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Problem I: Macroeconomic concepts (2 points)

1. What does GDP per capita measure?

GDP per capita is a total average income per people. Which is measure of country's economic. which can find by $\frac{\text{gross domestic product}}{\text{total population.}}$

2. Why are we interested in real GDP?

Because in real GDP we calculated from both base year and current year while nominal GDP calculate just current year and include affect of inflation, so result of Nominal might be bias while real GDP is more accurate.

3. What is the discouraged-worker effect? How does it affect the unemployment rate?

Discouraged-worker effect is a person of legal employment age and can work, but now they are not currently employed and not attempt to be employed or a person who has not found a work for a long-term and give up to find a work. It doesn't affect to the unemployment rate because discourage-worker is out of labour force which when we find unemployment rate we calculated from = $\frac{\text{unemployed}}{\text{labourforced}} \times 100$.

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4. What is transfer payment? and why is it not included in the GDP?

Transfer payment is a free money that government provide to people in the country which not get anything return back which mean not require to produce any good or service, so that's why it was not include in the GDP because there is no production activity.

5. Using market exchange rates, per capita income in Switzerland exceeds that in Canada, but when PPP rates are used the situation is reversed. Why?

I will show you some example to explain why ppp rates are used the situation is reversed

For example

	Burger king price	
	Canada	Switzerland (interpret in dollar)
price whopper burger	$5.69	$15.37
wages	$20	$40
number of burger they can consume.	≈ 3.5	≈ 2.6

Even though in switzerland have income per capita higher than that in Canada, but relatively with their daily wage we can buy 3.5 burger in Canada while we can buy just 2.6 burger in switzerland. As a result ppp which is a compares economic productivity and standards of living between countries of Canada is higher than switzerland.

So, we can clude that income in Switzerland > Canada but ppp canada > Switzerland.

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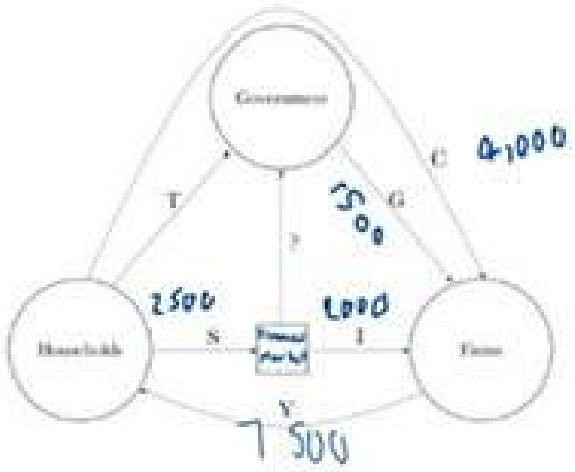
Problem II: flows in a closed economy (5 points)

Assume that the circular flow of a closed economy is described by the figure below.



Suppose that in period, household consumption (C) is 4,000, and they save (S) 2,500. The firms invest (I) 2,000, and government spends (G) 1,500.

A) Find the values for the rest (T and Y), include the question mark. What market is the box, and how can we interpret the question mark. Then write out the identity function of the GDP by using the consumption and income approach. (1 point)

- The market in the box is Financial Market. and the question mark is public borrowing. (Government borrowing)
- find the value of Tax by using Leakage - Injection Model.

Saving + Tax = Government (G) + I (Invest)

2500 + T = 1500 + 2000

2500 + T = 3500

T = 3500 - 2500

T = 1000

- y = Consumption + Invest + gourrment spending

y = 4,000 + 2000 + 1500

y = 7,500. , GDP = 7500

? = Public borrowing.

? = saving - invest

= 2500 - 2000

= 500

Or

y = S + T + C

7500 = 2500 + T + 4000

7500 = 6500 + T

7500 - 6500 = T

T = 1000

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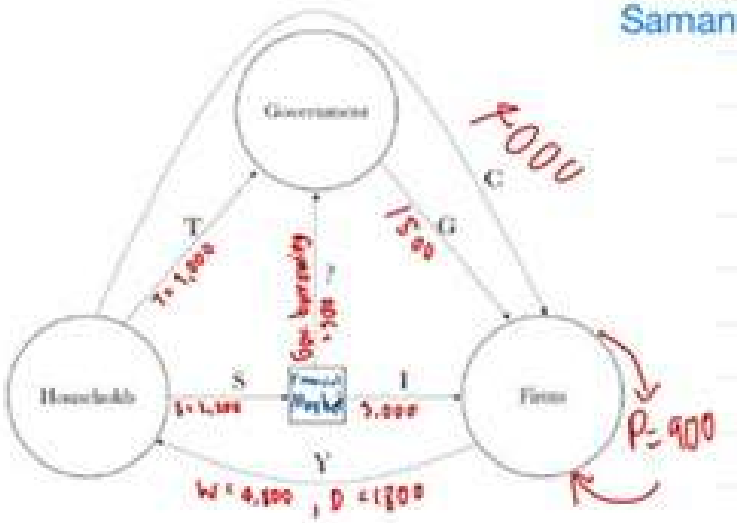

Suppose that in period, household consumption (C) is 4,000, and they save (S) 2,000. The firms invest (I) 2,000, and government spends (G) 1,500.

II) We still consider the same close economy, but now we introduce firms' ability to **immediately** self-finance, designated by P. We also introduce compensation of employees, W, and paid dividends D. Reconfigure the circular flow above (scan them for submission).

We now assume that $C = 4000$, $I = 2000$, $G = 1500$, $W = 4800$, $D = 1800$, $T = 1000$. Estimate the missing elements of the circular flow. What is the GDP?

Write out the same two identity functions for the GDP as before, but using the new variables. What is the aggregate profit in the economy. (2 points)

Tip: Y, household income, is replaced.

$$GDP = C + I + G$$
$$= 4{,}000 + 2{,}000 + 1{,}500$$
$$= 7{,}500$$

$$GDP = W + D + P$$
$$7500 = 4{,}800 + 1{,}900 + P$$
$$7500 = 6600 + P$$
$$P = 900$$

$$\text{aggregate profit} = \text{dividend} + \text{Profit}$$
$$= 1800 + 900$$
$$= 2{,}700$$

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Problem III: The CPI and The GDP Deflator (6 points)

1. The nominal GDP per capita of Thailand in 2000 and 2018 are 80,534 baht and 235,010 baht respectively. Given that the GDP deflator = 100 only in 2010, and equals to 73.49 and 116.59 in 2000 and 2018 respectively, calculate the real GDP per capita of Thailand in the year 2000 and 2018. What is the base year? What is the cumulative price increase between 2000 and 2018? between 2010 and 2018? (2 points)

เท่ากับ 100.

- The base year is 2010 เท่ากับ 100

- find real GDP per capita of Thailand in the year 2000 and 2018

GDP deflator = $\frac{\text{Nominal GDP}}{\text{Real GDP}}$

- find real GDP in year 2000.

$\frac{73.49}{100} = \frac{80,534}{\text{Real GDP}}$

$0.7349 = \frac{80,534}{\text{Real GDP}}$

$\text{Real GDP} = \frac{80,534}{0.7349}$

Real GDP = 109,584.978

real GDP in year 2018

GDP deflator = $\frac{\text{Nominal GDP}}{\text{Real GDP}}$

$\frac{116.59}{100} = \frac{235,010}{\text{RGDP}}$

$1.1659 = \frac{235,010}{\text{RGDP}}$

$\text{RGDP} = \frac{235,010}{1.1659}$

RGDP = 201,569.603

- cumulative price increase is a inflation rate so we can find from this formula, 2000-2018

inflation rate = $\frac{\text{GDP deflator 2018} - \text{GDP deflator 2000}}{\text{GDP deflator 2000}} \times 100$

inflation rate = $\frac{116.59 - 73.49}{73.49} \times 100$

= 58.647 %.

- Cummulative price increase between 2010-2018

$= \frac{116.59 - 100}{100} \times 100$

= 16.59 % increase in price.

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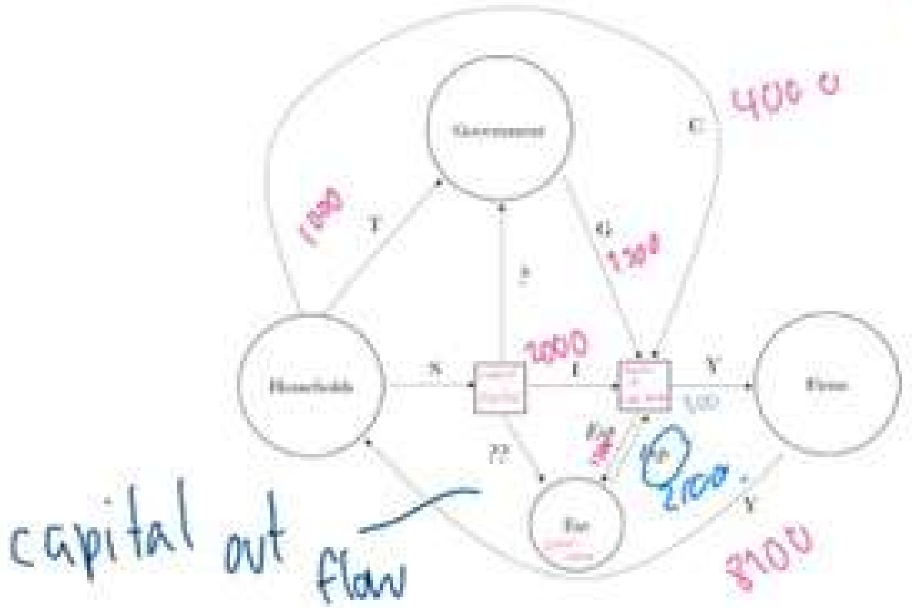
$Y - C - T = S$

C) Now, we consider an open economy characterised by the circular flow below.

$Y = T + S + C$



We know that $Y = 8100, C = 4000, I = 2000, G = 1500, T = 1000, Exp = 1500$. Determine the values of the other aggregates. What are the budget balance, the trade balance, aggregate savings? Interpret these results. Is such a situation sustainable? Is it condemnable? (2 points)

To find value of import.

Y: market good and service = I + G + C + (Ex − Im)

8100 = 2000 + 1500 + 4000 + (1500 − Im)

8100 = 7500 + (1500 − Im)

8100 − 7500 = 1500 − Im

Im = 1500 − 600

Import = 900

Saving. Y = T + S + C

8100 = 1000 + S + 4000

8100 − 5000 = S

S = 3100

Aggregate saving = Y − C

= 8100 − 4000

= 4100

Budget Balance.

Tax − government spending.

1000 − 1500 = −500

(government spend more than their revenue, a lot of money which is called budget deficit.)

Trade Balance.

Export − import

1500 − 900 = 600 ↗ trade surplus.

This situation is not sustainable because in long term budget deficit will create public debt which is a downside of overall economy, but it doesn't condemnable because it has been use to stimulate economy. Also, it has a trade surplus which is positive to economy.

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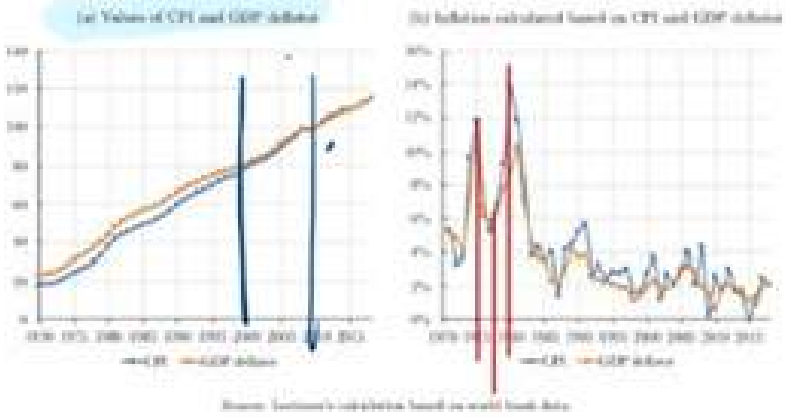


1974-1975 "oil crisis"
Early 1980s recession in United State.

a. Value of CPI and GDP deflator.
- CPI which is capture what customers actually buys. but GDP deflator is captures all good that produced in the country. Therefore, CPI may include imported goods. So, in the first figure shows that at beginning of 1970 CPI less than percent of GDP Deflator which means that what we consume (CPI) is less than amount of goods that produced in our country which mean that at a begin of 1970, there are less import and more export but between 2010 and 2015 we can see that CPI is exceed GDP deflator which mean that between 2010 and 2015, there are more import than export because when CPI > GDP deflator which mean we consume good more that we produced in the country, so we need to import more.

- Also, from the figure 1 we can see that at begining of 1970 CPI which is consumer price index is lower than over all product price that produce in country but at begining of 2000 CPI begin growth of price is growth in higher rate than GDP deflator. While GDP deflator is growth in price is more constant.

is depend on world price, and Us is oil importer. So, CPI fluctuate move than GDP deflator. As a result, the shock cause an increase in inflation rate.

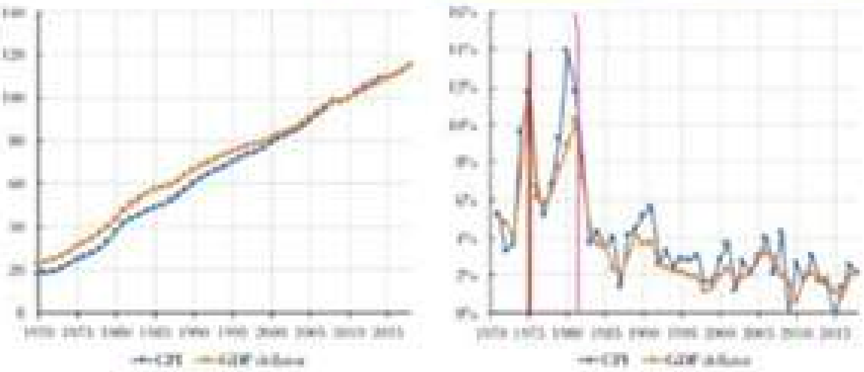
moreover, the reason why gap between CPI and GDP deflator during 1979 - 1982 is more wider and more fluctuate because this period are import a lot of oil (import more on oil) but during 1974 - 1975 is produce and export more than import on oil.

2. Based on the figure below for the US, the main difference in the evolution of the series for the CPI and the GDP deflator takes place in 1974-75 and 1979-1982. 1980

oil crisis

(a) Values of CPI and GDP deflator

(b) Inflation calculated based on CPI and GDP deflator



Source: Lecturer's calculation based on world bank data

What could explain this pattern? (2 point)

Hint: think about the likely impact of an oil crisis on the price of imported goods and, in particular, on your own transport and fuel bills.

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1974 - 1975
"first oil crisis"

1979 - 1980
"second oil crisis"

b According to (b), In early 1970, US production had declined also consumer price index, but during 1974 - 1975 and 1979-1982 price of production and consumer price index significant increase. The event that creat sharp spike in CPI is oil price shock (oil crisis) which occured between 1974-1975 and between 1979-1982 which is a "second oil shock" respectively. Since GDP deflator capture only good produced domestically also including oil price, otherwise, the gap between CPI and GDP deflator were widen during the negative supply shock which is a surprise event that cause an increase in price of material to produce. For instance, an increase in oil price increase the cost of transporting goods and also increase the cost of production because almost of every processes are use the oil, so when cost of production increase it will have an impact more on consumer because producer will charge more on consumer that's why CPI is more flucutate. Also, oil price

3. Write a short summary on the evolution of inflation, unemployment, and the real GDP per capita growth rate over the same period based on the figure below. (2 points)

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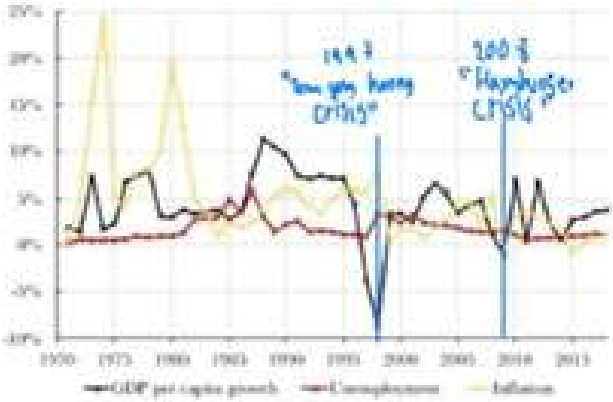
Figure 2: Real GDP per capita growth rate, unemployment, and inflation in Thailand, 1970-2018



from the graph you can see that in normally when GDP per capita growth increase, inflation is follow the GDP per capita growth which mean when GDP which can interpret expenditure approach is increase means that there are more expenditure, so the price is increase which we can call inflation then unemployment is decrease related to Okun's law "when a country's output growth was high, unemployment tended to decrease". But since 1997 that Tom Yum Kung crisis which is a direct crisis mean it happened in Thailand, so it effected to the GDP, unemployment and inflation a lot. GDP per capita growth is rapidly decrease inflation is increase while in normal situation inflation need to be same trend with GDP. Unemployment is significant increase. Then after 1997 GDP is increase but inflation is decrease, and unemployment also decrease. Then it back to normal trend same at the first basinis (1970-1995) that when GDP increase inflation will follow and has a same trend. However, since 2008 GDP is decrease again, and inflation still decrease because this situation is an affect from Hamburger Crisis which is indirect crisis, so it doesn't have much impact to our country. Then it doesn't affect much to unemployment in Thailand.

2. Based on the "*Against Economics*" article, the author – David Graeber, an American anthropologist at the London School of Economics – said:

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> *"Economic theory as it exists increasingly resembles a shed full of broken tools."*

What does he mean by this? Give one example amongst many that the author used to support his argument. Do you agree with the article and why?

From the quote "Economic theory as it exists increasingly resembles a shed full of broken tools" said by David Graeber, it means that economic theory might not be reasonable and useful enough to solve economic problems. Although the author does not claim that there are no useful tools in economic theory, these theories cannot be the real solution of economic problems nowadays since they were designed for the problems in the past. Moreover, we are facing bigger and different problems these days such as how to deal with increasing technological productivity, how to decrease real demand for labour, or the effective management of care work which we cannot adjust some economic theories to solve these problems efficiently. That is why the author said that economic theory is like an increase of a shed full of useless tools.

The one of examples that the author used to support his argument is Heterodox theory or Heterodox economics. The author indicates that mainstream economists these days might not be accurate to predict financial crashes, facilitating general prosperity, or model for preventing global warming. However, their success will be outstanding when it comes to proving themselves in position of intellectual authority and unaffected by such failings. It would say that mainstream economists might be successful and can predict economic conditions correctly according to the economic theory. On the other hand, Heterodox theory is like the realization of the universe and impeccable mathematical truths rather than the useful theory that even economics students do not accept it and rebel against this theory. The author also shows the reasons why most people do not like this theory. Heterodox theory is almost locked out of what are considered serious sectors.

I agree with the article *"Against Economics"* because of many reasons, Firstly, I think it is true that economics now and in the past are completely different. Several things have changed, especially social structure, behavioral economics, psychology, knowledge of feminism, politics, or anthropology that affect economics. We have different economics problems from the past. We might not solve the problems correctly if we only use the old economic theory. If all theories are effective, I think we will not face deflation or inflation several times. As the author said, the theory might be effective for the moment, but it will be a shed full of broken tools if we cannot adjust those theories to solve economics problems these days. The theory will become a book for the academy that students must study about it, but no one will get benefit from it because it is not effective anymore. Finally, the author also states about the book that attempts to answer the real problems that most economists least to talk about. That is why I believe that some theories are not effective because we will never know what happened in the past, so how can we believe all the theory undoubtedly.So, Economic theory make us more logical person.

Reference
http://bemoodle.econ.tu.ac.th/pluginfile.php/36966/mod_folder/content/0/Against%20Economics.pdf?forcedownload=1

Problem IV: Short essays of 500 words each (7 points).

Must: cite your sources.

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1. What is Thailand's definition of unemployment rate? How has Thai unemployment evolved since 2001? Based on your interpretation of the article, what is the biggest problem in the Thai labour market, and how should we try to fix it? Any reference to the other mandatory reading written by Bruno Jetin in 2012, *"Distribution of income, labour productivity, and competitiveness: is the Thai labour regime sustainable?"*, is welcomed and will be awarded.

The International Labour Organization defines the unemployed as people who are without work or work less than one hour per week and the U.S. also includes those who work for family business without compensation and work less than 15 hours per week. Because of these definitions, Thailand's definition of the unemployment rate is the rate of unemployed that is much lower than the U.S. and will edge up from 1.1 percent to 1.5 percent according to the international standard. Thai unemployment has gradually changed since 2001 such as many self-employed has slowly increased which means that a lot of people will have unstable jobs or give up on seeking jobs and will be excluded from the labour force as a result. From CEIC Data, it shows that the average rate of Thailand's Unemployment Rate from Jan 2001 to Dec 2019 is 1.20 percent. Moreover, the chart of the structure of employment in Thailand from 1969 to 2007 that is written by Bruno Jetin indicates that self-employed such as self-account workers and family helpers had increasing every year but then moderately decreased since 2001 while wage earners in private companies represented as a small minority of workers.

Furthermore, the biggest problem that is based on my interpretation of the article is that some workers have unstable jobs because most Thai people now are self-employed and decide to work for their family business especially in the agricultural sector. For example, most people start working after graduation for their family business immediately as farmers or family helpers. As a result, they will be not in the social security system and also become bankrupt if they face the great economic recession. To solve this problem sustainably, the most important first step is education and training. Thai people should understand how important stable jobs are or how to join Gig economy. If they know what Gig economy is, they can work from home and decide to get a job freely and sustainably without leaving their family business behind. Next, The Government should educate Thais and train them to help them to have long-term new skills which enable them to find jobs in developing industries and also have the skill to help their family business either. Lastly, increasing labour market confidence is one of the interesting ways to make people want to join stable work. If there is a reliability of labour market, people may trust the market and find their proper jobs instead of heading to the countryside and only taking care of their family business. If we can fix this problem, Thai labor will have more stable jobs and that will reduce the unemployment rate.

Reference

https://www.ceicdata.com/en/indicator/thailand/unemployment-rate

https://pdfs.semanticscholar.org/d4c0/eea2859e23e842f037911f21cc4000e0d685c.pdf?_ga=2.106655811.1137966382.1580775320-1904114728.1580775320

http://bernoodle.econ.tu.ac.th/pluginfile.php/36966/mod_folder/content/0/BOT_2019-March_ThaiUnemployment.pdf?forcedownload=1

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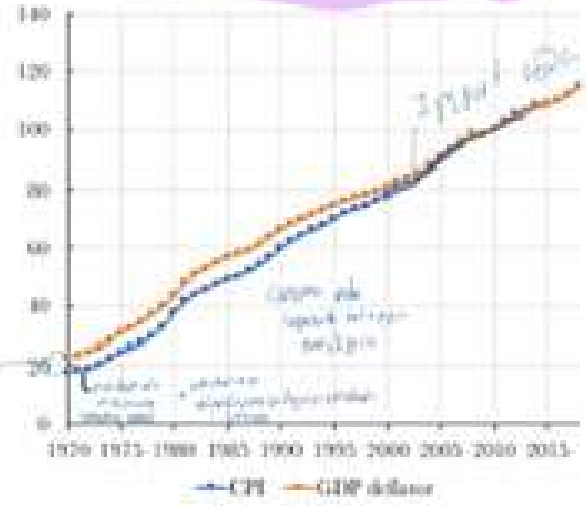
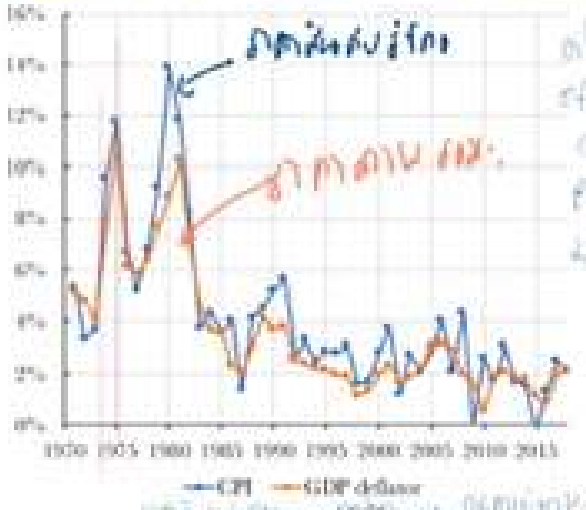


(b) Inflation calculated based on CPI and GDP deflator



Source: Lecturer's calculation based on world bank data.

What could explain this pattern? (2 point)

Hint: think about the likely impact of an oil crisis on the price of imported goods and, in particular, on your own transport and fuel bills.

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