

Study of The Development of Manufacturing Industries Sector in Indonesia

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Abstract. Now the world economy is in confusion under the Pandemic, Wuhan virus or Covid-19, but before this deadly Pandemic, the world economy had been already in long term stagnation. And now the end of 'Globalization and Neo Liberalism' is near at hand. Actually the USA has given up 'free trade'.

1. Introduction

Now the world economy is in confusion under the Pandemic, Wuhan virus or Covid-19, but before this deadly Pandemic, the world economy had been already in long term stagnation [1]. And now the end of 'Globalization and Neo Liberalism' is near at hand. Actually the USA has given up 'free trade'.

2. Result and Discussion

2.1 Historical view of 'Globalization and Neo-liberalism'.

Historically the world economy had been severely divided between advanced countries and less developed countries. However, recently the position of advanced countries had declined significantly [2][3]. The common people of the advanced economies are facing not only the deadly Pandemic but also high unemployment, low wage and poverty [4].

During this decade, especially since Leman Shock in 2009, advanced countries have suffered low economic growth, or stagnation. On the other hand less developed countries have recorded significant growth [5][6]. After 2009, Leman Shock in the USA, the growth of advanced countries had suffered low growth rate around 1% level or less and cannot see any sign of higher growth, especially western Europe and Japan. (Around+-1%.) The USA had maintained +2%.

The common people of these countries are anticipating to terminate 'Globalization and Neo-liberalism'. The main cause is 'free trade system', which have been destroying the economy of advanced countries. Table 1 shows uneven growth of GDP (Gross Domestic Production). Western European countries and Japan, GDP growth became nearly 1 per cent before Pandemic. In this year, 2020, OECD estimates that advanced countries will experience -5~-10% growth. Almost all countries may not recover

in the near future. On the other hand especially China had jumped up greatly and some other countries, such as India and Indonesia also recorded higher growth, more than 5 %.

Table 1 GDP (real) growth, %

	2007	2009	2010	2015	2018	2019p	2020p
UK, 2015	2.36	-4.85	1.70	2.40	1.30	1.50	-10.1
Germany, 2010	3.37	-5.57	3.95	1.50	1.30	0.60	-5.4
Netherlands, 2010	3.70	-3.77	1.33	2.00	2.40	1.70	
France, 2010	2.36	-2.88	1.89	1.10	1.80	1.50	-9.5
Italy, 2010	1.33	-5.53	4.65	0.80	0.80	0.30	-10.5
Spain, 2010	3.77	-3.57	0.01	3.80	2.40	2.00	
USA, 2009	1.78	-2.78	2.53	3.10	3.00	2.20	-7.8
Japan, 2011	1.65	-5.42	4.19	1.20	0.30	0.70	-5.8
Korea, 2010	5.46	0.71	6.50	2.80	2.70	2.00	-1.0
Canada, 2007	2.06	-2.95	3.08	0.70	2.00	1.70	-5.8
Mexico, 2013	2.28	-5.07	5.13	3.30	2.10	-0.10	-10.2
China, 2010	14.23	9.40	10.64	6.90	6.60	6.10	1.8
Russia, 2016	8.54	-7.82	4.50	-2.00	2.50	1.30	-7.3
India, 2011-12	9.80	8.48	10.26	7.80	6.70	4.2	- 10.2
Indonesia, 2010	6.35	4.70	6.38	4.90	5.20	5.00	-3.0

Source: OECD statistics; the world economy 2020.

2.2. Nominal GDP share of the world

The Nominal GDP share of the advanced countries was 81.3% in 1995, but in 2018, its share declined to 60.3%. The most miserable country is Japan. Japanese share was in 1995, 17.6%, but in 2018, only 5.6 %, less than one third. Euro Area had lost their share too. Euro area share was in 1995, 24.6%, but in 2018 it declined to 16.1%. Even Germany had lost its share from 8.6% to 4.6% during the same term. Other countries had lost 1~2 %.

The United State of America had not lost so much, 24.6 in 1995 and 24.2% in 2018. But the USA had once over 50% share soon after WWII. China, on the contrary has gained amazingly, in 1995 Chinese share was only 2.4% and in 2018 jumped up to 15.8%, No. 2 in the world, 10% bigger than Japan. But Japan has maintained the position of No. 3 in the world. Germany is No.4. (NIES countries, South Korea, Taiwan and Singapore had increased only slightly. From 3.4% to 3.5%.) ASEAN 5 countries has so far increased from 2.0% to 2.7%. Indonesia jumped from 0.8% to 1.2%, biggest gain in ASEAN. Recently Vietnam is developing rapidly from 0.1% to 0.3%, but Vietnam is still low level. India is also expanding

its GDP share in 1995, 1.2%, to 3.2% in 2018 by rapid increase of manufacturing industry. Indian government is now making ambitious 5 years program to expand iPhone manufacturing industries. Actually Apple group are shifting their 8 factories from China to India.

Table 2 World Nominal GDP share.

	1995	2000	2005	2010	2015	2018
Advanced Nations	81.3	79.1	76.2	65.5	60.6	60.3
USA	24.6	30.3	27.4	22.7	24.4	24.2
Japan	17.6	14.4	10.0	8.6	5.9	5.9
UK	4.3	4.9	5.3	3.7	3.9	3.3
Germany	8.6	5.8	6.0	5.2	4.5	4.7
France	5.2	4.0	4.6	4.0	3.3	3.3
2.Euro	24.6	19.2	22.2	19.2	15.7	16.1
3.Nies	3.4	3.4	3.4	3	3.4	3.5
Korea	1.8	1.7	1.9	1.7	1.9	1.9
Taiwan	0.9	1.0	0.8	0.7	0.7	0.7
Hong Kong	0.5	0.5	0.4	0.3	0.4	0.4
Singapore	0.3	0.3	0.3	0.4	0.4	0.4
China	2.4	3.6	4.6	9.2	15.1	15.8
India	1.2	1.4	1.8	2.6	2.8	3.2
ASEAN5	2.0	1.5	1.7	2.5	2.7	2.9
Indonesia	0.8	0.5	0.7	1.1	1.2	1.2
Thailand	0.5	0.4	0.4	0.5	0.5	0.6
Malaysia	0.3	0.3	0.3	0.4	0.4	0.4
Philippines	0.3	0.2	0.2	0.3	0.4	0.4
Vietnam	0.1	0.1	0.1	0.2	0.3	0.3
Russia	1.1	0.8	1.7	2.5	1.8	1.9
World Total	100	100	100	100	100	100

During 2001 and 2008, in many countries, Per head GDP so far increased. However after 2008, Leman Shock, Per head GDP of advanced countries had not increased, excluding the USA, On the other hand, less developed countries well increased. The USA increased recently, especially after Trump administration. His major policy was 'America First, or strong America again' and he began to attack

China and started decoupling policy. UK has decided to separate from EU to escape 'free trade' regime. China, GDP had jumped up from 2,645 in 2007 to 9,608 in 2018, nearly 3.6 times bigger in 11 years.

In India jumped from 989 US\$ to 2,036 US\$ more than double in the same term. In Indonesia also nearly double in the same period, from 1,961 US\$ to 3,871 US\$. However living conditions of the common people of these countries have not improved so much, because income level is still low. (About China). The economic strategy of China had been to invite and opened the gate for foreign manufacturing companies, such as Japan, USA, Germany, Taiwan and S. Korea. As the result China increased its production capacity and exports [7], [8].

However Chinese people did not become rich. Recently Chinese prime minister, **Li Keqiang** revealed that more than 600 million people's monthly income is only 1,000 Renminbi, nearly equal 140 US\$. The majority people of China remain poor. On the other hand high officials of Communist Party became very rich and transferred their money to the USA and Switzerland.

2.3. The result of neo-liberalism and globalization

In the advanced countries, income of common people relatively decreased and consumption of household has been squeezed. That is the cause of long term stagnation, before 'Pandemic disaster'.

Gross Domestic Production (GDP) is explained by following equation.;

$$\text{Production} = \text{Investment} + \text{Consumption} + \text{Exports} - \text{Imports} + (-)\text{stock}$$

If imports increase, GDP will decrease. If consumption will decrease, GDP will decrease too.

If investment increases, GDP will increase, but if consumption will not change, no capitalist would not invest. Consumption is the key of advanced countries. If they can increase export, investment would be justified.

What is the main cause of stagnation of the advanced countries?

The first factor is low priced imports. The 2nd factor is lower wage for its workers. The majority of people cannot consume much, due to lower income. This is the cause of low GDP growth of the advanced countries. So, the advanced countries had been in stagnation, before Pandemic.

2.4. New movement of capital of advanced countries. After the end of current big recession of the world economy.

- Now is the last stage of 'Neo Liberalism' and 'Globalization'. Neo Liberalism brought the inequality of people of the advanced countries. Majority of people are getting poorer and miserable. Only a few percent rich people dominate majority of the national wealth. Since the end of 1970s, neo-liberalism began to dominate world economy.

Thatcherism in Britain, and Reganomics in the USA. Neo-liberalism policy had appeared as the solution of stagflation (stagnation and inflation).

The basic policy and philosophy of Neo-liberalism

- 1) Small government, less tax from rich people. And privatization was promoted.
- 2) Low wage for working people, and less social welfare for common people.
- 3) Free import from less-developed countries.
- 4) Pressure to the trade-unions.

5) Avoiding longer term investment, especially manufacturing industries with large investment but promoted development of big finance companies. Monetarism was advocated. The financial capital (major banks) of the USA now dominates world financial economy. So the money was powered into stock market, 2 or 4 times larger than GDP, which was the cause of 'bubble economy', Leman Shock in 2009 and current situation of 2020 [8], [9].

- The effect of 'free trade' had been so severe in the advanced countries and began to counter attack. China has been the biggest beneficiary of the globalization, or free trade and became the No. 2 economy of the world. However, Chinese Government recently became aggressive and got illusion that they can dominate the whole world. "One band one road" policy is the typical manifest of China. But the conflict with the USA and other advanced countries became apparent and the USA began to counter attack against China. Trump government now started decoupling policy with China, and the USA started to establish the alternative source of imports.

In 2019, the total deficit of Balance of payment of the USA was 480.2 billion US\$. In 2019, the USA decreased import from China 12.7%. USA trade deficit with China was 419.6 billion\$ in 2018 and 344.9 billion\$ in 2019.(Annex Table 1 & 2).

- Structural change of the world economy.
In future, after the end of the Pandemic (Wuhan virus), the world economy will be less globalized than before. Even though, economic recovery may be slow, the economic structure also will be changed. Major banks will lose their power, after burst of bubble [9]–[11].

In the past, almost all the governments of the advanced countries had supported the free trade systems, but now these countries have to establish some barriers to trade and re-establish some portion of manufacturing industries. Recently president Trump is insisting US companies should relocate factories from China. From semiconductors makers to auto-parts producers, they are recognizing that existing production networks are not stable and risky. Especially concentrating on China is very dangerous, because China intends to control the world economy. However the USA understands that if all of the factories go back to the USA, they may face difficulty, because the wage level of American workers is still higher and the USA had lost many of its manufacturing factories. So Trump suggests they should 'relocate' to the safer and friendly countries. Now is the chance the global capitalism will be 'rebalanced'. Less developed countries have good opportunity to introduce more manufacturing industries now. India, Vietnam and possibly Indonesia have started their manufacturing strategy. Indonesia government is arranging good investment environment. Especially Indonesia will have good opportunity, because Indonesia has plenty of good working force and natural resources. Indonesia has some experience of manufacturing industries, such as cloth making, steel making, automobile assembling and electronics.

- After the end of current big recession of the world economy.
Advanced countries, under the restriction of free trade, the working class will get more jobs and unemployment ratio will be improved, which means that every advanced country will decrease imports and re-start their manufacturing daily needs products. In less developed countries manufacturing industries will develop by using FDI (Foreign Direct Investment). But foreign companies with high technology will be more selective to invest in these countries. Foreign companies will request better environment for investment. The request of foreign companies to the

less developed countries. To the government; Clean, transparent and efficient administration, which are necessary to improve management cost, in case of Indonesia, management cost has been relatively high and time consuming. To the employees : 1) Manufacturing skill is requested to make better quality of products, but these advanced skills will be acquired on the job training (OJT), 2) Skill of communication: English language and the basic skill of computer and internet, 3) Longer time employment: Workers can acquire working knowhow and skill of manufacturing through longer term working experience.

2.5. Merit of manufacturing compared with agriculture

Income is of manufacturing industries usually higher than that of agriculture, owing to the difference of productivity.

According to experience, the difference of productivity between manufacturing and agriculture would be more than three times. In case of Thailand, the difference is 8 times. The development of manufacturing industries would affect the agriculture section, and the income of farmers would be improved following manufacturing development.

But agriculture is very important in Indonesia. Agriculture sector should increase productivity and diversify its products. Village life is also very important for human being. We can live peacefully in village and with large family.

Table 3. Agriculture and Manufacturing in Indonesia

		2000		2010		2015		2018
Agriculture	Labour(1000)	40,677		41,495		37,750		35,703
	Output,BilRp	216.8		956.1		1,555.2		1,900.3
	1000Rp/head	5.330	100	23,041	100	41,197	100	53,225
Manufactrng	Labour(1000)	11,6420		13,824		15,621		18,251
	Output,BilRp	385.6		1,512.8		2,418.9		2,947.3
	1000Rp/head	33,121	621	109,433	475	154,849	376	161,487
(Source) Key Indicators		2019; ADB						

1) Economic structure of Indonesia

For these years, the structure of GDP has not changed so much in Indonesia. The agricultural sector has not changed, the industrial sector decreased and the service sector increased. However much of service sector provided 'informal jobs' to workers. Per head production, 'information' is biggest.

Table 4. GDP of Indonesia

1. GDP(current price) %	2000	2005	2010	2015	2017	2018
Agriculture	15.6	13.1	14.3	13.9	13.7	13.3
Industries	45.9	46.5	43.9	41.3	41	41.4

Services	38.5	40.3	41.8	44.7	45.4	45.2
2.Output by sector (million)	2000	2005	2010	2015	2017	2018
Agriculture	216,800	364,200	956,100	1,555,200	1,787,300	1,900,300
Manufacturing	385,600	760,400	1,512,800	2,418,900	2,739,700	2,947,300
Information	18,300	70,400	256,000	406,000	513,700	559,100
Labor Force (1000)						
Agriculture	40,677	41,310	41,495	37,750	35,925	35,703
Manufacturing	11,642	11,953	13,824	15,538	17,559	18,251
Information				541	819	895
Agriculture(Million Rp/head)	5.330	8.816	23.041	41.197	49.751	53.225
Manufacturing	33.121	63.616	109.433	155.676	156.028	161.487
Information				750.462	627.228	624.693

Many foreign manufacturing companies (US, Japanese, Taiwanese etc.) will move to Indonesia sooner or later, because Indonesia has many good work-force and they can acquire technical skills on the job. As the result, Indonesia can develop manufacturing industries considerably and at least can substitute imports of low technology products from China.

2) What Indonesian can do in manufacturing industries?

Assembling industries: clothing, apparel, electronics, PC, iPhone. Auto parts, battery for automobile, electric bicycle, Compact passenger automobiles, EV cars.

2.6. Trade between Indonesia and China.

Indonesia can replace Chinese imports easily. Indonesia imports manufacturing goods from China, and exports mainly the primary products and natural resources. Manufacturing goods are assembled goods with low technology, which will be easily replaced by Indonesian workers. In 2019, Indonesia imported from China, 45,790 million US\$, and exported to China, 34,060 million US\$, and trade imbalance with China was 11,729 million US\$. The major imported items from China, are 'machineries and textiles and base metals. (Table 5-1 &2). Indonesia exports to China mainly natural resources, mineral ore, pulp and palm oil (recently increased steel).

If Indonesia can establish manufacturing industries, Indonesia can export clothing, sports shoes, auto-parts, personal computers and iPhones to the USA and other countries, because the USA wants to change its supply source from China to other countries.

Table 5-1) Indonesian Imports from China (million US\$)

	2011	2018	2019	19/18
VI Chemicals, fertilizers	2,552	4,196	3,849	-8.3

VII	Plastics, rubber	967	1,961	2,168	10.6
XI	Textile, clothing, silk	3,292	5,063	5,091	0.6
XIII	Stone, glass, ceramic	465	975	2,047	109.9
XV	Base metals	2,805	6,011	5,995	-0.3
72	Iron & Steel	828	2,194	2,049	-6.6
XVI	Machinery, Electronics	9,909	16,157	17,543	8.6
84	Machinery & parts	5,584	7,974	8,721	9.4
85	Electrical machinery, parts	4,325	8,182	8,822	7.8
XVII	Vehicles, aircraft, vessels	1,598	1,867	1,807	-3.2
XVIII	Optical, clocks, musical instr	1,155	1,124	1,208	7.5
	Total	23,555	38,851	41,020	5.6

Table 5-2) Export from Indonesia to China (mil US\$)

		2011	2018	2019	19/18	19/11
III	Animal, vegetable oil	3,553	3,528	3,950	12.0	11.2
V	Mineral, ores, oils	16,530	13,977	13,362	-4.4	-19.2
VI	Chemicals, fertilizers	2,214	2,534	2,449	-3.4	10.6
X	Pulp, paper	1,382	2,968	2,709	-8.7	96.0
XI	Textile, clothing, silk	478	935	943	0.8	97.3
XII	Foot-ware, umbrellas	120	670	814	21.5	577.1
XV	Base metals	837	3,600	3,989	10.8	376.6
72	Iron & Steel	10	2,932	3,156	7.6	32,115.2
XVI	Machinery, Electronics	2,239	1,858	1,790	-3.6	20.0
84	Machinery & parts	798	381	475	24.9	-40.5
85	Electrical machinery, parts	1,440	1,477	1,314	-11.0	--8.7
	Total	27,353	30,071	30,005	-0.2	9.7

(Source; China Trade Statistics)

2.7. The problems of Indonesia from the foreign companies' view point. Indonesia has broad room for improvement

- Inefficiency of government administration, which is the cause of corruption and high cost of management.
- Non-tariff barriers. (The special standard of Indonesia, different from foreign standard).
- This is what Japanese manufacturing companies are often suffering.
- Import tax; in case foreign companies for import materials, machines, they must pay their part of income tax beforehand. Tax system is complicated and sometimes the tax will be refunded much later, after hard negotiation with government officials.)
- Fair treatment for foreign companies and local companies.
- Indonesian government should increase 'vocational school', like Thailand. Younger generation needs education of basic manufacturing skill and internet. In Indonesia, 40% of the primary

education students will get better jobs. They must be given more education of basic skill , know-how, computer knowledge and English.

- The students will support the development of manufacturing and communication. In Thailand these graduates of vocational schools are supporting manufacturing industries such as automobile assembling, auto-parts making and machinery factories.
- The government has to increase public investment in rural infrastructure and expand the coverage of its agricultural extension program.

3. Conclusion

- The result of globalization. Advanced countries (the USA, West Europa and Japan) had suffered low growth rate, lost GDP share in the world, no income increment, and high unemployment ratio.
- Advanced economies are in long term stagnation for nearly 10 years, before this Pandemic, because, the common people had been paid low wage and house hold consumption had been squeezed. As the result advanced economies got into stagnation.
- After Pandemic, advanced economies would not revive soon. They must call back their companies from China or diversify their factories to the safer and friendly countries.
- Advanced countries would establish trade barrier to fend off cheap imports from less developed countries.
- Less developed countries, except China, will have good chance to invite FDI (Foreign Direct Investment) and they can develop the manufacturing industries.
- Indonesia has possibility to invite FDI, because Indonesia has large population and natural resources. Indonesia has good working people, with some experience of manufacturing and educational level is comparatively high. The Indonesian government understands how to improve the investment environment for FDI.

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