Principal-Agent Relations in Electronic-Based Budgeting Planning in the City of Yogyakarta

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Abstract
This study aims to explain the principal-agent relationship in an electronic-based local budgeting planning system in the city of Yogyakarta. This relationship is colored by the opportunistic behavior of electronic-based planning actors. The method used is a qualitative approach with data collection techniques through interviews, observation, E-FGD and review of document data and analyzed using the Miles and Huberman models. The research results found are the agency relationship between the people and the legislature and the agency relationship between the executive and the legislature. Society is in a position of principal and legislature as agent and executive as agent and legislature as principal. This relationship frames various interests that are trying to be achieved by looking at the opportunities that exist and are manifested through opportunistic behavior. Therefore, electronic-based budgeting planning in the City of Yogyakarta cannot be separated from the interests and behaviors that benefit each actor.

Keyword: actor, actor’s interest, opportunistic behavior, budget planning

Introduction
Regional budgeting planning is an integral part of development planning in Indonesia (Blöndal et al., 2009), even though the two are not regulated in integrated regulations in one complete legislation, where the SPN Law (National Planning System) does not regulate budgeting planning (Susanto, 2018) The terminology of development planning in the national development planning system is interpreted as a unified planning procedure to produce long-term, medium-term and annual development plans implemented by government administrators at the central and regional levels by involving the community (Booth, 2007).

Development planning in Indonesia that is not integrated between planning and budgeting is known as disconnection (Suhartono et al., 2022). caused by first, planning is the domain of the National Development Planning Agency (BAPPENAS), while budgeting is under the coordination of the Ministry of finance. Second, there is no synergy between development planning between the central government and local governments, both from the content of development planning (Regional Medium Term Development Plan, National Medium Term Development Plan, Regional Development Work Plan, Government Work Plan) or from the planning and budgeting stages due to the domain of the Ministry of Home Affairs (Rencana Strategis KPPN/Bappenas 2020-2024, 2020). Third, the quality of development planning is also a problem that is no less important. In general, the implementation of Evidence-Based Policies (EPB) is still a challenge in Indonesia (Subhan, 2019).

According to Bowman C. Kearney states that the budgeting process cannot be separated from 4 main actors, namely interest groups, agency agendas, chief executives and legislatures (Bowman & Kearney, 2017). Interest groups put pressure on the other three actors to fulfill their desires.
or interests (Heinz et al., 1993). Good budget politics is a balance between the four actors, both the accommodation of interests and the actions of actors (Hakim et al., 2021). However, ideality is always faced with reality, the budget planning process which should involve the community in determining the budget will only become a game of representative and executive institutions so that it ignores the transparent, accountable and participatory principles as the basis of budget democracy (Shah, 2007).

Budget politics cannot be separated from the principal-agent relationship which includes the community, legislature and executive (von Hagen, 2002). The legislature acts as an agent that carries the interests of the community but there is ambiguity in the mechanisms, arrangements and controls regarding the delegation of the people's authority to the legislature which causes budgetary distortions so that they do not reflect the interests of the community but are merely self-interest (Rondinelli et al., 1983). This self-interest is not only carried out by the principal but also the agent, where in the context of budgetary politics there is a deviation from the ideal goal of good contractual relations related to accountability, transparency and so on (Cuadrado-Ballesteros, 2014). In addition, it is also influenced by digital transformation as the impact of innovation in governance and which leads to the politics of digitalization of budget planning (Stetsyunich et al., 2019). The description above illustrates that there is potential for irregularities in the budget political process, especially budget planning.

Therefore, a strategy or policy is needed to break the chain of evil through the transformation of governance both in terms of public services, regional planning and budgeting. A manual shift to the use of information technology, which is more commonly known as E-Government, is urgently needed and important to reduce the symptoms of irregularities in the budget planning process. Implementation of E-Government for both central and regional government was initially regulated through Law Number 11 of 2008 concerning Information and Electronic Transactions which was revised to Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions which are translated into Government Regulation Number 82 of 2012 concerning Implementation of Electronic Transactions (Aritonang, 2017). Furthermore, its application became even clearer when two (2) Regulations were issued, namely Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government Systems (SPBE) and Minister of Home Affairs Regulation Number 98 of 2018 concerning Regional Development Information Systems (Nurdin et al., 2022).

The Ministerial Regulation governs electronic-based development planning and budgeting or an application in the form of e-planning. E-Planning based on article 1 number 3 Regulation of the Minister of Home Affairs Number 98 of 2018 is defined as an application used to assist policy formulation in preparing regional development plan documents, formulating policies in preparing online-based development plans (Artharini et al., 2022). Changes in development planning both at the central and regional levels are the effect of the manual era into the digital era which triggers many significant changes, such as the use of websites and applications, this is what is known as digitization (Sandberg et al., 2020).

Digitization is defined as a change from analog to digital, in this case budget planning, which so far has used thick documents, has been converted into e-papers and digital files (Schoen, 2017). Then digitalization refers to the pattern of changing conventional processes to digital, the context of regional budgeting planning is that it no longer uses physical documents (paperless) and interactions between stakeholders through online such as e-planning (Naseer et al., 2015). Finally, digital transformation, where using advances in information technology is not limited to digitization, but has transformed to create new models. It is this new model that creates new sources of revenue and new values that develop. Digital transformation is a process in which the process involves existing resources, including utilizing digital technology that existed at that time to produce output from the organization to provide new experiences (Gong & Ribiere, 2021).

Development budget planning especially in the regions adopts two approaches, namely E-Government and E-Governance. The E-Government approach here is an interaction mechanism between the government and the community through information technology and includes the scope of Government to Government (G to G), Government to Citizen (G to C), Government to Business (G to B) and Government to Employees. (G to E) (Pardo et al., 2011). E-Government as the use of information and communication technology to support public services, government administration, democratic processes, relations between citizens, civil society, the private sector and local government (Fang, 2002).
There have been many studies that have discussed the justification for this. One of them was stated by Khan and Anttiroiko regarding the implementation of E-Government in a developing country, namely Bangladesh, where development planning through websites or portals reflects more the interests of the government or capital owners than the community (Khan & Anttiroiko, 2014). Portals or webs that should be used as a solution for interaction between the government and the community and improving public services, on the contrary, only fulfill the principle of efficiency. Ironically, the design of government portals or websites is strictly conditioned by external pressures and political structures causing the goals of E-Government not to be achieved. Regional budgeting planning throughout Indonesia is electronically based from the center to the villages, however, it is not functionally connected between the state and the public, in the sense that it is not community-centered and not integrated. The context of electronic-based budgeting planning demands interconnection and integration in the stages of the process, not just conveying service information or presenting balance sheet data.

The process of digitizing planning and budgeting causes blurring in the principal-agent relationship which has implications for the absence of an ideal model for regional development budgeting planning. This relationship is caused because regional budgeting planning is still quasi-digital in nature so that political factors have the potential to distort the process. In addition, the state civil apparatus has not been able to distinguish between digital and electronic terms, where in fact the terminologies have fundamental differences in both theoretical and practical contexts. This will have administrative, technical-operational, material, social and political implications. If this trend is not anticipated, it will lead to a quasi-digital/electronic work culture. It even has implications for accountability, transparency and benefits for both local government and the community.

The author chooses the City of Yogyakarta with considerations, among other things, as a city that is the initiator of digital government and is used as a national-level electronic-based budgeting planning pilot project as well as developing independent budgeting planning application innovations that accommodate regional interests before the enactment of national electronic-based budgeting planning, namely the Regional Development Information System (SIPD).

**Method**

This study uses a qualitative approach. Qualitative research is a number of methods for exploring and understanding meaning, which is ascribed to social or humanitarian problems by individuals or groups of people (B. Miles & Huberman, 1994). This study comprehensively discusses (a) the actions of actors in digital-based planning, the dynamics of digital budgeting planning and the urgency of integrated electronic-based budgeting planning for the City of Yogyakarta, (b) the specific context which includes the power and influence of outsider actors, intergovernmental institutions, dynamics electronic-based budgeting planning, strategy and interests of stakeholders, integration background and resources owned in relation to the politics of digitizing electronic-based budget planning in the City of Yogyakarta. For this reason, it is strengthened by a case study research strategy. Case study is defined as an intensive study of one unit for the purpose of understanding a larger class (Bogdan & Biklen, 2007). Other expert arguments that a case study is an in-depth examination or examination of certain phenomena in a contextual setting to provide a descriptive explanation of experiences, events and the research process (Moleong, 2014). Harrison, Birks, Franklin and Mills state that using case studies is very important for qualitative research because it helps to understand certain phenomena from an in-depth and real-life perspective (Harrison et al., 2017).

Researchers use this method based on considerations, including being able to explain and provide a holistic understanding of the theme or research topic, namely the principal-agent in electronic-based budgeting planning. Therefore, researchers consider exploratory case studies as the right method in this research because they are oriented towards data obtained from various sources in order to obtain evidence by referring to or being guided by theory so that they can explore research phenomena. Based on this, the writer explores the information needed not only in writing and textual data but also non-textual which is presented in the form of tables, figures and graphics (Sugiono, 2007). The case study that the researchers took was the mapping of actors in electronic-based budget planning in the City of Yogyakarta. Data collection techniques used were in-depth interviews and document data analysis. Interviews were conducted with TAPD (Local Government Budget Team) which included the Chairperson, Deputy Chairperson...
and Secretary, Regional Representative Council including Fraction Chairmen and members of the Budget Board representing the Indonesian Party of Striving Democratic (PDIP) Fraction, National Mandate Party (PAN), Great Indonesia Movement Party (Gerindra), Worker class Party (Golkar), the Social Justice Party (PKS) and National Democrats Party (Nasdem). Meanwhile, the documentation study was carried out by tracing report data, minutes of meetings, news articles, photographs and audio-visual recordings.

Results and Discussion
Regional budgeting planning in the City of Yogyakarta is colored by three main actors, namely the executive, legislature and the community. These three elements or elements form a principal-agent relationship in budget planning. The principal-agent theory is used as an analytical knife for preparing and implementing public budgets (Braun & Guston, 2003). In the context of Yogyakarta City, budget preparation can be viewed from two perspectives, namely the agency relationship between the people and the legislature and the agency relationship between the legislature and the executive. Society in the position of principal and legislature as agents. While the legislative agency relationship with the executive, the principal becomes a legislative position and the agent is attached to the executive. The community is classified into three, namely the general public, community leaders and NGOs. Relationships that are established are broadly related to the interests that are fought for, the fulfillment of interests and the forms of relationships that are built. These interests can relate to individuals, groups or regions, whether brought by the executive through OPD (Regional Apparatus Organization) and TAPD (Local Government Budget Team), DPRD (Regional Representative Council) which are grouped into council members and institutions and the community through community leaders with extraordinary informal power so that they can influence other institutions. Therefore, these interests are trying to be achieved by various actors in budget planning by looking at the opportunities that exist. This opportunity is trying to be achieved with self-beneficial behaviors both formal and non-formal. This is better known as opportunistic behavior. Opportunistic behavior is interpreted as an attempt to gain profit through dishonest practices in economic activities (transactions) (Klein et al., 1978).

The first interest to be discussed is the Regional Representative Council as an agent of the community. The interests of the community are related to public services and other important needs such as health and education. Second, be proud of being an agent of the leadership of the Regional Representative Council. Institutionally, Budget Agency fights for the interests of the Yogyakarta City Regional Representative Council, both internally and externally, the Yogyakarta City Government. However, behind institutional interests, there are also personal interests, for example politics that coincide with budget planning priorities. The aim is for the political interests of council members to be re-elected in the general election for the 2024-2029 period. Particularly in the Budget Agency, personal interests intersect with factions and sometimes force their will to be fulfilled. Apart from those intersecting with the faction, there are purely personal interests, one of which is the economy through procurement projects in the Yogyakarta City Regional Representative Council. To speed up its fulfillment, Regional Representative Council members establish non-formal communication with the Yogyakarta City Government through the OPD (Regional Apparatus Organization) because at the Budget Agency level they cannot fulfill it quickly because the work system or mechanism is formal in nature.

In addition to the Regional Representative Council as an agent of the community and the principal of the executive. There are also personal interests that surfaced from the executive as agents of the Yogyakarta City Regional Representative Council. This interest does not cover all OPD (Regional Apparatus Organization) or Local Government Budget Team, but only certain ones who have political will in the regional head elections for the 2024-2029 period. An indication of the emergence of this interest is when the budget planning discussion process between Budget Agency and Local Government Budget Team there is a sudden budget allocation, even though during the formal communication process or work meetings it has never been discussed. For example, the budget allocation for social grants. This case could occur because the executive or the City Government of Yogyakarta have information power that the Commission and Budget Agency do not know. These interests are trying to be fulfilled personally by Regional Representative Council members and institutions. There are two mechanisms for fulfilling these interests, namely formal and non-formal. Formal through a formal meeting mechanism, while non-formal uses a personal approach in the form of lobbying or negotiation. Furthermore, the
interests of the factions are in the form of party policies that must be guarded, for example regeneration in the next general election. National Mandate Party classifies faction interests into two, namely practical and historical. Practical politics related to elections and history cannot be separated from supporters. Finally, the interest of the institution is related to the bargaining power of the Regional Representative Council towards the Yogyakarta City Government and ensuring that the community is related to public services and other important needs such as health and education.

Fulfillment of these interests is carried out in several ways, namely for the community through recess and renegotiation and for the interests of the council through leaders who bring personal and institutional interests. The leadership of the board must think broadly and be able to accommodate all incoming interests. Therefore, the duties and responsibilities of Regional Representative Council leaders are enormous, both internal and external institutions. Behind the great responsibility of the Regional Representative Council leadership there is the possibility of personal interest being brought in because to get this position one has to pay the administrators of political parties at the central level even though each party has different policies. As a consequence, there are differences in the interests of each individual member and leadership of the Regional Representative Council. Personal or individual interests are essentially brought up by each board member in the budget planning process. This is normal and natural as long as you are able to explain at the faction level and intersect with common interests. If so, it will be agreed upon by all Regional Representative Council members. However, problems will arise if the personal members of the board play individually in collaboration or in coalition with the executive.

After outlining the interests of the Regional Representative Council, it will be explained in the executive area. The executive's interest as a Regional Representative Council agent normatively is to ensure that policies, programs and activities are entered according to the platform. The platform referred to by the executive is democratic so that it can benefit in the form of technical certainty, regulatory certainty and certainty of sustainable urban development. These benefits can be achieved if the executive is able to function as an agent optimally and in accordance with regulations. The budget planning process in the Yogyakarta City Government area cannot be separated from the Mayor and Deputy Mayor who have political interests through the RPJMD (Regional Medium Term Development Plan) and RKPD (Regional Development Work Plan). In addition, there are also personal interests that are wrapped in operational positions.

Agency relations in budget planning also include the community, Regional Representative Council and Yogyakarta City Government. The community in the principal-agent theory acts as the principal of the Regional Representative Council and the Government of the City of Yogyakarta. Meanwhile, the Regional Representative Council and Yogyakarta City Government are agents of the community. The agency relationship that is formed is normative, in which the community is only involved in official forums held by the Regional Representative Council and the Yogyakarta City Government such as the Musrenbang (Development Planning Conference) starting at the District to City and RDPU levels while input proposals are not their territory. Apart from that, for aspirations through the Regional Representative Council using the mechanism of pokir and recess. There is no difference in the form of this relationship between conventional and electronic. Particularly in the City of Yogyakarta, the people involved are Non-Governmental Organizations. There are several interests that have been described above which are categorized as opportunistic behavior. Opportunistic behavior can be classified into three, namely moral hazard, adverse selection and rent seeking. First, moral hazard as an activity carried out by the agent which is not fully known by the principal, so that the principal can take action beyond his knowledge. Moral Hazard in the agency context is caused by the existence of asymmetric information between principal and agent (Nickolas et al., 2022). In the context of budget planning in the City of Yogyakarta, moral hazard is evidenced by the existence of programs and activities carried out that are not known by the Regional Representative Council such as the emergence of social assistance funds in discussions on budgeting planning. Meanwhile, internally in the Regional Representative Council is the establishment of the Yogyakarta Syariah Bank. This behavior caused by different conditions, namely first, it occurs due to a condition of monitoring disability (hidden action), where the principal cannot observe the agent's behavior. Second, the inability of the principal to observe the agent's actions indicates the existence of undesirable behavior production (unwanted behavior) from a principal's perspective. The behavior described above corresponds to two conditions.

Third, it occurs because of the undesirable outcome (impact) production, where moral hazard is
a form of post-contractual opportunism that arises due to actions that have efficiency consequences that cannot be observed freely so that they can fulfill their personal interests at the expense of other parties. This condition is evidenced by the mayor’s request for operations such as maintenance of official homes and other supporting facilities. Finally, it occurs because of moral disability, namely the tendency for immoral behavior. For this in the city of Yogyakarta did not happen. Second, adverse selection. As agents and other insiders usually having more information than the principal, which will influence the decisions taken. This type occurs when there is a difference in the amount of information held by the principal and agent so that they cannot distinguish whether what is being done is good or not. Usually there is a tendency for agents to hide information to benefit themselves or their group. Budget planning in the City of Yogyakarta also has this behavior in both the Regional Representative Council and the Yogyakarta City Government.

The Yogyakarta City Government has more information regarding detailed budgets and program activities so that the tendency for decisions related to acceptance and rejection of SIPD pokir proposals becomes the domain of TAPD (Local Government Budget Team). Then came the social grants budget in the discussion which previously did not exist from the initial planning process. The other side regarding political interests is more powerful than the Yogyakarta City Regional Representative Council. Adverse selection also appeared within the Regional Representative Council internally, one of which was the establishment of the Yogyakarta Syariah Bank, which was unknown to other factions that suddenly entered into budget planning discussions. The third is rent seeking behavior. Rent seeking is focused on individual government efforts. This concept is seen as rent-seeking behavior from a negative lens (Tullock, 2005). The last opportunistic behavior is associated with economic motives or interests. Its manifestation is in the form of involvement in internal procurement projects in the Regional Representative Council and informal personal cooperation with the executive (Graf Lambsdorff, 2002).

Principal-agents in budget planning in Yogyakarta City hierarchically can be grouped into four, namely (a) agency hierarchy domination, conflict and agency information control, (b) executive domination hierarchy, (c) legislature domination hierarchy and (d) issue domination hierarchy networks. Domination of agency hierarchy, conflict and control of agent information is interpreted as a condition where agents control the flow of budget information and thereby dominate the decision-making process (Hoadley & Hatti, 2021). Regional Representative Council and Yogyakarta City Government act as principal and agent. The position of the agent is used by the Regional Representative Council against the community to determine or adopt policies according to their function. Likewise, the Yogyakarta City Government as an agent controls information regarding detailed budgets, programs and activities so that they can be decisive in budgeting policies such as distribution and allocation as well as approval or rejection of proposals. Legislative domination, conflict and control of legislative information are focused on the legislature is the principal that controls the executive (agent) The legislature on the other hand refers to its committee system, the majority requirement for power and the will of its members to pursue personal interests over control over the institution. This dominance is evidenced in budgeting discussions, where the personal interests of legislators, factions as manifestations of the party, council leadership and Regional Representative Council institutions emerge. This institution has political power and great bargaining power to negotiate interests so that at every TAPD (Local Government Budget Team). Work meeting, Budget Agency decisions always follow. Executive domination, conflict and control of executive information emphasizes the equality of the executive and the legislature, where they work as partners. Strength on budget details, programs and activities is used as a negotiating tool for the Regional Representative Council to approve those proposed by the Yogyakarta City Government. In the era of Regional Development Information System, the executive became the determinant of budgeting policy through the Regional Development Information System main ideas, validation process and input the results of budget planning through the system. Therefore, Regional Representative Council can only submit, record and follow up on incoming reports.

The dominance of issue networks in budget planning in the City of Yogyakarta is related to aspects that are crucial and receive joint attention from the legislature, executive, community and central government. Therefore, Regional Representative Council does not have as much legitimacy as before because it has been determined by the center. Issues that develop and are discussed in budget planning change every year depending on regional conditions so that the
Musrenbang (Development Planning Conference) is thematic in nature. The thematic Musrenbang (Development Planning Conference) is an initiative or innovation by the City Government of Yogyakarta to realize quality development planning. The opportunistic behavior described above can be described in outline in table 1.

<table>
<thead>
<tr>
<th>No.</th>
<th>Category Behavior</th>
<th>Institution</th>
<th>Interest Level</th>
<th>Embodiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Moral hazard</td>
<td>Yogyakarta City Government</td>
<td>Individual</td>
<td>the emergence of social assistance funds in the discussion planning budgeting for interest 2024 election</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internal Parliament of the City of Yogyakarta</td>
<td>Groups (PKS and PAN parties)</td>
<td>Establishment of Bank Yogyakarta Syariah</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yogyakarta City Government</td>
<td>Individual Mayor</td>
<td>Request budget for operations and facilities</td>
</tr>
<tr>
<td>2</td>
<td>Adverse selection</td>
<td>Yogyakarta City Government</td>
<td>Individual</td>
<td>the emergence of social assistance funds in the discussion planning budgeting for interest 2024 election</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internal Parliament of the City of Yogyakarta</td>
<td>Groups (PKS and PAN parties)</td>
<td>Establishment of Bank Yogyakarta Syariah</td>
</tr>
<tr>
<td>3</td>
<td>Rent seeking</td>
<td>Internal Parliament of the City of Yogyakarta</td>
<td>Individual</td>
<td>Projects internal procurement of DPRD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Government and Yogyakarta City Regional Representative Council</td>
<td>Individual</td>
<td>Work as personal informally with Yogyakarta City Government</td>
</tr>
</tbody>
</table>

Source: Processed Data, 2022

Table 1 explains that in budget planning there are all models of opportunistic behavior. This behavior is mostly at the level of individual interest in both the Yogyakarta City Regional Representative Council and the Yogyakarta City Government. The motive behind it is centered on two factors, namely practical politics and economics. However, this behavior does not apply institutionally, but only personally as members of the parliament and political parties which are manifested in the factions. Opportunistic behavior can also be seen from the actions taken by the executive, according to the Chairman of the TAPD (Local Government Budget Team), which did not occur institutionally. The budget planning process has been carried out in accordance with regulations and procedurally has followed the rules set by the central government. Therefore, policies or decisions taken by the executive must be understood by the leadership and members of the board. This understanding as an implication of improving the competence or quality of the Yogyakarta City Regional Representative Council is even smarter than the OPD (Regional Apparatus Organization) in budget planning. Particularly in the City of Yogyakarta, budgeting planning for regional leaders is not as attractive as it used to be economically and has shifted towards land or agrarian affairs. Another aspect that emerges is privilege. The discussion on this matter did not involve the Yogyakarta City Regional Representative Council, only the Ministry of Home Affairs, the Ministry of Finance and City Government officials, namely the Regional Land Agency / Ministry of Agrarian Spatial Planning (ATR) in the regions.

Conclusions
Budgeting planning in the City of Yogyakarta is characterized by principal-agent relations. This agency relationship involves three actors, namely the community, Yogyakarta City Regional Representative Council and Yogyakarta City Government. The community plays a role as the principal of the Yogyakarta City Regional Representative Council and Yogyakarta City Government.
Government. Yogyakarta City Regional Representative Council as the principal of Yogyakarta City Government and community agent. The internal level of the Yogyakarta City Regional Representative Council also has an agency relationship, where Budget Agency is the agent for the leadership of the council. This relationship also covers internal Yogyakarta City Government, namely TAPD (Local Government Budget Team) as the agent of the Mayor and Deputy Mayor. Relationships that are built in budget planning can never be separated from interests. Therefore, it allows for opportunistic behavior such as moral hazard, adverse selection and rent seeking both in the Yogyakarta City Budgeting Implementing Council and the Yogyakarta City Regional Government. This behavior arises due to information control from each party even though they have implemented planning SIPD (Regional Development Information System).

Theoretically, this suggests that actor involvement, actor interaction and fulfillment of agent interests are fully electronic so as to be able to realize quality budgeting planning that is transparent, accountable, integrated, harmonized and synchronized. For this reason, an SPBE architecture is needed to support the implementation of e-government and e-governance in the context of development planning as a single unit. Apart from that, strengthening electronic-based budgeting planning both from regulations and application systems so that the models used in discussions are purely electronic. Therefore, it is necessary to apply the concept of interactive democracy to planning SIPD (Regional Development Information System). This study has limitations that only focus on principal-agent relations in electronic-based budgeting planning, so further research is needed on reducing opportunistic behavior as a result of quality planning.

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