

# **MIDDLE-INCOME “TRAP”: THE CASE OF INDONESIA AND HUNGARY**

A2P1EB

## **INTRODUCTION**

Countries are going through economic growth and development overtime: starting from low Per Capita Income (PCI) level, through middle-PCI level, to the high-PCI level. The process of reaching high income level is varied across the world –it may occurs rapidly, as observed in East Asia countries, or sluggish, as observed in Latin America and Middle East countries that has been stuck in the middle income level for decades (Arezki et al., 2019; Melguizo et al., n.d.). Nevertheless, achieving high-income status does not guarantee a country to sustain advanced development –take Argentina for instance, which has achieved high-income status yet fell again to middle-income status in 2019 (World Bank Data Team, 2019). Middle-Income “Trap” (MIT) is a theoretical concept in which after a country grows rapidly for a sustained period of time, stagnation occurs and hinders the economy to move upward to the high-income level.

During the development stage, a country may be “trapped” between low-wage producers and highly skilled and innovative countries. It can no longer compete against lower wage countries as wage level has become relatively high, and yet it lacks human resource, capital, as well as technological advancement to catch up with innovative countries. This situation leads to productivity and growth slowdown, hence, MIT. While located in different region, given immense differences in economic environment and policies, Indonesia and Hungary seem to encounter similar problems that might lead both countries into MIT. Indonesia and Hungary are currently facing the “dilemma” of underdeveloped manufacturing sector, rising labour wage, and low level of innovation that might result in growth slowdown.

This study is aimed to observe economic performance of Indonesia and Hungary through several macroeconomic indicators, namely manufacturing sector exports, value-added, and labour earnings; R&D; country competitiveness; and GDP growth. Comparative descriptive analysis will be utilized to examine the existence of the aforementioned dilemmas of Indonesia and Hungary, which the writer perceives as risks of falling into MIT. The period of observation is 15 years, starting from 2004 to 2018. According to Ohno (2020), analysis of the MIT prevalence must be structural and comparative in order to identify difference causes and phases, as well as to suggest possible solutions for each individual case (p.1). Comparison between two countries in different region and level of development is unusual, hence unique in its nature.

## **STUDIES ON MIDDLE INCOME TRAP**

The term MIT was introduced by Gill & Kharas (2007) to explain the great challenge East Asia middle-income economies face to sustain their historically impressive growth, as well as their risk of stagnation and fail transition to productivity-driven growth. Subsequently, Ohno (2009) proposed stages of catch-up industrialization model, with a “glass ceiling” of MIT present before the stage of mastered management and technology to produce high quality goods (p.6). According

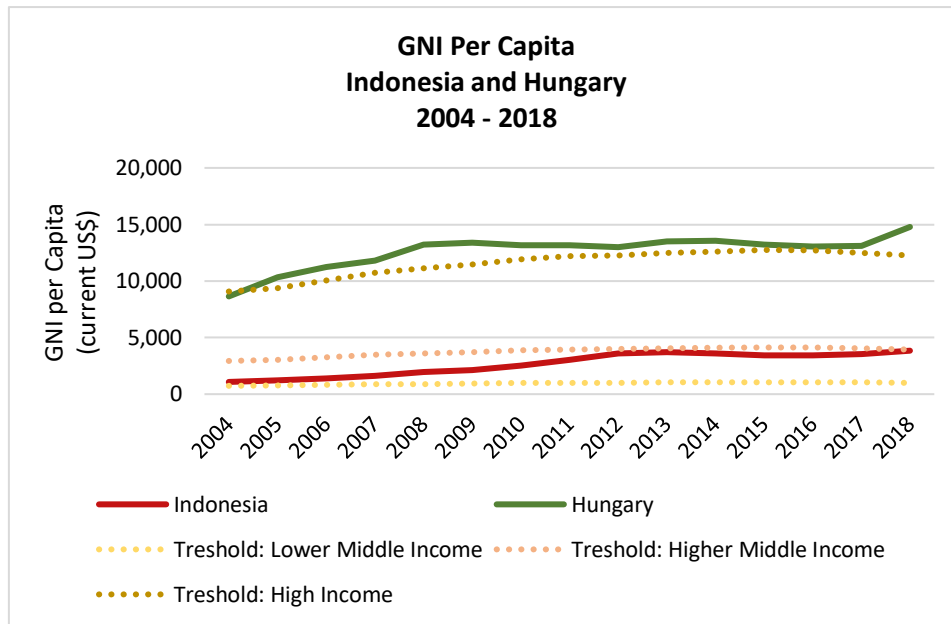
to Gill and Kharass (2015), MIT occurs when rapidly growing countries with rising wages have tried to sustain an economy based on labour-intensive manufacturing and export-led growth (Engel & Taglioni, 2017, p. 123). Jones (2016) and Kim and Park (2017) argued that middle-income growth is related to total factor productivity growth (Kharas, 2020). In addition, Aiyar, Duval, Puy, Wu, and Zhang (2018) found that growth slowdowns are more likely to occur in middle-income countries than in low-income or high-income countries (Zhao et al., 2019, p. 1462).

There are several factors explaining MIT, such as diminishing marginal returns to physical capital, exhaustion of cheap labour and imitation gains, insufficient quality of human capital, distorted incentives and misallocation of talent, lack of access to advanced infrastructure, lack of access to finance, and income inequality (Agénor, 2017, pp. 11–30). Numerous countries experienced rapid growth at their early stage of economic development, yet their further economic growth was increasingly restrained by slower pace of convergence, structural problems, and stagnant productivity growth (Lee, 2020, p. 59). Moreover, economies perceived as candidates to fall into the MIT today are no longer come from only the emerging market group –countries within upper middle-income or even high-income level are now considered to have the risk of falling into the trap.

## **COMPARATIVE STUDY ON INDONESIA AND HUNGARY ECONOMIC PERFORMANCE**

Income classification by the World Bank is based on Gross National Income (GNI) per capita current US\$ using the Atlas Method. Based on the classification, world's economies are grouped into low-income, lower middle-income, higher middle-income, and high-income groups. Currently, according to the World Bank's classification, Indonesia is belonged to lower-middle income group, whereas Hungary belonged to high income group. The volatility of Indonesia in progressing into higher income level as well as Hungary in maintaining its position in high income group constitute a foundation of this study. It raises a question whether Indonesia and Hungary are at risk of MIT.

Figure 1 exhibits GNI per capita trends of Indonesia and Hungary with regard to the income level thresholds by the World Bank. 1998 Asian Financial Crisis hit Indonesia tremendously, dragged the country down into low income economies, and took approximately six year for the country to be back to low middle-income level. Indonesia needed 58 years to be able to retain its position in lower middle-income group, as since 2004, the country is progressing steadily towards higher middle-income level. However, a study in 2016 asserted that Indonesia still need thirteen years to become a higher middle-income country –with a requirement of consistent annual GDP growth of minimum 4.5 per cent (Basri & Putra, 2016, p. 37). As for Hungary, although the country has been achieving high level of income since 2005, improvement of GNI per capita has been slow. The slow progression was exacerbated by 2008 Financial Crisis that dragged its GNI per capita level to barely above high-income threshold. GNI per capita of Hungary has been decreasing since 2009, and just recently improved significantly in 2018, moving up and away from the high-income threshold.



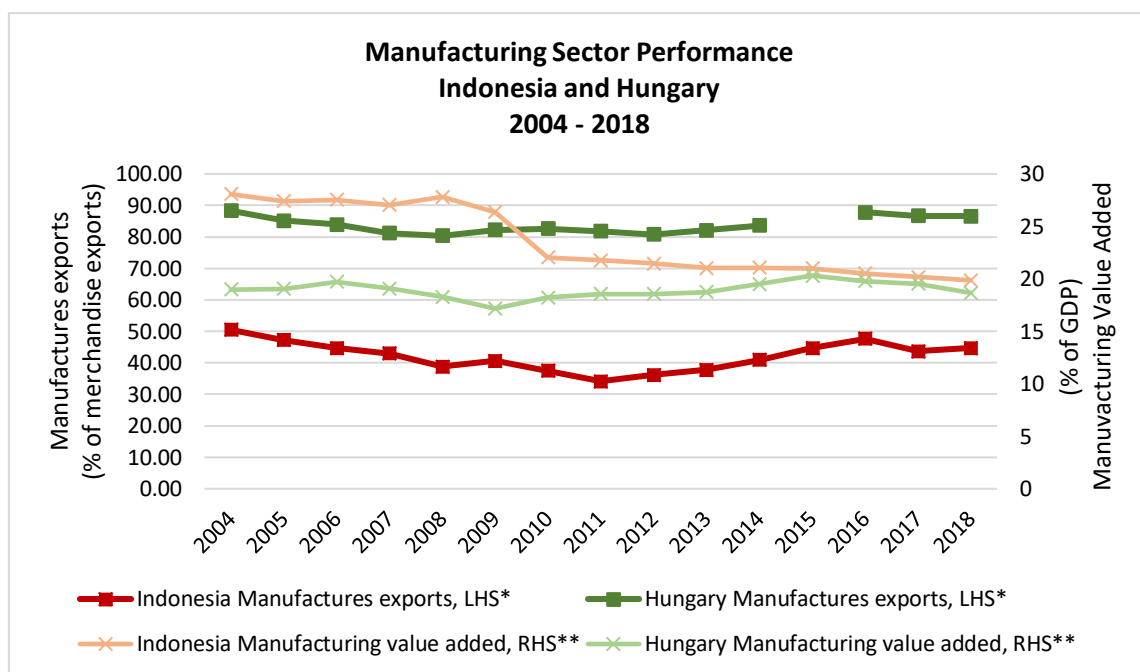
**Figure 1. GNI Per Capita of Indonesia and Hungary, 2004 - 2018**

Source: World Development Indicator (2020)

## 1. Manufacturing Sector Performance

In this study, manufacturing sector performance is analysed through export of manufactures and manufacturing sector value-added to GDP, as shown in Figure 2. Both for Indonesia and Hungary, exports of manufactures constitute the majority of merchandise exports. Indonesia's manufactures export proportion is relatively volatile in the period of 2004 to 2018. In 2004, manufactures export was 50 per cent of total merchandise exports, declined to its lowest proportion of 34 per cent in 2011, and reached 45 per cent in 2018. Beside manufactures, fuels are the second major export of Indonesia in the same period –accounted for 27 per cent of total merchandise export in average (The World Bank, 2020). On the contrary, Hungary's manufactures exports during 2004 to 2018 exports is more stable at around 80 per cent of total merchandise exports. Most of Hungary's merchandise exports are manufactures, followed by food (The World Bank, 2020).

While Indonesia records significant decrease in manufacturing value-added to GDP, in the period of 2004 to 2018, manufacturing value-added of Hungary is relatively stable. Contribution of manufacturing sector to Indonesia's GDP reached 28 per cent in 2004, and declined to 18 per cent in 2018. Declining value-added of manufacturing sector may indicate manufacturing sector of Indonesia is losing its competence to other manufacturing countries. As for Hungary, manufacturing sector value-added to GDP is more stable at around 18 per cent of the GDP, and had reached its highest proportion of 20 per cent in 2015. From Figure 2, it can be seen that manufacturing sector both in Indonesia and Hungary generate relatively low value-added to GDP.

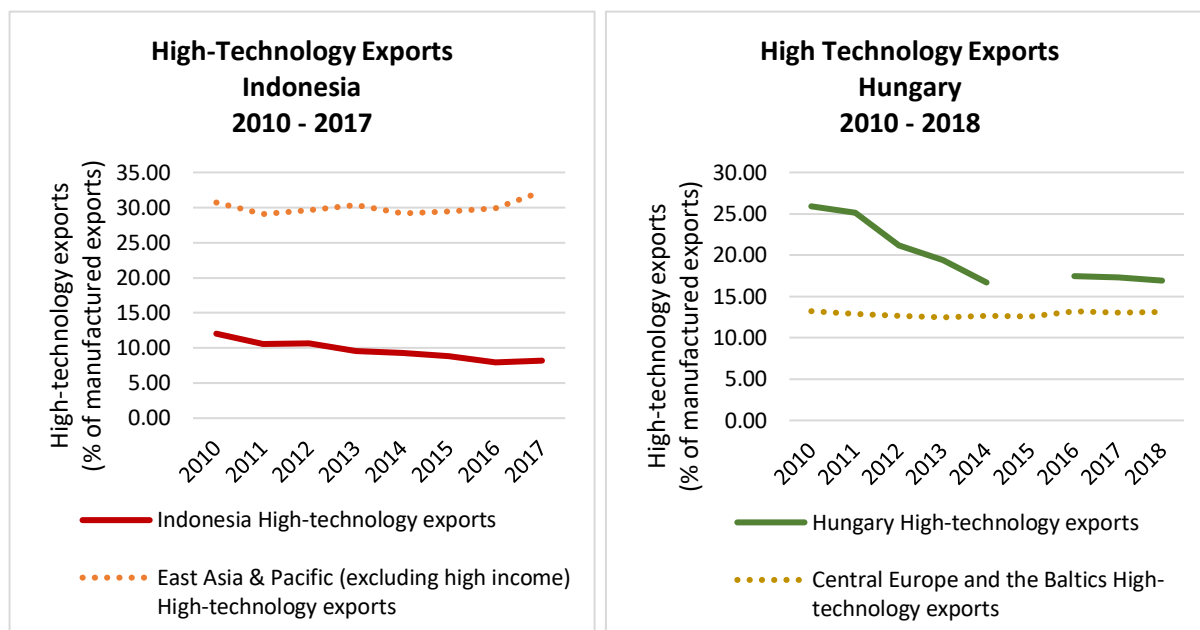


Note: data of Hungary manufactures export of 2015 is not provided. | \*LHS: Left hand-side \*\*RHS: Right hand-side

**Figure 2. Manufacturing Sector Performance of Indonesia and Hungary, 2004 - 2018**

Source: World Development Indicator (2020)

According to Ohno (2009), MIT emerges as the manufacturing sector of a country failed to move up to the stage of skill and technology internalization to produce high quality products. Figure 3 depicts high-technology exports of Indonesia and Hungary. Both Indonesia's and Hungary's high technology exports show declining trend in the period of 2010 to 2018. Indonesia is still lacking in the export of high technology products compared to countries in East Asia and Pacific (EAP), even when high income economies in the region are excluded. The average of high-technology exports of Indonesia during 2010 to 2018 is 10 per cent from its total merchandise export, while low- and middle-income EAP countries record an average of 30 per cent. In contrast, Hungary's high-technology exports are higher than its counterparts in Central Europe and Baltics (CEB). The average of high-technology exports of Hungary during 2010 to 2018 is 20 per cent from its total merchandise export, while CEB countries record an average of 13 per cent. Nevertheless, Hungary has been facing significant decrease in high-technology export from 2010.



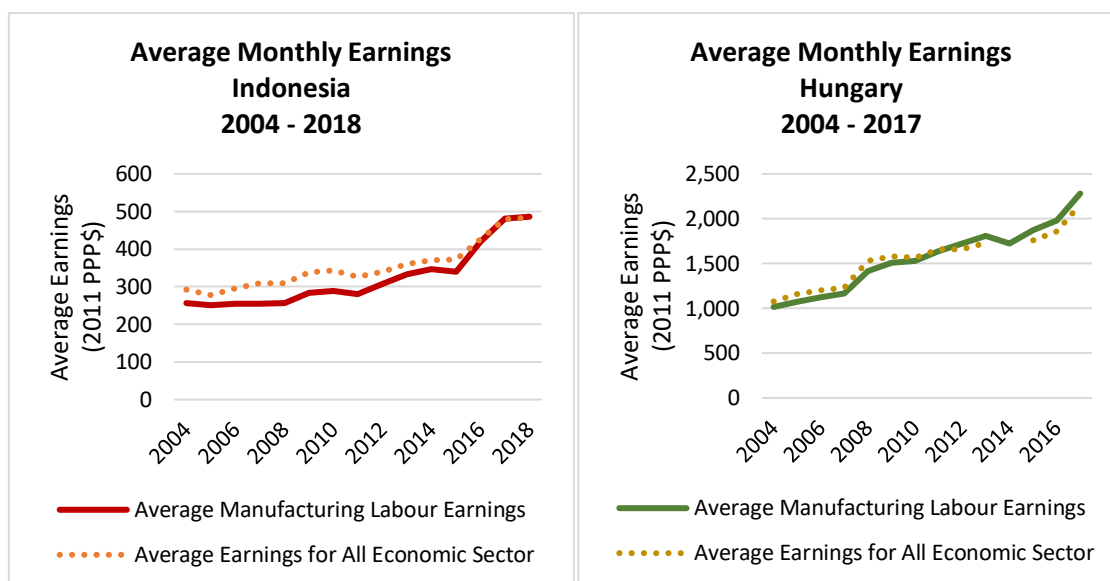
Note: data of Hungary high-technology exports of 2015 is not provided.

**Figure 3. High-technology Exports of Indonesia and Hungary, 2010 - 2018**

Source: World Development Indicator (2020)

## 2. Labour Earnings in Manufacturing Sector

Figure 4 shows the trend in Indonesia's and Hungary's average earnings in manufacturing sector, as well as its comparison with the average earnings of all economic sectors. From the figure, it can be seen that both countries experience rising wage rate in all economic sector, including manufacturing. An interesting situation take place during 2004 to 2018: the average monthly earnings in manufacturing was below the average monthly earnings of all economic sector, then significantly increase and surpass the average earnings of all economic sector. Average monthly earnings of manufacturing labour in Indonesia is currently about one-fifth of Hungary. Increasing wage rate of manufacturing labour in Indonesia and Hungary, when not accompanied by skills and technologies required to produce products with higher value-added, would increase the risk of both countries to fall into the MIT.



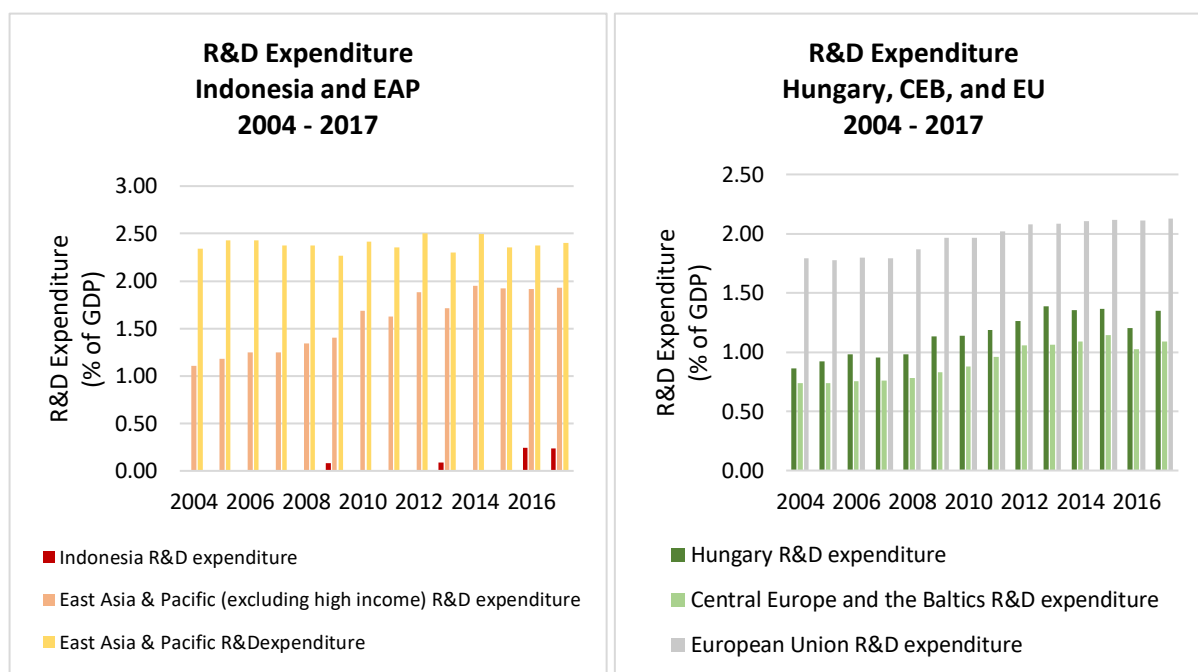
**Figure 4. Average Monthly Earnings in Manufacture Sector of Indonesia and Hungary, 2004 - 2018**

Source: ILOstat (2020)

### 3. Research and Development (R&D)

R&D activity is crucial to stimulate innovation, particularly in production of higher value-added products. In order to achieve and sustain high income level, labour-intensive production should be shifted to knowledge and innovation-driven production, generating innovation-driven growth (Shah, 2017). However, as seen in Figure 5, R&D expenditure of Indonesia and Hungary are relatively low in comparison to countries in their region. Indonesia's R&D expenditure tend to increase during the period of 2004 to 2017. Yet, the share is far below average share of R&D expenditure in EAP countries, even when high income economies in the region are excluded. In 2017, Indonesia's R&D expenditure was only 0.3 per cent, while in low- and middle-income EAP it was 1.9 per cent, in comparison to 2.4 percent average of all EAP countries. Similarly, Hungary's R&D expenditure tend to increase during the period of 2004 to 2017. Compared to CEB countries, R&D expenditure of Hungary is slightly higher, although when compared to EU countries, Hungary's R&D expenditure is much lower. In 2017, Hungary's R&D expenditure was 1.3 per cent, while in CEB it was 1.1 per cent, in comparison to 2.1 percent average of EU.

Another indicator that is interesting to observe, with regard to innovation, is private sector's expenditure on R&D. In Indonesia, firms that spend on R&D in 2015 accounted for only 1.9 per cent of all firms (The World Bank, 2020). The number might be higher in Hungary, as in 2013 firms that spend on R&D accounted for 6.9 per cent of all firms (The World Bank, 2020). Still, from the data, it can be concluded that the share of firms that spent on R&D are diminutive. Small proportion of firms that spent of R&D certainly result in lower innovation activity in the countries.



**Figure 5. R&D Expenditure of Indonesia and Hungary, 2004 - 2017**

Source: World Development Indicator (2020)

#### 4. Country Competitiveness

Country's competitiveness can be compared through the Global Competitiveness Index (GCI) score, as shown in Table 1. In 2018, World Economic Forum release a new version GCI, GCI 4.0, which incorporates the notion of fourth industrial revolution to the assessment of countries' competitiveness –emphasising human capital, innovation, resilience, and agility. Out of 100, the score of Indonesia and Hungary are close to each other: 64,9 for Indonesia and 64,3 for Hungary. Among ASEAN countries, Indonesia rank fourth (45<sup>th</sup>) behind Singapore (2<sup>nd</sup>), Malaysia (25<sup>th</sup>) and Thailand (38<sup>th</sup>). Indonesia enjoys the benefits of its enormous size of market and its status as the world's most connected emerging economies. Even so, it lacks on the pillar of infrastructure, health, and innovation capability –with R&D activities particularly ranks among the lowest, with “R&D expenditure” indicator ranks 112<sup>th</sup> out of 140 countries. Among EU countries, Hungary ranked among the lowest (48<sup>th</sup>), just below Bulgaria (51<sup>st</sup>), Romania (52<sup>nd</sup>), and Croatia (68<sup>th</sup>). Hungary has its highest rank on infrastructure, while lacking in product market, labour market, and business dynamism –in particular, “Ease of finding skilled employees” indicator of Hungary ranked 138<sup>th</sup> out of 140 countries (Virovacz, 2018).

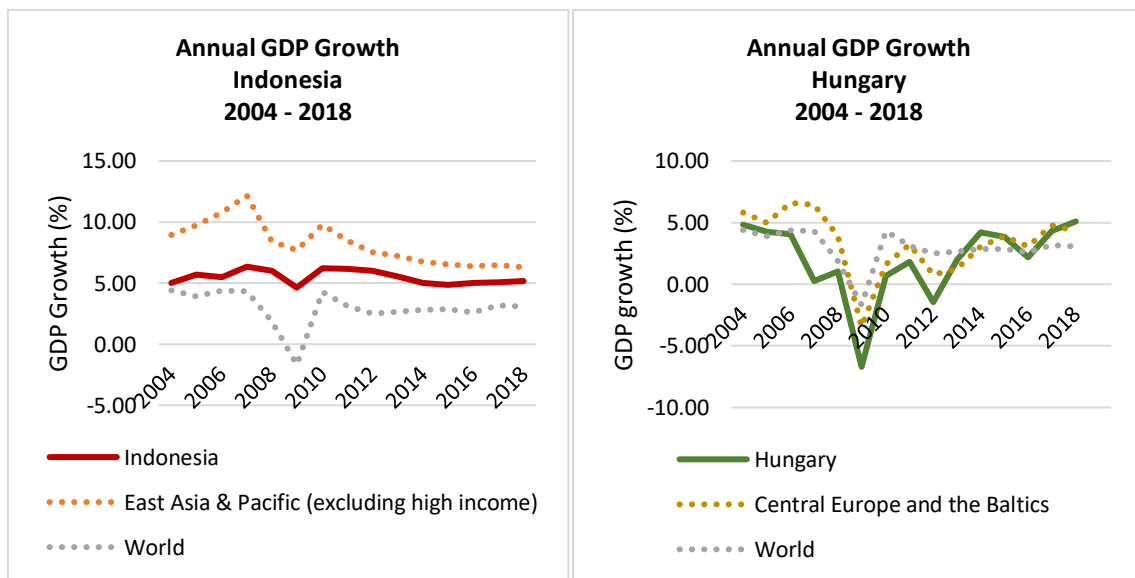
**Table 1. Global Competitiveness Index 4.0 2018, Indonesia and Hungary**

	Score	Rank
<i>Indonesia</i>	64,9	45
<i>Hungary</i>	64,3	48

Source: World Economic Forum (2018)

## 5. GDP Growth

Figure 6 represents GDP growth rate of Indonesia and Hungary in the period of 2004 to 2018. Indonesia's GDP growth rate is higher than the world's average, yet considerably lower than low- and middle-income EAP countries' average growth. There are two periods of which Indonesia underwent growth decline –once during global financial crisis in 2009, and once after Indonesia's commodity boom ended in 2012. After 2012, GDP growth of Indonesia tend to be stable around 5 per cent. Nevertheless, with its current growth rate, Indonesia is being left behind the region's dynamic economies and needs measures to catch up in terms of GDP growth rate. In the other side, GDP growth of Hungary is highly fluctuating in the period of 2004 to 2018. After declining sharply during 2004 to 2009, Hungary's GDP growth tend to increase although fluctuations still present. Growth of Hungary's GDP is mainly fostered by EU fund (Keszthelyi, 2017). According Csath (2019), even among Visegrad countries, Hungary experienced the most sluggish catch-up process. Nonetheless, in 2018, GDP growth of Hungary reached 5 per cent, higher than the world's as well as CEB countries' average growth rate.



**Figure 6. Annual GDP Growth of Indonesia and Hungary, 2004 - 2018**

Source: World Development Indicator (2020)

## CONCLUSION AND RECOMMENDATION

The concept of MIT is a useful instrument in analysing growth dynamics of developing countries, with regards to sustainable long-run economic growth. This study is aimed to observe economic performance of Indonesia and Hungary through several macroeconomic indicators, which the writer perceives as risks of the countries of MIT occurrence. Currently, according to World Bank's classification, Indonesia is belonged to lower-middle income group, whereas Hungary belonged to high income group. However, both Indonesia and Hungary show slow progression in improvement of GNI per capita –for Indonesia to achieve higher middle-income status and for Hungary to move up from high-income level threshold.

With regard to manufacturing sector performance, manufactures export in both countries constitute the majority of merchandise export in both Indonesia and Hungary. However,



contribution of the sector to GDP is relatively low. As for high technology exports, both Indonesia and Hungary show declining trend, although Hungary records higher high-technology export than CEB average while Indonesia accounts lower high-technology export than EAP average. Labour earnings in Indonesia and Hungary exhibit escalation during the period of observation, surpassing the average earnings for all economic sector. Unfortunately, higher earnings in manufacturing sector is not followed by improvement of R&D sector. Both countries record low R&D expenditure in comparison to countries in their region –while Indonesia spent much lower in R&D than EAP countries, Hungary exhibit slightly higher performance than CEB countries yet still left behind EU.

In countries' competitiveness, Indonesia lacks on the pillar of infrastructure, health, and innovation capability, with R&D activities particularly ranks among the lowest. Hungary, in other side, lacks in product market, labour market, and business dynamism, with ease of finding skilled employees particularly ranks among the lowest. Lastly, looking at GDP growth of both countries, GDP growth rate is currently higher than the world's average. Indonesia's GDP growth rate is declining after the end of commodity boom period, considerably lower than low- and middle-income EAP countries' average growth. Hungary experiences fluctuations on its growth, highly depending on the EU fund. From the comparative study on Indonesia and Hungary economic performance, it can be concluded that dilemmas of manufacturing sector declining performance, rising labour wage, and low level of innovation are present in both Indonesia and Hungary. However, growth rates of both countries are considerably high above the world's average, although they are in need to accelerate catch up to their region in terms of GDP growth.

Based on the comparative study of Indonesia and Hungary economic performance, in order to avoid occurrence of MIT in both countries, government of both countries should focus on several matters. First, both Indonesia and Hungary need to shift from capital and labour-intensive production to knowledge and innovation-driven production that generate higher value-added. Innovation stimulation policy is one crucial aspect to implement, particularly to increase number of firms focusing on R&D activities. For Indonesia, infrastructure which is the enabling environment for country's competitiveness should be improved, mainly in the form road connectivity. Quality of human capital in terms of health condition should also be a concern for Indonesia. For Hungary, labour market rigidity should be reduced, and business dynamism should be improved. Citing Agénor (2017), structural reforms are required to promote technological catch up, facilitate structural transformation into higher productivity sectors and new activities, and better allocate existing resources in the economy, hence, avoiding the MIT (p.37).

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