Formosa Journal of Science and Technology (FJST)
Vol.3, No.8, 2024: 1875-1892

Modeling Digital Inclusive Finance and Corporate Green Technology Innovation Towards the Formation of Green Finance and Green Economy Through Green Monetary and Fiscal Policies in 5 Advanced Asian Countries

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A R T I C L E I N F O R E

Keywords: Green Finance, Green Economy, Digital Inclusive Finance, Corporate Green Technology, Green Monetary, Green Finance Policy.

Received: 1, July
Revised: 14, July
Accepted: 25, August

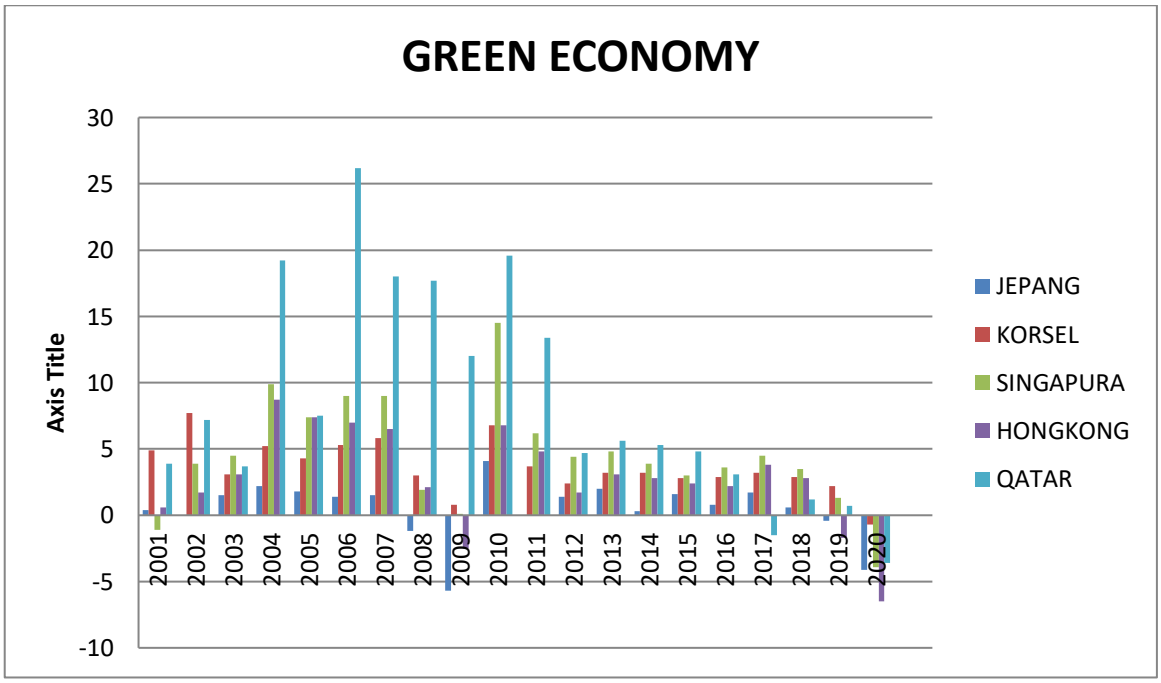
A B S T R A C T

Facing global problems such as environmental degradation and climate change. Literature analysis shows that the green economy focuses on transformation towards low-carbon development, resource efficiency and population welfare through technology and innovation. Over the past few decades, research on green finance has increased, with many publications demonstrating the importance of green finance in supporting renewable energy projects and climate-resilient urban infrastructure. Despite progress, challenges such as the global economic contraction due to COVID-19 and increasing poverty show the need for a more integrated and sustainable approach in implementing green finance and the green economy

ISSN-E: 2964-6804
DOI: https://doi.org/10.55927/fjst.v3i8.10860
https://journal.formosapublisher.org/index.php/fjst

INTRODUCTION

In an era of climate change and global environmental challenges, countries around the world are increasingly focusing on strategies to integrate sustainability into their economies. Developed countries in Asia, with advanced technology and rapidly developing economies, have great potential to lead in green innovation and green finance implementation. This research aims to explore how digital inclusive finance modeling and corporate green technology innovation can influence the formation of green finance and a green economy in five developed countries in Asia through green monetary and fiscal policies. Globally, several factors have made it necessary for economies to shift from a brown economy to a green economy as an important means of achieving sustainable development (Derev'yanko et al., 2020; Kar et al., 2015; Licastro and Sergi, 2021; Sabat et al. , 2022). A green economy improves prosperity, ensures social justice, and significantly reduces environmental risks (Allen and Clouth, 2012; Green Economy Coalition, 2020; Pearce et al., 2013)



THEORETICAL OVERVIEW

In the current era of globalization, many countries are experiencing problems, including developed countries, even though they are facing quite complex problems in both the industrial climate and the economy, from these problems the idea of the green economy concept emerged which is believed to be able to overcome existing problems. The relevance of solving global problems and the search for alternative energy sources due to the depletion of natural resources requires the formation of optimal conditions for economic development based on new models, the "green" economic model being one of them(Алиджанова, 2019). Saleem, Khattak, Ur Rehman, & Ashiq, (2021) stated that from 1977 to 2020, research results reveal a gradual increase in green marketing research, especially in the last five years. During this period, 1025 scientific articles were published in 634 publications and included in the Web of

Science (WOS). Many contemporary researchers consider natural resource conservation as one of the most pressing goals for addressing global problems that contribute to environmental degradation and climate change (Singh & El-Kassar, 2019 ; Rehman et al., 2021 ; Yaoteng&Xin, 2021).

The concept of green economy is an economic idea that aims to improve the welfare and social equality of society, while significantly reducing the risk of environmental damage. The difference between the green economy and other economic ideas is the direct assessment of natural capital and ecological services as economic value and cost accounting where the costs realized to society can be traced back and calculated as liabilities, an entity that does not harm or ignore assets. In the world, the "green economy" is understood as a dynamic process of economic transformation towards low-carbon development, increasing resource efficiency and population welfare through the use of technology and innovation that creates new jobs while reducing carbon emissions. environmental risks in the long term (Frone & Frone, 2015). . To reduce the impact of climate change in both the short and long term, this idea leads to an economic system that is more efficient, environmentally friendly and resource-saving (Anwar, 2022) (Kristianto Day, 2020) (Yasa, 2010) .

Climate change is a real threat to life and the economy. Green economy is currently the main topic of discussion in many international forums because it is considered to be a solution to the global climate crisis. The importance of maintaining a sustainable economic climate for the welfare of society for the present and future generations with a primary focus on economic activities that produce products and create jobs. needs to be the focus of policy makers. Economic activity contracted in 2020 in around 90 percent of countries, exceeding the number of countries that experienced declines such as during world wars, the depression of the 1930s, the economic debt crisis that emerged in the 1980s, and the global financial crisis of 2007 to 2009. In 2020, which was the first year of COVID-19, resulted in the global economy shrinking by around 3 percent and global poverty increasing (IMF, 2021).

Currently, one of the green economy concepts contains green finance which is widely implemented by many countries through many sectors. According to the United Nations Environment Program (UNEP), green financing aims to increase the level of financial flows (from banking, microcredit, insurance and investment) from the public, private and non-profit sectors towards sustainable development priorities . Increasing green finance [1] , climate finance and low carbon investments are directly and indirectly linked to various SDGs (Sachs et al., 2019). Environmentally friendly financing (green finance) is very important in financing renewable and environmentally friendly energy projects to reduce carbon emissions and their negative impacts on health, develop climate-resilient urban infrastructure, and ensure environmental sustainability. As proposed by Zhang (2018), energy financing is broadly categorized into six broad themes including: energy and financial markets (Zhang, 2017; Ping et al., 2018); pricing mechanisms (Zavadska et al., 2018); energy company finance (Ghouma et al., 2018); green finance and

investment (Sachs et al., 2019; Yoshino et al., 2019); energy derivatives markets (Ji and Zhang, 2019) and energy risk management (Hain et al., 2018).

METHODOLOGY

Conceptual Framework

A conceptual framework is a form or description in the form of a concept of the relationship between variables in a study. The conceptual framework helps researchers in providing guidance to researchers in formulating research problems. The conceptual framework will be very helpful in facilitating understanding regarding the relationships that each variable has, so that it can be used as a guide by researchers to create a systematic research structure (Kesler, 2015)

The following is a conceptual framework with a Simultaneous model approach

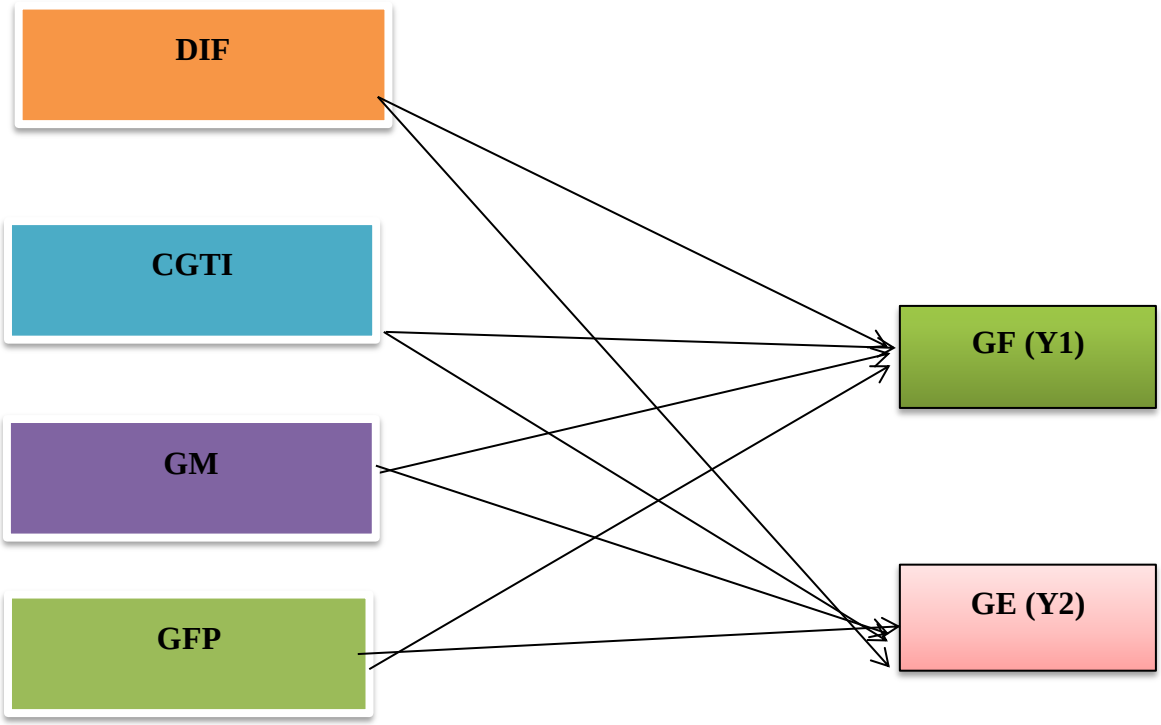


Figure 2.1: Conceptual Framework Of The Sur Model: Modeling Digital Inclusive Finance And Corporate Green Technology Innovation Towards The Formation Of Green Finance And Green Economy Through Green Monetary And Fiscal Policies In 5 Advanced Asian Countries

System equality simultaneous is set equality Which where variable bound on One or more equality Also is variable free on a number of equality other, specifically case on System equality One variable simultaneous have two his role that is variable bound (Y) And variable free (X) so Which determined No only variable bound Y only (Ghofur, 2018) .

Economic Equations :

Equation 1

LogGF = a0+a1log(DIF)+a2log(CGTI)+a3log(GM)+a4log(GFP)+a5lig(GE)+e1

Y1=GF=GREEN FINANCE

X1=DIF=Digital Inclusiv Finance

X2=CGTI=corpora Green technology innovation

X3=GM=Green Monetary

X4=GFP=Green Finance polyce

Y2=GE=Green Economy

a= Constanta

e=error trem

Equation 2

LogGE = a0+a1log(DIF)+a2log(CGTI)+a3log(GM)+a4log(GFP)+a5lig(GF)+e2

Y2=GE=Green Economy

X1=DIF=Digital Inclusiv Finance

X2=CGTI=corpora Green technology innovation

X3=GM=Green Monetary

X4=GFP=Green Finance polyce

Y1=GE=Green Finance

a= Constanta

e=tram error

Table 1. Operational Definition of Variables

L	Variable	Description	Measurement	Scale
1	*Green Finance*	Equity Market Index	(%)	Ratio
2	*Green Economy*	The Green Economy used in this research is GDP	(%)	Ratio
3	*Digital Inclusive Finance*	ATM	(%)	Ratio
4	*Corporate Green technology*	The green technology used in this research	(%)	Ratio

	innovation	is High-technology exports		
5	*Green Monetary*	The Green Economy used in this research is Agricultural Land Investment	(%)	Ratio
6	*Green Finance Police*	Carbon Emissions	(%)	Ratio

RESEARCH RESULTS

Simultaneous Analysis Results

Classic assumption test

Normality test

Data normality is one of the assumptions required in multiple linear regression. The normality test is used to determine whether the residuals from the data are normally distributed or not.

Table 2. Normality Test Results

System Residual Normality Tests
Orthogonalization: Cholesky (Lutkepohl)
Null Hypothesis: residuals are multivariate normal
Date: 08/05/24 Time: 09:41
Sample: 2001 2020
Included observations: 20

Components	Skewness	Chi-sq	df	Prob.
1	0.282500	0.266021	1	0.6060
2	0.405209	0.547315	1	0.4594
Joint		0.813336	2	0.6659

Component	Kurtosis	Chi-sq	df	Prob.
1	2.969259	0.000788	1	0.9776
2	5.693271	6.044758	1	0.0139
Joint		6.045545	2	0.0487

Component	Jarque-Bera	df	Prob.
1	0.266808	2	0.8751
2	6.592073	2	0.0370

Joints	6.858881	4	0.1435

The following are the results of the Eviews processing output: ProbJB Joint value (0.1435o) > 0.05 So the data is declared to have a normal distribution or the assumption of data normality has been met.

Autocorrelation Test

The test used to detect whether or not there is serial correlation in this research model is the residual portmanteau tests for autocorrelation. The following are the results of the eviews processing output

Table 3. Autocorrelation Test Results

System Residual Portmanteau Tests for Autocorrelations
Null Hypothesis: no residual autocorrelations up to lag h
Date: 08/05/24 Time: 09:41
Sample: 2001 2020
Included observations: 20

Lags	Q-Stat	Prob.	Adj Q-Stat	Prob.	df
1	7.690812	0.1036	8.095592	0.0881	4
2	8.681097	0.3699	9.195908	0.3260	8
3	13.72337	0.3187	15.12799	0.2345	12
4	17.89403	0.3301	20.34132	0.2052	16
5	19.21117	0.5081	22.09751	0.3352	20
6	21.30678	0.6206	25.09124	0.4008	24
7	23.32533	0.7166	28.19670	0.4541	28
8	24.63065	0.8207	30.37223	0.5490	32
9	29.58414	0.7662	39.37857	0.3212	36
10	32.31982	0.8009	44.84994	0.2757	40
11	34.71771	0.8405	50.17858	0.2418	44
12	36.50761	0.8874	54.65334	0.2366	48

****The test is valid only for lags larger than the System lag order.***
df is degrees of freedom for (approximate) chi-square distribution

.Based on the results of df is degrees of freedom for (approximate) chi-square distribution, it is known that the Q-Stat prob values for all indicators are (0.0881, 0.3260, 0.2360, 0.2052, 0.3352, 0.4008, 0.4541, 0.5490, 0.3212, 0.2757, 0.241 8, 0.2366) > 0.05, then all lag movement indicators over time do not show any autocorrelation effect in the data movement, so the data is declared free from autocorrelation problems.

Simultaneous Regression

Estimates to determine the influence of variables using 2 simultaneous equations were carried out using the *Two-Stage Least Squares model.* The results of estimating the system of equations with *Two-Stage Least Squares* are shown in the table below. From the table it is known that there are 2 (two) simultaneous model equations:

Table 4. Simultaneous Regression Results

System: SIMULTANKU
Estimation Method: Two-Stage Least Squares
Date: 08/05/24 Time: 09:40
Sample: 2001 2020
Included observations: 20
Total system (balanced) observations 40

	Coefficient	Std. Error	t-Statistic	Prob.
C(10)	-0.266135	1.031832	-0.257925	0.7981
C(11)	72793.29	66028.11	1.102459	0.2785
C(12)	-78.26335	15.10329	-5.181875	0.0000
C(13)	211.7642	139.5330	1.517664	0.1389
C(14)	-0.000392	0.000482	-0.812710	0.4224
C(20)	0.000716	0.009743	0.073456	0.9419
C(21)	124795.9	113193.9	1.102496	0.2785
C(22)	0.285951	0.272258	1.050297	0.3014
C(23)	-3.173580	2.515276	-1.261722	0.2162
C(24)	3.04E-05	8.69E-06	3.501654	0.0014
Determinant residual covariance		17791.94		

Equation: GF =C(10)*+(11)*DIF+C(12)*CGTI+C(13)*GM+C(14)*GFP
Instruments: DIF CGTI GM GFP C
Observations: 20

R-squared	0.904268	Mean dependent var	1054.070
Adjusted R-squared	0.886318	S.D. dependent var	286.5547
S.E. of regression	96.61685	Sum squared resid	149357.0
Durbin-Watson stat	0.784196		

Equation: GE=C(20)*+(21)*DIF+C(22)*CGTI+C(23)*GM+C(24)*GFP
Instruments: DIF CGTI GM GFP C
Observations: 20

R-squared	0.478724	Mean dependent var	0.615000
Adjusted R-squared	0.380985	SD dependent var	2.213660
SE of regression	1.741652	Sum squared resid	48.53365
Durbin-Watson stat	2.695821		

Based on the results of the structural equation output, it can be seen that there are 2 equations, here are the explanations for each of the 2 equations:

Equation test results 1:

The first equation is the equation used to simultaneously find out GF with the following equation as follows:

LOG(GF)=C(10)+(11)*LOG(DIF)+C(12)*LOG(CGTI)+C(13)*LOG(GM)+C(14)* LOG(GFP) + ε_1

Based on this equation, the output results of eviews with the *Two-Stage Least Square model* are as follows:

LOG(GF)=4446+-2.448*LOG(DIF)+-43.33*LOG(CGTI)+-222.9*LOG(GM)+ 0.0003*LOG(Inflation) + ε_1

1) **DIF Coefficient and Elasticity of GF**
   - GF coefficient value = 727.9 **(POSITIVE)**
   This means: If DIF increases by 1 percent then GF decreases by 727.9 percent
   - DIF elasticity
   E DIF = $\frac{\text{d DIF}}{\text{d GF}} \times \frac{\text{Ev GF}}{\text{Ev DIF}}$
   E DIF = -78.26 x $\frac{368.2}{54.0}$ = 4.963< 1 **Elastic**

The results of the regression coefficient show a negative value of In Elastic, which means that an increase in DIF will result in a smaller percentage decrease in GE.

2) **Coefficient and Elasticity of CGTI towards GF**
   - CGTI coefficient value = -78.26 **(Negative)**
   This means: If CGTI rises by 1 percent then GF falls by -43.33 percent
   - CGTI elasticity
   E CGTI = $\frac{\text{d CGTI}}{\text{d GE}} \times \frac{\text{Ev GF}}{\text{Ev CGTI}}$
   E CGTI = -78.26 x $\frac{368.2}{24.18}$ = - 1.191 < 1 **Elastic**

The results of the regression coefficient show a negative In Elastic value, which means that an increase in CGTI will result in a smaller percentage decrease in GF.

3) **Coefficient and Elasticity of GM to GF**
   - GM coefficient value = 211.7 **(positive)**
   This means: If GM rises by 1 percent then GF falls by 211.7 percent

- GM Elasticite

$$E\,GM = \frac{d\,GM}{d\,GF} \times \frac{Ev\,GF}{Ev\,GM}$$

$$E\,GM = 211.7 \times \frac{368.2}{11.63} > 1$$ **Elastic**

6.70

The results of the regression coefficient show a negative Elastic value, which means that an increase in GM will result in a smaller percentage decrease in GF

4) **Coefficient and Elasticity of GFP towards GF**
   - GFP coefficient value = - 0.0003 **(negative)**
   This means: If GFP increases by 1 percent then GF increases by 0.0003 percent
   - GFP elasticity

$$E\,GFP = \frac{d\,GFP}{d\,GF} \times \frac{Ev\,GF}{Ev\,GFP}$$

$$E\,GFP = 0.0003 \times \frac{368.2}{} = 0.000 < 1$$ **In Elastic**

414.6

The results of the regression coefficient show a negative value of In Elastic, which means that an increase in GFP will result in a smaller percentage decrease in GF.

Equation test results 2:

The first equation is the equation used to simultaneously determine GDP and purchasing power with the following equation as follows:

LOG(GE)=C(20)+(21)*LOG(DIF)+C(22)*LOG(CGTI)+C(23)*LOG(GM)+C(24)*LOG(GFP)+ ε_1

Based on this equation, the output results of eviews with the *Two-Stage Least Square model* are as follows:

LOG(GE)=-12.79-0.016*LOG(DIF)+0.386*LOG(CGTI)-4.424*LOG(GM)+3.26*LOG(GFP) + ε_1

1) **Coefficient and Elasticity of GE**
   - Export coefficient value = 124.7 **(Positive)**
   This means: If DIF increases by 1 percent then GE increases by 124.7 percent
   - DIF elasticity

$$E\,DIF = \frac{d\,DIF}{d\,GE} \times \frac{Ev\,GE}{Ev\,DIF}$$

$$E\,DIF = 124.7 \times \frac{2.80}{} = 0.064 < 1$$ **In Elastic**

54.00

The results of the regression coefficient show a positive Elastic value, which means that an increase in DIF will result in a smaller percentage increase in GE.

2) coefficient and elasticity of consumption towards inflation

- CGTI coefficient value = 0.285 **(Positive)**

This means: If CGTI rises by 1 percent then GE rises by 0.285 percent

- CGTI elasticity

E Kon = $\frac{d\ CGTI}{d\ GE} \times \frac{Ev\ GE}{Ev\ CGTI}$

E CGTI = 0.285 x 2.80 = 0.033 < 1 **In Elastic**

24.18

The results of the regression coefficient show a positive Elastic value, which means that an increase in CGTI will result in a greater percentage of additional GE.

3) Coefficient and Elasticity of GM towards GE

- GM coefficient value = -4.424 **(Negative)**

This means: If GM rises 1 percent then GE falls by -4,424 percent

- GM elasticity

E GM = $\frac{d\ GM}{d\ GE} \times \frac{Ev\ GE}{Ev\ GM}$

E GM = -3.173 x 2.80 = - 1.326 > 1 **Elastic**

6.70

The results of the regression coefficient show a negative Elastic value, which means that an increase in GM will result in a smaller percentage of additional GE.

4) GFP Coefficient and Elasticity towards Inflation

- GFP coefficient value = 3.04 **(Positive)**

This means: If GFP rises by 1 percent then GE rises by 3.04 percent

- GFP elasticity

E GFP = $\frac{d\ GFP}{d\ GE} \times \frac{Ev\ GE}{Ev\ GFP}$

E GFP = 3.04 x $\frac{2.80}{}$ = 0.020 < 1 In **Elastic**

414.6

The result of the regression coefficient is known to be a positive value in Elastic, which means that an increase in GFP will result in a smaller percentage decrease in GE.

T-test

Is a statistical test used to test the truth or falsity of a hypothesis which states that the research contains or does not contain significant differences. Following are the summary results:

Equation 1:
DIF Prob (0.2785) > 0.05 so it is not significant
Prob CGTI (0.0000) < 0.05 then it is significant
Prob GM (0.1389) > 0.05 so it is not significant
Prob GFP (0.4224) > 0.05 so it is not significant

Based on the estimation results, it is known that one variable is significant to GF, so H1 is accepted. This means that CGTI has a significant effect simultaneously on GE.

Equation 2:
DIF Prob (0.2785) > 0.05 so it is not significant
Prob CGTI (0.3014) > 0.05 so it is not significant
Prob GM (0.2162) > 0.05 so it is not significant
Prob GFP (0.0014) < 0.05 then it is significant

Based on the estimation results, it is known that one variable is significant for inflation, so H1 is accepted. This means that GFP has a significant effect simultaneously on GE.

Test D

Equation 1:

The Adj.square value (0.8863) or 88.63%, means that GFP is able to explain GF, or DIF CGTI and GM are not the right variables to explain GF. So GF is more precisely explained by other variables that are not included in the research model.

Equation 2:

The Adj.square value (0.3809) or 38.09% means that GFP is able to explain GE, or DIF, CGTI and GM are not the right variables to explain GE. So inflation is more precisely explained by other variables that are not included in the research model.

CONCLUSION

Simultaneous Results

This research analyzes the influence of digital inclusive finance (DIF) and corporate green technology innovation (CGTI) on the formation of green finance (GF) and green economy (GE) in five developed countries in Asia through green monetary and fiscal policies. Through a simultaneous equation system model, this research has produced several key findings:

a. Influence of Digital Inclusive Finance (DIF) and Green Technology Innovation (CGTI) on Green Finance (GF) and Green Economy (GE):
   1) Green Finance (GF): The analysis results show that DIF and CGTI have a significant influence on GF. Specifically, CGTI has a significant effect on GF, with a negative coefficient indicating that increasing CGTI can reduce GF. In contrast, DIF did not show a significant effect on GF.
   2) Green Economy (GE): GFP has a significant influence on GE, indicating that increasing GFP contributes positively to GE. Meanwhile, DIF and CGTI did not show a significant influence on GE.

b. Classic Assumption Test Results:
   1) Normality: Data is declared to be normally distributed based on the Jarque-Bera test, with a prob value. Joints that are more than 0.05.
   2) Autocorrelation: No autocorrelation problems were found in the data, based on the Portmanteau test, with all prob values. more than 0.05.

c. Simultaneous Regression Analysis:
   1) In the first equation (GF), CGTI showed high significance with a negative effect on GF, whereas DIF, GM, and GFP were not significant.
   2) In the second equation (GE), GFP showed a positive significant effect, whereas DIF, CGTI, and GM were not significant.

d. Variable Elasticity:
   1) DIF: Has negative elasticity to GF and positive elasticity to GE.
   2) CGTI: Has negative elasticity to GF and positive elasticity to GE.
   3) GM: Has positive elasticity towards GF and negative towards GE.
   4) GFP: Has negative elasticity towards GF and positive towards GE.

e. Significance and Explanation of Variables:
   1) The GF equation shows that CGTI is a significant variable that influences GF negatively, while DIF, GM, and GFP do not show a significant effect.
   2) The GE equation shows that GFP is a significant variable that influences GE positively, while DIF, CGTI, and GM are not significant.

RECOMMENDATIONS

Further Exploration of Relationships

Additional Variables:

- **Identify Additional Variables:** Researchers should explore additional variables that might affect Green Finance (GF) and Green Economy (GE), and how these variables might interact with Digital Inclusive Finance (DIF) and Green Technology Innovation (CGTI).
- **Interaction Analysis:** Investigate how these additional variables interact with DIF and CGTI to provide deeper insights into their impact on GF and GE.

Case Studies:

- **Diversify Locations and Sectors:** Conduct case studies in different countries or sectors to gain a broader perspective on the influence of DIF and CGTI on GF and GE. This can help understand local and sectoral contexts that might affect the outcomes.
- **International Comparisons:** Compare findings with other countries to identify significant patterns or differences. Such studies can offer insights into more effective policy adaptations in varying contexts.

Methodology Development

Alternative Methodologies:

- **Explore New Methods:** Develop and test alternative methodologies to the simultaneous equations model to ensure more comprehensive and reliable results. Methods such as panel data models, instrumental variable techniques, or machine learning approaches might provide more accurate results.
- **Integration of Analytical Techniques:** Consider integrating other analytical techniques, such as network analysis or agent-based models, to understand the complex dynamics between DIF, CGTI, GF, and GE.

Sensitivity Analysis:

- **Evaluate Parameter Sensitivity:** Conduct sensitivity analyses to assess how results might change with variations in model parameters or assumptions. This helps ensure that findings are robust and generalizable.
- **Model Robustness Review:** Review the robustness of the model against data and assumption variations to confirm the validity and reliability of the research findings across different scenarios.

Publication and Dissemination

Research Dissemination:

- **Share Findings:** Disseminate research findings to relevant stakeholders, including policymakers, financial practitioners, and the academic community. This can be achieved through journal publications, research reports, and conferences.
- **Industry Collaboration:** Collaborate with industry stakeholders and financial institutions to ensure that research findings are applied in practice and policy formulation.

Training and Workshops:

- **Stakeholder Education:** Organize training sessions and workshops to enhance understanding of the impacts of green financial variables and technologies on the green economy. Target policymakers, decision-makers, and industry practitioners to help them integrate research findings into their strategies and policies.

- **Discussion Forums:** Facilitate discussion forums and seminars to enable idea exchange between academics, practitioners, and policymakers on ways to maximize the benefits of DIF and CGTI for GF and GE.

These recommendations aim to deepen the understanding of the relationships between green financial variables and the green economy and enhance the effectiveness of policies and practices supporting green finance and green technology innovation.

FURTHER STUDY

Based on the results and conclusions of the research, here are some suggestions for future studies that could further develop and deepen the understanding of the impact of Digital Inclusive Finance (DIF) and Green Technology Innovation (CGTI) on Green Finance (GF) and Green Economy (GE):

1. **Exploration of Additional Variables**
    - **Social and Economic Factors:** Investigate how additional social and economic variables, such as education levels, environmental policies, or income, influence the relationship between DIF, CGTI, GF, and GE.
    - **Regulatory Role:** Examine how specific environmental regulations and policies might moderate or mediate the relationships between DIF, CGTI, GF, and GE.
2. **Case Studies in Different Countries or Sectors**
    - **Developing Countries:** Conduct similar studies in developing countries to determine whether the patterns of relationships between DIF, CGTI, GF, and GE differ from those observed in developed countries.
    - **Industrial Sectors:** Explore specific industrial sectors, such as renewable energy or clean technology, to gain a more detailed understanding of the impacts of DIF and CGTI.
3. **Methodological Development**
    - **Alternative Methodologies:** Develop and test new methodologies, such as panel data analysis or dynamic models, to provide additional perspectives and validate research findings.
    - **Structural Models:** Employ structural models to test more complex causal relationships between DIF, CGTI, GF, and GE.
4. **Sensitivity Testing**
    - **Sensitivity Analysis:** Perform sensitivity analyses to assess how robust the results are to variations in key assumptions or model specifications. This can help identify how changes in underlying conditions or parameters might impact the relationships among DIF, CGTI, GF, and GE.

By pursuing these suggestions, future research can provide a more comprehensive understanding of how DIF and CGTI influence GF and GE, as well as the factors that affect these relationships.

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