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# AN ASSESSMENT OF INTERNATIONAL LIQUIDITY AND HIGHER OIL PRICES

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**Abstract:** Energy represents an important component of production costs and therefore, an increase in energy prices directly impacts economic productivity, unemployment, inflation, and balance of payments equilibrium – often engendering currency devaluations. Until recently, the growth in demand for conventional fuels, mainly oil and gas, has widened imbalances between demand for and supply of energy. The effects of the surge in oil prices ripple across the entire global economy resulting in a redistribution of international liquidity. The latter creates global imbalances characterized by increasing balance of payment deficits and deteriorating the terms of trade, reducing the flow of non-energy goods and services and increasing uncertainty of future global transactions. The aim of this paper is to shed some light on the impact of higher fuel prices on global liquidity management.

**Keywords:** *oil revenues; price volatility; global liquidity; balances of payments; globalization; the Middle East; China; India.*

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## INTRODUCTION

In this age of industrialization, transportation and mass production of goods and services, energy and energy prices play a crucial role in the overall development of all societies. Modernization and future prospects of rapid and sustained growth depends on the supply of energy. In other words, such high dependency on energy has linked the future development of mankind to the existence of conventional energy sources to ensure the meeting of human needs and the enhancement of productivity growth. Exacerbating matters, the prospect of developing alternate sources of energy to substitute for fossil fuel has shown very little sign of encouragement. Despite investment in technologies geared to developing non-fossil fuels, the potential for finding a sub-

stitute for hydrocarbons remains unachieved and illusive.

Currently, most production and exports of oil and gas come from developing countries with low population density. The gap between production and consumption of energy stems from the uneven distribution of fossil fuels where most consumers are highly industrialized countries with heavy dependence on imported oil to meet domestic requirements. Due to the narrow economic base and small absorptive capacity of most oil exporting countries, they are able to accumulate large reserves and enjoy current account surpluses. Such trends could have spillover effects by creating global imbalances through higher prices, liquidity shortages, inadequate global demand and currency devaluations.

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International liquidity is important for maintaining balance of payments equilibrium, strengthening global economic management and enhancing international financial stability. Higher petroleum prices could produce adverse effects on global stability by redistributing income in favor of oil producing countries and reducing flows of international transactions. The main objective of this paper is to highlight the importance of liquidity imbalances and its impact on global trade and finance.

### THE OIL QUESTION

During the last few years, oil prices have been volatile rising to over US\$140/bbl. in July 2008 and declining to \$35/b by December in the same year. However, higher oil prices could engender substantial negative financial, social and economic imbalances, particularly in non-oil producing countries. In addition, rapid economic growth, especially in Asia in recent years, has widened the gap between the demand for petroleum products and the existing capacity of supply. Heavy dependence of many industrialized and non-industrialized countries on imported oil to meet their demand requirements could impose constraints on government budgets, balance of payments equilibrium, aggregate expenditures, human development, poverty alleviation programs and economic growth. The negative impact of rising energy prices will be on low income countries as well as on industries which rely on oil as a key input in production.<sup>i</sup>

In developing countries, earning of foreign exchange depends largely on production and export of a limited number of primary products, mainly minerals and agricultural-based products. As a consequence, higher petroleum prices could weaken the ability of these countries to increase pro-

duction for exports and promote global competitiveness. In addition, higher oil prices weaken the effectiveness of national economic policies by reducing the country's capacity to import, especially capital goods and raw materials. Economic development underscores the importance of access to global knowledge, skills, technology and information for building capacity capable of increasing productivity and sustaining economic growth.

Petroleum and petroleum products are among the most important commodities traded globally; therefore, the stability of the oil market is essential for international financial flows, promoting trade and ensuring global economic growth. It is estimated that the primary demand for oil is to increase by 1.3 percent per year over 2005 – 2030 or the equivalent of 99 million barrels in 2005 and 116 million barrels in 2030. About two thirds of this increase in demand will originate in developing countries. Meeting such demand requires that the oil industry invest a total of \$4.3 trillion over the period 2005 – 2030 or \$164 billion per year.<sup>ii</sup> In addition, most of the known-reserves of oil and gas are located in non-industrialized countries with low population density and low economic productivity. It is unlikely that a substitute for fossil fuel will be found in the near future and, therefore, the risk of imbalances between demand and supply is expected to continue keeping the global energy market volatile.<sup>iii</sup>

Table 1 illustrates that world proven reserves of oil amounted to 1,295 billion barrels in 2008, about 60 percent of which is located in the Middle East and North Africa. Table 1 also shows that the Middle East enjoys the largest share of world proven reserves of natural gas amounting to more than 42 percent.

**Table 1: World proven crude oil and natural gas reserves by region, 2008**

Region	Proven crude oil reserves (m/b)	% of total world	Proven natural gas reserves (billion cu m)	% of total world
North America	26.217	2	9,168	5
Latin America	210.507	16.3	8,007	4.4
Eastern Europe	128.979	10	55,000	30
West. Europe	14.805	1.1	5,292	2.9
Middle East	762.265	58.9	75,298	41.2
Africa	122.041	9.4	14,692	8
Asia & pacific	40.278	3.1	15,394	8.4
Total World	1,295.09	----	182,842	----
OPEC	1,027.38	79.3	93,347	51.1

Source: Organization of the Petroleum Exporting Countries (OPEC), Annual Statistical Bulletin 2008 (Vienna, 2008)

This implies that the region will remain the most important supplier of oil for several decades to come. Given the global demand for energy, it is uncertain whether the Middle East can continue to supply a sufficient amount of oil to meet future global demand. The Organization of the Petroleum Exporting Countries (OPEC), with less than 10 percent of world population, controls about 80 percent of world known oil reserves. Bridging the gap between demand and supply not only requires collective cooperation among producers and consumers, but also the construction of an effective strategy for crisis management. Such collective action will ensure stability of financial markets and reduce the risk of global recession. International trade is biased in favor of exporters of manufactured goods, technology and serv-

ices. This bias imposes constraints on non-industrialized countries to get a fair share in world trade and foreign direct investment.

### GLOBAL TRENDS

Since the start of the millennium, energy prices in general and oil prices in particular have been volatile causing a major concern for policy makers, energy analysts, (OPEC), international organizations and industry. Throughout the 1980s and 1990s, the fact that oil prices were very low discouraged investment and reduced supply. Low investment in conventional sources as well as in alternative sources of energy was met with rapid global demand for energy during the last few years, especially in Asia, where China and India have become prime con-

sumers of energy. Economic growth rates in China and India have surpassed all world regions by growing at 9.7% and 7.6% in 2008 compared to 11.9% and 8.6% in 2007 respectively.<sup>iv</sup>

In recent years, globalization has increased global interdependencies among nations by liberalizing trade and financial transactions, promoting capital flows, and increasing labor mobility. Modern information and communication technologies (ICTs) have enhanced financial services by connecting global markets through electronic networks and satellite broadcasting. Such trends gave rise to new markets dominated by key players, mainly multinational business, industrial countries and global institutions. Similarly, information technologies speeded up international transactions by linking individuals, businesses, markets and organizations worldwide. Globalization, though its meaning is vague, involves worldwide exchanges of goods and services, capital flows, and telecommunication technologies. Taking advantage of the new global knowledge-based economy driven by globalization requires countries to deepen global integration and increase global competitiveness through production and exports of high-tech products. Higher petroleum prices could have an adverse effect on global trade because of the increase in production costs of intermediate goods including fertilizers, chemicals, plastic products and fuels. Not only the demand for oil comes from its direct need for fuel, but also from its indirect usage as intermediate goods that enter in production of many products.<sup>v</sup>

As multinational nationals, oil companies are fully integrated in the globalization process for being key players in the global energy markets. Almost two thirds of oil production, distribution and shipping are

controlled by these companies, better known as the seven sisters. Due to the importance of oil trade and because of the rise in oil prices in recent years, these companies exercise tremendous economic and financial powers over the global markets. For example, in 2008, total revenues of the top five major oil companies (BP, ExxonMobil, Total, Royal Dutch/Shell and Chevron) were about \$1.4 trillion. As shown in Table 2, net income earned by major oil companies more than doubled between 2003 and 2008 increasing from \$61,429 million to \$138,597 million respectively.

Globalization has eased restrictions on global trade and finance by giving greater access to global markets. Export-led growth policies require building capacity capable of facilitating global connection for absorbing knowledge and disseminating information. Balance of payments disequilibrium weakens the ability of the economy to sustain growth by imposing constraints on its international trade transactions. As a consequence, availability of foreign exchange becomes necessary to pay for the country's global obligations. A deficit in the balance of payments could cause devaluation of the national currency which reduces the country's ability to meet its external obligations, especially serving the foreign debt and paying for imported goods. Such trends create uncertainty about future growth by discouraging foreign direct investment in the local economy. In other words, without liquidity, the country suffers from capital flows causing brain drain, disinvestment, skill shortages, knowledge denial and limitation on technology transfer. Petroleum import price increases is referred to as an OPEC tax because of the transfer of wealth from oil importers to exporters. The money paid to oil producers, is not invested back in the country and represents a loss of resources. Higher

**Table 2: Net income of major oil companies, 2003 – 2008 (m\$)**

Oil company	2003	2005	2008
BP	12,432	19,314	25,593
ExxonMobil	21,510	36,130	45,220
Total	7,944	14,885	15,576
Royal Dutch/Shell	12,313	25,311	28,272
Chevron	5,294	11,098	23,931
Total	61,429	109739	138,597

Source: Organization of the Petroleum Exporting Countries (OPEC), Annual Statistical Bulletin 2007 (Vienna: OPEC, 2008) (Vienna, 2008)

petroleum prices siphons financial resources outside the circular flows of the local economy. This weakens multiplier effects and reduces potential for higher growth. Under such circumstances, management of macro-economic variables becomes more difficult stemming from increasing uncertainty about future energy prices impacting the ability of the economy to sustain stable growth.<sup>vi</sup>

### GLOBAL LIQUIDITY

Global liquidity constitutes monetary assets used mainly for financing international trade transactions and correcting balances of payments disequilibrium. Liquidity is a stock measured in a given time period showing the distribution of international reserves among various countries. The need for these reserves is vital for facilitating trade transactions and settlement of foreign obligations. Enhancing the reserves position depends largely on the country's export trade as well as on global demand for its products. In China, for example, rapid economic growth in recent years considerably improved the

country's balance of trade position, causing gross international reserves to increase from \$821,514 million in 2005 to \$2,340,000 million in 2008. On the other hand, current account balance increased from \$160,818 million to \$284,100 million respectively.<sup>vii</sup> Similar build up in reserves is occurring in oil exporting countries where the recent surge in oil prices has resulted in transferring large amounts of global liquidity to few countries, mainly those in the Middle East and North Africa. For example, current account balance of OPEC increased from \$263,129 million in 2005 to 466,546 million in 2008. In the case of Saudi Arabia, the biggest oil exporter, current account balance increased from \$89,990 million in 2005 to \$141,800 in 2008.<sup>viii</sup> Due to the small size of their economies and because of the limitation of their absorptive capacity, these countries have been enjoying a favorable balance of trade position by accumulating a substantial amount of surplus.

In recent years, the balance of payments situation has been aggravated by rising

global food prices which have added additional burden on net export earnings of most non-oil importing countries. The challenges facing many of these countries are so great that it will take much needed financial and technical assistances to correct imbalances in their economies. In other words, urgency is need for reengineering the international financial system in order to ensure global financial stability and maintain balances of payments equilibrium. Greater management over the global financial system is also due to the current financial crisis sweeping the economies of Western countries. Uncertainty about future financial transactions will worsen economic growth prospects and weaken management of the global economy.<sup>x</sup>

In particular, the least developed countries with high dependency on imported oil could suffer from liquidity shortages needed to finance their international obligations. In these countries, settlement of international transactions is usually resolved through revenues earned from export of primary products, the prices of which are volatile. In recent years, serving the foreign debt has increased economic vulnerability by subjecting the economies of these countries to liquidity shortages and balance of payments disequilibria. In additions, capital flows into these countries are restricted due to economic and political considerations which in turn cause disequilibrium in balances of payments. Poor countries usually do not have investments abroad to supplement their foreign reserves earnings, i.e. they rely heavily on export earnings to support the demand for imported goods and services.

On the other hand, oil producers continue to argue in favor of higher prices to maximize the return from non-renewable

resources. Low levels of economic development in these countries encourage calls for higher prices to pay for their development projects. In addition, political instability and external interference undermines market stability, especially in the Middle East, where historical trends have proven to be disruptive to oil flows. For many energy consumers, especially the United States, oil is a strategic commodity which falls into the domain of national security. Such importance gives oil high priority in constructing future energy policies. In recent years the relationship between consumers of oil, mainly Western countries and oil producing countries has deteriorated because of the events in Iraq, Venezuela, Iran, Algeria and Nigeria. Western military intervention and the threat of embargos and sanctions against economic interest of oil producing countries could have destabilizing effects on the global economy.<sup>x</sup> The rise of anti-western feelings in many of the developing countries, including the Arab world, increases uncertainty about the future flow of oil by encouraging people to use force for achieving their national objectives. Oil prices are sensitive to changes in global demand and security problems which in turn undermine efforts to increase market stability.<sup>xi</sup>

### **ENERGY IMBALANCES**

Because of its significant components of production costs, higher oil prices are expected to have a negative impact on growth prospects of both local and global economies. In OECD countries, for example, productivity growth is to decline from 2 percent currently to about 1.5 percent per year in 2030 which in turn could slow the demand for energy consumption. However, recent growth trends in Asia, especially China and India, are expected to continue to pressure demand for oil in order to meet productivity

requirements and population increase. Meeting global requirements for oil, demand is to rise by 29 million barrels per day from 2006 to reach to 113 million barrels per day in 2030. Most of the increase is expected to come from developing countries with energy consumption is to double reaching 56 million barrels a day by 2030. The Asian countries alone are to see an increase of 17 million barrels a day or two thirds that of all developing countries combined.<sup>xii</sup>

As shown in Table 3, World's demand for oil increased from 82.5 million barrels in 2004 to 86.8 million barrels a day in 2008. Most of the increase in demand for oil comes from the Asian countries, where China's demand alone increased from 6.4 million barrels a day to 8.0 million barrels a day in 2008.

In the long run however, the demand for

oil may come from rapid economic growth in the Middle East where demand is estimated to reach 9.7 million barrels per day in 2030 compared to 2 million barrels per day in 1980. Latin America's requirement for oil demand is to reach to 7.0 million barrels per day whereas in Asia the demand for oil will be reaching to 29.7 million barrels of oil per day in 2030 compared to that of 4.4 million barrels per day in 1980. In China, the demand is expected to reach 15.3 million barrels of oil in 2030 or at an average yearly increase of 3.4% between 2005 and 2030. It seems that in the long term most of the demand for oil will originate in developing countries where average yearly increase is estimated at 2.5% between 2005 and 2030. Unless alternative energy sources are developed, such trends widen the gap between demand and supply causing long-term prices to soar.<sup>xiii</sup>

**Table 3: Global demand for oil (million barrels/day)**

Region/World	2004	2005	2006	2007	2008
North America	25.4	25.5	25.3	25.5	25
Europe	15.5	15.6	15.6	15.3	15.3
Pacific	8.5	8.6	8.4	8.3	8.3
China	6.4	6.7	7.2	7.5	8
Other Asia	8.7	8.8	9	9.3	9.4
Latin America	5	5.1	5.3	5.6	5.9
Middle East	5.7	6	6.2	6.5	6.8
Africa	2.8	2.9	3	3.1	3.1
World	82.5	83.8	84.9	86	86.8

Organization of the Petroleum Exporting Countries (OPEC), World Oil Outlook 2008 (Vienna: OPEC, 2008)

**Table 4: Global Supply of oil (million barrels/day)**

Region/World	2004	2005	2006	2007	2008
North America	14.6	14.1	14.2	14.3	14.1
Europe	6.1	5.6	5.2	5	4.6
Pacific	0.6	0.6	0.6	0.6	0.7
China	3.5	3.6	3.7	3.7	3.8
Other Asia	2.7	2.7	2.7	2.7	2.7
Latin America	4.1	4.3	4.4	4.2	4.1
Africa	3.4	3.7	3.9	2.5	2.6
OPEC	33.1	34.2	34.3	35.5	---
World	83.4	84.6	85.4	85.5	---

Source: Organization of the Petroleum Exporting Countries (OPEC), World Oil Outlook 2008 (Vienna: OPEC, 2008)

Sources of current supply of oil are shown in Table 4 reflecting the importance of OPEC countries in future energy supply. In 2007, the share of OPEC in total world supply of oil accounted for 42%. Whereas North America, the biggest consuming region of energy, supplied about 17% of world total or less than half of demand requirements.

Creating a global energy balance, both in terms of security of supply and security demand for oil are important. OPEC countries are under pressure to guarantee supply by keeping the flow of oil in line with world demand. However, unlike other globally traded commodities, the supply of oil is influenced by political, strategic and national security factors which make future flows highly uncertain. The 1973 oil embargo and the rise in petroleum prices is still a reminder of the risk that history may be re-

peated. The Middle East, where most of the oil is produced, remains one of the most volatile regions in the world. Both external and internal factors could contribute to the instability of the region reflecting global disruptions of oil and a sudden hike in prices.

Supply from conventional areas costs more due to the declining reserves and rising cost of technology used in production and discovery. Even with new discoveries in Africa and Russia the amount of the new reserves fall short of meeting future demand requirements. In addition, the supply of oil is influenced by non-economic factors including political, social and environmental forces which increase uncertainty about future growth to meet demand. As nonrenewable resources, oil and gas have the tendency to deplete faster as output is supplied. Most oil and gas reserves are located in developing

countries with ambitious development plans of their own. Supporting these plans, these countries need to make more of their produced supply for domestic consumption instead of exports. Sustaining future economic growth and meeting the challenges of development will require greater investment in energy alternatives. To this end, global management of energy resources underscores the importance of global cooperation to ensure adequate supply and reduce market uncertainty.

Oil producers are developing countries facing many challenges including high growth rates of population, greater demand for services, economic restructuring, new job opportunities and social development. Implementing these programs may reduce the ability of OPEC countries to meet global supply requirements. To increase supply, OPEC is to invest \$150 billion between

now and 2012. These investments are to increase OPEC capacity by 4 million barrels of oil per day. Alternatively, oil consuming countries should look closely at the global supply requirements and take some initiatives to increase supply not only through production of conventional energy sources but also by investing in the development of new energy sources, reducing tensions in oil producing countries, maintaining stability of the dollar and increasing global cooperation. Global energy imbalances are shown in Table 5. As the table indicates, the global supply of oil was less than global demand by -0.98million barrels in 2007.<sup>xiv</sup>

Global imbalances constitute an important obstacle for the flow of trade among nations. Not only do imbalances influence international trade movements, but also investment expenditures. Weakening the national demand for investment could have a

**Table 5: Summarized supply/demand balance of supply and demand for 2007-2008 (mb/d)**

Region	2006	2007	2008
(a) World oil demand	84.63	85.78	86.88
Non-OPEC supply	48.88	49.43	50.13
OPEC NGLs and non-conventional	4.06	4.4	4.93
(b) Total Supply excluding OPEC Crude	52.94	53.83	55.06
Difference ( a – b )	31.69	31.95	31.82
OPEC Crude Oil Production	31.43	30.97	-----
Balance	-0.26	-0.98	-----

Source: Organization of the Petroleum Exporting Countries (OPEC), World Oil Outlook 2008 (Vienna: OPEC, 2008)

negative impact on global trade by reducing the capacity to import, especially manufactured products. The stability of the world economy underscores the importance of capital flows to facilitate international transactions. Recent increase in oil prices has increased imbalances by redistributing global liquidity in favor of small countries. Maintaining global balance will require recycling of excess liquidity earned by oil exporting countries by buying goods and services in the global markets. Unfortunately, a large number of developing countries could suffer badly from the surge in oil prices in the form of balance of payment deficits, higher prices, increasing costs and declining profits. These countries may respond by adopting policy measures to reduce the impact of higher oil prices but such policies may prove to be unsustainable if oil prices continue to rise. In the longer run, the challenge facing these countries is to invest and develop alternative energy sources.<sup>xv</sup>

To predict future trends in the oil market is extremely difficult because neither demand for nor supply of oil is easy to estimate due to the nature of factors that govern demand and supply. To reduce uncertainty and ensure market stability, global cooperation is needed for bridging the gap between supply and demand for oil. Such cooperation increases confidence in international markets by allowing countries to construct policies capable of inducing economic growth as well as investing in new sources of energy. Balance of payments disequilibrium could undermine international trade movements by imposing constraints on oil consuming countries to import goods and services to meet their development requirements. In addition, many of these countries are in debt, the service of which comes mainly from earning of their exports.

## **GLOBAL LIQUIDITY AND GROWTH POTENTIAL**

Economic growth, especially in developing countries, depends heavily on the country's ability to import capital goods and technology needed for building technological capacity and diversifying the productive structure. Development is a process of structural changes that focus on the supply side of the economy to strengthen the productive capacity, induce technologic change, diversify production, increase services and improve worker skills. The growth potential of an economy depends on the creation of productive capacity capable of stimulating aggregate demand and increasing investment spending. Without investment capabilities, economic growth remains stagnant due to a lack of adequate stimulus and weak linkages. Availability of international reserves is vital for promoting development and stimulating economic growth.<sup>xvi</sup>

During the last several years, many developing countries have experienced balance of payment deficits and deterioration of terms of trades due to weak economic performance and low export demand. Most developing countries have a narrow export base which imposes constraints on development by reducing the ability to meet the country's liquidity requirements. Almost two thirds of export of developing countries, including OPEC members, comes from production and exports of a few primary products such as petroleum, cotton, coffee, minerals, bananas and tea. Sharp fluctuations in prices and demand for these products could impact export earnings reflecting changes in income, prices, unemployment and government revenues and expenditures. For supplementing their liquidity, many developing countries rely on foreign debt and foreign direct investment to finance their

international obligations and pay for their immediate imports.

Table 6 illustrates the volume of exports and imports and current account balances of OPEC countries. The importance of oil to the economies of these countries manifests the large share of oil exports in total exports. Earnings from oil export account for almost two thirds of total exports reflecting the heavy dependence on oil production and export. Table 6 also shows the size of surplus these countries were able to accumulate over the period 1990-2007. Current account balance increased from \$13,717 million in 1990 to \$334,301 million in 2007 reflecting the amount of liquidity transfer to these countries.

Increase in oil prices could have a negative impact on aggregate demand causing expenditures on both public and private investment, productivity growth and employment to decline. In developing countries, such trends undermine their development projects by disallowing the economy from reaching its potential. Similarly, higher oil prices increase the cost per unit of output produced pushing up the cost of living. Under globalization, macroeconomic policies become less effective due to external forces which in turn make government policies unable to manage the economy and correct financial imbalances. The weakening of macroeconomic policies could spell trouble for developing countries which are in dire needs for financial stability and external balance.<sup>xvii</sup>

**Table 6: OPEC countries exports and imports and current account balances, 1990 – 2007. (M \$)**

Region	1990	1995	2000	2003	2005	2006	2007
Exports	200,612	220,570	379,267	405,193	746,948	905,589	1,013,427
Imports	123,965	158,226	191,790	240,490	406,440	468,653	580,048
Values of oil exports	151,020	138,007	258,117	258,156	535,631	650,258	730,434
% of oil exp. in total exp.	75.3	62.6	68.1	63.7	71.7	71.8	72.1
Current balance	13,717	-18,635	94,311	88,052	264,201	332,840	334,301

Source: Organization of the Petroleum Exporting Countries (OPEC), Annual Statistical Bulletin 2007 (Vienna: OPEC, 2007)

In relation to the economic consequences of higher oil prices, the International Monetary Fund (IMF) estimates the impact of a \$10 increase in crude oil prices on the global economy. The results are listed in Table 7 showing that all regions will suffer a decline in real GDP and experience inflation because of this increase. As Table 8 illustrates, in 2005 global GDP declined by -0.5 % whereas GDP in the United States decreased by -0.8 followed by -.06 in industrial countries, -0.8 in the Euro area and -0.4 in Japan.

A more detailed assessment of the impact of a permanent rise in oil prices on macro-economic variables is shown in Table 8. Oil importing countries are to experience decline in real income, consumption and unemployment. Such impact should highlight the seriousness of energy supply by sending a warning to policy makers, national governments and international institutions for looking seriously into the energy question.<sup>xviii</sup>

Inflation is another likely result of higher oil prices both locally and globally. Energy prices represent a major item in production costs which determine the success of enter-

prises. As a consequence, not only does inflation reduce the share of the profit in total income, but also inversely affects aggregate demand by weakening the purchasing power. Domestically, increase in prices usually discourages incentive for growth by destroying the confidence in the local economy which makes it difficult for both foreign and local investors to make decisions due to uncertainty about future trends and cost movements. Enterprises may be faced with devaluation of foreign exchanges which causes the price of imported goods to rise. At a global level, inflation increases prices of traded goods and services which induce balance of payments deficits. Oil importers, especially developing countries are at a disadvantage position because of high share of oil imports in total imports and due to increasing cost in the domestic economy. These countries usually have larger foreign debt, the service of which is paid with earnings from exports. In addition, high degree of concentration in trade making developing countries exports are more vulnerable than leading to deterioration of the terms of trade and balance of payment disequilibrium. The

**Table 7: Impact of a permanent US\$10 per barrel increase in crude oil prices after one year, 2005 (% of 2003 GDP)**

Item	Real GDP	Inflation
World	-0.5	n.a.
Industrial countries	-0.6	0.4
United States	-0.8	0.6
Euro area	-0.8	0.6
Japan	-0.4	0.2
Others	-0.4	0.2

Source: Huntington, Hillard, The Economic Consequences of Higher Crude Oil Prices, Energy Modeling Forum, Stanford University, final report EMF SR 9. 2005 <http://www.stanford.edu/group/EMF/research/doc/summary%2002-08-05.pdf> (Vienna: OPEC, 2007)

depreciation of the dollar in recent years has fueled prices and increased speculations about the ability of developing countries sustaining higher price increases.

Because of the importance of energy prices in various sectors of the economy, the

immediate impact of the rise in prices of oil will be on the purchasing power. The cost of living is measured in domestic currency which adds to consumer price index. Similarly, producers that face rising costs pass the increase to consumers by charging higher prices for their products and services.

**Table 8: Impacts of a permanent \$10 rise in oil prices  
(Oil prices rise from \$30 to \$40)**

Year	1	2	3
Real GDP	-0.3	-0.6	-0.4
Real consumption	-0.4	-0.7	-0.6
GDP price index	0.2	0.5	0.9
CPI	0.7	1	1.3
Core CPI	0.1	0.3	0.6
Employment (000)	-125	-451	-270
Unemployment rate	0.1	0.2	0.1
Short-term interest rate	0	0	-0.1
Current account (\$bln)	-30	-29	-47
Inferred GDP impact (Billion \$) #			
Real GDP	-36.6	-73.2	-48.8
Oil wealth loss	-38.2	-38.2	-38.2
Real income = Real GDP + oil wealth loss	-74.8	-111.2*-	-87

Source: Huntington, Hillard, The Economic Consequences of Higher Crude Oil Prices, Energy Modeling Forum, Stanford University, final report EMF SR 9. 2005 <http://www.stanford.edu/group/EMF/research/doc/summary%2002-08-05.pdf>

This may be associated with productivity declines and loss of jobs due to weakening competitiveness and diminishing global demand. Under such circumstances, it is unlikely that real wages will increase enough to offset the decrease in purchasing power. In the developing countries, such trends could be devastating to the local economy by impacting poverty alleviation programs, investment confidence, government revenues and expenditures, unemployment, income distribution and economic growth. Industrial countries may attempt to shift their production operations, especially production of manufactured goods to developing countries to gain comparative cost advantages and remain competitive in the global markets. Globalization has opened the door for countries to compete in global markets. This in turn has helped in managing rapid increase in energy prices by producing goods and services in those countries which still enjoy low wage rates such as China and India. In the case of China, it is low wages paid to industrial workers that are keeping China competitive in the wake of rising petroleum prices. In other words, China competitive advantage position is maintained by cheap labor.

### **LIQUIDITY AND GLOBAL DEMAND**

International liquidity is a stock of monetary assets, mainly foreign currencies and gold, used for settlement of global trade and maintaining balance of payments equilibrium. In other words, facilitating world trade and promoting global stability will depend on the circulation of international liquidity to meet the demand for exports and imports of various nations as well as to ensure lending for foreign capital used in technology transfer, knowledge acquisition, short term financing and other international obligations. In many countries, economic

growth depends on both imports and exports, the financial settlement of which is usually done through international currencies, especially the dollar.

As a result of increasing global interdependencies, nations are required to gain access to trade and services for sustaining growth both locally and globally. Poor countries with limited exports could suffer from liquidity shortages to meet their obligations due to fluctuations in foreign exchange earnings and the rise in imported bill for oil and other petroleum products. Similarly, economic growth in industrialized countries depends on the export of manufactured goods and technology, mainly to developing countries. Under such circumstances, the existence of adequate liquidity becomes necessary for strengthening confidence in global markets and by keeping the flow of trade uninterrupted. Higher oil prices cause liquidity distribution to the oil exporting countries which have smaller propensity to spend than oil importing countries. Countries with high labor costs and capital intensive production have the tendency to suffer due to inability to compete and because of loss productivity. This makes government task to manage macroeconomic variables and stabilize the economy very difficult, i.e. monetary management over the economy weakens because of trade openness and balance of payments constraints. Countries with heavy dependence on imported oil are expected to experience slow economic growth and deterioration in its external balance. In relation to the external account, the International Monetary Fund points out that the decline in export demands leads to deterioration in the external account of oil importers causing the GDP to decline and current account deficits to worsen.<sup>xix</sup>

In recent years, the rise in oil prices has

greatly influenced the liquidity positions of many nations by redistributing foreign exchange in favor of small nations, mainly oil exporting countries with a limited absorptive capacity. Revenues from oil have so far exceeded their capacity to spend by generating pools of unused liquidity. For example, Table 9 shows that the four oil exporting countries in the Middle East, Saudi Arabia, Qatar, Kuwait and United Arab Emirates, accumulated close to \$200 billion in surplus in 2007 whereas current account balances among OPEC countries accounted for about \$350 billion in the same year. In 2007, the Gulf countries spent only one half of their earnings from export on imported goods and services leaving the rest in idle surplus funds.

### INTERNATIONAL LIQUIDITY MANAGEMENT

Managing global liquidity and facilitating global trade require urgent initiatives to re-

duce the risk of global recession, financial instability, liquidity shortages and balance of payments disequilibrium. Undertaking such action underscores the importance of global cooperation and the construction of collective policies capable of restoring confidence in global financial markets and institutions.<sup>xx</sup> Global stability depends on international demand as well as on the distribution of liquidity among nations. Demand for exports induces global growth by allowing countries to increase production and create employment, particularly in developing countries. For these countries, export earnings are essential for promoting socio-economic development and sustaining growth. To speed up the process of economic transformation, these countries depend on imported manufactured goods and technology for supporting investment programs and building productive capacity. Thus rising share of energy in total imports could jeopardize growth potential by disallowing these countries from meeting basic

**Table 9: Total exports, imports and current account balance, selected countries in the Middle East, 2007**

Region	Total Exports	Share of oil in total exports	Total Imports	Current account balance
OPEC	1,013,427	730,434	580,048	334,301
S. Arabia,	299,990	206,480	88,036	95,300
Kuwait	61,427	60,019	19,400	52,734
UAE	156,634	74,552	127,010	31,570
Qatar	37,952	27,801	22,042	5,453
Total GCC	556,003	368852	256,520	185,057

Source: Organization of the Petroleum Exporting Countries (OPEC), Annual Statistical Bulletin 2007 (Vienna: OPEC, 2007)

**Table 10: Expected current account impact of a \$10 increase in petroleum prices in 2004**

Region	Billions of US\$	% of 2003 GDP
Other emerging markets and developing countries	101.7	1.3
Total exporters	133.5	4.3
Total importers	-31.8	-0.7
Africa	21.9	3.9
Nigeria	7.4	12.8
Central and Eastern Europe	-2.2	-0.3
Former Soviet Union	24.7	4.3
Russia	20.3	4.7
Developing Asia	-14.9	-0.5
Indonesia	0.3	0.2
China	-7.6	-0.5
India	-5.6	-1
Middle East	65.3	9.3
Libya	4.5	18.4
Kuwait	5.9	13.3
Qatar	3.4	16.8
Saudi Arabia	29.3	13.3
United Arab Emirates	8.5	10.6
Iran	9.2	6.7
Iraq	3.4	13.6
Western Hemisphere	6.9	0.3
Venezuela	7.9	9.3
Argentina	1.3	1.1
Brazil	-1.2	-0.2
Mexico	6.3	1

Source: Huntington, Hillard, The Economic Consequences of Higher Crude Oil Prices, Energy Modeling Forum, Stanford University, final report EMF SR 9. 2005 <http://www.stanford.edu/group/EMF/research/doc/summary%2002-08-05.pdf>

development needs. As pointed out by the United Nations:

“Higher oil prices affect the economies of developing countries at both the macro – and micro levels. An important part of the effects are transmitted through changes in the terms of trade. According to UNCTD estimates, the terms of trade of countries in whose exports fuel products play a substantial role increased by 30 per cent during 2002-2004. All fuel-importing developing countries with manufacturing-dominated exports experienced deterioration in their terms of trade during this period. The terms-of-trade losses for East and South Asian economies with predominantly manufacturing exports ranged from 8 per cent for the Taiwan Province of China to over 14 per cent for India in 2003 and 2004.”<sup>xxi</sup>

With the increased uncertainty about future demand and supply it becomes necessary to have an emergency scheme for financing countries with a high degree of commodity fluctuations. International institutions such as the IMF can make the funds available for maintaining capital account convertibility and bailing out countries with balance of payments difficulties.

Table 10 shows the impact of a \$10 increase in petroleum prices on current account in several regions and countries. Oil exporters, especially those in the Middle East are to gain most from the increase in petroleum prices. Among losers are those experiencing high economic growth such as India, Brazil and developing Asia.

Oil producing countries could ease liquidity shortages by providing financial assistance to countries facing balance of payment disequilibrium. Such funds help recycle OPEC's surplus back into the global

economy through expenditures on imported goods and services. Most developing countries are under financial stress due to high energy prices. Shortages of liquidity restrain the developmental process by reducing productivity and slowing down economic growth. Recycling oil money keeps international flows relatively stable by reducing the impact of balance of payments deficits on trade transactions.

International reserves represent the country's purchasing power in global markets. Most of these reserves are made of foreign currencies, mainly dollar used by the country to settle its external transactions. In other words, these reserves are used as a “buffer stock” for maintaining balance of payments equilibrium as well as to support the country's exchange rates. Shortages of reserves could cause substantial domestic macroeconomic instability. Minimizing the risk of such instability requires governments to formulate adequate strategy for managing international reserves.

Most exporters of technology and manufactured goods are non-developing countries which represent the drive behind the growth of the global economy. Slow export demand undermines the stability of the international financial and economic systems and, therefore, assisting developing countries in meeting their short term liquidity requirements, reduces the risk of global recession. Benefits from such financing ensure economic and financial stability of oil exporting countries by keeping the flow of oil revenues uninterrupted.

## **CONCLUSION**

International liquidity provides emergency funding to ensure economic stability and correct balance of payments disequilibrium.

Most developing countries usually suffer from shortages of reserves to maintain stability of their economies. Recent trends in prices of oil have brought fear that productivity of both local and global economies will be negatively affected. Under such circumstances, sustaining growth could prove to be difficult which in turn reduces these countries capabilities to achieve their macro-economic objectives. Overcoming these unpredictable trends constitutes developing global strategies to minimize price vulnerability and sustain economic growth.

The future prospects of the global oil market stability will depend on the growth in demand for energy, especially from the newly emerging markets in Asia, as well as the ability of existing supply capacity to satisfy demand. In recent decades, the discovery of oil reserves hasn't proven sufficient to meet rising demand. Investment in an alternative energy sources hasn't proven successful in creating a viable substitute for conventional energy sources. The dynamism of macroeconomic variables and growth in population are expected to widen energy imbalances unless adequate energy policies, both locally and globally, are constructed. Under such circumstances, international cooperation becomes necessary for bridging the gap between supply and demand for energy. Petroleum-based products are presently used directly and indirectly in the production of several goods which makes oil even more critical than just a source of fuel.

In developing countries, the private sector and non-governmental institutions must be encouraged to take an active role in the management of both the use of energy resources and the utilization of liquidity. Government policy is to develop incentives for encouraging private sector to contribute by providing funding for research and development.

## BIOGRAPHY

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## END NOTES

<sup>i</sup> Details of the macroeconomic impact of higher energy prices can be found in International Energy Agency (IEA) (2006), *World Energy Outlook (Paris: IEA)*. The agency argues that an increase in the price of oil leads to a transfer of income from importing to exporting countries through a shift in the terms of trade. This in turn leads to a reduction in the purchasing power of the export earnings of importing countries.

<sup>ii</sup> Numbers are based on information pro-

vided by International Energy Agency (2006), *Oil Market Report*, [www.oilmarketreport.org](http://www.oilmarketreport.org)

<sup>iii</sup> See for details Holditch, Stephen and Chiaanelli, Russell (2008), *Factors that will Influence Oil and Gas Supply and Demand in the 21<sup>st</sup> Century*, MRS Bulletin, Volume 33, April 2008 [www.mrs.org/bulletin](http://www.mrs.org/bulletin)

<sup>iv</sup> See OECD, International Energy Agency, *Oil Market Report*, June 2008

<sup>v</sup> See Cordesman, Anthony and Al-Rodhan, Khalid (2005), *The Changing Risks in Global Oil Supply and Demand: Crisis or Evolving Solutions?* Center for Strategic and International Studies, Washington, DC.

<sup>vi</sup> International Monetary Fund (2007), *World Economic Outlook: Globalization and Inequality*

<sup>vii</sup> Data are taken from Asian Development Bank (2010), *Asian Development Outlook (Manila, 2010)*

<sup>viii</sup> See OPEC (2008) *Annual Statistical Bulletin (Austria: OPEC)*

<sup>ix</sup> See United Nations (2005), *Link Global Economic Outlook*, Development Policy and Analysis Division, Geneva

<sup>x</sup> Al-Roubaie, Amer and Elali, Wajeeh, (1995) *The Financial Implications of Economic Sanctions Against Iraq*, Arab Studies Quarterly (ASQ) Volume 17, Issue 3

<sup>xi</sup> See for details International Monetary Fund (2000), *The Impact of Higher Oil Prices on the Global Economy*, [www.imf.org/external/pubs/ft/oil/2000/index.htm](http://www.imf.org/external/pubs/ft/oil/2000/index.htm)

<sup>xii</sup> See Birol, Fatih (2006) *World Energy Prospects and Challenges*, International Energy Agency. He argues that the world energy needs would be more than 50% higher in 2030 than today, an average annual growth rate of 1.6%. this increase in output more than two thirds of which will come from developing countries. [www.iea.org/papers/2006/birol.pdf](http://www.iea.org/papers/2006/birol.pdf); Also see U.S. Department of Energy, Energy Information Administration (2009) *International Energy Outlook 2009*. [www.eia.doe.gov/oiaf/ieo/index.html](http://www.eia.doe.gov/oiaf/ieo/index.html).

<sup>xiii</sup> Organization of the Petroleum Exporting Countries (2007), *Annual Statistical Bulletin*

<sup>xiv</sup> Energy Watch Group (2007), *Crude Oil: The Supply Outlook*, [www.energywatch-group.org](http://www.energywatch-group.org)

<sup>xv</sup> See The Royal Bank of Scotland (RBS) (2004), *The Economic Impact of Higher Oil Prices*, [www.rbs.co.uk/economics](http://www.rbs.co.uk/economics)

<sup>xvi</sup> Mirakhor, Abbas and Zaidi, Iqbal (2004), *Foreign Currency Deposits and International Liquidity shortages in Pakistan*, IMF, Working Paper WP/04/167

<sup>xvii</sup> See IMF (2000), *Ibid*.

<sup>xviii</sup> An empirical study to measure the impact of high oil prices on macroeconomic variables was conducted by Energy Information Administration (EIA) showing that for a 33-percent increase in the oil price sustained for 2 years reduces real GDP by 0.2 percent in the first year and 0.5 percent in the second year. The study also measured the elasticity response of real GDP to oil price indicating that the percentage change in real GDP relative to the percentage change in oil price is approximately 0.01 in the first year and 0.02 in the second year. For details see Energy Information Administration (2006) *Economic Effects of High Oil Prices*, [www.eia.doe.gov/oiaf/aeo/otheranalysis/aeo\\_2006analysispapers/efhop.html](http://www.eia.doe.gov/oiaf/aeo/otheranalysis/aeo_2006analysispapers/efhop.html)

<sup>xix</sup> See International Monetary Fund (2000) *The Impact of Higher Oil Prices on the Global Economy* [www.imf.org/external/pubs/ft/oil/2000/index.htm](http://www.imf.org/external/pubs/ft/oil/2000/index.htm)

<sup>xx</sup> See Holditch, Stephen and Chianell, Russell, *Ibid*

<sup>xxi</sup> United Nations (2008), *United Nations Conference on Trade and Development, Globalization for Development: The International Trade Perspective*, New York, P. 51.