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

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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 fallen nearly 10% year over year. Despite the drop in the volume of crude oil imports, the rise in the cost of energy imports through 2009 and early 2010 could add more than $100 billion to the nation's trade deficit in 2010 over that experienced in 2009. Should the U.S. economic recovery falter in the second half of 2010, it could reduce both the volume of energy imports and the price of those imports compared with earlier estimates. This report provides an estimate of the initial impact of the changing oil prices on the nation's merchandise trade deficit.

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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 the first seven 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. Prior to this drop in oil prices, futures contracts had indicated that prices could reach over $80 per barrel by the fall of 2010. 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 likely 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 to push down world energy prices. As economic growth improved, energy imports increased and energy prices rose. 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 the first seven months of 2010, the United States imported about 2.5 billion barrels of energy-related petroleum products, valued at $188 billion. Energy-related imports for this seven-month period were down 2.5% in volume terms from the same period in 2009 and cost twice as much as 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, September 9, 2010. 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)

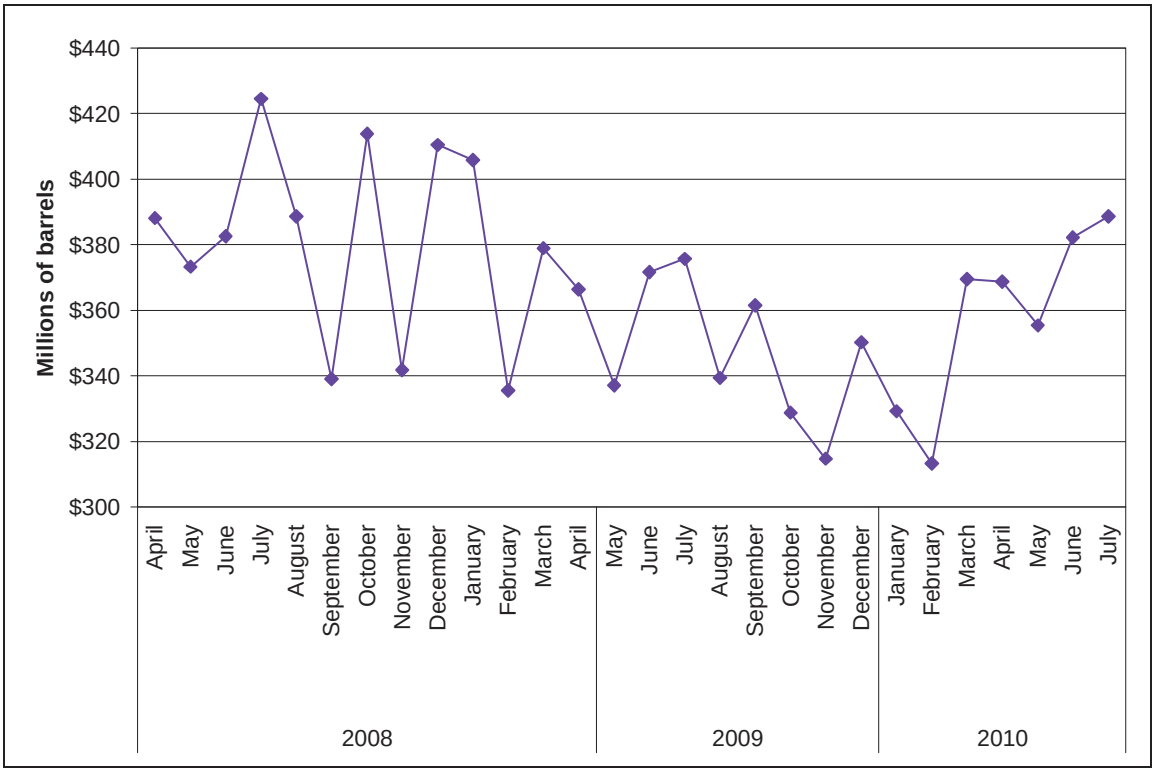
	January through July					
	2009		2010			
	Quantity (thousands of barrels)	Value ($ thousands)	Quantity (thousands of barrels)	% change 2008 to 2009	Value ($ thousands)	% change 2008 to 2009
Total energy-related petroleum products	2,571,251	$127,266,380	2,506,922	-2.5%	$188,402,949	48.0%
Crude oil	1,976,047	$96,096,639	1,985,853	0.5%	$147,420,352	53.4%
	January through December					
	2009		2010			
	(Actual values)		(Estimated values)			
	Quantity (thousands of barrels)	Value ($ thousands)	Quantity (thousands of barrels)	% change 2008 to 2009	Value ($ thousands)	% change 2008 to 2009
Total energy-related petroleum products	4,266,007	$245,690,140	4,159,248	-2.5%	$363,715,436	48.0%
Crude oil	3,314,787	$188,711,775	3,331,236	0.5%	$289,499,785	53.4%

Source: U.S. Department of Commerce, U.S. Census Bureau, Report FT900, *U.S. International Trade in Goods and Services,* Table 17, September 9, 2010.

Note: Estimates for January through December 2009 were developed by CRS from data through July 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 the first seven months of 2010, such imports averaged 358 million barrels a month.

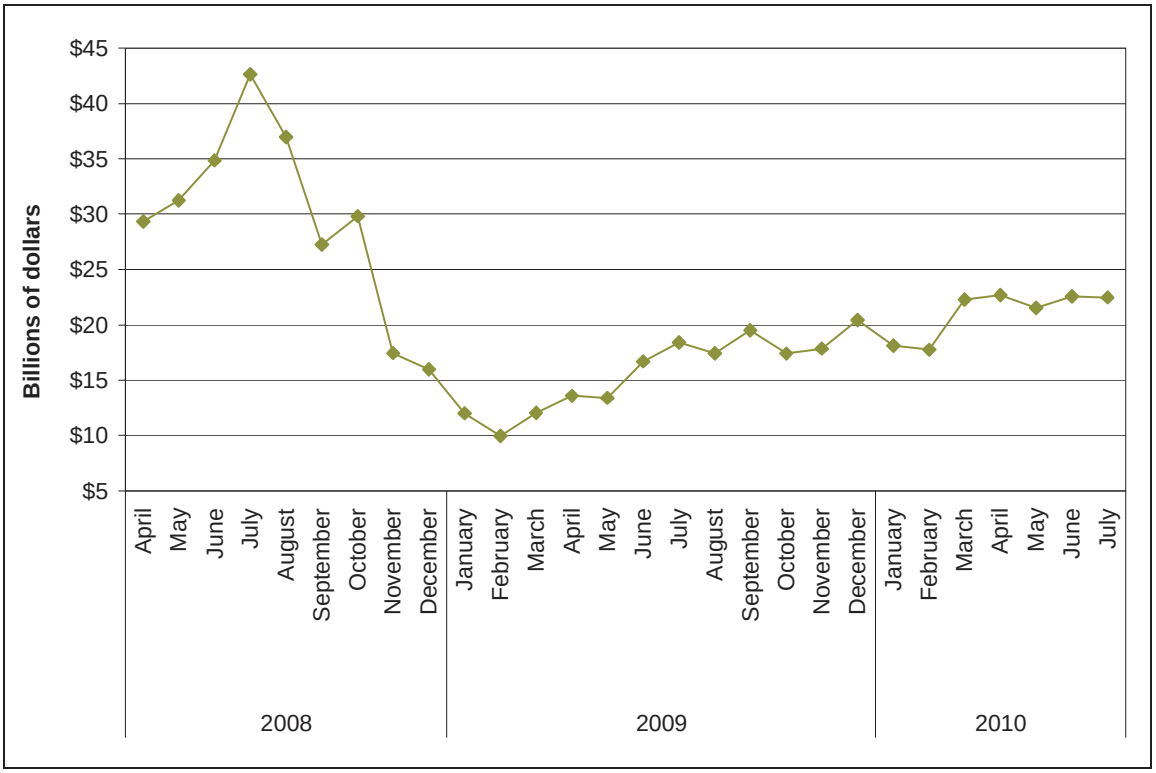
Figure 1. Quantity of U.S. Imports of Energy-Related Petroleum Products



Source: Department of Commerce.

In value terms, energy-related imports fell from $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 in February 2009, reflecting a drop in the price and in the volume of imported oil. The average price of imported oil in July 2010 was up 15% from the average price in June 2009. Total energy imports in July 2010 rose slightly from June 2010 to $28.4 billion, up from $23.6 billion in 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 seven-month period of January-July 2010, the rise in oil prices, year over year, combined with a slight decrease in demand for energy imports, pushed up the overall value of energy imports, which accounted for 42% of the total merchandise trade deficit. This share is up from the 38% share of the trade deficit experienced during the same period in 2009. In July 2010, the share of the U.S. trade deficit arising from energy imports was 38%, down from the 46% recorded in April 2010 due to a 24% increase in the non-energy portion of the trade deficit.

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

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)
			2009			
Jan.-Dec.	4,266,007	$245,690,140	3,314,787	9,082	$188,711,775	$56.93
Jan.-July	2,571,251	127,266,380	1,976,047	9,321	96,096,639	48.63
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
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.-July	2,506,922	188,402,949	1,985,853	9,367	147,420,352	74.24
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

Source: U.S. Department of Commerce, U.S. Census Bureau, Report FT900, *U.S. International Trade in Goods and Services,* Table 17, September 9, 2010.

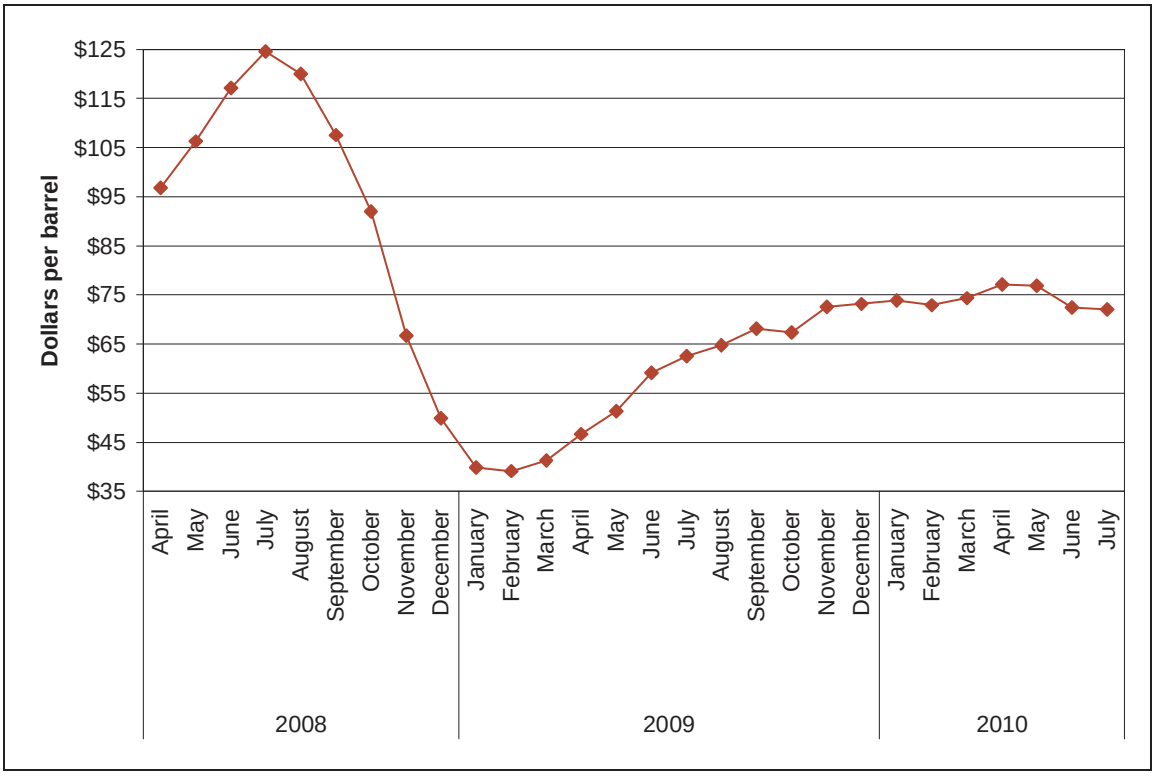
a. Energy-related petroleum products is a term used by the Census Bureau and includes crude oil, petroleum preparations, and liquefied propane and butane gas.

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

[2] Report FT900, *U.S. International Transactions in Goods and Services,* Table 17, September 9, 2010.

imports per day in 2008 to an average of 9.1 million barrels per day in 2009, or a decrease of 7%. In July 2010, such imports averaged 10.1 million barrels per day, or an increase of 5.6% over the volume of such imports recorded in July 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 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 value 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%, 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 $75 per barrel and could rise to nearly $330 billion at an average price of $85 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 April 2010 could have a significant impact on the annual U.S. trade deficit in 2010, 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 oil spill in the Gulf of Mexico and concerns over the safety of oil wells in the region could somewhat dampen oil production and further strain supplies as summer demand increases.

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.

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