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Access to Safe Drinking Water

Does Specific Transfer and Good Governance Matter?

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Abstract: The National Medium-Term Development Plan for 2020-2024 aims to provide 100% of residents with access to safe drinking water. However, according to Statistics Indonesia, the average number of residents with access to safe drinking water will still be 92% in 2022. Attaining this goal is difficult without focusing on fiscal transfer policy and governance. This study explores the relationship between fiscal transfer and good governance toward access to safe drinking water in each district/city in Indonesia using 2017-2022 data from The Socioeconomics Survey, Statistics Indonesia, Ministry of Finance, and Ministry of State Apparatus Utilization and Bureaucratic Reform. The panel data regression uses a fixed effect model, which shows that specific-purpose capital grants for drinking water and good governance significantly impact access to safe drinking water. These results indicate that specific-purpose capital grants still hold a crucial role in providing access to safe drinking water. Meanwhile, good governance is also a key factor in obtaining optimal outcomes in safe drinking water through the implementation of efficient government. The subsample analysis also shows that specific-purpose capital grants might have a similar impact on both regions. Meanwhile, in the western region of Indonesia, good governance and poor governance have a stronger effect on access to safe drinking water.

Keywords: Fiscal Transfer; Good Governance; Safe Drinking Water.

1. Introduction

Enhancing the availability of clean and consumable water and proper sanitation facilities leads to immediate health improvements and economic, and societal advantages. In fact, according to the World Health Organization (WHO), addressing the urgent priority of improving water, sanitation, and hygiene in healthcare facilities can have immediate health benefits and positive impacts on economic and social factors (World Health Organization & UNICEF, 2013). Authorities, development agencies, and water sector organizations face a significant challenge in providing sufficient and enhanced drinking water, particularly in countries experiencing rapid population growth (UNICEF & World Health Organization, 2015).

Ensuring access to better quality water is essential to prevent negative health consequences in infants and children, such as respiratory illnesses, malaria, and diarrhea, among the main causes of mortality in this age group (Armah et al., 2018). Household decisions regarding drinking water have significant implications for both health and socioeconomic development. In countries with low income, many waterborne diseases, including dysentery, cholera, hepatitis A, typhoid, and diarrhea, have been linked to the consumption of contaminated water. In Africa, drinking unsafe water, along with inadequate sanitation and hygiene, contributes to the deaths of approximately 2670 people each day due to illness (Abubakar, 2018). In Nigeria, children below the age of five have a 38% higher risk of dying because of unsafe drinking water and poor sanitation (Ezeh et al., 2014).

In Indonesia, based on The National Medium-Term Development Plan for 2020-2024, the government plans to reach 100% of residents with access to safe drinking water. The availability of access to safe drinking water in Indonesia has been on the rise from 2017 to 2022. Yet, according to the Central Bureau of Statistics, it is anticipated that by 2022, the proportion of the Indonesian population with access to safe drinking water will remain at 91%. This plan needs to be carried out carefully to ensure that access to safe drinking water is available for all. Besides being available for all, this access is also needed to fulfill public service standards. The provision of drinking water services in Indonesia continues to face numerous challenges. One prominent obstacle is the inability of the entire community to access an adequate supply of drinking water. Moreover, based on the data from the Central Bureau of Statistics, 19 out of 34 provinces in Indonesia are still below the national average (91%) in terms of access to safe drinking water in 2022. This underscores the unequal distribution of public services across different regions, highlighting the need for further attention and action to address this disparity. Widodo (2019) explained that the disparities in public service infrastructure in Indonesia can be attributed to irregular and inconsistent budget management. Suboptimal performance in public services leads to inefficiencies in the provision of public service infrastructure.

Access to safe drinking water can be made available through a fiscal transfer scheme. The idea behind this approach is each municipality will face fiscal challenges. Often, they need assistance from the central government. By doing so, local governments are expected to provide better and more efficient public services, which aligns with the principles of decentralization (Oates, 1972). Ihwandi and Khoirunurrofik (2023) stated that the level of regional fiscal autonomy remains relatively low, while the dependency on external financial resources, including intergovernmental transfers and village funds, continues to be substantial. It seems that the maximization of regional income sources needs to be optimized to strengthen the fiscal capacity.

Theoretical formulations, such as those made by Mehta et al. (2005) and Van Ginneken et al. (2011), find that developing countries have relied heavily on public

financing to expand water coverage, which has been crucial in making healthcare accessible to more people. For Mehta et al. (2005), public financing funds can be utilized for infrastructure development, rehabilitation, and the financing of operation and maintenance. This can contribute to the improvement and accessibility of various services. It can also fund community capacity building, policy formulation, or multi-sector supervision. Van Ginneken et al. (2011) highlight the long life of infrastructure, - and the need for sufficient maintenance funds to be available. On the other hand, redistribution and market failures require investment and necessitate public intervention. According to Saputra and Setiawan (2021), one of the interventions is adequate governance which canto hinder regional economic losses.

Fiscal transfer as a decentralization instrument can enhance society's welfare and development, such as health and education (Pradana & Mun'im, 2022; Purba et al., 2023; Sandjaja et al., 2020). This paper will focus on specific transfers as an instrument for the government to fund public infrastructure. Specific transfer refers to a specific-purpose capital grant for drinking water or Dana Alokasi Khusus Fisik (DAKF) Air Minum. According to data from the Ministry of Finance, the allocation of specific-purpose capital grants for drinking water has shown a consistent upward trend from 2017 to 2022. This indicates that the government is committed to providing 100% residents with access to safe drinking water. Lewis (2014) explained that this transfer mainly aims to allocate funds to local governments with limited financial resources, especially those in remote areas. This transfer requires each region to comply with regulations from the central government when implementing budget use. Juanda and Handra (2017) emphasized that specific transfers are immune to the distortions often found in general-purpose transfer formulas. This is because specific transfers have the potential to enhance the quality of expenditure by each regional government. Specifically, these specific transfers are allocated to regions to support national priority programs in compliance with regulations overseen by the central government. Efficient and effective specific transfers have the power to stimulate economic growth and narrow regional disparities.

The prioritization of fiscal transfers to develop public services goes hand in hand with the imperative of establishing good governance by the authorities. Widowati et al. (2023) stated that from the government's perspective, resistance to change in implementing governance might be the main obstacle to society's development. Simanjuntak (2015) and Prabowo (2019) even declare that regional autonomy without institutional efficiency can be disastrous. Thus, Afonso et al. (2010) suggest that good governance enables the municipality to exercise oversight, formulate strategic plans, and allocate funds for multifaceted development. It is essential to recognize that a nation's increased budgetary allocation does not automatically translate into superior public services. To guarantee the delivery of high-quality public services, it is crucial to ensure efficient and effective budget expenditure management.

The government's responsibility to ensure that financial management adheres to various aspects of good governance represents a crucial element of effective governance. This is instrumental in achieving more optimal outcomes for the selected inputs (Afonso et al., 2010; Kumah & Brazys, 2016; Rajkumar & Swaroop, 2008; Rizki & Kurniawan, 2023). Sastra Wijaya (2024) stated that minimizing inefficiency in public service outcomes can be achieved by implementing good governance. According to the Ministry of State Apparatus Utilization and Bureaucratic Reform, there has been an improvement in government governance at the district/city level from 2017 to 2022, as evidenced by the increase in the accountability evaluation score called SAKIP (Sistem Akuntabilitas Kinerja Instansi Pemerintah), especially in the western region of Indonesia. The concept of good governance in this study will further focus

on accountability, which according to the Ministry of State Apparatus Utilization and Bureaucratic Reform pertains to the government's dedication to effectively implementing established work programs. This accountability includes planning, measurement, reporting, and internal evaluation in each district/city.

Globally, many studies explore the determinants of access to safe drinking water, yet those studies have yielded mixed results. Lewis (2014) found that local government investment positively influences the creation of water connections. Sow and Razafimahefa (2015) stated that fiscal decentralization has a positive impact on public service delivery in developed countries but not in developing countries. Pinilla-Rodríguez and Torres-Sánchez (2019) found that there is a highly consistent positive correlation between public social spending and the percentage of coverage of access to water in rural and urban areas. Sudarsono and Nurkholis (2020) undertook a study to quantify the substantial impact of government funding on achieving universal access to drinking water in Indonesia. The findings of this study demonstrate that government funding exerts a significantly positive influence on the accessibility of drinking water in Indonesia. However, Widodo (2019) found that special transfer to the Papua Region has a negative impact on basic public infrastructure (water and sanitation) at the district/city level. Triesmarandita et al. (2022) also said that the government's funding for water does not affect access to improved drinking water. These mixed findings need to be addressed to reach a consensus on the issue and deepen the discussion.

Studies have also been conducted on the relationship between good governance and public service delivery. The findings from prior studies indicate a substantial correlation between effective governance and heightened efficacy in public service delivery. Better governance can enhance better outcomes in public service delivery (Afonso et al., 2010; Kumah & Brazys, 2016; Rajkumar & Swaroop, 2008; Rizki & Kurniawan, 2023). Afonso et al. (2010) found that effective government positively impacts public sector outcomes (health and education). Kumah and Brazys (2016) found that good governance can enhance health development. Rajkumar and Swaroop (2008) found that good governance positively impacts healthcare and education. Rizki and Kurniawan found that good governance can strengthen public service performance. Nonetheless, contrasting results have been documented in earlier investigations where no association was established between good governance and the enhancement of public service quality (Binh & Giai, 2022).

The rationale between good governance and public service delivery can be explained through the mechanism of budget allocation management. As stated by the World Bank (2003), the formulation, execution, and monitoring of budget allocation through good governance can lead to better provision of public goods and services. The translation of budget allocation management into public goods and services hinges on the government. It takes accountability for government actions to produce effective services. Access to safe drinking water is also part of public services; it primarily relies on government transfer, necessitating good governance to manage budget allocation. The accountability to manage this budget will eventually enhance access to safe drinking water. This rationale about the impact of good governance and public services motivates us to seek empirical evidence.

This study investigates the association of specific-purpose capital grants with access to safe drinking water and whether good governance plays a role in improving access to safe drinking water. Previous research has extensively explored the correlation between fiscal transfers and public service delivery, including access to safe drinking water. However, limited studies still examine the correlation between good governance and access to safe drinking water within the context of public service

delivery. Most previous studies on the relationship between good governance and public service delivery have primarily centered on healthcare or education, yet safe drinking water remains under-explored. After exploring the literature, we seek to address this issue and fill the gap by examining the association of good governance in providing safe drinking water on the district/city level. Furthermore, this study also contributes to a larger extent of regional economics by expanding our analysis using a subsample based on a district/city in Western Indonesia and Eastern Indonesia. Those contributions are valuable in determining the best fiscal policy designs for implementing public service delivery. This paper focuses on its analysis from 2017 to 2022 due to the availability of the data. The correlation effect was determined using the fixed effect method. This paper is divided into four sections. The introduction describes the background, objectives, and research contribution. The second section discusses the method used for estimating the impact of fiscal transfer and good governance on access to safe drinking water. The third section delivers the estimation results and discussions. Finally, the last section reveals conclusions.

2. Methods

The percentage of households with access to safe drinking water in each district/city is included as a dependent variable, and the source of this data is the National Socioeconomic Survey (Susenas). This variable was measured from the questionnaire item: "What is the main source of drinking water for your household?" The National Socioeconomic Survey adopts the definition of safe drinking water from SDG 6. A household can be considered to have access to safe drinking water if the household consumes secure drinking water sources, such as individual taps for piped water; public tap/public hydrant; drilled wells; pump wells; protected wells; retail plumber/retail seller; protected springs; rainwater storage; bottled drinking water; and refill water. Households that rely on bottled drinking water and refills must be evaluated for their options on the source of water for various daily activities such as bathing, washing, latrine, cooking, and sanitation to assess their water sustainability. If the water source for these daily activities comes from a source of safe drinking water other than bottled drinking water and refills, the household can have access to safe drinking water.

The empirical model of this study refers to the model in Lewis (2017). It includes a proxy that measures the outcome of public service delivery and, in this study, is access to safe drinking water. The predictors include related variables that are considered to impact the outcome. Our study utilizes panel data from 509 districts/cities (i) in Indonesia during 2017-2022 (t). The specification model in this study is as follows:

$$ASDW_{it} = \beta_0 + \beta_1 LnSCG_{it} + \beta_2 GG_{it} + \beta_3 PG_t + \beta_4 LnSCG_{t-1} + \beta_5 LnGS_{it-1} + \beta_6 LnMW_{it} + \beta_7 LnGRDPC_{it-1} + \beta_8 LnPD_{it} + \beta_9 CP_{it} + \beta_{10} TFW_{it} + \beta_{11} E_{it} + \beta_{11} COV_{it} + \varepsilon$$

where ASDW is access to safe drinking water; SCG is a specific-purpose capital grant for drinking water; GG is good governance dummy; PG is poor governance dummy; GS is government spending in housing and public facility; MW is municipal waterworks; GRDPC is gross regional domestic product (GRDP) per capita; PD is population density; CP is city population; TFW is time for fetching water; E is electrification; COV is dummy for COVID-19; Ln is log transformation; β is the parameter to be estimated; and ε is error term.

Our main predictors are specific-purpose capital grants and good governance. Specific-purpose capital grants for drinking water (in billion Rupiah) are collected from the Ministry of Finance. The proxy of good governance utilizes the accountability data

called SAKIP from the Ministry of State Apparatus Utilization and Bureaucratic Reform for each district/city. This proxy is only available in a predicate. Hence, we transform it into a dummy variable to make it available for regression. There are seven predicates: AA, A, BB, B, CC, C, and D. AA is given to each district/city with outstanding governance performances. Meanwhile, D is for those who still have not applied good governance in their administration. The dummy for this predicate is divided into two categories. First, the good governance dummy is 1 when the municipality receives AA and A, - and 0 when the municipality gets the rest. The dummy of good governance is expected to have a positive sign. Second, the poor governance dummy is 1 when the municipality receives C and DD, - and 0 when the municipality gets the rest. The dummy of poor governance is expected to have a negative sign. The use of a poor governance dummy is to test the consistency of our model to see whether better government governance can deliver better access to safe drinking water.

We were also aware that there might be other factors affecting the outcome. To address this issue, we use several control variables. The first one is the lag of specific-purpose capital grants for drinking water. We argue that the allocation of the current grant is affected by the previous spending of it. That is why we elaborate on the lag of time. We use the lag of house and public facility spending (in billion Rupiah) from the Ministry of Finance for government spending. We use this variable to control other district/city spending for drinking water from other income resources. We also consider the use of lag of time because government spending in public facilities is designed to provide long-term effects. It is expected to have a positive impact on the dependent variable. For the municipal waterworks, we use real water volume production (million liter/second), which is expected to be positive. Gross regional domestic product per capita is set to be a proxy that controls the region's economic performance. It is expected to be positive. According to Statistics Indonesia, population density is the number of people residing per 1 km^2, and it is expected to be positive. City population is the percentage of people living in a city, which is expected to be positive. The time needed to fetch water is the average time for households to get to the source of safe drinking water (in minutes), and it is expected to be negative. Electrification is the percentage of households with access to electricity and is expected to be positive. Lastly, we create a dummy variable for COVID-19 where 1 occurs during the pandemic (2020-2022) and 0 before the pandemic (2017-2019). It is expected to be positive.

The hypothesis for this research is both specific-purpose capital grants and good governance have a positive impact on access to safe drinking water. We not only conducted analyses for districts/cities in Indonesia but also explored subsamples for districts/cities in the eastern and western regions of Indonesia. The eastern regions of Indonesia contain districts/cities on Sumatera Island and Java-Bali Island, while the western regions include districts/cities on Borneo Island, Sulawesi Island, Maluku Island, and Papua Island. We strongly affirm the significance of this subsample analysis, especially given the persistent disparities in access to safe drinking water across different regions. According to Statistics Indonesia (2022), Kalimantan Island, Sulawesi Island, Maluku Island, Nusa Tenggara Island, and Papua Island in the eastern region of Indonesia continue to exhibit access to safe drinking water below the national average. Furthermore, the parameters of the model are estimated using the fixed-effect method. This method can deal with the issue that unobserved individual effects are correlated with the repressor in the panel data model (Greene, 2012).

3. Results and Discussion

The statistical summary is shown in Table 1. The number of observations has decreased from 509 municipalities to 450 municipalities due to the unavailability of

data for SAKIP in certain areas. We also excluded every municipality from the capital city of Jakarta due to the differences in characteristics. The final observation from 2017-2022 is 2.700 observations. It is safe to say that it is still a random sample.

Table 1. Descriptive Statistics

Variables	Mean	Std. Dev.	Min	Max
Access to Safe Drinking Water	0.807	0.164	0.153	1
Specific-purpose Capital Grants	3.469	3.23	0	39.320
Good Governance Dummy	0.022	0.147	0	1
Poor Governance Dummy	0.128	0.334	0	1
Houses & Public Facility Spending	129.500	157.700	0	1756
Water Volume Production	9.748	24.995	0	366
GRDP per Capita	17.17	.625	15.655	19.858
Population Density	1040.192	2232.439	1.5	15643
City Population	.429	.304	0	1
Time Fetching for Water	1.78	1.747	0	16.633
Electrification	0.976	0.061	0.269	1
COVID-19 Dummy	0.5	0.5	0	1

The overall ratio of households with access to safe drinking water has a mean value of 0.81, meaning 81% of households in each district/city have access to safe drinking water. The ratio ranges widely from 15% to 100%. The dispersion based on the standard deviation is 19% from the mean value. This indicates that there is still a disparity in access to safe drinking water across regions in Indonesia. The specific-purpose capital grants for drinking water have a mean value of 3.5 billion Rupiah. Its value ranges widely from 0 to 39.3 billion Rupiah. Both good governance and poor governance dummy ranges across regions with 0 and 1 values.

The good governance and poor governance dummy variables show that the SAKIP score varies across regions. The good governance dummy indicates that the region is performing well and is accountable for carrying out established and mandated work programs. Conversely, the poor governance dummy signifies that the region has not shown accountability in implementing established and mandated work programs.

The estimation results are shown in Table 2. All models in the table below show a significant effect on the outcome. For model 1, we analyze the full sample for all districts/cities in Indonesia. For model 2, using a subsample from model 1, we analyze each district/city in the western region of Indonesia. Again, in model 3, using a subsample from model 1, we analyze each district/city in the eastern region of Indonesia.

Our results complemented previous results that investigated the relationship between fiscal transfer and access to safe drinking water (Lewis, 2014; Pinilla-Rodríguez & Torres-Sánchez, 2019; Sow & Razafimahefa, 2015; Sudarsono & Nurkholis, 2020). It also complements previous studies that investigated the relationship between good governance and public service outcomes (Afonso et al., 2010; Kumah & Brazys, 2016; Rajkumar & Swaroop, 2008; Rizki & Kurniawan, 2023). According to Lewis (2017), specific transfers remain crucial for the efficiency of public infrastructure. This funding can lead to improved access to safe drinking water when coupled with good governance. Based on our estimations of the results, the specific-purpose capital grants for drinking water as one of the fiscal transfer instruments

Table 2. Estimation Results with Fixed Effect Method

	(1) Full Sample Access to Safe Drinking Water	(2) Western Indonesia Access to Safe Drinking Water	(3) Eastern Indonesia Access to Safe Drinking Water
Specific-purpose Capital Grant	0.0012***	0.0010***	0.0011***
	(0.0002)	(0.0003)	(0.0003)
Good Governance Dummy	0.0212**	0.0249*	0.0226*
	(0.0104)	(0.0131)	(0.0127)
Poor Governance Dummy	-0.0291***	-0.0428***	-0.0218*
	(0.0094)	(0.0144)	(0.0116)
Lag of Specific-purpose Capital Grant	0.0013***	0.0014***	0.0010***
	(0.0002)	(0.0003)	(0.0003)
Lag of Houses & Public Facility Spending	0.0016***	0.0016**	0.0012*
	(0.0005)	(0.0006)	(0.0007)
Water Volume Production	0.0014	0.0043	0.0013
	(0.0026)	(0.0073)	(0.0010)
Lag of GRDP per Capita	0.0729*	0.2719***	0.0349
	(0.0379)	(0.0637)	(0.0303)
Population Density	0.0183	0.0306	0.0179
	(0.0128)	(0.0191)	(0.0158)
City Population	0.4689**	1.1148***	0.2178
	(0.2174)	(0.1619)	(0.1493)
Time Fetching for Water	-0.0430***	-0.0436***	-0.0358***
	(0.0045)	(0.0059)	(0.0064)
Electrification	0.1662*	0.2816	0.1914**
	(0.0859)	(0.2090)	(0.0880)
COVID-19 Dummy	0.0617***	0.0528***	0.0548***
	(0.0040)	(0.0048)	(0.0043)
_cons	-0.9860	-4.9852***	-0.2002
	(0.6701)	(1.0793)	(0.5131)
R-square (within)	0.4207	0.4741	0.3913
Observations	2250.0000	1305.0000	945.0000
Groups	450.0000	261.0000	189.0000

Note: * p < .10, ** p < .05, *** p < .01

significantly positively impact access to safe drinking water based on all models. In model 1, an additional 1% spending of specific-purpose capital grants for drinking water from the previous year's spending would increase 0,0012% of households with access to safe drinking water. Meanwhile, good governance also plays a vital role in providing access to safe drinking water.

According to Gisselquist (2012), governance and political power are inseparable when it comes to the management and administration of a country. Governance also signifies public institutions' utilization of government authority to formulate public policies and deliver public goods and services to the populace. This form of governance not only influences objectives but also affects outcomes, such as economic

development. Moreover, De Carvalho et al. (2009) suggest that the government can prevent shortcomings in providing safe drinking water by demonstrating good water management. The SAKIP proxy, as shown in Table 2, significantly impacts access to safe drinking water. In model 1, the impact of a good governance dummy is significant. This indicates that the more, the merrier. It means the better district/city governments implement good governance, the more they can improve access to safe drinking water. Each district/city with AA and A predicate has a 0,0212% chance of having better access to safe drinking water than other municipalities below that predicate. Conversely, the poor governance dummy in each district/city with C and D predicate has a 0,0291% chance of having worse access to safe drinking water than other municipalities that get above that predicate.

Additional information can be taken from the parameters of control variables. The lag of specific-purpose capital grants significantly has a positive impact on access to safe drinking water. This indicates that the allocation of current grants is influenced by the performance of its spending from the previous year. The lag in housing and public facility spending significantly has a positive impact on the outcome. Municipal waterworks represented by water volume production do not significantly affect access to safe drinking water. We cannot translate its economic interpretation since the coefficient of this control doesn't have a significant impact on the outcome. Other socio-economics control variables such as lag of gross regional domestic product per capita, city population, time for fetching water, electrification, and COVID-19 have significant impact on the outcome. The increasing percentage of lag of gross regional domestic product per capita might increase access to safe drinking water. The more people reside in a city, the more access to safe drinking water is provided to them due to easier access for the government to provide public services. The longer it takes for a household to fetch water from its resources might affect lower access to safe drinking water. The increasing percentage of households with access to electricity will affect higher access to safe drinking water. It is well known that electricity can power water pumps. COVID-19, which occurred from 2020 to 2022, increased drinking water consumption significantly.

The subsample analysis for each district/city based on the western region of Indonesia is shown in model 2 from Table 2. The main predictors of this study once again show a significant impact on access to safe drinking water. Specific-purpose capital grants for drinking water and good governance are vital in providing this access. Our results show that specific-purpose capital grants and good governance significantly impact each district/city in the western region of Indonesia. The coefficient of specific-purpose capital grants for drinking water in the western region is lower than in the eastern region (see model 2). This indicates that a 1% increase of specific-purpose capital grants for drinking water in the western region can improve 0,0010% of households with access to safe drinking water. This figure is lower than the eastern region. The coefficient of good governance dummy in the western region is higher than in the eastern region. This indicates that good governance has a stronger effect on the West than on the East. Each district/city in the western region with AA and A predicate has a 0,0249% chance of having better access to safe drinking water than other districts/cities that get below that predicate. Meanwhile, each district/city in the western region with C and D predicate has a 0,0428% chance of having worse access to safe drinking water than other districts/cities that get above that predicate. It seems that having poor governance might worsen the access to safe drinking water compared to having good governance. This finding aligns with Aryani et al. (2023), who found that public services in the western region, particularly in Java and Bali Island, surpass those in the eastern region due to the quality of its governance.

Additional findings can be taken from our estimation results for the western region of Indonesia. The parameters of control variables show different results in this region. In the western region, the lag of specific-purpose capital grants, the lag of houses and public facility spending, the lag of gross regional domestic product per capita, city population, time for fetching water, and COVID-19 significantly impact access to safe drinking water.

In the eastern region of Indonesia, based on model 3 in Table 2, the specific-purpose capital grants for drinking water and good governance have a positive impact on access to safe drinking water. Interesting information about our main predictors is the influence of specific-purpose capital grants is greater than in the Western region. Yet, good governance may be less impactful than in the Western region. In the eastern region, a 1% increase of specific-purpose capital grants for drinking water for each district/city in the eastern region can improve 0,0011% of households with access to safe drinking water. Good governance also has a significant impact. Each district/city in the eastern region with AA and A predicate has a 0,0226% chance of having better access to safe drinking water than other districts/cities that get below that predicate. Meanwhile, each district/city in the eastern region having poor governance with C and D predicate has a 0,0218% chance of having worse access to safe drinking water than other districts/cities that get above that predicate. Poor governance is more impactful in the Western than in the Eastern region.

In the eastern region, the control variables show different results, too. The lag of specific-purpose capital grants, houses, and public facility spending, time for fetching water, electrification, and COVID-19 significantly affect access to safe drinking water. The government's electricity provision significantly improves access to safe drinking water. Households might utilize it to power a water pump to fulfill their needs for safe drinking water.

4. Conclusion

This study seeks to determine the impact of specific-purpose capital grants for drinking water on the accessibility of safe drinking water in Indonesia and ascertain the impact of good governance on access to safe drinking water. Specific-purpose capital grants for drinking water have been proven to positively impact and significantly improve access to safe drinking water at Indonesia's districts/cities level. The specific form of central government transfer, known as the specific purpose of capital grants for drinking water, continues to exert influence in raising the minimum service standards in public services, particularly in enhancing access to safe drinking water. These findings are consistent with previous studies (Lewis, 2014; Pinilla-Rodríguez & Torres-Sánchez, 2019; Sow & Razafimahefa, 2015; Sudarsono & Nurkholis, 2020). Regarding the impact of good governance on access to safe drinking water on the district/city level, our findings show that the accountability of each region in implementing established and mandated work programs significantly contributes to improved access to safe drinking water. Utilizing the SAKIP proxy, it is evident that every municipal with good governance can have a better chance at providing better access to safe drinking water. These findings align with previous research studies (Afonso et al., 2010; Kumah & Brazys, 2016; Rajkumar & Swaroop, 2008; Rizki & Kurniawan, 2023). Moreover, in the subsample analysis, it is evident that both specific-purpose capital grants for drinking water and good governance significantly positively impact access to safe drinking water. Specific-purpose capital grants for drinking water are indicated to have a similar impact on both regions. However, good governance seems to have a greater impact on the western region compared to the Eastern region.

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