

Approaches to the Development of Open Government for Various Countries to Country Development

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ABSTRACT

This study aimed to examine the components and appropriate relationships among various factors in each area to drive open government and country development across various dimensions in the studied regions. The latent variables included the open government process, the political environment, open government, and country development. The researchers used quantitative research methods to analyze and test indicators using Partial Least Square Structural Equation Modeling (PLS-SEM). The research demonstrated that: 1) the open government process influenced the development of open government, supporting the hypothesis; 2) the political environment influenced the development of open government, which did not support the hypothesis; 3) all four stages of open government influenced country development across all components; and 4) open government had a direct, positive influence on country development. However, the open government process had an indirect influence on country development through open government. The political environment did not influence open government. These findings contribute to understanding how open government initiatives in each country can effectively implement this policy. This study can present the results to practitioners in the civil service and will be useful for developing a concrete conceptual framework and creating public policies that will benefit public administration in the future.

Keywords: Open government; Open government Process; Political environment; Country development; Policy implementation.

INTRODUCTION

The concept of open government is linked to the view that government must be governed based on transparency and accountability. In line with the principles of representative democracy, public representatives must not manage in secret and must be open to scrutiny at all times. Thipawan Lorsuwannarat (2017) suggests that the concept of open government arose in the 2020s. The government should provide citizens with access to the content and meetings of the government, enabling them to be informed, monitor, and scrutinize government performance. Monitoring government performance today is based on participation through information technology, which is readily accessible to everyone, anytime, anywhere. The concept of open government aligns with public administration research, which focuses on transparency and accountability to citizens as owners of the country.

Thipawan Lorsuwannarat and many scholars view this concept as a further development of e-government, focusing on three key aspects of public administration: 1) transparency, 2) availability for scrutiny at all times, and 3) a focus on public participation through information technology. (Lorsuwannarat, 2017) The private sector also

recognizes the importance of creating an open government to benefit the state and promote the private sector, as suggested by Rob van der Meulen (2017) from Gartner, who proposed a direction for government development. Developing government at each level, moving upwards, will enhance public sector potential and, importantly, enhance country development in various dimensions, which serve as a foundation for technology adoption.

The above proposal aligns with efforts to call for greater public accountability for government administration. Furthermore, scholars like Van Dooren et al. (2012) believe that the higher the level of open government, the greater the public accountability, resulting in overall benefits. This has led many countries to develop concrete measures and policies to support open government as a reality and meet the needs of their citizens (Yu & Robinson, 2012).

The concept of open government has been implemented in many countries around the world. This can be seen from the establishment of the Open Government Partnership (OGP) since 2011, which has expanded from 8 initial countries to 74 countries by 2024. The government will prepare a National Action Plan and a Declaration to create a commitment to promote open government in collaboration with civil society, the media, and other sectors within the country. However, many countries that see this policy or concept as important have implemented it but have not applied to be members of the Open Government Partnership (OGP) (Ministry of Finance, 2015).

The researcher recognizes that the gap in open government studies remains the lack of application of the comparative politics framework to the study of open government. Therefore, the researcher is interested in applying the concept of comparative politics to the transition to open government policymaking, which often involves political science and public administration. This study examines Nicolas Henry's paradigm of public administration, fundamental political science, digital government, open government, citizenship, democratic transition theory, the rule of law, and good governance.

When these countries transitioned to open government policy implementation, did the government encourage various levels of government to implement it consistently? Was it successful? To what extent? What factors were involved? The sustainability of this concept in the creation of open government requires consideration of multiple factors, particularly the promotion of open government data (OGD), which drives open government policy implementation. Furthermore, research based on secondary data sources will provide a clearer picture of the development of a model of factors related to the process of driving open government. The political environment, open government, and country development of over 100 countries can provide a comprehensive overview of the study and development strategies for open government in each country (Lee et al., 2019).

If countries, including Thailand, can achieve open government, they will be able to achieve the ultimate goal of public administration: gaining public trust. Government agencies established throughout the country are now closer to the public. Civil servants, government employees, officials, and employees are a key mechanism for driving this organization toward governance based on the rule of law, good governance, transparency, accountability, and public disclosure. This will ultimately lead to national development outcomes across 12 dimensions (The Legatum Institute Foundation, 2021).

Research Objectives

To study the appropriate components and relationships between factors in each area for driving the development of open government and country development towards sustainable development in various regions.

LITERATURE REVIEW

The process of driving open government involves five main theoretical concepts:

The Concept of “Policy Implementation”

When considering the process of transforming open government concepts/policies into reality in each country, according to Chandarasorn (2011), this process involves the interactions, connections, dependencies, and degrees of independence of organizations and individuals, from policy-making agencies to implementing agencies. It is divided into two levels: “macro” and “micro”. Macro-level policy implementation, in which higher-level agencies formulate public policies for implementation at lower levels, involves two key stages: the “policy translation” stage, where after the executive branch establishes the policy, the primary agency is assigned to interpret the policy into operational guidelines, plans, or projects. This stage is crucial; if the implementation fails to achieve its intended purpose, the outcome will be unsuccessful from the start. Success therefore depends on clarity of goals, understanding of objectives, and sincere cooperation from those responsible. The “policy acceptance” stage, in which lower-level agencies must “understand and accept” the plan/project before it can be implemented in line with its objectives. (Chandarasorn, 2011) Later, in micro-implementation, upon receiving a

policy from the central government, internal agencies must develop consistent internal policies and drive the work through coordination of interests between the top and bottom, relying on the discretion of the implementers. This process is divided into three main stages: 1) the mobilization stage, in which the implementing agency, such as the regional or local government, considers the appropriateness, importance, urgency, alignment with goals, and the ability to meet the needs of the target group. They also build a support base from personnel, key players, networks, and various organizations to foster widespread participation; 2) the implementation stage, in which the implementers' discretion plays a key role, determining appropriate approaches, methods, and tools for effective implementation; and 3) the solidarity or continuity stage, in which even after the policy has expired, it can still be "embedded" into routine work if agency leaders create motivation and teamwork that fosters engagement and acceptance, resulting in sustainable operations (Chandarasorn, 2011).

The Open Government Implementation Model (OGIM) — Lee & Kwak (2011)

Lee and Kwak (2011) presented the Open Government Implementation Model (OGIM), which outlines four implementation steps and describes the focus, outcomes, benefits, challenges, best practices, and indicators for each step. The core tenet of the model is that governments, state agencies, and local governments should develop open government initiatives incrementally, focusing on a step-by-step implementation process, beginning with increasing data transparency (Step 1), progressing to improved open participation (Step 2), enhancing open collaboration (Step 3), and realizing widespread participation (Step 4). We argue that by following this sequence, agencies can mitigate risk and effectively harness the power of social media to engage the public.

The Concept of Multi-Current Model of Policymaking

Kingdon (2003)'s multi-currency model of policymaking was first presented in his 1984 book, "Agendas, Alternatives, and Public Policies." His model evolved from the garbage can model proposed by Cohen, M.D., J.G. March, and J.P. Olsen in their 1972 article, "A garbage can model of organizational choice." This model examines the relationship between four factors: problem status, problem resolution, participation, and decision-making opportunities. These factors may not be consistent with the problem and solution options because they have not yet occurred or are future-oriented. However, this process attempts to create decision-making that supports the problem and solution options of everyone in the organization, which have not yet occurred, so that they are ready to accept and solve the problems. These problems already exist within the organization, and the options for resolving them depend on the context of the work. This model is appropriate for decision-making in initiating new public policies and challenging change. Public administrators, civil servants, and practitioners must be prepared to address the challenges posed by these policies once they are implemented. The multi-stream model has three components that comprise the government's key policy agenda: problem streams, policy streams, and politics streams. These three streams may be drivers of the implementation of open government policies or obstacles to their implementation, depending on other environmental factors. (Akhatand, 2016; Kingdon, 2003; Powintara, 2018; Vinijaiyapak, 2022).

The Concept of Open Government

The modern origins of open government are often traced back to the European Enlightenment, which emphasized freedom of the press and access to information. The first open government legislation appeared in Sweden, where the "Freedom of the Press Act" was enacted in 1766. This act, part of the Swedish constitution, granted citizens access to official documents, except those deemed confidential. Since then, over 100 access to information laws have been implemented in many countries around the world. The development of open government in the second half of the 20th century has focused on legal development and promotion of human rights, public consultation, social responsibility, and whistleblower protection (Congress of local and regional authorities of the Council of Europe, 2018). A key turning point was the establishment of the global Open Government Partnership (OGP). Launched at the United Nations General Assembly in September 2011, the OGP is a voluntary, multi-stakeholder international initiative aimed at To maintain the concrete commitment of governments to their citizens and promote transparency, fight corruption and use modern technology, ultimately resulting in strengthening good governance and country development. Today, with more than 70 member states, the OGP has developed more than 200 action plans with more than 2,500 commitments. The OGP was the exclusive partner of its member states until 2016, when it launched its Subnational Pilot Program with 14 subnational governments (including devolved, regional and local levels). The regional governments signed the "Open Government Subnational Declaration" in Paris in December 2016. The essence of the Declaration outlines the essence of cooperation between federal, state, regional and other subnational governments from around the world, representing the populations of municipalities, cities, metropolitan areas, counties, states, provinces, regions

and countries, to come together at the Open Government Partnership Global Summit, convened by the Government of France, the OGP and the City of Paris, to pursue three key goals: 1) “Recognition” of government as closest to citizens at the regional level; It proposes a role as a truly transformative change agent for more transparent, responsive, accountable and effective governments that benefit all citizens, promoting the role of civil society in co-creating regional action plans and implementing these commitments to lead to citizen-led change at the local level. 2) “Commitment”, a key mission of the OGP is to promote a global culture of open government that empowers and delivers for citizens and advances the ideal of open and participatory government for the 21st century. And 3) “Call”, calling on local, regional and other sub-regional governments and civil society networks to sign this declaration and implement open government in their local areas (Congress of local and regional authorities of the Council of Europe, 2018). The goal of open government reform is “to create a state with good governance, better decision-making, greater public trust, less corruption and more effective public services”. Open government is thus the precursor to the ultimate outcome of creating a state with good governance, better decision-making. Greater public trust, reduced corruption, and improved effectiveness of public services (Congress of local and regional authorities of the Council of Europe, 2018). This idea aligns with the research of Hansson et al. (2015) entitled “Open Government and Democracy: A Research Review”. The concept of open government addresses the fundamental gaps of e-government by significantly enhancing democratic ideals. The research therefore provides a framework for analyzing open government from a democratic perspective. To explore the foundations of open government research and the types of missing research, we closely examined the concept of democracy in peer-reviewed journals on open government from 2009 to 2013, focusing on some fundamental issues of democracy and the types of solutions suggested. Despite seemingly good intentions and broad rhetoric, it was found that, despite the seemingly good intentions and extensive rhetoric, there was a lack of adequate tools for meaningful public deliberation and expression. It is important to note that the rhetoric supporting the concept of open government, defined by the Obama administration as “transparency, participation, and cooperation,” has, in practice, largely focused on transparency and information exchange, while neglecting the fundamental democratic issues of participation and cooperation.

Social forces that shape public policy, as proposed by Sangiampongsa (2022), also play a crucial role in recognizing the importance of policy creation in society. These include: 1) Interest articulation, which is relevant to public policy within political systems analysis and comparative politics. It explains the role of citizens in political participation. Democratic political institutions can communicate public policy intentions to the government. If citizens wish to pay for benefits or interest groups wish to claim any benefits, they can contact members of parliament or lawmakers. Today, citizens have more communication channels than ever before, making communication more accessible to the government. Regarding communication or demands that take a more intense or violent dimension, protests are believed to play a role outside the political system. These methods are often used to demand benefits through relatively large amounts of violence, often found in dysfunctional political societies. However, if one aspect of communication between society and political authorities is the power to consider and determine laws, which is public policy, it could be considered a means of advocating for benefits, a public policy advocacy. While not physically violent, violence can be communicative, perhaps through persuasion through the use of rhetoric to push for the success of certain policies. Furthermore, under the concept of political systems and comparative politics, it is stated that the social groupings that are associated with advocacy are groups. There are interest groups that focus on organizing and acting for their own interests, and there are groups that act for public benefit, which organize these groups to demand government policy implementation, particularly government disclosure policies. This is a problem facing political societies in all countries seeking transparent government administration. The success of campaigns or policy advocacy can be determined by the number of participants, as a small number of participants may indicate policy success. Therefore, citizens may view the role of each group in society as a bridge between society and the state, as well as an effective communication tool between state and society. 2) Groups and Differences Within Society: Advocating for benefits and protests are actions to raise awareness and encourage policy creation. Although some parts of society share common racial and religious characteristics, they may have different desires to push for policies to meet different needs. 3) The nature of the issues that groups use to demand their interests. Gerston (cited in Sangiampongsa, 2022) stated that triggering mechanisms, or factors that make certain issues appear more important than others at the same time, such as major events, serious incidents, or violent incidents, are social mechanisms that prioritize issues in society based on the urgency of addressing them. However, whether prioritization is a fad depends on other factors. Otherwise, a given issue may lose its importance or be replaced by a new issue, leading to a relapse into the same problem when the government no longer wishes to pursue that policy. This research also explores other concepts, such as Nicolas Henry's public administration paradigm, basic political science concepts, digital government, civil rights, the theory of democratic transition, the rule of law, good governance, and decentralization. Political and

bureaucratic concepts, etc., in order to cover the analysis of case studies to cover all 3 factors: 1) Structural factors such as political social development, bureaucratic development, economic development, and changes in social and cultural structures of each country in different periods that have pushed the government to be more open to the public in the country. 2) Actor factors such as political leaders, political elites, political parties, interest groups, civil society, etc. 3) External influence factors such as external pressure, commitment to international conventions, influence of political changes in countries in the same subregion, etc., which will be used for further study.

Concepts for Country Development

Lee et al.'s (2019) research, "The Contribution of Open Government to the Prosperity of Society," initiated an empirical study on the impact of open government on societal issues, such as economic welfare and good governance, that lack statistical studies. This study aims to demonstrate the relationship between open government and social well-being, such as social or environmental capital. The implementation of open government concepts and policies has increased internationally, such as access to information laws in China and India, the launch of the Open Government Partnership (OGP) in 2011 under the Obama administration, and the creation of the Latin American Network (Red Latinoamericana por la Transparencia Legislativa) in 2012. These initiatives encourage governments to promote transparency by engaging citizens to combat corruption and strengthen governance. One of the OGP's key missions is to "establish strong anti-corruption policies, mechanisms, and practices, foster transparency in public budgeting and government procurement, and strengthen the rule of law." Examples of regional movements toward open government and transparency include the Latin American Network, which operates as a legal mechanism connecting governments and civil society organizations to promote transparency, access to information, and accountability. Initiatives to promote public transparency of information that captures their interest and engagement, and aligns social and political issues, such as corruption detection or regulatory strengthening. Globally, open government should serve to improve citizens' well-being through governance mechanisms and communication platforms. This study uses the Prosperity Index from the Legatum Prosperity Institute to uncover two main findings: 1) to examine whether open government has a positive and direct effect on social welfare in terms of social and environmental capital; and 2) whether rule of law and corruption control mechanisms play an important role in linking the two variables. The study investigated the relationship between open government and prosperity of 96 countries in 2015. Structural equation modeling (SEM) analysis was used. Since SEM can analyze all paths in a single analysis simultaneously, the results show that open government is neither directly nor positively related to prosperity. Therefore, Hypothesis 1 is rejected. Subsequently, the indirect effect of open government on prosperity is significant. Four independent variables (publicity of legal documents and government information disclosure, right to access government information, public participation, and complaint mechanism) showed significant effects. and positively on two mediating variables (rule of law and corruption control), which in turn exert a significant and positive effect on all nine dependent variables (economic equality, business environment, good governance, education, public health, safety and security, personal freedom, social capital, and the environment). Open government has a significant and positive indirect effect through the rule of law and corruption control, thus supporting Hypothesis 2. The statistical results show that social and environmental capital are not related to open government, but are significantly related to e-government. Social and environmental capital have a significant and positive relationship with open government through the rule of law and corruption control. Therefore, Hypothesis 3 is partially accepted. In conclusion, open government affects economic prosperity, social and environmental capital through the mechanism of rule of law and corruption control. The research of Lee et al. emphasizes the role of the rule of law and corruption control because they are important in moderating the effects of open government and prosperity. Unless mechanisms such as regulation, law enforcement, and corruption control are resisted by the public, government agencies, or other agencies in the country, open government itself will have a negative impact on country development for sustainability.

To summarize, the study's conceptual framework is illustrated in Figure 1.

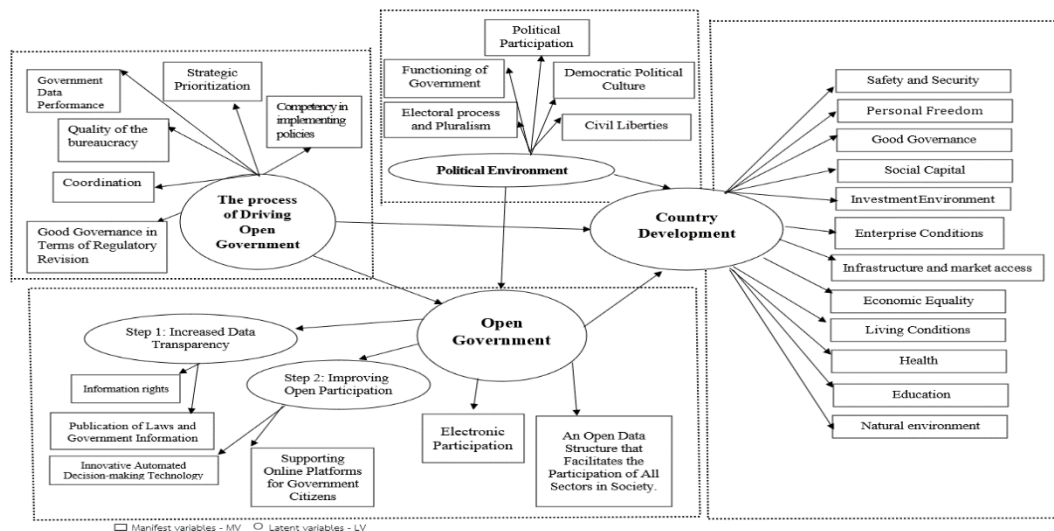


Figure 1. Research model

Hypotheses

From the above research conceptual framework, the research hypotheses can be developed as follows:

H1: The processes driving open government, including competency in implementing policies, strategic prioritization, government data performance, quality of the bureaucracy, coordination, and good governance in Terms of Regulatory Revision, contribute to the development of open government. (Davis, 1989; Venkatesh et al., 2003; Scassa, 2014; Powintara, 2018; Powintara, 2019; Chandler Institute of Governance, 2022)

H2: The increasing political environment, including Electoral process and Pluralism, Functioning of Government, Political Participation, Democratic Political Culture, and Civil Liberties, contribute to the development of open government. (Hansson et al., 2015; Congress of local and regional authorities of the council of europe, 2018; Sangiampongsa, 2022)

H3: Open government (defined by four levels of open government indicators: Step 1: Increased Data Transparency, Step 2: Improving Open Participation, 3. Electronic Participation, and 4. An Open Data Structure that Facilitates the Participation of All Sectors in Society.) can contribute to increased country development across all components: 1. Safety and security, 2. Personal freedom, 3. Good governance, 4. Social capital, 5. Investment Environment, 6. Enterprise Conditions, 7. Infrastructure and market access, and 8. Economic equality. 9. Living Conditions, 10. health 11. Education and 12. Natural environment. (Davis, 1989; Venkatesh et al., 2003; Lee & Kwak, 2011; Geiger & von Lucke, 2012; Wirtz et al., 2017; Lee et al., 2019)

H4: The process of promoting open government and the political environment indirectly influence Sustainable national development in each area through the level of open government.

RESEARCH METHOD

The researcher used partial least square - structural equation modeling (PLS-SEM) to test the research model rationally to answer the research question and objectives, focusing on predicting the impact of the open government driving process, political environment, open government on national development, including the relationship between various variables. The main purpose of PLS-SEM focuses on predicting the hypothesized relationship, that is, to increase the variance in the dependent variable. Therefore, PLS contributes to predictive causal analysis in theory development (Wold, 1985; Henseler et al., 2009; Wong, 2013; Sarstedt et al., 2014; J.F. Hair et al., 2017, as cited in, Sangkachan, 2020). All variables, both exogenous variables and endogenous variables, in this research are structured measures, such as preconditions for the open government driving process. Political environment, open government, and country development PLS-SEM is suitable for models with structural measures in terms of patterns (Sarstedt et al., 2014; Lee et al., 2016 as cited in, Sangkachan, 2020). Moreover, the sample for this research has more than 100 countries, which may be a small sample size. However, modeling with an appropriate sample size of 100 to 200 samples, coupled with a sample size that should be 10 times the maximum number of paths to be followed in the model, should, according to the rule of thumb, have a sample size of more than 50 samples. Therefore, 105 countries are sufficient for the partial least squares structural equation model (PLS-SEM) used in this study (Hoyle, 1995; Chin, Marcolin & Newsted, 2013, as cited in Sangkachan, 2020). Furthermore, this study utilized secondary data, which may lead to problems with normal distribution. Therefore, partial least squares structural equation model (PLS-SEM) is the primary and important choice for secondary data

analysis. Furthermore, PLS-SEM does not assume the normality of normal distribution data. It can handle all types of data, both metric and non-metric, with very few assumptions regarding the nature of the data. Therefore, it is useful for testing the research model in this study (Hair & Hult, 2022; Sangkachan, 2020; Sarwono, 2018; Wong, 2019).

Sample And Data Collection

The researcher chose to use the research unit at the “country” level as the unit of analysis, which includes a list of 105 countries where the research was conducted, including: 1) Albania 2) Algeria 3) Angola 4) Argentina 5) Australia 6) Austria 7) Bangladesh 8) Belgium 9) Benin 10) Bosnia and Herzegovina 11) Botswana 12) Brazil 13) Bulgaria 14) BurkinaFaso 15) Cambodia 16) Cameroon 17) Canada 18) Chile 19) China 20) Colombia 21) Costa Rica 22) Czech Republic 23) Denmark 24) Dominican Republic 25) Egypt 26) ElSalvador 27) Estonia 28) Ethiopia 29) Finland 30) France 31) Georgia 32) Germany 33) Ghana 34) Greece 35) Guatemala 36) Honduras 37) Hungary 38) India 39) Indonesia 40) Iran 41) Ireland 42) Italy 43) Jamaica 44) Japan 45) Jordan 46) Kazakhstan 47) Kenya 48) Kyrgyz 49) Latvia 50) Lebanon 51) Lithuania 52) Luxembourg 53) Madagascar 54) Malawi 55) Malaysia 56) Mali 57) Malta 58) Mauritius 59) Mexico 60) Moldova 61) Mongolia 62) Montenegro 63) Morocco 64) Mozambique 65) Namibia 66) Nepal 67) Netherlands 68) New Zealand 69) Nicaragua 70) Nigeria 71) North Macedonia 72) Norway 73) Pakistan 74) Panama 75) Paraguay 76) Peru 77) Philippines 78) Poland 79) Portugal 80) Romania 81) Russia 82) Rwanda 83) Senegal 84) Serbia 85) Singapore 86) Slovakia 87) Slovenia 88) South Africa 89) Spain 90) Sri Lanka 91) Sweden 92) Tanzania 93) Thailand 94) Tunisia 95) Turkey 96) Uganda 97) Ukraine 98) United Arab Emirates 99) United Kingdom 100) United States 101) Uruguay 102) Venezuela 103) Vietnam 104) Zambia and 105) Zimbabwe.

Data Processing and Statistical Analysis

This research utilized partial least squares structural equation modeling (PLS-SEM). The process of transforming secondary data into data suitable for analysis began with data entry and data cleaning. Data cleaning is the process of detecting and correcting corrupted or invalid records from a table or database recordset, and involves identifying incomplete data. This involves determining whether there are missing data and correcting them. If there are, correcting them. If not, inspecting the data is followed by testing the two-step structural equation modeling of the partial PLS-SEM model in this research. Model evaluation can be subdivided into two sequential steps: evaluation of the formative measurement model and evaluation of the structural model (Rinthaiong, 2021; Sangkachan, 2020).

The PLS-SEM model is an estimation method based on OLS regression that defines statistical properties. It consists of two components: 1) the measurement model (or Outer Model) using factor analysis; and 2) the structural model (or Inner Model) using path analysis. Both utilize different techniques: the measurement model represents the relationship between the constructed variables and their indicators (for each constructed variable), while the structural model represents the relationship (path) between the constructed variables. This research utilized the SmartPLS program to test both the measurement model and the structural model, as this tool is less sensitive due to the small sample size. It provides greater statistical power than tools based on covariance analysis, such as LISREL and AMOS (Sarwono, 2018; Hair, 2018; Rinthaiong, 2021; Sangkachan, 2020). As mentioned above, the PLS-SEM structural equation model consists of a measurement model and a structural model. There are two types of measurement models: formative and reflective. The evaluation of the quality of the formative measurement model involves testing for convergent validity, discriminant validity, multicollinearity, nomological validity, coefficient of determination (R^2), blindfolding (Q^2), and model fit (Sangkachan, 2020).

Next, the evaluation of “the formative measurement model” was performed. This first step in the evaluation process was construct validity. Construct validity was assessed using factor analysis to examine convergent validity, discriminant validity, and multicollinearity. Second-order constructs were then analyzed using latent variable scores from the first-order constructs. Furthermore, the second-order constructs were validated using construct validity tests for all three constructs. No reliability tests were required in the PLS-SEM analysis, as PLS-SEM assumes very low correlations between measurement items (Wong, 2013; Lee et al., 2016; Wong, 2019; Sangkachan, 2020).

Data Analysis

Demographic Profile

Data from 105 countries studied by the researchers were used in the analysis. Table 1 shows the results of the percentage summary of countries in each continent/region, showing the proportion of countries by region as follows:

Table 1. Demographic Profile

No.	Continent/Region	Percent (%)
1	Africa	26 (24.76)
2	Asia	23 (21.90)
3	Europe	35 (33.33)
4	America	19 (18.10)
5	Australia	2 (1.90)
	All	105 (100.00)

Measurement Model Evaluation Results

Regarding the Measurement Model Evaluation, the reflective measurement model evaluation involved testing the reliability and validity of the measurement instruments. The latent variable reliability testing criteria were Cronbach's α , composite reliability, and outer loadings. The validity testing assessed construct validity in two ways: convergent validity and discriminant validity. Details are as follows.

Next, the "Outer Loadings" test was conducted. The standardized outer loadings of the indicator variables should be at least 0.70. If they fall below this value, the variables should be omitted. Table 4 shows the external loadings of the variables. Results of the first iteration of the measurement model showed that only one indicator variable, 412_NRE, was eliminated due to its external loading of 0.669, which is lower than 0.70. This indicates that the 412_NRE variable is an indicator variable not used to measure country development. After eliminating the 412_NRE indicator variable, the final iteration of the measurement model, without eliminating other indicator variables, found that all indicator variables had external loadings greater than 0.70. This suggests that all indicator variables used in the study are reliable.

Table 2. Results of the reliability tests and component weights of the statistical measurement instruments

Latent variables	Indicator Variables	First Iteration				Final Iteration			
		Outer loadings	Composite reliability	Cronbach's Alpha	AVE	Outer loadings	Composite reliability	Cronbach's Alpha	AVE
ProcDrvOpe nGov	11_CompInImpPol	0.748	0.936	0.938	0.678	0.749	0.936	0.938	0.712
	12_StratPri	0.701				0.702			
	13_GovDatPer	0.989				0.989			
	14_QualBureau	0.913				0.910			
	15_Coordination	0.738				0.738			
	16_GoodGovRegRev	0.933				0.933			
PolicEnviron	21_ElecProPlu	0.819	0.925	0.923	0.716	0.818	0.925	0.923	0.716
	22_FuncOfGov	0.980				0.990			
	23_PolPart	0.726				0.718			
	24_DemoPolCul	0.754				0.753			
	25_CivLib	0.922				0.921			
OpenGove	Proc1	31_PubLawGovData	1.004	0.932	0.929	0.872	1.004	0.932	0.872
		32_RightToInform	0.742				0.742		
	Proc2	33_InnoAutoDecisTech	0.840				0.840		
		34_SupOnPlatGovCit	0.915				0.915		
	Proc3	35_ElecPart	0.879				0.879		
	Proc4	36_OpenDatStru	0.986				0.986		
CountDevel	41_SS	0.771	0.962	0.961	0.678	0.770	0.962	0.961	0.698
	42_PF	0.763				0.754			
	43_GN	0.926				0.924			
	44_SC	0.720				0.717			
	45_IE	0.955				0.955			
	46_EC	0.851				0.851			
	47_IMA	0.883				0.883			
	48_EE	0.867				0.868			
	49_LC	0.841				0.843			
	410_PH	0.744				0.746			
	411_Edu	0.843				0.844			
	412_NRE	0.669				Eliminate			

Results of the Convergent Validity Test of the Measurement Instrument

The statistic used to measure convergent validity is the Average Variance Extraction (AVE). An AVE value greater than or equal to 0.5 indicates that the latent variable can explain more than 50 percent of the indicator variance (Hair et al., 2013). Table 2 shows that all four latent variables have average variance extractions exceeding the specified threshold of AVE greater than 0.5, with statistical significance at $p = 0.000$. This indicates that all

latent variables have convergent validity, meaning that the latent variables accurately explain or measure the indicator variables.

Results of the Discriminant Validity Test of the Measurement Instrument

This research used discriminant validity analysis to test whether indicators clearly measure specific latent variables. Cross-loadings were used to assess the relationship between the component weights of the indicator and the component weights of the indicator and other latent variables in the model. Each indicator of a latent variable should have a higher component weight than the other latent variables (Hair et al., 2014), with a weight of at least 0.70 (Lee et al., 2011). The first-order constructs of the measurement model showed lower component weights. As shown in Table 3, the correlations between the component weights of the indicators and other latent variables in the model were also lower.

The second-order constructs revealed that the component weights of the indicators and the latent variables in the model were at least 0.70 and higher than the component weights of the indicators and other latent variables in the model. Therefore, it can be concluded that the four latent variables, namely, the process of driving open government (ProcDrvOpenGove), political environment (PolicEnviron), open government (OpenGove), and country development (CountDevel), have discriminant validity according to the cross loadings criteria as shown in Table 4.

Table 3. Results of the evaluation of measurement models (First-order constructs)

Latent variables Constructs	Items (Latent variables)	Outer weights (Outer loadings)	t-value	VIF	Cross Loadings			
					1	2	3	4
1. ProcDrvOpenGove	11_CompInImpPol	0.170***	20.940	3.714	0.747	0.639	0.646	0.724
	12_StratPri	0.159***	19.987	3.812	0.700	0.645	0.582	0.698
	13_GovDatPer	0.225***	22.973	2.986	0.989	0.709	0.941	0.882
	14_QualBureau	0.208***	24.711	4.510	0.913	0.788	0.769	0.901
	15_Coordination	0.168***	20.251	2.877	0.738	0.637	0.646	0.706
	16_GoodGovRegRev	0.212***	26.902	6.587	0.932	0.834	0.774	0.930
2. PolicEnviron	21_ElecProPlu	0.224***	12.586	7.830	0.686	0.831	0.548	0.702
	22_FuncOfGov	0.281***	14.816	4.595	0.840	1.040	0.686	0.843
	23_PolPart	0.206***	10.319	2.451	0.575	0.764	0.505	0.622
	24_DemoPolCul	0.179***	7.425	2.317	0.687	0.663	0.438	0.647
	25_CivLib	0.242***	17.999	8.611	0.770	0.896	0.592	0.790
3. OpenGove	31_PubLawGovData	0.615***	23.750	2.249	0.861	0.738	0.862	0.870
	32_RightToInform	0.454***	22.255	2.249	0.745	0.806	0.637	0.755
	33_InnoAutoDecisTech	0.509***	110.037	2.442	0.835	0.660	0.905	0.900
	34_SupOnPlatGovCit	0.554***	50.122	2.442	0.803	0.581	0.985	0.796
	35_Proc3ElecPart	0.488***	73.793	4.019	0.766	0.559	0.879	0.769
	36_Proc4OpenDatStru	0.547***	56.649	4.019	0.858	0.670	0.986	0.905
4. CountDevel	41_SS	0.093***	18.384	3.256	0.761	0.673	0.656	0.773
	42_PF	0.084***	11.015	4.201	0.714	0.891	0.520	0.693
	43_GN	0.111***	27.429	13.124	0.930	0.859	0.726	0.919
	44_SC	0.084***	14.322	2.333	0.662	0.675	0.645	0.697
	45_IE	0.116***	28.692	12.936	0.939	0.811	0.838	0.963
	46_EC	0.105***	25.799	8.191	0.864	0.717	0.713	0.867
	47_IMA	0.108***	25.535	9.492	0.857	0.707	0.824	0.898
	48_EE	0.107***	25.163	4.841	0.848	0.676	0.815	0.889
	49_LC	0.104***	28.415	8.860	0.782	0.627	0.871	0.859
	410_PH	0.092***	19.515	4.231	0.702	0.544	0.766	0.766
	411_Edu	0.104***	22.835	5.645	0.775	0.629	0.884	0.858
	412_NRE	0.077***	11.442	2.367	0.617	0.669	0.560	0.636

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 4. Results of the Measurement Model Evaluation (Second-Order Constructs)

Latent variables Constructs	Items (Latent variables)	Outer weights (Outer loadings)	t-value	VIF	Cross Loadings			
					1	2	3	4
1. ProcDrvOpenGove	11_CompInImpPol	0.170***	16.780	3.714	0.749	0.645	0.646	0.729
	12_StratPri	0.160***	13.257	3.812	0.702	0.650	0.582	0.703
	13_GovDatPer	0.225***	41.208	2.986	0.989	0.712	0.941	0.886
	14_QualBureau	0.208***	36.295	4.510	0.910	0.793	0.769	0.899
	15_Coordination	0.168***	15.142	2.877	0.738	0.642	0.646	0.710
	16_GoodGovRegRev	0.213***	42.272	6.587	0.933	0.839	0.774	0.936
2. PolicEnviron	21_ElecProPlu	0.221***	21.752	7.830	0.686	0.818	0.548	0.698
	22_FuncOfGov	0.268***	29.191	4.595	0.840	0.990	0.686	0.845
	23_PolPart	0.194***	12.345	2.451	0.574	0.718	0.504	0.614

	24_DemoPolCul	0.204***	13.737	2.317	0.687	0.753	0.438	0.643
	25_CivLib	0.249***	38.750	8.611	0.770	0.921	0.592	0.787
3. OpenGove	31_PubLawGovData	0.615***	29.317	2.249	0.861	0.740	0.862	0.869
	32_RightToInform	0.454***	16.562	2.249	0.745	0.806	0.737	0.753
	33_InnoAutoDecisTech	0.509***	28.287	2.442	0.835	0.662	0.905	0.906
	34_SupOnPlatGovCit	0.554***	41.731	2.442	0.803	0.582	0.985	0.798
	35_Proc3ElecPart	0.488***	39.622	4.019	0.766	0.559	0.879	0.772
	36_Proc4OpenDatStru	0.547***	76.910	4.019	0.858	0.670	0.986	0.908
4. CountDevel	41_SS	0.099***	17.164	3.155	0.761	0.678	0.656	0.770
	42_PF	0.096***	13.157	3.760	0.714	0.894	0.520	0.754
	43_GN	0.118***	49.458	13.103	0.930	0.866	0.726	0.924
	44_SC	0.092***	12.512	2.300	0.662	0.676	0.645	0.717
	45_IE	0.122***	80.527	12.918	0.939	0.815	0.838	0.955
	46_EC	0.109***	30.328	8.140	0.864	0.723	0.712	0.851
	47_IMA	0.113***	31.240	8.951	0.857	0.709	0.824	0.883
	48_EE	0.111***	32.639	4.813	0.848	0.679	0.815	0.868
	49_IC	0.108***	29.630	8.499	0.782	0.627	0.871	0.843
	410_PH	0.095***	18.072	4.008	0.702	0.545	0.766	0.746
	411_Edu	0.108***	23.977	5.575	0.775	0.630	0.884	0.844

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In conclusion, the results of the structural model evaluation using latent variable analysis from the Open Government Development Structural Model revealed that most external component weightings were statistically significant at $p < 0.001$, with a Cronbach Alpha reliability of ≥ 0.70 , and an Average Variance Extracted (AVE) of > 0.50 . In summary, the results from all three criteria confirm that the Open Government Development Structural Model is suitable for structural modeling.

Results of Measurement Model Hypothesis Testing

The PLS and SEM structural equation modeling hypothesis testing utilized bootstrapping to test for statistical significance. The path coefficients were considered at a significance level of 0.05, i.e., $p < 0.001$, and t-values greater than 1.96, indicating that the path coefficients supported the research hypothesis, as shown in Table 5.

Table 5. Presents the results of the measurement model hypothesis testing

Hypothesis	Structural relationship	Path coefficient	T statistics	P values	Results
H1	Proc Driv Open Gove \rightarrow Open Gove	0.871	27.556	0.000***	supported
H3	Open Gove \rightarrow Count Devel	0.317	3.409	0.000***	supported
H4	Proc Driv Open Gove \rightarrow Count Devel	0.510	3.704	0.000***	supported

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

From Table 5, the hypothesis testing results show that Hypothesis 1 has a path coefficient of 0.871, t-statistics = 27.556, and a significance level of P-value < 0.001 . This indicates that the process of driving open government, including policy implementation capability, strategic prioritization, government data capability, bureaucratic quality, coordination, regulatory governance, strategic prioritization, and policy implementation capability, affect the development of an open government. Therefore, the hypothesis is supported. Hypothesis 2 found a path coefficient of -0.264, t-statistics = 1.488, and a significance level of P-value < 0.137 . This indicates that the political environment, including the electoral process and pluralism, government duties, political participation, democratic political culture, and civil liberties, affect the development of an open government, which does not support the hypothesis. For Hypothesis 3, the path coefficient was found to be 0.317, the t-statistics value was 3.409, and the significance level was at a P value of < 0.001 . This indicates that being an open government, including Step 1: increased information transparency, Step 2: improved open participation, Step 3: improved open collaboration, and Step 4: awareness of widespread participation, impacts country development in all components: 1. safety and security, 2. personal freedom, 3. good governance, 4. social capital, 5. environmental investment, 6. investment conditions, 7. infrastructure and market access, 8. economic equality, 9. living conditions, 10. public health, and 11. education. Therefore, the hypothesis is supported. And hypothesis 4 found that the path coefficient was 0.510, the t-statistics was 3.704, and the significance level was at P-value < 0.001 . This shows that the process of driving open government, including the capability to implement policies, strategic prioritization, the capability of government information, the quality of the bureaucracy, coordination, regulatory governance, strategic prioritization, and the capability to implement policies, affect country development in all components, namely 1. Safety and security 2. Personal freedom 3. Good governance 4. Social capital 5. Environmental investment 6.

Investment conditions 7. Infrastructure and market access 8. Economic equality 9. Living conditions 10. Public health and 11. Education, thus supporting the hypothesis.

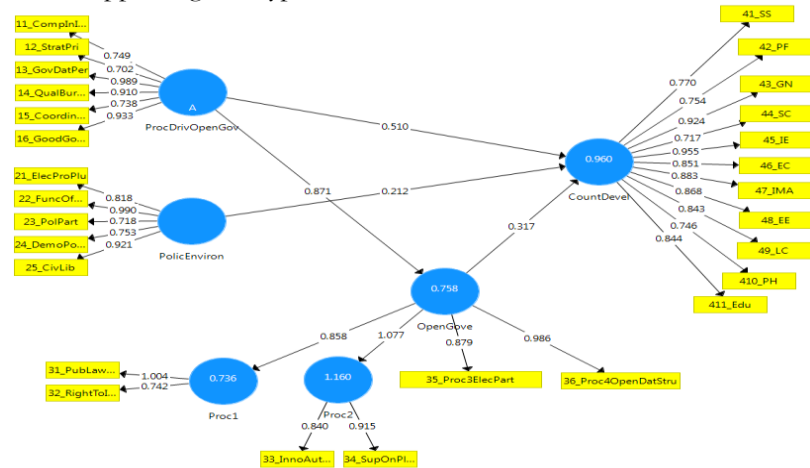


Figure 2. Results of the Path Coefficients Test

The analysis of the influences on the dependent variables in the model can be conducted by considering three dependent variables: the process of promoting open government, the political environment, and open government. It was found that open government exercises a direct, positive influence on country development, with statistical significance at the 0.01 level. Meanwhile, the process of promoting open government exerts an indirect, statistically significant influence through open government on country development, with statistical significance at the 0.01 level. The political environment does not influence open government.

Table 6. The results of the Mediating Effect

Hypothesis	Structural relationship	Path coefficient	T statistics	Standard deviation	P values	Results
H2	PolicEnviron \Rightarrow OpenGove \Rightarrow CountDevel	-0.264	1.488	0.177	0.137	Non-supported
	PolicEnviron \Rightarrow CountDevel	0.210	2.422	0.087	0.016	supported

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

From Table 6, The results of the test of Hypothesis 2 show a path coefficient of -0.264, a t-statistic of 1.488, and a significance level of 0.137. This indicates that the political environment has no influence through an open government on country development, which does not support the hypothesis. However, the political environment does have a direct influence on country development, with a path coefficient of 0.210, a t-statistic of 2.422, and a significance level of < 0.05 , thus supporting the hypothesis.

Table 7. Results of the Research Model Fit (Coefficient of Determinant – R Square)

Latent variables	R Square	R Square Adjusted
OpenGove	0.758	0.756
CountDevel	0.960	0.959

From Table 7, it was found that development had a coefficient of determination (R Square) of 0.960 and a coefficient of determination after adjustment (R Square Adjusted) of 0.959, which is considered to have a high level of prediction accuracy, influenced by open government, meaning that open government can explain 95.9 percent of the variance in country development.

DISCUSSION AND CONCLUSION

Summary of the Research's Findings

H1: The processes driving open government, including competency in implementing policies, strategic prioritization, government data performance, quality of the bureaucracy, coordination, and good governance in Terms of Regulatory Revision, contribute to the development of open government. (Davis, 1989), (Venkatesh et al., 2003), (Scassa, 2014), (Powintara, 2018), (Powintara, 2019), (Chandler Institute of Governance, 2022).

The research results confirm that the increasing process of promoting open government leads to the

development of open government. This is consistent with the research of Ruvalcaba-Gomez et al. (2020) on "Analyzing open government policy adoption through the multiple streams framework: The roles of policy entrepreneurs in the case of Madrid," which emphasized that the process of promoting open government inevitably leads to the development of open government. The related factors include new comprehensive mechanisms and technological tools, the application of innovative and successful cases from abroad, an understanding of the nature of public participation, a commitment to democratic governance, a legal framework for municipal governance, the creation of a collaborative ecosystem with non-government actors, a debate on the nature of information that should be disclosed or concealed, a lack of knowledge and the spread of open government concepts, training and collaboration between government agencies, and institutional imitation to build acceptance (isomorphism). Related political factors include the change of political parties in the constituency, the transition from civil society to the role of local politicians in the constituency who must drive open government themselves as they demanded this policy, and political conditions and relationships between political parties within the area. The political context of the area and the movements of political movements, the ideology and vision of democracy, and the political willingness and leadership. The above factors lead to political change that results in the development of an open government that can create transparency, participation, and cooperation in the country.

H2: The increasing political environment, including Electoral process and Pluralism, Functioning of Government, Political Participation, Democratic Political Culture, and Civil Liberties, contribute to the development of open government. (Congress of local and regional authorities of the council of europe, 2018), (Hansson et al., 2015) , (Sangiampongsa, 2022)

The research results confirmed that the political environment, including the electoral process and pluralism, government functions, political participation, democratic political culture, and civil liberties, influence the development of open government. This hypothesis was not supported. This is consistent with Wirtz et al.'s (2017) research, "Open Government and Citizen Participation: An Empirical Analysis of Citizen Expectancy Towards Open Government Data," which found that citizen participation is the core or essence of open government, demonstrating democratic participation. Despite the important role and benefit of open government and the public, challenges to democracy among citizens remain. Previous empirical research has rarely addressed the issue from a citizen perspective. The determinants of citizen use of public government data in Germany are ease of use, usefulness, and transparency. Participation and expectations of collaboration determine citizen use of data, leading to intentions to use open data, which positively influences their intentions to share information. Consistent with Lee et al.'s (2019) hypothesis, "The Contribution of Open Government to the Prosperity of Society," the researchers initiated an empirical study on the impact of open government on society to examine the relationship between open government and social well-being. The results of the study revealed that: The rule of law and corruption control are crucial to the smoothing of the effects of open government and prosperity. Unless mechanisms such as regulation, law enforcement and corruption control are resisted by the public, open government itself will have a negative impact on the progress of society.

H3: Open government (defined by four levels of open government indicators: Step 1: Increased Data Transparency, Step 2: Improving Open Participation, 3. Electronic Participation, and 4. An Open Data Structure that Facilitates the Participation of All Sectors in Society.) can contribute to increased Sustainable National Development across all components: 1. Safety and security, 2. Personal freedom, 3. Good governance, 4. Social capital, 5. Investment Environment, 6. Enterprise Conditions, 7. Infrastructure and market access , and 8. Economic equality. 9. Living Conditions, 10. health 11. Education and 12. Natural environment (Davis, 1989), (Venkatesh et al., 2003) , (Lee & Kwak, 2011) , (Geiger & von Lucke, 2012) , (Wirtz et al., 2017), (Lee et al., 2019)

The research confirms that open government impacts all aspects of national development, supporting the hypothesis. This aligns with Pirannejad and Ingrams' (2022) research, "Open Government Maturity Models: A Global Comparison," which examines bureaucratic reform approaches for development. Open government aims to increase government transparency and accountability, as well as improve citizen and stakeholder engagement. In today's era of digital governance transformation, evaluating government efforts toward openness is a key issue for politicians, policymakers, and researchers. Numerous open government maturity models have been developed worldwide, but most focus on government technological capabilities, which contribute to country development outcomes. This aligns with Lee et al.'s (2019) research, "The Contribution of Open Government to the Prosperity of Society," which examined the impact of open government on society. This research demonstrated a relationship between open government and societal well-being.

H4: The process of promoting open government and the political environment indirectly influence country development in each area through the level of open government.

The research results confirm support for the hypothesis of the analysis of the influences on the dependent variables in the model, which can be considered according to the variables: the process of promoting open

government, the political environment, and open government. It was found that open government has a direct, positive influence on country development, while the process of promoting open government has an indirect influence through open government on country development. The political environment also found no influence on open government. This is consistent with the research of Wirtz et al. (2017) on "Open Government and Citizen Participation: An Empirical Analysis of Citizen Expectancy Towards Open Government Data," which argues that citizens are essential to open government and participate democratically in pushing for open government data disclosure to the public for maximum benefit, leading to country development in 12 areas: 1. Safety and Security, 2. Personal Freedom, 3. Good Governance, 4. Social Capital, 5. Environmental Investment, 6. Investment Conditions, 7. Infrastructure and Market Access, 8. Economic Equality, 9. Living Conditions, 10. Public Health, 11. Education, and 12. Natural Resources and Environment. According to Lee et al.'s (2019) research, "The Contribution of Open Government to Prosperity of Society".

Implications of the Study

This study contributes to the academic community by filling a gap in current knowledge. By using Partial Least Square - Structural Equation Modeling (PLS-SEM) analysis to predict the relationships between various factors and the impact of open government on various aspects of country development, this research will enhance existing knowledge related to open government, enabling further research in other fields, enriching this body of knowledge. It also lays a foundation for future studies of open government. The findings of this study can be used to develop a concrete conceptual framework and create public policies that are more beneficial to public administration. Furthermore, this research presents several notable theoretical contributions by integrating variables influencing the process of promoting open government, the political environment, the evaluation of open government, and country development. Examining these factors in the context of all 105 countries studied will enable this research to gain a detailed understanding of their influence and interconnectedness, broadening academic discussion and guiding future research.

LIMITATIONS OF THE STUDY

These limitations may influence the scope of the study and the interpretation of the conclusions. First, the findings may be specific to the 105 countries studied. While they may not be applicable to all regions, they are a good starting point. Second, relying solely on quantitative data may not fully capture the diversity and complexity of the factors studied and their impact on country development. This may miss the contextual details of each country, which may need to be supplemented by qualitative research and other supporting documents. Therefore, the researchers recommend using a mixed-method research approach to further connect these points of understanding.

CONCLUSIONS

The results of this study conclude that the process of promoting open government in each country worldwide requires consideration of various factors, including policy implementation capacity, strategic prioritization, government information capacity, bureaucratic quality, coordination, regulatory governance, strategic prioritization, and policy implementation capacity. These are all crucial factors affecting open government development. This is coupled with consideration of political environmental factors that may contribute to or inhibit open government progress. Furthermore, the study of open government is highly beneficial to knowledge across various disciplines, as country development encompasses a wide range of areas. It is crucial for each country's government to create an environment conducive to country development based on the disclosure of government information. Hypothesis 2 suggests that the political environment influences open government development, which is not supported. Hypothesis 3 suggests that open government has an impact on all aspects of country development, thus supporting the hypothesis. Hypothesis 4 suggests that the process of promoting open government has an impact on all aspects of country development, thus supporting the hypothesis. Further research is needed to understand the role of politics and other factors to enhance the effectiveness of open government progress.

RECOMMENDATIONS FOR FUTURE STUDY

This study suggests several interesting future research directions. The researchers suggest that longitudinal studies should be conducted to examine the evolution of open government in Southeast Asian countries and its impact on policy outcomes over time. In-depth policy evaluations could be conducted to better monitor and evaluate the effectiveness of these policies. Comparative analysis of open government policy implementation across regions or continents, and different business models of policy implementation, can help identify best practices and adapt them to the specific contexts of each region. Furthermore, theoretical development should emphasize integrating various theoretical perspectives, including public administration, political science, and information technology, to create a comprehensive theoretical framework that understands the complex interactions between open government and the political environment leading to country development.

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