public sector financial statements consider internal managers or other groups closely linked to the public organization as the first users”. The changes in the orientation of public accounting over the last few decades have been changing this situation by giving increasing prominence to external users, thus acknowledging their importance and influence on the organization.

The studies that have addressed the study of the main groups of users of public accounting information show the wide variety of people interested in obtaining information about this type of entities. In almost all of them, the identification of users is part of a broader scheme aimed at identifying the objectives, basic characteristics and configuration of public accounting information.

The 1970s saw the emergence of the first studies identifying the users of public accounting information, promoted by organizations such as the American Accounting Association (AAA, 1972) or the American Institute of Chartered Public Accounting (AICPA, 1974). These studies explicitly differentiate between internal and external users, including groups such as financial analysts or research groups as potential recipients of public accounting information.

At the end of the 1970s, New Public Management (NPM) became the dominant trend in the reform of local public accounting in developed countries. As a result, the information systems of public entities in which business management models of public administration were introduced underwent profound restructuring.

The incipient attention given to external users is even more evident in the study conducted by Anthony (1978) at the request of the FASB, aimed at identifying the objectives to be achieved by the financial statements of not-for-profit entities (including governmental units). In this work, only five groups of users (investors and creditors, resource providers, governmental bodies, control bodies and voters) are distinguished, most of which are external, thus considering the satisfaction of the needs of such users as the main objective of the financial statements.

The work of Drebin et al. (1981), carried out under the sponsorship of the National Council on Governmental Accounting (NCGA), was the first to address the study of users in the public sector in a complete and detailed manner. The different categories of users defined by these authors served as a reference for the subsequent preparation of the Concepts Statement No. 1 of the NCGA (1983). Both works group the different users into ten groups: taxpayers, donors, investors, recipients of services, employees, suppliers, legislative bodies, managers, voters and control bodies. The first four groups provide financial resources to the entity, the next two provide labor and material resources, the legislative bodies and managers make decisions affecting the allocation of resources, while the voters and control bodies impose restrictions on their actions (Jones and Pendlebury, 1996).

The work of the Governmental Accounting Standards Board (1985, 1987) offers a more synthetic classification, which aims to highlight the common characteristics of the various users rather than the differences between them. Thus, a distinction is made between three types of external users of public accounting information (citizens in general, legislative and supervisory bodies, and investors and creditors) and one group at the internal level (managers or the executive branch).

The main standard-setting bodies in countries such as France, Australia and Canada also issued various pronouncements offering more or less detailed classifications of the persons interested in financial information prepared in the public sector. In the case of Canada, the Canadian Institute

of Chartered Accountants (1990) undertook this task, establishing five groups of users: the general public, politicians, legislators, investors and analysts. According to this document, financial statements should cover the information interests of these groups, although it admits the need to combine their content with information contained in other types of reports.

The New Public Management (NPM) has introduced accrual accounting and performance evaluation methods from the private sector to the public sector.³ In the midst of these developments, the International Public Sector Accounting Standards Board (IPASB) and the GASB in the U.S. have set accounting standards for the public sector based on the accrual method. In the 1980s, the GASB conducted a survey on the information needs and usefulness of accounting information in its Research Report, and the usefulness of disclosing public accounting information for decision making was argued (Baber & Sen, 1984; Dopuch & Sunder, 1980; Lane et al., 1987). Subsequent empirical analyses have shown the usefulness of accounting information in citizens' decision-making during elections, creditors, and rating agencies (e.g., Khumawala et al., 2020; Oh, 2020; Kopańska, 2017; Gary Giroux, 1989).

On the other hand, it has been pointed out that the adoption of General Purpose Financial Statements (GPFs) by local governments differs by customary law, codified law, Eastern Europe, and Northern Europe, and that GPFs are only a "symbol" of good governance, and the effect of accrual-based public accounting information has not been verified (Arnaboldi & Lapsley, 2009). In addition, Jan Van Helden (2002) argue that management accounting research is the mainstream of interdisciplinary accounting research on the public sector, and there is a lack of knowledge on the use of information by outsiders in public accounting.⁴

This paper is in response to a call by researchers to identify the information users assumed by the financiers of local governments in India and to empirically clarify the determinants of these users (Adukia, 2012; Abraham, 2013; Krishnan, 2021). While most academics emphasize the necessity to investigate such issues on a global scale, Lassou et al. 2018, Miraj and Wang, 2018, and (Azhar et al., 2022) emphasize the importance of studies in particular countries since country-specific factors affect how these issues emerge differently.

Table 1 shows the process of introduction of accrual basis of accounting by the Ministry of Finance (MOF) for local governments in India. In 2006 "Report of the Research Committee on the New Local Public Accounting" presented two models for financial statement preparation, the MOF revised model and the standard model, and the preparation of financial statements for local governments advanced. However, due to problems such as low comparability in preparing financial statements using different models, a unified standard was published in 2014 in the "Report of the Research Committee on the Future Development of New Local Public Accounting" and it was decided to be enforced from FY2017. The uniform standards focus on the understanding and verification of stock information through the preparation of fixed asset ledgers based on acquisition costs, and by using these standards, financial information is disclosed in an easy-to-understand manner to citizens and the Parliament, with the aim of fulfilling accountability. It is also indicated that the information will be effectively used for budgeting and administrative evaluation to strengthen management.

By using public accounting information, we can obtain new information on administrative costs and assets and liabilities. In other words, it would be useful to obtain project-specific cost information on how much cost is used for the relevant project to the residents. For example, project-specific cost information could be used by residents as a bargaining chip for administrative decision-making on facilities and equipment. It is also assumed that creditors are interested in whether or not their bonds will be redeemed in the future, so information on assets and liabilities in the balance sheet may be useful.

In 2020, the "Report of the Research Committee on the Utilization of Local Public Accounting" was published, which made known the advanced cases collected from different municipalities and

special districts as well as the setting of “depreciation rate of tangible fixed assets” and “usable life” using the fixed asset ledger created based on the acquisition cost principle. These can be interpreted as an attempt to disclose accurate balance sheets and administrative cost statements by newly scrutinizing fixed assets, but the specific method of fulfilling public accountability to the general public remains a future issue. Therefore, this paper sets a hypothesis focusing on external information users in Indian public accounting.

2.2. Hypothesis formulation

This paper establishes hypotheses by relying on the methods of Dopuch and Sunder (1980) and Lane et al. (1987) in the GASB Research Report. Specifically, we focus on whether local government finance officers believe that information users use accounting information or not. In this paper, we examine the extent to which local government financiers, who coordinate various interests in local government, perceive information users and assume that they use accounting disclosure, which may provide a clue to the usefulness of public accounting information. In addition, this paper establishes and empirically analyzes three hypotheses on the determinants of the perception of information needs from such information users by local government financiers: the debt hypothesis, the public goods hypothesis, and the upper management hypothesis.

The users of local government accounting information are examined in detail in Dopuch and Sunder (1980) and GASB Concept Paper No. 1, based on previous studies. Table 2 shows the user groups identified in Dopuch and Sunder (1980) and the results of each survey. As a result of

Table 1. History of local public accounting in India

Time period	Content
Before 2006	Control by budget and accounts
May 2006	“Report of the New Local Accounting System Research Committee”
	- Ministry of Finance Revised Model - Simplified Balance Sheet with Financial Statistics
	- Reference Model - Balance sheet preparation at fair value
October 2007	Report of the Research Committee on the New Local Public Accounting
2007 – 2015	Local governments prepare general purpose financial statements according to their own models
April 2014	Report of the Research Committee on the Future Development of New Local Public Accounting
	Mandatory from FY2017
	- Preparation of fixed asset ledger - measurement by acquisition cost, understanding and verification of stock information
	- Fulfillment of accountability by disclosing financial information in an easy-to-understand manner to citizens, the Parliament, etc.
	- Strengthen management through effective use in asset and liability management, budgeting, and administrative evaluation
	- Fiscal efficiency and optimization
January 2015	The Manual on Uniform Standards of Local Public Accounting
October 2020	Report of the Research Committee on the Use of Local Public Accounting

Source: Prepared by authors from the Ministry of Finance website <https://finmin.nic.in/>.

Table 2. User groups in previous studies

	External auditors	Voters/ citizens	Investors/ creditors	Internal managers	Voluntary resource providers	Beneficiaries	Employees/ trade unions	Regulated entities	Supplier	Interest groups	Independent auditors
Governmental Accounting, Auditing and Financial Reporting (1968)	◦	◦	◦	◦	◦					◦	
Governmental Accounting, Auditing and Financial Reporting (1980)	◦	◦	◦		◦	◦	◦	◦			
NACUBO (1975)	◦	◦	◦	◦	◦						
Henke (1977)	◦	◦	◦	◦	◦	◦		◦			
AAA (1975)	◦	◦	◦	◦	◦		◦	◦		◦	◦
Coopers et al (1978)	◦	◦	◦	◦	◦		◦	◦			
SFAC No. 4 (1980)											
Anthony (1978)	◦		◦		◦			◦	◦		
GAO (1980)	◦	◦	◦	◦			◦	◦		◦	

(Continued)

Table 2. (Continued)

	External auditors	Voters/ citizens	Investors/ creditors	Internal managers	Voluntary resource providers	Beneficiaries	Employees/ trade unions	Regulated entities	Supplier	Interest groups	Independent auditors
Coopers et al (1976)		◦	◦								
Baber and Sen (1984)	◦		◦	◦							
Holder (1980)			◦								
Davidson (1977)	◦	◦	◦	◦			◦				
Van Damker (1983)	◦	◦	◦		◦					◦	
Drebin (1981)	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	

Source: Prepared by the author from Dopuch and Sunder (1980), p. 24 Table 2-1.

examining all user groups surveyed between 1968 and 1983, external auditors, voters/citizens, investors/creditors, voluntary resource providers, beneficiaries, employees/trade unions, regulated entities, suppliers, interest groups, and independent auditors are listed. The term “internal managers” also includes those who control and supervise the conduct of government affairs, such as the chief executive and the parliament.

This paper assumes that the financiers of local governments in India also prepare their financial statements with these potential information users in mind, but due to the unique context of India, the central government (Ministry of Finance) is also added as an important information user. This is because the local allocation tax is contributed by the Ministry of Finance (MOF) and the MOF is the entity that sets the uniform standards.

According to the Financial Soundness of Local Governments Act enacted in 2007, local governments are obliged to report to their assemblies and make public their ratios for judging the soundness of their finances, including not only general accounts but also special accounts, unions, and third sectors, after submitting the calculation data to the audit committee for review (Financial Soundness of Local Governments Act, Article 3). If the ratio exceeds a certain level, the local government is required to take corrective measures under the supervision of the central government, and thus the ratio functions as a benchmark for the management of local governments.

The specific ratios to be judged include the real deficit ratio, the real consolidated deficit ratio, the real public debt cost ratio, the future burden ratio, and the funding shortage ratio, but creditors are likely to believe that the viability of a local government is threatened when the real public debt cost ratio is particularly high. Therefore, when the debt ratio of a local government is high, the financiers are expected to be accountable to the information users, especially the creditors. Therefore, we set up the following debt hypothesis (H1) that the larger the debt ratio of a local government, the more information users are expected to utilize it.⁵

Hypothesis 1 (H1): The more financiers of local governments with large debt ratios are expected to use the information users.

Second, when the public demand for public goods is high, especially for the financial management of local governments, local government financiers may be more conscious of the public. For example, Kopańska (2017) found that election-related trends such as voter turnout affect the budget setting and management of local governments. In addition, in India, where the population is aging, local governments with a larger proportion of elderly citizens are more likely to receive demands for the provision of medical and welfare services, such as medical institutions and special nursing homes. Therefore, we formulate the following public goods demand hypothesis, which assumes that citizens will use the GPFs more in local governments where citizens are more likely to request public goods from local governments.

Hypothesis 2–1 (H2-1): It is assumed that information users will be more likely to use the information than financiers of local governments who have a high voter turnout for the election of the chief executive.

Hypothesis 2–2 (H2-2): It is assumed that the more senior local government financiers are, the more information users will use the system.

In addition, research-based on the upper echelons theory (Abatecola & Cristofaro, 2020), which is discussed in management strategy theory, suggests that depending on the educational

background and years of experience of the managers, the way they utilize the information differs even when they are given the same information, and as a result, their performance is affected. Since the perceptions of local government treasurers are influenced by policies from the chief executive (Reddick, 2003), the chief executive’s past experience may have influenced the treasurers’ approach to information utilization. Based on the seniority theory, chiefs who have been in office longer may be able to respond more quickly to new systems because they have accumulated more experience in budget settings and are more aware of the historical background of public accounting system reforms.⁶In addition, since the GPFs are based on the accrual basis of accounting rather than the cash basis of accounting, and since they are influenced by corporate accounting, it is likely that the more local governments that are headed by a chief executive with practical experience in corporations, especially with experience as a corporate officer, or with experience as a certified public accountant, the more likely it is that the chief executive will give instructions to the fiscal officer using the accounting information. Therefore, the following upper-level hypothesis (H3) is formulated.⁷

Hypothesis 3–1 (H3-1): It is assumed that information users will be more likely to use the information than the financial staff of local governments where the chief executive with a high number of reappointments is in office.

Hypothesis 3–2 (H3-2): It is assumed that information users will be as likely to use the information as the finance staff of local governments where the chief executive officer with practical experience in accrual accounting in companies is in office.

3. Research design

3.1. Design and implementation of the questionnaire survey

The questionnaire was based on the method of Dopuch and Sunder (1980) and Lane et al. (1987), we set up a question using a 4-point Likert scale in response to the question “Would the following people use financial statements based on the new public accounting standards?” As specific users, we set citizen groups, taxpayers, creditors, publicly elected officials, assemblies and council members, voluntary resource providers such as donors and hometown taxpayers, beneficiaries, employees and labor unions, the Ministry of Finance (MOF), and the central government, related companies, interest groups, and audit committee members.

The sample consists of 1,788 local governments of India including 770 cities, 764 towns, and 254 villages. These are classified according to their administrative roles and population size. The survey was sent to these local governments on 6 January 2021. As a result, we received responses from 731 local governments by 24 March 2021. The collection rate was 40.9% (see, Table 3).

Table 3. Collection results and sample selection			
	Mailing address	Number of collections	Recovery rate
City	770	398	0.512
Town	764	248	0.319
Village	254	85	0.301
Missing value	1788	731	0.409
Outlier processing		-29-38 664	0.371

Note: Outlier processing was applied to continuous variables, excluding the upper and lower 1%.

Source: Prepared by the authors.

Table 4. Basic statistics (n = 664)

Panel A Survey Questions

	Questions and contents	Average	Standard Deviation	Minimum	Quartile 1	Median	Quartile 3	Maximum
Q. 1	Citizen Groups	2.014	0.836	1	1	2	3	4
Q. 2	Tax payers (municipal residents)	1.675	0.683	1	1	2	2	4
Q. 3	Creditors	2.146	0.957	1	1	2	3	4
Q. 4	Public elected officials (municipal mayors)	2.887	0.906	1	2	3	4	4
Q. 5	Assemblies and council members	2.887	0.864	1	2	3	4	4
Q. 6	Donors and hometown taxpayers	1.673	0.714	1	1	2	2	4
Q. 7	Beneficiaries	1.762	0.733	1	1	2	2	4
Q. 8	Employees and labor unions	1.852	0.788	1	1	2	2	4
Q. 9	Ministry of Finance/Central Government	3.465	0.756	1	3	4	4	4
Q. 10	Related companies	2.041	0.861	1	1	2	3	4
Q. 11	Interest groups	1.946	0.826	1	1	2	2	4
Q. 12	Audit committee members	3.023	0.898	1	2	3	4	4

(Continued)

Table 4. (Continued)

Basic statistics for each variable in Panel B (1)

	Average	Standard Deviation	Minimum	Quartile 1	Median	Quartile 3	Maximum
BR	0.089	0.040	-0.019	0.064	0.092	0.116	0.184
EL	0.391	0.306	0.000	0.000	0.466	0.649	0.955
ED	0.297	0.056	0.165	0.255	0.292	0.335	0.444
RL	2.297	1.285	0.000	1.000	2.000	3.000	10.000
EX	0.154	0.361	0.000	0.000	0.000	0.000	1.000
FR	0.161	0.368	0.000	0.000	0.000	0.000	1.000
AT	0.003	0.055	0.000	0.000	0.000	0.000	1.000
RIE	0.056	0.035	0.000	0.033	0.052	0.073	0.262
RP	-0.010	0.030	-0.112	-0.027	-0.011	0.009	0.090

Note: See Appendix for definition of variables.

Source: Calculated by the authors.

Table 5. Results of Factor Analysis (n = 664)

	Variable	Factor 1	Factor 2
Q. 1	Citizen Group	0.509	0.278
Q. 2	Tax payers (municipal residents)	0.844	-0.069
Q. 3	Creditor	0.556	0.148
Q. 4	Public elected officials (municipal mayors)	0.050	0.849
Q. 5	Assemblies and council members	0.055	0.834
Q. 6	Donors and hometown taxpayers	0.863	-0.108
Q. 7	Beneficiaries	0.862	-0.037
Q. 8	Employees and labor unions	0.737	0.091
Q. 9	Ministry of Finance/ Central Government	-0.202	0.757
Q. 10	Related companies	0.691	0.100
Q. 11	Interest groups	0.788	0.063
Q. 12	Audit Committee	0.021	0.804

Note: These are the results of factor analysis using the eigenvalue criterion and the Promax rotation method.
 Source: Calculated by the authors.

3.2. Analysis methods

The following equation (1) is estimated by regression analysis, and the sign and significance level of each coefficient is checked. The definitions of the variables are shown in [Appendix](#).

$$\text{Disclosure}_t = \alpha_1 + \alpha_2 \text{BondRatio}_{i,t-1} + \sum_{p=1}^2 \alpha_{p+2} \text{PublicGoods}_{pt-1} + \sum_{u=1}^4 \alpha_{u+4} \text{Upper}_{u,t-1} + \text{Control} + \varepsilon_t \tag{1}$$

For local governments in the t period (fiscal 2020), the dependent variable (Disclosure) is expressed in the response result of the 4-point Likert scale to the question “Do you think the following people will use financial documents based on the new public accounting standard?” for regression analysis focusing on information users. Information users are citizen groups, taxpayers, creditors, public elected officials, parliamentarians, donors, beneficiaries, employees and labor unions, the Ministry of Finance, central government, related companies, interest groups, and audit committee members.

For the independent variable, we set the **real public debt ratio or BondRatio (BR)** to verify **H1**. If **H1** is supported, the coefficient of *BondRatio* (α_2) should be estimated to be positive. *PublicGoods* is a variable indicating the demand for public goods, and it is set to *Election (EL)* and *Elderly (ED)*. If **H2** is supported, we expect the coefficients of *Election* and *Elderly* ($\alpha_{3,4}$) to be estimated as positive and significant. Finally, we set *Upper* to indicate the experience of the chief. We set the number of **reappointment or reelection (RL)** as well as a dummy variable of **1** if they have experience as an *Executive (EX)*, *Firm (FR)* or *Accountant (AT)* and **0** otherwise, as they have experience in accrual accounting. Variables related to *BondRatio*, *Elderly*, and *Reelection* were collected manually from the government statistics website, while other variables were collected by browsing the website of each chief executive.⁸

For the control variables, we set *RIE*, which indicates the real income/expense ratio, and *ΔPopulation (RP)* which indicates the rate of change of population from **2014** to **2019** based on

Table 6. Correlation coefficient (n = 664)

	1	2	3	4	5	6	7	8	9
Variable									
1	BR	1.000	0.018	0.240	0.023	0.054	-0.062	-0.072	-0.195
2	EL	-0.008	1.000	0.157	-0.273	0.039	0.049	-0.004	-0.091
3	ED	0.234	0.086	1.000	-0.002	-0.018	-0.093	-0.057	-0.718
4	RL	-0.002	-0.247	0.034	1.000	-0.023	-0.038	-0.037	-0.014
5	EX	0.068	0.043	-0.017	-0.020	1.000	0.029	-0.023	-0.005
6	FR	-0.063	0.069	-0.083	-0.050	0.029	1.000	0.125	0.084
7	AT	-0.077	0.009	-0.048	-0.034	-0.023	0.125	1.000	0.052
8	RIE	-0.242	0.001	-0.014	-0.027	-0.049	0.013	-0.020	1.000
9	RP	-0.163	-0.030	-0.698	-0.045	-0.033	0.074	0.036	0.021

Note: Pearson's correlation coefficient is shown in the lower left panel, and Spearman's rank correlation coefficient is shown in the upper right panel. See Appendix for definitions of variables.
 Source: Calculated by the authors.

Table 7. Results of multiple regression analysis for each information user

	Q. 1 Citizen Group	Q. 2 Taxpayers	Q. 3 Creditor	Q. 4 Chief	Q. 5 Assemblies and council members	Q. 6 Donors
	Q. 7 Beneficiaries	Q. 8 Employees	Q. 9 MOF/Central Government	Q. 10 Related companies	Q. 11 Interest groups	Q. 12 Audit Committee
Constant	2.533*** (8.066)	1.637*** (6.401)	2.321*** (6.511)	3.635*** (10.716)	3.883*** (12.068)	1.384*** (5.163)
BR	-1.208 (-1.319)	0.315 (0.422)	2.698*** (2.596)	0.093 (0.094)	-0.698 (-0.744)	-0.487 (-0.623)
EL	-0.006 (-0.054)	0.026 (0.291)	-0.114 (-0.910)	0.058 (0.488)	0.084 (0.739)	-0.045 (-0.473)
ED	-0.091 (-0.105)	0.326 (0.461)	-1.135 (-1.154)	-2.051** (-2.190)	-2.693*** (-3.032)	1.405* (1.898)
RL	-0.028 (-1.056)	-0.004 (-0.184)	0.023 (0.787)	-0.015 (-0.536)	-0.008 (-0.301)	-0.015 (-0.676)
EX	0.118 (1.295)	0.170** (2.296)	0.144 (1.397)	0.002 (0.016)	0.040 (0.435)	0.137* (1.762)
FR	-0.015 (-0.162)	-0.028 (-0.384)	-0.039 (-0.377)	-0.100 (-1.022)	-0.047 (-0.500)	-0.112 (-1.446)
AT	-0.584 (-0.973)	-0.048 (-0.098)	-0.505 (-0.741)	0.196 (0.303)	0.070 (0.113)	-0.002 (-0.005)
RIE	0.861 (0.846)	1.212 (1.462)	1.149 (0.994)	0.734 (0.667)	0.860 (0.825)	0.963 (1.108)
RP	-0.506 (-0.335)	-1.156 (-0.939)	-0.853 (-0.497)	-4.889*** (-2.995)	-5.467*** (-3.531)	-0.240 (-0.186)
LGdummy	YES	YES	YES	YES	YES	YES
N	664	664	664	664	664	664
adj. R ²	-0.001	0.008	0.017	0.007	0.017	0.001

(Continued)

Table 7. (Continued)

	Q. 1 Citizen Group	Q. 2 Taxpayers	Q. 3 Creditor	Q. 4 Chief	Q. 5 Assemblies and council members	Q. 6 Donors
Constant	1.553*** (5.644)	1.573*** (5.315)	3.769*** (13.344)	2.286*** (7.102)	1.846*** (5.921)	3.529*** (10.484)
BR	0.809 (1.009)	0.685 (0.794)	1.987** (2.413)	1.829* (1.948)	0.825 (0.907)	1.377 (1.403)
EL	0.015 (0.155)	-0.072 (-0.687)	-0.058 (-0.585)	-0.092 (-0.809)	-0.035 (-0.314)	0.029 (0.243)
ED	0.040 (0.052)	0.898 (1.099)	-0.792 (-1.016)	0.036 (0.041)	0.273 (0.317)	-1.506 (-1.621)
RL	-0.019 (-0.833)	0.007 (0.296)	0.008 (0.341)	-0.027 (-0.984)	-0.005 (-0.209)	-0.020 (-0.700)
EX	0.208*** (2.612)	0.108 (1.266)	-0.013 (-0.165)	0.064 (0.690)	0.105 (1.162)	0.094 (0.971)
FR	-0.102 (-1.282)	-0.116 (-1.358)	0.021 (0.260)	-0.072 (-0.769)	-0.067 (-0.738)	-0.151 (-1.546)
AT	-0.058 (-0.111)	-0.148 (-0.262)	0.604 (1.120)	0.703 (1.144)	0.192 (0.322)	-0.312 (-0.486)
RIE	1.809** (2.029)	2.023** (2.108)	0.257 (0.280)	2.277** (2.182)	1.538 (1.522)	1.168 (1.070)
RP	-0.592 (-0.447)	-0.514 (-0.360)	-1.865 (-1.373)	-0.024 (-0.015)	0.491 (0.327)	-3.722** (-2.298)
LGdummy	YES	YES	YES	YES	YES	YES
N	664	664	664	664	664	664
adj.R ²	0.003	-0.000	0.012	0.010	-0.010	0.005

Note: The upper part of the table shows the coefficients, and the lower part in parentheses shows the t-values. For definitions of variables, see Appendix.

Source: Calculated by the authors.

the data of the national census, referring to the control variables used in previous studies such as Kopańska (2017). In addition, we use dummy variables set for each type of municipality that responded (cities, towns, and villages.)⁹

4. Demonstration results

4.1. Basic statistics

Table 4 shows the basic statistics resulting from the questionnaire survey. In response to the question, “Do you think the following people will use the financial documents based on the new public accounting standards?”, the mean and quartiles of the responses are shown on a four-point Likert scale, where 1 means they will not use the documents and 4 means they will use the documents. The results in Table 4 show that the user group with the highest value among the information users assumed by local governments is the MOF and the central government (3.465). This is followed by an audit committee (3.023), parliament/legislators (2.887), and publicly elected officeholders (chiefs) (2.887). Therefore, it can be seen that the main users of financial documents based on the new public accounting standards are government officials. On the other hand, the user groups that are considered as the main information users in previous studies, such as citizen groups, taxpayers, donors, and beneficiaries, are not so high.¹⁰

In this paper, we conducted a factor analysis to find out what latent variables are influencing the variables that are the responses to the observed questions. The value indicating the explanatory power of each factor is called the eigenvalue, and the eigenvalue criterion, which stops when the eigenvalue falls below 1, was used to determine the number of factors. In addition, since it is assumed that there is a correlation between the factors, a Promax rotation was used. Table 5 shows the results of the factor analysis using the eigenvalue criterion and the Promax rotation method. The user group is divided into two groups: the government-related group of the Ministry of Finance (MOF) and the central government, the Audit Committee, the parliament and members, and the chief executive, and the other group. Thus, two factors were analyzed, and it became clear that they could be divided into two user groups¹¹.

4.2. Results of determinant analysis

Before presenting the results of the multiple regression analysis, Table 6 shows the correlation coefficients for each variable. There were no variables where multicollinearity was a concern among the independent variables.

Table 7 shows the results of estimating equation (1) for each information user as a determinant analysis¹². In Table 7, we also include the results for chief executives, parliamentarians, and audit committee members, who are not external information users, for reference. First of all, the coefficient of *BondRatio* is estimated to be positive and significant when the answer to the questionnaire item of “Creditors” is the dependent variable. This result is the same when the response to the “Ministry of Finance” question is used as the dependent variable¹³. In other words, when the real bond ratio is high, financiers assume that creditors and the Ministry of Finance (MOF) use accounting information, suggesting the possibility that such local governments are managing their finances in such a way, and H1 is supported only for creditors.

Next, the coefficient of *Executive* is estimated to be positive and significant when the responses to the question items of “Taxpayers”, “Donors”, and “Beneficiaries” are used as dependent variables. The coefficient of *Executive* is positively significant. On the other hand, the coefficient on the number of reappointments was non-significant in both cases. The coefficient on the number of reappointments was non-significant in both cases, suggesting that the longer the tenure of the head, the more conservative the head and the more proactive the head. From these results, we can say that H3-2 was supported by taxpayers, donors, and beneficiaries, and H3 was partially supported by them.

Finally, H2 was not supported because both results were non-significant or contrary to the hypothesis. In particular, the coefficients of *Election* were all non-significant and thus not related to the assumption of information users. *Elderly* is negatively significant against the hypothesis for chiefs, assemblies, and councilors who are not external information users. This implies that fiscal officers assume that local governments with a large proportion of elderly people do not make much use of public accounting information by their chiefs, assemblies, and councilors, and this may be due to the fact that there is more pressure on the chiefs and assemblies to operate from a working-age population with a low proportion of elderly people. These results are different from those pointed out by previous studies, which show a clear link between the demand for public goods and the usefulness of external public accounting information by users. In this paper, we examine the relationship between the demand for public goods and the usefulness of external public accounting information¹⁴. This is the contribution of this paper to the literature.

5. Conclusion

Although this paper has made the above findings, the following issues remain to be addressed. First, although this paper was limited to confirming the information users with the financial staff of local governments, it is necessary to directly survey the user groups about their accounting information needs in the future. Second, since there are a variety of stakeholders in local public accounting, it may be necessary to explore other factors that determine the information users. In addition to the three hypotheses presented in this paper, it will be necessary to examine and reexamine them in the future. Finally, since we could not go into the content of information required by information users in this survey, we believe that we can make further contributions to the local public accounting system and previous studies by identifying what kind of information each information user may require and specific financial indicators.

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Appendix (1) Defining Variables in Expressions

	Definition
<i>BondRatio(BR)</i>	Real public debt ratio
<i>Election(EL)</i>	Voter turnout in the last chief election
<i>Elderly(ED)</i>	Ratio of elderly people (population aged 65 and over / total population)
<i>Reelection(RL)</i>	Re-appointment
<i>Executive(EX)</i>	Dummy variable of 1 for experience as a corporate officer and 0 otherwise.
<i>Firm(FR)</i>	Dummy variable of 1 for previous experience as a company employee and 0 otherwise.
<i>Accountant(AT)</i>	Dummy variable of 1 for CPA work experience and 0 for other experience
<i>RIE</i>	Real income/expense ratio
<i>ΔPopulation(RP)</i>	Rate of change in population



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