



Correlation Between Food Price Inflation and Undernourished People in South East Asia

HIGHLIGHTS

- *In 2021, the occurrence of the COVID-19 pandemic strongly affected the general and food Consumer Price Index (CPI), leading them to levels higher than during the 2007/2008 global food security crisis.*
 - *The yearly variation of the global general consumer price index decreased from 3.8 percent in 2019 to 3.5 percent in 2020 before increase to 6.3 percent in 2021.*
 - *The annual variation of the global food consumer price index rises up from 1.9 percent in 2016 to 4.4 percent in 2019 and increase to 6.8 percent in 2021 due to the COVID-19 pandemic.*
 - *In 2021, variety of the general and food consumer price indexes were higher than 25 percent when compared to 2020 in Western Asia, South America and Middle Africa.*
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INTRODUCTION

Home to 600 million people, Southeast Asia is a source of valuable resources and a strong workforce. However, many suffer from hunger and malnutrition, which is why it is important to ensure food security in the region. Promoting the development of the agricultural sector in the region is essential for economic growth and development. As the obstacles to climate change and the depletion of natural resources multiply, it is important

to focus on the development of long-term policies and reforms in the region's agricultural sector.

However, the farmers need a lot of help from the government to ensure food security in the region. Farms need to invest in knowledge and tools and have a voice in government. In Southeast Asia, most farms are very small, typically 2 hectares or less, and are predominantly run by women. Governments should focus on policies that support farmer organizations, empower and educate women, and raise awareness of property rights. World leaders began taking steps to implement some of the policies mentioned above at the East Asia World Economic Forum in Myanmar. They have developed a new initiative called A New Vision for Agriculture, which aims to foster public-private partnerships for food security and environmental stability. He called for increased investment in agriculture to boost economic growth. It highlights innovative ways in which the public and private sectors work together to achieve optimal results. Achieving the common goal of food security in Southeast Asia will require extraordinary efforts from all actors.

Unfortunately, covid-19 disaster was happening. In 2021, the evolution of the COVID-19 pandemic is severely affecting the average consumer and food consumers. The price index (CPI), higher than during the world food crisis of 2007/2008 (Vos et al., 2022). The epidemic not only affected the CPI itself, but also the quality of the data. Challenges faced by NSOs in collecting and interpreting price data (OECD, 2022).

The average annual change in the CPI for all items worldwide has almost doubled during the pandemic. Growth of 3.5% in 2020 and 6.3% in 2021. This is the result of a global recovery. Aggregate demand for goods (Gustafson et al., 2021), as firms still face supply chain break due to COVID-19 or its recovery (Vos et al. 2022) supply chain disruption. Drives up commodity prices, input costs and transportation costs (Kalish and Wolf, 2022). This change in the global food CPI also increased, from 0.6% in 2019 to 6.3% in 2020 and 6.8% in 2021.

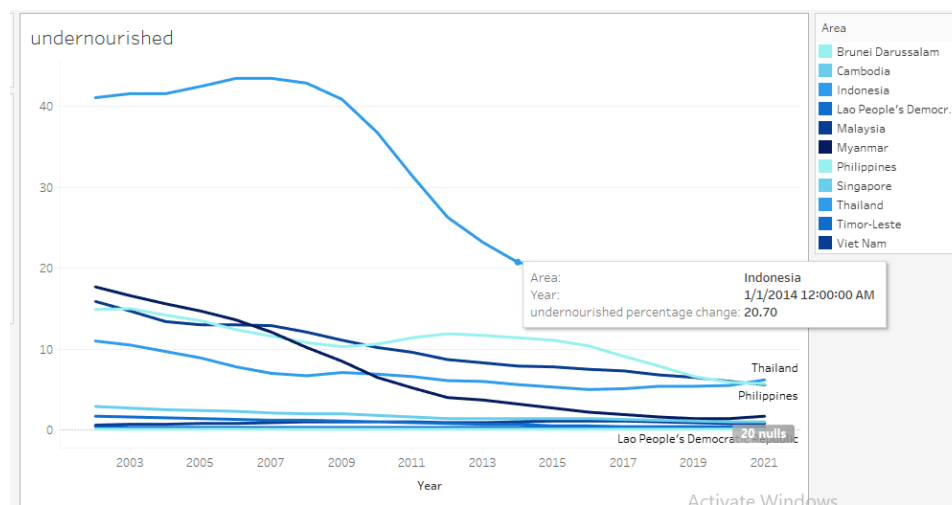
Food prices in most regions have experienced significant volatility in 2020 and 2021 food supply disruption. Chain stores have affected food production and distribution around the world, while weather-related events, La Niña affects agricultural production in the Americas and Asia (WMO, 2021). Chance Devaluation, especially in low-income countries (mainly South Asia, Sub-Saharan Africa and Latin America) United States), increased costs due to economic downturn due to COVID-19. Food imports, which amplifies food price volatility (IMF, 2021). Recession due to COVID-19 restrictions and restrictions leading to job losses and reductions in income. This has a double effect: on the one hand, prices fell in 2020 due to lower prices consumption of goods and services during the restriction period; on the other hand, prices have recovered. After reopening in 2021, growth will follow as

consumption returns to previous levels. This project aims to find the correlation between food price inflation and amount of un nourished people in south east Asia countries.

ANALYSIS AND VISUALISATION

Dataset is obtained from FAO databank for annual un nourished people amount for each country and annual food price inflation. Moreover, this project highlights the change and interaction those two subjects from 2002 to 2021.

Undernourished curve shows the ratio change of the amount of un nourished people throughout the year



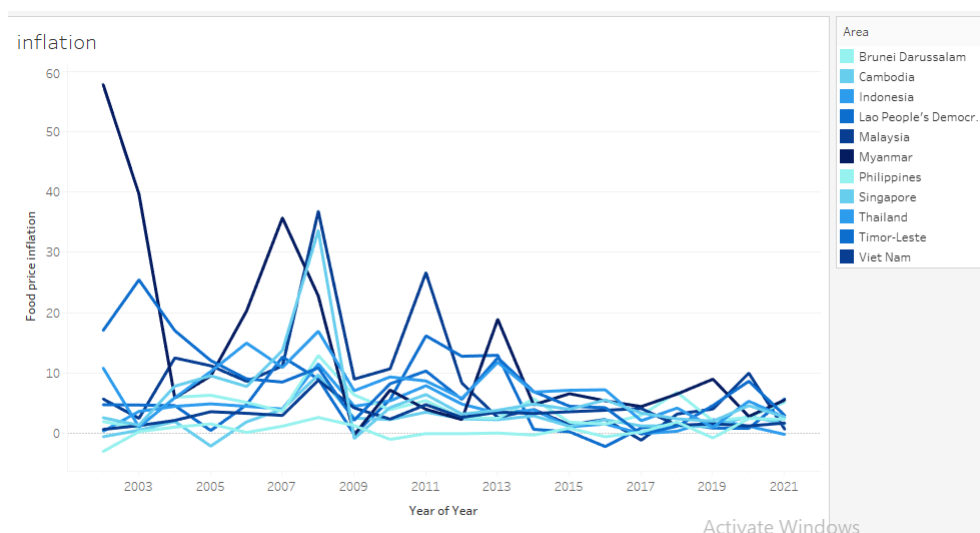
This visual shows that has the largest amount of un nourished people while Singapore and Brunei Darussalam have no or do not state the amount of un nourished people. however,



through time, the amount of un nourished people generally decreased. Even though there were pandemic from 2020 to 2022, the effect of it can be ignored.

Indonesia has big land, wide range of plant variety, all-year round season, and many more. However, it is a sad truth that indonesia also has the highest rate of un nourished people. It may be due to huge amount of citizen where other asian countries can not compete with this matter.

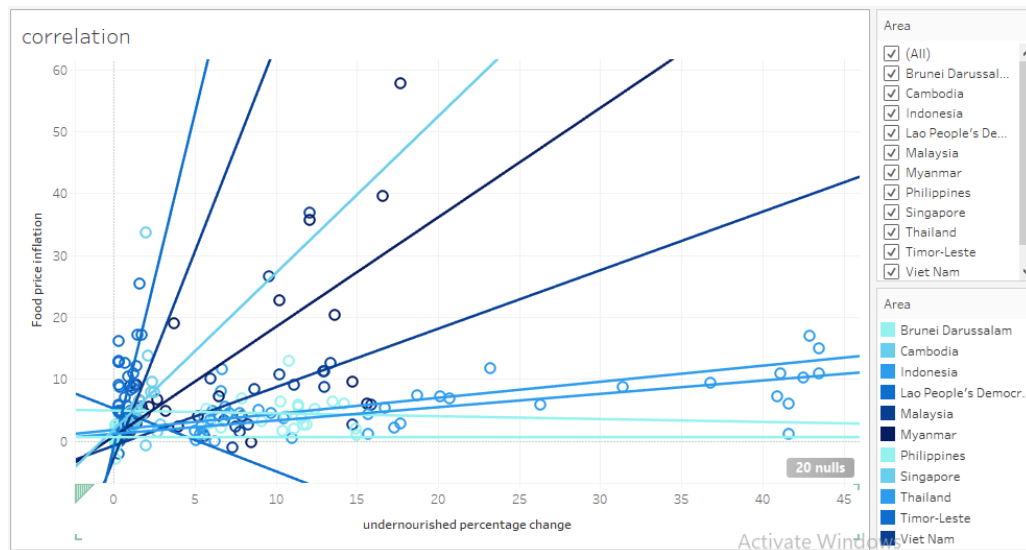
Food price inflation shows the general ratio food price change throughout the year. This curve show the average yearly of food price change yearly from original monthly dataset.



From this graphic, it shows that Myanmar is the most fluctuated country than others through 10 years. Even though pandemic really hit most of countries hard, evidently, pandemic does not give that much impact to food price either.



Among Asean countries, Brunei Darussalam is the most stable in term of food price and also the amount of unnourished people.



The correlation of food price inflation and amount of unnourished people for every country are weak except for Laos has quite strong correlation ($r\text{-squared} = 0.6061$) Philippine with medium correlation ($r\text{-squared} = 0.4680$). So that in general, there are only slightly correlation between food price inflation and the amount change of unnourished people. However, pandemic also create difficulties in collecting data due to restriction and low access of facilities. Pandemic will end soon and the world is better and fairer through time and food security is also become the crucial issue to each country. Because of that, government and scientist are more supported nowadays to tangle food scarcity and make every country with strong food security.

CONCLUSION

The disruption of food supply chains in production and distribution of food worldwide. The economic downturn due to COVID-19 induced a rise in the cost of imported food, amplifying the fluctuation in food prices. In conclusion, there are only slightly correlation between food price inflation and the amount change of unnourished people.

BEST PRACTICES IN THE TIME OF COVID-19: SAFE FOOD AND HEALTHY LIFESTYLES



Covid-19 is not a foodborne disease

There is currently no evidence that food or food packaging can spread the new coronavirus which causes Covid-19. The virus is transmitted between people through airborne droplets. The virus cannot grow on food.

**Safe food, healthy diet, and active lifestyle today
for healthier lives tomorrow**



5 keys to safer food

Follow food hygiene practices when cooking at home and at food businesses (restaurants, street food stalls).



Keep hands, kitchen, and utensils clean and sanitized.



Separate raw from cooked food to avoid cross contamination.



Cook food thoroughly (70°C).



Refrigerate cooked and perishable food promptly, reheat food prior to serving.



Use safe water and raw materials.



5 keys to healthy diet

Balanced nutrition intake prevents malnutrition. Start healthy diet from very young age, to promote growth and long-term health.



Breastfeed babies and young children, introduce additional food (cereals, fruits) at the age of 6 months.



Eat a variety of foods: staples, vegetables, legumes, fruits and animal source foods.



Eat plenty of vegetables and fruit.



Eat moderate amount fats and oils. Use unsaturated vegetable oil (e.g. mustard oil) rather than saturated oil (e.g. coconut oil, palm oil, ghee, butter).



Eat less salt and sugars. When cooking foods, limit the amount of salt and highly salted sauces.



5 keys to physically active life

Being active is good for your physical and mental health. Every move counts and you can be active in lots of different ways, even at home.



Break up sitting time - move around for a few minutes every half an hour.



Build activity into your everyday routine: take the stairs, go for a brisk walk.



Make time every day to be active - setting a realistic goal can motivate you.



Join an online exercise class, or plan active breaks with family and friends, even if remotely.



Have fun! Dance, play, cycle or walk. Start gently and build up.

**FOOD SAFETY IS
EVERYONE'S BUSINESS**

let's team up!

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