

## **A POTENTIAL FOR CAUSALITY IN DEVELOPMENT COUNTRIES (TRACKING E-PARTICIPATION AND E-GOVERNMENT IN SOUTHEAST ASIAN COUNTRIES)**

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### **ABSTRACT**

*This study aims to examine the Potential Of Causality In Developing Countries (Tracking E-Participation And E-Government In Southeast Asia). Many countries have democratized by utilizing information and communication technology as e-government. Conceptually, e-government should increase participation which is equally called e-participation. Several studies confirm and reject this assumption. Some claim that there is no causal relationship between e-government development and e-participation progress. Continuing the debate, this article addresses how often the development of e-government is in line with the progress of e-participation. What pattern appears in the relationship between the two variables, based on data provided by UNDP in EDGI and EPI scores, this article looks at Indonesia and other Southeast Asian countries that directly border Indonesia; Malaysia, Singapore, Brunei Darussalam, and Timor Leste. A series of categories are defined to facilitate analysis, such as low, moderate, and high fluctuations for EDGI and EPI respectively, then low, moderate, and high consistency and inconsistency for the confluence of EDGI and EPI. Taking into account the national income per capita of these countries, it is known that the potential for causality is more likely to occur in developed countries that have high national income per capita.*

**Keywords:** e-government; e-participation; causality; development

### **ABSTRAK**

Penelitian ini bertujuan untuk mengkaji Potensi Kausalitas Di Negara Berkembang (Tracking E-Participation Dan E-Government Di Negara Asia Tenggara). Banyak negara telah melakukan demokratisasi dengan memanfaatkan teknologi informasi dan komunikasi sebagai e-government. Secara konseptual, e-government seharusnya meningkatkan partisipasi yang disebut juga e-participation. Beberapa penelitian mengkonfirmasi dan menolak asumsi ini. Beberapa mengklaim bahwa tidak ada hubungan kausal antara pengembangan e-government dan kemajuan e-partisipasi. Melanjutkan perdebatan, artikel ini membahas seberapa sering perkembangan e-government sejalan dengan kemajuan e-partisipasi. Pola apa yang muncul dalam hubungan antara kedua variabel tersebut, berdasarkan data yang diberikan oleh UNDP dalam skor EDGI dan EPI, artikel ini melihat Indonesia dan negara-negara Asia Tenggara lainnya yang berbatasan langsung dengan Indonesia; Malaysia, Singapura, Brunei Darussalam, dan Timor Leste. Serangkaian kategori ditentukan untuk memfasilitasi analisis, seperti fluktuasi rendah, sedang, dan tinggi untuk masing-masing EDGI dan EPI, kemudian konsistensi dan inkonsistensi rendah, sedang, dan tinggi untuk pertemuan EDGI dan EPI. Dengan mempertimbangkan pendapatan nasional per kapita negara-negara tersebut, diketahui bahwa potensi kausalitas lebih banyak terjadi pada negara-negara maju yang memiliki pendapatan nasional per kapita tinggi.

**Kata kunci:** e-government; partisipasi elektronik; hubungan sebab dan akibat; perkembangan

## INTRODUCTION

Democracy requires citizen participation in the whole government activities, It represents the main value of democracy. It's clear, no debate. But the way to participate has competed around democracy scientists and activists. Nowadays, the concept of democracy is explained with two patterns, direct and indirect, and they practice both in different ways. Direct democracy provides an opportunity for citizens to directly determine public officials, regulations, policies, and public services, which they will directly experience in their daily lives, without involving intermediaries. In a different pattern, indirect democracy involves intermediaries, known as representatives, to act on behalf of citizens. Direct democracy is often seen as a 'pure' form of democracy. Today many governments provide instruments to enhance direct democracy, to improve the quality of decision-making to better suit the needs of citizens. The practice of direct democracy was first carried out in Athens in the 4th and 5th centuries BC. However, the democracy practiced in Athens was different from the democracy we know today. There is only one similarity between democracy in Athens and democracy today, an idea that power should be exercised by those to whom it is targeted, or at least accountable to those people (Cole, 2004). This idea applies to indirect or representative democracy. Citizens delegate the representatives to act on their behalf, if the performance fails then they will not be elected or appointed for the next office. This is a form of accountability, although accountability does not occur immediately after the failure, and it is necessary to wait until the period expires. But that is precisely the advantage of representative democracy, and a solution to complex social and economic systems (Held, 1996). However, the debate about how citizens control decision-making is still ongoing.

In today's technological era, many countries are utilizing technology to increase efficiency and effectiveness, as well as provide opportunities for their citizens to participate and engage online (Manoharan and Holzer, 2012). The use of technology in the public sector has a long history since the development of computerization in the 1970s to 1990s. This development was responded to by the government to gain efficiency through simplification and automation of services (Sprecher, 2000). In line with that, e-government began to become an important value in the political system and many governments began to issue regulations that encourage the use of technology. For example, in the United States, the federal government issued a regulation called the Clinger-Cohen Act in 1996 to encourage the modernization of management in the federal government into electronic systems (Manoharan and Ingrams, 2018). Furthermore, the use of technology relates to democratization. So that citizens have more opportunities to be involved in government. The Internet and computers help governments communicate their policies directly to citizens. Optimizing the use of technology is getting stronger while social media and mobile users increased. Citizens increasingly have the opportunity to provide policy feedback quickly and easily.

Many scholars mentioned that local governments in the United States have led the

implementation of e-government (Manoharan and Carrizales, 2010; Benton, 2005). Many scholars also developed the concept of e-government in local government, from providing one-way information to two-way interaction (Manoharan, 2013; Norris and Reddick, 2013; Reddick, 2004). A survey conducted by Norris and Reddick (2013) showed that more than 90 percent of local governments in the United States provide important information online, in addition to online transaction services. Manoharan (2013) found that more than 75 percent of US counties have developed official Web sites, and others are developing.

The transformation of governance does not only occur in developed countries but also in developing countries, such as Indonesia. The development of technology and awareness to carry out government reforms has prompted the government to issue regulations on e-government. The government issued Presidential Instruction No. 3, 2003, concerning policies and strategies in e-government utilization, which became the legal basis for implementing e-government to support a clean and transparent government and increase responsibility. By e-government, a government is expected to be able to provide effective, efficient, and interactively public services. By e-government, a government provides an easy channel of participation (Huda and Yunas, 2018).

Many administration units responded to the instruction by developing e-government at various levels of government. For example, every government agency in Indonesia already has an official website that aims to publish its activities and policies. At every level of government, an e-procurement application or LPSE (electronic procurement service) has also been provided, to maintain transparency of the government job auction process so that citizens can participate in management and supervision. In addition, some governments have provided interactive channels that citizens can use to complain or provide advice to the government.

At the national level, the government runs LAPOR ([lapor.go.id](http://lapor.go.id)), an electronic service for citizens who complain about public services. This service manages complaints from all ministry agencies in an integrated manner. Even so, the village ministry also has e-complains, an electronic complaint service. At the local level, local governments also run electronic services in the form of e-mail applications. For example, the Binjai City Government has the E-Masyarakat, an android application, as an online channel for the citizen to submit complaints or reports. The Semarang City government runs a Lapor Hendi that utilizes an Android application, to interact with the citizen. These examples are only a small part of the electronic participation services in Indonesia.

E-government can ideally facilitate the interaction between government and citizens. The increasing development of e-government means easier and more opportunities for interaction between government and citizens (Manoharan and Holzer, 2012). With these opportunities, the citizen or stakeholder can use it to increase public participation in

government through technology. Are the facts consistent with the concept? Many scholars examined the effectiveness of e-government development. For example Kurniawan and Napitupulu. Napitupulu et al (2019) show how e-government fails to increase public participation. The development of E-government is only limited to pursuing the application of technology, without involving the stakeholders in the development process. As a result, the implementation of e-government cannot adapt to the needs. Although the interest and perception of citizens about e-participation are very high, the level of public participation is still low. Kurniawan (2018) shows something different. On e-musrenbang, Kurniawan (2018) found that the implementation of e-musrenbang was not effective. The weakness of e-readiness is responsible. The low ability of the citizen to be actively involved in e-musrenbang is one of the causes of citizens do not use it well.

Conclusions from the research of Kurniawan (2018) and Napitupulu et al. (2019) are the failure of e-government in increasing public participation caused by the technological and capabilities aspects. The study of Stratu-Strelet et al. (2021) shows a different result from their research. Stratu-Strelet et al. (2021) argue that the development of e-participation was caused more by macro variables (democracy, legitimacy, government efficiency), than by the development of e-government or the ability of citizens. Likewise, Grönlund's (2009) research states that there is no causality between e-government tools and e-participation.

The contradictory findings raise big questions regarding the level of causality in e-government and e-participation. If both e-government and capabilities can lead to an increase the e-participation, how often do these causal patterns emerge? If neither e-government nor capability is the main variable that causes increased e-participation, then how small is the role of these two variables? I follow this big question by asking a more detailed question, how often does e-government development get along with the e-participation? What pattern appears in the relationship between the two variables? By utilizing the available data, this article looks at the achievements of Indonesia and other Southeast Asian countries that have direct borders with Indonesia, namely Malaysia, Singapore, Brunei Darussalam, and Timor Leste.

The selection of these countries also represents differences in national income per capita. Referring to the World Bank (2022), Singapore and Brunei Darussalam can be classified into two-digit (high) countries, which have per capita incomes of 42,052 and 22,332 US dollars, respectively. Meanwhile, Malaysia, Indonesia, and Timor Leste can be classified into one-digit (low) countries, which are 7,465 dollars, 3,079 dollars, and 1,628 dollars respectively. The results of this study are expected to provide knowledge about what needs to be done by the government in the context of democratization through the use of technology.

## **METHOD**

As a follow-up to the widespread application of information and communication technology in various countries, not only in Indonesia, several international institutions have measured the achievements. One of them is UNDP, which publishes the E-Government Development Index (EGDI), and the E-Participation Index (EPI). The E-Government Development Index (EGDI) is a composite measure of three important dimensions of e-government, namely: online service provision, telecommunications connectivity, and human capacity. The E-participation Index (EPI) focuses on the use of online services to facilitate information by governments to citizens, interaction with stakeholders, and involvement in decision-making processes. This article utilizes scores published by UNDP regarding EDGI and EPI. The scores from year to year will be the basis for mapping the pattern of linkages between e-government development and e-participation. To build a final argument, this article consists of three sessions. First, showing the fluctuation of each score in the e-government development and the e-participation. Second, taking the scores to discuss the consistency and inconsistency patterns that emerged in Indonesia and each country. Third, as a conclusion, compare the patterns and state an argument.

This article sets out the categorizations of EDGI and EPI to figure them out. In the EDGI and EPI scores, three categories are determined; low fluctuation, moderate fluctuation, and high fluctuation. Low fluctuation occurs if from 2003 to 2020, a country has one decline case and then has an increase in the following year. Moderate fluctuation occurs if from 2003 to 2020, a country has two decline cases, with has increase between the two. High fluctuation occurs if from 2003 to 2020 a country has three or more decline cases, with has increase in between eaches. In the comparison between EDGI and EPI scores, two major patterns are established, namely consistency and inconsistency. Consistency is a condition when the EDGI score is in line with the EPI score. An increase in EDGI score in a certain year coincides with an increase in EPI score in that year. A decrease in EDGI score in a certain year coincides with a decrease in EPI score in that year. Consistency is divided into three categories, namely low consistency, moderate consistency, and high consistency. Consistency is low if from 2003 to 2020 a country has one or two (years) consistency cases. Consistency is moderate if from 2003 to 2020 a country has three or four (years) consistency cases. Consistency is high if from 2003 to 2020 a country has five or more (years) consistency cases.

Inconsistency is a situation when the EDGI score contradicts the EPI score. An increase in EDGI score in a certain year coincides with a decrease in EPI in that year. The inconsistency in this model can be called a negative inconsistency. A decrease in EDGI in a certain year coincides with an increase in EPI in that year. The inconsistency in this model can be called a positive inconsistency. The use of the positive and negative terms refers to the assumption that EPI is an ideal consequence of EDGI. I categorize

inconsistency in three terms, namely low inconsistency, moderate inconsistency, and high inconsistency. Low inconsistency occurs if from 2003 to 2020 a country has one or two (years) inconsistency cases. Moderate inconsistency occurs if from 2003 to 2020 a country has three or four (years) inconsistency cases. High inconsistency occurs if from 2003 to 2020 a country has five or more (years) inconsistency cases.

## **RESULT/ DISCUSSION**

### **The fluctuation: the best and the worst of Indonesia**

With a score value between 0 – 1, UNDP released 0.42240 for Indonesia's EDGI score in the first year of measurement, 2003. This score decreased to 0.39090 in 2004, then again to 0.38190 in 2005. Indonesia still got an increase to 0.41070 in 2008 but got declined to 0.40260 in 2010. A significant increase to 0.49490 happened in 2012 although the score decreased to 0.44870 in 2014, then to 0.44780 in 2016. In 2018, Indonesia rose to 0.52580 and made a great leap to 0.66120 in 2020. The last score is the highest score achieved by Indonesia as long as the EDGI measurement. If we trace the scores since it was first held, Indonesia's and moved up and down and presented a high fluctuation with three decline cases in scores.

Indonesia's e-participation scores also moved up and down. In 2003, Indonesia got 0.25860 and increased slightly to 0.26230 in 2004, and 0.2857 in 2005. In 2008, the EPI score dropped significantly to 0.04550. In the following years, it increased to 0.12860 in 2010 and increased significantly to 0.21050 in 2012. The upward trend continued to 0.29410 in 2014, to 0.37290 in 2016, then improved so far to 0.61800 in 2018 then to 0.75000 in 2020. The latest score is the highest score achieved by Indonesia in EPI measurement. With a declined case, Indonesia's EPI scores are categorized as low fluctuation.

Malaysia has different scores when compared to Indonesia. In the first year of measurement, Malaysia scored 0.52400. This score increased to 0.5409 in 2004 and increased more to 0.57060 in 2005. It continued to 0.60630 in 2008, and 0.61010 in 2010. Malaysia got a significant increase in 2012 with 0.67030. In 2014, it dropped to 0.61150 but got a small increase to 0.61749 in 2016. Malaysia was surprised with a high increase in 2018 with 0.71740 then the highest score, 0.78920, came in 2020. Malaysia's scores were quite fantastic, at least with only one decline case. The scores brought Malaysia to be a country with low fluctuation in EDGI.

In the EPI scores, Malaysia got 0.12070 in the first year then decreased to 0.11475 in 2004. However, in 2005 and 2006, Malaysia showed good ones, respectively, to 0.17460 and 0.29545. Malaysia made a great flight to 0.65714 in 2010. After the great flight, Malaysia dropped far to 0.50000 in 2012. Malaysia corrected it to 0.52941 in 2014, and to 0.67797 in 2016. Malaysia scored an amazing one in 2018 that jump to 0.88760, although it decreased to 0.85710 in 2020. Malaysia's EPI scores are indeed impressive. With two decline cases, it brought Malaysia into a moderate fluctuation.

As one of the best countries in EDGI, Singapore noted high scores. In 2003, Singapore scored 0.74633, a score that has not been achieved by Indonesia since the EDGI measurement. In 2004, there was an increase to 0.83404 then continued to 0.85030 in 2005. Singapore got decreased to 0.70090 in 2008 but increased to 0.74760, 0.84742, and 0.90762 in 2010, 2012, and 2014. It dropped to 0.88280 in 2016 and continued to 0.88120 in 2018. In 2020, Singapore got a fantastic score, 0.91500. The high scores were not present in the consistency scores. With two decline cases, Singapore's EDGI was categorized as a moderate fluctuation.

As for the EDGI scores, Singapore's EPI scores were fantastic also. In the first year of measurement, Singapore scored 0.46550. The score increased very high in the following year, touching 0.83606. A range of around 3.5 points told a very high achievement. The increase continued to 0.98412 in 2005. Unfortunately, a big decline occurred in the following year. It dropped to 0.63636. In 2010, Singapore got a small increase to 0.68571 and then jump so high to 0.94740 in 2012. Singapore got one decline more in the following year to 0.90196, although it was still high. Singapore kept going up in the following years to 0.91525, 0.96630, and 0.97620 in 2016, 2018, and 2020. The high score in the EPI was similar to the EDGI. With two decline cases, Singapore's EPI was in the moderate fluctuation category.

The EDGI score that is almost similar to Indonesia is the achievement of Brunei Darussalam. In 2003, Brunei scored 0.45876 and increased the following year to 0.46323. Brunei got a decrease in EDGI in 2005 to 0.44753 and increased again in 2008 to 0.46670. The increase continued in 2010 and 2012, to 0.47955 and 0.62502. Brunei declined again in 2014 to 0.50424 and increased again to 0.52981 in 2016. The increase continued in 2018 and 2020, to 0.69230 and 0.73890. Although the achievement figures are similar to Indonesia, Brunei is in the category of moderate fluctuation with a decline of two times.

Brunei is one of the countries that started the EPI measurement with a very low number, namely 0.01720. In the following year, Brunei got a small increase, which was 0.03278. This relatively small number decreased in 2005 to 0.03174 and increased again to 0.09090 in 2008. Brunei got two fairly large increases in 2010 and 2012, to 0.17142 and 0.47370. Although in 2014 it decreased again to 0.05882, it again recorded a significant increase in 2016 and 2018, to 0.37288 and 0.60670. Unfortunately, Brunei got another decline in 2020 to 0.54760. In this EPI achievement, Brunei is in the moderate fluctuation category, with two declines in EPI achievement.

Timor Leste scored slightly better than Brunei in the first year EDGI measurement. In 2003 Timor Leste scored 0.08733, which immediately decreased in 2004 to 0.04633. Timor Leste got a fairly good increase in 2005 to 0.25115 but got a decline in 2008 and 2012, respectively, to 0.24620 and 0.22727. Another increase occurred in 2012 to 0.23653. The increase continues to occur in the following measurement years. In 2014, Timor Leste scored 0.25276. This number increased to 0.25817 in 2016 and increased

again to 0.38160 in 2018. In the most recent measurement year, Timor Leste managed to increase to 0.46490. From these data, it is known that Timor Leste got two increases after an increase so it was included in the moderate fluctuation category.

A very troubling achievement occurred in the EPI of Timor Leste. In the first year of measurement, Timor Leste only scored 0.08620, and immediately decreased the following year to 0.01639. The decline again occurred at this low number to 0.01587 in 2005. The achievement of East Timor's EPI became worrying when in 2008 it did not get a number or got 0.00000. Timor Leste rose and rose in 2010, from 0.000 to 0.01428. Unfortunately, in 2012 it did not return to 0.00000. In 2014, Timor Leste got a significant increase to 0.29411, although it declined again in 2016 and 2018 to 0.27119 and 0.26970. Timor Leste got a pretty good improvement in 2020, which was 0.48810. Timor Leste's low EPI achievement is also in line with fluctuations in EPI achievement. Timor Leste has got three declines so EPI's achievements are in the category of high fluctuations.

Table. EDGI and EPI scores

		2020	2018	2016	2014	2012	2010	2008	2005	2004
Indonesia	EDGI	0.66120	0.52580	0.44784	0.44874	0.49486	0.40264	0.41070	0.38186	0.39090
	EPI	0.75000	0.61800	0.37288	0.29411	0.21050	0.12857	0.04545	0.28571	0.26229
Malaysia	EDGI	0.78920	0.71740	0.61749	0.61152	0.67031	0.61014	0.60630	0.57057	0.54089
	EPI	0.85710	0.88760	0.67797	0.52941	0.50000	0.65714	0.29545	0.17460	0.11475
Singapura	EDGI	0.91500	0.88120	0.88280	0.90762	0.84742	0.74760	0.70090	0.85030	0.83404
	EPI	0.97620	0.96630	0.91525	0.90196	0.94740	0.68571	0.63636	0.98412	0.83606
Brunei	EDGI	0.73890	0.69230	0.52981	0.50424	0.62502	0.47955	0.46670	0.44753	0.46323
	EPI	0.54760	0.60670	0.37288	0.05882	0.47370	0.17142	0.09090	0.03174	0.03278
Timor Leste	EDGI	0.46490	0.38160	0.25817	0.25276	0.23653	0.22727	0.24620	0.25115	0.04633
	EPI	0.48810	0.26970	0.27119	0.29411	0.00000	0.01428	0.00000	0.01587	0.01639

Source data 2020

Based on the data and categorization above, it can be seen that Indonesia had the highest fluctuations in EDGI achievement compared to fluctuation in other countries. The fluctuation of Indonesia's EDGI is categorized as high fluctuation with three decline cases after the previous increase. Singapore, Brunei Darussalam, and Timor Leste are in the moderate fluctuation category. The best fluctuation was shown by Malaysia, with only one decline case after an increase. This achievement brought Malaysia the only country in this study that has low fluctuation. It means that there are fluctuations in the e-government development in various countries, even in developed countries.

On the other hand, Indonesia got the best fluctuation in e-participation among the countries studied. Indonesia was the only country that has a low fluctuation category with only one decline case after an increase. Singapore, Malaysia, and Brunei Darussalam were in the moderate fluctuation category with two decline cases. The most



worrying condition of e-participation is Timor Leste. Timor Leste got three declines and even got 0.000 twice. With that fluctuation, Timor Leste became the country with the worst fluctuation among several Southeast Asian countries studied in this article. This section concludes that there are fluctuations in e-government development and e-participation in all countries.

### **EDGI and EPI: Inconsistency is a problem**

As one of the e-government purposes, the achievement of e-participation should be in line with the development of e-government. Do UNDP's measurements show this? By comparing the achievements above, various patterns emerge between countries. From 2003 to 2004, Indonesia got a decline in e-government development but instead got an increase in e-participation. The same achievement was repeated from 2004 to 2005. Indonesia got an increase in e-participation amid a decline in e-government development. The opposite situation occurred in 2008. Indonesia got a decline in e-participation when there was an increase in e-government development. The same inconsistencies as in 2008 occurred in 2014 and 2016. This means that Indonesia has five cases of inconsistency, and four cases of consistency. This similar condition occurred in 2010, 2012, 2018, and 2020. Based on the categories that have been determined, Indonesia had a high inconsistency with two positive inconsistencies and three negative inconsistencies. Also, Indonesia had a moderate consistency.

Inconsistencies are also found in Malaysia's EDGI and EPI scores. In 2004 there was an increase in e-government development, but in fact, there was a decrease in e-participation. The same inconsistency emerged in 2012 and 2020, where there was an increase in e-government development in Malaysia but a decrease in e-participation. The opposite form of the inconsistency only occurred in 2014, when there was a decline in e-government development but an increase in e-participation. This means that Malaysia has four contradictory cases and five cases are in line. The five similar cases occurred in 2005, 2008, 2010, 2016, and 2018. Based on the predefined categories, Malaysia is in a moderate inconsistency but with three negative inconsistencies and only one positive inconsistency. Regarding consistency, Malaysia is in high consistency.

As a country with very high EDGI and EPI achievements, Singapore also cannot be separated from its inconsistency. In 2014, there was an inconsistency in the form of increasing e-government development and decreasing e-participation in the same year. In the following year, 2016, there was an inconsistency in the opposite form. In that year, there was a decrease in e-government development but an increase in e-participation. Overall, Singapore got two cases of inconsistency and seven cases of consistency. The seven consistent cases appeared in 2004, 2005, 2008, 2010, 2012, 2018, and 2020. Based on the predefined categories, Singapore was in a low inconsistency with one positive inconsistency and one negative inconsistency. Regarding consistency, Singapore is high consistency.

Brunei is the only country in this study with a phenomenal comparison. In the measurement period from 2003 to 2018, Brunei always had consistent results between EDGI and EPI. In the second measurement year, namely 2004, there was an increase in EDGI achievement and an increase in EPI achievement, but in the next measurement year, there was a decrease in EDGI scores in line with a decrease in EPI scores. The consistent pattern of increase continued to occur in subsequent measurement years until 2014. In 2014, there was a decrease in EDGI achievement and a decrease in EPI achievement in that year. The increasing pattern of consistency occurred again in 2016 and 2018. In the most recent measurement year, 2020, Brunei got an inconsistency between its EDGI and EPI achievements. An increase in EDGI score but a decrease in EPI score. Overall, Brunei has one case of inconsistency and eight cases of consistency. Based on the predetermined category, Brunei is in a low inconsistency with one negative inconsistency. Regarding consistency is in the category of high consistency.

Timor Leste experienced dynamics of consistency and inconsistency that are different from other countries studied. In 2004 there was consistency in the form of a decrease in EDGI score and a decrease in EPI score. This consistent pattern of decline continued to be inconsistent in 2005, with an increase in EDGI score but a decrease in EPI score. Consistency in the form of a decline occurred in 2008 and continued with the emergence of inconsistencies in 2010 and 2012. The decline in EDGI score along with an increase in EPI score occurred in 2010 and the opposite pattern of inconsistency occurred in 2012. In 2014 there was a consistent pattern of improvement, an increase in EDGI score and an increase in EPI score, but again there was an inconsistency in the next two measurement years, 2016 and 2018, increasing EDGI score but decreasing EPI score. The consistent pattern of improvement occurred again in the latest measurement year, where EDGI score increased and the EPI score also increased. Overall, Timor Leste had five cases of inconsistency and four cases of consistency. Based on the categories that have been determined, Timor Leste is in high inconsistencies with one positive inconsistency and four negative inconsistencies. Regarding consistency, Timor Leste is in the category of moderate consistency.

The cases above showed that inconsistency and consistency occurred in all countries although to different degrees. The highest inconsistency occurred in Indonesia, with five cases of inconsistency. Only Timor Leste accompanies Indonesia in this category. However, when considering the positive and negative values, Indonesia is more positive than Timor Leste, with more positive inconsistency cases than Timor Leste. The lowest inconsistency occurred in Brunei Darussalam, only one case of inconsistency. No other country occupies this level other than Brunei. Although Singapore is in a low inconsistency, it had two cases of inconsistency. Automatically, Brunei had the highest consistency, with 8 cases of consistency, and Indonesia and Timor Leste had the highest inconsistency.

## **CONCLUSION: A POTENSIAL FOR CAUSALITY**

From all cases in five countries, knowing that there are 17 cases of inconsistency and 28 cases of consistency between e-government scores and e-participation scores. Of the 17 cases of inconsistency, there were ten cases of negative inconsistency. Inconsistency can be considered as the basis for questioning the causality between e-government and e-participation. While negative inconsistencies can strengthen the potential for the absence of causality. The inconsistent cases above showed agreement with the research of Stratu-Strelet et al (2021) and Grönlund (2009) although 28 cases cannot be explained through their research. With the argument of the existence of macro dynamics as stated by Stratu-Strelet et al (2021), 28 cases out of 45 cases studied is not a small number. This figure represents 62.2 % of cases. It means that the causality of e-government and e-participation deserves to be considered in further studies. The cases of consistency also cannot be explained through the research of Grönlund (2009). With the argument that e-government tools do not lead to an increase in e-participation, then how do explain the 28 cases of consistency above?

Apart from the above debate, the number of cases of consistency and inconsistency presented the knowledge that e-government and e-participation cannot be the foundation of democratization in a country that is still plagued with economic (income) problems. The best achievements of Brunei Darussalam and Singapore, as well as the large distance between the two countries and other countries, show that countries with advanced or rich economic levels have more potential to have a causal impact. Meanwhile, the country facing economic problems has the lowest potential impact, Timor Leste. Indonesia is in a slightly better position than Timor Leste. This argument can support the argument of Stratu-Strelet et al (2021) in that economics is considered a macro dynamic. However, this argument also showed the need to involve economic variables, not just democracy, legitimacy, and government effectiveness.

The conclusion of this article was limited to the potential existence of causality and the potential absence of causality. This is because the data sources measure EDGI and EPI without testing the causal relationship between the two. Further studies are needed to prove causality by involving various variables, including the income variable as the recommendation of this article. The distance between the numbers on the increase or decrease is also interesting to study further. Like Brunei Darussalam, it has an EDGI increase distance of about 0.16 but has an EPI increase distance of about 0.23. Meanwhile, Timor Leste has a range of increases in EPI around that score with an increase in EDGI below 0.10.

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