

POLICY EXPERIMENTS IN A MINSKY SFC MODEL

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 1. Fiscal policies are more effective if coupled with conventional investment function

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 5. JG impact on price level is undetermined

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- G) Policy rate set by Central Bank. Other interest rates are defined endogenously

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- F) Two investment functions: standard vs. Minsky-like
- G) Policy rate set by Central Bank. Other interest rates are defined endogenously
- H) Central Bank acts as lender of last resort for both commercial banks (advances) and the Treasury (but return rate on bills depends also on private demand)

MODEL ASSUMPTIONS (CONT'D)

- 1) Active government sector: consumption, taxes, transfers and direct intervention

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- K) Banks have no production costs and they distribute all profits. They set a mark-up over the policy rate and fully accommodate firms' and households' demands

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- K) Banks have no production costs and they distribute all profits. They set a mark-up over the policy rate and fully accommodate firms' and households' demands
- L) There is a reserve requirement (either legally imposed or desired)

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- M) Labour force adjusts to firms' demand for labour in the medium run

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- N) Price setting: wage equation (expected change in real wage rate depends on unemployment rate) and monopoly power (mark-up rule)

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- N) Price setting: wage equation (expected change in real wage rate depends on unemployment rate) and monopoly power (mark-up rule)
- M) Regressive inflation expectations

Gross investment (*conventional*):

$$id = \gamma \cdot (k^T - k_{-1}) + da \quad (1)$$

where:

$$k^T = \kappa \cdot y \cdot \frac{ep}{p} \quad (2)$$

and:

$$da = \delta \cdot k_{-1} \quad (3)$$

Gross investment (*Minsky-like*):

$$id = \gamma_0 + \gamma_1 \cdot q_{-1} + da \quad (4)$$

where:

$$q = \frac{esr \cdot pe + lf}{k} \quad (5)$$

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Current consumption:

$$c = \alpha_1 \cdot yd \cdot \frac{ep}{p} + \alpha_2 \cdot hh_{-1} + \alpha_3 \cdot m1h_{-1} + \alpha_4 \cdot m2h_{-1} + \alpha_5 \cdot bh_{-1} + \alpha_6 \cdot ehr_{-1} \cdot pe_{-1} \quad (6)$$

where:

$$\alpha_1 > \alpha_2 \geq \alpha_3 \geq \alpha_4 \geq \alpha_5 \geq \alpha_6$$

Endogenous propensity to consume out of income:

$$\alpha_1 = \alpha_{10} + \alpha_{11} \cdot \Omega_{-1} - \alpha_{12} \cdot un_{-1} \quad (7)$$

where:

$$\Omega = \frac{wb}{y} \quad (8)$$

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LENDER'S RISK:

Interest rate on loans obtained by production firms:

$$r_l = r^* + \mu l \quad (9)$$

where:

$$\mu l = \mu l_0 + \mu l_1 \cdot lev_{-1} \quad (10)$$

and:

$$lev = \frac{lf}{lf + esr \cdot pe} \quad (11)$$

Money wage rate:

$$w = [1 + \omega_1 \cdot (un_{-1} - nun)] \cdot \frac{ep}{p_{-1}} \cdot w_{-1} \quad (12)$$

Unit price of goods produced by private firms:

$$pf = \frac{w}{prf} \cdot (1 + \mu p) \quad (13)$$

General price level:

$$p = pf \cdot \left(1 - \frac{C_{gov}}{y}\right) + pg \cdot \frac{C_{gov}}{y} \quad (14)$$

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Aggregate value of public goods:

$$c_{gov} = \min(\alpha_g \cdot c, wb_g) \quad (15)$$

Unit price of public goods:

$$pg = \frac{c_{gov}}{prg \cdot ng} \quad (16)$$

Wage bill of JG employees:

$$wb_g = w_g \cdot ng \quad (17)$$

Money wage rate of JG employees:

$$w_g = \rho_g \cdot w \quad (18)$$

where: $0 < rho_g \leq 1$

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B) Stochastic (or quasi-rational) expectations:

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C) **Regressive expectations:**

$$E(\pi) - \pi_{-1} = \psi_0 + \psi_1 \cdot [\pi^T - \pi_{-1}]$$

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- B) Redundant equation: $hs = hh$

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- C) 100 periods
- D) Coefficients borrowed from literature or fine-tuned

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- D) Coefficients borrowed from literature or fine-tuned
- E) Complete sensitivity tests not performed yet

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- F) Language: *R* code (available upon request)

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- 1) An increase in government spending (funded by bills and money issues)

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- 4) A (major) change in the reserve requirement

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- 4) A (major) change in the reserve requirement
- 5) A quantitative easing programme
- 6) A JG plan
- 7) A tax cut (funded by bills and money issues)

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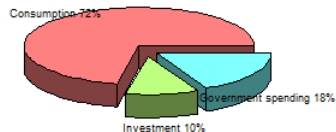
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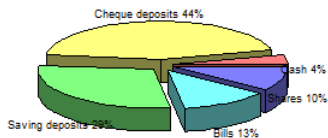
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FIGURE 1: Output and portfolio components under baseline

a) Output composition under baseline



b) Portfolio composition under baseline



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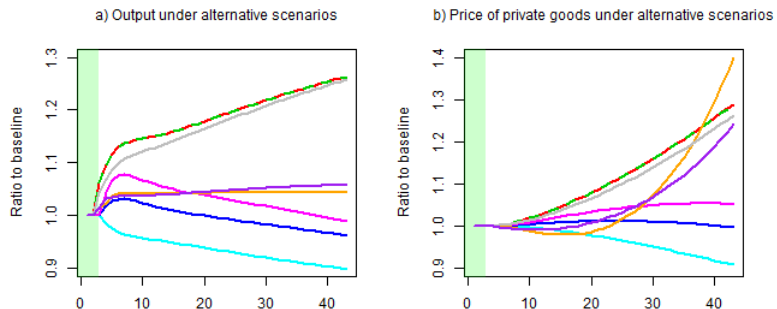
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FIGURE 2: Output and prices



Higher spending

Lower policy rate

Quantitative easing

Tax cut

Higher spending and monetisation

Higher reserve requirement

Job Guarantee plan with endogenous wage rate

Job Guarantee plan with endogenous employees

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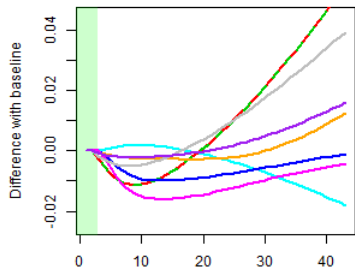
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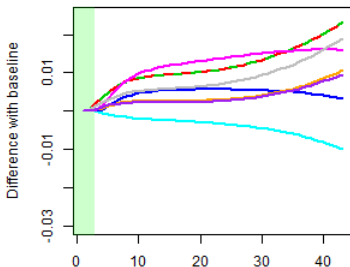
CONVENTIONAL INVESTMENT (CONT'D)

FIGURE 4: Valuation and leverage ratios

e) Tobin q under alternative scenarios



f) Leverage ratio under alternative scenarios



Higher spending

Higher spending and monetisation

Lower policy rate

Higher reserve requirement

Quantitative easing

Job Guarantee plan with endogenous wage rate

Tax cut

Job Guarantee plan with endogenous employees

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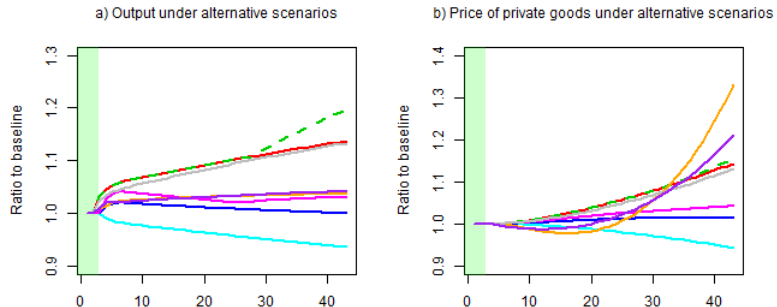
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FIGURE 5: Output and prices



■ Higher spending

■ Higher spending and monetisation

■ Lower policy rate

■ Higher reserve requirement

■ Quantitative easing

■ Job Guarantee plan with endogenous wage rate

■ Tax cut

■ Job Guarantee plan with endogenous employees

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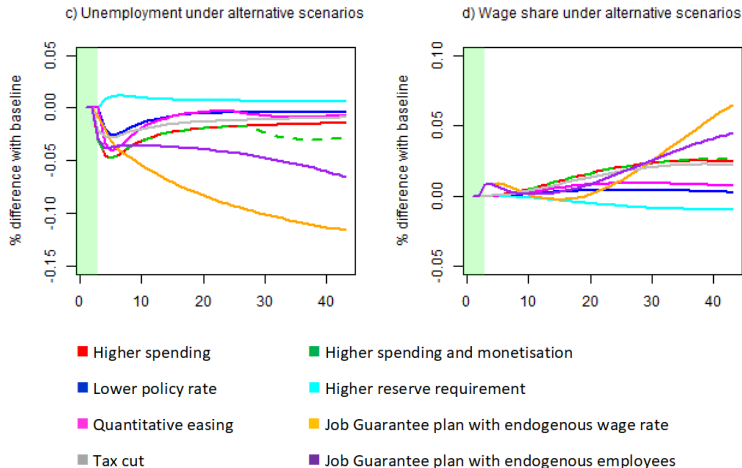
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FIGURE 6: Employment and inequality



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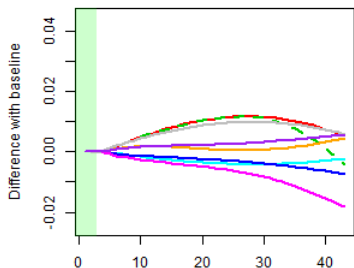
MINSKY-LIKE INVESTMENT (CONT'D)

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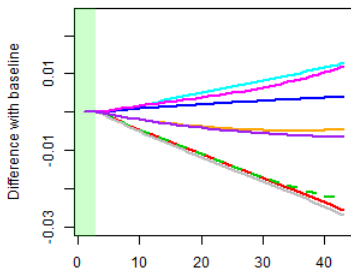
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FIGURE 7: Valuation and leverage ratios

e) Tobin q under alternative scenarios



f) Leverage ratio under alternative scenarios



■ Higher spending

■ Higher spending and monetisation

■ Lower policy rate

■ Higher reserve requirement

■ Quantitative easing

■ Job Guarantee plan with endogenous wage rate

■ Tax cut

■ Job Guarantee plan with endogenous employees

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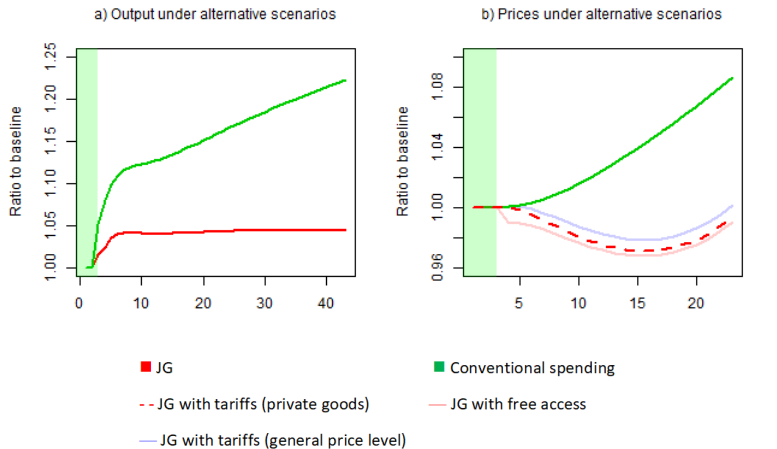
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FIGURE 8: Output and prices



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FIGURE 9: Employment and government deficit

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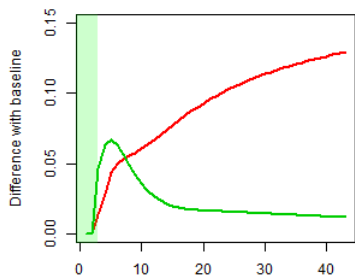
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c) Employment rate under alternative scenarios

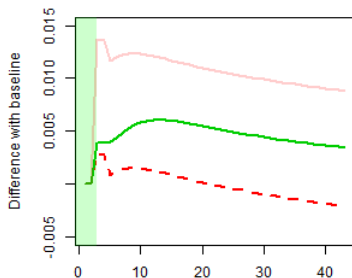


■ JG

-- JG with tariffs (private goods)

— JG with tariffs (general price level)

d) Deficit to GDP ratio under alternative scenarios



■ Conventional spending

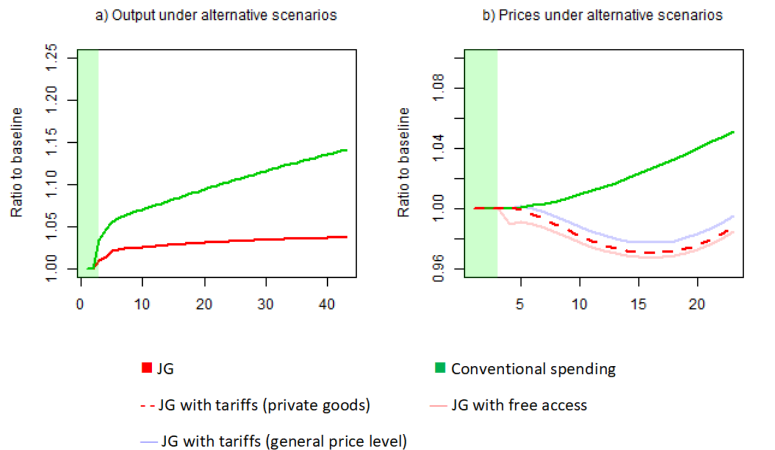
— JG with free access

G vs JG: MINSKY-LIKE INVESTMENT

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FIGURE 10: Output and prices



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FIGURE 11: Employment and government deficit

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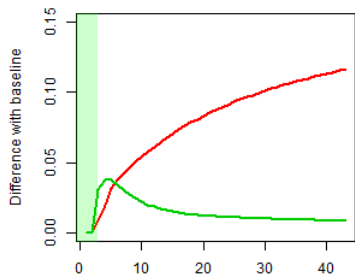
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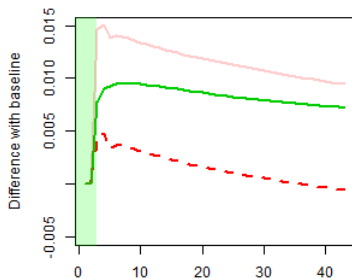
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c) Employment rate under alternative scenarios



d) Deficit to GDP ratio under alternative scenarios



■ JG

-- JG with tariffs (private goods)

— JG with tariffs (general price level)

■ Conventional spending

— JG with free access

1. Loose fiscal policies are more effective if coupled with conventional investment (financialisation trap)

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1. Loose fiscal policies are more effective if coupled with conventional investment (financialisation trap)
2. Loose monetary policies are effective in S/R, but possibly deflationary in L/R (due to lower interest payments from government to private sector)

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1. Loose fiscal policies are more effective if coupled with conventional investment (financialisation trap)
2. Loose monetary policies are effective in S/R, but possibly deflationary in L/R (due to lower interest payments from government to private sector)
3. Minsky-like investment makes monetary policy effects more persistent than traditional investment (though weaker in S/R)

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1. Loose fiscal policies are more effective if coupled with conventional investment (financialisation trap)
2. Loose monetary policies are effective in S/R , but possibly deflationary in L/R (due to lower interest payments from government to private sector)
3. Minsky-like investment makes monetary policy effects more persistent than traditional investment (though weaker in S/R)
4. JG is more effective than standard government spending in supporting employment, despite a lower multiplier

FINAL REMARKS

1. Loose fiscal policies are more effective if coupled with conventional investment (financialisation trap)
2. Loose monetary policies are effective in S/R, but possibly deflationary in L/R (due to lower interest payments from government to private sector)
3. Minsky-like investment makes monetary policy effects more persistent than traditional investment (though weaker in S/R)
4. JG is more effective than standard government spending in supporting employment, despite a lower multiplier
5. JG net effect on the price level is undetermined (higher wages in private sector and higher propensity to consume, but 'cheaper' public goods)

Thank You

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Download presentation, paper and code from *marxianomics*:

www.marcopassarella.it/en/

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