Discussion of

*Endogenous Wage Indexation and Aggregate Shocks*,

by Carrillo, Peersman and Wauters

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This paper

- Standard DSGE model

+ Workers can choose the indexation scheme of their labor contract
  Can index to:
  - past inflation
  - Central Bank inflation target
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= Non-trivial extension

- Model calibrated and then solved using nonlinear techniques
This paper

Results

1. Model matches the available empirical evidence on wage indexation

2. Workers prefer indexing wages to past inflation when technology or inflation-target shocks are prevalent

3. The decentralized equilibrium differs from the planner’s
   - Planner prefers indexation to past inflation when demand shocks are important
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State-of-the-art DSGE modeling exercise
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Potentially important findings
Why do I say potentially? My comments

1. Motivation and evidence

2. Well-executed paper, but little economic intuition for the results

3. Interesting result: inefficiency of private wage indexation choice
1. Motivation

- Large literature on structural breaks in US postwar macro dynamics

- Hofmann, Peersman and Straub (2012)
  - Long-run effect of shocks on prices and wages is stronger in the 1970s than 80s
  - Changes in MP rule not enough to explain this pattern
  - Most likely explanation: higher wage indexation in the 1970s
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- Natural question: Why did indexation change?

- This paper endogenizes wage indexation choice
1. Empirical evidence

- COLA coverage
  - Proportion of union workers in large collective bargaining agreements with explicit contractual wage indexation clauses
COLA coverage

Figure 1: Presumed wage indexation in the U.S.

1. Empirical evidence

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  - Fraction of workers covered by unions is small and shrinking
    - 23% in 1983 to 12% in 2014
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- Alternative approach: different wage-setting model altogether
  - Christiano, Eichenbaum and Trabandt (2015): real wages are determined by alternating offer bargaining
2. Economic intuition

- Workers prefer indexing wages to past inflation when *technology* or inflation-target shocks are prevalent.

- Why?
2. Economic intuition

- Workers prefer indexing wages to past inflation when *technology* or inflation-target shocks are prevalent

- Why?

- My (static) intuition...
2. My (static) intuition

- For simplicity, assume
  - Economy with only technology shocks
  - The economy is in steady state

- Worker $i$ is randomly selected to re-set her wage
  - Will set wage to steady state
  - Subsequent periods: she has to be ready to supply as much labor as demanded
2. Static intuition: A positive technology shock
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Diagram showing the relationship between W/P and L with desired L^S and L^D.
2. Static intuition: A positive technology shock

![Graph showing the relationship between W/P and L with desired LS and LD.](image-url)
2. Static intuition: A positive technology shock

No indexation

\[ \text{desired } L^S \]

\[ L^D \]
2. Static intuition: A positive technology shock

![Diagram showing the relationship between W/P and L, with desired LS and LD, and indexation and no indexation marked.](image-url)
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- Worker $i$ is randomly selected to re-set her wage
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- Suppose now the economy is hit by a positive technology shock
  - Labor demand $\uparrow \Rightarrow$ she must work more at the same nominal wage
  - Inflation $\downarrow \Rightarrow$ her real wage $\uparrow \Rightarrow$ less costly to work more

- Will she choose to index her wage to inflation?
  - If she does, real wage approx constant and she is more off her labor supply
  - The opposite of the paper’s findings
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2. Economic intuition

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- Why?

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  - Is there something more subtle in the dynamics?
Response to a technology shock in the aggregate

\[
\begin{align*}
\pi & \quad \log(w/p) \\
\log(L) & \quad \log(MUC)
\end{align*}
\]
Response to a technology shock for the “Calvo” worker

No indexation

Indexation
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  - Is consumption smoothing the key?
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- My (static) intuition... is not enough
  - Is there something more subtle in the dynamics?
  - Is consumption smoothing the key?
  - Is the labor supply schedule really flat?
2. Static intuition: A positive technology shock

\[ W/P \]

\[ \text{desired } L^S \]

\[ L^D \]

No indexation

indexation
2. Static intuition: A positive technology shock

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Indexation
3. Decentralized equilibrium vs planner’s solution

- Indexation to past inflation
  - Workers: when technology or inflation-target shocks are prevalent
  - Planner: when demand shocks are prevalent
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- Indexation to past inflation
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- Planner’s solution is easier to understand
  - Planner wants to achieve the first best:
    - Economy should respond to technology shocks
    - Economy should not respond to “demand/inefficient” shocks
  - Indexation reduces the variation of real wages
  - Desirable only with “demand/inefficient” shocks
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- **Conjecture:** Planner’s ranking of indexation schemes might be more robust than private ranking
My comments

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   - Evidence of wage indexation in non-union sector?

2. Well-executed paper, but little economic intuition for the results
   - Intuition is important to evaluate generality of the findings

3. Interesting result: inefficiency of private wage indexation choice
   - Conjecture: Planner’s ranking of indexation schemes might be more robust than private ranking