

# Discussion of 'The Welfare Cost of Inflation in some OECD Economies' by Boel and Camera

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November 15, 2009

## Summary of the Paper

- There seems to be significant changes in the volatility of US GDP, US inflation, US monetary policy and world oil prices.
- Change in how the US economy uses oil.
- Change in monetary policy. (pre- and post-Volcker)
- Useful to think about all (or some) of these changes as endogenous.

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- Main Results (percentage of volatility reduction due to each factor)

## Comparison to the Literature

- Important advantages vs. Leduc and Sill (2007):
  - Estimated vs. Calibrated.
  - An explicit oil-producing sector.
  - Dependence on oil is governed by a parameter.
- Results are somewhat similar:
- Leduc and Sill (2007) : 17% of reduction in volatility of output and 29% of reduction in volatility of inflation is due to policy. (rest are shocks) Not exactly same counter-factual exercise.
- Key difference : Effect of change in dependence on oil.

## Main Comments / Questions

- Important step: endogenizing oil output (and price) in a model for the US...
- ... but US is not the sole consumer of oil. (about 30% of OPEC output)
- Maybe add a rest-of-the-world demand shock to the model, calibrating the share of US consumption. (Use GDP of G7 minus US plus China and India as an observable)
- Not clear if this will affect the results. (Oil to US GDP link is important for results.)



## Main Comments / Questions

- Unconditional variance-decompositions show virtually 100% of variations in oil prices are explained by oil-related shocks. Is that realistic? What has endogenizing oil output bought us?
- In popular press we hear (especially recently) that oil prices fall due to concerns about the US economy. Maybe they do not survive to a quarterly frequency?
- Hamilton (1983, 2003) argue that while before 1973 oil prices are exogenous, in the post 1974 data, US variables Granger-cause oil prices.
- Maybe we should see some impulse-responses to see the short-run feedback from US GDP to oil prices.

## Main Comments / Questions

- One of the key implications of the model : Due to smaller oil shocks and due to (possible) feedback from the US economy, oil prices are less volatile.
- Did the volatility of real oil price really go down after 1984?
- The standard deviation of growth rate of real oil price : 19 before 1984, 13 after 1984. (similar numbers for HP filtered or levels)

## Cheap Shots / Small Comments

- The discount-factor shock sounds non-standard. Some other demand shock?
- In the calculation of the elasticity of oil of oil in production, why is nominal output defined as  $PQ = PY + P_oO$ ?
- Why is labor supply elasticity and Calvo parameter allowed to vary across the two sub-periods? Related, the Calvo parameter in the post-1984 estimation (0.47) could be too low for some people's tastes.
- Why doesn't the model implied unconditional variances match those in the data?
- An alternative question to ask: how much "good luck" do we need to explain the great moderation?

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# Future Directions

A more general analysis of business cycles (of US, world?) and “oil cycles”:

▶ Real Price of Oil

- Allow for time-variation in volatilities, monetary policy rules and ...
- Allow the agents to form expectations over future changes changes.
- Question: How much of the volatility of cyclical fluctuations in output can be explained by oil-related shocks / changes in elasticities, when TFP shocks are also present? Which business cycle(s) are really due to oil-related shocks? How much of TFP is actually coming from oil-related shocks.
- There are non-structural answers to these questions in the literature but this setup would be especially useful to answer this question.



