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The Impact of the E-Government Development Index (EGDI) on the Worldwide Governance Indicator (WGI) in European Union Countries

Abstract

This study aims to analyze the impact of the e-Government Development Index (EGDI) on the Worldwide Governance Indicator (WGI) in European Union member countries. The EGDI is an index measurement that displays conditions related to the development of e-Government implementation in the member country of the United Nations, while the WGI is a series of governance indicators issued by the world bank that measures six dimensions of governance. The research method used in this research is a mixed method with collecting and analyzing data quantitatively by using Smart PLS 0.3 version, then collecting qualitative data analysis data by using qualitative methods collecting data from relevant scientific articles. The data sources for this research were obtained from the official website of the EGDI, the official website of the WGI, and literature studies of relevant scientific articles. The result of this study shows that the implementation of e-Government based on EGDI data in European Union countries has no impact on the six indicators of WGI as a whole. This is based on the results showing that the influence of the EGDI of European Union member countries on corruption control, government effectiveness, and voice of accountability is accepted, while the impact of the EGDI of European Union member countries on political stability and the absence of violence/terrorism, the quality of regulation and the rule of law is rejected. This research contributes to complement existing research by looking at the impact of implementing e-Government in European Union countries. This research is expected to be a reference in studying the implementation of e-Government in European Union countries so that it can be implemented effectively and efficiently.

Keywords:

E-Government Development Index; European Union Countries; Worldwide Governance Indicator

Introduction

Advances in information and communication technology impact public government administration services. Increasingly sophisticated Information and Communication require the government to utilize technology in providing government services to its citizens, which is called electronic Government, which is then shortened to e-Government (Carter et al., 2022). The application of e-Government in government services is expected to improve the quality of government services to the community so that people can simply access services via the Internet without having to come to government offices, implement e-democracy, and increase transparency to prevent corruption (Zhu & Kou, 2019). This shows that the implementation of e-Government can make it easier for both parties, both government and citizens, to provide and receive government services wherever and whenever (Twizeyimana & Andersson, 2019).

The application of electronic government in government services is implemented in various countries in the world, both countries on the Asian continent and the European continent (Al-Mushayt, 2019). The European continent is a country that is considered quite good at implementing information and communication technology sophistication in government services (MacLean & Titah, 2022). Previous studies explained that although the implementation of electronic government in European countries has been widely implemented, the high implementation of electronic government has not been implemented optimally. One of the causes is the digital divide between citizens when using e-Government-based services (Seljan et al., 2020). This is reinforced by studies showing that the progress of implementing e-Government in European countries was initially uneven. One of the causes is the digital divide that occurs between citizens due to the factors of generational stability, old age, and country differences (Sala et al., 2022). Along with its development, European countries, especially Estonia, have become role models in implementing e-Government (Goede, 2019).

The implementation of e-Government in European Union member countries has increased since the COVID-19 pandemic with efforts to increase digital services as a means of interaction between government and citizens in public administration services (Campmas et al., 2022). The European Union is an international organization consisting of 27 countries in Europe, namely Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden. (Tutak & Brodny, 2022).

The application of e-Government in European Union countries is quite developed. However, e-Government implementation requires high skills and interest from citizens in utilizing e-Government-based online government services, so that e-Government implementation can be carried out efficiently (Doran et al., 2023). This is in line with studies showing that the use of digital sophistication in governance in European Union countries increases transparency and reduces corruption cases. However, in the implementation of e-Government, the government needs to carry out promotions related to the implementation of e-Government to citizens so that citizen participation increases in government affairs and creates an open, transparent, and collaborative government (Cifuentes-Faura, 2022).

Based on the literature review, it can be seen that there is a gap indicating that the high level of implementation and development of e-Government in a country does not guarantee a high level of effectiveness and efficiency in the implementation of e-Government-based services in that country, which is caused by various factors. So that it becomes an interesting topic and study to be discussed.

Updating the study in this research, the authors will focus on analyzing the influence of the implementation of e-Government in European Union countries. This research is interesting to study because in examining the effect of implementing e-Government in European Union countries, researchers used data from the Electronic Government Development Index (EGDI) (Rahmadany, 2021) to see the effect of implementing e-Government on six indicators of governance based on data from the Worldwide Governance Indicator (WGI), namely the indicators of Corruption Control, Government Effectiveness, Political Stability and Non-Violence, Voice and Accountability, Rule of Law, and Regulatory Quality (Darsono, 2022) in European Union member countries by utilizing

Smart PLS 0.3 version software in analyzing data and strengthening it with relevant scientific articles (Ghozali, 2021).

The research question in this study is whether the e-Government development index (EGDI) in European Union member countries has an impact on the Worldwide Governance Indicator (WGI), namely Corruption Control, Government Effectiveness, Political Stability, and Absence of Violence, Voice and Accountability, Rule of Law, and Regulatory Quality in countries in European Union member countries. The hypothesis in this study is that there are 6 hypotheses, namely: H1: The impact of EGDI on Control of Corruption (CoC) is positive and significant, H2: The impact of EGDI on Government Effectiveness (GE) is positive and significant, H3: The impact of EGDI on Political Stability and Absence of Violence (PSA) is positive and significant, H4: The impact of EGDI on the Rule of Law (RL) is positive and significant, H5: The impact of EGDI on Regulatory Quality (RQ) is positive and significant, and H6: The impact of EGDI on Voice and Accountability (VA) is positive and significant.

The structure of this research article after presenting the introduction, namely the next section presents the research method, then proceeds with the presentation of the results and discussion, and the last section is the presentation of the research conclusions.

Methods

The research method in this study is the mixed method. The mixed method is research that combines qualitative research and quantitative research (Taherdoost, 2022). This study uses a sequential explanatory strategy, the first stage collects and analyzes quantitative data, then the second stage collects qualitative data analysis data (Cresswell & Cresswell, 2018).

The first stage of research in this study used quantitative methods with primary data, namely EGDI sample data and WGI data in European

Union countries using Smart PLS software 0.3 version (Aburumman et al., 2023; Ghozali, 2021). In the second stage, researchers carried out development using qualitative methods by collecting data from relevant scientific articles as secondary data in research.

Population and Sample

The population in this study is European Union member countries. The sample is part of a particular population that is of concern. The research sample was taken by purposive sampling, namely the sample selection method based on previously known population characteristics. The European Union countries that are part of the sample population in this study are as follows:

Table 1.
Research Population Information

No	Country	No	Country
1	Austria	15	Italy
2	Belgium	16	Latvia
3	Bulgaria	17	Lithuania
4	Czech Republic	18	Luxembourg
5	Croatia	19	Malta
6	Cyprus	20	Netherlands
7	Denmark	21	Poland
8	Estonia	22	Portugal
9	Finland	23	Romania
10	France	24	Slovakia
11	Germany	25	Slovenia
12	Greece	26	Spain
13	Hungary	27	Sweden
14	Ireland		

Source: obtained by personal data

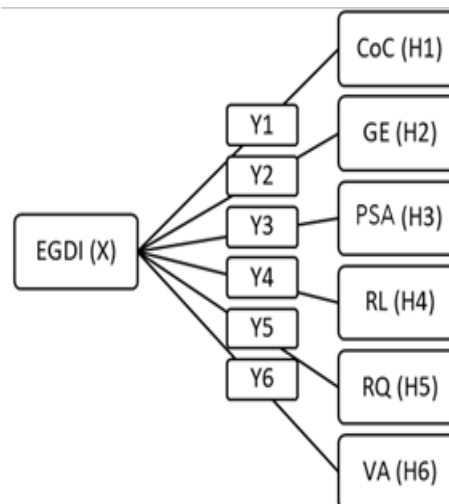
Research variable

Based on the literature review and previous research, the following research conceptual framework is obtained:

Based on the research model that has been designed, the formulation of the hypothesis proposed in this study is:

1. H1: The impact of EGDI on the Control of Corruption (CoC) is positive and significant.
2. H2: The impact of EGDI on Government Effectiveness (GE) is positive and significant.

Figure 1.
The Framework of Research Concept



Source: obtained by personal data

3. H3: The impact of EGDI on Political Stability and Absence of Violence (PSA) is positive and significant.
4. H4: The impact of EGDI on the Rule of Law (RL) is positive and significant.
5. H5: The impact of EGDI on Regulatory Quality (RQ) is positive and significant.
6. H6: The impact of EGDI on Voice and Accountability (VA) is positive and significant.

Based on the hypothesis mentioned above, the variables that will be used in this study are as follows::

1. The dependent variables are variables whose values are influenced by the independent variable. As for the dependent variables in this study, there are six variables, namely Control of Corruption (CoC), Government Effectiveness (GE), Political Stability and Absence of Violence (PSA), Voice and Accountability (VA), Rule of Law (RL), and Regulatory Quality (RQ).
2. Independent Variables are variables that can affect changes in the dependent variable and have a positive or negative relationship with other dependent variables. The independent variable in this study is the E-Government Development Index (EGDI).

Results and Discussion

Validity test

Convergent Validity

Convergent validity in PLS with reflective indicators is assessed based on the loading factor (correlation between item scores/component scores with construct scores) of the indicators that measure constructs. The general rule that is commonly used to measure convergent validity is outer loading > 0.7. The loading factor values in this study are shown in Table 2.

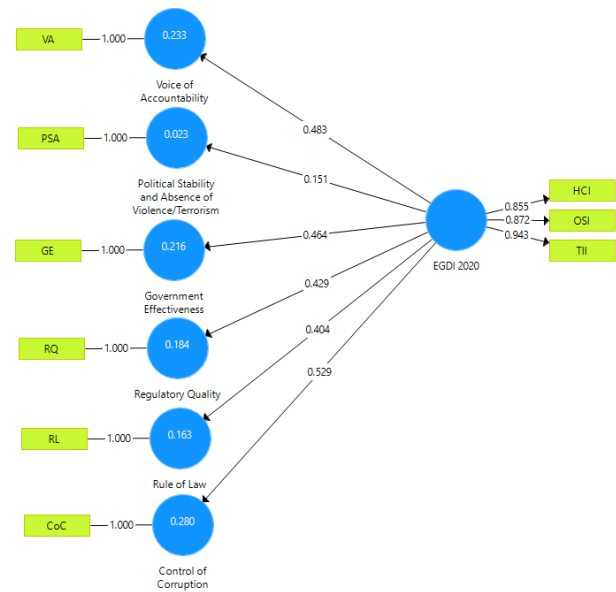
Based on Table 2, as a test to test convergent validity, it is clear that these indicators have values above and below 0.5 – 0.7 so the indicators on these variables meet the requirements for convergent validity. Besides that, by looking at the loading factor value of each indicator. The research model is as follows:

Discriminant Validity

For discriminant validity, each indicator is tested by cross-loading. In Table 3, the Discriminant

Validity test is used to show that each indicator in a construct will be different from indicators in other constructs and converges to the construct in question, which is shown in the following table 3.

Figure 1.
Research Concept Framework



Source: obtained from Smart PLS 0.3 version

Table 2.
Loading Factor

	Control of Corruption	EGDI	Government Effectiveness	Political Stability	Regulatory Quality	Rule of Law	Voice of Accountability	Information
CoC	1.000							Valid
GE			1.000					Valid
HCI		0.855						Valid
OSI		0.872						Valid
PSA				1.000				Valid
RL						1.000		Valid
RQ					1.000			Valid
TII		0.943						Valid
VA							1.000	Valid

Source: obtained from Smart PLS 0.3 version

Table 3.
Cross Loading

	Control of Corruption	Government Effectiveness	Political Stability	Regulatory Quality	Rule of Law	Voice of Accountability
CoC	1.000	0.913	0.561	0.899	0.937	0.895
GE	0.913	1.000	0.627	0.887	0.921	0.873
PSA	0.561	0.627	1.000	0.600	0.672	0.596
RQ	0.899	0.887	0.600	1.000	0.914	0.864
RL	0.937	0.921	0.672	0.914	1.000	0.876
VA	0.895	0.873	0.596	0.864	0.876	1.000

Source: obtained from Smart PLS 0.3 version

Based on Table 3 above, it can be seen that all indicators have a value above 0.5 so these indicators can be processed further, and it can be concluded that the construct has good convergent validity. The cross-loading value also shows good discriminant validity because the indicator correlation value is higher than the other constructs.

Reliability Test

The reliability test can be seen from the Composite Reliability and Cronbach's Alpha values. To be said to be a reliable construct, Cronbach's alpha value must be > 0.6 and the composite reliability value must be > 0.7. The followings are the results of the composite reliability test and Cronbach's alpha:

Table 4.
Composite Reliability

	Composite Reliability
Control of Corruption	1.000
EGDI 2020	0.920
Government Effectiveness	1.000
Political Stability and Absence of Violence/Terrorism	1.000
Regulatory Quality	1.000
Rule of Law	1.000
Voice of Accountability	1.000

Source: obtained from Smart PLS 0.3 version

Based on Table 4 it can be seen that all constructs are declared reliable because all

constructs have a value above 0.70. So it can be said that the construct in this study has good reliability.

Table 5.
Cronbach's Alpha

	Cronbach's Alpha
Control of Corruption	1.000
EGDI 2020	0.873
Government Effectiveness	1.000
Political Stability and Absence of Violence/Terrorism	1.000
Regulatory Quality	1.000
Rule of Law	1.000
Voice of Accountability	1.000

Source: obtained from Smart PLS 0.3 version

Based on Table 5 it can be seen that the Cronbach alpha value in all constructs above 0.7 is 1,000, 0,873, 1,000, 1,000, 1,000, 1,000, 1,000. This shows that the constructs in this study are reliable and show that all constructs have met the required reliability.

Hypothesis testing

Hypothesis testing was carried out to answer research problems that had been formulated previously using Smart PLS version 3 software. Based on the estimation results of the Smart PLS model using the bootstrap technique above, it produces significant test data as in the following table 6.

Based on the results of testing the hypothesis above, the following test results are obtained:

Table 6.
Hypothesis testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Information
EGDI 2020 -> Control of Corruption	0.529	0.612	0.160	3.302	0.001	Accepted
EGDI 2020 -> Government Effectiveness	0.464	0.553	0.188	2.472	0.014	Accepted
EGDI 2020 -> Political Stability and Absence of Violence/Terrorism	0.151	0.195	0.195	0.774	0.439	Rejected
EGDI 2020 -> Regulatory Quality	0.429	0.524	0.244	1.758	0.079	Rejected
EGDI 2020 -> Rule of Law	0.404	0.492	0.215	1.874	0.062	Rejected
EGDI 2020 -> Voice of Accountability	0.483	0.553	0.157	3.067	0.002	Accepted

Source: obtained from Smart PLS 0.3 version

1. The p-value of EGDI on Corruption Control is 0.001 with a T-value of 3.302 and a positive path coefficient of 0.529, so the hypothesis is accepted. Therefore it is concluded that EGDI has a positive and significant effect on Corruption Control, the better EGDI, the better Corruption Control, and vice versa.
2. The p-value of EGDI on Government Effectiveness is 0.014 with a T value of 2.472 and a positive path coefficient of 0.464, so the hypothesis is accepted. Therefore it is concluded that EGDI has a positive and significant effect on Government Effectiveness, the higher the EGDI, the higher Government Effectiveness, and vice versa.
3. The p-value of EGDI on Political Stability and Absence of Violence/Terrorism is 0.439 with a T value of 0.774 and a positive path coefficient of 0.151 then the hypothesis is rejected. Therefore it is concluded that EGDI has no significant effect on Political Stability and Absence of Violence/Terrorism, the higher the EGDI, the better Political Stability and Absence of Violence/Terrorism, and vice versa.
4. The p-value of EGDI on Regulatory Quality is 0.079 with a T value of 1.758 and a positive path coefficient of 0.429, so the hypothesis is rejected and it is concluded that EGDI Therefore it is concluded that EGDI has no significant effect on Regulatory Quality, higher the EGDI, the better the Regulatory Quality, and vice versa.
5. The p-value of EGDI on the Rule of Law is 0.062 with a T value of 1.874. as well as a positive path coefficient of 0.404, then the hypothesis is rejected and it is concluded that EGDI has no significant effect on the Rule of Law, the higher the EGDI, the better the Rule of Law, and vice versa.
6. The p-value of EGDI on Voice and Accountability is 0.002 with a T value of 3,067 and a positive path coefficient of 0.483, so the hypothesis is accepted and it is concluded that EGDI has

a positive and significant effect on Voice and Accountability, the higher the EGDI, the better Voice and Accountability performance, vice versa.

Based on the results of quantitative data processing using Smart PLS version 3 above, it can be concluded that e-Government implementation is based on the EGDI data WGI. This is based on the results of the smart PLS 0.3 version data processing hypothesis which shows that the influence of the EGDI of European Union member countries on corruption control, government effectiveness, and voice accountability is accepted, while the influence of the EGDI of European Union countries on political stability and the absence of violence/terrorism, the quality of regulation and rule of law is rejected.

After obtaining the results of quantitative analysis, the next stage is the discussion of qualitative analysis based on secondary data, namely relevant scientific articles. Discussion of the results of testing the hypothesis regarding the impact of implementing EGDI on the WGI in European Union member countries is then analyzed qualitatively with secondary data in the form of relevant scientific articles as follows:

The Impact of EGDI on Control of Corruption

Based on the results of the hypothesis showing that the p EGDI value for Corruption Control in European Union countries is 0.001 with a T value of 3.302 and a positive path coefficient of 0.529, then the hypothesis is accepted. Therefore it is concluded that EGDI has a positive and significant effect on the Control of Corruption in European Union countries, the better the EGDI, the better control of Corruption, and vice versa.

The application of electronic government certainly provides an increase in government openness regarding the administration of its government, and this can certainly reduce the level of corruption in a country (Cifuentes-Faura, 2022;

Nnyanzi et al., 2018). This is because a high level of transparency allows citizens to pay attention and supervise the running of government so that it becomes a form of corruption of control (Ni Wayan Rustiarini, 2019).

The results of this hypothesis are in line with data showing that European Union member countries have implemented e-government by utilizing technological sophistication in providing government services to their respective citizens (Djayasinga & Prasetyo, 2019). The data shows that corrupt practices also occur in European Union countries, one of which is the Qatargate scandal (Oxford Analytica, 2022), and also data on the highest level of corruption in Hungary and Bulgaria than other European Union countries (Djayasinga & Prasetyo, 2019). However, the European Union has made several efforts to control corruption by utilizing technological sophistication to increase public transparency (Laureti et al., 2023). Based on these efforts, countries in the European Union experienced a significant reduction in the level of corruption and experienced an increase in the level of accessibility of digital-based administration (Androniceanu, Georgescu, et al., 2022).

The efforts to implement e-Government in European Union countries are based on three things, namely digital access, implementation of the digital single market, and the digital economy of society (Lips, 2020). The implementation of e-Government in the countries of the European Union certainly increases the level of transparency in the European Union. Transparency is also based on the European Union treaty in article 15 which states that the European Union has the responsibility to behave transparently and ensure that citizens or legal entities living or registered in European Union member countries can open access to documents (Official website of the European Union, 2023).

Based on the treaty, it shows that the European Union transparently provides access to

citizens in accessing official documents, minutes of meetings, and agendas offline and online (Androniceanu et al., 2020). Citizens can access information online through website databases provided by the European Union, including the EUR-Lex website, the Transparency Register website, and the DORIE website (Official website of the European Union, 2023). The high level of transparency in the European Union by utilizing e-Government makes it easy for citizens to participate in overseeing the pace of government thereby reducing the level of corruption. This is in line with the results of the hypothesis of this study which shows that the e-Government development index (EGDI) on control of corruption in European Union countries is accepted and has an impact.

The Impact of EGDI on Government Effectiveness

Based on the results of the hypothesis, the p EGDI value for Government Effectiveness in European Union countries is 0.014 with a T value of 2.472 and a positive path coefficient of 0.464, so the hypothesis is accepted. Therefore it is concluded that EGDI has a positive and significant effect on Government Effectiveness, the higher the EGDI, the higher the Government Effectiveness, and vice versa.

The application of electronic government in government services is certainly expected to increase government effectiveness. The use of technological sophistication in a government service certainly has an impact on service quality, where government services become more effective (Hodžić et al., 2021). This is because in practice the government as a service provider and citizens as service recipients can give and receive services online anytime and anywhere so that services can run more effectively and efficiently (Nam, 2019).

The implementation of e-Government in European Union countries certainly has a positive impact on government effectiveness (Doran et al., 2023). This is based on data showing that

European Union member countries have utilized digital sophistication in providing government administration services. The data shows that Estonia is a country with government service facilities as a whole that can be accessed online. Because of that, Estonia is recognized as a leading European country which is recognized as "the most advanced digital society in the world" with the development of e-Government including Government Cloud, Data Embassy, e-Voting, and e-Cabinet (Hodžić et al., 2021). In addition, the implementation of e-Government-based countries Austria, Denmark, Estonia, Finland, Malta, the Netherlands, Slovenia, Spain, and Sweden are European Union member countries with high e-Government development, and Romania, Bulgaria, Italy, Hungary, and Croatia at the lower tier in e-Government development, particularly in technology infrastructure (Doran et al., 2023).

One e-Government-based service in the European Union includes the existence of an Electronic Identity Card (eID) service (Walke et al., 2023), Electronic Health Record (EHR) (Stellmach et al., 2022), dan European Citizens' Initiative (Tosun et al., 2022). Based on these data, it shows that the implementation of e-Government in countries in the European Union influences government effectiveness. This is in line with the results of the hypothesis of this study which shows that the e-Government development index (EGDI) on government effectiveness in European Union countries is accepted and has an impact.

The Impact of EGDI on Political Stability and Absence of Violence/Terrorism

Based on the hypothesis, it shows that the p EGDI value of Political Stability and Absence of Violence/Terrorism in European Union countries is 0.439 with a T value of 0.774 and a positive path coefficient of 0.151 then the hypothesis is rejected. Therefore it is concluded that EGDI has no significant effect on Political Stability and Absence of Violence/Terrorism, the higher the

EGDI, the better Political Stability and Absence of Violence/Terrorism, and vice versa.

Political Stability and Absence of Violence/Terrorism are measured by looking at the amount of politically motivated violence in a country rather than the level of political turnover (Russell, 2023). Data from previous research shows that Bulgaria, Hungary, and Romania have the lowest levels of public services, political rights, and government effectiveness. This is the impact of political instability, unstable economic policies, and inconsistent economic planning (Androniceanu, Georgecu, et al., 2022). Furthermore, other research data explains that based on GDP per capita data, Romania and Bulgaria are the least developed European Union member countries and have concerns regarding how they respect the rule of law and the independence of the judiciary (Tankovsky & Endrődi-Kovács, 2021). This is in line with the results of the hypothesis of this study which shows that the e-Government development index (EGDI) on Political Stability and Absence of Violence/Terrorism in European Union countries does not have a significant effect and is rejected.

The Impact of EGDI on Regulatory Quality

Based on the hypothesis showing the p-value of EGDI on Regulatory Quality is 0.079 with a T value of 1.758 and a positive path coefficient of 0.429, then the hypothesis is rejected and it is concluded that EGDI Therefore is concluded that EGDI has no significant effect on Regulatory Quality, the higher the EGDI, the better Regulatory Quality, and vice versa.

Regulatory Quality is an indicator on the world government index that looks at the quality of government policies (Linhartova, 2022). Data from previous research shows that in terms of regulatory quality and implementation, each European Union member country has different capacities, with data showing that Hungary has the least impact and Estonia has the greatest impact on regulatory quality (Ahmić & Isović,

2023). This is in line with the results of the hypothesis of this study which shows that the e-Government development index (EGDI) on Regulatory Quality in European Union countries does not have a significant effect and is rejected.

The Impact of EGDI on the Regulatory Rule of Law

Based on the hypothesis, the p-value of EGDI against the Rule of Law is 0.062 with a T value of 1.874. as well as a positive path coefficient of 0.404, then the hypothesis is rejected and it is concluded that EGDI has no significant effect on the Rule of Law, the higher the EGDI, the better the Rule of Law, and vice versa.

The Rule of Law is part of the main law of European Union member countries by developing autonomous jurisprudence based on the common constitutional tradition of member countries with abstract rule of law principles (Fleck et al., 2022). Previous research data shows that the rule of law and the quality of deliberations in European Union countries from 2010 -2019 experienced a decline, especially in Bulgaria, Malta, and Slovenia, except for Bulgaria, Croatia, and Slovakia, which experienced a slight increase in the quality of deliberations and rule of law (Gora & de Wilde, 2022). This is in line with the results of the hypothesis of this study which shows that the e-Government development index (EGDI) against the rule of law in European Union countries does not have a significant effect and is rejected.

The Impact of EGDI on the Voice of Accountability

Based on the hypothesis shows the EGDI p-value for Voice and Accountability is 0.002 with a T value of 3,067 and a positive path coefficient of 0.483, so the hypothesis is accepted and it is concluded that EGDI 2020 has a positive and significant effect on Voice and Accountability, the higher the EGDI 2020, the better Voice and Accountability performance, vice versa.

Voice and accountability is a form of measurement that looks at the extent to which citizens can participate in contesting government elections, have freedom of expression, take roles, and have freedom of expression and freedom of the media (Ardielli, 2019). The application of e-Government in government services will certainly increase the voice of accountability (Lytras & Şerban, 2020). This is because technological sophistication makes it easy for citizens to express opinions and participate only with a computer or cellphone screen; residents do not need to come to the location of government offices (Waheduzzaman & Khandaker, 2022).

Previous research data shows that the effect of implementing e-Government on voice and accountability in Austria, Belgium, Denmark, Finland, Germany, Ireland, Luxembourg, the Netherlands, and Sweden is in the highest position, then Bulgaria and Hungary are in the lowest position (Stawska & Jabłońska, 2022). One form of implementing e-Government in European Union countries that has an impact on voice and accountability, including the existence of the EU Open Data Portal website (Duguay et al., 2019), European Blockchain Services Infrastructure (Baldacci & Frade, 2021), and European Open Science Cloud (EOSC) (Burgelman, 2021). This is in line with the results of the hypothesis of this study which shows that the e-Government development index (EGDI) on the voice of accountability in European Union countries is accepted and has an impact.

Conclusion

Based on the results found in this study, it can be concluded that e-Government implementation based on the E-Government Development Index (EGDI) data in European Union countries has no impact on the six overall governance indicators, the Worldwide Governance Indicators (WGI). This is based on the results of testing the hypothesis of smart PLS 0.3 version data processing which

shows that the influence of the EGDI of European Union member countries on corruption control, weakness of government, and accountability of votes is accepted, while the impact of EGDI of European Union member countries on political stability and absence of violence/law enforcement, regulatory quality and rule of law is rejected.

The results of this hypothesis test are in line with data showing that European Union member countries have implemented many services that can be accessed digitally by the public as well as providing convenience in information transparency by providing an information database website that can be accessed by citizens. The implementation of e-Government certainly influences controlling corruption, government services that run more effectively, and influence public participation in voicing their appreciation and accountability. However, the results of the research hypothesis test show that the implementation of e-Government has no significant effect on the indicators of Political Stability and Absence of Violence/Terrorism, Regulation Quality, and Rule of Law. This is due to differences in capacity between countries, political instability, inconsistent policies, and economic planning in several European Union member countries.

Apart from this, e-Government implementation in European Union countries is less accessible to citizens with low digital skills overall and, technically normal, to those with low internet access. So that this can be a material consideration for governments in European Union countries to make regulations and policies for European Union countries so that high e-Government penetration in European Union countries can also be felt by all citizens regardless of the place of residence and educational background. However, in implementing e-Government, countries in the European Union need to pay more attention to the readiness of their citizens in facing technological sophistication, so that

the impact of implementing e-Government in EU member countries can be felt optimally. In other words, the implementation of e-Government is not only increased, but the readiness of citizens in facing the implementation of technology-based government (e-Government) also needs to be improved so that the implementation of e-Government can be carried out effectively and efficiently.

As a limitation of this research, it should be noted that this study analyzes the impact of implementing e-Government based on the E-Government Development Index (EGDI) data on governance indicators developed by the Worldwide Governance Indicator (WGI) in European Union countries. This research can be developed for further research by conducting a more in-depth research analysis regarding the implementation of e-Government and its influence on one of the six governance indicators based on the Worldwide Governance Index (WGI) in European Union countries.

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