The Important Role Of Inflation In Developing Economic Growth And Its Impact On Information Communication And Technology

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Abstract

This study investigates internet users, Technology, taxes and Economic Growth. This study investigates data at the start point year of 2000 to 2020 to generate "autoregressive vectors" that can be utilize for determine relationship among the variables. This model is to analyze among Technology, Taxes and Economic Growth at Indonesia using secondary data from the World Bank. We discovered that if the Inflation was high in Indonesia, it can cause a setback to Information Communication and Technology, but this is not the case for Economic Growth, which has been stated that the higher Inflation in Indonesia, the higher Economic Growth will be, just as a decrease in Inflation will have an impact. good for Information Communication and Technology.

Keywords: ICT, Inflation, Economic Growth.
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Background

The twenty-first-century information economy is committed to the monetization of home data. As the primary instrument of post-industrial society, the information base altered the macroeconomic underpinnings of the national economy (Adkins, Cooper, & Konings, 2020). The contemporary information economy is in a state of flux due to two factors: digitization and the alteration of telecommunications interactions. The tools and requirements of Information Communication Technology are driving the growth of the information economy and the digitization of society (Bawono, 2021). The information economy has evolved through time, beginning with the establishment of an information base and culminating with the rise of social networks (Van der Schyff, Flowerday, & Furnell, 2020). In a post-industrial society, the information economy obtains the character of communication channels. Changes in the information economy's fundamental conditions are discernible not only through the evolution of digital tools but also through Internet interactions (Kuznetsova, Klochkova, Lukyanchikova, Shmarkov, Sukhodolov, Popkova, & Litvinova, 2018).

Economic behaviour (society and business) toward information should be a primary focus of research in information economic theory. To summarize, the findings add to scientific knowledge on the subject of the information economy and create new avenues for its improvement and growth (Bogoviz, Osipov, Zeldner, Rozhkova, Titova, Sukhodolov, Popkova, Litvinova, 2018). The evolution of the information economy demonstrates that the best scenario's execution is mostly driven by political influences (state regulators' objectives) and

financial variables (Gashenko, Bogataya, Orobinskaya, Zima, Sukhodolov, Popkova, & Litvinova, 2018).

Inadequate information and a high degree of resistance to innovation in many developing nations demand the implementation of significant socioeconomic transformation procedures in order to create the information economy (Cantú, Aguiñaga, & Scheel, 2021). The abundance of data on socioeconomic events and processes has further implications for the challenge of information security (Dunn Cavelty, & Wenger, 2020). The information economy is at the pinnacle of the evolutionary growth of the current socio-economic system, and its principles should serve as the model for the global economic system's future development. This concept is derived from previous concepts digital economy and internet economy that emphasized technological capital as the primary factor of production and placed a premium on the process of developing socioeconomic systems, as well as the knowledge economy concept, which places a premium on human capital and innovation as a result of the economic system's development goals (Fath, Fiscus, Goerner, Berea, & Ulanowicz, 2019). The information economy incorporates the characteristics of the preceding idea, places equal emphasis on technology and human capital, makes use of information and communication technologies, and accomplishes achievements relating to the development, storage, and highly effective use of information (Mutiarin, Moner, & Nurmandi, 2019).

Throughout modern history, countries have always used monetary policy to manage the economy. It is important to contain and overcome the crisis (Fabris, 2018). However, it can even be argued that if used inappropriately, monetary policy can lead to a crisis. The main objective of monetary policy is to keep inflation under control. For this, the government relies on an inflation-targeting regime (Sasongko, Bawono, Prabowo, 2021). For a given year, an inflation target is set, and the Central Bank must use monetary policy instruments to fulfill it. There is also a tolerance range for targets. If inflation is deemed to be met according to the target, it will allow the absorption of short-term shocks in the economy, such as an external crisis and vice versa if it does not meet the potential for hyperinflation and a crisis may occur. When there are large economic fluctuations and volatility, it becomes a favorable environment for observing the use of the monetary policy. So much so that within a short period of time, the country vacillated between expansionist and contractionary policies (Hidayanti & Prabowo, 2021).

Inflation can lead to a decrease in the purchasing power of the population when wages do not follow the index. With a general increase in prices, people's wages will be able to buy less of a product. Therefore, even if wages are held at the same nominal value, real wages are said to be reduced. Inflation does not affect all economic actors equally (Bawono, Zainuri, Wilantari, 2019). Therefore, it ends up causing a random redistribution of wealth. This can harm the economy of a country. Inflation can be seen as a devaluation of the purchasing power of a currency. Therefore, very high inflation causes an appreciation of the exchange rate, with a tendency for strong currencies to skyrocket in value. Finally, a high inflation rate carries a scenario of great economic uncertainty. This ultimately makes it difficult for companies to plan, due to low visibility to make investments. It is important to point out that, while inflation is harmful to the economy, its opposite, deflation, is also harmful (Widarni & Bawono, 2021). In the scenario of falling prices, people tend to delay consumption, to always buy cheaper. This, in the long run, leads to a decline in demand which can lead to economic stagnation. For this

reason, some governments in highly developed countries that exhibit inflation that tends to be negative, use expansionary monetary policy as a way to stimulate the economy (Qingquan, Khattak, Ahmad, & Ping, 2020). This study investigates the causal relationship between Information Communication and Technology, Inflation and economic growth.

Research Method

In the analysis of 21 years of data spanning the years 2000 through 2020, "autoregressive vectors" were used to express variable-to-variable causal linkages. The World data for this study. We examine Digitization, Inflation and Taxes in Indonesia. To study the causal link, the next multivariate regression model was utilized among The Information Communication and Technology, Inflation and Economic Growth variables at Indonesia:

$ICT_t = \beta_0 + \beta_1 NO_t + NT + e_t$ eai 1
$NO_t = \beta_0 + \beta_1 ICT_t + NT + e_t$ eai 2
$NT_t = \beta_0 + \beta_1 ICT_t + \beta_2 NO_t + e_t$ eai 3

Description :
ICT: Information Communication and Technology
NO : Inflation
NT : Economic Growth
e : erroneous title
t : time sequence
β : degree in terms of causation influence
eai: formula

This research employs vector computations, in which every regression connection is combined so that every variable simultaneously becomes both the independent and the dependent variables. The concept of zero from Dickey-Fuller, derived by PP analyze, with p=1 and $\Delta yt = (\rho - 1)yt\text{-}1 + ut$ are formula, while Δ – This is the very first try, various operations were utilize. For the "unit root test," the following equation was employed in this study:

$\Delta Y_1 = \alpha_0 + \beta_0 T + \beta 1 Y_{t-1} + \sum\_(i-1)^q \alpha_1 \Delta Y_{t-1} + e_t$

Caption:
Y the check of unit root variables. T "linear pattern" variable represented, and "different in lag" are Yt1, 0 are displayed as "single equation," also with "t" being a "time trends" indication. The null hypothesis (h0) and the following are some alternate unit root test hypotheses:
H0 : α=0
H1 : α≠0

Result and Discussion

This test may be used to assess whether or not data is stationary. An error term analysis is used to determine if the series is stationary, which includes the possibility of autocorrelation if the sequence isn't stationary. Following the trying on following test unit root: findings were obtained:

Table 1: ADF's Unit Root Test on ICT, NO, and NT data in Indonesia

Variable	Unit Root	Include in the examination Equation	Statistics for the ADF Test	5% Critical Value	Description
Information Communication and Technology (ICT)	Level	Intercept	-1.840710	0.3514	
	First Diff	Intercept	-3.693215	0.0133	Stationer
Inflation (NO)	Level	Intercept	-1.605610	0.4605	
	First Diff	Intercept	-5.809964	0.0002	Stationer
Economic Growth (NT)	Level	Intercept	-0.527808	0.8660	
	First Diff	Intercept	-1.929268	0.3129	
	Seccond Diff	Intercept	-3.319458	0.0293	Stationer

The NT data is stationary in the second difference, while the ICT and NO variables are stationary at the first difference. This is indicated by the Augmented Dickey-Fuller with such a result of, run a test -3.693215 and a probability of 0.0133, because the probability is less than 5%, in this situation, the second difference IN data demonstrates that it is stationary.Both the VAR and the causationtry must be got the sensitivity test before beginning the VAR investigation, there is must be select an acceptable optimum lag time. This is the following result:

Table 2 : The test of Optimum Lag at Lag 0 to 4 ICT, NO, and NT data in Indonesia

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-141.4639	NA	4829.667	16.99576	17.14279	17.01037
1	-135.8147	8.640059	7356.085	17.38996	17.97811	17.44842
2	-125.2325	12.44958	6946.631	17.20383	18.23309	17.30614
3	-112.3419	10.61579	6328.669	16.74611	18.21648	16.89227
4	-50.05060	29.31356 *	30.55058 *	10.47654 *	12.38803 *	10.66655 *

The study's findings check we can se on the Table 2. And result of varying lengths of lag ICT, NO, and NT are at LR, FPE, and SC at possition number 1. As a result of this three components' conclusions are all the same, lag 4 will be picked.

Table 3 : VAR Model Analysis

	NT	NO	ICT
NT	-4.132363	-0.946412	8.626158
	(2.56238)	(3.65634)	(8.16523)
	[-1.61271]	[-0.25884]	[1.05645]
NO	0.463607	0.552448	-2.046059
	(0.21199)	(0.30249)	(0.67551)
	[2.18697]	[1.82633]	[-3.02890]
ICT	0.106329	-0.191552	0.440940
	(0.11039)	(0.15752)	(0.35177)

	[0.96320]	[-1.21604]	[1.25348]
C	54.91599	73.27148	-163.8828
	(20.4156)	(29.1317)	(65.0561)
	[2.68990]	[2.51518]	[-2.51910]
R-squared	0.798073	0.948628	0.902484
Adj. R-squared	0.192290	0.794510	0.609934
Sum sq. resids	11.70550	23.83394	118.8614
S.E. equation	1.710665	2.441001	5.451179
F-statistic	1.317425	6.155234	3.084896
Log likelihood	-20.95014	-26.99408	-40.65228
Akaike AIC	3.994134	4.705186	6.312034
Schwarz SC	4.631297	5.342349	6.949197
Mean dependent	5.017747	7.484611	35.04655
S.D. dependent	1.903432	5.384842	8.728139

The connection among ICT with NO, was greatly negative, having a -0.191552 coefficient with the t-statistic -1.21604. The association among NO with NT is drastically positive, having a 0.463607 coefficient with 2.18697, meaning that the more NO there is, the more NT. The association among NT with NT itself is super negative, with -4.132363 coefficient and -1.61271 t-statistic. This demonstrates that a rise in Inflation will boost Economic Growth, and a decline NO it can also raise the Information Communication and Technology.

Table 4 : The test of Causality's Granger

Null Hypothesis:	Obs	F-Statistic	Prob.
NO does not Granger Cause NT	17	0.84299	0.5354
NT does not Granger Cause NO		4.09795	0.0427
ICT does not Granger Cause NT	17	0.50517	0.7339
NT does not Granger Cause ICT		0.51018	0.7306
ICT does not Granger Cause NO	17	1.01818	0.4530
NO does not Granger Cause ICT		1.33289	0.3371

The outcomes of the Granger causality test in Indonesia there is in Table 4. It's a single variable-to-variable causal connection, namely between NO variable against NT, ICT against NT, and ICT variable against NO. This can be seen from the lower probability than five percent.

Conclusion

High Inflation in Indonesia can cause a setback to Information Communication and Technology, but this is not the case for Economic Growth, which has been stated that the higher Inflation in Indonesia, the higher Economic Growth will be, just as a decrease in Inflation will have an impact. good for Information Communication and Technology.

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