Coronavirus Pandemic——the Reverse and Impact of Globalization

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Abstract: Globalization process was interrupted by the pandemic. Is the pandemic the turning point from globalization to deglobalization? Comparative Advantage theory does not support this point. So what is the impact to globalization?

Keywords: Pandemic; Reverse of Globalization; Comparative Advantage; Production Efficiency; Productive Surplus

Introduction

This article tried to offer some thoughts about pandemic impact and trend to globalization. The outbreak is progressing and moving, so some of the data in this article might fall out of date.

1. Global breakout of coronavirus?

The COVID -19 can transmit human-to-human within 14 days when people exposure to the virus or onset of symptoms, even before showing symptoms or without any symptoms. There is not enough epidemiological evidence of basic reproductive number. But one infected person can infect two and three people on average on estimation. (ECDC, 2020).

Biological inventions and discoveries, public health initiatives, and mathematical modeling may help to control COVID-19spreading. (Collins, 2020) The Basic Exponential Model may estimate infected cases without any public health initiatives.

Spreading speed of a contagious diseases depending on the frequency of social contact between individuals. An infected person will send the disease to someone they personal contact. If each infected person meets other two people in a day, the virus will spread exponentially. This result in this situation will be doubling number of infected cases by each day. (Collins, 2020) The mathematical model states following equation:

y=2^t-1

Where y = sum of infected cases, and t = in days, How many days since the initial first case.

The number of infections grow exponentially each day. A simplistic model show how many an infected case could spread through a population. (Collins, 2020)

For example, the local disease control department of Wuhan reported strange cases of pneumonia on 30th. Dec.2019 (Myers, 2020), hypotheses the “t” of the equation will be 95 (from 30th Dec.2019 to 3rd. April 2020). y=2^95-1=19807040628566084398385987584. The result is uncountable but exceeds the number of global populations.

COVID-19 affected 196 countries and territories around the world according to the World Health Organization announcement. To 20 January 2022, there are 336,790,193 confirmed cases of COVID-19 globally, including 5,560,718 deaths from the report of WHO. Before one year WHO declared that the risk assessment is at a very high level globally.

2. Global economic impact of COVID-19

COVID-19 is spreading around the world. The economic loss caused by the global COVID-19 is hard to estimate. The broad consensus among economists is a hard strike on the global economy. By end of 2020 were estimated the leading economies at least loss 0.6% of GDP. Well-known economists have lowered their forecast for global economic growth in 2020 from 3.0% to 2.4%. From this perspective, the global GDP in 2019 was about 86.6 trillion US dollars. 0.6% decline in economic growth results in a loss of 0.52 trillion US dollars in economic output. (Daffin, 2020)

2.1 Business interruption

The initial shortage of primary manufactured goods and parts interrupted the supply chain around the world. After the Chinese New Year postponed the factory the opening time. Because workers stayed at home to help with epidemic prevention.

Foxconn Technology Group is Apple's main contract manufacturing partner. Its founder announced that due to the outbreak of COVID-19, the supply chain was interrupted. Foxconn faces production delays. Nissan and Hyundai closed factories outside of China because of shortage of parts. (Tam, 2020)

Global pharmaceutical industry faced disruptions since February. The pharmaceutical industry of the USA is worried about a shortage of drugs. Due India accepted the ban on March 24. India provides half of the generic drugs for the United States (Saplakoglu, 2020)

2.2 Response to COVID-19's monetary policy

The European Central Bank (ECB) has taken action. It launched a 750-billion-euro pandemic emergency purchase plan on March 18. Which is expected to continue until the end of 2020. (Hutt, 2020)

The ECB decided to provide 120 billion euros of extra asset purchase. It is under the existing plan (APP) and under the corporate sector purchase plan (CSPP) by the end of 2020. And it relaxes the mortgage of the euro system Standard to refinance business (MRO, LTRO, and TLTRO). (International Monetary Fund, 2020). The ECB released some capital conservation buffer and the liquidity coverage ratio. (LCR). (IMF, 2020) ECB expected the relief to keep credit flowing into the economy. Rather than the credit increases dividends or bonuses. (Menin, 2020)

Chinese monetary policy aim to insure financial stability and keep enough Liquidity into the banking system. RMB 3 trillion in the first half of February relief to the market. And China central bank extended credit time for RMB 350 billion to micro and small enterprises. (IMF, 2020)

Households, corporates, and regions in repayment difficulties relieved. SMEs and households which fit the description, could delay loan payments or have other credit support measures. (IMF, 2020)

The key interest rate of US was near zero. By low-interest rates the Federal Reserve aim to release liquidity to the market. (IMF, 2020)

Capital and liquidity buffers from Fannie Mae and Freddie Mac offered support to households and businesses. It suspend mortgage payments for up to 12 months for those in repayment difficulties by Covid-19. (IMF, 2020)

2.3 Stocks slump

The stock market unpredictable reacted to the pandemic. A huge fall is in each stock market. The Dow Jones had four times market-wide circuit breaker in March, 2020. (Funakoshi, 2020)

German benchmark DAX lost 7.1% early on 16th March 2020.The blue-chip index decreased 40% to deepest point for five years. It had Never before in its history. (DW, 2020)

The benchmark Nikkei had the lowest closing level in over three years. (13th March 2020). Because of nervous about economic impact of COVID-19 the Nikkei turned into a rout. (JIJI, 2020)

The Hang Seng hit 26,146. Tencent and 49 tool manufactures decreased -2.56%/-80.8 index points. (Ahrens, 2020)

2.4 Oil devaluation

On 9th March 2020, oil prices lost as much as a third. It felled never like that since the 1991 Gulf War. The manufacturing industry is humped by shortage of parts, and transportation industry suspended because of COVID-19. Therefore the International Energy Agency (IEA) predicted the first drop in global oil demand in a decade. (IEA, 2020)

Oil prices fall. Brent North Sea oil hit to a four-year low. The falling demand and an ongoing price war between Russia and Saudi Arabia was regarded as the reasons. Global oil prices was even below 30 dollars per barrel. (DW, 2020)

On 18th March 2020 US crude futures stood at 17-year low. Travel restrictions and social lockdowns was contributing to oil market instability. Brent crude prices were decreased $0.78, at $27.95 a barrel according to Reuters. (Offshore, 2020)

2.5 The impact on employment

The euro area adjusted unemployment rate was 7.3% in February 2020, a month before the COVID-19 containment measures beginning. The lowest employment rate recorded in the euro area since March 2008. (Eurostat, 2020)

More than 10 million Americans new claims unemployment benefits at the end of March. (McCaskill, 2020). Unemployment claims have reached unprecedented levels, according to Department of Labor data.

As long COVID-19 spread in the first two months of this year, near 5 million people in China lost their jobs. The urban unemployment rate in February reached 6.2%, which is the highest on record of the National Bureau of Statistics. (Cheng, 2020)

3. Conclusion-The reverse of globalization because of COVID-19 pandemic?

The Ricardian model is one simple model, which explains the international trade, and innovates the principle of comparative advantage. The model absorbs differences between countries. It concludes that everyone benefits from trade. (Saylor, 2012). And analyzed the benefits from international trade by using the Ricardian model.

With all its resources, country A can produce 80 food or 48 trucks, and country B can produce 48 items food or 16 trucks. Opportunity cost of Country A: 1 item of food costs 0.6 items of trucks; 1 item of truck costs1 .67 items of food. Opportunity cost of Country B: 1 item of food costs 0.33 items of trucks; 1 item of truck costs 3 items of food. The data shows the A has a comparative advantage (less opportunity cost) for truck. (1.67 food compared with 3 foods for B). Country B has a comparative advantage for food (0.33 truck compared with 0.6 truck for the A). By themselves, the A can consume 30 units' trucks and 30 unites food and B can consume 12 unit of truck and 12 unites of food. But if they specialize and trade: A produces 48 trucks and trades 16 to B leaving 32 for themselves. B produces 48 foods and trades 32 to the A leaving 16 for themselves. (Mankiw, 2008)

So, a table can summarize potential Gain from the international trade as following:

Table1 summarize potential Gain from the international trade as following

	Before Trade	After Trade	Gain from Trade
Country A	Trucks 30 Food 30	Trucks 32 Food 32	Trucks 2 Food 2
Country B	Trucks 12 Food 12	Truck 16 Food 16	Trucks 4 Food 4
Totally Production	Trucks 42 Food 42	Trucks 48 Food 48	By specialization and trade extra 6 units of each good for each country

By specialization and trade, each country gets additional 6 units of each product.

The Rule of Thumb for the price is the trade the opportunity costs for the two partners. Who has a better opportunity cost for a certain product? It specializes in the product. Country A: 1 truck costs 1.67 food (1: 1.67); country B: 1 truck costs 3 food (1: 3); the price is 16 trucks for 32 foods (1: 2). (Mankiw, 2008). Extra 6-unit gains each are from the trade and it means multi-beneficial.

The extra gains come from the trade. But why? Can we get extra profit by simply exchanging the product? Obviously not. My point is we gain from the exchange of production efficiency. We profit from the trading of the most efficient productivity per unit time. In this way, the high-efficiency producer can trade more products to the market. Thus, we gain from the productive surplus per unit time from the producers, which have a comparative advantage in the specialization.

Thus, because of COVID-19 impact most profitable industries compete fiercely, industry in life necessities become more cooperative or self-sufficient. But the fundamental principle of globalization based on the Ricardian model is unchanged. We gain from the productive surplus per unit time from the producers, which have a comparative advantage in the specialization. In the future, the globalization is not like before but mankind will not ever stop marching to a better life.

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