U.S. Trade Deficit and the Impact of Changing Oil Prices

James K. Jackson
Specialist in International Trade and Finance

January 13, 2011

Congressional Research Service
7-5700
www.crs.gov
RS22204

CRS Report for Congress
Prepared for Members and Committees of Congress

Summary

Petroleum prices rose sharply in the first half of 2008, at one time reaching more than $140 per barrel of crude oil. After July 2008, however, petroleum prices and import volumes fell at a historically rapid pace; in January 2009, prices of crude oil fell below $40 per barrel. Since then, crude oil prices have nearly doubled, while the average monthly volume of imports of energy-related petroleum products has risen slightly, year over year, reflecting the positive, albeit slow, growth in the rate of economic activity. In addition to the slight rise in the volume of crude oil imports, the rise in the cost of energy imports through eleven months of 2010 could add more than $80 billion to the nation's trade deficit in 2010 over that experienced in 2009. The increase in energy import prices is pushing up the price of energy to consumers and could spur some elements of the public to pressure the 112th Congress to provide relief to households that are struggling to meet their current expenses. With oil prices rising to over $90 per barrel in early 2011, the International Energy Agency cautioned that the rising price of oil was becoming a threat to the global economic recovery. This report provides an estimate of the initial impact of the changing oil prices on the nation's merchandise trade deficit.

Contents

Figures

Tables

Contacts

Background

According to data published by the Census Bureau of the Department of Commerce,[1] the prices of petroleum products over the first half of 2008 rose sharply, generally rising considerably faster than the change in demand for those products, before falling at a historic rate. After falling each month between August 2008 and February 2009, average petroleum prices reversed course and rose by 85% between February and December 2009, climbing to nearly $80 per barrel at times. Through eleven months of 2010, petroleum prices reached a peak average price of about $77 per barrel in April before falling to around $72 per barrel in July 2010. Average prices dropped from May to July, one of only three times average monthly petroleum prices have declined since January 2009. In November 2010, petroleum import prices averaged nearly $77 per barrel and continued to increase, reaching over $90 per barrel in January 2011. Oil futures contracts indicate, however, that crude oil prices are expected to peak at the $90 range before falling to under $80 per barrel by mid-summer. As a result of changing petroleum prices, the price changes in imported energy-related petroleum products worsened the U.S. trade deficit in 2006, 2007, and 2008, and will again in 2010. *Energy-related petroleum products* is a term used by the U.S. Census Bureau that includes crude oil, petroleum preparations, and liquefied propane and butane gas. Crude oil comprises the largest share by far within this broad category of energy-related imports.

In 2009, the slowdown in the rate of growth in the U.S. economy reduced the amount of energy the country imported and helped push down world energy prices. As economic growth has improved, energy imports have increased and energy prices have risen. In isolation from other events, lower energy prices tend to aid the U.S. economy, which makes it a more attractive destination for foreign investment. Such capital inflows, however, place upward pressure on the dollar against a broad range of other currencies. To the extent that the additions to the merchandise trade deficit are returned to the U.S. economy as payment for additional U.S. exports or to acquire such assets as securities or U.S. businesses, the U.S. trade deficit could be mitigated further.

Summary data from the Census Bureau for the change in the volume, or quantity, of energy-related petroleum imports and the change in the price, or the value, of those imports for 2009 and for 2010 are presented in **Table 1**. The data indicate that during eleven months of 2010, the United States imported about 3.9 billion barrels of energy-related petroleum products, valued at $294 billion. Energy-related imports for this eleven-month period were up 0.1% in volume terms from the same period in 2009 and cost 26% more than similar imports during the same period in 2009.

[1] U.S. Department of Commerce, U.S. Census Bureau, Report FT900, *U.S. International Trade in Goods and Services*, Table 17, January 13, 2011. The report and supporting tables are available at http://www.census.gov/foreign-trade/Press-Release/current_press_release/ftdpress.pdf.

Table 1. Summary Data of U.S. Imports of Energy-Related Petroleum Products, Including Oil (not seasonally adjusted)

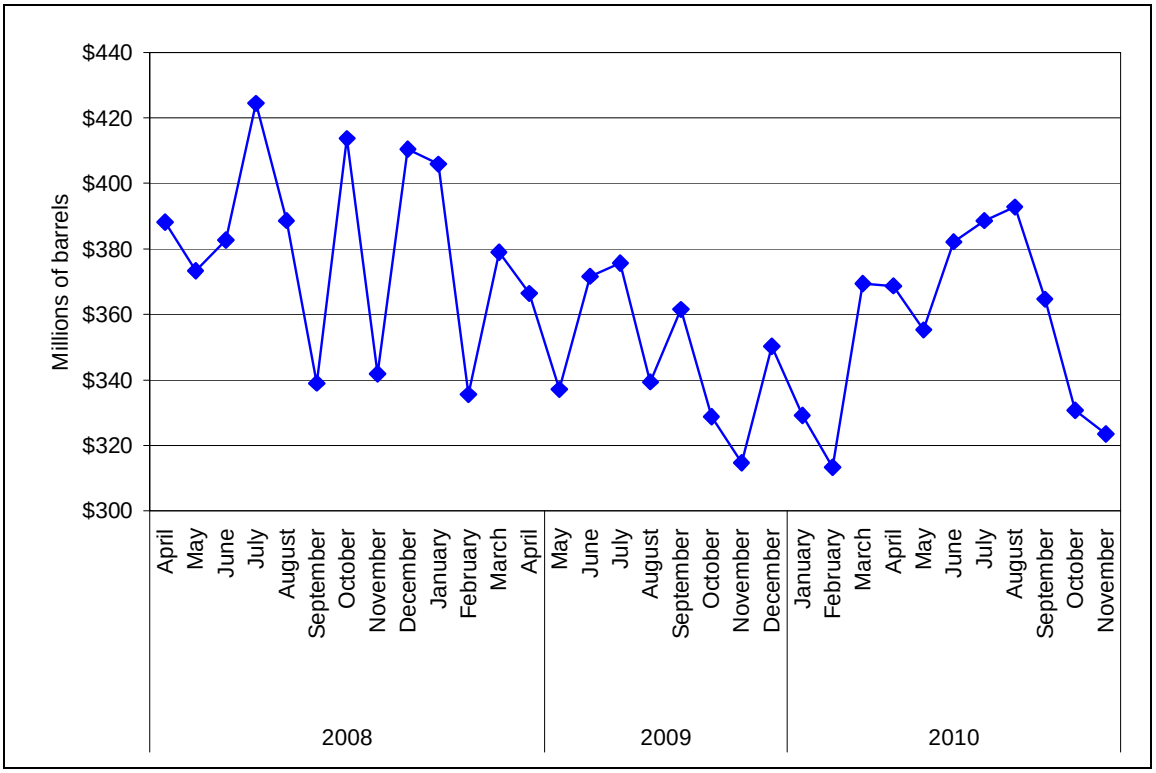
	January through November					
	2009		2010			
	Quantity (thousands of barrels)	Value ($ thousands)	Quantity (thousands of barrels)	% change 2009 to 2010	Value ($ thousands)	% change 2009 to 2010
Total energy-related petroleum products	3,915,751	$219,999,955	3,918,710	0.1%	$294,424,143	33.8%
Crude oil	3,035,470	$168,283,047	3,095,124	2.0%	$229,640,165	36.5%
	January through December					
	2009		2010			
	(Actual values)		(Estimated values)			
	Quantity (thousands of barrels)	Value ($ thousands)	Quantity (thousands of barrels)	% change 2009 to 2010	Value ($ thousands)	% change 2009 to 2010
Total energy-related petroleum products	4,266,007	$245,690,140	4,269,231	0.1%	$328,805,108	33.8%
Crude oil	3,314,787	$188,711,775	3,379,930	2.0%	$257,517,343	36.5%

Source: U.S. Department of Commerce, U.S. Census Bureau, Report FT900, *U.S. International Trade in Goods and Services,* Table 17, January 13, 2011.

Note: Estimates for January through December 2010 were developed by CRS from data through November 2010 and data through 2009 published by the Census Bureau using a straight line extrapolation.

The data also indicate that the United States imported 4.3 billion barrels of total energy-related petroleum products in 2009, valued at $246 billion, compared with a total value of $439 billion in 2008. Also, in 2009, the quantity of energy-related petroleum imports fell by 4.0% compared with the comparable period in 2008; crude oil imports also fell by 2.7% from the same period in 2008. Year-over-year, the average value of energy-related petroleum products imports fell by 44% in 2009, while the average value of crude oil imports fell by 45%. As **Figure 1** shows, imports of energy-related petroleum products can vary sharply on a monthly basis. In 2009, imports of energy-related petroleum products averaged about 355 million barrels a month. Through eleven months of 2010, such imports averaged 356 million barrels a month.

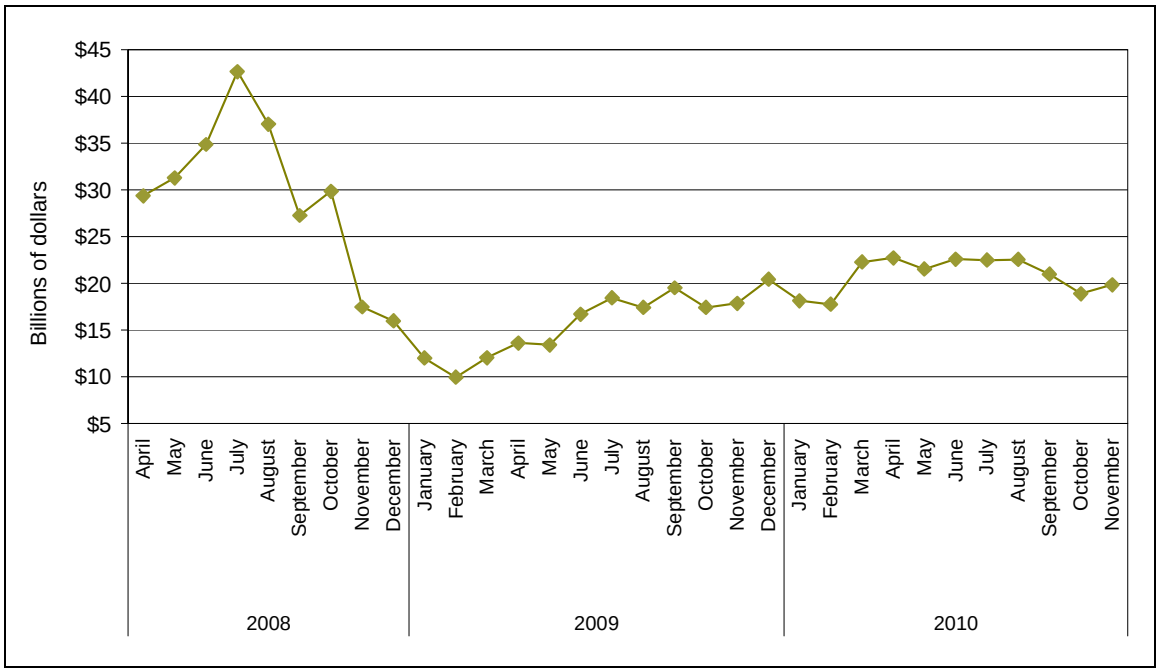
Figure 1. Quantity of U.S. Imports of Energy-Related Petroleum Products



Source: Department of Commerce.

In value terms, energy-related imports fell from a total value of $439 billion in 2008 to $245 billion in 2009, or a decrease of 44%, to account for about 16% of the value of total U.S. merchandise imports. Energy prices rose sharply in 2007 and continued rising from January through July 2008, not following previous trends of falling during the winter months. As **Figure 2** shows, the cost of U.S. imports of energy-related petroleum products rose from about $17 billion per month in early 2007 to $53 billion a month in July 2008, but fell to $13.6 billion a month in February 2009, reflecting a drop in the price and in the volume of imported oil. The average price of imported oil in November 2010 was up 5.8% from the average price in November 2009. The value of total energy imports in November 2010 rose slightly from October 2010 to $25.2 billion and up from $23.0 billion in November 2009, as indicated in **Table 2**.

Figure 2. Value of U.S. Imports of Energy-Related Petroleum Products



Source: Department of Commerce.

As a result of the drop in the overall value of energy-related imports in 2009, the trade deficit in energy-related imports amounted to $204 billion, down by nearly half from the $386 billion recorded in 2008, and accounted for 40% of the total U.S. trade deficit of $517 billion for the year. In the eleven-month period of January-November 2010, the rise in oil prices, year over year, combined with a slight increase in energy imports, pushed up the overall value of energy imports, which accounted for 40% of the total merchandise trade deficit. This share is comparable to the share of the trade deficit experienced during the same period in 2009. In November 2010, the share of the U.S. trade deficit arising from energy imports was 39%, down from the 42% share recorded in November 2010.

Table 2. U.S. Imports of Energy-Related Petroleum Products, Including Crude Oil (not seasonally adjusted)

	Total energy-related petroleum products[a]		Crude oil			
Period	Quantity (thousands of barrels)	Value ($ thousands)	Quantity (thousands of barrels)	Thousands of barrels per day (average)	Value ($ thousands)	Unit price (dollars)
			2009			
Jan.-Dec.	4,266,007	$245,690,140	3,314,787	9,082	$188,711,775	$56.93
Jan.-Nov.	3,915,751	$219,999,955	3,035,470	9,088	$168,283,047	55.44
January	405,890	16,398,894	301,069	9,712	12,000,941	39.86
February	335,510	13,586,823	254,504	9,089	9,962,489	39.14
March	378,997	16,084,729	291,514	9,404	12,033,939	41.28

Period	Total energy-related petroleum products[a]		Crude oil			
	Quantity (thousands of barrels)	Value ($ thousands)	Quantity (thousands of barrels)	Thousands of barrels per day (average)	Value ($ thousands)	Unit price (dollars)
April	366,401	17,354,644	290,973	9,699	13,582,121	46.68
May	337,118	17,682,576	261,296	8,429	13,404,650	51.30
June	371,612	22,515,808	282,057	9,402	16,691,240	59.18
July	375,723	23,642,907	294,634	9,504	18,421,260	62.52
August	339,446	22,459,799	268,878	8,673	17,417,873	64.78
September	361,561	24,845,000	286,200	9,540	19,511,044	68.17
October	328,767	22,416,890	258,420	8,336	17,410,475	67.37
November	314,726	23,011,887	245,925	8,198	17,847,016	72.57
December	350,256	25,690,185	279,317	9,010	20,428,728	73.14
			2010			
Jan.-Nov.	3,918,710	294,424,143	3,095,124	9,267	229,640,165	74.19
January	329,246	24,681,956	245,273	7,912	18,122,185	73.89
February	313,293	23,040,666	243,305	8,689	17,742,303	72.92
March	369,473	27,809,434	299,473	9,660	22,258,328	74.32
April	368,731	28,828,138	294,118	9,804	22,685,592	77.13
May	355,344	27,597,395	280,029	9,033	21,542,988	76.93
June	382,177	28,015,041	311,932	10,398	22,595,686	72.44
July	388,659	28,430,320	311,724	10,056	22,473,270	72.09
August	392,801	29,180,574	306,909	9,900	22,548,205	73.47
September	364,678	26,623,444	289,694	9,656	20,961,556	72.36
October	330,752	24,992,682	254,479	8,209	18,878,078	74.18
November	323,557	25,224,494	258,188	8,606	19,831,974	76.81

Source: U.S. Department of Commerce, U.S. Census Bureau, Report FT900, *U.S. International Trade in Goods and Services,* Table 17, January 13, 2011.

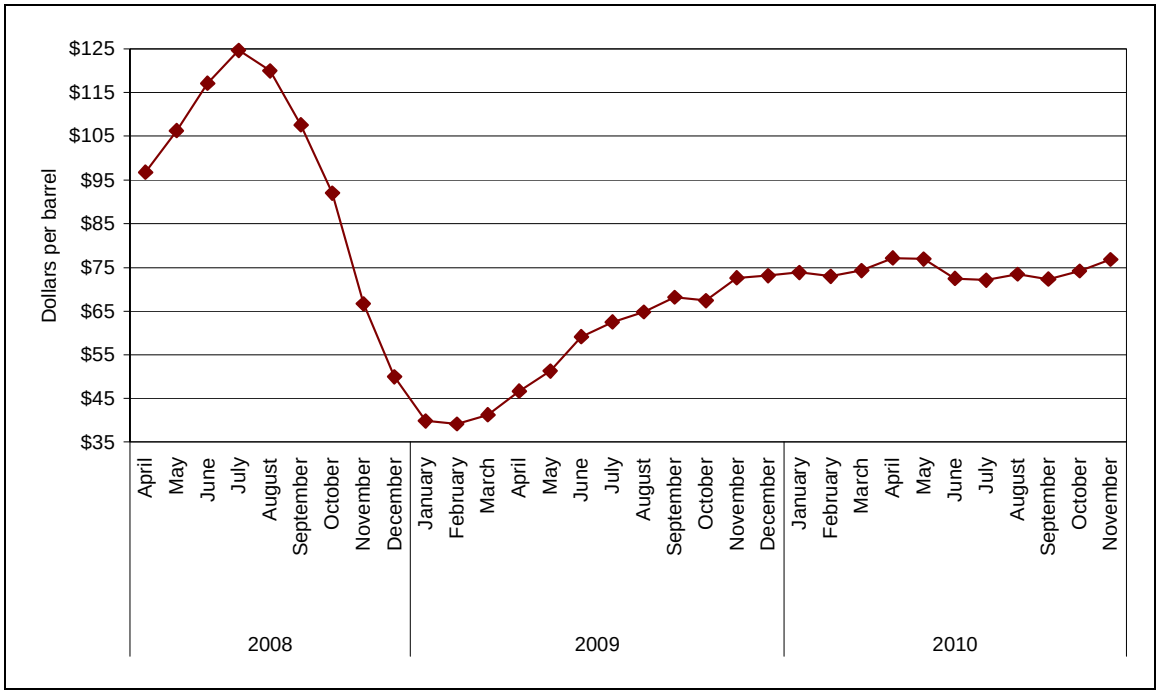
a. Energy-related petroleum products is a term used by the Census Bureau and includes crude oil, petroleum preparations, and liquefied propane and butane gas.

Crude oil comprises the largest share of energy-related petroleum products imports. According to Census Bureau data,[2] imports of crude oil fell from an average of 9.8 million barrels of crude oil imports per day in 2008 to an average of 9.1 million barrels per day in 2009, or a decrease of 7%. In November 2010, such imports averaged 8.6 million barrels per day, or an increase of 5.0% over the volume of such imports recorded in November 2009. From January 2008 to June 2008, the average price of crude oil increased from $84 per barrel to $117 per barrel, or an increase of

[2] Report FT900, *U.S. International Transactions in Goods and Services,* Table 17, January 13, 2011.

39%, as shown in **Figure 3**. As a result, the value of U.S. crude oil imports rose from about $27 billion a month in January 2008 to $35 billion a month in June 2008.

Figure 3. U.S. Import Price of Crude Oil



Source: Department of Commerce.

Data for 2009 indicate that a number of factors, primarily the economic recession, had a large impact on pushing down oil prices in the first three months. As economic growth picked up, the higher demand tended to raise pressure on oil prices, which rose through the end of the year. The rise in oil prices and an increase in the volumes of oil imports during the period combined to raise the overall cost of imported energy. At times, crude oil traded for nearly $148 per barrel in July 2008, indicating that the cost of energy imports would have a significant impact on the overall costs of U.S. imports and on the size of the U.S. trade deficit. Since those record prices, the price per barrel of imported crude oil fell to under $40 per barrel at times in January and February 2009. For the year 2009, the imported volume of energy-related petroleum products fell by 44% compared with 2008, due in large part to a slowdown in economic activity. At an average price of $56 per barrel in 2009, compared with an average price of $95 per barrel in 2008, energy-related imports fell by nearly $130 billion as a component in the overall U.S. trade deficit. For 2010, the total cost of energy imports could rise to about $300 billion at an average price of $76 per barrel and account for nearly half of the annual trade deficit.

Issues for Congress

The rise in the prices of energy imports experienced since early 2000 through January 2011 could have a significant impact on the annual U.S. trade deficit in 2010 and 2011, should those price increases stick, or run even higher. The rise in energy prices may well affect the U.S. rate of inflation and could have a slightly negative impact on the rate of economic growth in 2010. Various factors, dominated by the rate of economic growth in the United States and Western

Europe, could combine to push up the cost of energy imports, which will have a slightly negative impact on the pace of the economic recovery. Typically, energy import prices have followed a cyclical pattern that has caused energy prices to rise in the summer and decline in the winter. The slowdown in the rate of economic growth in the United States and elsewhere in 2009 sharply reduced the demand for energy imports and caused oil prices to tumble from the heights they reached in July 2008. An important factor that often affects crude oil prices is the impact Atlantic hurricanes have on the production of crude oil in the Gulf of Mexico.

The return to a positive rate of economic growth will continue to place upward pressure on the prices of energy imports and contribute to the nation's merchandise trade deficit. Some of the impact of this deficit could be offset if some of the dollars that accrue abroad are returned to the U.S. economy through increased purchases of U.S. goods and services or through purchases of such other assets as corporate securities or acquisitions of U.S. businesses. Some of the return in dollars likely will come through sovereign wealth funds, or funds controlled and managed by foreign governments, as foreign exchange reserves boost the dollar holdings of such funds. Such investments likely will add to concerns about the national security implications of foreign acquisitions of U.S. firms, especially by foreign governments, and to concerns about the growing share of outstanding U.S. Treasury securities that are owned by foreigners.

It is likely that the economy will again face high and rising prices for imported energy products as national economies recover to a more robust rate of economic growth. It is possible for the economy to adjust to the higher prices of energy imports by improving its energy efficiency, finding alternative sources of energy, or searching out additional supplies of energy. There may well be increased pressure applied to Congress to assist in this process. For Congress, the increase in the nation's merchandise trade deficit could add to existing inflationary pressures and complicate efforts to stimulate the economy should the rate of economic growth flatten out. In particular, Congress, through its direct role in making economic policy and its oversight role over the Federal Reserve, could face the dilemma of rising inflation, which generally is treated by raising interest rates to tighten credit, and a slow rate of economic growth, which is usually addressed by lowering interest rates to stimulate investment. A sharp rise in the trade deficit may also add to pressures for Congress to examine the causes of the deficit and to address the underlying factors that are generating that deficit. In addition, the rise in prices of energy imports could add to concerns about the nation's reliance on foreign supplies for energy imports and add impetus to examining the nation's energy strategy.

Author Contact Information

James K. Jackson
Specialist in International Trade and Finance
jjackson@crs.loc.gov, 7-7751