Oil Prices and Economic Activity: Demand versus Supply Shocks

Mine K. Yücel, Nathan Balke and Stephen Brown

Abstract. World oil prices rose to record highs in the summer of 2006, reaching $77 per barrel. In addition to an “uncertainty premium” brought about by the war in Iraq and the lack of excess OPEC production capacity, part of the strength in oil prices was attributed to the strength of Chinese and Indian oil demand. All previous papers on the effect of oil price shocks on world economies have emphasized the role of supply shocks. Unfavorable supply shocks have been shown to cause declines in GDP, an increased price level and higher interest rates. In looking at U.S. business cycles since World War II, the relationship between oil price shocks and U.S. economic activity seems much weaker in the current high-oil-price period. One explanation is that the relationship between oil price shocks and economic activity has been altered by changing market conditions, such as a reduction in the energy-to-GDP ratio. Another explanation is that because the price gains are the result of increased demand rather than reduced supply, the effect on the economy is less. We use a state-space model to investigate the differential effects of supply versus demand shocks. Restrictions from economic theory help identify the underlying states that drive oil price movements, where the states can be interpreted as supply or demand shocks.

Biography
Mine K. Yücel
Vice President and Senior Economist
Federal Reserve Bank of Dallas

Mine Yücel is Vice President and Senior Economist at the Federal Reserve Bank of Dallas. She has been with the Bank since 1989. As an energy economist and head of the Bank’s regional group, she analyzes the regional economy and energy markets on an ongoing basis and has published numerous articles on energy and regional growth.
Yücel is past president of the United States Association of Energy Economics (USAAE), past president of the Dallas Economists Club, and member of the executive board of the International Association of Energy Economics. She has served on the executive boards of the USAAE and the Dallas Chapter of Women in Technology International, Inc. In 2006, she was chosen as one of the recipients of the ‘Key Women in Energy – Global’ award. Currently, she serves on the Greater Dallas Chamber’s Life Sciences Committee and the Chamber’s Board of Economists.

Before joining the Bank she was an assistant professor of Economics at Louisiana State University. She has a B.S. and M.S. in mathematics from Bogazici University in Istanbul, Turkey and a Ph.D. in economics from Rice University in Houston, Texas.