Structural reforms in a debt overhang

Roberto Piazza (discussant)

Financing growth: Levers, Boosters and Brakes Conference
The case for structural reforms:

- After the introduction of the euro, indicators point to a loss in competitiveness of the export sector in "periphery" of the EMU.

The dangers of structural reforms at the ZLB:

Absent monetary policy accommodation, structural reforms are deflationary in a NK model: GDP contracts in the short-run. Better to postpone structural reforms, and temporarily increase monopolistic power of firms and unions. (Eggertsson, Ferrero, Raffo [2013], henceforth EFR)
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**Simulating a structural reform:**

- Add a second shock, i.e. a reduction in mark-ups, and track the *differential* evolution of macro variables relative to baseline (credit crunch but no mark-up shocks).
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Simulating a structural reform:

- Add a second shock, i.e. a reduction in mark-ups, and track the differential evolution of macro variables relative to baseline (credit crunch but no mark-up shocks).

- Structural reforms have positive effect on GDP, relative to baseline.
Mechanics: how structural reforms are turned from contractionary to expansionary

1. **Kill** the contractionary, *price-based*, effect on demand of real rate surge:

\[
\hat{c}_t = - \sum_{j=0}^{\infty} (r_{t+j} - r^n) + \hat{c}_\infty
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NB: in EFR (2013) structural reforms raise \( \hat{c}_\infty \) but also raise the sequence of real rates \( r_{t+j} \).
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2. **Substitute it** with a slow, *quantity-based*, credit rationing, with smaller impact on demand:

\[
\hat{c}_t = \sum_{j=0}^{\infty} \frac{\Delta b_{t+j}}{1 + \pi_{t+j}} + \hat{c}_\infty
\]

\(\Delta b_{t+j}\) represents the slow mechanic (contractual) repayment of nominal debt during a deleveraging.

NB: since \(\Delta b_{t+j}\) is small, the negative impact of deflation \((\pi_{t+j} < 0)\) on the real cash-flow (and thus on total demand) of debtors is small.
Amplify positive effect of structural reform thanks to positive impact on collateral values and borrowing constraints:

By raising long-run GDP, structural reforms have a positive impact on future and hence on current real estate (collateral) prices. The positive feedback on consumption and investment stemming from the financial accelerator pushes up demand.
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4 Other new channels relative to EFR (2013): capital accumulation, direct effect of structural reform on export price (talk about later...)
The paper captures three important stylized facts: 1) loss of competitiveness 2) labor and product market rigidities 3) slow deleveraging.
Loss of competitiveness (a bit provocative)

PPI-based price-competitiveness indicators (index 1999=100)

Source: Giordano and Zollino (2014)
Labor and product market rigidities

Source EFR (2013)
Leverage and Investment cycle in Japan

(% of GDP)

- Corporate debt (left)
- Investment (right)

190%
160%
130%
15%
20%
25%

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Some aspect deserve a bit more discussion:

- How does the addition of an investment channel affect by itself the conclusions of EFR? (suggestion: try to shut-off the long-term debt assumption)
- How much are the results driven by the fact that structural reforms reduce directly the cost of production in the tradable sector (in EFR they don’t. Again, try to shut off all other channels)
- The paper manages to “kill" the recessionary effect of an increase in the real rate. Does this mean that fiscal multiplier at the ZLB are now much smaller than in the typical Eggertsson-Woodford set-up?
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NICE JOB!
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- Does this "sound right"? These paradoxes are not necessary results of sticky prices models! Kiley (2014) shows that with sticky-information models (Mankiw and Reis [2002]), the paradoxes disappear: good things remain good things (and fiscal multipliers are low) even in the short-run.