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Inflation in United Arab Emirates

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التضخم في الإمارات العربية المتحدة

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الملخص

دفع إقتصاد الامارات تكلفة عالية لتخفيض معدلات التضخم المرتفعة. إذ أدت الازمة المالية العالمية الى إنكماش حاد بالنشاط الاقتصادي للعالم بأسره، و قلَصت أيضا معدل النشاط الاقتصادي بالامارات. و إنخفض معدل التضخم على أثرها من 12% عام 2008 الى 1.5% عام 2009.

تناقش الورقة مشكلة التضخم المرتفع و المستمر في الامارات خلال العقد المنصرم. و تهدف الى تطوير الوعي بأهمية إستخدام أدوات السياستين المالية و النقدية في معالجة التضخم و الاقتراب من الاستقرار الاقتصادي. إذ يمكن إستخدام هذه الادوات نفسها في تحفيز النشاط الاقتصادي و الخروج من الانكماش.

تؤسس الدراسة إطارا نظريا لمعالجة مشكلة التضخم. و تعرض بيانات و إحصاءات الارقام القياسية للاسعار و تناقش مدى دقتها. ثم تُلخّص الآثار الاقتصادية و الاجتماعية للمشكلة. و خُصِص الجزء الاهم لمعالجة أسباب التضخم المرتبطة بالتوسع النقدي و الانفاق الحكومي و التضخم المستورد و أسعار الصرف. تطرح الورقة بعض الافكار لمعالجة التضخم بغية ضمان نموا مستقرا. و ترتبط معالجات التضخم بتفعيل أدوات السياستين النقدية و المالية و إعادة تقييم سعر صرف الدرهم و الولوج بالعملة الخليجية الموحدة و الاستثمار في السكن و المواصلات.

Abstract

The United Arab Emirates (UAE) economy as a part of the global economy paid a high cost to eliminate the inflation rate. The global financial crisis brought deep recession even in the most developed countries. The crisis obviously attacked the UAE economy as well. One benefit gained was to lower the inflation rate from 12.3% (2008) to roughly 1.5% (2009) as released by UAE National Bureau of Statistics.

The paper examines the problem of high and continuous inflation rates in the UAE during the last decade. So, we will start with an intensive summary of macroeconomic theory which will put a theoretical framework of inflation. This step is necessary to lead the analysis of inflation in UAE.

Then, we will shed light on the recently collected data from primary sources and information about overall level of prices and inflation rates in the UAE during the last decade. Figures should be examined to judge the quality of published data.

Then we will discuss the effects and social costs of high inflation rates in the country. After reading and analyzing other views, we will investigate causes leading to the problem which are related basically to rapid growth of money supply, excess aggregate demand and the effect of heavy dependence on imports as a ratio to the gross domestic product.

Finally, we will suggest solutions as how to control and eliminate inflation rate by using the tools of monetary and fiscal policies, in addition to some recommendations based on supply side policies.

The paper will analyze the information and figures published by the Ministry of Economy, Central Bank, Department of Economic Development (Abu Dhabi), Statistics Center - Abu Dhabi and Dubai Statistics Center. Additionally, latest Macroeconomics textbooks will be used for the theoretical frame.

Introduction

The United Arab Emirates economy as a part of global economy has paid a high cost to eliminate the inflation rate. The global financial crisis brought deep recession even in the most developed countries. The crisis obviously attacked the UAE economy as well. One benefit gained was to lower the inflation rate from 12.3% (2008) to roughly 1.5% (2009) as released by UAE National Bureau of Statistics.[1]

The paper examines the problem of high and continuous inflation rates in UAE during the last decade.

Inflation is a sustained increase in the overall price level in an economy. That means a continuous increase over a certain period of time. For instance, it is from 2003 to 2008. [2] It is an increase in the overall price level which means the prices of goods and services will increase on average rather than an increase in a few products. We are talking about the whole economy of the UAE. This is to say, the increase covers most of the sectors and products.

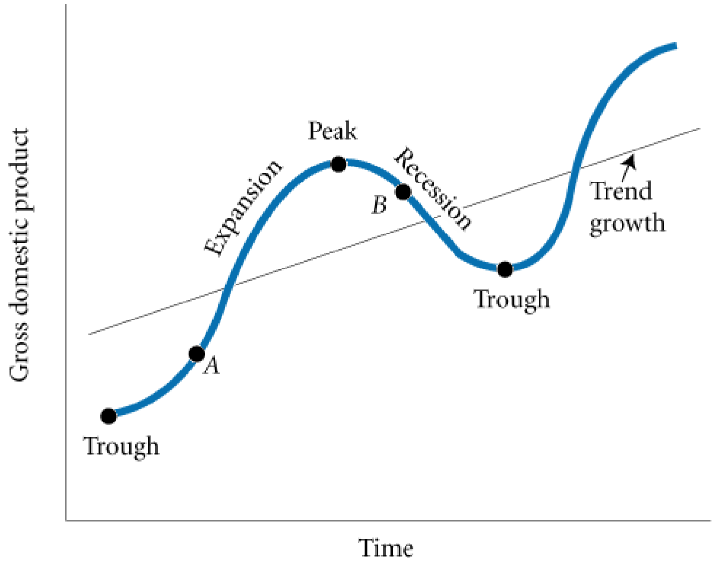
Inflation is mainly caused – due to macroeconomic theory – by an increase (excess) in aggregate demand. This is called **demand – pull inflation**. The increase in aggregate demand may occur due to factors such as: an increase in the money supply, an increase in government purchases and an increase in exports which is an international demand on our gross domestic product.

Inflation may occur by an increase in production costs which is called **cost – push inflation**. The latter is caused by an increase in money wage rates and an increase in the money prices of raw materials.

Inflation is harmful to the whole economy and redistributes the national income. It lowers real wages. Inflation may lower or lessen lending and borrowing. It increases transaction costs and uncertainty.[3] The most harmful effect of inflation is an increase in investment risks which lowers investment level and economic growth rate and pushes the economy into recession as it happened globally or in the UAE economy at the end of 2008.

A natural functioning of a free enterprise economy is fluctuations of real economic activities as seen in the next figure. During an expansion phase, the inflation rate increases. During the recession phase, the unemployment rate increases. We should implement tools of fiscal and monetary policies to eliminate the fluctuations and bring the economy into a potential level as represented by the trend growth. [4]

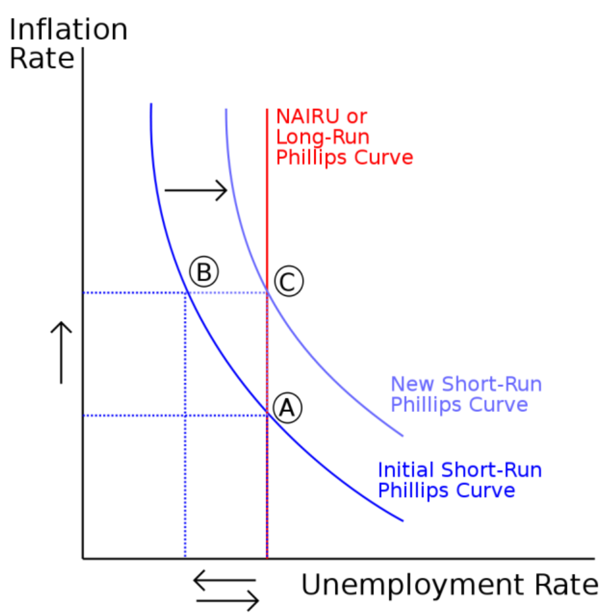
Figure 1: A Typical Business Cycle



Source: Case, Karl *et al*. **Principles of Macroeconomics**. 9/E. Pearson Education International, 2009, P.115

According to the New Zealand's economist A.W. Phillips, who suggested short-run Phillips curve (SRPC), there is a tradeoff between inflation rate and natural unemployment rate.[5] The latter is caused due to the normal functioning of the labor market and structural changes of an economy. If the government policies eliminate inflation rate, it may result in an increase in the unemployment rate, vice versa.

Figure 2: Phillips Curve



Source: http://en.wikipedia.org/wiki/Phillips_curve . Retrieved April 3, 2010

According to new theories, as rational expectations or non accelerating inflation rate of unemployment (NAIRU), as we implement an expansionary policies, the inflation increases and unemployment decreases below the natural rate of unemployment. There will be a movement from point A to point B. However, the expectations will shift the curve rightward. The vertical line represents a long run trend with stable level of natural rate of unemployment. The expansionary policies would result in an increase in inflation.[6]

The paper will use a strict **methodology** to examine the problem of inflation in the UAE and its effects and causes. The macroeconomic theory summarized above will be a guideline to test data and information. For instance, we will not say that inflation is caused by greedy merchants as mentioned in newspapers.

Since inflation rate mostly depends on the Consumer Price Index (CPI), we will throw light on this indicator. The Ministry of Economy (recently Statistics Center of Abu Dhabi) usually makes family budget surveys to gather information about quantities consumed and gather regular information about changes of prices for the basic items consumed by households. To simplify the method of calculating CPI, we will assume a typical consumer who buys only 20 hamburgers, 1 shirt and 2 CDs.

Table 1: Prices of a hypothetical consumer basket.

Year	Price of hamburger Dhs per unit	Price of shirt Dhs per unit	Price of CD Dhs per unit	Cost of basket
2009	**2**	**20**	**7**	**2(20)+20(1)+ 7 (2)= 74**
2010	**2.5**	**18**	**8**	**2.5(20)+18(1)+ 8 (2)=84**

$$CPI_{2010} = \frac{\text{value of the basket of goods in 2010}}{\text{value the basket of goods in 2009}} \times 100$$

$$= \frac{84}{74} \times 100 = 113.5$$

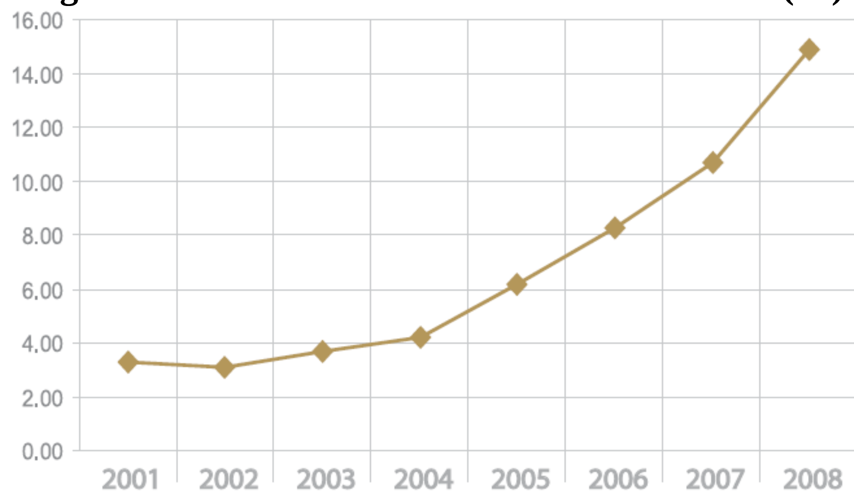
The first row of the table shows that the price per hamburger is Dhs 2 , the price per shirt is Dhs 20 and the price per CD is Dhs 7 in 2009. So the cost of this basket will be Dhs 74 which is the sum of prices times the Quantities consumed. By contrast, prices increase in 2010 even the shirt’s price decreases and the cost of the basket with the same quantities consumed will be Dhs 84. So the consumer price index in 2010 comparing with prices in 2009 will be 113.5, according to the formula. The overall level of prices has increased by 13.5% from 2009 to 2010 which is called the inflation rate in 2010.[7]

Problem

The UAE experienced sustained inflation during the last decade. We noticed different sources of data pertaining to our problem. For instance, the following figure represents a rapid increase in the inflation rate in the Emirate of Abu Dhabi. The rate continuously increases from more than 3% (2001) to around 15% (2008).[8] The ministry of economy published data about inflation in the UAE which is close to data mentioned above.[9]

According to a recent report issued by the Department of Economic Development in Abu Dhabi, the inflation rate in the UAE reached 12.9% (2008). This increase is caused by an increase in prices of raw materials, oil, and imports in addition to depreciation of US dollar exchange rate. The report added that the rent was the highest factor influencing inflation in which the weight of rent takes more than 40% of the consumer basket.[10]

Figure 3: Annual Inflation Rates in Abu Dhabi (%)



Source: Statistics Center – Abu Dhabi. **Annual Statistical Report of Abu Dhabi Emirate**, 2009, P.153

Needless to say, the inflation rate approached high level and threatened the stability of the whole economy and became public debate. The government offices such as Department of Economic Development and the Chamber of Commerce and Industry in Abu Dhabi published reports in addition to a large heap of papers in the local and regional magazines and newspapers.

According to recent report published by the National Bureau of Statistics, the inflation rate in the country increases from 6.2% (2005) to 12.3% (2008). The global financial crisis has pulled the economy of UAE into a recession which brought the inflation down to around 1.5% in 2009. We expect the inflation rate would be positive and around 1.1% (2010). The rate may increase to more than 2% in 2011 due to global economic recovery as expected by the National Bureau of Statistics.[11]

Table 2: CPI inflation rate in the UAE 2005- 2011 (%)

Year	CPI Inflation Rate
2005	6.2
2006	9.3
2007	11.1
2008	12.3
2009	1.56*
2010	1.1**
2011	2 – 2.5**

*Provisional Data

** Expected Data

Source: National Bureau of Statistics, **Analytical report on economic & social dimensions in the UAE 2009**, Abu Dhabi, April 2010, P.17 & P.51

The analysis of expenditures groups or how households allocate their income shows that the most important item is housing which currently has allocated the most weight within CPI that is 38% of CPI or a typical family budget. This expenditure group is similarly the one which has witnessed the most dramatic increases in prices over the last years. Transportation and communication have allocated 17% of the CPI and has also experienced high inflation. [12]

Despite Abu Dhabi’s population growth rate of 6% in 2006, there was not a sufficient increase in housing units which led to an excess demand or shortage of 3000 housing units. The problem increased in 2007 which led to a shortage of 7000-8000 units. New units entered the market were of higher standard and for upper layer of the society. The problem harmed the middle layer and limited income section of society. [13]

We will give ideas to support housing and transportation sectors when we will talk about solutions since these items are locally produced and the government could support them indirectly as we will see later.

The International Monetary Fund wrote a report about UAE economy in 2006. They state “*that the CPI currently underestimates the true inflation rate within the UAE”* because of the outdated weight and outdated basket where replacement products are not adjusted well and for missing data. The International Monetary Fund reports an 8% increase in consumer prices for 2005 as compared to the 6.2% announced by UAE Ministry of Economy. [14]

The table below shows different levels of inflation rates among Abu Dhabi, Dubai and Sharjah. The differences are due to the government investment expenditures which may strengthen the housing shortage and put pressures on rents. [15]

Table 3: CPI Annual Growth Rate (%) by Emirates (2001 - 2005)

	2001	2002	2003	2004	2005
General Price Index	**2.75**	**2.93**	**3.19**	**5.02**	**6.21**
- Abu Dhabi	3.10	3.09	3.03	6.22	5.05
- Dubai	2.90	2.94	3.45	5.09	6.48
- Sharjah	2.30	2.92	3.12	4.82	6.10

Source: Dubai Chamber. **Macroeconomic Report Series: UAE Macroeconomic Report**, Dubai, 2007, P.39

Effects & Social Costs

Higher inflation lowers the purchasing power of money. Dirham should operate as a store of value. When the prices of different products increase, the value of dirham will depreciate. Additionally the real value of our salaries and savings will be less today compared to that of last year.

Inflation changes the distribution of national or aggregate income. People living on fixed incomes are particularly hurt by inflation. If prices of products increase faster than the increase in the wages or salaries, we will find that the workers with fixed salaries will be able to buy only fewer quantities of products. However, the businessmen who get the profit, their income will increase rapidly and they will be better off.

The prices of consuming goods have increased faster than the prices of factors of productions such as labor forces. That leads to depreciation of our currency and results in a decrease in the purchasing power.[16]

Inflation that is higher than expected benefits borrowers at the expense of lenders. If you lend me Dhs100 at 7% interest rate and suddenly the prices increase by 9% the real interest rate will be negative or (-2%). It means that I will return you less than

Dhs100 as a real value of money. Inflation may affect the financing of large projects and especially for long run.

The real interest rate of 5% equals nominal interest rate of 15% minus the inflation rate of 10%.[17] In general the real interest rate is determined by the interaction in stock markets in basic International markets. But the nominal rate is determined in a country according to the level of inflation. As interest rate increases the motivation of businessmen to borrow money for expansion will be hurt.

People during inflation tend to hold less cash than regular. That will affect negatively the structure of families' expenditure. People will spend more money on consumption and for transferring some of their savings to jewelry. Eventually, the real investment would be less.

Because it is difficult to expect the rate of inflation, investors will spend time to estimate the changes in prices. They can not evaluate properly the profitability of new projects. More resources will be allocated to projects that will not benefit the nation or accelerate the real economic growth.

Because high inflation makes the living cost very high for workers with fixed salaries, majority of the general public will push the government to focus on short-run economic issues such as inflation & stabilization rather than long-run issues such as economic growth, technological progress and economic diversification.

During high inflation, workers will try to tackle the effect of inflation by finding other jobs and some of them will work extra over time. The outcome will be lower real wages and smaller quantities will be consumed. Moreover, the natural unemployment rate may decrease because of lower real wage rates.

Also during sustained inflation, the purchasing power of money expressed by our fixed salaries will be terribly lower within two or three years. People will allocate basic part of their salaries to cover food and other necessities. They will spend less on education, health services & recreation. The outcome will be low labor productivity and low standard of living.

The severe cost we paid to tackle the inflation was the recession of 2009. Inflation would increase risk and lower investment and economic growth. The unemployment rate is surely larger in 2009 than it was in 2008. The labor force survey conducted by the National Bureau of Statistics showed that the unemployment rate reached 4.2% in 2009 for the UAE as a whole.[18]

Causes

The quantity theory of money states that:

$$M \times V = P \times Y$$

in which M: Money supply, V: velocity of money that is constant (or virtually constant), P: overall price level, Y: quantity of aggregate output. Thus,

$$\text{Nominal GDP} = P \times Y.$$

Money supply (M) can be considered a policy variable set by the central bank. According to the theory, a change in money supply causes equal percentage change in nominal GDP. Then, if money supply increases faster than an increase in real GDP, the overall price level will increase to ensure equality between two sides of the equation.[19]

When the **money supply** increases, this will result in more money chasing the same amount of goods. The excess money supply will then create a new equilibrium point in the market. The only difference is an increase in the overall price level. According to the annual report (2005) issued by the UAE Central Bank, money supply increased by Dhs 24 billion (29%) to reach Dhs 104 billion, as compared to Dhs 80 billion (2004).

Inflation rate reached 11% (2007) and increased to 12% (2008). Money supply rose by 51% (2007) and 15% (2008), while the real GDP grew much slower than money supply. Real economic growth rate was 6% (2007) and 7% (2008). We can conclude now that slow growth of money supply in 2009 of 7% was a reason to drop inflation down to 1.5% in the corresponding year.

Table 4: Money Supply in UAE

(In millions of AEDs)

Items	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Currency with the public	15,778	17,522	21,837	25,942	36,967	37,217
Monetary Deposits	65,040	86,927	98,182	155,722	171,171	186,265
Money Supply	80,818	104,449	120,019	181,664	208,138	223,482
Money Supply Change % *	-	29	15	51	15	7

* Calculated by the researcher

Sources: 1. Central Bank of UAE. **Annual Report 2005**. Abu Dhabi. P.28

2. Central Bank of UAE. **Economic Bulletin 2008**. Abu Dhabi. P.15
3. Central Bank of UAE. **Annual Report 2008**. Abu Dhabi. P.33
4. Central Bank of UAE. **Annual Report 2009**. Abu Dhabi. P.6 of statistical supplement

If the money supply increases more than the real domestic product, the prices will definitely increase. It seems that the 29% increase in money supply which is much higher than the economic growth rate of real Gross Domestic Product of 13% in 2005, became a one main source to fuel the overall price level.

Table 5: Gross Domestic Product in UAE

(In billions AEDs)

Items	2005	2006	2007	2008	2009(1)
Nominal GDP	506.8	643.5	758.0	934.3	914.3
Real GDP(2)	393.1	445.1	472.7	507.9	514.5
Nominal GDP growth rate %(3)	31.8(4)	27	17.8	23.3	- 2.1
Real GDP growth rate %	13.1	13	6.2	7.4	1.3

(1) Provisional data
(2) Converted from US Dollar to Dirhams as 1 US Dollar = 3.6725 Dirhams by the researcher
(3) Calculated by the researcher
(4) Calculated from: Central Bank of UAE. **Annual Report 2005**. Abu Dhabi. P.19

Source: National Bureau of Statistics, **Analytical report on economic & social dimensions in the UAE 2009**, Abu Dhabi, April 2010, P.17

As oil prices have increased over the past years, the UAE has received an increasing value of oil revenues resulting in an injection of liquidity into the domestic markets. The inflationary pressure of money supply could not be compensated by a rapid increase in domestically produced goods and services. That results in an increase in prices.

UAE economy is still rigid because the excess aggregate demand can not motivate the production process. In the long-run, we should work to diversify the economy and give attention to technological innovation and research.[20]

The basic cause of inflation is excess **aggregate demand** stimulated by private consumption and government expenditures. Since the UAE economy is a developing economy and is not flexible, the real output could not grow rapidly as aggregate demand.

We can find out the excess aggregate demand if we calculate it based on current prices and compare it with real GDP based on constant prices.

Inflation is caused by an excess demand in which demand exceeds supply. The increase in aggregate demand is caused by a rapid increase in oil revenues which leads to high rate of government expenditures. For instance demand for housing units increases faster than the increase in supply of housing units which results in an increase in rents.[21]

According to annual report (2005) issued by UAE Central Bank, total expenditure rose by 31% (2005) based on current prices which is represented as aggregate

demand, while the gross domestic product grow by 13% (2005) based on constant prices which is represented as real output. The difference will put inflationary pressure on the UAE economy.
The gap continued between aggregate demand represented by aggregate expenditures (nominal GDP) and aggregate supply represented by real GDP. Total expenditures increased by 18% (2007) and 23% (2008), while real GDP rose by 6% (2007) and 7% (2008). The gap led to high inflation rate of 11% (2007) and 12% (2008). We can conclude now that the decline in aggregate demand by 2% in 2009 and a weak - but positive – increase in real GDP by 1% led to a great fall in inflation to 1.5% in the corresponding year.

In national accounts along with given price level, aggregate expenditures always equal aggregate output or gross domestic products. If we assume now the aggregate demand equals aggregate supply, the prices tend to be stable.

The aggregate expenditure grows rapidly - for example - by 31% in 2005 stimulated by the increase in oil revenue or government expenditures. While the real output could not grow as rapid as aggregate demand that will result in an increase in prices of different products. However, the aggregate expenditure is equal to GDP in current prices.

According to the UAE Central Bank, the ratio of imports to Gross Domestic Product was 68% in 2005 and increased to 86% in 2008.[22] Thus, we heavily depend on goods produced abroad. The global inflation affected the UAE through imports which are called **imported inflation**.

The price at which one currency exchanges for another is called a foreign exchange rate. The dirham has stabilized against the US Dollar. The problem is with the US dollar depreciation which is the fall in the value of dollar in terms of other international currencies. People in UAE have to pay more dirhams to import a particular product from countries such as India or China.

Most of products consumed locally are imported from abroad. As in 2005, 68% of consuming and capital goods were imported. So the overall price level in UAE is too sensitive to inflation in international markets.

According to the Department of Economic Development in Abu Dhabi, the fixed relation between US Dollar and UAE dirham limits the usage of monetary policy tools and leads to depreciation of dirham exchange rate against other foreign currencies.[23]

The rigid relation between the Dirham and US dollar leads to Dirham depreciation as much as dollar depreciation. As the International Monetary Fund database, the U.S. Dollar depreciated against SDR (Special Drawing Right) by 19% from Dec. 1, 2000 to Dec. 1, 2010, and depreciated against U.K. Pound Sterling by 8.9% for the corresponding period.[24] "*The currency value of the SDR is determined daily by the IMF by summing the values in U.S. dollars, based on market exchange rates, of a basket of four major currencies—the euro, Japanese yen, pound sterling, and the U.S. dollar. The SDR valuation basket is normally reviewed every five years.*"[25]

Solutions

(1) Monetary policy is a policy to control over the money supply by the Central Bank. The bank can use its tools to reduce the money supply. The Bank should:

- increase the discount rate
- sell government securities
- increase the required reserve ratio

The Central Bank should allow a limited growth of money supply according to the speed of economic growth of real domestic product.

To lower money supply the central bank should increase the discount rate to commercial banks. As a commercial bank, National bank of Abu Dhabi has to increase the interest rate. The borrowing by people or investors would be less. The fixed relation between Dirham and US dollar led the Central Bank to be reinforced to decrease the interest rates during the period of inflation. Otherwise, a good part of local savings will travel abroad. Needless to say, a decline in interest rates did not lead to a decline in inflation. For instance, the interest rate of commercial banks overdraft lending decreases from 11.04% in the third quarter of 2006 to 9.05% in the first quarter of 2007.[26]

When the central bank - through the open market - sells government securities, the bank will cut the money supply. i.e., Cash in hands will be less.

The central bank should increase the required reserve ratio. So commercial banks have to keep extra funds out of lending. All these suggestions would contribute to lower the high growth of money supply. The central bank's tools are not so effective because of tight relation between our currency and US dollar.

The rapid increase in money supply in UAE is caused by commercial banks when they facilitated loans. Commercial banks can create money. Money supply comprises currency in hand and deposits on demand. When someone deposits a cash of Dhs 100 in a commercial bank, assume the required reserve ratio is 20%; the bank can give a loan up Dhs 80 and keep Dhs 20 as reserve. If the loan of Dhs 80 deposits again in the bank, the latter lends 80% of the new deposit. Ultimately, the total deposits equals Dhs 500 and total loans equals Dhs 400, while the total reserves equals the initial deposit of Dhs 100. Commercial bank created Dhs 400 by giving loans.[27]

The money multiplier, in this case, is Dhs 500 / Dhs 100 = 5. Mathematically, it equals:

Money Multiplier = 1 / required reserve ratio = 1 / 0.20 = 5[28]

If the central bank increases the required reserve ratio, the money multiplier will be lower, i,e., the ability of creating money by commercial banks will be less.

According to the balance sheet of the National Bank of Abu Dhabi, deposits reached Dhs 70.7 billion (2006) and increased to Dhs 81.7 billion (2007). Loans were 81% of total deposits in 2006 and increased to 97% in 2007.[29] We know that most of deposits came from loans given to customers or investors.

According to a recent annual report issued by the central bank, and due to the aggregated balance sheet of commercial banks, we notice heavy credit facilities given to the private sector reached Dhs 730 billion in 2008 and slightly dropped in 2009. The loans given exceeded monetary deposits of Dhs 171 billion and quasi monetary deposits of Dhs 466 billion. The commercial banks use their foreign liabilities and government deposits to expand their activities. The rapid speed of credit given to the private sector participated to fuel inflation.[30]

(2) Fiscal Policy: Making changes in taxes and government spending is called Fiscal policy. The government should increase taxes (Fees) or/and cut its spending in an attempt to prevent inflation from increasing. A surplus in a public budget is a method to control the overall price level. The UAE government should impose value added taxes in addition to income taxes. That would activate the effectiveness of our fiscal policy to influence the whole economic activities in the country.

As we mentioned before the excess aggregate demand causes rapid increases in overall price level. Government expenditures took 22% of total expenditure on GDP in 2005.[31]

To eliminate the excess aggregate demand, the government should cut its spending. The problem is with oil revenues which go directly to the public budget and cause a rapid increase in government expenditures and ultimately an excess aggregate demand.

The government can design one budget based on foreign currencies and another budget based on domestic currencies. I mean that the government should spend domestically according to the production capacity of the UAE economy. Extra demand on goods and services created by government expenditures can be absorbed via imports. However, a critical part of demand must be satisfied by domestic production such as housing units, education and medical care.

I think privatization process could participate in lowering the government expenditures.

The UAE is still considered, among top five countries in the world, on the ease of paying taxes.[32] We should start to implement taxation system, as most of other countries are doing, as a source of public revenue. That will decrease the dependence on oil revenues. Additionally taxes will decline private consumption which is a major part of aggregate demand.

Value added taxes are largely imposed by different countries across the globe. International Trade Organization tends to decline tariffs or even cancel them. Additionally, GCC countries tend to substitute value added taxes for tariffs. Value added taxes can increase government revenues better than tariffs because the first can be imposed on sale prices and cover both goods and services while tariffs are imposed on imported goods only.[33]

(3) The U.S. dollar has decreased its value against other currencies in the last years. Due to its fixed peg to the US dollar, the dirham **exchange rate** depreciated against other currencies abroad. The solution is to re-evaluate the dirham according to a basket of foreign currencies instead of the U.S. dollar only.

The US dollar lost around 19% of its value within the last 10 years because of internal and external problems faced by US economy and especially due to the burden on U.S. public budget primarily because of the war in Iraq and Afghanistan. In contrast the UAE economy experiences a high economic growth and has achieved an important position in the international trade, especially of accumulated surpluses of oil revenues and public budget.

We should stop the fixed relationship between UAE dirham and US dollar and re-evaluate the Dirham according to a basket of foreign currencies as Kuwait did recently. If we do so, the exchange rate of Dirham will be appreciated. Thus, the effect of depreciation of dollar will not affect the prices of our imports.

(4) To protect our currency from severe fluctuations, we should achieve **GCC single currency** among GCC countries.

We have a great potential opportunity to push debate about GCC single currency among GCC countries as European Union created the Euro. The new currency would be more stable and it will depend on a wide basket of foreign currencies. The Euro, US dollar and pounds sterling will be part of the base.[34]

(5) The government should invest in the **housing** sector especially for those people who are earning fixed salaries. Moreover, the Municipality should allocate more housing land to encourage investors to bring life in barren areas and deduct the fees on merchants & industries of real properties or housing raw materials.

According to family budget survey conducted by Abu Dhabi Statistics Center, we found that families averagely spend 48% of their income on two essential categories: housing which takes 38% and transportation (without telecommunication services) which takes 10%. These two categories witnessed high rate of inflation. Housing prices increased by 12.8% while transportation prices increased by 7.4% in 2008.[35] If the government supports these two sectors that would control the prices or even deflate them.

The government should invest in a large apartment complex for public servants (Government employees) rather than billing huge amount for renting. That will increase supply of housing units. During recession, hosing investments can stimulate the whole economic activities as much as investment in infrastructures. A reduction in rents may lower the production cost for most businesses. And production may increase to get rid of recession.

The effect of global financial crisis was limited to real properties sector in Mexico because the investment in this sector was supported by the financial market and was focused on housing units for the middle layer of society. The Mexican construction companies and developers were aware of the importance of the middle class as the majority of the population.[36]

(6) Government should increase the investment in public transportation. People should be offered an opportunity to travel by train. This will help the public to spend less on **transportation**. During recession, cheaper transportation and closer housing may increase labor productivity and decrease production cost.

Additionally, Abu Dhabi department of transport aims to reduce the reliance on private cars as a key to tackle congestion and promoting economic growth. The government should invest in public transportation as trains.[37]

Mr. Abdulla Al-Otaiba, Chairman, Department of Transport, said; the Abu Dhabi Surface Transport Master Plan will "*reduce distribution costs by having shorter and more predictable journey times within the supply chain. Additionally the allocation of resources in the economy will be made more efficient as users bear more of the cost of transport provision directly through fares and charges.*"[38]

Do these recommendations work now?

Even though the economy enters the phase of recession from the end of 2008, we should increase the effectiveness of monetary and fiscal policies to adjust the level of money supply and aggregate demand to match the potential level of aggregate output. Moreover, recommendations to tackle inflation work well as supply-side policies to stimulate output. We still need to support housing and public transportation to lower production costs. Ultimately, we should free the exchange rate from the fixed relation with US dollar.

Conclusions

1. It is crucial to depend on modern macroeconomic theories when the matter comes to analyze macroeconomic problems such as inflation.

2. The country experienced high and continuous inflation rates in which the rate increases from 3% (2001) to 15% (2008) according to the data published by Statistics Centre – Abu Dhabi.

3. The inflation affects the middle and limited income layers of the society especially because of the increase in rents of housing units.

4. The exchange rate of dirham was depreciated and resulted in lowering the purchasing power.

5. Inflation increased risks and uncertainty, lowered investment and economic growth. The severe cost we paid to tackle inflation was the recession of 2009. The unemployment rate increased in 2009 relative to 2008.

6. Searchers suffer from availability and accuracy of data. Statistics centers should make continuous improvement to cover economic activities.

7. Money supply increased faster than the increase in real gross domestic product which led to an increase in the overall level of prices.

8. The basic cause of inflation was an excess aggregate demand stimulated by government expenditures.

9. The UAE economy depends heavily on imports and the fixed relation with US dollars led to a rapid increase in imports prices.

10. The central bank should activate the tools of monetary policy to be able to adjust the quantity of money supply according to the level of potential GDP.

11. The Ministry of Finance should activate the tools of fiscal policy to enable to adjust public budget according to the level of potential GDP.

12. The UAE dirham exchange rate should be re-evaluated and the fixed relation with the US dollar should be changed into a wide base.

13. We have a great opportunity to push debate about GCC single currency since it increases the stability of the monetary system.

14. The government should invest in a large apartment complex for public servants and encourage the private sector to invest in housing for the middle layer of the society. That will increase the supply of housing units.

15. The government should expand public transportation to eliminate the cost of transport for the labor and materials.

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