Structural Shocks and Labour Market Dynamics in a Small Open-Economy:

Theory and Some Evidence

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Motivation

We know that :

- A *well-behaved* labour market is a key to boosting economic growth,
- Labour market flexibility across countries may be very useful in the context of economic integration,
- Small open-economy, such as Caribbean States and some Latin America countries, the constraints posed by the limited economies of scale lead to focus on the poor performance of labour markets.

The aim of this paper

- The main goal of this paper is to analyze the persistence of shocks on unemployment in a small open economy,
- We examine the link between structural shocks, exchange rate regime,
- We perform parameterization and simulation for Barbados and Jamaica countries,
- One notable difference is that in our framework we take into account monetary, productivity and foreign shocks in explaining the labour market dynamics.

Previous paper

1. Blanchard and Summers (1986),
2. Lindbeck and Snower (1986).

For BS an LS unemployment dynamics is given by :

$$\hat{u}_t = \gamma \hat{u}_{t-1} + \epsilon_t \quad \gamma \in [\,0, 1]$$

Assumptions

- We focus on an insider-outsider model.
  - Firms are *price-takers*,
  - Insiders (unions) have a strong bargaining power,
  - Rational expectations,
  - Stochastic considerations,
  - Exchange rate system.

Basic relations

$$\hat{\ell}_t^d = -\delta\left(\hat{w}_t - \hat{p}_t - \hat{a}_t\right)$$
$$\hat{w}_t = E_{t-1}\hat{p}_t + \hat{a}_{t-1} + g - \frac{\gamma}{\delta}\hat{\ell}_{t-1}^d - \frac{1-\gamma}{\delta}\bar{\ell}$$
$$\hat{p}_t = \hat{p}_t^f + \hat{e}_t$$
$$\hat{p}_t^f = \hat{p}_{t-1}^f + \pi + \epsilon_t^p$$
$$\hat{m}_t - \hat{p}_t = \bar{y}_t - \eta\hat{i}_t + v_t$$
$$v_t = v_{t-1} + \epsilon_t^m$$
$$\hat{i}_t^f = \hat{i}_{t-1}^f + \epsilon_t^i$$
$$\hat{i}_t = E_t\hat{e}_{t+1} - \hat{e}_t + \hat{i}_t^f$$
$$\hat{u}_t = \bar{\ell}_t - \hat{\ell}_t$$

Dynamics behaviour in the basic model

- We compute the rational expectations solution to the previous model given the exchange rate regime. The general solution is :
$\hat{u}_t = \gamma \hat{u}_{t-1} + \delta \left(E_{t-1} \Delta \hat{p}_t - \Delta \hat{p}_t \right) - \delta \epsilon_t^s$

Under flexible exchange rate

The reduce-form for the unemployment rate dynamics is :
$\hat{u}_t = \gamma \hat{u}_{t-1} - \delta\eta\epsilon_t^i - \delta\epsilon_t^m$

Under fixed exchange rate

The reduce-form for the unemployment rate dynamics is :
$\hat{u}_t = \gamma \hat{u}_{t-1} - \delta \left(\epsilon_t^p + \epsilon_t^s \right)$

Extensions

1. We extend the discussion by taking into account the New Keynesian Macro-Model,
2. Caribbean labor markets, are affected by international business cycles (foreign shocks),
3. we complet the previous model by intergrating, the aggregate supply (the new Keynesian Phillips Curve), this IS curve and the monetary policy based on the Talor rule.

Simulation and calibration

1. We solve the equilibrium model by taking into account the rational expectations' hypothesis,
2. We perform the parameterization for both basis and extended models,
3. We simulate the model for Barbados and Jamaica countries.

TAB.: Parameter values of the basic model for Barbados

α	γ	η	$\bar{\ell}$
0.928	0.962	0.011	1

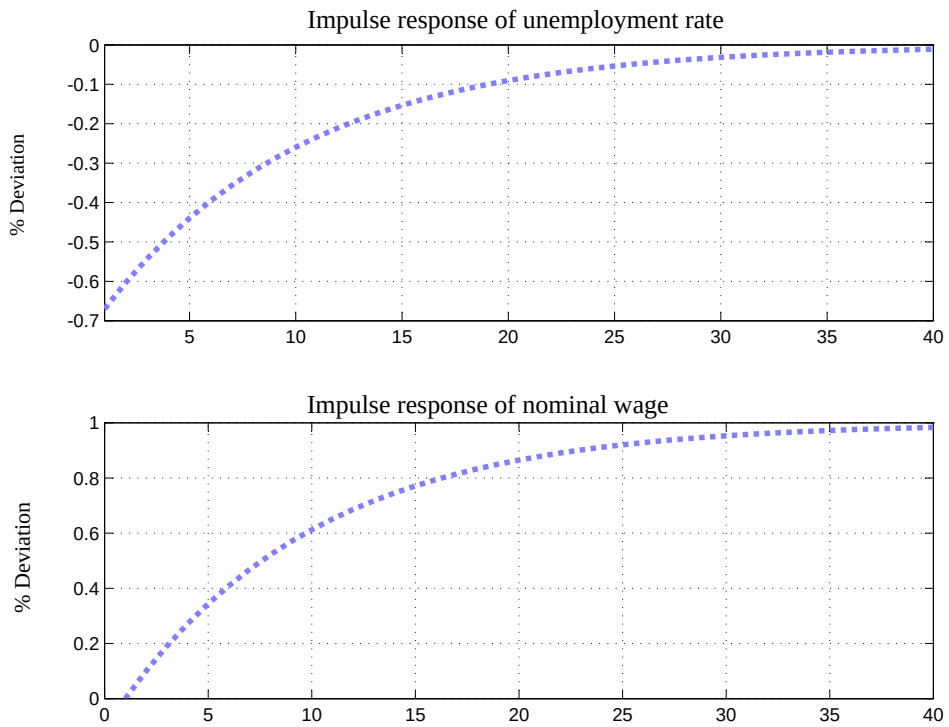
TAB.: Parameter values of the extended model

λ	θ	ϑ	ς	ω	κ	ρ
0.5586	0.0011	0.4859	0.0045	1.6409	0.6038	0.0045

Note : Cho and Moreno (2006).

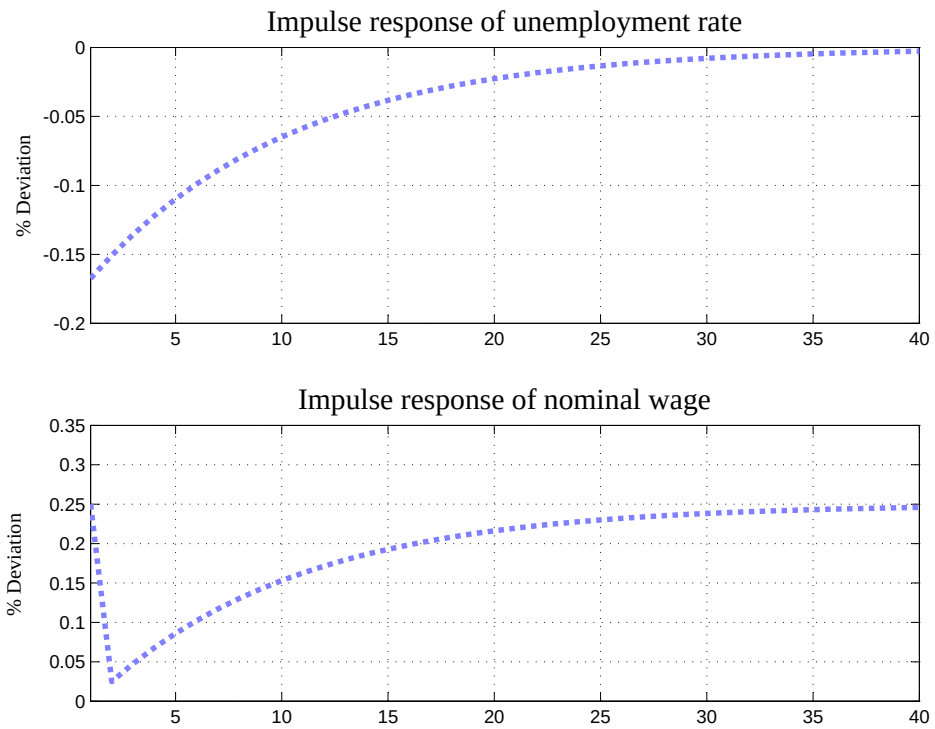
Barbados

FIG.: Impulse responses to ϵ_t^s



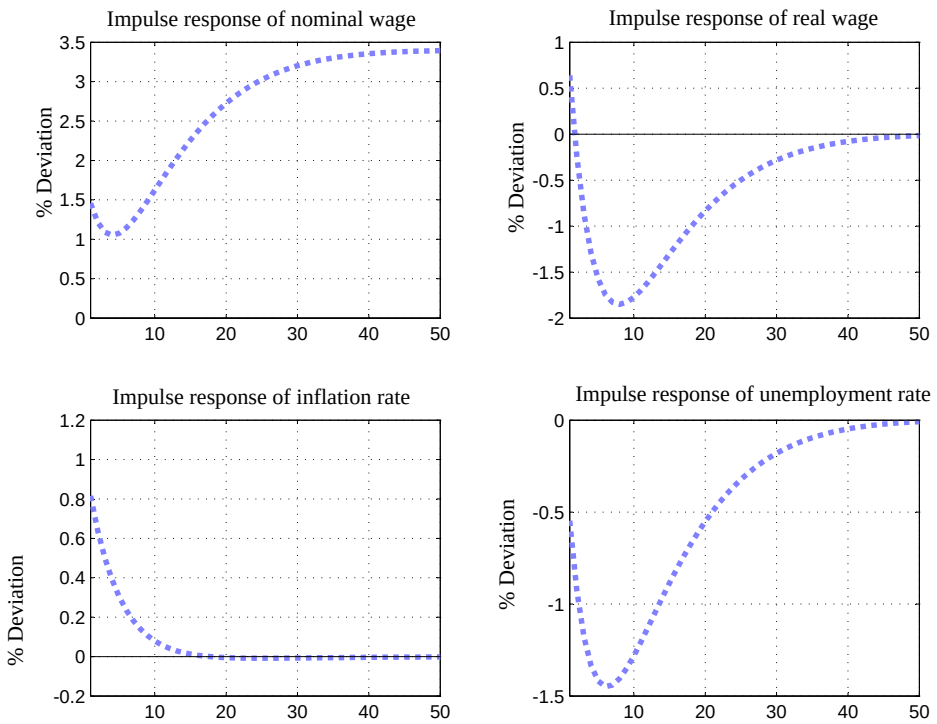
Jamaica

FIG.: Impulse responses to ϵ_t^i



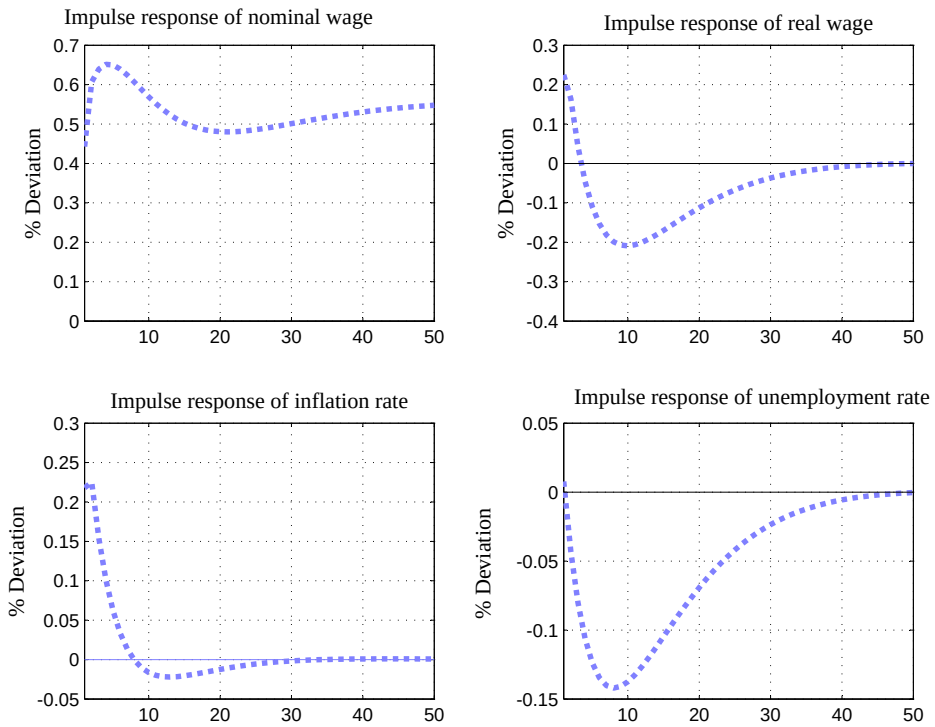
Barbados

FIG.: Impulse responses to ϵ_t^{AS}



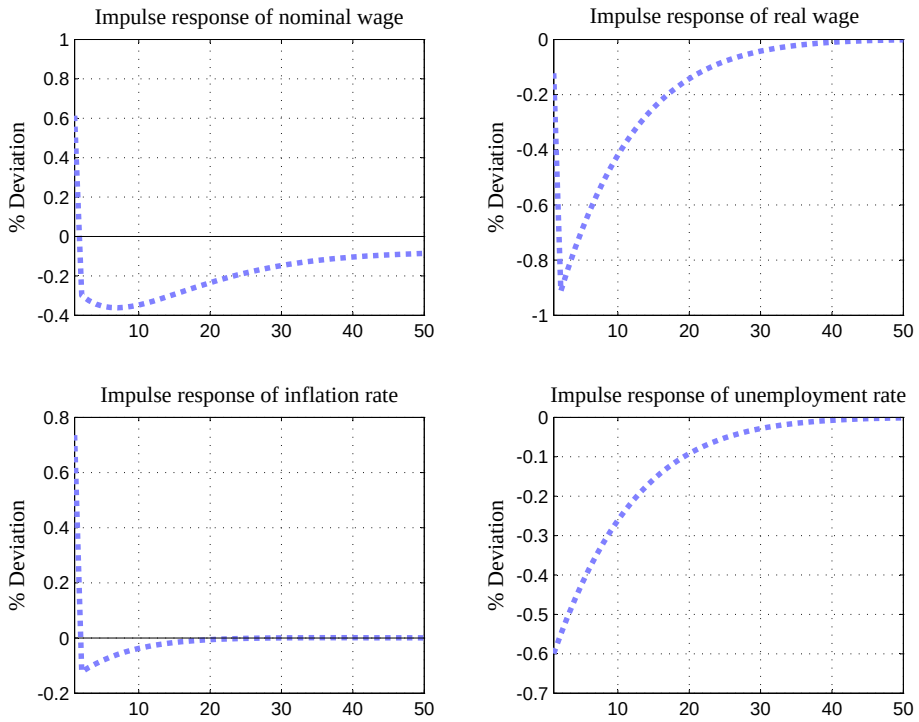
Jamaica

FIG.: Impulse responses to ϵ_t^{AS}



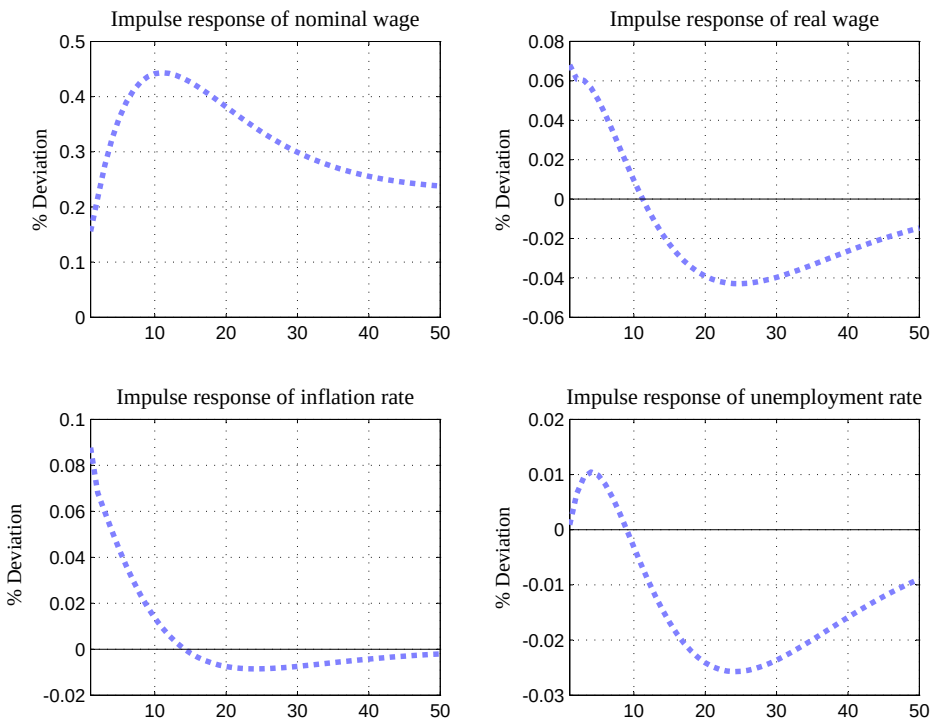
Barbados

FIG.: Impulse responses to ϵ_t^{MP}



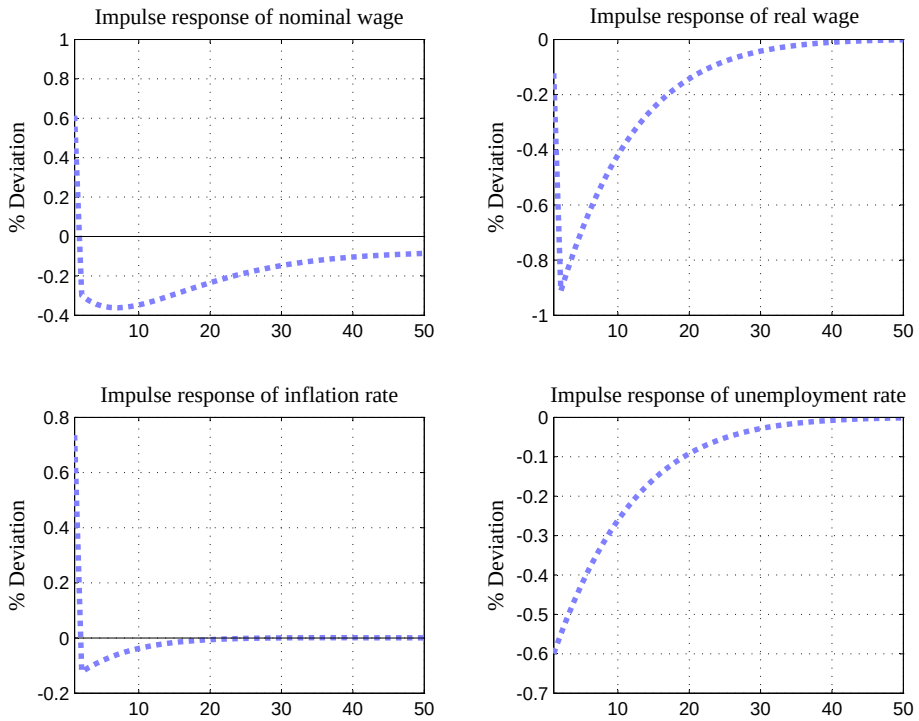
Barbados

FIG.: Impulse responses to ϵ_t^{MP}



Jamaica

FIG.: Impulse responses to ϵ_t^{MP}



1. Under a flexible exchange rate regime, unemployment and wage have smaller impacts when countries are hit by structural shocks,
2. Under a fixed exchange rate regime, labour market tends to fluctuate more,
3. Structural shocks coming from the US economy have strong effects on Caribbean labort markets (this is due to the rigidity).