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**South-South Integration and the SDGs:  
Enhancing Structural Transformation in Key Partner  
Countries of the Belt and Road Initiative**

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# Indonesia's Macroeconomic and Finance Policy Framework for Structural Transformation

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## Abstract

During the period following the economic crisis of 1998, the Indonesian economy was not able to grow above the average level of the end of the Suharto presidency. The challenge of realising economic prosperity in the future depends on Indonesia's ability to produce high and stable growth so that it can become a developed country, avoiding the middle-income trap. Therefore, Indonesia needs to transform its economic activities towards activities that are more productive and with high added value.

From the macroeconomic and financial side, there are many ways to carry out economic transformation in a country. China is one country from which lessons can be learned for this economic transformation. China's achievement of high economic growth over four decades is clear evidence that Indonesia also needs to learn from China.

This paper tries to explore the basic elements of macroeconomics and finance that are key to the transformation of China's economy and may provide lessons for Indonesia's future economic transformation. From the analysis of various studies and comparison of policy strategies between the two countries, it is concluded that Indonesia needs to focus on fixing four critical elements for its successful economic transformation, namely: 1) promoting economic competitiveness focussing on aspects of infrastructure, human resources, technology, and institutions; 2) boosting capacity and capability of the industry; 3) optimising the rapid growth of the digital economy; 4) increasing the deepening of the financial sector for sources of financing.

**Key words:** Indonesia; macroeconomic management; structural transformation; China



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## 1. Background

Indonesia is trying hard to escape from the middle-income trap by focusing on structural reforms. This effort is reflected in Indonesia's vision for 2045. Economic growth is projected to rise by 5.7% per year by carrying out structural reforms, taking full advantage of technological advance and increasing economic competitiveness.<sup>1</sup> With an average growth target of 5.7% per year, Indonesia is targeting to become a high-income country by 2036 and the world's fifth-largest economy by 2045. This high growth would gradually increase the middle-income class to about 70% of Indonesia's population by 2045 (Bappenas, 2019).

The vision of Indonesia's economic achievements at a macro level over the next 25 years will influence various economic development strategies. The ability to achieve high economic growth remains widely open to the Indonesian economy, but this strategy involves structural reforms that should be implemented in a disciplined and sustainable way.<sup>2</sup> Over the course of 29 years (1986-2015), Indonesia's average economic growth was just 5.1%. This means that further effort is required to achieve an average growth rate of 5.7% per year as targeted by the Indonesian government in its 2045 vision (Table 1).

**Table 1: Economic Growth Scenario in Indonesia's Vision 2045**

1986 - 2015	Indicators	Scenario 2016 – 2045**	
		Basic	High
5.1	Economic Growth (%)	5.1	5.7
16	World GDP Ranking*	7	5
3'378	GDP per Capita (USD)*	19'794	23'199
Year of acceding to high-income country status		2038	2036
32.8	Contribution of Investment*	33.1	38.1
21.1	Contribution of Industry*	22.5	26
13.5	Contribution of Agriculture*	7.8	7.4

Source: *The Ministry of National Development Planning/National Development Planning Agency (Bappenas), 2019.*

Notes:

\*end of the period, percentage of GDP.

\*\*Basic: Low global economic growth and structural reforms are running as business as usual.

High: Structural reforms go as expected and relatively high global economic growth.

After the 1998 economic crisis, relatively lower economic growth than that of the pre-crisis period became one of the significant problems for the current Indonesian economy.<sup>3</sup> The post-crisis economic growth has also shown a declining trend, especially after the commodity boom (2010-2012). During the commodity boom period,

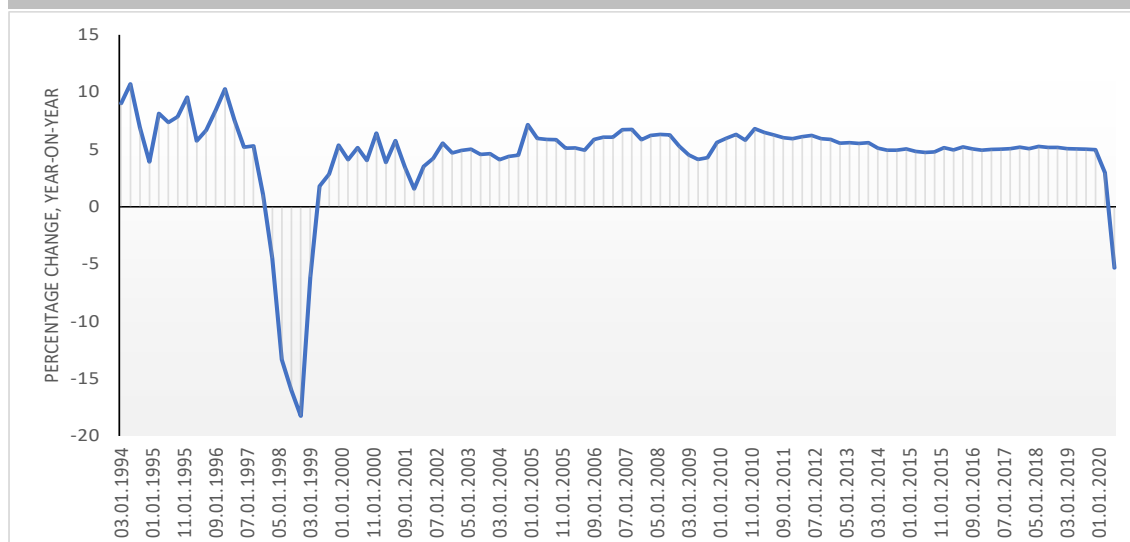
<sup>1</sup> Indonesia's Vision 2045 is a government's long-term development planning roadmap document that describes the 100th anniversary of Indonesia's independence.

<sup>2</sup> Basri and Putra (2016) estimated that the opportunity for Indonesian economy to be trapped in low-income is 80%, and middle-income trap is 16%. For becoming a high-income country, the chance is small, which is 3%. This estimation is based on Indonesian economic conditions, which tends to be closed when measured by the role of exports of goods to GDP in terms of a purchasing power parity.

<sup>3</sup> In general, planned economic development in Indonesia began in the New Order Era (1966-1998) with Soeharto as President, then – after the 1998 Asian Financial Crisis – changed to the Reform Era (1998-present).

the average of Indonesia's economic growth was 6.4% per year, but it only lasted about three years. After the commodity boom period ended, Indonesia's economic growth averaged only 4.69% per year (2013-2020 Q2), with a gradual downward trend (Figure 1).

**Figure 1: Indonesia: Economic growth, 1994–2020**



Source: CEIC, 2020.

The accomplishments of the last four years before the crisis (Soeharto's administration) were not able to match the post-1998 economic growth results. The Soeharto period lasted from 1965 to 1998. The post-crisis economic growth rate was just 4.91%, while the pre-crisis average (1994-1997) was 7.10% annually. This comparison reflects Indonesia's decline in economic growth. The process of structural economic transformation has not progressed smoothly, so there has been no substantial economic productivity increase. Therefore, it is crucial to speed up economic growth and structural reform so that the Indonesian economy steps out of the middle-income trap.

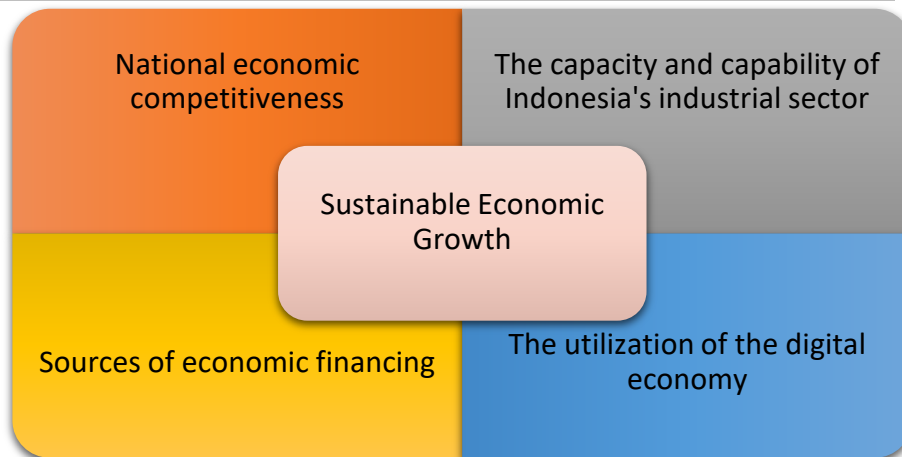
Rising productivity, as expressed in a strong and steady economic growth, is a leading indicator of structural change. As a developing country, Indonesia's average economic growth in the last seven years (2013-2020 Q2) was just 4.69%. Therefore, systemic economic transformation needs to be carried out. The aim is to achieve economic welfare in society by preventing the middle-income trap, i.e., preventing that a country's productive workers are ageing before the country gains high-income status.

Every nation in this world is actively trying not to be trapped in the middle-income trap. However, most countries have struggled to turn into developed countries and are slipping into the middle-income trap. Various efforts must therefore be made to make full use of Indonesia's demographic bonus. To ensure that the Indonesian economy will escape the trap in the future, the government needs to plan different strategic economic tools.

## 2. Indonesia's Challenges to Accelerate Economic Growth

Albeit after the 1998 economic crisis, known as the Reformation Era, economic growth reached an average of 4.91% per year, the challenges of the Indonesian economy in pursuing robust growth and economic transformation have not yet been completed. This can be seen from the achievement of economic growth after the crisis, which has never hit the pre-crisis period in which average economic growth (1994-1997) was 7.1%. Emphasising the importance of structural transformation in achieving sustainable economic growth, the Indonesian government, together with Indonesia's central bank, has formulated four main strategies focused on the Indonesian economy's structural components. These strategies consist of (1) increasing the competitiveness of the national economy; (2) developing the capacity and capabilities of the industrial sector; (3) optimising the use of the digital economy; and (4) widening the sources of economic financing (Bank Indonesia, 2018). The objective of this paper is to elaborate on the main challenges posed by these four structural strategies to determine the best policy formulation for future economic transformation.

Figure 2: Structural components of the Indonesian economy



Source: Central Bank of Indonesia, 2018

To meet the target of a high-income country by 2036 and the world's fifth-largest economy by 2045, it should be supported by a sound monetary policy. In Indonesia, the fundamentals of monetary policy have changed since the Asian crisis in 1997. According to Bank Indonesia, a fixed exchange rate regime was applied between 1971-March 1983. After that period, Indonesia exerted a managed floating exchange rate system (April 1983-September 1986). Furthermore, in the period of September 1986 to August 1997, a flexible floating exchange rate was applied. Since 14 August 1997, Indonesia has used a free-floating exchange rate system. The main reason behind the changes in the exchange rate system is the low level of foreign-exchange reserves.

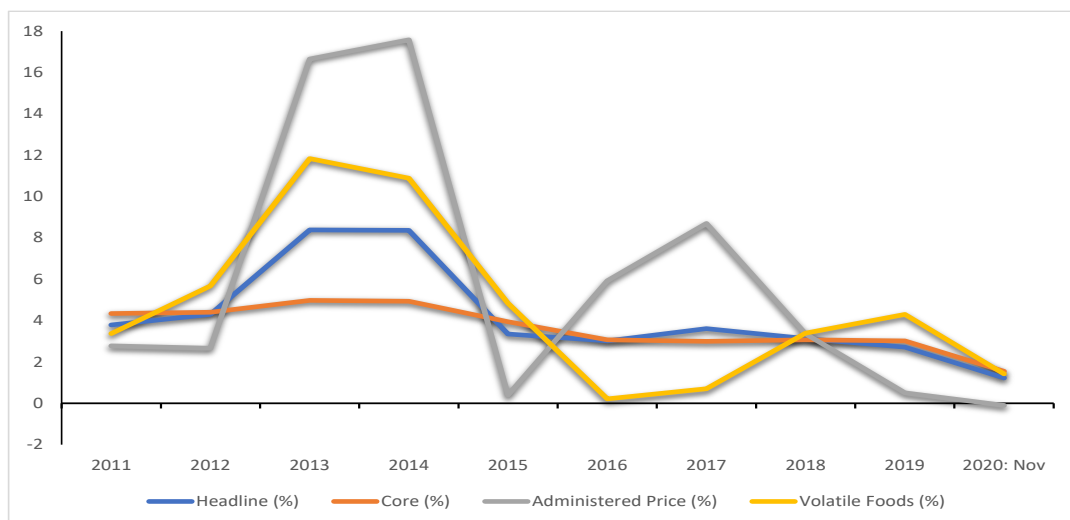
The development of the Rupiah exchange rate against the US\$ has undoubtedly been less encouraging in recent years. This is expressed in the failure to meet the Rupiah target set out annually in the macroeconomic assumptions of the state expenditure budget. This missed realization from the target has been attributed to many factors. *First*, the imbalance between supply and demand for foreign exchange. The demand for foreign exchange in Indonesia is relatively high for the repayment of private and government debt and industrial imports.

*Second*, sentiment towards both the local and global economy strongly influences the stability of the Rupiah exchange rate against the US \$. Like other developing countries, negative sentiment has led the participants in the money market to shift their portfolios to other countries, which are deemed safer (flight to quality). The impact of capital outflows can be even more significant on exchange rates if the foreign exchange financial market is relatively shallow. Moreover, foreign ownership in the domestic portfolio is very high, rendering it vulnerable to the Rupiah's volatility. For instance, the proportion of foreigner ownership reached 30 per cent in tradable Government Securities (SBN).

*Third*, low foreign exchange reserves. When the Rupiah is volatile, foreign exchange reserves are a tool used to intervene in the market. The low foreign exchange reserves cause the central bank to have limited capacity to intervene in the market as a monetary authority. The central bank tends to carefully use foreign reserves for exchange rate intervention because these reserves are also used for government debt repayment and imports.

The second indicator of the monetary side is inflation. Headline inflation has continued to decline in Indonesia in recent years. The fall in inflation has triggered some factors: (i) slowing down the realization of economic growth; (ii) the downward trend in world oil prices. A period of high inflation occurred in 2008 when the world oil price reached its historical peak, reaching US \$ 145 per barrel. The government is currently adjusting domestic fuel prices twice and causing inflation to soar by double digits. The period of increasing oil prices took place in 2013 and 2014 as well. In these years, general inflation was above 8 per cent each.

**Figure 3: Inflation in Indonesia (percentage change, year-on-year)**



Source: Statistics of Indonesia, 2020

The downward trend in general inflation could be a positive note for the government in the future. However, how to prevent food inflation from flaring up becomes the government's challenge. Food inflation has recently moved higher than for other types of inflation. This increase hurts poor households, where two-thirds of their income is used to meet the staple foods.

In the fiscal sector, covid-19 has a severe impact on Indonesia's fiscal sector. This impact is reflected in the decline in state income amidst increasing government spending. The imbalance between state income and expenditure ultimately causes the fiscal deficit to keep soaring. The fiscal deficit could be kept below 3% of GDP between 2003 and 2019. However, the Covid-19 forced the government to widen the fiscal deficit to 6.34% of GDP in 2020 and targeted at 5.7% in 2021. There are three factors that make Indonesia's fiscal expenditure higher than its revenue. *First*, state revenue depends heavily on commodity prices, especially crude oil, coal, and palm oil. Increases in commodity prices positively affect income tax revenues and non-tax state revenues on the natural resource component. High dependence on commodity prices makes Indonesia's fiscal position vulnerable to failure to achieve its target. This condition even becomes more evident when COVID-19 depresses world commodity prices. *Second*, the structure of Indonesia's tax revenues is supported by Value Added Tax (VAT). Therefore, its value is highly dependent on the purchasing power of consumers. *Third*, the role of the processing industry reaches 30% of non-oil and gas tax revenues. Unfortunately, the manufacturing industry's growth continues to slow down, and this is a significant challenge for achieving the VAT target.

## 2.1. National Economic Competitiveness

In the 2019 Global Competitiveness Index (GCI), Indonesia's competitiveness ranking is in 50th place or down five places compared to 2018. This decline shows that the challenges of economic competitiveness are tough. The other countries have effectively increased their competitiveness faster than Indonesia. This also demonstrated a tough competition between countries to improve their competitive performance.

**Table 2:** Indonesia: rank on global competitiveness index, 2018 and 2019

Indicators	2018	2019	2019-2018
	Rank	Rank	ΔRank
<b>Overall</b>	45	50	5 ↓
<b>Infrastructure</b>	71	72	1 ↓
<b>Human Capital - Pillar Skill</b>	62	65	3 ↓
<b>ICT Adoption</b>	50	72	22 ↓
<b>Institutions</b>	48	51	3 ↓

Source: World Economic Forum, 2020.

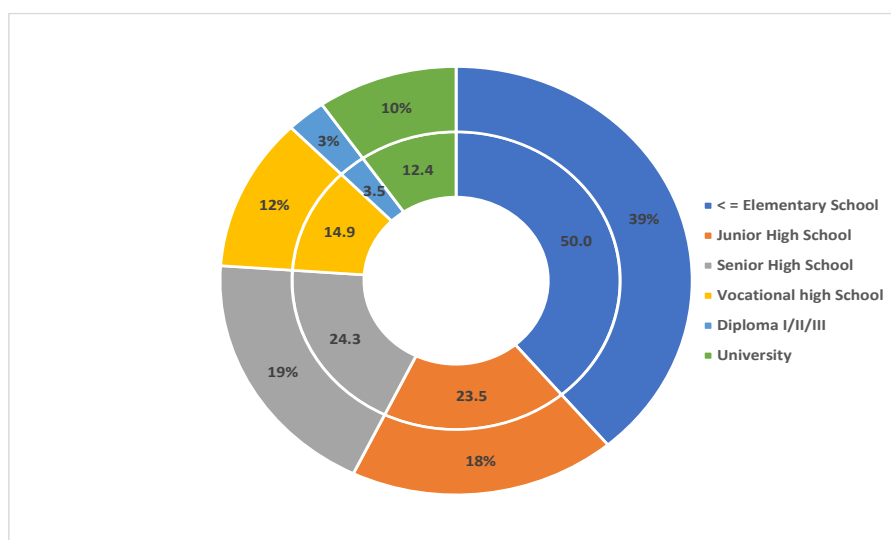
There are four fundamental components related to Indonesia's economic competitiveness challenges: infrastructure availability, the quality of human capital, technology adoption, and institutional support (Bank Indonesia, 2018). *First*,



infrastructure provision in Indonesia has increased in recent years. However, the rise in infrastructure development in 2019 was not as fast as the rise in other countries, so that Indonesia infrastructure dropped one place in the 2019 ranking. Indonesia's infrastructure ranking in 72 out of 141 countries also showed that infrastructure availability would continue to be improved to promote economic competitiveness, foster physical and virtual connectivity, promote equitable development between regions, and fulfil basic infrastructure requirements (Bappenas, 2019).

*Second*, human resources development plays a vital role in increasing Indonesia's competitiveness. The skills ranking of Indonesian human capital in the 2019 GCI, which is 65 out of 141 countries, is still behind compared to other nations. This occurred because most workers in Indonesia only have the attainment of middle school education and below. As of August 2020, based on workforce data, the working population with elementary education in Indonesia is 39% (49.96 million workers). If added to junior high school graduates, whose portion is 18% (23.47 million workers), the total workforce with junior high school graduates and below is 57% (Figure 4).

**Figure 4: Indonesia: working population by education (Million and percentage share)**



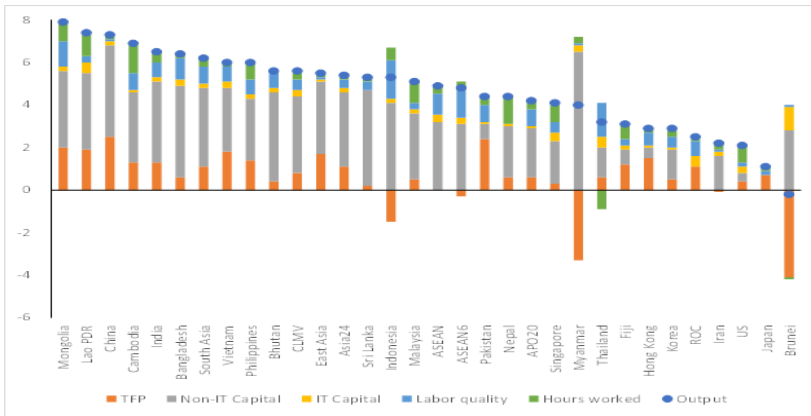
Source: Statistics Indonesia, August 2020.

In the sense of efforts to drive economic transformation based on human capital, it is comparatively more difficult to handle a nation with a low level of education than a country with a higher education level. Interestingly, if seen from the education-based unemployment rate, Indonesia's highest unemployment rate is for people with high school or vocational diploma and university degree status. This suggests that potential job creation efforts should concentrate on the absorption of skilled and qualified employees.

Unfortunately, if seen through the Total factor Productivity (TFP) metric, efforts to encourage human capital with skills and expertise have decreased since 2010. Indonesia's TFP is among the smallest in ASEAN; even Indonesia has experienced negative TFP growth since 2010. This means that Indonesia's current economic growth

strategy cannot accommodate high school and tertiary education graduates as the largest unemployment group in Indonesia; instead, the available jobs are mainly for workers with primary education graduates.

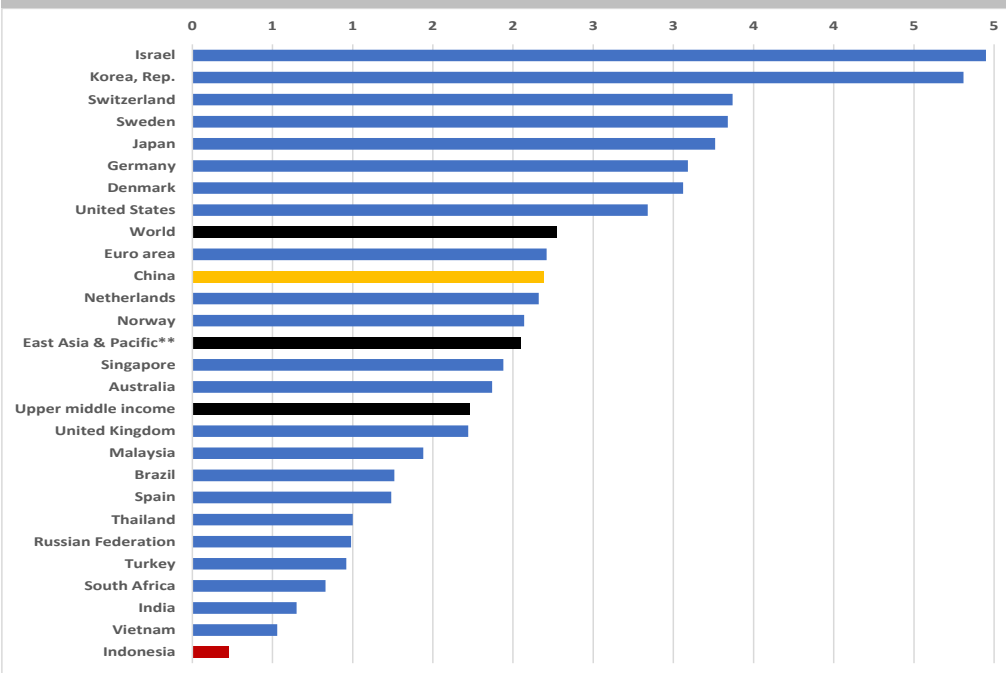
Figure 5: Sources of Economic Growth, 2010-2017



Source: APO Productivity Database, 2019.

Support for the allocation of Indonesian government spending for Research and Development is still low. In the 2016–2018 period the government budget for R&D per GDP decreased, from 0.25% in 2016, down to 0.24% in 2017, and 0.23% of GDP in 2018 (World Bank, 2020). In comparison, the average R&D budget in the world was 2.27% of GDP in 2018. This low R&D budget in Indonesia indicates that technology and skilled labour support have not guided overall economic growth.

Figure 6: R&D Expenditure (percentage of GDP), 2018



Source: World Bank, 2018.

Labour productivity indicators can also describe the competitiveness of human resources. According to the ILO (2020) labour productivity represents the total volume of output (measured in terms of GDP) produced per unit of labour (measured in terms of the number of employed persons or hours worked) during a given period. In terms of labour productivity, output per worker in Indonesia is still lower than in several countries in ASEAN and China. This illustrates the importance of improving the quality of Indonesia's human resources in the future to be able to compete with other countries.

	<b>Output per worker (constant 2011 international \$ in PPP)</b>
<b>Malaysia</b>	61'291
<b>China</b>	32'002
<b>Thailand</b>	31'204
<b>Indonesia</b>	25'517
<b>Philippines</b>	20'433
<b>Vietnam</b>	11'970

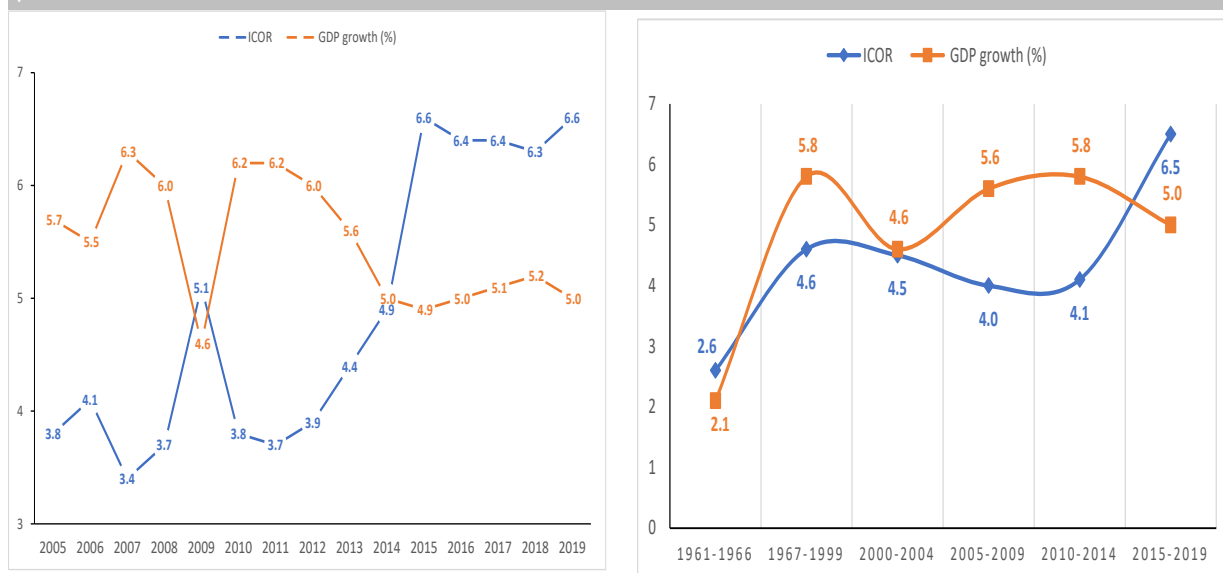
Source: ILO, 2020.

Technology support, especially information and communication technology (ICT), is another competitiveness challenge for Indonesia. Indonesia's ICT adoption ranked 72 out of 141 countries in the 2019 GCI. There was a substantial decrease in both the score and the ICT adoption ranking. The significant drop in the ranking compared to 2018 illustrates that Indonesia's ability to utilise ICT in driving the economy is still less fast than in other countries.

Indonesia's institutional factors are still low compared to other countries in the 2019 GCI institutional ranking, which is 51 out of 141 countries or down three places compared to 2018. The good news is that the institutional pillar score records a slight increase compared to 2018. However, the acceleration of improvement is still relatively low compared to other countries, so the ranking has fallen.

The low competitiveness of these institutions also hampers investment into Indonesia. The level of ICOR (Incremental Capital Output Ratio), which tends to increase from year to year and currently reaches 6.5. The high ICOR shows that investment in Indonesia is quite large, but the return-on-investment rate is minimal. The ICOR has increased from 2012 to 2019, which demonstrates that investing in Indonesia is very costly. Compared to other countries, investment in Indonesia is expensive. The average ICOR score in the New Order Era was around 4.6, which is still better than the current Reform Order. In 2018, Indonesia's ICOR reached 6.4, while Vietnam's ICOR was 5.2; Malaysia 4.6; Thailand 4.5; and the Philippines 3.7.

**Figure 7: Indonesia: Incremental capital output ratio (ICOR) and GDP growth, selected periods**



Source: BPS-Statistics Indonesia in Basri, 2020.

Indonesia's economic growth after the 1998 Southeast Asian financial crisis was relatively stable, accompanied by a downward trend in ICOR, which illustrates that investment costs in Indonesia are relatively efficient. The average ICOR before the Southeast Asian financial crisis (1967-1999) was 4.6, while the average ICOR since 2000-2014 was 4.2 with a downward trend. However, the situation has been different from 2015-2019, where Indonesia's ICOR has increased. One of the causes of the increase in ICOR in the last five years is that most investment has flowed into infrastructure development or construction and has not had a broad impact on increasing economic growth.

## 2.2. The Capacity and Capability of Indonesia's Industrial Sector

The next challenge is developing the industrial sector's contribution to Indonesia's economic growth, which declined, especially after the 1998-crisis. The manufacturing sector's contribution to economic growth began to undergo a downward trend after the crisis, from 29% in 2001 to 19.9% in the second quarter of 2020. The industrial sector is the key to carrying out structural economic transformation and preventing Indonesia from the low and middle-income trap (Basri and Putra, 2016).

Support for investment in the manufacturing sector is essential to ensure that this sector remains attractive and contributes to economic growth. Unfortunately, most of the incoming direct investments (both of FDI and DDI) are in the construction sector, with the remainder being in the machinery and automotive equipment, and other equipment sectors (Table 4). The domination of investment in the construction sector means that most of the incoming investment does not generate adequate jobs. Moreover, construction technology is also growing, with investments in the construction sector making more use of technology than labour-intensive ones.

**Table 4: Indonesia: Gross fixed capital formation, by economic sector (percentage shares)**

Sector	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Construction	74.3	73.1	72.8	73.5	74.7	75.2	75.2	75.1	74.5	75.0
Machinery & equipment	10.4	11.4	11.7	11.2	10.4	10.0	9.0	9.3	10.4	10.6
Vehicles	5.8	6.0	6.4	5.7	4.8	4.6	5.2	5.4	5.4	5.0
Other equipment	1.5	1.4	1.4	1.4	1.4	1.6	1.7	1.8	1.8	1.7
Cultivated biological resources	5.9	5.9	5.7	5.8	5.9	6.0	6.1	5.8	5.5	5.4
Intellectual property products	2.2	2.1	2.1	2.4	2.8	2.7	2.8	2.6	2.4	2.3
Total GFCF	100	100	100	100	100	100	100	100	100	100

Source: BPS-Statistics of Indonesia.

Investment (Gross Fixed Capital Formation) is an important contributor to Indonesia's GDP. On average, the contribution of investment to Indonesia's GDP is around 30% per year. Therefore, the government needs to increase the quantity and quality of incoming investment. In terms of quantity, it needs to be targeted so that the amount of incoming investment increases every year. Meanwhile, in terms of quality, investment policies need to be directed towards types of investment that can have a broad multiplier impact, one of which is an investment in the types of machinery and equipment.

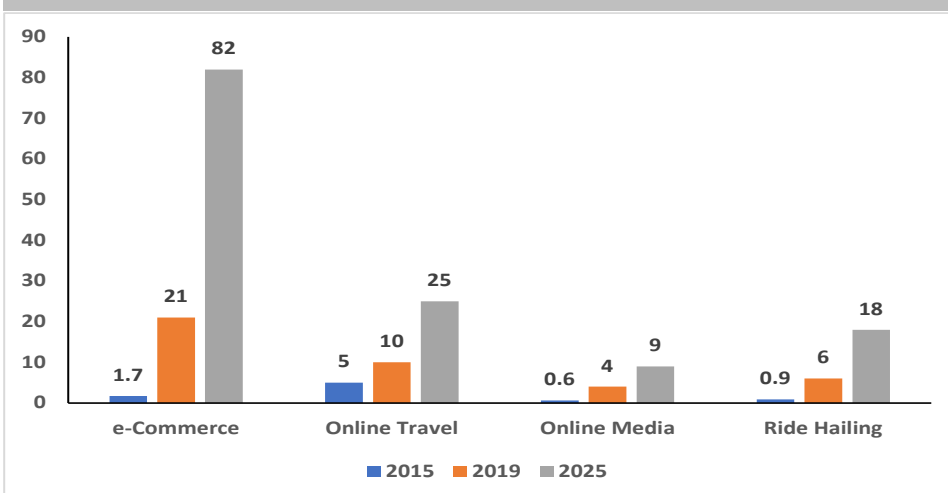
**Figure 8: Gross fixed capital formation, 2010-2020 (percentage of GDP)**

Source: Statistics Indonesia, 2020.

The ability to improve the quality of investment entering Indonesia is essential. Countries that are generally successful in developing investment to boost their economy are predominantly countries that can promote investment in industrial machinery and equipment. There would be many jobs and added value that can be produced from existing commodity products by promoting manufacturing investment. In other words, if an investment is driven into high-value-added industries, economic growth will naturally accelerate compared to if it comes only from the construction sector.

### 2.3. The Utilisation of The Digital Economy

The Internet has become a necessity for Indonesia. In 2020, 175.4 million of the 269 million people in Indonesia are internet users or 65% of the total population. This user base has caused business transactions in Indonesia via the internet (digital economy) to rise. A report by Google, Bain & Company, and Temasek (2019) estimates that the volume of digital (internet economy) transactions in Indonesia will reach USD 130 billion by 2025, compares to a transaction value of only USD 40 billion in 2019 (Google, Temasek, Bain & Company, 2019).

**Figure 9: Indonesia: The Internet economy (GMV, \$B)**

Source: Google, Temasek, Bain & Company, 2019.

Note: GMV: Gross Merchandise Value.

Although the expected economic value of the internet in Indonesia will continue to grow, the total online shopping transactions from the Indonesian population are still relatively small compared to total retail transactions. The proportion is only 3%, while it has reached 16% in China (McKinsey & Company, 2018). Some of the problems faced by the digital economy in Indonesia include: *First*, most products listed on Indonesia's online marketplace are imported products, amounting to 93% (Coordinating Ministry for Economic Affairs, 2017). Indonesian imports of consumer goods hit USD 14.2 billion in 2017, rising 14.7% from 2016 to USD 12.4 billion. The greater percentage of imported than of local products in e-commerce indicates that imported goods play a broader role in Indonesia, making the absorption of jobs less optimal.

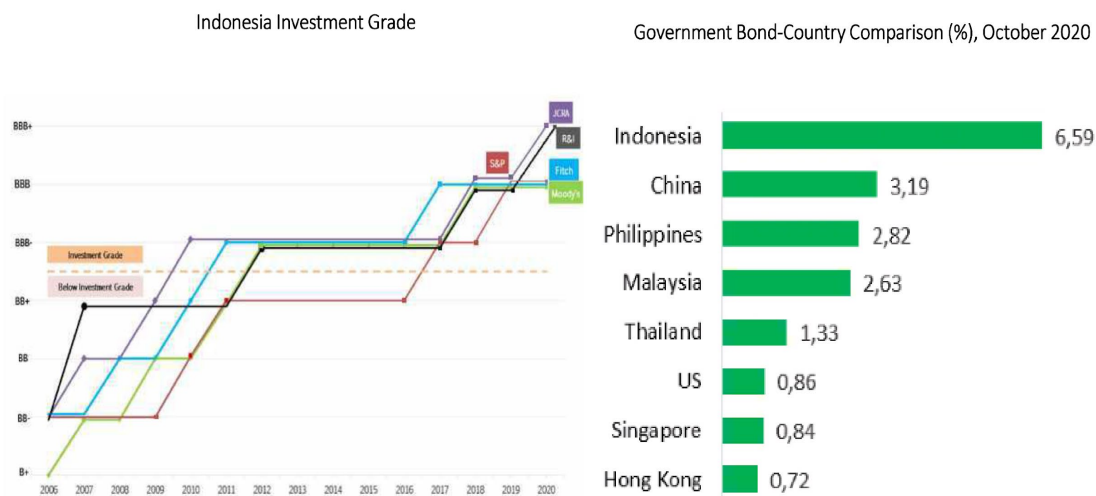
*Second*, in general, the competitiveness of imported products through e-commerce transactions is higher than that of local products, such as textiles and electronics. Domestic products have a 60% higher production cost than imported products (Ministry of Industry, 2018). Due to reliance of certain local products on a high import content, higher prices for local products become another factor why local goods are less competitive. Moreover, compared to Indonesia's same goods, imported products have better competitiveness in terms of design, materials, and standards. If this imbalance persists, domestic products in the domestic market will continue to be increasingly depressed, so that labour absorption will also decrease.

*Third*, the foreign ownership laws of e-commerce companies in Indonesia are on the rise. In 2015, 42% was international ownership, 50% was domestic or Indonesian ownership, and 8% was joint ownership. The Presidential Regulation of the Republic of Indonesia Number 44 the Year 2016 concerning the Negative Investment List (DNI) states that foreign investors are allowed 49% of trade transactions through an electronic system with an investment value less than IDR 100 billion, while foreign investors are allowed 100% of foreign ownership for those priced above IDR 100 billion. As time goes by, given that foreign capital funds rose in 2017 through Indonesian start-ups, this proportion of ownership is gradually changing, amounting to USD 4.8 billion or equivalent to IDR 64.32 trillion (BKPM, 2018). It is feared that growing foreign ownership would weaken the domestic economy as a foreign investment would also be followed by imports of goods and foreign labour.

## 2.4. Sources of Economic Financing

Indonesia is becoming an investment-worthy country (investment grade). Indonesia has been classified as an investment-worthy country by all foreign investment rating agencies since 2017. However, Indonesia is unable to make maximum use of this advantage to attract investment at a more cost-effective price. One indication is that the government bond interest rate of the Republic of Indonesia (6.59%) is relatively higher than that of other countries, such as Malaysia (2.63%), Thailand (1.33%), and China (3.19%). Even though Indonesia has become an investment-worthy country, the relatively high yield of government bonds shows that investors still perceive Indonesia's investment as relatively riskier than some neighbouring countries. One of the reasons for the high yield on the Indonesian government bond is the shallowness of the stock of such bonds. This condition usually makes investment costs more costly. Furthermore, due to more competitive interest rates, this has also caused a crowding out of bank funds flowing into government bonds.

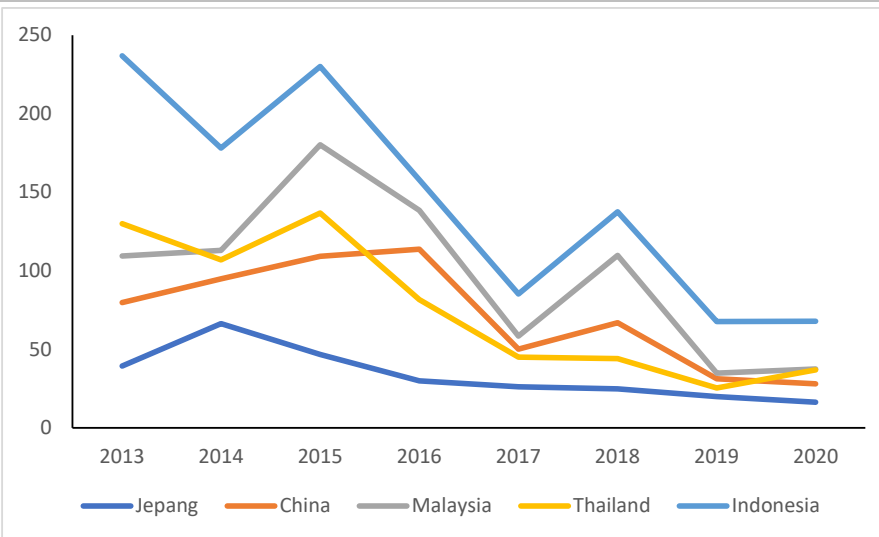
**Figure 10:** Indonesia: Yield curve - Investment grade and government bonds



Sources: Bank Indonesia and Coordinating Ministry for Economic Affairs, 2020.

One indicator that shows the high risk of investing in the portfolio market is the relatively high value of Indonesia's CDS (Credit Default Swap). Investors must place a higher reserve for losses on investments made in Indonesia. Consequently, they ask for a higher yield than that given by some other countries.

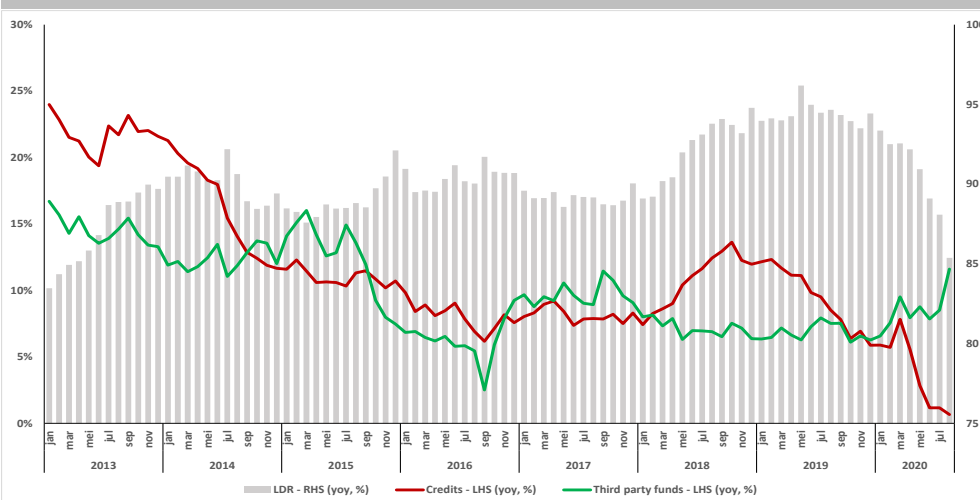
**Figure 11: Credit Default Swap Comparison (%)**



Source: Bank Indonesia, 2020.

Furthermore, about providing liquidity, credit growth in Indonesia is also not encouraging. Credit growth has always been slow for the past seven years. Credit growth indeed, in the last 15 months has only hit single digit territory. Most recent data from September 2020 indicates that credit growth has also turned negative as Covid-19 has not been resolved. This credit growth further shows that financial support for the real sector in Indonesia is declining. In the past, credit growth could hit 23% per year during the boom period. In Indonesia, the growth slowdown in third-party funds has contributed to a decline in credit growth. A substantial decline in third-party funds has occurred over the last five years. However, during the Covid-19 pandemic time, the growth of third-party funds grew to double digits.

**Figure 12: Banking credit and third-party funds, 2013-2020 (annual percentage change)**



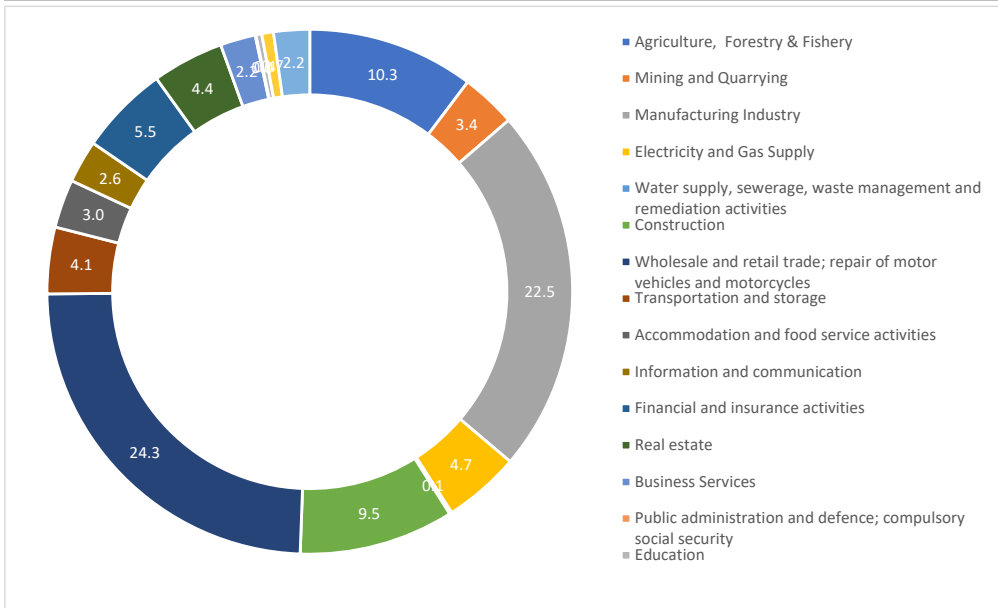
Sources: Bank Indonesia and Financial Services Authority (OJK), 2020.

Credit allocation that flows more to the trade sector (24.3%) than the industrial sector (22.5%) discourages industrialisation efforts in Indonesia. Low support for sustainable economic acceleration has shown excessive credit allocation in the industrial sector. Moreover, it also indicates that most of the banking sector funds are short-term funds.



Banks can ultimately channel their loans into sectors with fast turnover through working capital loans rather than investment loans.

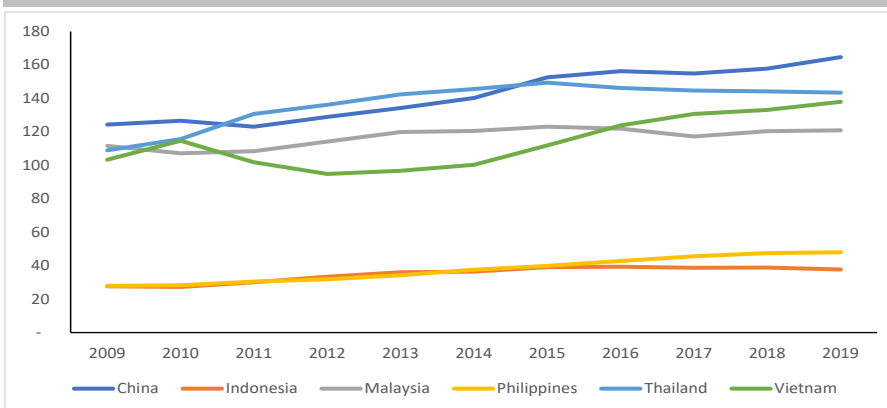
**Figure 13: Share of credit, by sector (percentage)**



Source: Bank Indonesia-SEKI, 2020.

Overall, in terms of liquidity support through credit, the small domestic credit per GDP also indicates that Indonesia's credit penetration is still low, which is 37.75% of GDP in 2019. Meanwhile, it is very high in many other countries. The ratio of credit to GDP was 120.87% of GDP in Malaysia and 164.66% in China in 2019. Compared to the time before the monetary crisis (New Order Era), the GDP-ratio of credit has not yet reached its pre-1998 level. At the end of the New Order era, the ratio of credit to GDP had reached 62% of GDP. The ratio hit just around 40% of GDP during the Reform Period. This ratio shows the importance of efforts to push liquidity into the real sector to receive adequate funding support from the financial sector.

**Figure 14: Credit to GDP ratio, selected countries (percentage)**



Source: World Bank, 2020.

In line with a low tax ratio and increasing debt, budget policy support for the state revenue expenditure budget is still limited. The low tax ratio, which also hit the lowest level during the reform period, i.e., 8.2% in 2020, is another issue linked to the source

of development funding. With the low tax ratio in Indonesia, the ability of the state budget to fund the development agenda is reduced. External funding, in addition to tax, is also required to finance development plans. Indonesia took a shortcut to fill this funding gap by expanding the deficit via debt. From 2015 to 2020, government debt witnessed a substantial rise. The debt to GDP ratio was relatively stable at 25% in 2015, but in 2020 it jumped to 35% or 38%. The same situation also exists in private debt, which has increased in line with the effects of a financial pandemic.

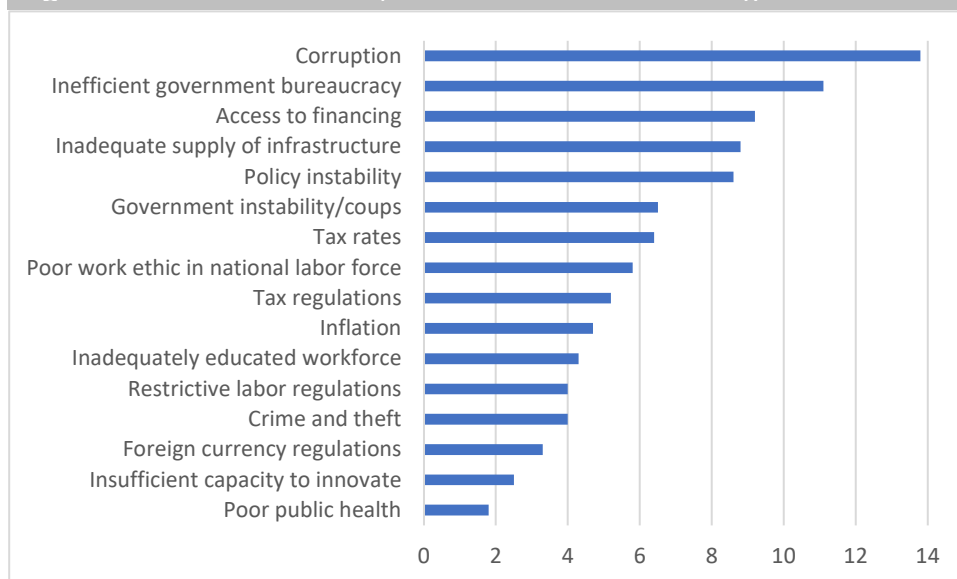
Based on data from the Indonesian Ministry of Finance, tax spending continues to increase every year. In 2019 the share of tax spending to GDP reached 1.62%. However, this spending will not have an impact on increasing direct investment if the main problem of Indonesia's competitiveness has not improved. According to WEF (2018), the tax rate is the 7th problem of the 16 main problems of competitiveness in Indonesia. Meanwhile, the most urgent problems to be resolved regard corruption and bureaucratic inefficiency. As long as these two main problems are not resolved, the provision of tax incentives will not be able to encourage more significant investment.

**Table 5:** Indonesia: tax expenditure, 2016-2019

	Tax Expenditure (Trillion Rupiah) % GDP	
<b>2016</b>	192	1.55
<b>2017</b>	196	1.45
<b>2018</b>	225	1.52
<b>2019</b>	257	1.62

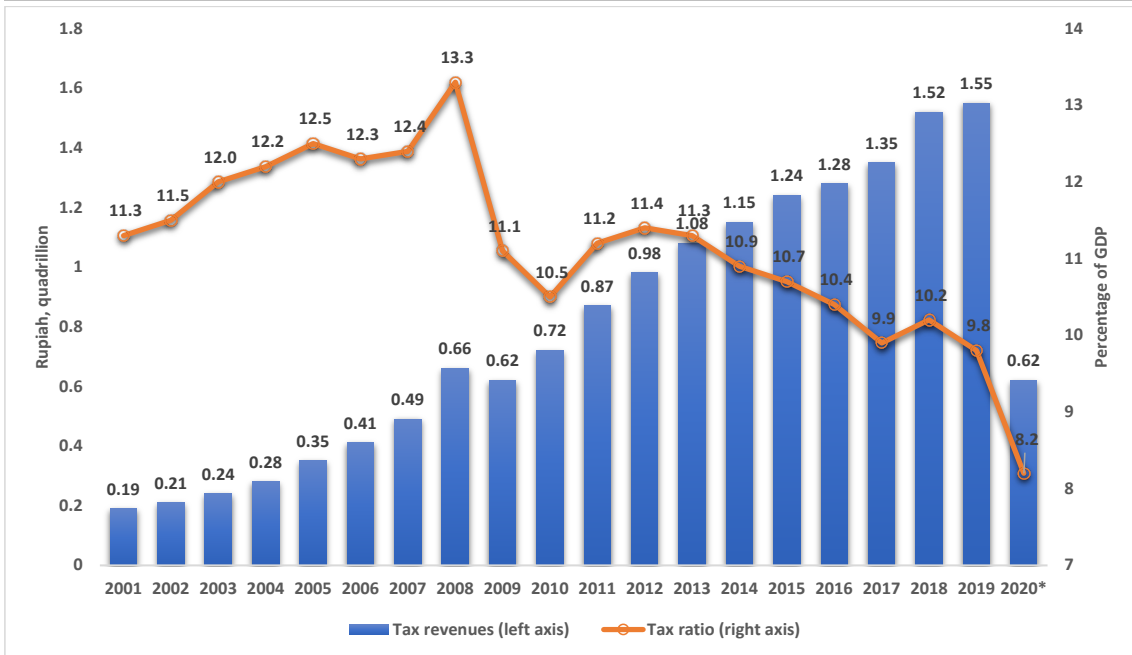
Source: Ministry of Finance, 2020.

**Figure 15:** Indonesia: Most problematic factors for doing business



Source: WEF, 2018.

Figure 16: Indonesia: Tax indicators

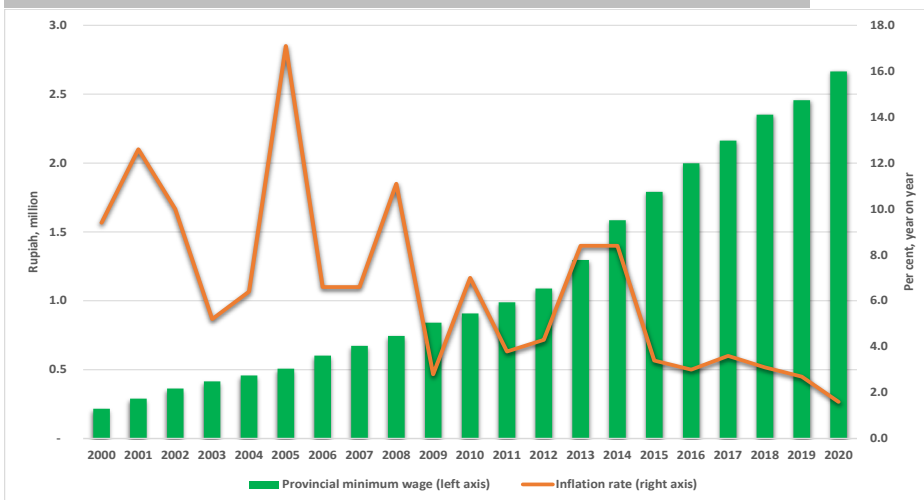


Sources: Ministry of Finance, Statistics Indonesia, in Basri, 2020.

In the time after the 1998 monetary crisis, not all economic numbers declined. Some economic successes during the Reformation Period must be maintained. In terms of fiscal policy, notably wages, the level of provincial minimum wages has increased from period to period, which indicates that the level of welfare of workers is improving. Moreover, improvements in wages have also been accompanied by developments in the inflation rate, which has become increasingly stable and at a low level.

The relative stability of inflation illustrates the effectiveness of monetary policy in stabilising prices. Indonesia can control inflation better than before the 1998 Asian crisis. During the decade following the crisis, inflation was hitting double digits several times, even reaching 20%. In the second decade after the crisis (2010-2020), inflation was always at a low point, i.e., just one digit.

Figure 17: Provincial minimum wage and rate of inflation



Source: Central Bank of Indonesia and Statistics Indonesia, 2020.

Note: Inflation for 2020 refers to data for November (% , yoy).

Over the last 20 years, effective inflation management has been achieved since Indonesia's central bank and the government of Indonesia have been adequately thorough in enforcing policies for price stability and inflation control. As inflation is causally related to the population's general welfare, especially in terms of their access and purchasing power to basic needs and other needs, this step is considered successful. The emphasis on controlling inflation over the years has finally established a relatively low rate of inflation. Therefore, the management of price stability in the reform period has been quite successful in the long term. Albeit there have been many increases in fuel prices, inflation has remained at the single-digit level over the last ten years.

Moreover, the inflation rate also showed a substantial decrease during the Jokowi presidency (2014 – now). The single-digit inflation trend has, unfortunately, not been able to accelerate economic activity. Maintaining food price stability, which is still relatively higher than the core inflation component and inflation due to administered prices, is the challenge of managing volatile food inflation in the future.

The downward trend in economic growth during the Reformation Order era indicates that economic development achievements still have some challenges, and economic transformation in Indonesia is still not working optimally. The average national economic growth in the Reformation Period over the New Order Era is comparatively lower, reflecting these difficulties. Therefore, relative to the New Order era, Indonesia's economy needs a more optimal economic transformation towards higher economic growth.

### 3. Lessons from China's Growth and Transformation

China's GDP (based on Purchasing Power Parity) is currently ranked as the world's largest (IMF, 2020). China's success is inseparable from the success of economic transformation in line with demographic transformations. The success of China's economic policies is a good lesson for Indonesia, but adjustments are still required to be applied if Indonesia wants to learn from China. China's achievement in maintaining high economic growth over the past four decades could help Indonesia make a structural economic transformation. Indonesia could adopt China's policy reforms and adjust based on potential and Indonesian economy characteristics.

By taking lessons from the Chinese economy, we will identify China's achievements and then compare them with those of Indonesia. We use the analytical framework for the essential elements of structural transformation on a macro-financial basis to provide a more holistic image of economic development and transformation in both countries. The study is then deepened with a selection of supporting literature on both the Chinese and Indonesian economies.

#### 3.1. China's Economic Competitiveness

Infrastructure development in China is a fundamental prerequisite for boosting economic growth and has become an essential part of economic growth. Infrastructure development in China is also a strategy to avoid the risk of an economic downturn. There are three significant aspects of China's success in the development of infrastructure (Warwick, 2017). *First*, the benefits of a multi-layered national, regional, and local spatial planning system to promote and facilitate the implementation of

infrastructure programs. One of China's strengths is synchronised strategic and spatial planning between levels of government. Planning starts with a five-year planning system at the national level, which sets national development targets and sets national strategic goals, then proceeds to the local government level. This strategic plan is supplemented by more comprehensive regional and local urban planning, which translates the region's overall development goals into strategies for industrial, infrastructure, and human development for each specific location. It is imperative to provide detailed and comprehensive aspects of spatial planning.

*Second*, decentralisation is mostly responsible for providing infrastructure to provincial and local governments to encourage innovation and a more integrated approach within and between geographic areas. The decentralisation that has been carried out since the 1980s has encouraged competition for economic development between regions in China. Moreover, China's decentralisation is often followed by a fiscal system that enables local governments to have a certain degree of control over the resources they need to perform their duties. This system is relatively stable for infrastructure financing, especially for large-scale investments requiring the implementation of multiple budget cycles and access to medium and long-term debt financing. The effect is expressed in the rapid development of China's regional infrastructure and economic growth, which has been at a high level for many years.

*Third*, China has a long-term commitment to strengthen the capacity to provide infrastructure services, especially at the regional level. Local governments' authority to plan, finance, and implement infrastructure development in the regions requires a stable macroeconomic policy environment at the central level. Therefore, China is continuing to reform and to innovate its macro policy environment to ensure that it is both stable and sustainable.

In terms of competitiveness in human capital skills, China ranks 64th out of 141 in the world. This highlights the need for China to foster its human capital's competitiveness to respond to the rapid development of innovation and technology in China. Compared to Indonesia's 65th ranking of skills, the gap between Chinese and Indonesian human capital skills is not too far away. However, when viewed from the trend side, China's human resources ranking has increased, while Indonesia has decreased (UNDP, 2020).

The World Bank (2018) states that human capital consists of knowledge, skills, and health that accumulate throughout human life. The Human Capital Index (HCI) created by the World Bank indicates that to create competitive human capital, countries need to invest in people through nutrition, health care, quality education, jobs, and skills. Judging by this indicator ranking China (46) was far above the competitiveness of Indonesian human capital that ranks 87th. Overall, the sixth-forming component of HCI, Indonesia scores were still lower than China.

**Table 6: Human Capital Index, China, and Indonesia**

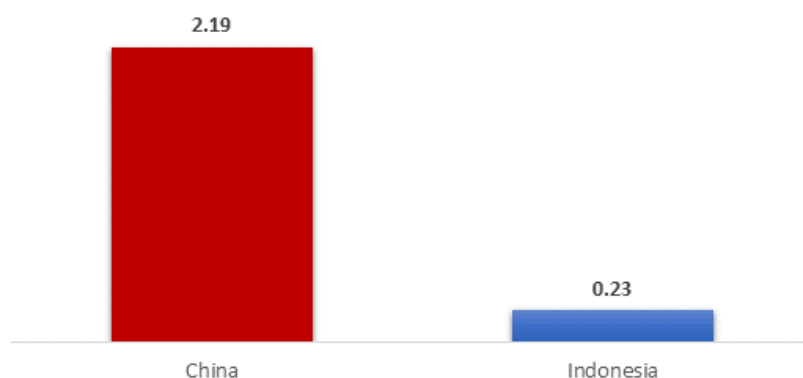
COUNTRY	RANK (2018)	HUMAN CAPITAL INDEX (HCI)			COMPONENTS OF HUMAN CAPITAL INDEX 2020					
		HCI 2020	HCI 2018 back calculated	HCI 2010	Probability of Survival to age 5	Expected Years of School	Harmonized Test Scores	Learning adjusted years of school	Adult survival rate	Fraction of Children under 5 not stunted
China	46	0.65	0.65	n.a.	0.99	13.1	441	9.3	0.92	0.92
Indonesia	87	0.54	0.54	0.50	0.98	12.4	395	7.8	0.85	0.72

Source: World Bank, 2020

China has a program to develop the skills of its human capital. The central government also encourages very talented Chinese scholars and scientists trained abroad to return and participate in building and contributing to the country. China still actively embraces a strong central planning role as a leading instrument for economic development. China can also develop its innovation and entrepreneurship model that differs from the more independent and dispersed systems developed in western countries. On the other hand, any innovation and market-opening reforms that may be required may also be hindered by this central planning (Deloitte, 2014).

In the pillar of information and communication technology adoption, China is ranked 18th globally while Indonesia is far behind, ranking 72nd. This difference demonstrates that China is more technologically advanced than Indonesia. China recognises that its economy's long-term challenge is moving from labour-intensive and capital-intensive activities to activities that leverage knowledge, innovation, design, information technology, software, and marketing. China has a range of distinct advantages that allow the country to quickly move up the value chain and push its technological frontier. Chinese government policy is aggressively targeting major industries for aggressive investment, such as aerospace, high-value machinery, and components; life sciences; mobile technology; internet and social media; logistics and other services, health services, and education services (Deloitte, 2014).

**Figure 18: Research & Development Expenditures, 2018 (percentage of GDP)**



Source: World Bank, 2020.

China's ranking in the institutional pillar is 58th, while Indonesia ranks 51st out of 141 countries. From this position, Indonesia's rank is comparatively better than that of China. It means that not all of Indonesia's economic competitiveness is below China. Indonesia is more robust than China in several aspects of pillar institutions, such as social capital, freedom of the press, and transparency of the state budget. However, in terms of economic performance, Indonesia's position is still far behind China. Indonesia must make numerous strategic efforts to transform its economy to have robust and sustainable growth to catch up with other countries, especially China.

China's 1978 economy transition from a closed economy to an open economy has transformed China into one of the world's strongest economies. China's success in achieving economic development and prosperity while maintaining stable economic growth, relatively low inflation, and the avoidance of crises since its transformation is a valuable lesson for developing countries trying to pursue economic transformation.

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China's relatively stable economic growth over the past 40 years has rarely occurred in any other country, which is perhaps a miracle in human economic history.

## 3.2. The Key to Successful Transformation of China

The significant role of macroeconomic policies is the key to China's success in achieving successful transformation and economic competitiveness. According to Feng et al. (2020), there are three macroeconomic policy frameworks that China has adopted in its economic transformation process: proactive macroeconomic management policies, financial sector reform and development, and carefully managed capital account liberalization (Feng, Li and Wu, 2020). Implementing the three macroeconomic policy frameworks was successful in bringing high and stable growth to China.

### 3.2.1. Proactive macroeconomic policies

Proactive macroeconomic policies are a key element of China's success in establishing stable macroeconomic conditions. To generate stable economic growth, China has adopted three types of proactive macroeconomic policies.

#### — The Market Approach

China uses two policy instruments in this market approach. *First*, using monetary policy by adjusting interest rates (savings and loans) and statutory reserve requirements to influence investment and credit demand and household decisions to save or consume. *Second*, using fiscal policy through tax rate adjustments, fiscal subsidies, and fiscal spending arrangements stimulates consumption under sluggish economic conditions.

China implements a low-interest rate strategy in a monetary policy that is investment-friendly, thus providing access to loans at a lower cost to the government and private sectors. Although this policy is beneficial for companies and stimulates investment and production, this low-interest-rate policy also sacrifices the other side's savings rate. There is an interest rate subsidy between the savings interest rate and the loan interest rate. Moreover, to avoid the potential for a sharp increase in interest rates, China has implemented a gradual interest rate liberalisation policy.

Meanwhile, as regards the export-friendly monetary policy, China has reformed its exchange rate system. China's relatively stable currency also plays a significant role in boosting China's international trade exports. From 1978 until now, China has reformed its exchange rate system four times to adapt to changing economic conditions.

#### — Administrative Orders

Administrative orders are carried out by strictly controlling new investment when the economy is booming. When the economy is sluggish, the Chinese government is forcing rules by pushing out-of-date goods to go onto the market immediately.

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Moreover, the government is also seeking to broaden and develop infrastructure projects to increase market demand.

— **Institutional Reform**

In China, institutional reform is carried out by; (i) establishing four asset management companies to spin off low-value assets at four state-owned commercial banks. (ii) joining the WTO, and (iii) investing in human capital through education to produce quality human resources.

### *3.2.2. Financial sector reform and development*

China has put banking reform as a top priority in financial reform, followed by capital market reforms. Channelling savings in the banking sector into investment is particularly important in increasing investment. In China's case, about half of total investment in the real sector is financed through financial institutions. Commercial banks generally find it challenging to meet investment needs in the infrastructure sector, requiring special conditions, such as high capital requirements and long investment cycles. To address these challenges, China undertook financial reforms through the development of a China Development Bank (CBD) financial model through which CBD could provide infrastructure sector investment loans. Until 2018, the overall financing of the infrastructure sector by CBD amounted to USD 1,701 billion. This amount exceeds the total financing given by both the World Bank Group and the Asian Development Bank.

Holding public trust in the financial system is an essential step for China to ensure its financial system remains stable. To preserve this degree of trust, China has implemented three strategies: (i) ensuring that the purchasing power of the RMB (Renminbi) remains stable, (ii) ensuring that the RMB exchange rate against the US Dollar remains stable and preventing a sharp short-term depreciation of the RMB against the US Dollar, and (iii) ensuring investor confidence towards national financial institutions, especially regarding the security of public savings in banks. China is closely monitoring arrangements for borrowing in foreign currencies because they can generate financial risks.

### *3.2.3. Carefully managed capital account liberalisation*

Ease the inflow of FDI from advanced-technological countries. This policy has been introduced to improve China's technology expertise and modernise the manufacturing industry to increase its productivity significantly. Fu (2012) argued that FDI contributed to the overall regional innovation capacity in China. However, the benefit of innovation depends on sufficient innovation-complementary assets at the regional level. In addition, Fu (2012) noted that the advantages of FDI on innovation depend on its quality and type. Fu (2012) identifies the coastal and inland region differences in the capacity to innovate. In the coastal region, the human resources are supported by educated R&D staff and skilled labour. The staff performs as a host of China's R&D activities involving top universities and research institutes. As the innovation-complementary assets in the coastal region are sufficient, FDI to this region has transformed from labour-intensive processing activities to more strategic asset-seeking type FDI. Contrary, in the inland provinces, FDI was typically in labour, land, or resources intensive production activities.

Fu and Gong (2010) argue that foreign technology in China was not always better than indigenous innovation. In some cases, indigenous innovation is much more powerful than foreign technology. In low-medium technology sectors, more indigenous firms

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have benefited while foreign firms were strong in the high-technology sector. In the last few years, indigenous Chinese firms have experienced considerable TFP growth. It was because there was technical change in all sectors except the medium-low technology industries. In these terms, foreign-invested firms in China have lower technical growth than of indigenous-firm due to the collective indigenous R&D activities spill overs.

## 4. Lessons from China's Economic Transformation for the Indonesian Economy

The following section provides some important notes for Indonesia regarding China's successful transformation.

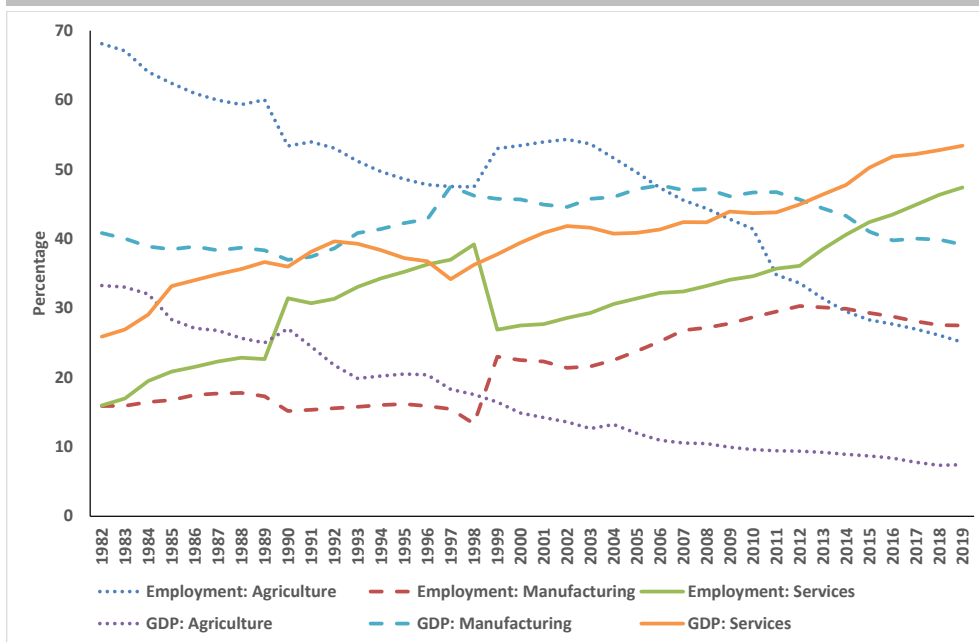
### 4.1. Success in Economic and Demographic Transformation

Fan, Jen-Wei, and Zhang (2013) explain that one of the most obvious developments in China is its structural transformation, both in its economy and demographics. This transformation started in 1970. There are several indicators that show the economic and demographic transformation in China. *First*, structural transformation is reflected in the shift in the structure of the rural economy (agriculture to urban economy, industrial, and services). According to data from the Asian Development Bank (2020), the share of the agricultural sector in China in 1982 reached 68%, while the manufacturing and service industries each accounted for 16%. Meanwhile, in terms of employment, the agricultural sector absorbed 33%; manufacturing and services respectively 41% and 26%. In 2019, employment in China's agricultural sector was only 25%; manufacturing 27% and services 47.4%.

In terms of GDP structure, the contribution of the agricultural sector is only 7.4%; manufacturing 39.2%; and services 53.4%. During 1982-2019 the share of labour in China's agricultural sector fell 43.03%; while in the manufacturing sector it rose 11.6%, and services rose 31.34%. Meanwhile, the agricultural sector's contribution to China's GDP fell 25.85% during 1982-2019, while the role of the manufacturing sector fell 1.67%. In contrast, the contribution of the services sector increased to 27.52%. Fan, Jen-Wei, and Zhang (2013) explained that in line with China's economic transformation, which is marked by a decrease in the contribution of the agricultural sector to GDP, China has also succeeded in changing the focus of crops in the agricultural sector. China's agricultural sector has begun to move to high-commercial crops (such as fruits, vegetables, livestock, and other cultivated products).

Similar structural changes have occurred in the manufacturing and service sectors. China's manufacturing sector underwent structural shifts rapidly in four phases. From 1978 to 1985, China was still a centre for the production of natural resource-based goods such as coal and oil. During 1986-1995, China experienced rapid growth in labour-intensive exports. In the 1996-2000 period, China's main exports were electric machinery and transportation equipment. In the last decade, China's exports have been high-tech products.

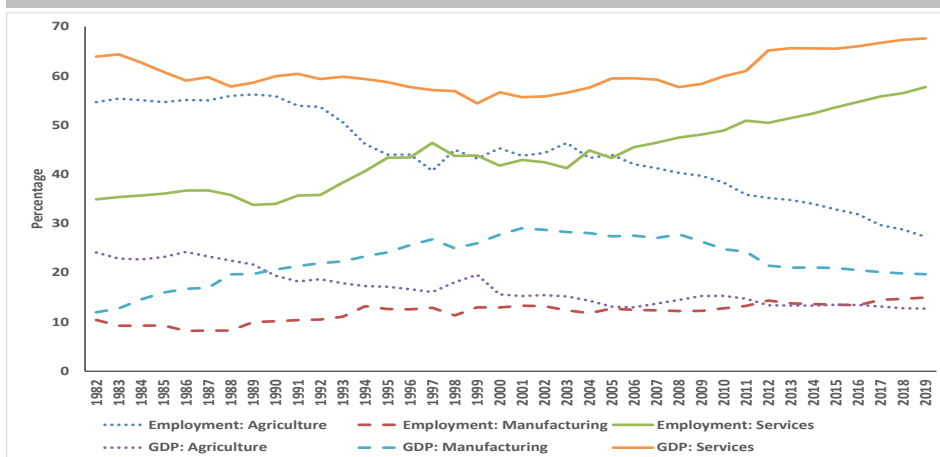
**Figure 19: China: Sectoral composition of GDP and employment, 1982–2019**



Source: Asian Development Bank, 2020.

When compared to China, the economic and demographic transformations that have taken place in Indonesia are not in line. This can be seen from changes in the structure of the economy which are not mirrored by changes in the structure of employment. In 1982, the share of GDP in the agricultural sector reached 24% with employment reaching 54.6%. Meanwhile, the role of the manufacturing industry in GDP reached 11.9% with employment reaching 10.4%. The service sector filled about 63% of GDP in 1982 while the employment of the service sector reached 34.9% of the total workforce. When compared with 2019 data, the contribution of the agricultural sector to Indonesia's GDP fell by 11.3%; while the contribution of the manufacturing and services sectors increased by 7.7% and 3.66%, respectively. In terms of employment, the share of the agricultural sector decreased by 27.3%; the manufacturing industry and services each rose 4.54% and 22.7%.

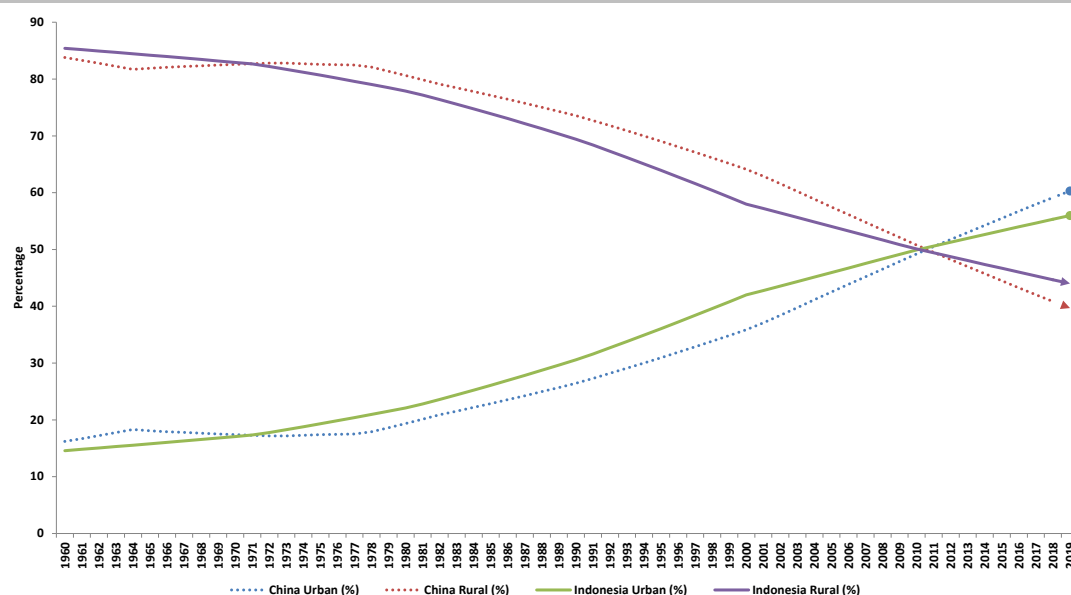
**Figure 20: Indonesia: Sectoral composition of GDP and employment, 1982–2019**



Source: Asian Development Bank, 2020.

*Second*, the demographic movement. The movement of the population from rural areas to urban areas is one indicator of changes in the structure of the economy. The World Bank (2020) revealed that the number of population movement from rural to urban areas increased in China. In 1960, the share of China's population in urban areas was 16.2%, increasing to 35.9% in 2000. During 1960-2019, the share of China's urban population increased by 44.1%. Meanwhile, the share of Indonesia's population in rural areas in 1960 reached 85.4%; decreased to 58% and fell again to 44% in 2019. The increase in labour to urban areas is in line with the development of industry and services both in China and in Indonesia.

**Figure 21: China and Indonesia: Share of rural and urban population, 1960–2019 (percentage)**



Source: Asian Development Bank, 2020.

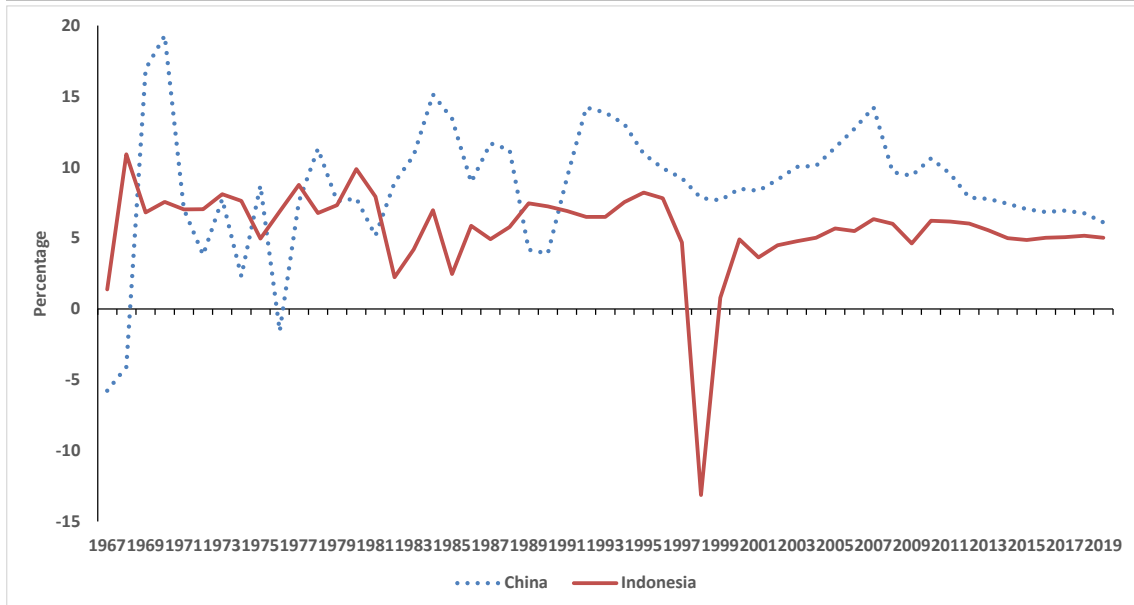
## 4.2. The Strength of Chinese Investment

China is supported by a large trade and investment sector. The combination of the two causes China's foreign exchange reserve accumulation to be the largest in the world. Foreign exchange reserves are important for the fulfilment of international transactions, such as debt payments and market intervention by the monetary authority. The share of gross capital formation in China reached 44.8% of China's GDP in 2019; while in Indonesia, it was 34.6%. A large amount of direct investment has a positive impact on employment, expansion of trade (exports), technology transfer to economic growth and structural changes. China has also developed outward foreign direct investment. In fact, the role of outward FDI has increased since the global financial crisis.

Buoyant investment has contributed significantly to China's economic growth. China is listed as one of the countries with the highest growth in recent decades. A consistent growth with an average of above 9% per year during 2000-2019 was able to increase China's per capita income. Meanwhile, Indonesia's output growth during this period averaged 5.26% per year (World Bank Data, 2020). In 2000, China's per capita income

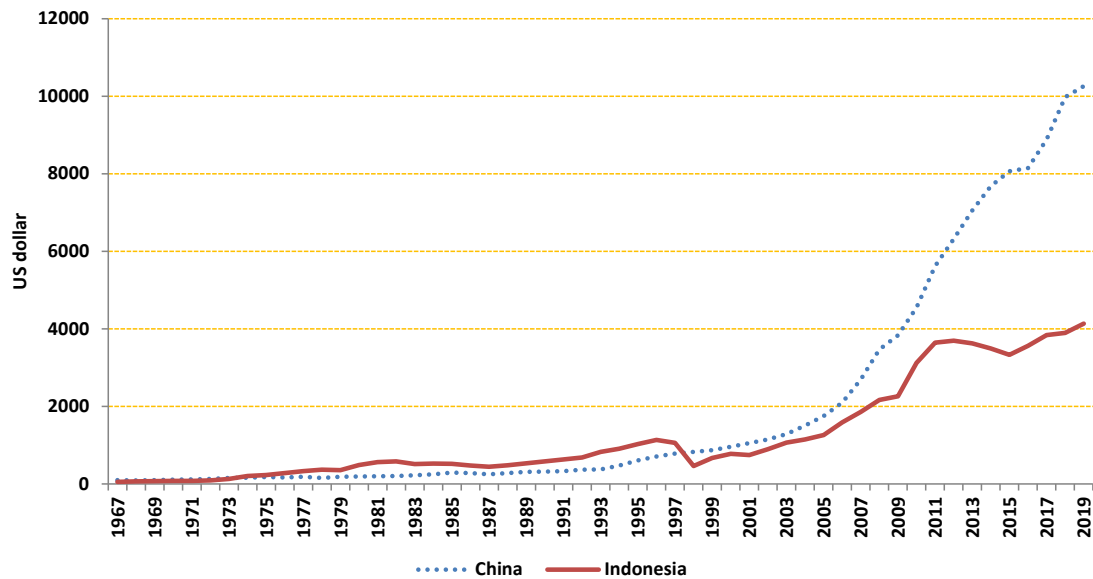
was only US \$ 959 per year, while Indonesia was at US \$ 780 per year. In 2019, China's per capita income reached US \$ 10,261 per year, while Indonesia was at US \$ 4,135 per year. During 2000-2019, China's average per capita GDP growth reached 13%, while Indonesia was 10%.

**Figure 22: China and Indonesia: annual growth of GDP, 1967-2019**



Source: World Bank Data, 2020.

**Figure 23: China and Indonesia: per capita income, 1967-2019 (US dollar)**



Source: World Bank Data, 2020.

According to Tseng and Zebregs (2002), several factors influence the very rapid increase of FDI in China, such as market size, abundant cheap labour (even though in recent years the cost of labour in China is getting more expensive), infrastructure that

is in line with the Open Economic Zones thus improving infrastructure in the regions, reducing barriers to FDI and producing policies to support an investment environment that is capable of attracting FDI, as well as providing fiscal incentives, especially for cutting income taxes and providing tax holidays.

Another measure depicting the role of FDI in China is the share of FDI to the gross capital formation. This study calculated the share of FDI on gross capital formation by gauging it from Chinese Bureau of Statistics. In 2018, the total of FDI in China was US\$138.31 billion, while gross capital formation was US\$5,999 billion (1US\$ = 6 Yuan). This means that the ratio of FDI to gross capital formation was 2.31 per cent in 2018.

**Table 7: Share of FDI on Gross Capital Formation in China**

	<b>FDI (US\$ billion)</b>	<b>Gross capital formation (GCF) (US\$ Billion)</b>	<b>FDI as a share of GCF (%)</b>
2014	128.5	4'928	2.6
2015	135.6	5'023	2.7
2016	133.7	4'955	2.7
2017	136.3	5'390	2.5
2018	138.3	5'999	2.3

*Source: Authors' calculations from Chinese Bureau of Statistics.*

Davies (2013) explains that the increase in FDI to China is in line with the reforms carried out, such as streamlining and decentralising administration to strengthening the law. The focus of FDI policy is directed so that its realisation is in line with national priorities, for example supporting the improvement of sophisticated industries, supporting innovation, supporting industrial outsourcing, and developing poor areas in the interior. FDI is geared towards supporting high-high-end manufacturing; high and new technology industry; modern services industries; new energy, energy-saving and environmental protection industries. Meanwhile, FDI which has an impact on high pollution, large energy consumption, dependence on resources, low-level and overcapacity expansion projects is limited.

The local government continues to increase the realisation of FDI and is more focused on the amount. Meanwhile, the central government is more focused on quality, not just quantity. China is already spending huge amounts on science and technology, but it has not kept pace with increasing innovation. Therefore, the government's focus is to invite FDI, especially leading international companies, to move their R&D to China. Taxes and tariffs are exempted if international companies are willing to enter China. In line with that, technological innovation is heavily emphasised in the catalogue system to attract FDI.

There are several notes that underlie the development of FDI in China, namely:

- Changes in the FDI administration regime since the implementation of the 2008 OECD Investment Review of China. China changes the policy limit of regional government authority (provincial) in the FDI decision from US \$ 100 thousand to US \$ 300 thousand. These changes are not only in the manufacturing industry

- but also in the service industry except for financial services in the telecommunications sector. For projects in the "restricted catalogue" has not changed, with a maximum level of authority in the province of US \$ 50 million.
- Incentives for investors in poor rural areas. The Chinese government drives FDI for the rural and poor areas by providing incentives for investors. For example, tariff exemptions on imported equipment for foreign investment projects in the Central and Western Regions.
  - Commitment to eliminate discrimination for foreign investors. China has also eliminated merger notification discrimination for foreign investors. One of the challenges in managing FDI in China is the hike in labour costs and the lack of skilled labour.

There are several challenges to FDI in China: (i) an increase in labour costs and the lack of skilled labour. This increase is in line with the increase in the minimum wage in the regions for workers in factories. On average, these workers are migrant workers (from other regions); (ii) increased competition from Chinese firms. The rise of China's "national champions" has resulted in the competition that foreign investors feel is tighter. European investors, for example, report that they face strong competition from international companies and Chinese competitors in the Chinese market; (iii) foreign investors' concerns over government policies which began to discriminate against foreign investment companies. A survey of European foreign investors concluded that discriminatory policies increased from 33% to 43% in 2010; (iv) investors' focus on improving the protection of intellectual property rights.

Chen (2018) explains three things that can differentiate between FDI and domestic investment. *First*, FDI accelerates the adoption of technology capable of increasing the productivity of aggregate labour and capital. *Second*, FDI enables new technologies and intangible proprietary assets that are not available in the host country. This technology can shift the production frontier to a new level. *Third*, FDI can generate a positive knowledge spill over to increase the economic growth of the host country, including for local companies. Some of the spill overs referred to are R&D, human resource quality improvement, and technical assistance to vertical industrial relations.

Theoretically, FDI firms can generate a spill over export to domestic firms through three main channels. *First*, FDI firms can reduce the firm's domestic export costs through various R&D collaborations. The R&D budget for China's GDP reached 2.15% in 2000 and increased to 2.19% in 2018. In 2018, the R&D budget was mostly for experimental development, reaching 83.3% while the rest was for applied and basic research.

**Table 8:** China: R&D expenditure, by type of R&D (percentage of GDP)

	2000	2018
Basic Research	5.2	5.5
Applied Research	17	11.1
Experimental Development	77.8	83.3

Source: China's Bureau of Statistics, 2020

*Second*, FDI potentially has a positive impact on technology transfer to domestic companies, thereby increasing productivity, competitiveness, and exports. *Third*, FDI can increase collaboration with domestic companies because it can act as a buyer for the products of domestic companies.

## 5. Lessons from China's Financial Reform for the Indonesian Economy

The strength of China's financial sector, which is the result of reforms, can be seen from several measures, such as the penetration of China's big banks which are among the top 10 in the world. China's capital market and bond market are also ranked among the best. The Chinese currency has been included in the currency basket that makes up the Special Drawing Right (SDR) at the IMF (Wang and Huang, 2018).

China's financial reform took place in four stages from 1978 to 2018. Three important things related to China's financial reform during this period (Changwen and Xiheng, 2020). *First*, the financial sector has experienced deepening. Some data show significant development of financial sector depth ratios in China. The ratio of the broad money supply (M2) to GDP jumped from 134% in 1990 to 205% and 202% in 2000 and 2018, respectively. An increase also occurred in the ratio of savings to GDP from 31.4% in 1978 to 123.5% in 1990. This indicator continued to increase to 199% in 2000 and decreased slightly in 2018 to 197%. On the loan-to-GDP ratio, it increased from 51.4% in 1978 to 99% in 1990. In 2000 and 2018, China's loan-to-GDP ratio was 146% and 151%, respectively. Borrowing figures that exceed GDP indicate that Chinese banking continues to expand overseas.

**Table 9:** Financial intermediation, by type of monetary category (percentage of GDP)

	1978	1990	2000	2018
M2/GDP	-	134.2	205.9	202.9
Deposits/GDP	31.4	123.5	199.9	197.2
Loans/GDP	51.4	99.1	146.4	151.4

Source: China's Bureau of Statistics, 2020.

*Second*, in this period of financial reform, China has succeeded in maintaining its financial stability in the long term. This is an important achievement because in the financial transformation process, there is a potential for shocks to the financial system that will adversely affect the high level of economic fluctuation. Some of the factors driving the strength of stability in China's financial sector are the high flow of foreign capital, especially FDI. Xiao and Kimball (2001) show that capital controls in China are effective enough to limit the volatility of capital outflows between countries and divert foreign capital to support economic development. Nevertheless, currently China is deeply engaged with the global economy through trade links, but it is less integrated into cross-border capital flows. According to some observers, China has now reached a development stage where financial account opening is critical for sustaining growth by increasing market discipline and efficiency in financial services, easing the transition to a new economic model, and supporting the competitiveness of Chinese companies (Asia Society, 2020).

*Third*, China has succeeded in improving the financial allocation mechanism in its financial system. This can be seen by China's achievements in accumulating savings and channelling credit, both in urban areas and in rural areas. This successful achievement of China's financial transformation is often considered a rare thing in global financial history. It is important for other developing countries who want to carry out financial transformation to learn from China.

At least three key elements account for China's successful financial transformation. *First*, China always strives to follow clear objectives in its market-oriented financial reforms and correctly adjust the rhythm of the pace and intensity of its financial system reforms. In this case, China implemented a policy of separating government authorities in commercial bank management by encouraging commercial banks to be independent in carrying out their business operations. In the process of transforming its financial system, China prefers to transform gradually using the "the financial restraint model" approach, rather than the "Big Bang Model". China chose this approach because it was able to create an inherent impetus in the financial system to create financial deepening and stability.

*Second*, China has effective mechanisms for cost-sharing and error correction in its transformation process. Financial transformation requires a lot of fiscal funds, and this limited funding often becomes an obstacle in the financial transformation process of a country. To solve this problem, China used its central bank's foreign exchange reserves and balance of assets and liabilities to cover the costs of the financial reforms. This strategy succeeded in making China carry out their financial transformation on a large scale.

*Third*, China always strives to improve financial regulation and compliance with its financial system. Such reforms to financial system regulation are essential to mitigate financial risks and keep China's financial condition stable. In this case, China has established a policy that China's financial regulators must focus on financial regulation issues only, not take care of other financial matters.

Wang and Huang (2018) found several facts about China's financial sector reform. *First*, China's financial reforms in the last four decades have indeed been able to increase quantity but are still weak in quality. Chinese authorities still maintain restrictions on financial markets, including interest rates, exchange rates and allocation of funds. *Second*, financial reform uses a double track between the state and non-state sectors. To support less efficient state-owned enterprises (SOEs), the government must step in on factor allocation and pricing, leading to a dual-track approach to liberalisation in product and factor markets. Repressive financial policies have resulted in a dual-track financial market between the formal and informal sectors. Financial repression with restrictions on interest rates (low real interest rates) in the economy will cause low public interest in saving their funds in banks, which in turn will decrease the supply of investment funds so that financial liberalisation is needed with an interest rate policy in accordance with market mechanisms.

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*Third*, the pattern of repressive financial reforms initially worked quite well as it supported strong economic growth, but now creates risks. Repressive financial policies also help maintain financial stability, as they support investor confidence, although with the consequence of moral hazard, which increases in danger from time to time.

The Central Bank of China (PBOC / People's Bank of China) has implemented macroprudential policy instruments since 2010. Along with the development of China's financial sector and encouragement of international cooperation, starting 1 January 2016, China implemented the MPA (Macro-Prudential Assessment) Framework to strengthen its financial services sector in anticipation of systemic risk (Zheng, 2018). Within the MPA framework, there are seven main categories assessed by the PBOC, namely: Capital adequacy ratios and leverage ratios; Banks' assets and liabilities; Liquidity conditions; Pricing behaviour for interest rates; Quality of assets; Cross-border financing; and Execution of credit policy. These seven categories have a certain weight for each indicator. Within the MPA framework, the banking system is the object to be regulated. The banking system in China includes banks (four state-owned banks, three policy banks, 13 joint-stock banks, one postal saving bank, and a great number of urban banks, rural banks, and foreign banks (Zheng, 2018).

With the implementation of the MPA system, China is trying to build a dual policy framework to coordinate monetary policy and financial stability so that the financial sector becomes stable. Zheng (2018) suggests that even though it has implemented MPA, in the future China still needs more comprehensive financial sector reforms such as an integrated regulatory framework, an integrated information system, and improvements to policy coordination mechanisms.

## 6. Closing: Indonesia's Macroeconomy and Financial Framework

The slowdown in Indonesia's economic growth after the commodity boom and the threat of a middle-income trap required Indonesia to transform the structure of its economy. This effort needs to be done by fixing the four main elements of sustainable economic growth in Indonesia, namely 1) economic competitiveness, especially aspects of infrastructure, human resources, technology, and institutions; 2) industry capacity and capability; 3) utilisation of the digital economy; and 4) structure and sources of financing.

Strategies to improve economic competitiveness are focused on: *First*, infrastructure development that encourages improvements in manufacturing, logistics, and support for information and communication technology to accelerate the digital economy. The fact that Indonesia's infrastructure competitiveness ranking lags far behind China's ranking shows that infrastructure development is one of the key factors in transforming the economy.

*Second*, improving the quality of skills and expertise of Indonesian human resources is a must to increase high economic growth in the long term. The government needs to make improvements and refocus on the Human Resource development strategy to

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enter the era of digitalisation. The direction is an effort to increase competitiveness in R&D, innovation, and entrepreneurial skills.<sup>4</sup>

*Third*, accelerate development in the field of digital technology to optimise the role of the digitalisation era in economic growth. The rapid growth of the digital economy in Indonesia needs to be balanced with adequate information and communication technology facilities and infrastructure to boost economic productivity. Therefore, the development of Indonesia's digital economy in the future must affect hard and soft infrastructures in a balanced manner.

*Fourth*, improving the quality of institutions needs to accelerate with a view to reducing the level of Indonesia's ICOR. Better institutions will improve the competitiveness of business facilities so that economic growth will be of higher quality because it is supported by the investment sector.

The strategy to increase industrial capacity and capability is focused on efforts to encourage export-oriented investment. Limitations of fiscal and monetary instruments can be overcome by encouraging the rapid inflow of investment both domestically and abroad which is export oriented. Indonesia has the potential of natural resources; therefore, this export-oriented strategy is necessary to ensure that the goods and services exported must have a high added value. For this strategy to be effective, it is necessary to take the following steps: 1) improve the quality of investment incentives in the industrial machinery and equipment sector. Indonesia needs to increase the share of direct investment in the machinery and equipment sector to encourage high economic growth; 2) Strategy development invites global investors who are looking for medium-small scale investment to increase domestic investment. Therefore, it is important to develop an investment incentive scheme for medium-small scale, both for domestic and foreign investors; 3) large-scale global investors should be approached bilaterally in the context of economic diplomacy.

Indonesia needs industrial upgrading, which is oriented towards high value-added activities by utilising medium and high technology. Increasing the capacity for innovation is an important supporting factor in providing a better impact on the industrial upgrading process. It is hoped that through this combination, maximum results can be obtained in the effort to migrate Indonesia to become a developed country. Furthermore, increasing the capacity for innovation requires prerequisites in the form of strengthening R&D activities that lead to experimental and applied research, investing in strengthening human resources through quality tertiary education, strengthening the quality of physical and digital infrastructure, and building an integrated innovation ecosystem between regions.

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<sup>4</sup> In the Global Talent Competitiveness Index 2019, which focuses on comparing the talent of entrepreneurial human resources and the competitiveness of a country, it is revealed that Indonesia's ranking (67) is still behind compared to other lower-middle income countries. One aspect that is lacking from Indonesia is about global knowledge skills. This global pillar of knowledge skills is Indonesia's weakest pillar where it is still ranked 94 out of 125 countries. This means that Indonesia's young talents need to improve to face global competition.

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