

The Effect of the Higher Petrol Price on Unemployment by Sectors

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ABSTRACT

Most of the past studies stated that the increase in petrol price caused some economic problems such as the increasing consumer price index, the decrease in the consumption and the shrink in the national output, the increase in unemployment rate and others. This study is to see the impact of the higher oil price on unemployment and by sectors. The data of petrol price, unemployment rate, employment and by sectors is collected and analyzed. The results of the findings showed that the higher oil price caused the increase in unemployment rate in manufacturing, mining and quarrying sector. The higher price petrol had taken place and that the cost of production ensued. As a result the demand in the product will drop and this would totally affect the manufacturing sector. Finally, various measures that could be taken by the government to reduce the effect of the increase in petrol price on unemployment in those sectors.

Keywords: oil prices, unemployment rate, by sectors, Malaysia

1. INTRODUCTION

Theoretically, the increase in petrol price will cause the cost of production increases. As a result, the aggregate supply will shift to the left implying that the production falls. Most of the studies found out that the hike in petrol price would cause the inflation, decrease in output, the higher unemployment rate and others. The world petrol price has been always decreased from 1990 to 2007. In 2008, the world petrol price has reached almost 100% change. This change had raised many issues across the world especially in the developing countries such as China and India. These two countries were largely affected because they were among of the largest consumer of the petrol in the world. The world petrol price started to decrease after being at a highest level 114.6US dollar. The large decrease in petrol price has eased the burden of many people especially the poor. The food price rose due to the increase in world petrol price had made the poor to subsist on very small income.

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In India, the people suffer from the increase in petrol price by Rs 5 a litre. This is the steepest increase since December 2008. India's government decontrolled the petrol price in Jun 2010. As a result, the goods price increased by almost Rs 7. The petrol price is at Rs 63.37 on 15 May 2011 which is higher Rs 15.44 than the petrol price on 1 April 2010. India always faced the increase in petrol price from 2010 to 2011. The hike in petrol price can cause the inflation at 8.98% in India. This inflationary pressure could make the gross domestic product achieved below the target 9%.

Table 1: The oil price in Delhi

Date	Rs per litre
1 April 2010	47.93
26 June 2010	51.43
16 December 2010	58.87
16 Jan 2011	58.87
2 March 2011	58.37
15 May 2011	63.37

In 2008, Chinese Government increased petrol price by around 18% on 19 Jun 2008. This change had caused the inflation. Hence, many people suffer from the lower purchasing power and driven them to mount the protest in demonstration. Some of the refineries were shut down due to the sharp increase in petrol price. On May In 2011, China again increased the price of petrol by 350 Yuan in May. China is the second largest fuel consuming country. China resorted to increase the petrol price by 4.6% as the world petrol price reached above US\$100 per barrel. The last increase petrol price in China was in 22 December 2010 after the increase in October and April 2010. That was the third time, China faced the increase in petrol price in 2010. In 2011, China had to suffer from 4.9% inflation and triggered off the indignation among the citizen again. Therefore, China took action to control the rising costs of food and other items. The rising petrol price in China was a very sensitive issue.

In Malaysia, On 22 August 2008, government has announced the decrease of the fuel price by eight to twenty cent, starting 23 August 2008. On 24 September 2008, government has alleviated the burden of Malaysian by decreasing ten cent due to the sharp decline in global market. Starting 15 October, the price was adjusted again to the lower level by ten and twenty cent change. Substantially on 1 November, the price kept decreasing by 15 cent and even on 18 November and December 2008.

The adjusted price in Malaysia Market always seen the increment since 1990. Nizam B. Ahmat and Masturah Bt Ma'in (2008), used monthly data from 1999-2007 found out that there are significant relationship between the oil price and output. In the short run, the increase of the global price has given the bad impact on output and price but government has slowed down the effect by shielding with

the subsidy. However in year 2008 Malaysia has recorded the drastic decline from RM1.92 to RM2.70. That is the issue of the study. We are going to observe the effect of the large change in the fuel price by extending the past study in Malaysia. Starting from 1st November 2008, Malaysia Government no longer subsidized the petrol due to the incurring huge burden of the cost as announced by our minister of trade and consumer affair Datuk Shahrir Abdul Samad. Petrol company took RM19.54 while the operator of the petrol station took RM12.19. And the difference among the price at the pump oil, cost, commission of the company and operator were returned to the government in a tax form. This study is to address the consequence due to the withdrawal of the subsidy. According to the National Bank of Malaysia governor Tan Sri Dr Zeti Akhtar Aziz, 5% inflation was projected to happen while the economists announced that Malaysia will experience the 6% inflation due to the sharp increase of the fuel price in economy. Thus it can cause the shrink in economic growth.

The demand for the goods and services decrease, the demand for labor also will be indirectly affected. For example Air Asia and MAS has to reduce the frequency of travel. This had given the effect on the transportation sector in Malaysia. The private bus transportation was also affected. They have to compete with the bus transportation subsidized by the government such as MARA Liner Bus and Rapid Bus. Consequently, unemployment will increase.

The manufacturing was also affected as some firms had to shut down the operation. The increase in raw material and reduction in demand of product. Firm had no choice unless sacking the worker. Since the force labor was always increasing in Malaysia. They would find hard to avail themselves of the job vacancy. In Malaysia, manufacturing contribute the largest number of job to the worker. It is always more than 3 million people in manufacturing. The petrol price hiked would definitely affect the participation of the worker in manufacturing..

In Malaysia the issue of the high price actually can cripple the national economy, the unemployment rate will increase due to the cost of production rise. The firm is forced to reduce the number of the labor to reduce the cost of production. The transportation sector will be highly affected. There is company of the flight in China had to shut down. In Malaysia, the company of MAS still can subsist in the high oil price but it is also affected. Some of the transportation company is forced to reduce the number of travel. Does it will not affect the unemployment rate?

The increase in petrol price has become fore in the economy. In the positive view, it can bring up the profit to the producer country of petrol. The question is does it not affect the unemployment in the country like Malaysia? As many economists debate over the subsidy of petrol can shield the economy from the

inflation, high employment and drop of gross domestic product. Malaysia is one of the countries practicing the subsidizing petrol.

Besides that between the inflation and unemployment, which one is more affected by the hike of price of petrol? As we know that the unemployment can cause more problems to the country whether in social economy or political point. Malaysia economy should be subject to the subsidy is to ensure the economy will stand like other developed country such as Japan and United States. After we turn to be developed country, I think we can abolish the subsidy of the petrol as our economy might be substantially industrialized.

As one of the oil producer country in Asian, we should not practice the policy like other countries as they increase the price of petrol very high. I do not deny that we should increase the price of petrol in Malaysia when the world price hikes. This is should be done but is not by 41% and it should not be very high. Some of economists said that giving the subsidy of petrol can prompt ineffective market as government love the people and spoil them with the subsidy. This idea I think is somehow not applicable. This idea should be looked at all perspectives and corners. The over capitalist system is definitely not favorable in everywhere. The people should be shielded with the subsidy of petrol as it can slow down the effect of any shock. The main focus of this study is on the impact of the petrol price change due to the withdrawal of the subsidy from the government on the unemployment.

The objective of this study is to see the impact of the higher oil price on unemployment rate, and its sector and employment rate.

2. LITERATURE REVIEW

Lee Ni dan Ratti (1995) disclosed the result on the relationship between the oil price shocks with the real gross domestic product (GDP). The result revealed the shock increase in the petrol price had given the largely detrimental impact on real gross domestic product (GDP) and the unemployment where it was stable before the increase. The positively adjusted increase in price only caused the significance or influence in the other analysis of economic growth and economic variables and the oil price change function.

Shaban, Assaad, and Al-Qudsi (1995) measured the pressure that determine and influence the Arab market in the period of the study namely two decades. He emphasized on the demographic force and oil price change. Their study had shown the change in oil price caused the substantial change in the unemployment rate. However there were the differences between labor market in Arab and in Louisiana. The unemployment in Arab increased due to the incapability of the man power to enter the labor market to compete to get the job. The labor market

in Arab also faced the problem due to the drastic population growth and the labor migration from the rural area to the urban area. This gave much pressure on the labor market especially in the urban area. The labor market in Arab was also seen the larger increase in the migration flow than the country that does not export the oil petrol. The study, as it measured against the gold as the comparison of the commodity price index and the currency value, indicating at that time when the gold price is at the level of \$36, the oil price is at the level around \$2.65 per barrel. If the gold price exceeded \$830 in the year 1978, the oil price has exceeded \$70 per barrel. But it was not, in contrary, all other commodities especially petro chemistry like polyethylene, copper, steel and other commodities increase four folds even though the price of petrol remained stable. In the year 1903 with the finding of the oil in Iran, agent British D'Arcy, initially the finding entail smell vapor and gas vapor which were very dangerous to the health and safety. Therefore it charged for producing and exporting to the other countries.

The real exchange influenced by the change in oil price and the real exchange rate gave the effect on the money supply through the balance of payment effect against the reserve. Nevertheless, domestic output and price did not give any impact on the money. Based on the equation of the aggregate demand applied in the study, output was dependent on the change in money domestic while the net export is dependent on oil relative price and real exchange rate. Price responds to the change in oil price, real exchange rate, money supply and domestic output. The real exchange rate caused the effect of cost inflation from the imported production input increase (Joyce and Kamas, 1997)

Asian Development Bank (2005), in Bangladesh, the effect of the oil price increase on economy especially the large effect on the balance of payment but it still could be controlled because the strong growth in the inflow of money and the export growth is larger than expected. The impact of the financial inflation caused by the oil price increase is limited due to the temporary increase. The factors that relieve the economy in Bangladesh is because of the domestic natural gasoline production reached more than sixty percent of the commercial energy needed. The use of gasoline was increasing gradually in the domestic industrial sector and alternative use instead of the petroleum in transportation sector. The effect of the petrol price on the economic growth normally lead to the increase in the cost of business and the effect on the aggregate demand can be limited or alleviated. Nevertheless, the change in the petrol price could give the impact on the economic growth in the long run. The change in the petrol price could affect on the balance of payment. The cost of the import of the petrol increased in the year 2003 and it was anticipated that it rise higher in the year 2006 in the period of the study. Ninety one percent from the increasing cost of the import of the petrol was caused by the increase in petrol price while eight percent was from the domestically increasing demand. In the year 2005, there was around sixty percent from the increase in the deficit trade is because of the increase in the cost of the import of the petrol. While the effect on the fiscal, petroleum price set by

administer in Bangladesh and domestic consumption was shielded by the subsidy. When, the global price of petrol increase, the government would raise up the under control petroleum price like in May 2004 and September 2005, diesel price and gasoline price increased by fifty percent in currency. While petrol and octane increased by 27.3% and 28.6%. However in dollar, the increase in the various goods price by averagely 16-35%, compared to other South Asian countries where the price of goods increased rapidly. Thus it could cause inexorable problem of the petrol smuggling. The effect on inflation in increased from 5.8% in year 2004 to 6.5% in year 2005. Such increase probably was because of the higher increase in foods. In the base year it increased larger, achieving 7% in December 2005. The increase in inflation was because of the increase in the petrol price and this could be relieved by the small contribution of petroleum (4%) in consumer petrol price (CPI) and under control petrol price of petroleum.

Jim Saxton (R-NJ), Chairman Joint Economic Committee United States Congress (2006) found out that there was a relationship in the oil price shock in 1970s and 1980s, the high energy price in pre Katrina gave the modest effect on the economy in year 2005 and 2006. The effect of the high energy price however would remain in the fluctuation. Automobile Industry for instance would receive the impact due to the consumer purchase transfer. There were some mechanisms explaining the relationship between higher oil price and lower gross domestic product (GDP), lower manpower and high inflation.

Jo Ouvry, (4 October 2005), the increase in the profit did not reflect the effect of the increase by 11% in petrol price since the end of Jun. However, the oil price experienced the change twice in year 1970s/1980s but it gives the detrimental impact on the profit growth. The change in the oil price had threatened and reduced the profit in two ways – through revenue and cost. Through the revenue, the increase in the petrol price had reduced the consumer purchasing power and retarded the consumer spending, decreased the demand of the goods. At the same time, the higher oil price increased the cost of the materials, energy cost and transportation cost. Therefore firm tried to reduce the affected profit by reducing the cost and reducing the number of worker. The lower unemployment rate was one of the supports left to increase the consumer spending. The reduction in the manpower caused the consumer spending growth slow, and then decrease the revenue of firm and profit growth. This caused the slow business cycle and saving corporate.

Besides that, there was little evidence indicating that firm attains the success in the revenue during the increase in the cost on the consumer through the price increase. The increase in the inflation of the consumer index price (CPI) from 1.1% in the end of May to 2.4% in August was because of the energy price increase. Inflation of the main goods seems to be unchanged in the same period. It is good for the committee of financial policy with the decrease in the effect of

the oil price increase for the second time. One of the pleasant things to the firm was when the oil price increase did not cause the worker to demand the higher wage. The decrease in the profit growth did not make it harder to the share market to make more profit, but it would make harder to corporate to maintain the economy as the consumer maintain the purchase and the government gets the profit.

Felix Delbruck, Economics Department (2005), the change in the oil price gives the impact on the inflation. Transmission mechanism had the complex relationship with the increase of global oil price and inflation of consumer price index (CPI). The strength and the different channel time set were dependent on the situation. In the study in the first time, the change in the global petrol price gave the immediate effect on the domestic oil price New Zealand. Oil price was the component for the consumer price index (CPI). So the increase in the petrol price could give direct effect on the inflation. Besides that the production of petrol, diesel and other energy was the input in the process of production of goods and services in the most firms whether in the transportation process or direct use or others. Therefore the increase in the price of energy could put the pressure on the firm in the cost of production. The global increase in petrol price would increase the goods imported through the increase in the cost of shipping to import. Even though the oil price increases or decreases, it just gave the temporary effect on economy. In the second time, the impact would happen if the increase in the lost in the price and wage from firm and household tries to avoid from the increase in the petrol price and transportation cost (worker demand the high wage, firm sets the higher price), this led to the inflation. In the third time, petrol price might cause the opposite effect on the activities of economy namely reducing the inflation pressure. For example, if the increase in the petrol price could slow down the economic activities in case of the household reduces the consumption and faced the higher spending cost and the firm reduces the investment and manpower. As a result the profit would be lower. New Zealand was the importer of the oil. The increase in the oil price surely affected the current account balance due to the net debt in foreign country increased and decreased in the domestic consumption. Finally the change in the oil price reduces the economic activity through the activity of trade with other countries that also import the oil like Europe, United States and some Asian countries. This could decrease the demand for the export of New Zealand.

Bukola Olalekan Bolaji and Gbolagade Akin Bolaji, (2010), The result was found out that the increase in petroleum affected the price of petroleum products. Then, it affected the cost and quantity of raw materials. This incidence subsequently decreased the production capacity of some companies. The market demand of the productions would be reduced causing a reduction on profit or rate of turnover. Therefore, many solutions could be taken by government to shield the company with subsidy to reduce the effect of the increase in petroleum price on manufacturing.

Nalitra Thaiprasert and Michael J. Hicks, (2011) the result showed that a roughly \$1.00 increase in gasoline and diesel prices and a roughly \$25 increase in crude oil prices between 2010 and 2011. It would affect largely on the cost of consumption of the households and their net income was reduced by the increase in price of goods. This could be explained by the consumption of the petrol for the transport. They are forced to use more petrol for the transport. To illustrate this, Indiana's average commuting time is 22.7 minutes. Assuming average speeds of 45 mph and fuel efficiency of 18 mpg this translates into an increase in fuel costs of roughly \$11.82 per week. This annualizes to roughly \$614 in fuel expenses related to commuting only. Besides that the increase in petrol price also would cause the cost for leisure, shopping and other transportation would be higher

3. METHODOLOGY

The descriptive analysis that is used to analyze the impact of the petrol price increase on the output and the percentage of unemployed. The secondary data was collected from 2005 until 2009. The variables that I used are petrol price, the percentage of unemployed and by its sectors. These are to examine the relationship between the change in the petrol price and total unemployment by sectors. They are agriculture, mining and quarrying, manufacturing, construction, finance and insurance, transportation, storage and communication, government services and other services. The table and graph will be analyzed to achieve our objectives. We will see the effect of the increase in petrol price on employment rate for the whole and by its sector.

4. DESCRIPTIVE ANALYSIS

The table below shows the petrol price level and the percentage of the change in its price. We can see the fluctuation of the petrol price in Malaysia especially in 2008. This is because of the unstable world price of petrol. In 2006 it was recorded the large increase in petrol price by 18.5%. The 41% change in 2008 had worsened the economy of Malaysia.

Table 1: Retail Price at Petrol Station for RON 97 from 2005 to 2009

Date	Price (RM)	Percent (%)
1-Jan-05	1.42	0
5-May-05	1.52	7
31-Jul-05	1.62	6.6
28-Feb-06	1.92	18.5
5-Jun-08	2.7	41

23-Aug-08	2.55	-5.6
25-Sep-08	2.45	-3.9
15-Oct-08	2.3	-6.1
1-Nov-08	2.15	-6.5
18-Nov-08	2	-7.0
3-Dec-08	1.9	-5.0
16-Dec-08	1.8	-5.3
1-Sep-09	2.05	13.9

Sources: harga runcit di stesen minyak bagi RON 97

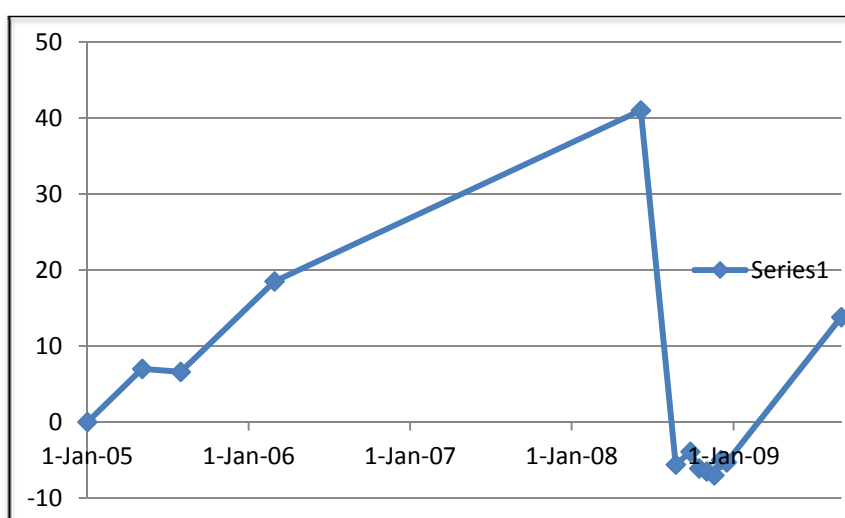


Figure 1: Oil Price Change in Malaysia

Figure 1 indicates the sharp increase and sharp decrease and increase back. Maximum change is at 41% in 2008 and started to plunge steeply in the year and hiked again in 2009. The mean of the change during the period is 3.653. Standard deviation is 14.0262.

The table below shows that the unemployment rate increased significantly by year 2009. The increase of labor force from 11967500 people to 12061100 people had made the job opportunity less available. If we look at the total unemployed in 2006 and 2007 did not make a very little change. The unemployment rate had indicated the decrease in unemployment rate as the labor force increased by 230600 people. Employment rate increased from 2005 until 2007. From 2007 to 2009 we will see the employment started decreasing. If we compare unemployment rate and total unemployment, the trend is different between 2006 and 2007. The unemployment falls but the total unemployment remained the same. This was because of the increase in labor force as well as the

employment. The total employment did not reflect the problem of unemployment in one country.

Table 2: Total Unemployment and Labor Force from 2005 to 2009

Year	Total Unemployed	Unemployment rate (%)	Employment	Employment rate (%)	Labor Force
2005	397700	3.5	10892800	96.5	11290500
2006	385500	3.3	11159000	96.7	11544500
2007	385500	3.2	11598000	98.5	11775100
2008	391000	3.3	11576500	96.7	11967500
2009	476100	3.9	11585000	96.1	12061100

Resource: Malaysia Economic Report

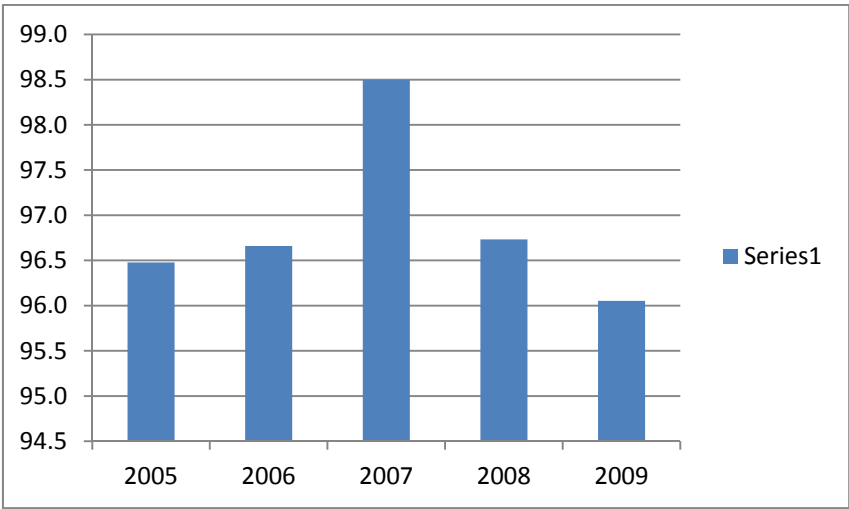


Figure 2: Employment rate from 2005 to 2009

Figure 2 showed that trend of increase and decrease from 2008 until 2009. Maximum Employment rate is at 96.8% in 2007 and minimum employment rate is at 96.1% in 2009.. The mean of the employment rate during the period is 96.56%. Standard deviation is 0.279285.

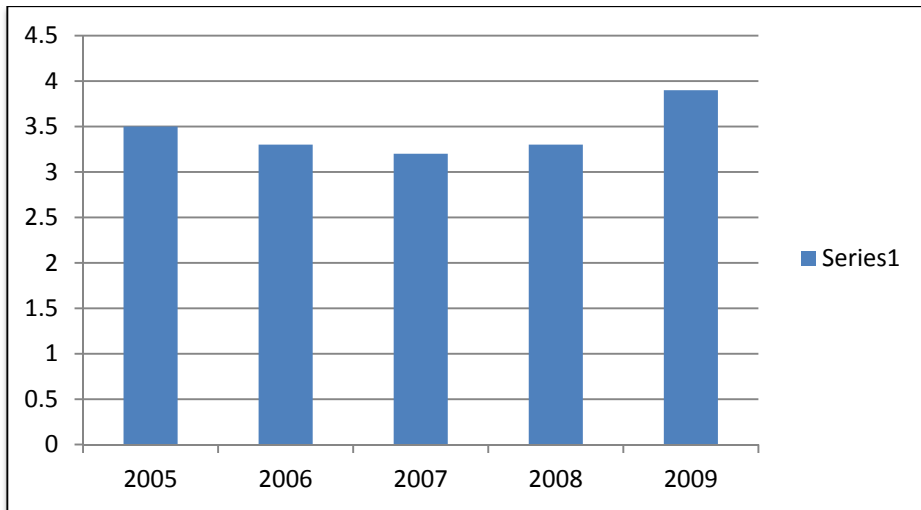


Figure 3: Unemployment rate from 2005 to 2009

Figure 3 showed the decrease and increase trend from 2005 until 2009. Maximum unemployment rate is at 3.9% in 2009 and minimum employment rate is at 3.2% in 2007. The mean of the unemployment rate during the period is 3.44% Standard deviation is 0.2792

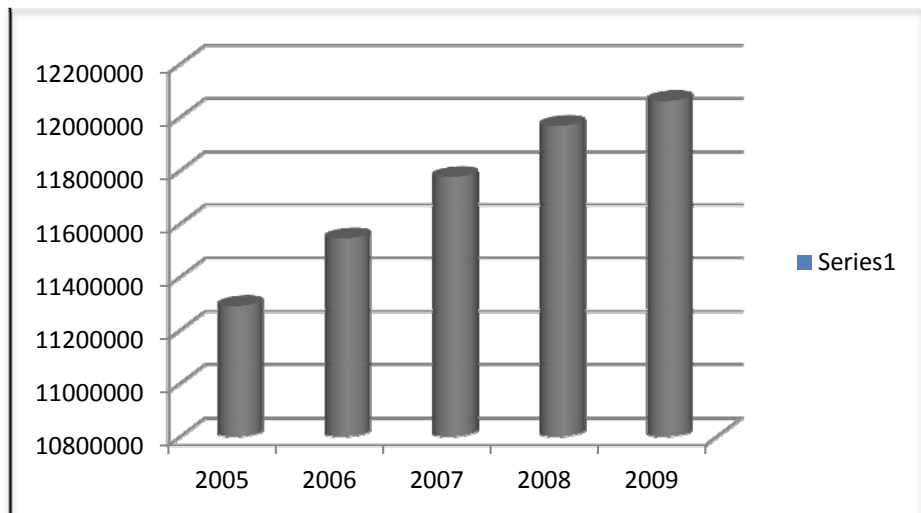


Figure 4: Total of labor force from 2005 to 2009

Figure 4 shows that the total labor force is always increasing from 2005 until 2009. Maximum total labor force is at 12061100 in 2009 and minimum total labor force is at 11290500 in 2005. The mean of total labor force during the period is 11727740.

Table 3 below indicates the participation of the labor in Malaysia by sectors. The sectors are agriculture, mining and quarrying, construction, finance and insurance, transportation, storage and communication. We will see the employment rate in manufacturing sector in 2006 fell by 2.4. In transportation, storage and communication sector has recorded the decrease by 1.7 in 2009.

Table 3: Total Employment by Sectors

Year	Agricu lture	Mining Quarrying	Manufacturing	Construction	Finance, Insurance, Real Estate and Business Services
2005	1,401.30	42.7	3133.2	759.6	734.4
2006	1392.4	42.6	3227.2	755.2	767.5
2007	1389.8	42.9	3296.6	757.3	789.7
2008	1390.9	42.8	3338.2	758.4	811.9
2009	1390.8	42.5	3289.9	762.4	817

Transportation and communication	Government Service	Other Services
630.6	1118.4	3072.6
646.4	1152.5	3175.4
660	1225.6	3236.1
673.2	1263.5	3297.5
675.5	1276.5	3331.9

Resource: Malaysia Economic Report

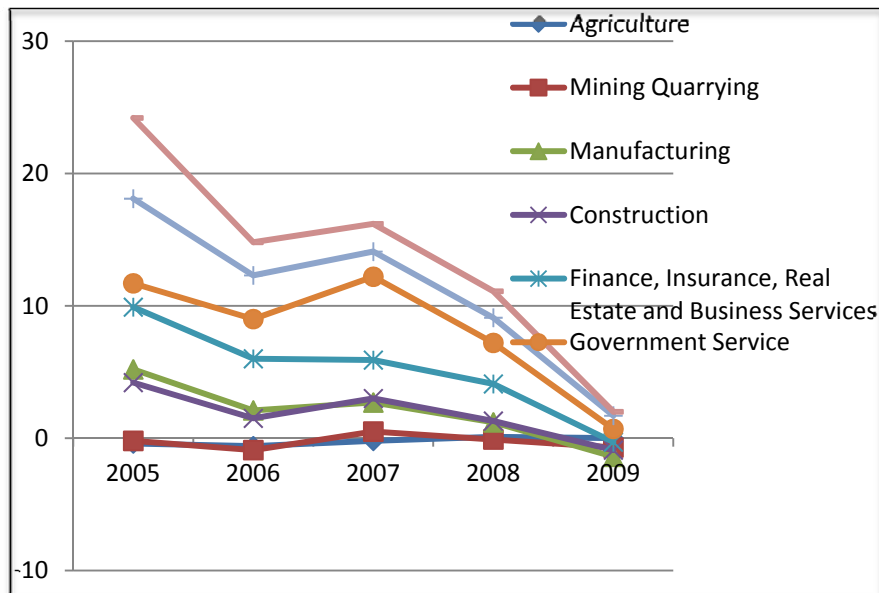


Figure 5: The Change of Employment by Sectors

Figure 5 shows the change of employment by sectors. They are agriculture, mining and quarrying, manufacturing, construction, Finance, Insurance, Real Estate and Business Services, Mining Quarrying, Manufacturing, Construction, Finance, Insurance, Real Estate and Business Services, Transportation and communication, Government Service, and Other Services. Based on figure we can see that government service sector increases sharply and decreases sharply. Transportation and communication, manufacturing and finance, insurance, real estate and business services have decreased from 2005 until 2009. Agriculture sector has showed an average increase. Mining and quarrying and manufacturing reached below zero in 2009.

5. CONCLUSION

Based on the table 2, we can see the effect of the largest change in the petrol price in 2008 on the unemployment rate. The effect did not really prevail in 2008 but started in 2009. In 2008, the unemployment increased from 3.2% to 3.3%. It was estimated that 5500 people lost their job.. This problem increased significantly in 2009 from 3.2% to 3.9%. This refers to the largest increase in petrol by 41% in 2008. It had caused around 49600 lost their job. The major sacked workers were from manufacturing sector. This problem had been exaggerated by the America financial crisis either. In 2005 until 2007, the unemployment was not affected despite the change in petrol price in the years. This was because of a little change in petrol price.

We look at by sectors, the employment rate in the mining and quarrying is the largest affected from in 2008. This is because the petroleum is a part of the sector. So the higher price of petrol will affect the demand of the good and subsequently affect the unemployment. Moreover the shortage of the petroleum resource has driven the decrease in production. The manufacturing sector is also highly affected. In 2008, the the manufacturing was not affected yet but it was hit in 2009. As the study by Nizam B. Ahmat and Masturah Ma'in (2008) said that there is the long run effect of the increase in the petrol price. The petrol price had caused the larger spending on raw material and firm had to cut the production. Bukola Olalekan Bolaji and Gbolagade Akin Bolaji(2010) had given the same result that the increase in petrol price increased the cost of production and the firm was forced to cut the production to meet the reduction of demand of the production.

The transportation always increased at the lower rate after 2005. The higher petrol price has dampened the growth of the transportation sector in Malaysia. The marginal increase in transportation sector has dropped from 2006 to 2009 after the increase in 2005 by 6.1%. The incident has proven my justification.

6. SUGGESTION

The higher oil price did affect the unemployment rate in Malaysia. Many workers were sacked especially in manufacturing sector. The increase had given the impact on mining and quarrying and manufacturing. The production of the goods was definitely reduced because of the factor of the cost and drop in demand. This issue had manifested the political turmoil and social problem. To address this matter we should remain the subsidy on petrol as it is the main commodity. To increase that price is a very cruelty especially to the poor people. The government used the point of the exorbitant cost in expenditure to clarify the people is only the reason. They can increase the petrol price but not too high by 41%. As we are very aware that the year prior to 2008, we also have the frequent increases but it did not affect much as they are not too high. We have to contemplate the detrimental effect on the manufacturing as this sector use much petrol to go operate. We have to be vigilant to the consequence to what policy we will implement so that it does not prompt any much problem. The increase can be donned unless we shield the industry of manufacturing, mining and quarrying. The government should subsidize the industry to do not let the cost of production increases. Preparing the incentive to the unemployed will alleviate the burden of the sacked worker. This incentive is also to reduce the worsened poverty in Malaysia. Giving the worker training and other coursed is also the good imitative to ease the gravity of the problem.

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