# DOES INDONESIA'S MACROECONOMY WORK WELL TOWARDS THE POLITICAL YEAR?

Kiki Verico

# Does Indonesia's Macroeconomy Work Well towards the Political Year?

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**Abstract**

This paper utilizes the timeframe of 2014–2018 as the period with some of the global underperformed macroeconomic indicators. This paper found that in late 2016, Indonesia's macroeconomic indicators started shown some improvements that keep real and monetary sector's equilibrium to be stable. This paper observes the external balance of current account, exchange rate stability, inflation and interest rate as well as consumption patterns, saving-investment gap, fiscal discipline and fiscal sustainability. It analyses the government expenditure multiplier, real and monetary sector stability and institutional coordination between fiscal authority, monetary authority, and financial service authority. Real sector improvements which have been rolling since 2017 has significantly contributed to the recent Indonesia's macroeconomic stability. Technically, if all on the track, this will sustain during the upcoming political year of 2019.

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## 1. Indonesia's Macroeconomic Posture

Recent global macroeconomy faces big challenges as the growing anti-globalization sentiment after the global financial crises (GFC) and oil price decay that reduced the price of gas and primary commodity. Data of 'before the GFC and after the GFC' shown that the global economic growth has been slowing down from 3.4% to 2.8%. These unfortunate global factors have declined global demand and impacted Indonesia's macroeconomy. Indonesia also faces domestic challenges in the lack of infrastructure development of outside of Java, low coverage of health and education public services, challenged in good governance, clean government and structural reform. How does the government of Republic of Indonesia manage these global and domestic challenges?

This paper discusses it from the macroeconomic perspective. It starts with a variable that connects domestic and global factors: *The Current Account Balance*[1]. Data

shows that Indonesia's current account balance was a deficit, for the first time since reform era[2], in the last quarter of 2011. The total current account in 2011 was still surplus at USD1.68 billion, but the deficit trend remained. In 2012, Indonesia's total current account became negative at USD24.4 billion (-2.65% per GDP) then worst off in 2013 at USD29.1 billion (-3.19%)[3].

Deficit current account makes local currency (Rupiah/ USD) to depreciate from Rupiah/USD8,770 (average in period of 2011) to Rupiah/USD9,386 (2012). It then touched the bottom at Rupiah/USD13,389 (2015) before slightly appreciated to Rupiah/USD13,308 (2016) and 13,380 (2017). This depreciation generated undervalue Rupiah to USD[4]. The Real Effective Exchange Rate has dropped from 99.98 in 2011 to 87.05 in 2014. The pattern of nominal exchange rate reflects the pattern of the real exchange rate. Table A1 (appendix) shows that undervalue of Rupiah/USD in 2017 is almost equal to that in 2013. As currency stability reflects country's open macroeconomic balance then it can be inferred that Indonesia's open macroeconomy has been getting better starting since 2016. Indonesia's current account deficit has persistently decreased from USD25.4 billion (-3.09% per GDP) in 2014 to USD16.3 billion in

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[1]$Y_{it} = C_{it} + I_{it} + G_{it} + (X_{it} - M_{it})$; $(Y_{it} - T_{it} - C_{it}) - I_{it} + (T_{it} - G_{it}) = X_{it} - M_{it}$; $(S_{it} - I_{it}) + (T_{it} - G_{it}) = (X_{it} - M_{it})$; Macroeconomy consists of three balances: Saving – Investment, Fiscal and Net Export. $NX_{it} = X_{it} - M_{it} = CA_{it} - PI_{it} - SI_{it}$; $(S_{it} - I_{it}) + (T_{it} - G_{it}) = CA_{it} - PI_{it} - SI_{it}$; Investment and Government Expenditure which higher than Saving and Tax inquire global support which represents in PI and SI. Symbol of variables: Y = GDP; C = Consumption; I = Investment; G = Government Expenditure; X = Export; M = Import; T = Tax; CA = Current Account; PI = Primary Income; SI = Secondary Income. This paper starts the analysis from CA as this reflects the whole macroeconomic performance of real sector (IS curve) and money demand of monetary sector (LM curve). CA is mirroring both the saving-investment gap and fiscal balance. Theoretically, CA patterns reflect that of the exchange rate. The latter is the ultimate

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indicator of real and monetary sector resiliencies.

[2]Indonesia's average economic growth during New Order is higher than that in Reform Era, but it never experienced positive current account.

[3]Increasing deficit in CA was caused by the 'Taper Tantrum' of declining 'Quantitative Easing' (QE) in the US market. It indicated that US economy was getting better than capital flown back to the US market. It hurts financial market of the so-called 'fragile five' countries of Brazil, India, Indonesia, South Africa, and Turkey. Indonesia and India were the fastest countries that successfully managed its negative impact (Basri, 2017). Details at http://www.tandfonline.com/doi/full/10.1080/00074918. 2017.1392922.

[4]REER in 2010 = 100.

2016 (-1.8% per GDP).

Indonesia's current account is a deficit because of the gap in primary income, on the average, above USD20 billion per year since 2010. Indonesia is a net borrowing country of which foreign acquisition of its asset is higher than her incurrence of liabilities in abroad. Indonesia's net primary income is always deficit due to the foreigner's investment income in Indonesia from the portfolio, and direct investment is still higher than the opposite. Compensation of employees is also always detrimental from USD781 million (2010) to double of USD1,553 million (2016). Compensating this primary deficit, besides surplus in secondary income, Indonesia relies on the net export of goods. Her net export of service is also always negative. The international price decline in oil and gas that naturally followed by the falling price in global commodity price has decreased Indonesia's export value. Net export of goods is still positive but start to drop from USD33.8 billion in 2011 to USD8.68 billion in 2012. This drop continued in 2013 and 2014. However, it increased double to USD14.05 billion in 2015, USD15.39 billion in 2016 and recently USD15.77 billion up to third quarter of 2017.

The Figure 1 (appendix) shows the factors that decrease the current account deficit is the net surplus in the export of non-oil and gas, the declining deficit of oil and gas trade and the weakening of service trade deficit. In 2016, mining price of iron ore, nickel, tin, and copper was starting to increase following the growth in China's commodity-based industry, infrastructure, and construction. These have contributed the positive impact on Indonesia's export, current account, and economic growth. In 2017, Indonesia's economic growth is better than that of 2016. Macroeconomic performance has touched the bottom and again, started to increase in his second-year period[5].

Indonesia economy is starting to be more productive. Adopting the interrelation between MRAS (Medium Run Aggregate Supply) and the AD (Aggregate Demand) shock, it can be inferred that if the AD is shifting to the upward right when the MRAS is elastic, then the increase of quantity (growth) will be higher than inflation rate (Verico, 2011). Data from 1970 to 2017 confirmed that since 2015, Indonesia's economic growth is always higher than the inflation rate. In the Asian Financial Crises (AFC) of 1997–1998, Indonesia experienced negative economic growth of -13%, high-rise inflation of 75% and decreased of GNI per Capita in USD due to the depreciation of Rupiah per USD.

The pattern of this drop reflects J-curve of which Indonesia took five years from 1998 to 2003 to adjust to the AFC impact. Why? The depreciation of Rupiah does not directly benefit the exporters as some exporters are also the importer; therefore, it increases import price[6].

On average, Indonesia economic growth before crises is 6.7% with the inflation rate of 13%. After the adjusted period of crises, 2004–2014, Indonesia's average economic growth was 5.7% with the inflation rate of 10%. Before President Joko Widodo's period, the inflation rate was always higher than the economic growth. Now the average

of economic growth of 5% is still higher than the inflation rate of 4%, the lowest rate ever in Indonesia. The Figure A2 (appendix) proves that Indonesia's productivity is moving towards her 'golden rule' of economic growth (Solow Model).

Theoretically, economic growth generates inflation rate and the opposite[7]. There is a trade-off between high inflation and declining unemployment. On the other hand, low inflation rate is good for consumer's purchasing power, debtor repayment ability and investor expectation. Therefore, economic growth needs low inflation and interest rate (Fischer's Effect). Interest rate is an 'effect', not a cause' (von Mises, 1912). Both Fischer & Mises proved that inflation rate is vital for interest rate and growth. Ideally, Indonesia has the inflation rate that lower than her economic growth.

## 2. Indonesia's Macroeconomic Gap

### 2.1 Saving-Investment Gap

In the beginning, the government was a very optimist with seven percent of Indonesia's economic growth. It made National Government Budget (APBN) overestimated. Minister of Finance[8] adjusted APBN according to Indonesia's real economic growth of five percent. Recent Indonesia's economic growth was below the 'optimum' forecasting of 6 percent[9].

The question is why Indonesia's recent economic growth was slightly lower than the previous period? The quick answer is because of its current account deficit. Data shows the lower the deficit, the higher the economic growth. This paper attempts to further respond to this question with other variables.

It starts with consumption growth. In mid of 2017, government puzzled on why Indonesia's consumption as the largest contribution to GDP (around 57%) has been growing below the expectation. In 2016 it was reflected in the increasing rate of saving per GDP from 30.5% (2013) to 32.15% (2016). In 2017, it was because of the 'shifting pattern of consumption' from non-leisure (high proportion to consumption) to leisure (low proportion to consumption) (Verico, 2017b). The highest proportion in Indonesia's consumption is food and beverage other than restaurant (39%), transportation and communication (23%), equipment (13%) and hotel and restaurant (10%). This shifting has slowed down the consumption growth. This paper uses economic growth of 5.06% as the threshold. The data shows that consumption growth for food and beverage other than restau-

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[5]Current Account reflects economic growth capacity (Prasad et al., 2006).

[6]The recent Indonesia's upper-middle industry data (2015) shows that 35% of Indonesia exporters are importers.

[7]$LogY_{it1} = LogY_{it0} + \beta.(LogP_{it1} - LogP_{it0})$ of which Y is GDP in constant price, P is CPI, i is space, t is time. This formula shows that economic growth needs inflation rate. In constructing positive slope of supply-curve, it is proven that inflation decreases real wage then increases demand for labour and finally increases economic growth.

[8]H.E. President Joko Widodo reshuffled his related economic ministers three times within two years on August 12th, 2015, July 27th, 2016 and October 14th,2016. On July 27th, 2016, H.E. Sri Mulyani Indrawati replaced H.E. Bambang Brodjonegoro as the Minister of Finance.

[9]In 2007, Indonesia would like to achieve High Income Country in the year 2030, then its estimated economic growth range in the period of 2015–2019 had to be between 8%-10%. However, this target was feasible only if its economic growth in the previous period (2010–2014) of 7.5%. Then actual economic growth was dropped up to on average 5.8%. Therefore, optimum estimated growth in 2015–2019 will be around 6%. See details at Verico (2017a).

rant was above it at 5.24% while equipment and apparel, footwear and maintenance service growth was below it at 4.12% and 3.47% respectively. On the opposite, the growth of leisure consumption of restaurant and hotel, and transportation and communication was impressively increased at 5.87% and 5.32% respectively. The Figure A3 and A4 (appendix) show the details.

The leisure-time destination to abroad has increased due to the low-cost of air transport. Immigration Directorate General data showed that during long public holidays of June 18th to July 3rd, number of Indonesian tourists went abroad increasing from 441,340 (2016) to 492,523 (2017). Another interesting fact was an increased consumption growth of health and education that indicated two things, first, the increasing human capital investment and second, the rising basic public services. Both are important but supporting long-run economic growth instead of short-run. Indonesia is also facing more complicated consumption patterns due to the changing transaction from off-line to online. It will affect the recorded value of GDP since the more virtual the economy, the higher informal activities and the more underestimate the GDP[10].

How about investment growth? In developing countries, investment inquiry is higher than saving rate. There is a need for foreign investment inflows. In the last six years, Indonesia received FDI inflows on average at around USD25 billion. FDI inflows have significantly increased. Indonesia has received on average of USD23 billion in 2012–2014 while in 2014–2017 increased up to USD27 billion. The highest value was in 2017 of which for the first time, Indonesia received more than USD7.6 billion per quarter and the highest value was in the last quarter of 2017 of USD8.6 billion. It was because of first, the Tax Amnesty Program (TAP). Second, Indonesia achieved better investment rank from all credit rating institutions two times in a row of July and December 2017. Third, in 2016, the government made investment liberalization by opening 35 closed sectors to foreign investors. It relaxed regulations for global exposure in production network except for the pre-design, architecture and specific services for local small and medium enterprises (TheJakartaPost.com, 2016). FDI inflows need harmonization policy within its host countries (Enderwick, 2005) and investment grade status, for the first time in Reform Era, proved that structural reform towards the global harmonization policy had been recently working in Indonesia.

Indonesia's Ease of Doing Business (EODB) rank improved significantly from the rank of 106th in 2015 to 72nd in 2017. According to the World Economic Forum (WEF), Indonesia's Global Competitiveness Index (GCI) was also improved from 4.53 (scale 7) in 2014 to 4.68 in 2018. Regarding deregulation to stimulate economy, in the last two years from September 2015 to September 2017, the government has released 16 economic packages (www.indonesia-investments.com, 2017b). Investment looks good but why economic growth increased slowly?

There are two quick answers. First, there is a need for more comprehensive evaluation using 'the helicopter view'

over all of the investment incentive regulations to avoid overlapping and cancel-out one and another. The LPEM's assessment on logistic and investment related packages in 2017 found that there were potential mismatches within related regulations due to the disconnecting between objective and the implementation on the ground (LPEM FEB UI, 2017). Second, there were time-lag in the industrial outcome as Indonesia remained competitive in the downstream of assembling, marketing and selling products (forward) than in the upstream of Research and Development (R&D) and design (backward) (Verico, 2016).

## 2.2 Indonesia's Infrastructure, ICOR and Investment Multiplier

The government has made an immediate improvement in reallocating direct subsidy of fuel to more productive spending of infrastructures[11], constructing the clean government, reforming land ownership with a free certificate, providing village budget and enhancing national health system. These are parts of his great long-term vision entitled the '*Nawacita*'[12].

The capacity of both national and local government budget to finance infrastructure is around 41% of total cost. Therefore, the government needs to be more creative in searching funding alternatives such as Public Private Partnership (PPP), State Owned Enterprises contribution, foreign debt, and aid. The government had made significant progress in improving scheme of infrastructure by expanding eligible sectors with the more flexible legal framework and implementing Land Reform including land acquisition. Besides, the government had established Indonesia Infrastructure Guarantee Fund to secure private sectors who are involving in Indonesia's infrastructure development, improved One Stop Service on investment, provided fiscal payment support for infrastructure development (Ministry of Finance Decree no 190/PMK.08/2015) and accelerated strategic projects implementation (Presidential Regulation no 3/2016). But again, why the economic growth remains slow?

Indonesia experienced negative trend (increase in magnitude) from ICOR 5.6 (2010–2014)[13] to 6.5 (2014–2016). Previously she owned positive trend from 4.45 (2000–2004) to 4 (2004-2009). If Indonesia's ICOR in the period of 2014-2016 stayed the same, with this GDCF (Gross Domestic

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[10]The LPEM FEB UI supports the government to increase the awareness of micro and small - medium enterprises to be formal by providing license and all kind related information for all businesses, in particular, those which non-formal ones at the website of http://ukmindonesia.org/index.php.

[11]In previous time, the proportion of public infrastructure expenditure to the GDP was 7% then due to the Asian Financial Crises, it dropped to 3%–4% of the GDP, in fact, it was supposed to be more significant if Indonesia was consistent in adopting 'counter-cyclical' policy during the crises. Indonesia has started to increase the ratio of public infrastructure expenditure per GDP such as that in China with at least 8.5% to GDP. Infrastructure development in medium to long run period will decrease logistic cost then economic cost in general. Five biggest value: 12 projects of Energy (USD95.5 billion), one program of electricity (USD79.6 billion), 74 projects of the road (USD52.6 billion), Train (USD47.1 billion) and economic zones (USD22.3 billion).

[12]*Nawacita* is a Sanskrit of "Nine Goals". They are: (1) Returning the state to its task of protecting all citizens and providing a safe environment; (2) Developing clean, effective, trusted and democratic governance; (3) Developing Indonesia's rural areas; (4) Reforming law enforcement agencies; (5) Improving quality of life; (6) Increasing productivity and competitiveness; (7) Promoting economic independence by developing domestic strategic sectors; (8) Overhauling the character of the nation; and (9) Strengthening the spirit of "unity in diversity" and social reform.

[13]This paper uses the 2010–2014 period instead of 2009–2014 considering GFC that impacted investment flowed in 2009.

Capital Formation) level, Indonesia is supposed to book more than five percent of economic growth. The increasing ICOR is hypothetically caused by an enormous infrastructure investment in borders and remote areas which takes time to generate multiplier impact[14]. Infrastructure budget allocation for this aim is vast. Government budget on infrastructure was significantly increased from Rupiah 139 trillion (USD11.7 billion) in 2014 to Rupiah 209 trillion (USD15.5 billion) in 2017 of which around Rupiah 42.14 trillion has been allocated to develop infrastructure outside Java. The ICOR utilises short-run time frame while vision on current infrastructure is for medium to long-term purposes[15]. It takes some time to obtain more accurate ICOR.

Regarding multiplier impact, in which sector that the investment gives more impact? One indicator that can be utilized to see the effect of the investment is multiplier analysis of Input-Output Table[16]. Calculation of top ten percent products in forward and backward linkage are presented in Figure A5 and A6 (appendix). The Figure A7 (appendix) shows multiplier of investment in Indonesia.

Backward linkage shows that Indonesia is competitive in the utilization of inputs in food and beverage of processing milk, meat, noodles, chocolate and other food. In the primary product of sugar and pulp. In beverage of non-alcoholic and in services of electricity, public health and rail transportation. In labour intensive of textile and music instruments.

Forward linkage shows that Indonesia is competitive in supporting of outputs in raw materials of oil and gas, natural gas and geothermal and crude oil. In chemical of basic except fertilizer, plastic and primary commodity of palm oil, rubber and paddy. In services of electricity, building and electricity installation, land transportation, telecommunication and leasing services and for labour intensive are paper and yarn.

Investment multiplier calculation shows that top ten percent of Indonesia's investment multiplier is in the infrastructure of roads, bridges and ports, railway and its repair services, building and electrical installation, residential buildings, agriculture infrastructure, ships and its repair services and other buildings. In industrial sector of upstream of iron and steel and downstream of first move engine, machinery and electric motors, the machine for office and equipment and other devices. In food materials of fruits and livestock and raw materials of oil and gas refinery. The government's development priority on infrastructure is already correct even construction in remote and border areas could

not generate an immediate impact on the economic growth.

## 2.3 Real Sector Analysis

Indonesia's current account has a long-term relationship with the real exchange rate of Rupiah and depends on the surplus of trade balance (Kurniawati & Verico, 2017). This study suggests that to maintain its current account stability, Indonesia needs the stability of real exchange rate and the surplus in trade balance. Manufacturing products are vital for Indonesia's trade balance, and they affect the patterns of derivative investment (Prabowosunu & Verico, 2017). Both of these studies confirmed that Indonesia needs a surplus in manufacturing trade.

The Figure A8 and A9 (appendix) using static comparative advantage (Revealed Comparative Advantage/RCA)[17] and dynamic (Constant Market Share Analysis/CMSA)[18] shows that Indonesia's export still relies on primary products of agriculture and oil and gas while in manufacturing, Indonesia only competitive in food and beverages product. Indonesia needs to enhance her industrial competitiveness of non-food and beverage.

Data of upper-middle level of the industrial survey in Indonesia shows that the highest percentage of manufacturers who do export is foreign companies at around of 76% of its total firms while for domestic owner and non-status are only 38% and 19% respectively. In order to reduce positive relation between FDI[19] and import then Indonesia needs to stimulate the rest of 24% of foreign companies to do the export. In sum, to increase her export, Indonesia needs to attach to the Global Value Chains (GVCs). Besides, the GVCs play an important role in the transfer of technology, sharing knowledge and productivity (Hoekman & Javorcik, 2006). It also increases the quality of human capital and welfare in developing countries as it increases demand for skilled labour (Lall, 2004). This is the problem: Indonesia's workers are the majority the non-skilled one.

National census data (SUSENAS 2015) shows that most of the Indonesian labour force works in the agriculture sector (43%) and service sector (47%) with the highest of 18% work in trade, hotel and restaurants. The latter are leisure kind sectors that are recently booming (Verico, 2018). Unfortunately, manufacture sector only absorbed 7.2% of the workers. The manufacturing sector growth also lower than the total economic growth, therefore, its contribution to GDP is always decreasing from 29.1% in 2001 to 20.8% in 2016.

Most of Indonesian's workers are unskilled workers with the highest degree of junior high school (73.6%), and at the same time, 55% of open unemployment is skilled labour with high school and vocational degree. Furthermore, most of Indonesia labour force works in the informal sector (64%). Job opportunities in Indonesia are still overriding by non-formal and unskilled labour. It made hard for Indonesia to enhance its manufacturing sector competitiveness due to her lack of skilled labour.

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[14]Geographically, Indonesia is the 7th largest country on earth with an enormous gap in infrastructure development between Western and Eastern parts of Indonesia as 85% of Indonesia's population are living in Western Indonesia.

[15]Indonesia's ICOR is higher than average ICOR in Southeast Asia of 3.5. The average normal range is 3-4. Indonesia's ICOR increased from 4.5 (2013) to 6.8 (2016) of which higher than this normal range meaning less efficient in allocating investment to boosting economic growth. Definition of ICOR is how much investment is needed to increase one monetary unit of GDP. The lower the ICOR, the better and more efficient that country or region to utilize its investment to generate GDP growth.

[16]Disclaimer: Indonesia has the latest 2010 Input-Output Table of 185 x 185 sector. The input-output table is designed to measure the size of the economic multiplier effects. The multiplier calculation coefficient calculations need technological approach. This coefficient matrix obtained by cultivating relationships between sectors by dividing the total input.

[17]For details in Verico (2017a). This paper uses the combination of RCA and CMSA to identify the competitive product.

[18]The most competitive product is the product with RCA higher than one and CMSA higher than zero.

[19]FDI consists of fresh equity capital, reinvesting of earnings and inter-company debt.

Furthermore, looking at the growth side, Indonesia's economic growth is still driven by non-tradable sectors of the service sector in particular transportation and communication. The transportation growth is caused by the changing patterns of consumption from products to leisure time[20] while for communication due to the growing internet-based communication of information and communication technology (ICT) revolution.

The world has entered the virtual Knowledge-Based Economy era and moving towards automation and artificial intelligent age. It needs optimum utilization of the ICT platform and Indonesia has to maximize its creative economy contribution and again, it requires higher quality of human capital. The government has to realize that Indonesia needs manufacture export-led growth and ICT based economy.

## 2.4 Fiscal Gap and Monetary Policy

Minister of Finance, in 2017, emphasized that revenue side of state budget represents 'effort' while expenditure reflects 'commitment'. Government effort aims to achieve stated revenue target while the commitment reveals the government preference. This paper discusses the combination of both which denotes in the net of revenue and expenditure. The state budget is commonly applied 'deficit position' to obtain multiplier impact value higher than the government expenditure[21]. Keeping her fiscal sustainability, the deficit per the GDP has to refer to the Stability and Growth Pact (SGP) measurements. The Annual Budget Deficit (ABD) is maximum of three percent of GDP. The accumulated deficit known as Public Debt (PD) must be below 60% per GDP[22]. Indonesia adopted these measurements into the National Law of State Budget 17/2003 in article 12 point 3.

Recent data shows that of -2.46% of ABD of GDP and 27.9% of PD per GDP are below the existing law. The ABD ratio represents fiscal balance while PD ratio reflects fiscal sustainability. Indonesia's ABD ratio is better than that of China (-3.8%) and India (-3.5%) and its PD ratio is much less than that of Japan (250%) and USA (106%)[23]. This Indonesia's fiscal discipline guarantees monetary stability from both the inflation and interest rate pressure. This then awarded Indonesia the investment grade status in 2017.

From expenditure side, the Minister of Finance of Sri Mulyani boldly cut the state budget in total Rupiah 133.8 trillion consisted of Rupiah 65 trillion for central government and Rupiah 68.8 trillion for local government transfer.

This unpopular cut has successfully avoided Indonesia's fiscal balance from the mounting deficit[24]. From revenue side, ratio between realization of tax collection and its initial target in 2017 achieved only 89.4% and claimed as the highest rate in the last five years which better than that of 2016 of 83.4% (www.indonesia-investments.com, 2017a). The government decision to reduce revenue target in 2017 is indeed the right choice.

How about tax ratio per GDP? Indonesia has around 180 million potential taxpayers but only 28 million who are registered with just 10 million who comply to pay tax regularly. If formal activities are those who own business with fixed-term worker and formal worker itself then Indonesia's tax base only around 36% of formal workers (Verico, 2018). The proportion of Indonesia's tax revenue per GDP is less than 12.75% and remains the lowest in Southeast Asia. Thailand records 17% of tax ratio, Malaysia is 15.5%, the Philippines is 14.4%, Singapore is 14.2%, and Vietnam is 13.8%. Advanced countries such as France has 44.6%, Germany has 40.65%, the UK is 39%, and the US is 26.9%(www.indonesia-investments.com, 2014).

Indonesia's tax ratio still below the IMF's minimum safe rate of 12.75%. Indonesia aims to achieve tax ratio of 15% of GDP by 2020 and has started to implement more strategic and comprehensive tax system reform on tax base and compliance[25]. This is for long-run, in medium-run, Indonesia has to increase up to 44 million of new taxpayers and it needs more tax officers for at least doubled from 37 thousand to 74 thousand. How about for the short-run? The answer is tax amnesty. It created USD 324 billion declarations, USD 96 billion government revenue and more than 3 million new Indonesian taxpayers. This was claimed as the biggest tax amnesty program in history (Keithley, 2017). Again, tax amnesty is not enough as it is only for short-run and once in a lifetime.

Near future challenge for Indonesia tax ratio is *digital economy*[26]. It has increased number of non-formal workers due to the disincentive to start the real-life business and more incentive to run virtual business utilizing social media. The latter supports 'peer to peer' transaction which beyond government ability to detect and collect the taxes. It can be inferred that if the government failed to anticipate this near future dynamic progress of e-commerce and financial technology, then Indonesia will be experiencing a declining tax revenue collection. Government needs to enlarge tax base and potential tax revenue form this digital era (Verico, 2018).

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[20]It is the right time for Indonesia to increase net travel income in trade in services account by intensifying and expanding foreign tourist's country of origin.

[21]Proven as follows: $Y_{it} = C_{it} + I_{it} + T_{it} + G_{it} + X_{it} - M_{it}$; $C_{it} = a + b.(Y_{it} - T_{it})$; $\mathbf{Y_{it}} = \frac{1}{(1-\mathbf{b})}.(\mathbf{G_{it}} - \mathbf{b}.\mathbf{T_{it}})$; $\frac{1}{(1-b)}$ is a multiplier, b is marginal propensity to consume (MPC).

[22]Originally, this measurement based on Mundell-Fleming of IS-LM model which shows that government budget deficit has a negative impact to the inflation rate and later on to interest rate. It potentially gives negative impact to the investment. This concept has been known as 'crowding-out effect'. Another concept is 'fiscal sustainability' that limiting the accumulated deficit to keep government budget stable. This measurement is also proportioned into the GDP known Public Debt to GDP. As illustrated follows $\frac{B_t}{Y_t} = (1+r).\frac{Y_{t-1}}{Y_t}.\frac{B_{t-1}}{Y_{t-1}}.\frac{(G_t - T_t)}{Y_t}$; $Bt$ = current debt; $r$ = interest rate of debt; $Yt$ = current GDP; $Gt$ = current government expenditure.

[23]Indonesia's fiscal balance and sustainability are basically safe, but in July–August 2017, they were become 'hot political issues' of which referring to Tempo Magazine (7–13 August 2017) these were driven by the members of opposition parties.

[24]Indonesia received some appreciations for her fiscal discipline achievement, and given other macroeconomic improvements afterward, H.E. Sri Mulyani granted an award as the Best Minister of Finance in the World at the World Summit in Dubai on February 11th 2018.

[25]The government has been working on the Automatic Exchange of Information (AEOI) with supported by the OECD that will be launched in September 2018. This system helps Indonesia to verify compliance rate of taxpayers including multinational cooperation. This is an example of more comprehensive and strategic policy than Tax Amnesty.

[26]Currently internet user in Indonesia around 52% of the population whose 13% experienced bought the online ticket and 12% did online groceries transaction (based on the survey of *Asosiasi Penyelenggara Jasa Internet Indonesia*). As for investment outlook, according to Google and A.T. Kearney investor survey, 2017 was for *e-commerce and travel* while 2018 is for *financial technology*.

## 2.5 Government Expenditure Multiplier

Indonesia's table IO analysis shows that the top ten percent of government multiplier is on the sector that related to public services of education, health, general and other public services. The Figure A10 (appendix) shows the gap between public service multiplier and non-public sector multiplier is rather high. Government service aimed for basic public services then Indonesia's Human Development Index[27] increases from 0.686 (2014) to 0.689 (2015), but the rank dropped from 110th (2014) to 113th (2015)[28]. Given this, the government main focus on human capital development is correct.

Other sectors that obtained high multiplier impact from government expenditure are health services of pharmaceutical products and education materials of paper products. Government expenditure also generates significant multiplier on trade other than car and motorcycle, land transportation, banking, and electricity. The latter needs to be more modernized, and the government showed serious commitment on the development of new power plant[29].

Besides, the government's grand vision on maritime is matching with Indonesia's geographical condition as archipelago country. In his first three years, under the Ministry of Maritime Affairs and Fisheries, government burned any fishing vessels that violate Indonesia's economic exclusive zone. This policy aims to protect the supply of fishes, but its method has received pros and cons globally. In 2018 under the Coordinating Minister of Maritime Affairs, Indonesia is starting to change the action form burning the vessels to utilize them locally[30].

## 2.6 Monetary Overview

Data shows, recently, the inflation rate has continuously decreased therefore Bank of Indonesia could decrease BI's interest rate. In October 2014, BI rate was 7.75% then reduction in February 2015 to 7.5%. Afterwards around six times, BI has decreased its rate in 2016 from 7.5% to 7.25% in January to 7% in February, 6.75% in March, 6.5% in June, 5.25% in August, 5% in September, 4.75% in October. In August 2016 BI changed its BI rate to BI-7 Day Repo Rate[31]. The latest 4.75% of BI-7 Day Repo Rate remained slightly longer for almost 9 months before BI reduced it to 4.5% in August and 4.25% in September 2017. The Figure A11 shows that BI interest rate follows inflation rate. If inflation rate decline then BI interest rate also declines. Decreasing trend of BI-7 Day Repo Rate is supposed to increase economic growth. However, the economic growth is only slightly increased from 4.88% in 2015 to 5.02% in 2016 and 5.1% in 2017. This pattern is similar to Indonesia's Non-Performing Loans (NPL) per total gross loans

which slightly increase from 2.1% (2014) to 2.4% (2015) and 2.9% (2016). The percentage of NPL increases because of two factors. First, low performance of the investment in the wholesale, shophouse and manufacturing sector due to the increase of online transaction and demand shift from goods to leisure consumption. Second, the uncertain global economy that influences commercial banks increases their Capital Adequacy Ratio (CAR) instead of allocates the investment.

Law, no 3/2004 in article 7 point 1, mentioned that the objective of BI is to assure Rupiah stability and article 10-point 1 letter A mentioned that monetary policy (i.e. interest rate) has to follow inflation rate targeting. Furthermore, empirically, the inflation rate is not necessarily the economic growth booster but the economic growth itself. This fact can be seen in the experiences of the emerging countries of China, India, Vietnam, the Philippines, Malaysia and Thailand and Indonesia before the AFC.

## 2.7 Uncovered Interest Parity

The Table A1 (appendix) shows that the highest undervalue Rupiah towards USD was in 2014 and 2015 of 87% and 88% respectively. This affected monetary policy of interest rate (BI rate) which was increased at 25 basis point from 7.5% (September 2014) to 7.75% (October 2014). Bank of Indonesia lowered it back to 7.5% in February 2015 and kept it until December 2015. The undervalue Rupiah which dropped from Rupiah per USD11,865 (2014) to Rupiah per USD13,389 (2015) turned to be slightly stronger at Rupiah per USD13,308 (2016) and stable until February 2018. This improvement does not correlate with the eight reform packages that released by the government from September 9th to December 21st, 2015 as at that time they were not yet 'ineffective'. Rupiah per USD was getting stronger at the end of 2015 simply because of the 'unchanged unemployment rate' of the USA at five percent. Capital outflowing which was preliminary expected to leave from emerging countries including Indonesia to the USA did not happen. It kept inflation rate to be low and stable.

Domestic real sector stability and global finance resilient of Indonesia have supported Indonesia's monetary sector stability. It shows that IS-LM equilibrium which represented by fiscal and monetary policy collaboration has been impeccably managed by both Government of Indonesia and Bank of Indonesia. On the other hand, since early of March 2018, Rupiah is under pressure as US macroeconomy of economic growth and inflation rate are increasing making the Fed plan to increase its rate. It has been stimulating capital flow back from the emerging countries to the US. Asia's derivative market including Indonesia's Rupiah per USD has been recently weakening.

## 2.8 Institutions Coordination

By regulation, for fiscal (IS) and monetary (LM) coordination has been regulated by Law No 3/2004 on Bank Indonesia (BI). The article 52-point 1 mentioned that Bank of Indonesia is government treasurer and point 2 said that it provides interest payment for government saving. Article 55 point 1 stated that before releasing government bonds, Ministry of Finance has to consult with Bank of Indonesia. It was designed to avoid the crowding-out effect of deficit

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[27]Details at https://countryeconomy.com/hdi/indonesia.

[28]Indonesia faces high incidence of communicable diseases and high infant mortality rate.

[29]The government had proposed 35 gigawatts of power in 2019 as the followed up of 10 gigawatts policy of in 2005.

[30]This new policy will generate another controversial issue as it seems Indonesia is interested in taking over the foreign vessels for its local fisheries.

[31]This 7-day repo rate is more practical and useful than BI rate as BI has to implement this rate directly in the financial market, for instance, BI uses this rate when selling government bonds (monetary contraction for increasing interest rate) or buying government bonds (monetary expansionary for decreasing interest rate).

fiscal to the interest rate hikes as well as to harmonize fiscal and monetary policy[32]. If by law, the government is not able to expand its deficit due to the limit of three percent of GDP then BI surely will provide monetary expansion.

As for banking and non-banking services supervision, the Law No 3/2004 article 34 point 1 stated that BI's primary task is to focus on monetary authority while for the bank and non-bank supervision is conducted by the Financial Service Authority (OJK). This article urged that OJK has to be established by December 31st, 2010 or 6 years after Law 3/2004 released. OJK was established in 2011 by Law No 21/2011 which officially took Minister of Finance's authority on supervising non-bank financial services of insurance, pension fund, non-bank financing institution and Capital Market Supervisory Agency and Financial Institution (BAPEPAM-LK) authority on monitoring stock market trading on December 31st, 2012. A year later on December 31st, 2013 OJK took over Bank of Indonesia's authority on supervising banks and finally microfinance institution in 2015. The establishment of OJK is dedicated to separate monetary authority (BI) and fiscal policymakers (MoF) to the supervision of the bank and non-bank.

Indonesia is still facing low ratio of banked population. Financial inclusion can help Indonesia to reduce its unbanked population ratio, increasing economic growth, income per capita and reducing inequality. As for supporting this financial inclusion, Indonesia's Central Bank (Bank Indonesia/BI) established *Layanan Keuangan Dijital* (LKD) for digital financial services and e-money in 2013 and Financial Services Authority (Otoritas Jasa Keuangan/OJK) established branchless banking named *Laku Pandai* (LP) in 2015. The latter is also utilized by the government to accurately transfer direct non-cash payment of Welfare Family Saving Program to the targeted beneficiaries. Study of the LPEM in 2017 found that main financial inclusion objective to reduce unbanked population ratio was still not optimal as the primary user of financial technology were those who had already have the bank account (Nuryakin et al., 2017).

Nowadays the most challenge for monetary and financial service authority collaboration including in Indonesia is virtual peer to peer financial transaction using virtual platform (blockchain) with non-central bank's medium of exchange (cryptocurrency) based on specific form (bitcoin). This virtual transaction can trap international exchange rate at risk as none of the monetary authority could supervise it. Bank of Indonesia in its press release on January 13th,2018 has banned cryptocurrency exchange in Indonesia as it can damage monetary system stability. However, it is too early to conclude the effectiveness of this regulation as bitcoin has been globally used under 'peer to peer' model.

## 3. Conclusion

The recent government smoothly made progress for Indonesia's macroeconomy started in late of 2016. Many related indicators showed positive in trend even though it starts un-

der some macroeconomic disadvantages both from global domestic factors. The decreasing of current account deficit proves that his administration has been able to improve productivity and international oriented market.

The government focuses on the campaign promises on increasing human capital quality, productivity and competitiveness in the global market, enhancing economic independence through local-driven-strategic sectors. The latter needs infrastructure development in all around Indonesia, not only in Java and Sumatera islands. Indonesia's increasing ICOR even with high FDI inflows and massive infrastructure funding outside main islands of Java and Sumatera indicated that the government is consistent with its long-term vision even this generates a lower impact on economic growth than that of being practical with the short-term vision. Furthermore, The NPL in wholesale, shophouse and manufacture slightly increases due to the increase in online transaction and demand shifting from goods to leisure-related services. In the banking sector, due to global economic uncertainty, capital adequacy ratio increases more than real investment allocation.

In this era, Indonesia recorded low inflation and interest rate. Given state budget is the deficit, this proved that 'crowding-out' effect did not happen. In February 2017, Indonesia has created 4 million workers yearly (IEQ World Bank, 2017). It revealed that 'Phillips Curve' which argued that employment creation needs high inflation rate (trade-off) also did not occur. The inflation rate was rather low, but unemployment declines from 6.18% in the last quarter of 2015 to 5.5% in the last quarter 2017. Economic growth that always higher than the inflation rate indicates that Indonesia's macroeconomy is going towards the 'golden rule' condition. In sum, since 2016, Indonesia recorded significant macroeconomic performance. Ministry of Finance's fiscal discipline and fiscal sustainability which awarded investment grade status that combined with persistent BI's financial inclusion, inflation targeting, financial technology empowerment and OJK's reliable supervision and its consumer protection have further enhanced Indonesia's macroeconomic performance. The coordination between government (MoF), monetary authority (BI) and financial supervisor (OJK) was robust that made Indonesia's monetary sector stable.

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[32]Theory shows that the annual budget deficit (ABD or fiscal side) significantly affects 'triangle relation' of inflation, exchange and interest rate (monetary side). Any distortion in ABD will impact investment grade, therefore, jeopardizes both the saving - investment gap and external balance deficit.

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## Appendix

**Table A1.** REER, Nominal Exchange Rate (Rupiah/USD), Real Exchange Rate (Rupiah/USD) and Nominal – Real Exchange Rate of Indonesia 2010–2017

| Year | REER | LCU per USD | | Nominal Undervalue Rupiah per USD |
|------|------|-------------|---|----------------------------------|
| | | Nominal Exchange Rate | Real Exchange Rate* | |
| 2010 | 100.00 | 9,09 | 9,09 | 0** |
| 2011 | 99.98 | 8,77 | 8,768 | 2 |
| 2012 | 96.25 | 9,387 | 9,035 | 352 |
| 2013 | 93.04 | 10,461 | 9,733 | 728 |
| 2014 | 87.05 | 11,865 | 10,329 | 1,536 |
| 2015 | 88.87 | 13,389 | 11,899 | 1,491 |
| 2016 | 92.51 | 13,308 | 12,312 | 997 |
| 2017 | 94.21 | 13,38 | 12,605 | 775 |

Note:*Calculated RER is based on data of https://fred.stlouisfed.org/series/RBIDBIS for REER and WDI of the World Bank for Nominal Exchange Rate, 2018
**Zero as constant price of 2010
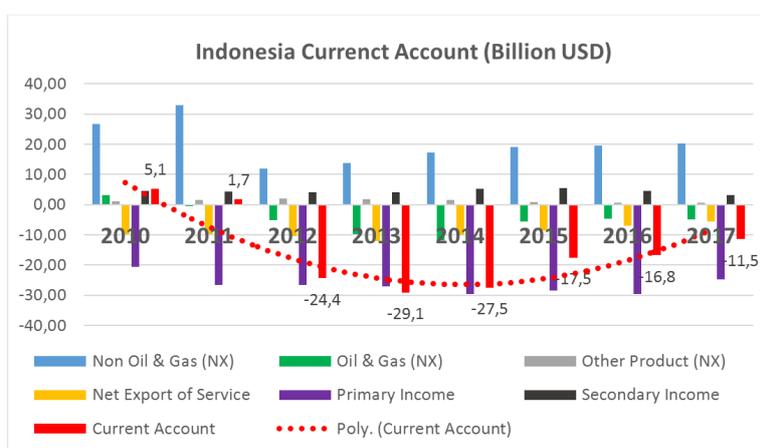


**Figure A1.** Indonesia's Current Account Balance 2010–2017
Source: Based on data of http://www.bi.go.id/sdds/, 2018
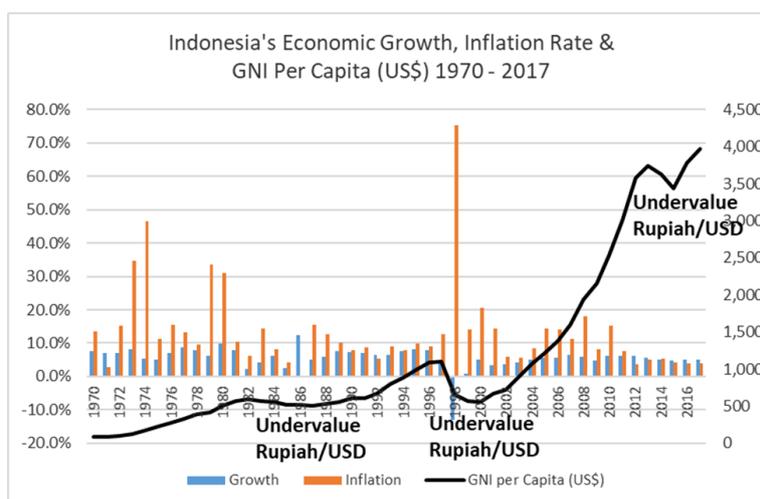


**Figure A2.** Indonesia's Economic Growth, Inflation Rate and GNI Per Capita 1970–2017
Source: Based on data of WDI of the World Bank, 2018
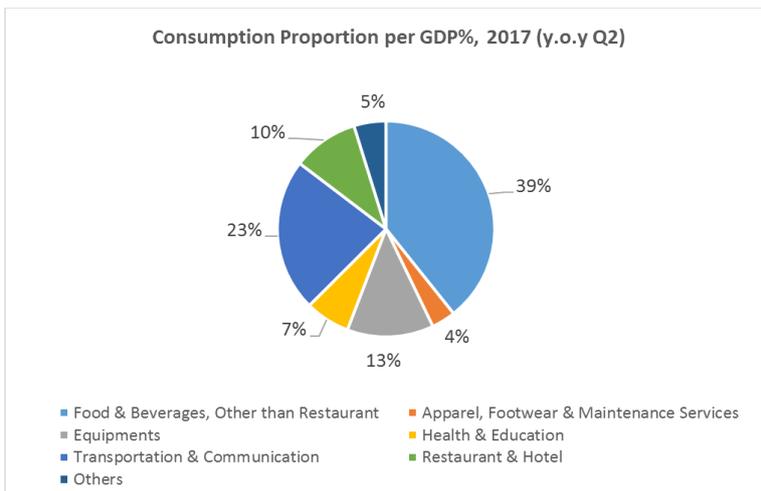
**Figure A3.** Indonesia's Consumption Proportion by Sub-Sector 2017
Source: Calculated based on data of CEIC, 2017
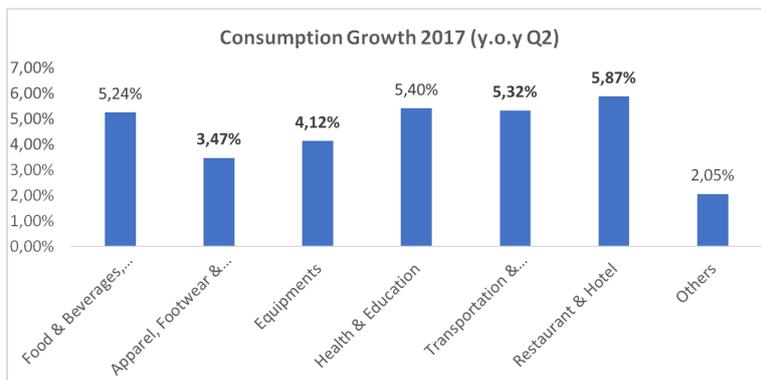


**Figure A4.** Indonesia's Consumption Growth by Sub-Sector 2017
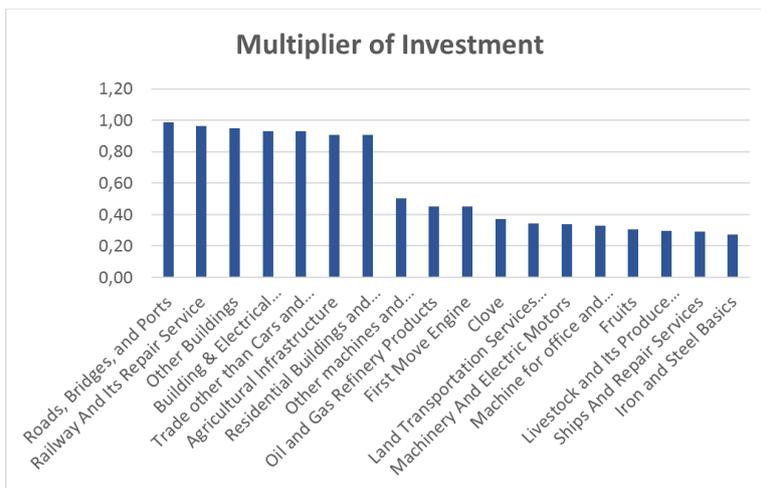Source: Calculated based on data of CEIC, 2017
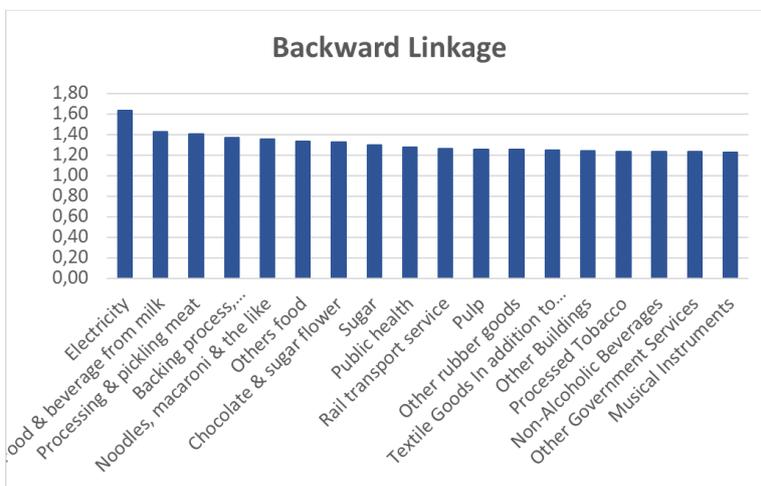


**Figure A5.** Indonesia's Backward Linkage
Input Output Table
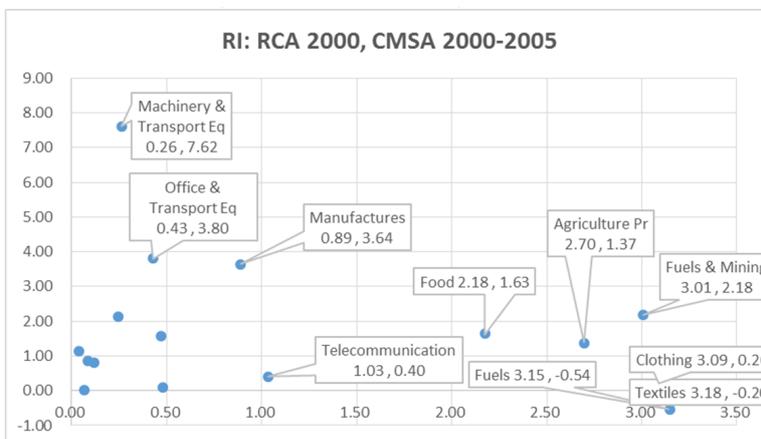Source: Calculated based on IO Table 2010 of BPS Indonesia
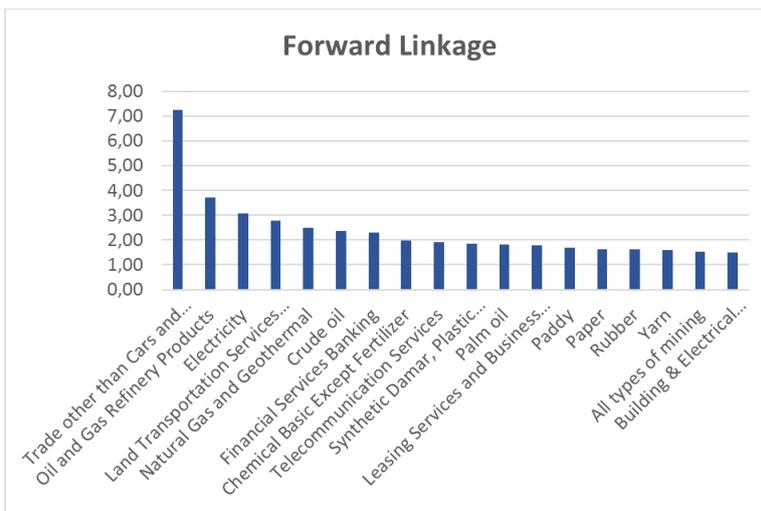
**Figure A6.** Indonesia's Forward Linkage
Input Output Table
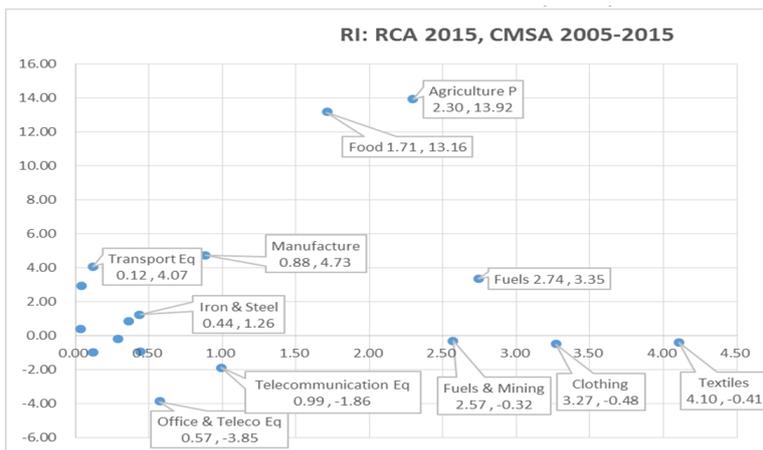Source: Calculated based on IO Table 2010 of BPS Indonesia



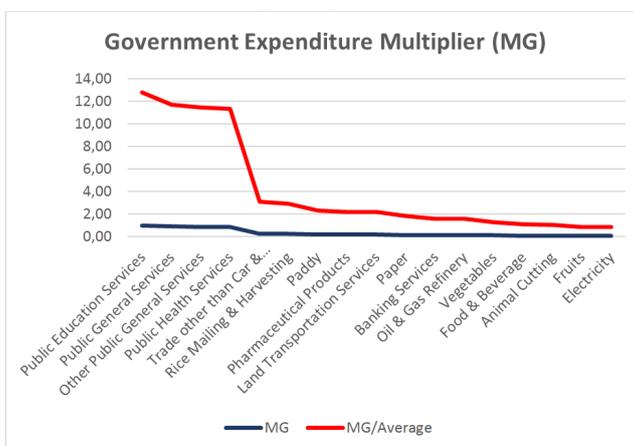**Figure A7.** Indonesia's Investment Multiplier
Input Output Table
Source: Calculated based on IO Table 2010 of BPS Indonesia



**Figure A8.** Indonesia's Comparative (RCA) and Competitive (CMSA) 2000–2005
Source: Calculated based on HS-1 Data of the WTO

**Figure A9.** Indonesia's Comparative (RCA) and Competitive (CMSA) 2005–2015
Source: Calculated based on HS-1 Data of the WTO

**Figure A10.** Indonesia's Government Expenditure Multiplier
Input Output Table
Source: Calculated based on IO Table 2010 of BPS Indonesia
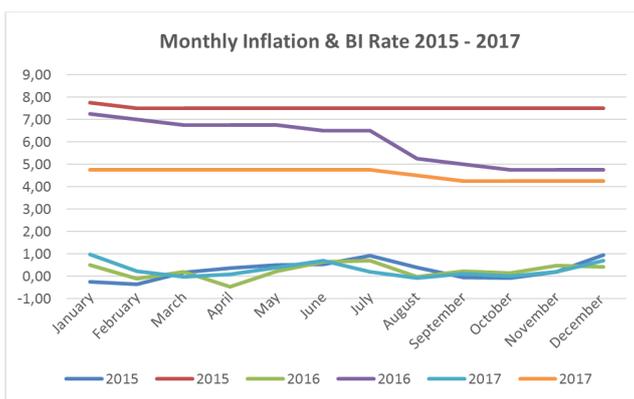
**Figure A11.** Monthly Inflation Rate and BI Rate 2015–2017
Source: Based on data of http://www.bi.go.id/sdds/, 2018
Note: Since August 2016, BI Rate has been changed into BI 7 Day-Repo Rate, calculation of inflation is m.o.m (month on month)