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Indonesia towards 2030 and beyond: A Long-Run International Trade Foresight

Kiki Verico¹

Abstract

One of the most important variables in the emerging economies like Indonesia is the stability of the exchange rate. Unstable exchange rates make it almost impossible for all business ventures to plan the business. The higher the depreciation of the Rupiah the higher the inflation rate and this will decrease people's purchasing power. In the balance of payments, the stability of the exchange rate and capital account are strongly influenced by the current account balance. A study found that in Indonesia, in the long run (Johansen Procedure) Indonesia current account balance affects the real exchange rate while in the short run (VECM) it affects the nominal exchange rate. The study also found that in the current account balance the one that affecting the exchange rate is the trade balance. Indonesia's trade balance relies on a surplus of trade in goods, especially agricultural products, petroleum and gas. The price of products in the primary sector is very vulnerable because of the volatility of primary products due to that of world's oil and gas price. Indonesia's current account balance is highly dependent on manufacturing product trade. Another study found that in real-world, manufacturing trade influences more the capital flows than vice versa. Therefore, in order to maintain a positive long-term economic growth and stable exchange rate, Indonesia must increase its trade competitiveness, especially in the manufacturing sector. This paper will explore the challenges and opportunities of international trade in Indonesia towards 2030 and afterwards.

Abstrak

Salah satu variabel paling penting dalam perekonomian emerging countries seperti Indonesia adalah kestabilan nilai tukar. Nilai tukar yang tidak stabil membuat hampir seluruh bisnis sulit merencanakan usaha dan pelemahan Rupiah yang besar akan meningkatkan inflasi yang menurunkan daya beli masyarakat. Di dalam neraca pembayaran, kestabilan nilai tukar dan neraca modal sangat dipengaruhi oleh neraca transaksi berjalan. Sebuah studi menemukan bahwa di Indonesia, dalam jangka panjang (Johansen Procedure), neraca transaksi berjalan mempengaruhi nilai tukar riil sementara dalam jangka pendek (VECM) neraca transaksi berjalan mempengaruhi nilai tukar nominal. Studi tersebut juga menemukan bahwa di dalam neraca transaksi berjalan yang mempengaruhi nilai tukar adalah neraca transaksi perdagangan. Neraca transaksi perdagangan Indonesia mengandalkan surplus dari perdagangan barang khususnya produk pertanian, minyak bumi dan gas. Harga produk di sektor primer sangat rentan karena tergantung fluktuasi harga minyak bumi sehingga pada dasarnya, neraca transaksi berjalan Indonesia sangat tergantung pada transaksi perdagangan produk manufaktur. Studi lain menemukan bahwa di dalam perdagangan manufaktur sektor riil lebih mempengaruhi arus modal ketimbang sebaliknya. Oleh karena itu untuk mempertahankan pertumbuhan ekonomi jangka panjang yang positif dan nilai tukar yang stabil maka Indonesia harus meningkatkan daya saing perdagangan khususnya di sektor manufaktur. Tulisan ini akan mengupas tentang tantangan dan peluang perdagangan internasional Indonesia menuju 2030 dan setelahnya.

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This paper consists of 4 Main Sections as shown below:

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1.2. New Calculation of Indonesia Economic Estimation

II. Challenges and Opportunities of International Trade in Indonesia 2030

2.1. Challenge of International Trade Indonesia

2.2. Indonesia International Trade Opportunity

III. Globalization and International Trade Strategy of Indonesia 2030

3.1. Development of Globalization and Records for Indonesia

3.2. Indonesia International Trade Strategy

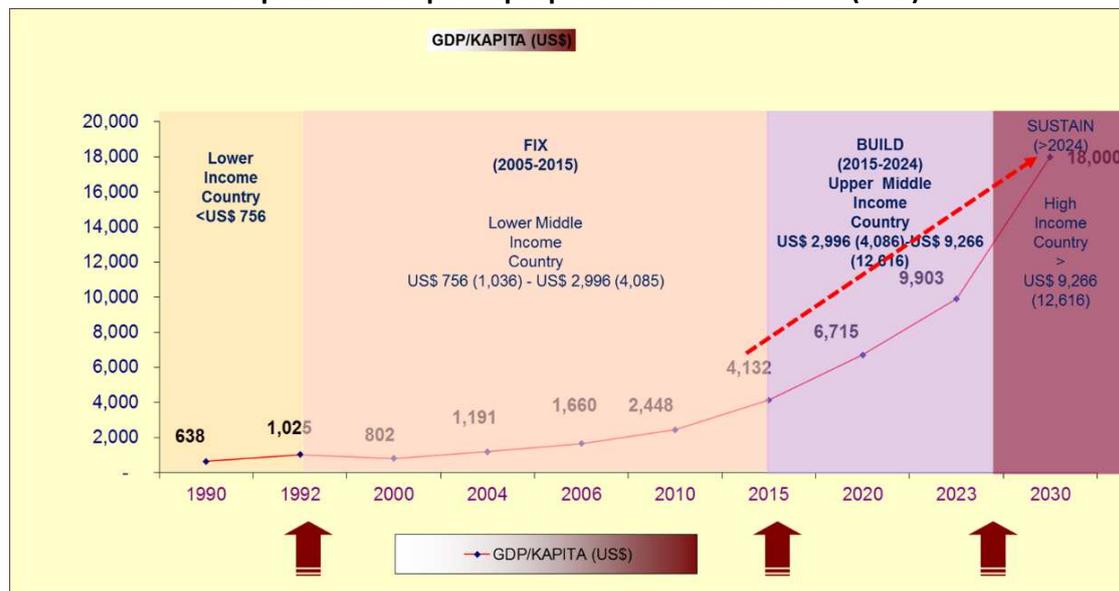
IV. Conclusion: The Asia Miracle and Hope Indonesia

I. Introduction: An Overview on Indonesia Economy 2030

1.1. Reviews on Previous Indonesia's 2030 Economic Estimation

In 2007, the Institute for Economic and Social Research (the LPEM FEB UI) upon request of Yayasan Indonesia Forum (YIF) had estimated the Indonesian economy of 2030. At that time, the author estimated that Indonesia could achieve USD 18 thousand per capita per annum. Referring to this number and income classification in 2030 around USD 15 thousand per capita per annum then Indonesia could be classified as a High Income Country (HIC). In order to achieve this level Indonesia needs to accelerate her economic growth with manufacture sector as its main source of growth towards the HIC developed country level². Estimation on Indonesia's income per capita (USD) of 2030 which had been estimated by the LPEM FEB UI in 2007 can be found in **Graph 1**.

Graph 1. Income per Capia per Year Indonesia 2030 (USD)



Source: Estimation of the LPEM FEB UI for YIF, 2007

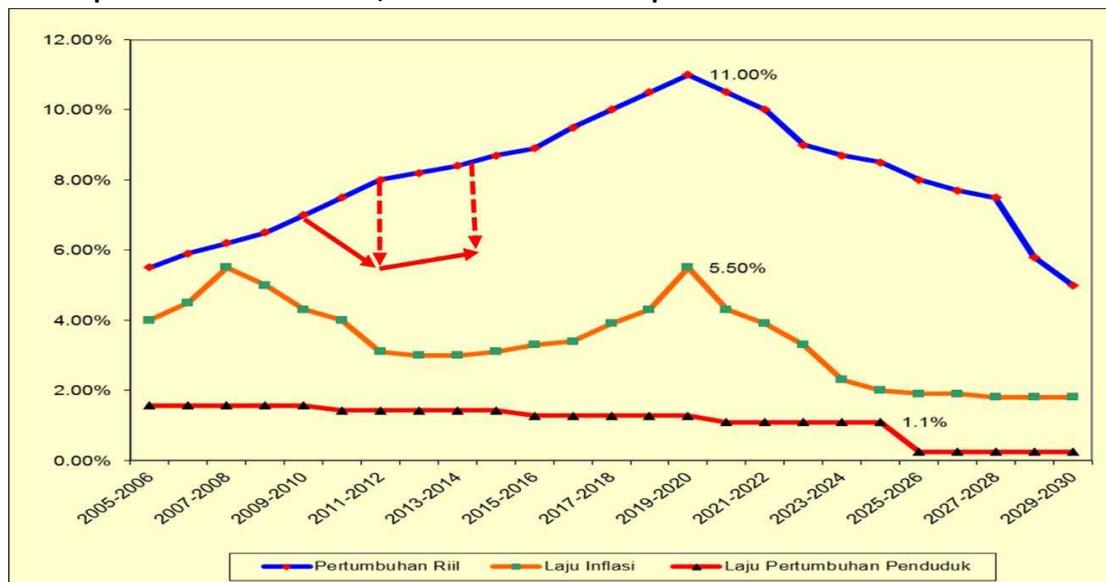
Interestingly this estimation was accurate until 2013 and less predicted income per capita of Indonesia in 2016 in the range of USD 4 thousand as real data shown Indonesia's income per capita around USD 3.900 per annum. The per capita income was below the 2007's estimation makes aiming USD 18 thousand per capita per annum getting farther from reality. According to the author's own calculation, Indonesia in 2030 will have per capita income between USD 9 thousand to USD 11 thousand. This means that Indonesia's per capita income of 2030 is unlikely to succeed entering the HIC group. In another words still in middle-income level in year 2030.

The basis of per capita income and economic growth has been lower than the 2007's estimation makes the projection of the Indonesian economy of 2030 should be revised downward. Indonesia can be expected to enter HIC by 2030 with per capita income of USD 15 thousand per capita per annum if she is able to grow on average 13% per year. This growth includes the depreciation of the rupiah per year of which the author estimated at about 0.8% per year and population growth of about 1.1% per year until 2030. This average expected growth is rather impossible to achieve. The 2007's estimation of

² The term developed is provided for countries capable of achieving HIC through industrialization. There are also many countries in the world that achieve HIC without industrialization like Brunei Darussalam, Kuwait, UAE, Saudi Arabia relying on natural resources, a service-dependent Singapore and an Australian relying on natural resources and services.

Indonesia's economic growth, inflation rate and population growth towards 2030 can be seen in Graph 2.

Graph 2. Economic Growth, Inflation Rate and Population Growth of Indonesia 2030



Source: Estimation of the LPEM FEB UI for YIF, 2007

*Pertumbuhan Riil: Economic Growth, Laju Inflasi: Inflation Rate, Laju Pertumbuhan Penduduk: Population Growth Rate

It is clear that the base had been decreased since 2010 whereas Indonesia's economic growth was expected to increase from 7% to 8% until 2012 and continue to increase to 9% in 2016. This estimation has totally not been achieved because in the end of the period of 2012 to year 2015, Indonesia's economy actually decreased due to sluggish global economy and falling prices of world oil that greatly affects the export prices of Indonesia's primary commodities. For the first time since 1969, Indonesia experienced a current account deficit that depressed the Rupiah exchange rate to be undervalued level that are vulnerable to be depreciated since the end of 2012. Therefore, Indonesia's long-term economic growth estimation should be revised as its calculation base declined as shown in the graph above.

Some basic indicators in economic balance $(S-I) + (T-G) = (X-M)$ reinforce the fact that the Indonesian economy have been declining in the period 2012-2015. In terms of Saving Investment Gap (S-I) author found indication of investment inefficiency which shown by the incremental capital output ratio (ICOR) increasing from 5.7 in 2010-2012 to 6.9 in 2013-2015 period. The LPEM's Survey for Monitoring of Investment Climate of Indonesia (MICI) of 2014-2015 found that some investment indicators had also declined. One of them is the process of establishing a new company which originally targeted within 3 days yet it turned out in the field around 11 days. The government has to see what happened on the ground, especially whenever the government issues new regulations. Without supervision in the field, any reforms and deregulations would end just a plan and will not carry benefits to the real business world.

In terms of external balance (X-M), it seems that Indonesia's current account balance experienced a deficit since Q1 2012 until Q4 of 2016. Psychologically, the current account deficit was worrying market players due to the pressure of undervalued Rupiah behind the deficit. This could make Rupiah reached the same highest level of depreciation of Rupiah per USD as it was in 1998 which is more than Rp 14 thousand per USD.

Decreasing investment efficiency (S-I) and external balance (X-M) gave pressure to the government budget deficit (T-G) and the public debt per GDP to increase. The data shows that the proportion of government budget deficit per GDP continued to fall from -1.9% (2012) to -2.53% (2015) and the proportion of public debt per GDP continued to increase from 22.96% (2012) to 27% (2015). Although still under the Maastricht Criteria (Stability & Growth Pact) of the proportion of government annual budget deficit of 3% per GDP and the proportion of public debt per GDP of 60% but the increasing balance of government budget is quite alarming therefore during this period hard for Indonesia to achieve 'investment grade' from investment rating agencies such as S & P, Fitch and Moody's. In 2016 the Indonesian economy started to show some significant improvements. The current account deficit have declined following the increasing of world's oil price that make Indonesia's export value which mostly primary products to increase. Fiscal discipline made for the first time since her reform era Indonesia obtained 'investment grade' from the S & P on May 19, 2017. The Ministry of Finance managed to keep the budget away from the rising annual budget deficit and public debt per GDP (T-G).

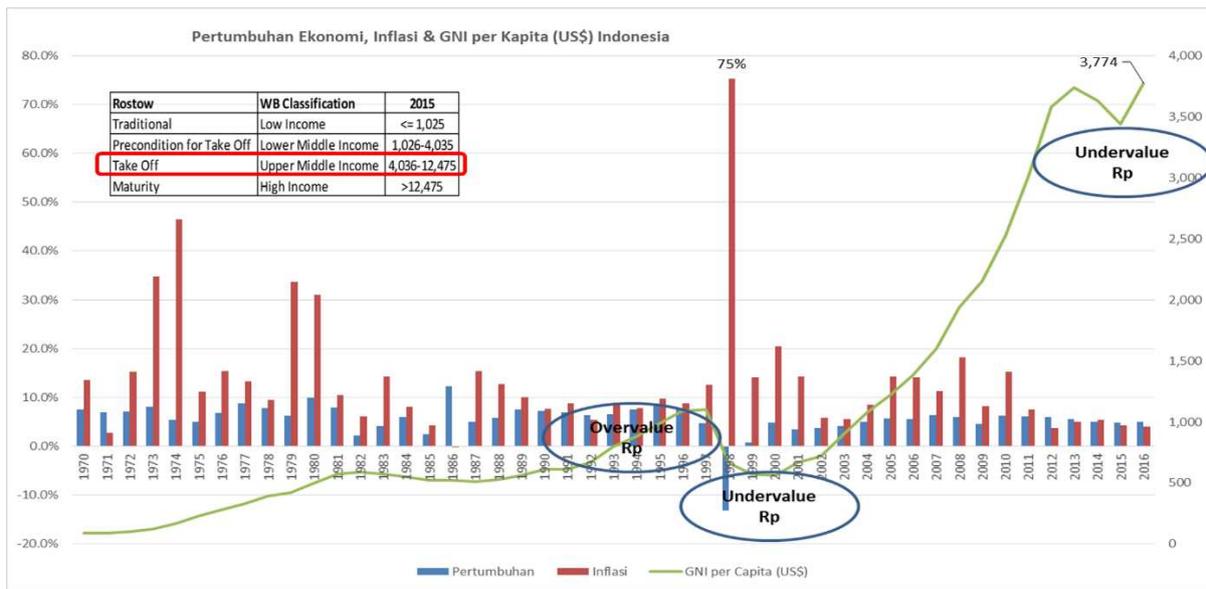
1.2. Newly Indonesia's 2030 Economic Estimation

After passing a tough period from 2013-2015 due to turmoil of global economic demand and declining global oil prices which impacted the decreasing of Indonesia's export prices, the Indonesian economy began to show improvement starting in 2016. In addition to these global factors, domestic factors namely the transition of government from President Susilo Bambang Yudhoyono to President Joko Widodo made this even hard since government paid more attention to politic rather than economic development.

Starting in 2016, Indonesia's economic indicators shown some improvements. Economic growth had increased from 4.79% (2015) to 5.02% (2016). The unemployment rate was dropped to about 7 million workforces, poverty and inequality have declined and the economic growth has been higher than the inflation rate of around 4% plus minus 1%. Even in March 2017, Indonesia experienced deflation due to the decreasing price in foodstuff. The higher economic growth completed by the higher the inflation rate indicates that the Indonesian economy becomes more productive.

From the external balance side, it also shown some improvements which made the current account deficit decreased in the last quarter of 2016. **Graph 3** shows that Indonesia's productivity is getting better because economic growth is higher than inflation rate. According to the Rostow stage, when Indonesia reaches USD 4 thousand per capita per annum then Indonesian economy is starting to take-off.

Graph 3. Economic Growth, Inflation Rate and Income per Capita (USD) Indonesia 1970-2016



Source: Author's Illustration based on data of WDI World Bank, 2017

Beside economic growth in local currency, the factor that determines per capita income in USD is the exchange rate. **Graph 3** shows that per capita income in USD falls every time the Rupiah experiences undervalued and depreciates significantly as seen in the period of 1997-2000 and 2013-2015. Given this any projection of per capita income in USD requires the estimation of local currency depreciation rate and population growth.

According to the LPEM calculations the estimated depreciation of the Rupiah up to 2030 is around 0.8% per annum with population growth about 1.1% per annum. If in 2030 Indonesia is expected to enter the category of high-income country with the respected criteria in the year 2030 then she needs to achieve USD 15 thousand per capita per annum by 2030. Given this the author estimated that Indonesia requires an average economic growth of 13% up to 2030. This estimation would be difficult or even almost impossible to achieve. The author then uses several scenarios of real economic growth in Rupiah between 7.9% -9.9% and estimated Indonesia's per capita income per annum in 2030 would be between USD 9 to 11.7 thousands instead of USD 18 thousands.

The author estimates until 2030 Indonesia still has not reached the category of high-income country. The author's estimated that Indonesia might be able to enter into high-income countries (with the scale at that time) in 2036 on condition of being able to record average real economic growth around 8.9%. But there is one challenge that can hamper this as Indonesia is expected to reach a peak in productive age worker in year 2030 with 53.1% of total population and then decreased starting in 2031. Indonesia will enter the so-called 'late dividend' from her demographic bonus starting in 2031 (Amaglobeli & Shi, 2016). Indonesia's dependency ratio is estimated to increase from 46.9% in 2030 to 47.3% in 2031. This means that if Indonesia wants to escape from the 'Middle Income Trap' and enter high-income country level by 2036 then there should be a big effort whereas one of them is productive age could be extended more than 65 years.

The prolonged age of productivity requires two conditions: one, the field and the production tools of work are increasingly user friendly so that senior citizens over the age of 65 can still work and two, the productivity of the working age population increases along with the increase in production technology. This increase requires a production and trade network in which Indonesia should be involved minimally in the regional economic network. Three encourage Micro Small Medium

Enterprises (SMEs) to generate foreign exchange in order to more global competition. Before describing the main factors of economic growth especially from the side of international trade the author will discuss the theory of growth advance as follows:

Diagram 1. Harrod Domar & Solow Growth Model

$$\begin{aligned}
 c \cdot \frac{\Delta K}{\Delta Y} &= \frac{I}{\Delta Y} = \frac{s \cdot Y}{\Delta Y} & \Delta K &= I - \partial k \\
 c \cdot \Delta Y &= s \cdot Y & \Delta K &= I - (\partial + n + g) \cdot k \\
 \frac{\Delta Y}{Y} &= \frac{s}{c} = \frac{s^*}{c} & \Delta K &= 0 \\
 & & I &= (\partial + n + g) \cdot k \\
 & & s^* \cdot Y &= (\partial + n + g) \cdot k \\
 & & g &= \frac{\Delta \epsilon}{\epsilon} \\
 & & & s^* \cdot \sqrt{k} = (\partial + n + g) \cdot k \\
 & & & s^* = (\partial + n + g) \cdot \sqrt{k} \\
 & & & Y = \sqrt{\frac{K}{l}} \\
 & & & Y = \sqrt{k}
 \end{aligned}$$

$$\frac{\Delta Y}{Y} - \left(\frac{\partial}{c} \cdot Y \right) = \frac{(n + g) \cdot \sqrt{k}}{c} = \frac{(n + g) \cdot \sqrt{K1/l}}{c} = \frac{(n + g) \cdot \sqrt{K2/L}}{c}$$

Source: Author's modified formula based on ICOR & Solow Growth, 2017

By combining Harrod-Domar and Solow Growth equations as shown above, the main factors of economic growth are population (n), human productivity (g), institutional reform (c) and natural sustainability (y). The Indonesian population as the government estimates will experience a decline in the number of productive ages by 2030 while institutional reform and natural sustainability are beyond the scope of this paper. This paper will focus on human productivity in terms of global competitiveness, especially trade.

II. Challenges and Opportunities Indonesia's International Trade

2.1. Indonesia International Trade: Challenges

Basic competitiveness trade theory is rooted to the comparative of worker productivity both in absolute and comparative advantage. Productivity has been indicated based on marginal productivity of labor (MPL). This paper proposes two basic indicators of worker's productivity: Revealed Comparative Advantage (RCA) dan Constant Market Share Analysis (CMSA)³.

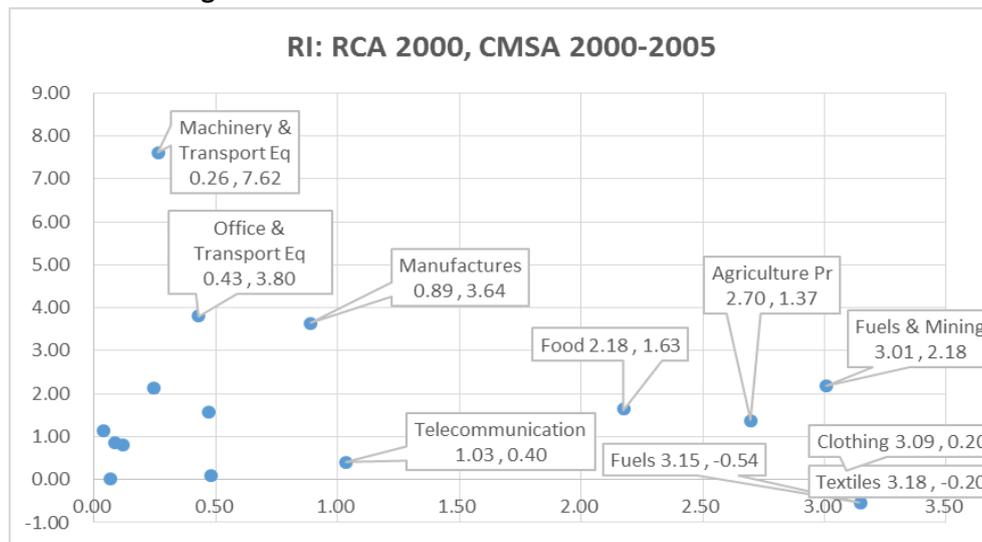
³ The combination of RCA and CMSA is useful to identify the competitive product and combination of RCA and NX is useful to find the comparative advantage product (Salvatore, International Economics, 2004). The indexes are described as follows:

Revealed Comparative Advantage (RCA):

$$RCA_{ijt_x} = \frac{X_{ij_{tx}} / X_{j_{tx}}}{X_{iw_{tx}} / X_{w_{tx}}}$$

RCA shows the relative productivity of a country in a static pattern while CMSA sees it in a dynamic pattern. The results of RCA and CMSA calculations by comparing data between 2000 and 2015 for RCA, 2000-2005 and 2005-2015 for CMSA, as shown in **Diagram 2** and **Diagram 3**, show that Indonesia is still superior to primary products such as agriculture, oil and gas and industrial products of food and beverage. While labor-intensive industries such as textiles, clothing and footwear that have been the mainstay of Indonesia begun to show a decline in competitiveness. Authors' calculations using OECD indicators for global value added networks, especially on backward linkage calculations, show that Indonesia is superior to the food and beverage industry. Indonesia's long-term foreign investment (FDI Inflows) data by sector also shows that the food and beverage industry is a national flagship industry. The LPEM's creative economy survey of 2016 also shows that Indonesia's majority creative industry (45%) is the food and beverage industry.

Diagram 2. RCA 2000 and CMSA of Indonesia 2000-2005



Source: Author's calculation and illustration with data HS-1 WTO, 2017

Variables: X_{ijt} = Value of Export of commodity i in country j at t time; X_{jt} = Total value of Export in country j at t time; X_{iwt} = Value of Export of commodity i in the world (W) at t time; X_{wt} = Total value of Export in the World (W) at t time;

Constant Market Share Analysis (CMSA):

$$X_{ijwt1} - X_{ijwt0} = \sum m_{iwt\Delta t} \cdot X_{ijwt0} + (m_{iwt\Delta t} - \sum m_{iwt\Delta t}) \cdot X_{ijwt0} + (X_{ijwt1} - X_{ijwt0} - m_{iwt\Delta t} \cdot X_{ijwt0})$$

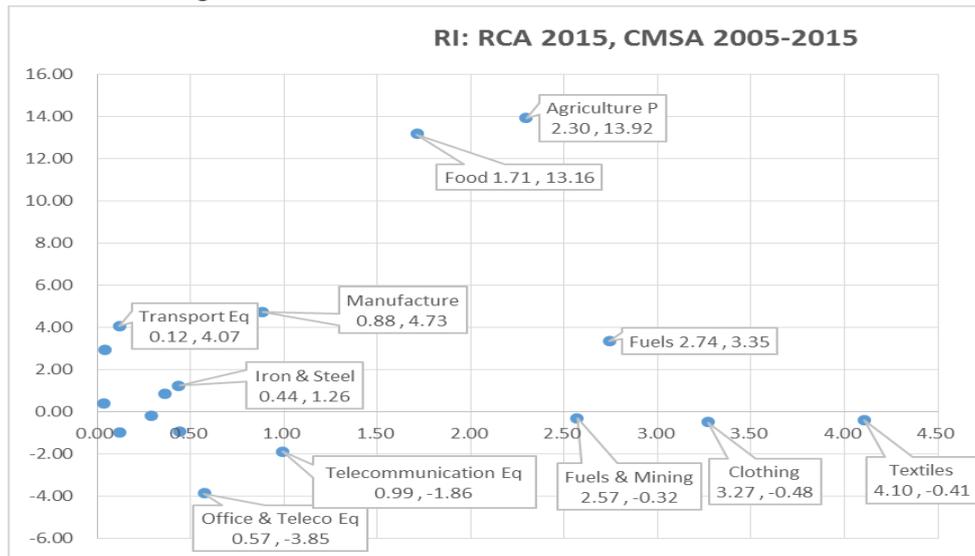
General Factor: $\sum m_{iwt\Delta t} \cdot X_{ijwt0}$; Composition Factor: $(m_{iwt\Delta t} - \sum m_{iwt\Delta t}) \cdot X_{ijwt0}$; Comparative Factor :

$(X_{ijwt1} - X_{ijwt0} - m_{iwt\Delta t} \cdot X_{ijwt0})$; Variables: X_{ijwt0} = Value of Export of commodity i in country j to world at t_0 time; X_{ijwt1} = Value of Export of commodity i in country j to world at t_1 time; $\sum m_{iwt\Delta t}$ = changing in total world import; $m_{iwt\Delta t}$ = changing in world import on commodity i .

The combination of RCA and CMSA will reveal the competitive product. The most competitive product is the product with a high RCA and positive CMSA comparative index.

The product is classified as 'Great' if it has RCA more than 1 (one) and Sector Comparative Factor more than 0 (zero), 'Challenging' if it has RCA more than 1 (one) and Sector Comparative Factor less than 0 (zero), 'Potential' if it has RCA less than 1 (one) and Sector Comparative Factor more than 0 (zero) and 'None' if it has RCA less than 1 (one) and Sector Comparative Factor less than 0 (zero).

Diagram 3. RCA 2015 dan CMSA of Indonesia 2005-2015



Source: Author's calculation and illustration with data HS-1 WTO, 2017

Although RCA products are higher than 1 but their CMSA of comparative is negative. Sooner or later RCA of Indonesia in textile, apparel and footwear industries will be smaller than 1 in year aheads. This means that the industry will soon enter the sunset period. Indonesia still relies on export value of 19% SITC-5 products while 81% of them are problematic of which 21% depends on world oil price and 25% faces marketing constraints and 35% less competitive in global market.

2.2. Indonesia International Trade: Opportunities

Although the proportion of manufacturing industry value added to national GDP continues to decline from 27.7% in 2000 to 20.8% in 2015 and net non-oil manufacturing exports Indonesia deficit in 2012-2014 but absorption of workers rose from 12.2% in 2008 To 15.7% in 2015. This means that the manufacturing industry has the opportunity to grow, but its market orientation needs to be shifted from local to global market targets. Foreign investment (FDI Inflows) in Indonesian manufacturing should be encouraged to produce exports therefore the balance of services in Indonesia's current account is not always a deficit due to net outflows from investment income and remittance from FDI Inflows.

Indonesia's competitiveness should immediately shift to products that enter the minimum which is ASEAN's production network such as electric machine and transportation industry other than rail. Non-oil export value of agricultural products which is the backbone of Indonesia's current account balance relies heavily on oil and gas prices. Fluctuating oil and gas prices make national export competitiveness is unstable while food and beverage manufacturing industries are unable to cover the current account deficit. This means that Indonesia needs to improve the competitiveness of the products therefore could enter the large production network in Southeast Asia region. They are electric machines, vehicles except trains, plastics and photography and film equipment. Indonesia has technically entered the Southeast Asian network yet still limited on primary products such as palm oil with oil and rubber with tires.

Indonesia's opportunity to enter the regional network for non-food and beverage products is still very open as she is the largest intra-ASEAN investment recipient. The major recipient investor in Southeast Asia is manufacture after financial sector. In addition, Indonesia is already in a cross-industry trade network in Southeast Asia with Singapore, Malaysia and Thailand. For the extra trade and investment

with intra-trade and investment, there is a mutually beneficial relationship between Singapore as the largest recipient of investment from outside the region with Indonesia as the largest recipient of regional investment. In terms of food and beverage industry development which were based on RCA and CMSA calculation, Indonesia needs to follow the Southeast Asian countries to enter even in the world network as what Thailand did. Thailand investment in restaurants, processed spices and formal employment has provided Thai people with power to achieve developed and HIC country. Indonesian culinary of MSEs should be sold like the Thai food and beverage.

A simultaneous effort by the government is needed for Indonesian exporters of both large and medium-sized enterprises to compete in the global market. Taiwan is an example of the success of MSMEs in the global network. Indonesia can imitate this primarily because the potential for future foreign exchange rely more on local SMEs oriented global market. Other opportunities come from China. The April 2017 IMF report shows that China's economic growth will drop from 6.6% in 2017 to 6.2% by 2018.

Author's previous study shown that economic relationship between China and Indonesia is more to substitution rather than complementary as what this study found between China and Malaysia, Thailand and Singapore⁴. This meant that if China's economic growth is predicted to decline then Indonesia's trade balance and economic growth would be the opposite, increased. Therefore Indonesia's is expected to gain positive spill-over effect form China's slowing down economic growth. The spill-over could be both the investment diversion from China's FDI home countries and Chinese's FDI investor who invested in Indonesia.

⁴ Verico, K (2017). Are the Benefits from ASEAN Integration Sustainable? *Asian Economic Papers*, MIT Press Journal, *Under Review*

obtaining long-term investment (FDI) from them. Conversely, if the bilateral countries have a lower income per capital than Indonesia then Indonesia should benefit from their bilateral trade relations.

Another very important form of cooperation that should not be weakened is regional plus cooperation. The author's study shows that regional plus cooperation such as ASEAN Plus is the most effective cooperation in increasing both the foreign trade and investment in Indonesia. There are two reasons, first because the economic cooperation of the region has entered the stage of economic community known as the ASEAN Economic Community (AEC) of which its main objective is to increase intra regional investment and value-added network. At this stage, regional cooperation has completed trade and investment cooperation. This is a big opportunity for Indonesia as the largest intra-investment recipient member state. Regional plus cooperation is the most appropriate framework for ASEAN as the concept of ASEAN cooperation itself is soft and open regionalism.

The stronger the regional cooperation network plus the greater benefit for the member states, especially for a member with big size economic measurements of both the GDP and population like Indonesia. With this concept, Indonesia as the chair of mega regional cooperation of the Regional Comprehensive Economic Partnership (RCEP: ASEAN + China, Japan, South Korea, India, Australia and New Zealand) should play more intense role therefore the RCEP as one of the largest mega economic cooperation in the world could enhance mutual benefit for all its member states including Indonesia.

3.2. Indonesia's International Trade Strategy Towards 2030

One of the most important variables to keep Indonesia's per capita income achieve its target (in USD) by 2030 is the stability of the exchange rate. International trade is the key factor for exchange rate stability, at least because of two reasons. One, the position of undervalue of the exchange rate is influenced by the current account deficit. Study of Kurniawati and Verico 2017 found that for Indonesia, the current account has long-term relationship (Johansen Procedure) with the real exchange rate of Rupiah and affected it according to the Granger Causality. This means that to maintain long-term exchange rate stability Indonesia needs to improve her trade competitiveness.

Two, the competitiveness in international trade has an effect on the expectation of the capital flows in capital account. Study of Prabowosunu and Verico 2017 proved that the real sector performance (GDP) of the manufacturing sector is more affecting the movement of equity derivative investments from the capital account than the opposite. This means that if the competitiveness of the real manufacturing sector in competing and generate foreign exchange increases then Indonesia's trade balance will increase. An increase in the trade surplus will increase the current account surplus. The current account surplus will stimulate the positive expectation on the capital account therefore it eventually stabilize the Rupiah's exchange rate. The stability of the Rupiah against the USD is very important in supporting the business plans and real sector stability in general.

Both export and domestic oriented firms need stable exchange rate because not all machinery, production inputs and raw materials are being produced in Indonesia. Various inputs even for domestic market-oriented firms are imported from abroad and very sensitive to the Rupiah depreciation as import become so expensive while the revenue is in Rupiah since it comes from the domestic market customers. Therefore, it can be said that in the end the competitiveness of Indonesia's international trade not only affects the ability to generate foreign exchange but maintains the stabilization of the exchange rate. Both are important in aiming the high target of 2030's per capita income which is in USD.

Previous study found that trade cooperation benefits were various within Southeast Asian countries. This study found that for Singapore and Malaysia bilateral agreement were the most fit strategy, Thailand benefited more from regional plus cooperation, the Philippines benefited more from AFTA,

while for Indonesia the most important was not trade agreement but productivity (Verico, K., *The Future of the ASEAN Economic Integration*, 2017). Worker productivity is important for Indonesia to accelerate because of two reasons: One, the government making policies that support the economy has to implement good governance and keep fiscal sustainability including stable fiscal deficit with solid integrity of the institutions of clean government. Second, human productivity in general in the field of international trade. Currently the government performance is getting better as Indonesia's rank increased from 2016-2017 after the turmoil from 2013-2015. Indonesia has improved ease of doing business indicator where Indonesia ranked better from 109 (2015) to 91 (2017) and earned investment grade from S & P and stable from Fitch. In terms of productivity of human resources from 2016-2017 Indonesia has slightly better in rank of the Global Competitiveness Index from 48 to 41 however still lower rank of Human Development Index from 110 to 113.

In relation to human productivity in terms of international trade competitiveness, there are at least two related fundamental issues and must be correctly done in order to be able to achieve the target of 2030. First Indonesia needs to excel in products that already in regional value-added network of electronic, machinery, transportation other than rail and chemical industry. Second, to support Indonesia's MSMEs (Micro and Small Medium Enterprises) to export their products⁶.

Both the entering regional value chain and making MSMEs to export things needs fundamental improvement in the quality of human resources because joining the network and excelling in overseas markets are impossible without high competitiveness and productivity of human resources. The absorption and improvement of knowledge and expertise needs optimal utilization of the information and communication technology. This knowledge based economy is the major platform for the future of Indonesian manufacturing trade competitiveness. The world has entered an era that is not merely flows of goods, long-run investment, and derivative capital and people but also flows of knowledge and ideas. Production shifted from large company-based with enormous organizational structures in particular headquarter to start-up companies with efficient, effective and mobile organizational structures across countries. The decline in communication, transportation and logistics cost makes countries to compete in a more dynamic situation therefore quick adaptability is the key success factor for the successful development of Indonesia's international industry and trade. In 2030 Indonesia is expected to be closer to the category of high-income industrial countries (developed HCI) and Indonesia needs to have quick and appropriate adjustment to the global changing and challenging.

IV. Conclusion: *The Asia Miracle* and Indonesia's Hopes

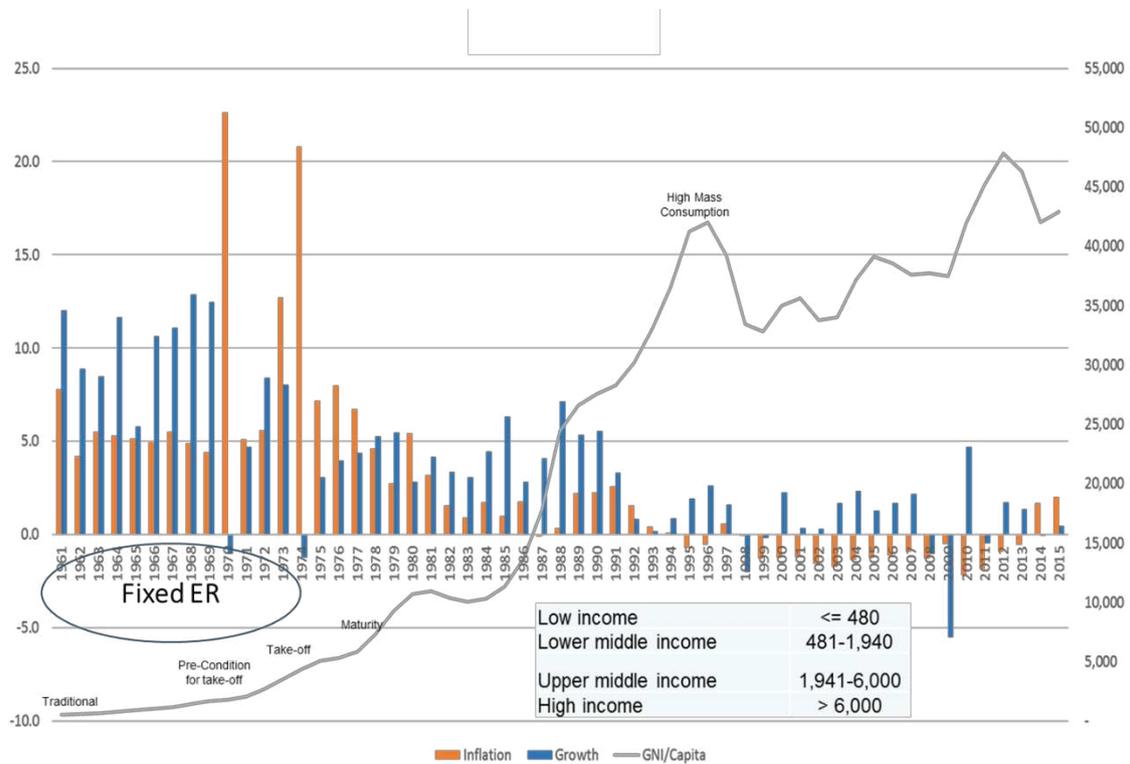
Japan and Korea are the best examples of the so called Asian Miracle because both can achieve high income level throughout industrialization and become developed high income country without being trapped in Middle Income Level. By incorporating the concept of Rostow's classification (Traditional, Pre-Condition for Take Off, Take Off, Maturity & High Mass Consumption) and the concept of state income classification (LMIC, Upper Middle Income Country / LMIC, UMIC, High Income Country / HIC) based on World Bank standards⁷ it can be seen that through industrialization, Japan only takes 17

⁶ Study of Revindo (2017) shows that some of the characteristics of MSMEs that are able to export are: owners have worked or lived abroad, have received at least one central government aid such as promotion, business management, finance or production, receive technical assistance from non-formal sources such as family and non-government associations, State-owned enterprises and universities, have small export constraints (logistics, export procedures, business competition), provincial-level business reach and national superior products.

⁷ USD/kapita/tahun: 1987-1989: USD 6.000; 1990: USD 7.620; 1991: USD 7.910; 1992: USD 8.355; 1993: USD 8.625; 1994: USD 8.955; 1995: USD 9.385; 1996: USD 9.645; 1997: USD 9.655; 1998: USD 9.360; 1999-2000: USD 9.265; 2001: USD 9.205; 2002: USD 9.075; 2003: USD 9.385; 2004: USD 10.065; 2005: USD 10.725; 2006: USD 11.115; 2007: USD 11.455; 2008: USD 11.905; 2009: USD 12.195; 2010: USD 12.275; 2011: USD 12.475; 2012: USD 12.615; 2013-2015: USD 12.475

years (1961-1978) to rise from traditional or Developing LIC to Developed HIC and escape from the Middle Income Trap (MIT). As seen in the following graph:

Graph 4. Economic Growth, Inflation Rate and GNI per Capita per Year (USD) Japan



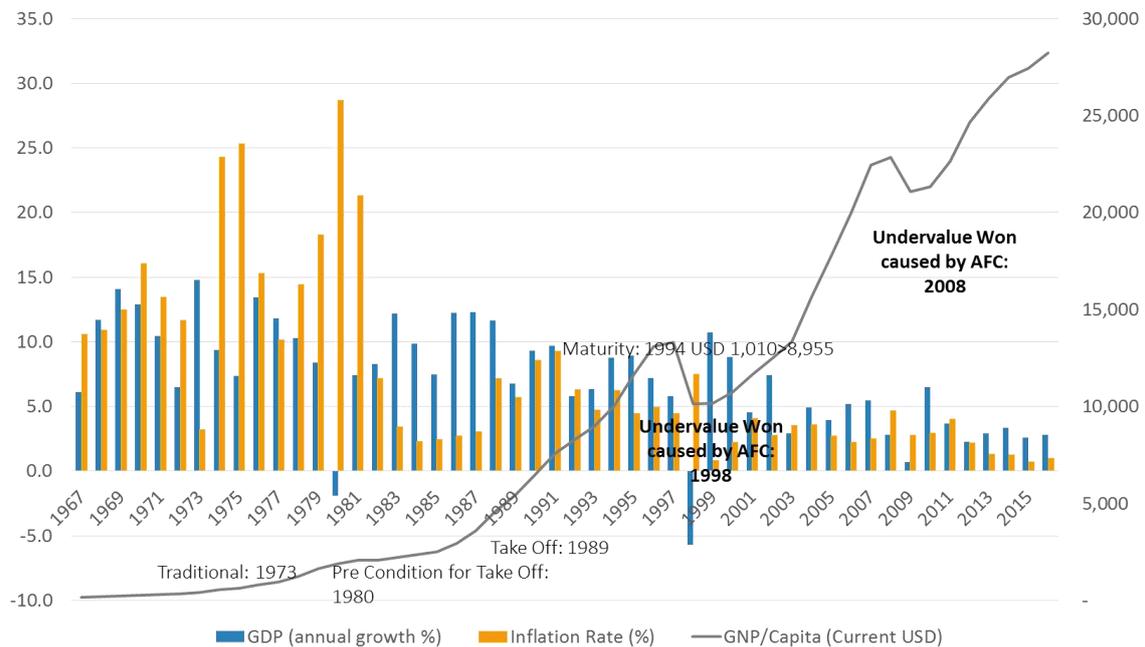
Source: Author's Illustration based on WDI-WB Dataset, 2017

The achievement of post-World War II industrialization of Japan achieved very satisfactory results in the period 1960-1969 and the period 1981-1991 in which the average rate of economic growth was far above the rate of inflation. In 1970 to 1980 Japan's average inflation rate is above its economic growth and in 1991 afterwards Japan has to deal with deflation.⁸ Japan's rapid economic growth rate in the period 1960-1970 benefited because the world's exchange rate against the USD is fixed as this was in the era of the Bretton Woods. Period of fixed exchange rate of USD made business people could have good and certain business plan. Beyond of the fixed exchange rate regime (period before 1972), Asia still has industrialization miracle phenomena. First, the Japanese economy continued to grow well and higher than the rate of inflation in the 1980s and second, the emerging of South Korean economy.

Based on the combined classification of Rostow and the World Bank, the authors found that South Korean industrialization made South Korea managed to rise from developing LIC or traditional to developed HIC within 21 years (1973-1994). In time utilisation wise, South Korea is slightly slower than that of Japan but South Korea achievement as seen in the graph below, remains remarkable example for developing countries including Indonesia.

⁸Theoretically, there is an endogenous relationship between economic growth and inflation rate. Real economic growth (changes in output or Q) generates inflation (expectations of price increases) while normal inflation rates provide positive expectations in the business world. When the economy grows but in the deflationary position it can be said that growth is not at the optimum point and will decrease in the next period (t + 1).

Grafik 5. Economic Growth, Inflation Rate and GNI per Capita per Year (USD) Japan



Source: Author's Illustration based on WDI-WB Dataset, 2017

Indonesia for approximately 50 years (1967-2017) is still moving from LIC Developing to Take Off and with optimistic scenario the fastest estimation will achieve Developed HIC in 2037. If this achievement is successful then Indonesia takes approximately 70 years to rise from Traditional or Developing LIC into Maturity or Developed HIC. Indonesia needs longer time and may not be succeed and being trapped in a middle income country level and never entered the developed high income country if she lost resources and economic power which creates economic growth run faster than inflation rate. To avoid these traps, as the author mention in the beginning of this paper, Indonesia's economic growth must be sourced from the manufacturing industry with human productivity-driven machinery and joining at least the regional value chain network in Southeast Asia as well as creating the export-oriented MSEs.

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