GLOBAL PANDEMIC 2020: INDONESIA'S OUTPUT GAP AND MIDDLE-INCOME TRAP SCENARIO

Kiki Verico

Global Pandemic 2020: Indonesia's Output Gap and Middle-Income Trap Scenario

Kiki Verico[1,★]

Abstract

This paper showed that Indonesia's output-gap has been improving since 2007 until the global pandemic hit Indonesia in 2020. The ultimate indicator for this improvement was the constant decrease in open unemployment. Okun's Law calculation proved that Indonesia's actual economic growth was higher than minimum economic growth to generate jobs. This paper also confirmed the Phillips Curve phenomenon that actual inflation was higher than expected inflation. Indonesia's average economic growth from 2007–2019 has increased above its natural long-run economic growth level. The global pandemic decreased Indonesia's economic growth and increased its open unemployment rate in 2020. Indonesia's economy needs an adjustment which depends on the pandemic containment. This adjustment will be affecting Indonesia's scenario in avoiding the Middle-Income Trap before 2040 regarding the end of the demographic bonus era. This paper attempts to estimate the impact of the global pandemic on the economy, referring to the Spanish Flu's impact on the global trade openness and how Indonesia adjusts its economy in the short-run and navigates its economic transformation in the long-run.

JEL Classification: O47; G01; E64; J60

Keywords

Output-Gap — Global Pandemic Impact — Middle-Income Trap — Open-Unemployment — Indonesia

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1. Introduction

1.1 Background

Indonesia experienced economic crises in 1998 called the Asian Financial Crises, which made its economic growth dropped to -13 percent while inflation jumped skyrocketing to 75 percent. The crisis started from the vast depreciation of IDR (Indonesia Rupiah) that forced Indonesia's Government of the New Order (*Orde Baru*) to change the exchange rate system from fixed to a managed float. The IDR, which had been experiencing the overvalue since August 1995 at 101.98, peaked in April 1997 at 113.07. The IDR was started decreasing but remained overvalued until August 1997 at 103.14 to become undervalued in September 1997 at 94.93. Since then, IDR turned into deeper undervalued until it reached the very bottom of undervalued at 36.36 in June 1998. Along this process, massive political fluctuating occurred in Indonesia, which started from the changing of political power from the New Order to the Reform Era (*Era Reformasi*).

This crisis affected Indonesia's supply-side of productivity that moved Indonesia to take various significant structural reforms. Economic recovery was started, which indicated by the IDR's movement undervalued from 37.5 in July 1998 to 70.54 in December 2001. At that time, Indonesia's Current Account (CA) was different from previous times and turned into a surplus, yet the Capital Account of both the derivative and FDI (Foreign Direct Investment) was still outflowing. From 2002 to 2006, Capital Account turned into a surplus while Current Account remained surplus but the open unemployment still increased. Capital Account remained surplus and surplus of current accounts and decreased open unemployment from 2007 to 2011. However, Indonesia's income gap (Gini Ratio) increased because of the surplus generated from the increasing value of primary commodity export of coal, rubber, palm oil, and others, which are export-based products and non-labor-intensive ones. Indonesia never experienced a complete set of the competitive economy of Current Account and Capital Account surplus with decreasing open unemployment and income gap.

Since 2012, Indonesia keeps a surplus in Capital Account while its economic growth consistently decreases open unemployment, income gap, and poverty rate, but its Current Account is backed to its original position, which is a deficit. This CA deficit makes IDR returned to the undervalue position with the expected depreciation of IDR. The IDR volatility is much affected by the market sentiment on Capital Account. Indonesia needs to reduce the dependency of IDR fluctuation in the Capital Account side, and it needs significant structural reform on the CA. The reason is that CA is the 'above the line' of Balance of Payment (BoP), which represents a country's real sector competitiveness. Indonesia must keep its current productivity level of higher economic growth than the inflation rate and persistent decrease of open unemployment while formulating the most appropriate structural reform and manufacturing sector strategy. Indonesia has to keep it from the middle-income trap before its demographic bonus ended between year of 2030 and 2040.

Nevertheless, an unprecedented global pandemic hit Indonesia in early 2020 after it hit several other countries

globally. Indonesia's economy has experienced a second economic contraction since 1998. Unlike the 1998's AFC, this global pandemic hit both the supply-side of productivity in education and health and the demand side of consumption. In this uneasy situation, different to the AFC that mostly affect supply-side, this time Indonesia must adopt, adapt and apply two big strategies at the same time: countercyclical fiscal policy to maintain basic needs in particular at household consumption level and effective pandemic containment to secure economic activities back to the new normal. Usually, if the necessary condition has been managed, then the economy will be overshooting with higher-than-average economic growth. The global pandemic impact affects both the Indonesia's output gap and strategies to avoid the middle-income trap.

1.2 Objective

Given the background, this paper has several related objectives:

1. Understanding Indonesia's output gap before the global pandemic hit Indonesia
2. Knowing the impact of the global pandemic on the global economy from the Spanish Flu experienced
3. Envisaging the short-run impact of the current global pandemic on Indonesia's economy
4. Estimating the long-run impact of the current global pandemic to Indonesia's middle-income trap strategy

1.3 Research Question

Given the objectives, this paper has several related questions:

1. How did Indonesia's output gap look like before 2020?
2. What were the impacts of the previous global pandemic of the Spanish Flu on the global economy?
3. How does the current global pandemic affect Indonesia's economy?
4. How does the current global pandemic affect Indonesia's middle-income trap strategy?

1.4 Specific Coverage

This paper focuses on two levels of observations: one is the global level to estimate the global pandemic's impact on the global economy. This global environment will be affecting economic recovery in any country, including Indonesia. Two is the country level, which is Indonesia. This paper focuses on the impacts of the global pandemic on Indonesia's output-gap and strategies to avoid the middle-income trap.

2. Reference and Theoretical Overview

This paper adopts the output-gap calculation to show the output-gap situation in Indonesia before the pandemic. They are Okun's Law (open unemployment and economic growth), Phillips Curve (economic growth and inflation rate), NAIRU (Non-Accelerating Inflation Rate of Unemployment for inflation and unemployment rate), LRAS (Long-Run Aggregate Supply for inflation rate and long-run economic growth). This paper observes the global pandemic's impact on the global economy using the Spanish flu's global pandemic as a lesson learned. This paper applies the time-series

analysis of Hodrick-Prescott Filter, Baxter-King Filter, Frequency Response Function, Dickey-Fuller Test, STL Decomposition, and Forecasting Averaging. As for the impact of the global pandemic, this paper assesses its long-run impact on Indonesia's strategy on the changing calculation of necessary economic growth needed to avoid the middle-income trap using the CAGR (Compound Average Rate of Return).

2.1 Output-Gap Theorem

2.1.1 Okun's Law (Economic Growth and Open Unemployment):

$$\frac{Y_{nt1} - Y_{nt0}}{Y_{nt0}} = \frac{Y_{mnt1} - Y_{mnt0}}{Y_{mnt0}} - \alpha.(U_{nt1} - U_{nto}) \quad (1)$$

Y = GDP constant price; n = country; m = minimum economic growth to generate employment; U = Open Unemployment Rate; t = time; α = elasticity of economic growth and unemployment.

2.1.2 Phillips Curve (Inflation Rate and Economic Growth):

$$\pi_{net1} = \pi_{nat1} - \beta.\left(\frac{Y_{nt1} - Y_{nt0}}{Y_{nt0}} - \frac{Y_{mnt1} - Y_{mnt0}}{Y_{mnt0}}\right) \quad (2)$$

π = inflation rate; na = actual of n country; e = expected of n country; β = elasticity of economic growth relative.

2.1.3 Unemployment Gap (NAIRU and Inflation Rate):

$$NAIRU_{nt1} = U_{nt1} + \gamma.(\pi_{nat1} - \pi_{net1}) \quad (3)$$

NAIRU = Non-Accelerating Inflation Rate of Unemployment of country n time t; γ = elasticity of inflation rates relative.

2.1.4 Long Run Aggregate Supply (LRAS) and Inflation Rate:

$$\frac{Y_{nt1} - Y_{nt0}}{Y_{nt0}} = \frac{Y_{LRt1} - Y_{LRt0}}{Y_{LRt0}} + \delta.(\pi_{nat1} - \pi_{net1}) \quad (4)$$

LR=natural growth/long run; δ = elasticity of economic growth and inflation rate.

2.2 Time-Series Analysis Method

2.2.1 Hodrick-Prescott Filter

McElroy (2008) explains the exact formulas for the H-P Filter. The general HP filter formula starts with:

$$H(b) = \frac{q}{q + (1-b)^4} \quad (5)$$

This formula has symmetric coefficient, with low-pass filter and high-pass filter 1- H(b) for the estimation of cycles. His method utilize low-pass as the high-pass factorization will easily adjust. This model argues that frequency filter of H-P follows ARIMA framework with polynomials and a constant variable.

2.2.2 Baxter-King Filter

Murray (2003) argued that both H-P Filter (1980) and B-K Filter (1999) are essential to evaluate business cycle yet B-K Filter is more ideal in terms of bandpass filter. This filter fits two-way infinite moving average representation as defined as follows:

$$a(L) = a_k L^k \quad (6)$$

Where as a_k is symmetric filter with a_{-k} B-K passes stationarity in the range of 1.5 to 8 years.

2.2.3 Frequency Response Function

Lingren (1959) firstly explains about frequency response function as follows:

$$Y_{iw} = \int_{-\infty}^{\infty} e^{-1tw}.dK(t) \qquad (7)$$

Where K(t) is bounded variation representing the impulse response. This function is important to assess the impulse response of the cycle.

2.2.4 Dickey-Fuller Test

Montañés & Sansó (2001) shows D-F tests attempt to reject hypothesis null (H0) except when the break affects all the period. Therefore, the breakpoints can be various in time.

2.2.5 Forecast Averaging

Pesaran & Pick (2011) compares two forecast methods, one is single estimation and two is averaging forecast. Their study found that averaging forecast generates smaller root mean square forecast error (RMSFE) than single estimation.

2.2.6 STL Decomposition

Seebens et al. (2007) proves that STL decomposition of time-series covering trend, seasonal and residual can take more comprehensive description of time-series trend.

2.2.7 Middle-Income Trap

A developing country, to escape from the middle-income trap, needs a manufacturing sector strategy. This strategy will be affecting the international reserve and fiscal support as well as structural reform guidance.

Lin (2017) explains five types of manufacturing sector strategies: catching-up (tech transfer from developed to developing), leading and cutting edge (RND and Innovation role), comparative advantage losing industries (based on the comparative advantage analysis), short-innovation cycle (catching-up the advanced countries technology), and strategic industries (mostly government led industrialization). Indonesia needs to adopt more than one type of manufacturing strategy with a complete set of information on industrialization's benefit and cost of the medium to long-run framework.

Verico (2017a) argues that trade and investment are the essential variables to keep sustainable economic growth and help the developing country escape from the so-called 'middle-income trap'. This study mostly discusses comparative advantage industrialization, which is based on Indonesia's current condition. This study proposes that Indonesia starts with trade in manufacturing sector competitiveness. These strategies will positively affect capital inflows and influence the nominal exchange rate's stability and reduce the current account deficit or perhaps turn it into a current account surplus.

Combining the Solow Growth Model, Harrod-Domar Model, Cobb-Douglas dan Saving-Investment Gap Model gives a clear description of what factors affecting economic growth as follows:

$$\frac{\partial y_{nt}}{y_{nt}} = \frac{\left\{ [I_{nt} + (X_{nt} - M_{nt})] - \left[\partial_{nt} + \rho_{nt} + \frac{\partial E}{E_{nt}} \right] \right\} \cdot \sqrt{\frac{(K,k)_{nt}}{(L,l)_{nt}}}}{c_{nt}}$$

$$(8)$$

Where:

$\frac{\partial y_{nt}}{y_{nt}}$: Real Economic Growth country n time t;

I_{nt} : Manufacturing Strategies based Investment;

$X_{nt} - M_{nt}$: Current Account;

∂_{nt} : depreciation;

ρ_{nt} : Population;

$\frac{\partial E}{E_{nt}}$: Marginal Productivity of Labour;

$\frac{K_{nt}}{L_{nt}}$: Infrastructure Availability;

$\frac{k_{nt}}{l_{nt}}$: Level of Technology (Manufacture Strategy);

c_{nt} : ICOR.

The combined formulation shows that sources of economic growth are the investment (in relation to manufacturing empowerment the important thing is Foreign Direct Investment/FDI), trade with the proxy of the net export (competitiveness), trade and investment strategies (Verico, 2017b), sustainable concern (depreciation of environment from depletion and degradation), number of populations, productivity level, infrastructure availability, level of technology and the economic efficiency with good regulatory framework, good governance, clean government and ICT based system.

2.2.8 Calculation of the CAGR

$$a_{nt0} * (1+g)^t = b_{nt1}$$

$$t * Log(1+g) = Log\frac{b_{nt1}}{a_{nt0}}$$

$$t = \frac{Log\frac{b_{nt1}}{a_{nt0}}}{Log(1+g)} \qquad (9)$$

Where t = time to achieve High-Income Country (HIC) from starting year; b_{nt1} = GDP per Capita of High-Income Country; a_{nt0} = GDP per Capita t0 of country n; g = growth scenario

3. Descriptive Analysis

3.1 Global Pandemic Impact: Spanish Flu 1919

The only lesson learned that the world could exercise to obtain a big picture of how the global pandemic even not straight 'apple to apple' comparison is Spanish Flu 1918-1920. This paper uses Economic Openness as a proxy since this indicator covers both two-way policy and market power.

The filter of HP on the cycle clearly shown that the most significant break occurred between 1918 to 1920. This fact initially confirmed that the global pandemic created an enormous impact on the economy (see Figure 1). This paper used another filter of Baxter-King and confirmed that between 1918 to 1920, there was a high impact on the global economy (see Figure 2). The frequency response function in Figure 2 showed that there was strong power that makes actual openness significantly dropped from its potential and generated overshooting economic recovery in 1922. From this figure, the world estimated that the impact of the Spanish Flu was around five years. This paper applies the Dickey-Fuller test, regression, and figure, and both found that the breakpoint was in 1919 (see Figure 3).

The Forecast Averaging showed that breakpoint in 1919 affected global economy contraction until the great depression in 1930's (see Figure 4). Last but not least STL Decomposition also shown similar result with the Forecast Averaging function (see Figure 5).

3.2 Indonesia's Output-Gap: Before Global Pandemic 2020

From bivariate regression of elasticity with log-log model of the period of 1990-2017 data, this paper found that elasticity of α (Okunˆ' s Law), β (Phillips Curve), γ (Unemployment Gap), δ (Long-Run Economic Growth Gap) as 0.62, 0.60, 0.14 and 0.67 respectively.

Okun's Law shows that open unemployment has an inverse relation to the economic growth gap between actual and minimum economic growth. The minimum economic growth reflects the minimum growth to generate employment. Indonesia experienced negative economic growth (contraction) in 1998 called the Asian Financial Crises (AFC), which decreased economic growth to a negative 13 percent and increased the skyrocketing inflation rate to 75 percent. Indonesia faced stagflation in 1998. Time-series wise, Indonesia experienced the increasing trend of open unemployment before the AFC and afterward until 2006. It took around eight years for Indonesia to reduce open unemployment since the AFC. In the last ten years, Indonesia's annual ability to reduce open unemployment was around 350 to 400 thousand (see Figure 6).

From 2007 until just before the global pandemic hit Indonesia in 2020, Indonesia's open unemployment decreased. Even economic growth was relatively low, but it can generate employment. Indonesia's economic growth has quality. Nevertheless, the power of Indonesia's economic growth to reduce open unemployment has been decreasing since the decreasing growth of the most labour absorptive sector, manufacture. Indonesia needs to redefine its long-run manufacturing sector strategy to boost its economic growth and increase its labour absorption capacity. The increase of the manufacturing sector will increase labour absorption and increase economic growth to its potential (see Figure 7). This figure shows that Indonesia's open unemployment rate can decrease below its potential; therefore, based on Okun's Law, the economic growth and actual inflation are possible to be increased.

Figure 6 and Figure 7 show that Indonesia's economy has quality as it can reduce open employment, increase actual economic growth above minimum economic growth to generate employment, and remain capable of increasing even more. This phenomenon indicates that Indonesia's economy can move from middle-income to the high-income level. Figure 6 needs to be detailed into the Phillips Curve indicator, NAIRU (Non-Accelerating Inflation Rate of Unemployment), and the comparison bias to its long-run economic growth. Figure 7 needs to be further observed with the Middle-Income Trap (MIT) scenario. Similar to Figure 6, which is undoubtedly affected by the global pandemic 2020, Figure 7 needs MIT scenario adjustment given that.

Figure 6 needs more detailed confirmation from the Phillips Curve model. This paper found that consistent with Okun's Law result, the actual inflation rate was always higher than the expected inflation rate from 2007 until 2019 (see Figure 8).

As from the unemployment gap between NAIRU actual open unemployment, this paper found another consistent result: the open unemployment rate was lower than NAIRU since 2007 (see Figure 9). This calculation proved that even smaller but the quality of Indonesia's economic growth increases since the AFC 1998.

Indonesia's economic growth was always above its long-run economic growth (see Figure 10). This figure confirmed that Indonesia's economic growth is always higher than its natural economic growth or long-run economic growth or long-run aggregate supply growth from 2007 until the global pandemic hit Indonesia's economic growth.

3.3 Indonesia's Economic Recovery

Since 2020 global economy, including Indonesia's economy, is facing the most challenging time due to the unprecedented global pandemic, which hit both the demand and supply side of the economy. This economic contraction had increased the open unemployment rate in 2020 and deteriorated all kinds of output-gap.

Different to the economic contraction in 1998 that hist supply-side, this global pandemic hit all around the world at both supply-side (aggregate supply/AS) and demand-side (aggregate demand/AD) (see Graph 1). Unprecedented global pandemic decreased the AD as many sectors affected by the limitation of the social movement. Sectors that depend on people's mobility, such as transportation, hotel, and restaurant, were much impacted while accommodation was the most labor absorption sector in the last ten years, followed by the manufacturing sector.

After a while, aggregate supply decreased followed the decline of the AD. The economic growth decreased, but the inflation rate was not skyrocketing as stagflation in 1998. The difference is decreasing the AD; therefore, fiscal have to be countercyclical and mostly allocated for social safety purposes. The next best aim is supporting the aggregate supply with the necessary condition is pandemic containment. The latter will affect the potential overshooting situation right after the contraction, and its long-run sustainability depends on structural reform during the economic hibernation due to social mobility limitation.

In reality, Indonesia needed to hold the Aggregate Demand to not dropped too much. Simultaneously, in 2021, if the vaccine effectively works for herd immunity, the economy will accelerate supply-side. In 2022, if all scenarios in 2020 and 2021 work smoothly, Indonesia can experience an overshoot state with fast acceleration in economic growth and speed recovery. In 2023 and afterward, Indonesia's economy can adjust with any new normal scenario that available for the world.

3.4 Indonesia's Middle-Income Trap Scenario: Before Global Pandemic 2020

Indonesia has a potential demographic bonus until 2040. Indonesia needs to achieve the high-income level before that year. Indonesia had just entered the upper-middle-income level in 2020, and it has less than 20 years to transform its economic level from upper-middle-income level of 'take-off' to a high-income level of 'maturity.' The world witnesses only Japan and South Korea that transformed their economic level with that fast track. Based on the calculation, Indonesia can transform its economy from middle-income to high-income and escape from the middle-income trap before 2040 if its economic growth is above six percent (see Figure 11). Given this, Indonesia needs a big manufacturing scenario as this sector is dominant in Indonesia's economy,

labour-intensive, and has solid backward and forward linkage. This scenario will be affecting not only fiscal posture but also the usage of international reserve and the Current Account Deficit for a specific time until it turned into surplus if the scenario succeeds in increasing Indonesia's manufacturing competitiveness in the world.

3.5 Indonesia's Middle-Income Trap Scenario Adjustment

Indonesia must change its strategy, given the pandemic impacts on its economic growth. Newly simulation of CAGR indicated that the average minimum economic is six percent. Before the global pandemic hit Indonesia's economy, the average could be between five percent to six percent, but now this is no longer the option. Indonesia must boost its average economic growth to at least six percent before 2040 (see Figure 12). Indonesia must adopt, adapt, and apply significant structural reform and effective manufacturing sector strategies to be one of the world's major manufacturing exporters. Indonesia has to adjust its economy depends on pandemic containment. Once the pandemic can be contained, the economy will be overshooting as naturally found in any country that just stepped out from the crisis. Indonesia must prepare structural reform in order to make the overshoot in line with Indonesia's accelerating economic recovery.

4. Conclusion

This paper found that:

1. Indonesia's economic growth after the AFC 1998 but before the pandemic 2007-2019 decreases open unemployment. Therefore, even the average economic growth, for instance, less than six percent in the last ten years, can create jobs. This finding proved that Indonesia's economic growth has quality.

2. The open unemployment has been constantly decreased therefore Indonesia's output gap in the Okun's Law, Phillips Curve, NAIRU (Non-Accelerating Inflation Rate of Unemployment), and the gap between natural economic growth of the LRAS and annual economic growth are decent.

3. Global pandemic hit global economy due to the social movement limitation that makes economic sectors dependent on people mobility got high impact and spill over to other sectors.

4. Learning from the global pandemic of 1918-1920 of the Spanish Flu, it made the global economy contracted for around four years. It generated a long-term economic impact on the great depression about 15 years afterward.

5. The global pandemic has put Indonesia's economic growth into a sub-zero economic growth zone with low inflation, which differs from the Asian Financial Crisis 1998 that generates a skyrocketing inflation rate with immense negative economic growth.

6. Global pandemic hit aggregate demand and aggregate supply; therefore, social safety net and economic stimulation to the most impacted sector and non-formal activities are very important.

7. The global pandemic affected economic growth and its GDP per Capita level. It involves the scenario to escape from the middle-income trap. Indonesia must have average economic growth above six percent by 2040 because it has been predicted as the last period for the demographic bonus.

8. Learning from the previous economic crises and global pandemic impact of the Spanish Flu on the economy, right after the core problem was contained, the economy will experience overshooting. To obtain optimum benefit from the overshooting, Indonesia needs to prepare appropriate structural reform with long-run manufacturing sector empowerment.

Indonesia must optimize the 8 major economic growth sources in the medium to long-run: Foreign Direct Investment (FDI), Current Account (CA), Environment Justice, Number of Population, Productivity, Economic Efficiency, Infrastructure Availability, and Level of Technology. Indonesia must keep all of these indicators and adjust them at any changing circumstances, including the global pandemic impacts. This period is the best time to implement structural reform and redefine a medium to long-term strategy welcoming the overshooting economic recovery right after the core problem has been contained.

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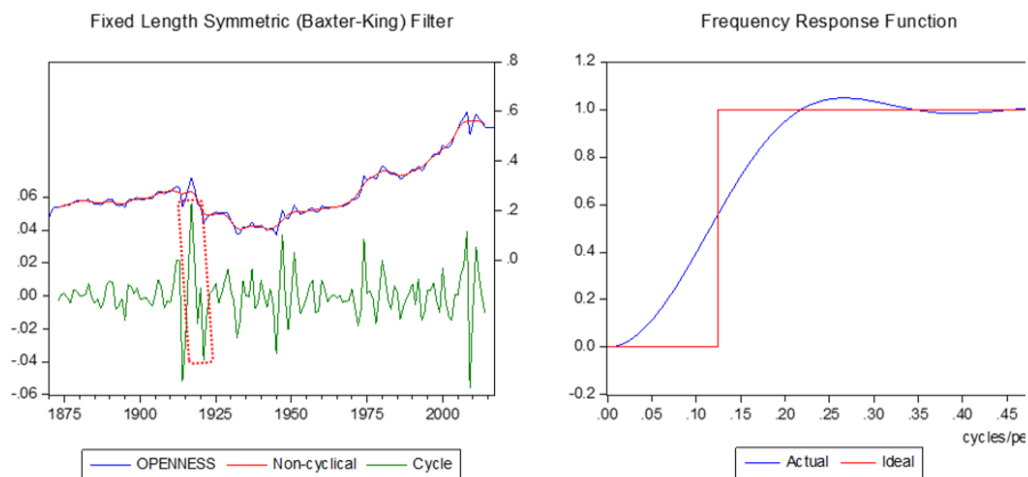
Sources of Data:

World Development Indicators — DataBank (worldbank.org)
Badan Pusat Statistik (bps.go.id)

Figures
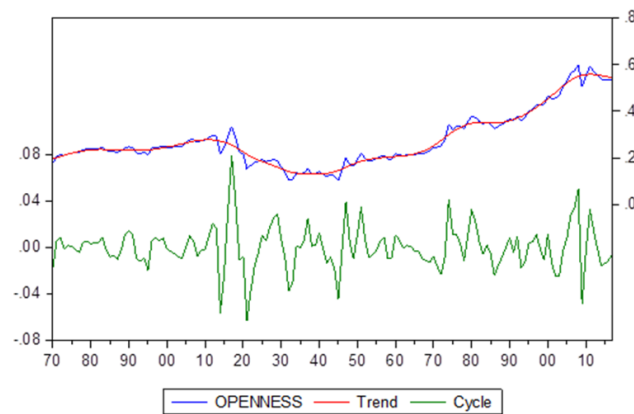
Figure 1. Business Cycle of Economic Openness (Filter of H-P)
1870–2018
Source: Own Illustration with various dataset, 2021

Figure 2. Business Cycle of Economic Openness (Filter of B-K)
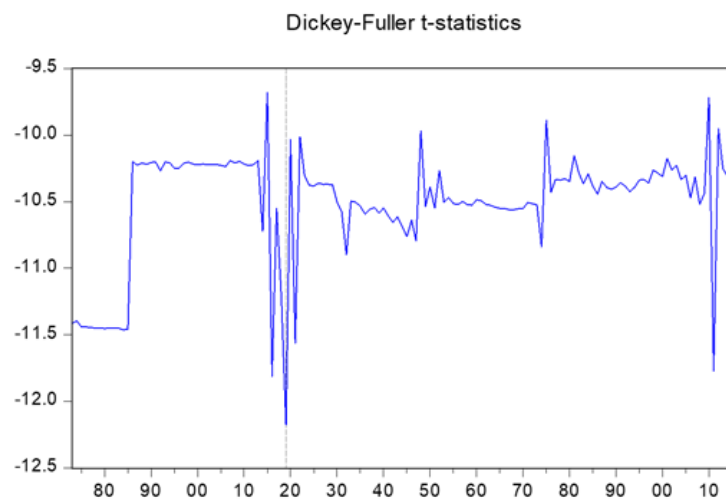**1870–2018**
Source: Own Illustration with various dataset, 2021

Null Hypothesis: D(OPENNESS) has a unit root
Trend Specification: Intercept only
Break Specification: Intercept only
Break Type: Innovational outlier

Break Date: 1919
Break Selection: Minimize Dickey-Fuller t-statistic
Lag Length: 0 (Automatic - based on Schwarz information criterion,
    maxlag=13)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-12.18020	< 0.01
Test critical values:	1% level	-4.949133	
	5% level	-4.443649	
	10% level	-4.193627	

*Vogelsang (1993) asymptotic one-sided p-values.

Figure 3. D-F Breakpoint Test
1870–2018
Source: Own Illustration with various dataset, 2021
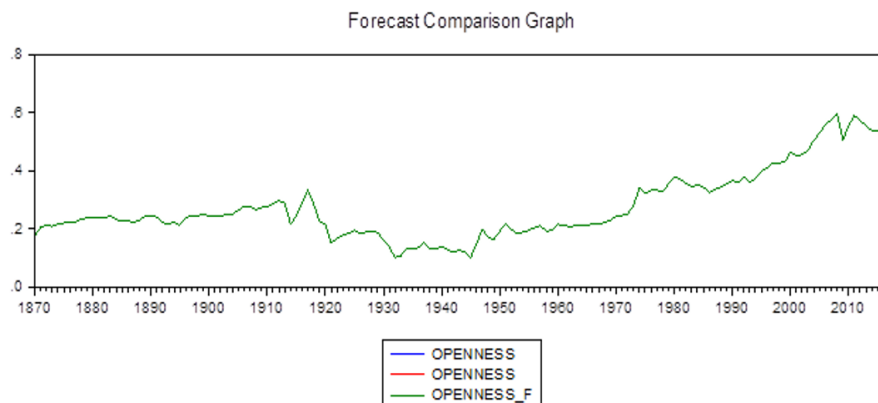
Figure 4. Forecast Averaging
1870–2018
Source: Own Illustration with various dataset, 2021
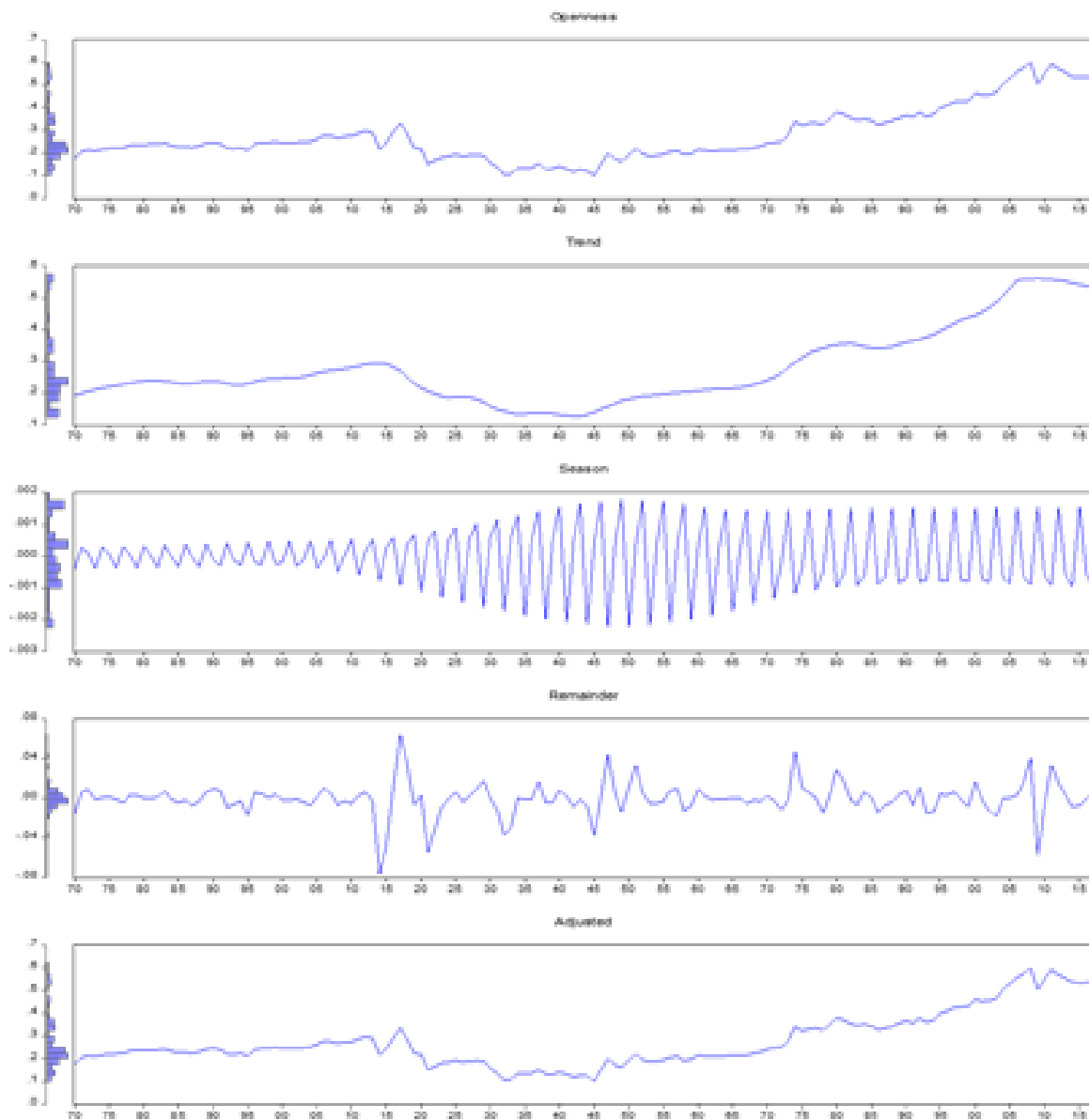
Figure 5. STL Decomposition
1870-2018
Source: Own Illustration with various dataset, 2021
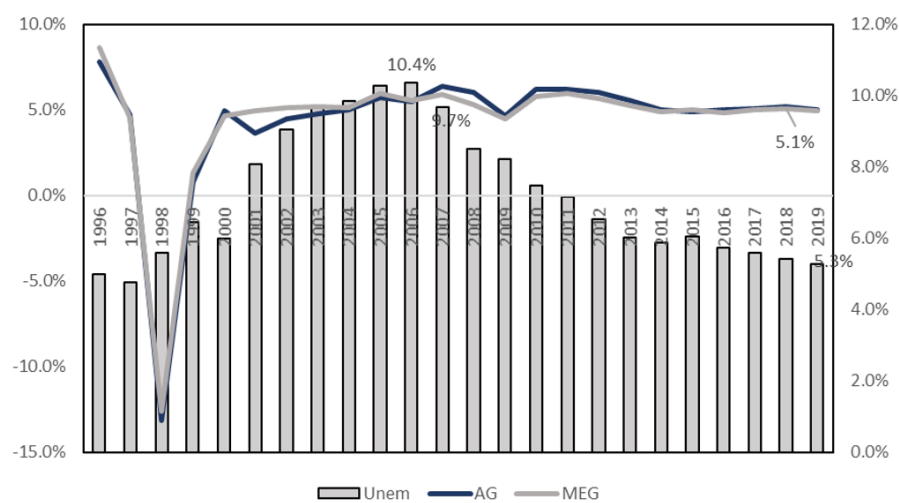
Figure 6. Okun's Law of Indonesia Before the Global Pandemic
1996–2019
Source: Own Illustration with various dataset, 2021
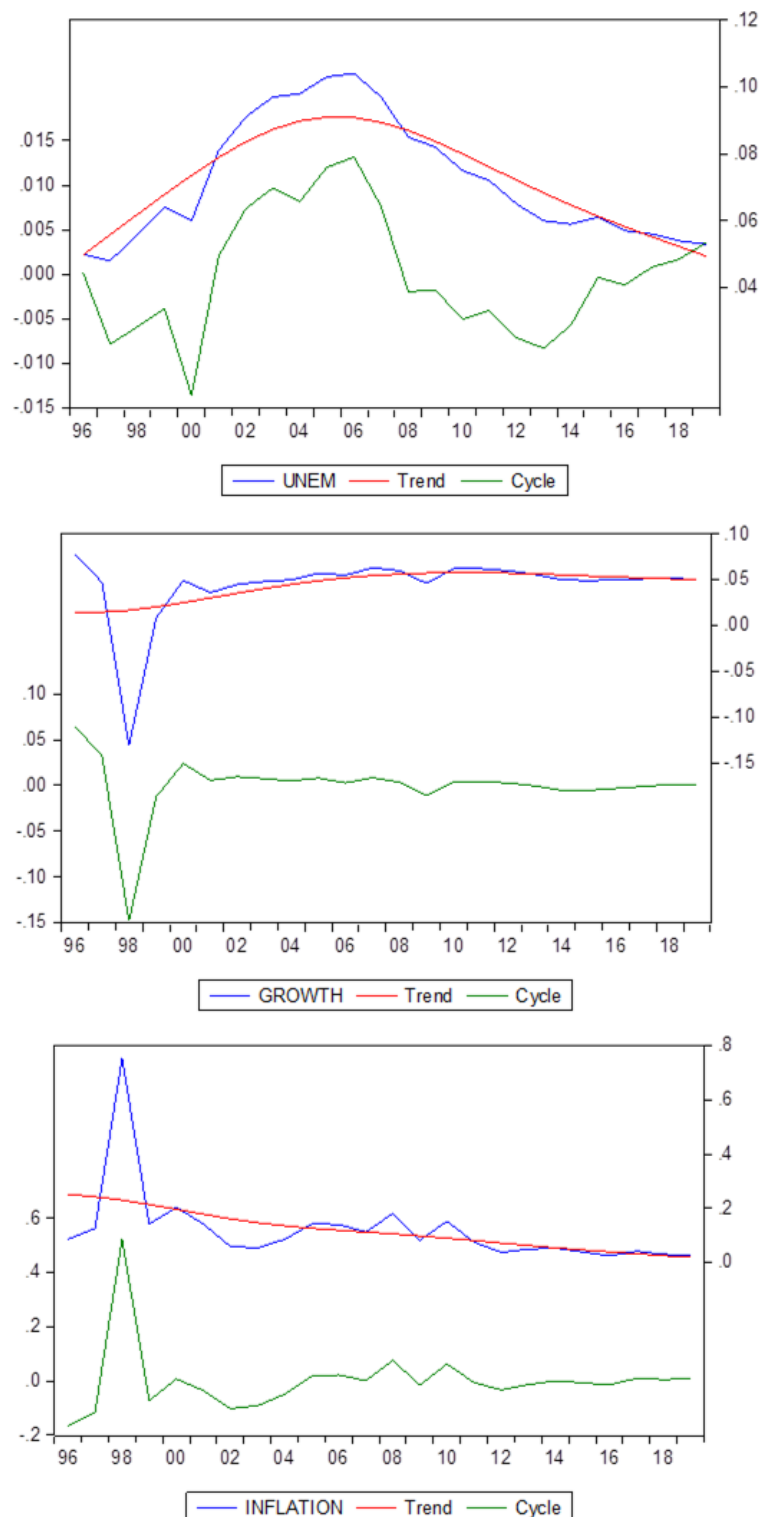
**Figure 7. Potential Open Unemployment, Economic Growth, Inflation Rate of Indonesia
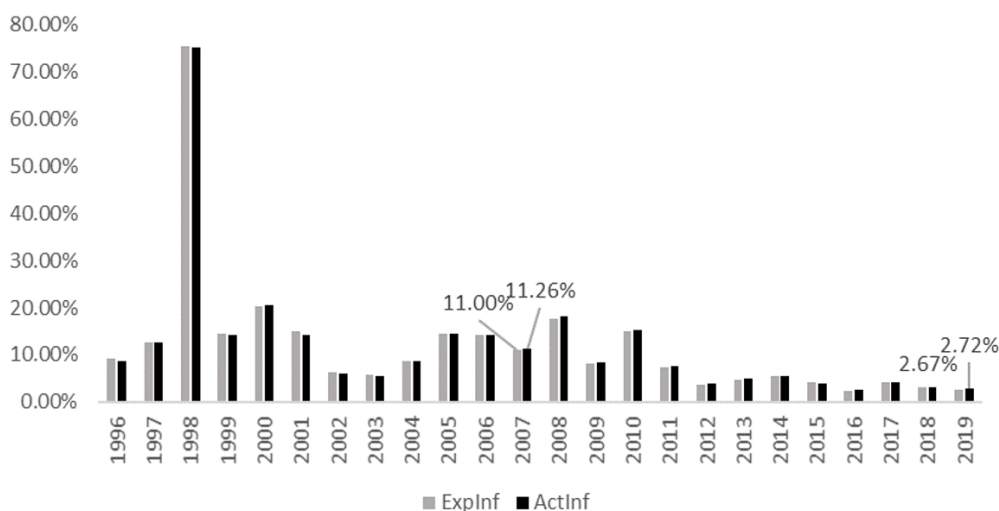1996–2019**
Source: Own Illustration with various dataset, 2021

Figure 8. Phillips Curve of Indonesia on the Gap between Actual and Expected Inflation Rate
1996–2019
Source: Own Illustration with various dataset, 2021
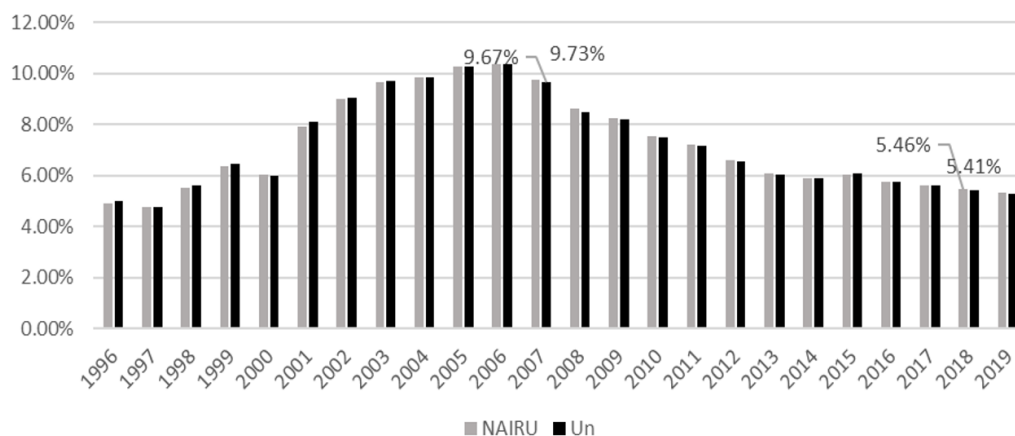
Figure 9. Unemployment Gap of NAIRU and Open Unemployment
1996–2019
Source: Own Illustration with various dataset, 2021
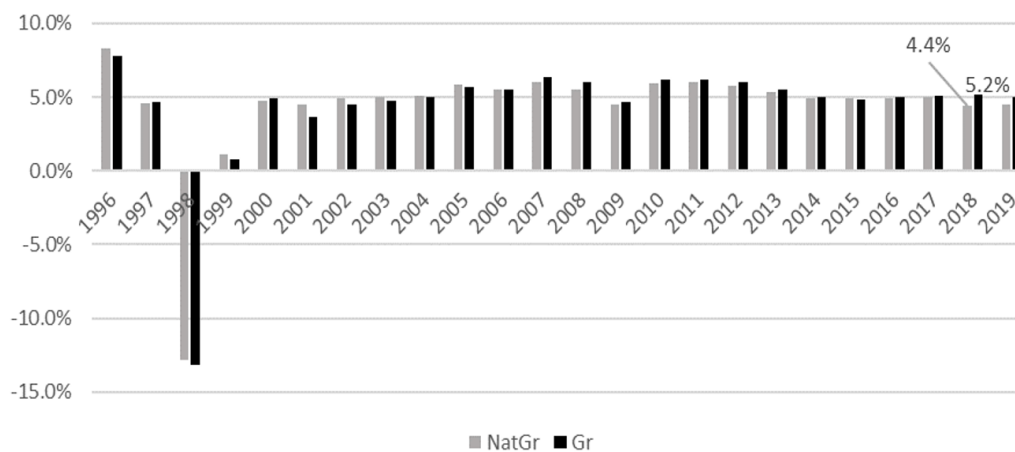
Figure 10. Indonesia's Short and Long-Run (LRAS) Economic Growth Impact
1996–2019
Source: Own Illustration with various dataset, 2021
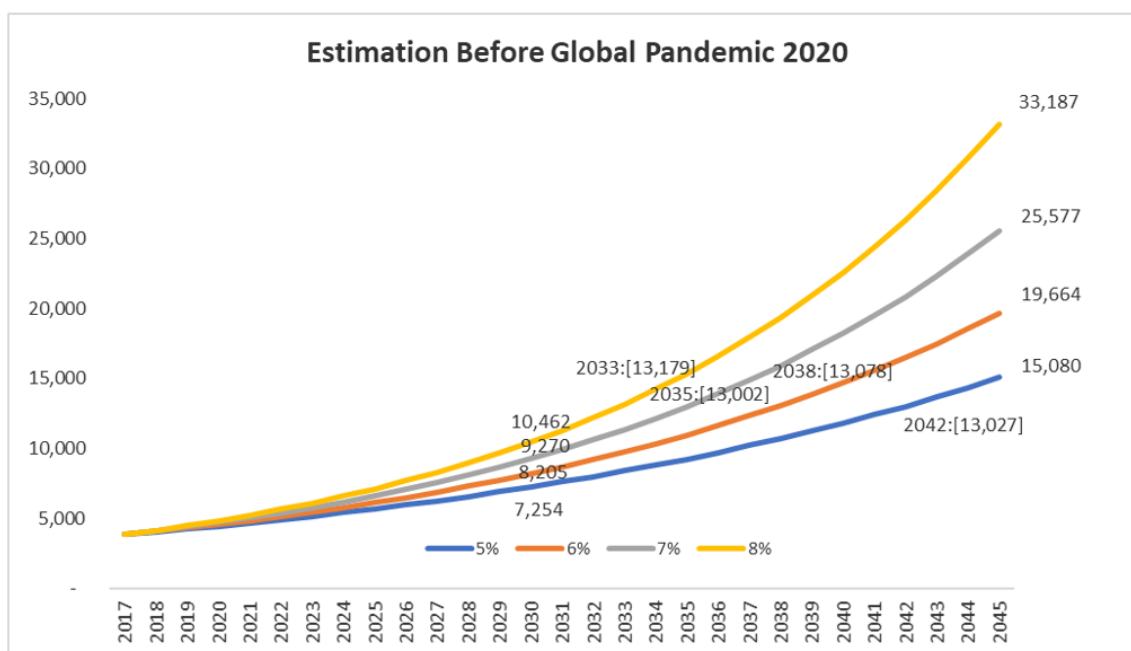
Figure 11. Indonesia's Scenario to Achieve High-Income Country (Escaping the Middle-Income Trap)
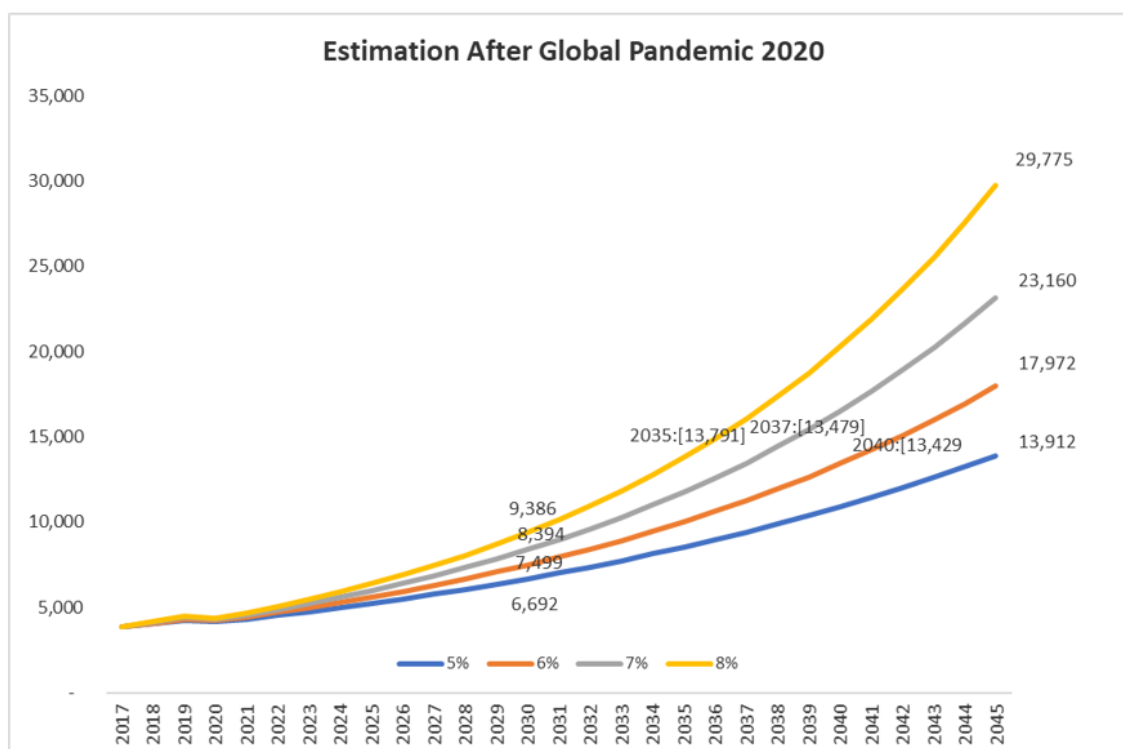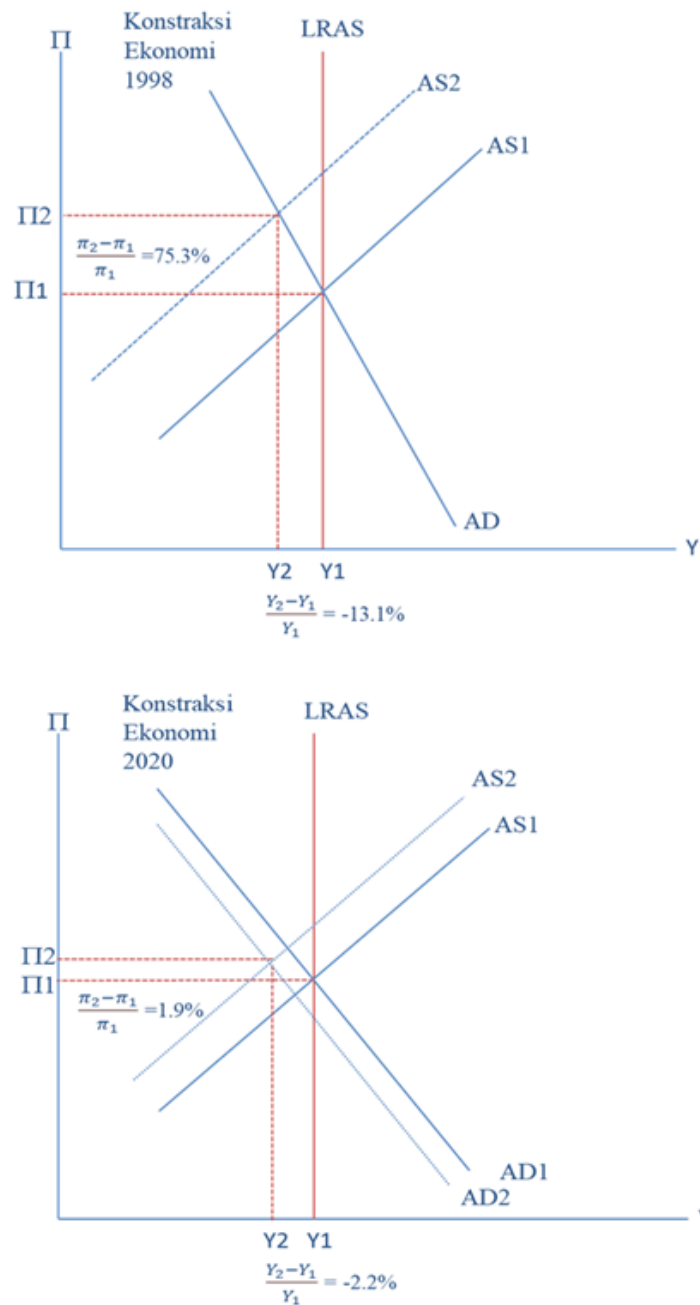Source: Own Illustration with various dataset, 2021

Figure 12. Indonesia's Adjustment Scenario to Achieve High-Income Country Level
Source: Own Illustration with various dataset, 2021

Graph 1. The Impacts of the AFC 1998 and the Global Pandemic 2020 on Indonesia's Economy
Source: Own Illustration, 2021