# Is "Inflation First" Synonymous with "Rentiers First" in the Pursuit of Monetary Policy? The Dominance of the Taylor Rule and the Rentier Income Share in Industrialized Countries

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Objective

- To analyze the consequences of monetary policy on the functional distribution of income since the 1970s, during most of the "inflation first" policy strategies for selected industrialized countries, by adopting an alternative Keynesian socioeconomic class approach:
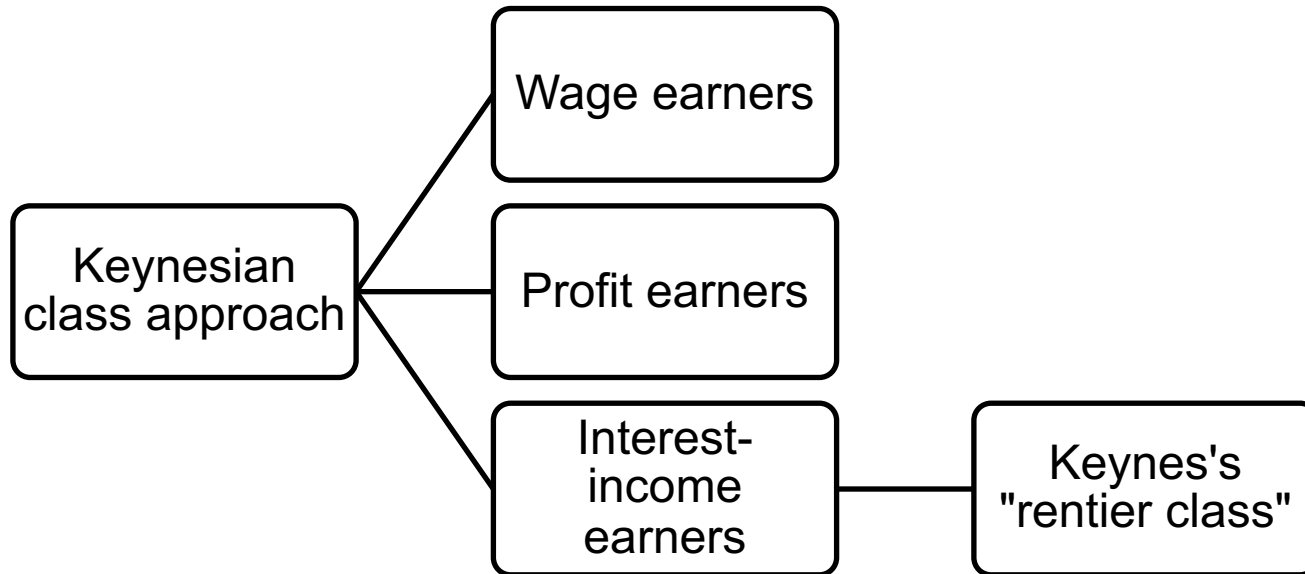
Justification

- The ongoing political debate over the Taylor rule, where the whole political economy of how this rule should be adopted, remains a major flashpoint as the problem of inflation has moved once again to centerstage within monetary policy circles since early 2022.

- Very little research exists about the monetary policy consequences on the functional distribution of income and, even more so, on rentier income vis-à-vis non-rentier income.

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History

- The Taylor rule was officially put forth only in the early 1990s (see Taylor 1993).

- Yet, it synthesized a framework that slowly appeared after the abandonment of the Keynesian priorities that existed before the high inflation environment of the 1970s.

- After monetarism "crashed and burned" in the early 1980s (as De Long (2000) expressed it), a new neo-Wicksellian veneer of the reaction function slowly replaced the monetarist logic.

- Despite trying to reconcile the Taylor rule with monetarist causality (see Taylor 1999), this framework was the lineal descendant of an old Wicksellian loanable funds approach (see Seccareccia 1998).

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The Taylor Rule:

$i = ρ + π + α(π - π^*) + β(q - q^*)$ [1]

or, equivalently, given the presumed link between potential output and the natural rate of unemployment:

$i = ρ + π + α(π - π^*) + δ(u - u^*)$ [1']

where both "gaps" have as ultimate focus the attainment of the central bank inflation target.

The logic is to raise i and, by implication, the real rate, $r = i – π$, whenever $π > π^*$ and whenever $u < u^*$, assuming $δ < 0$. The natural rate ($ρ$) would be the real policy rate of interest that is consistent with an equilibrium state.

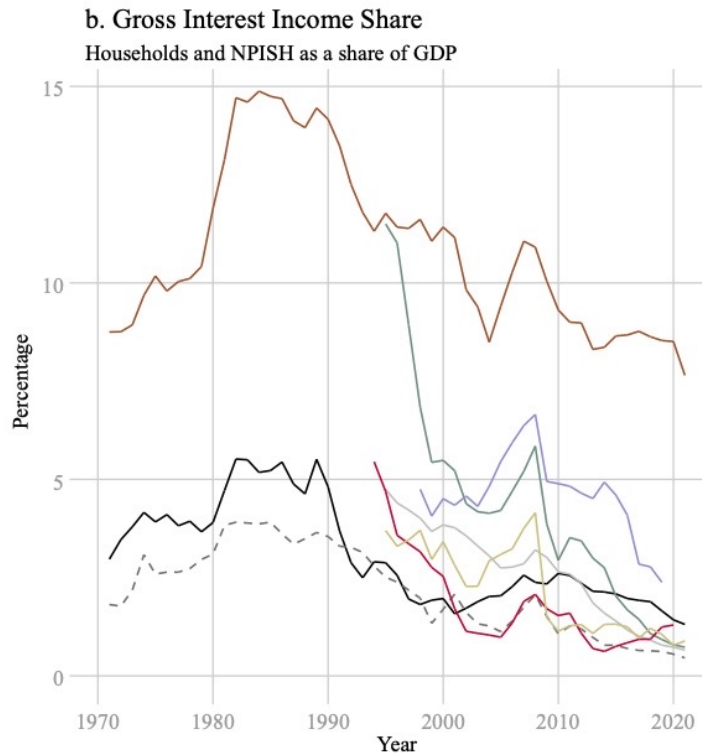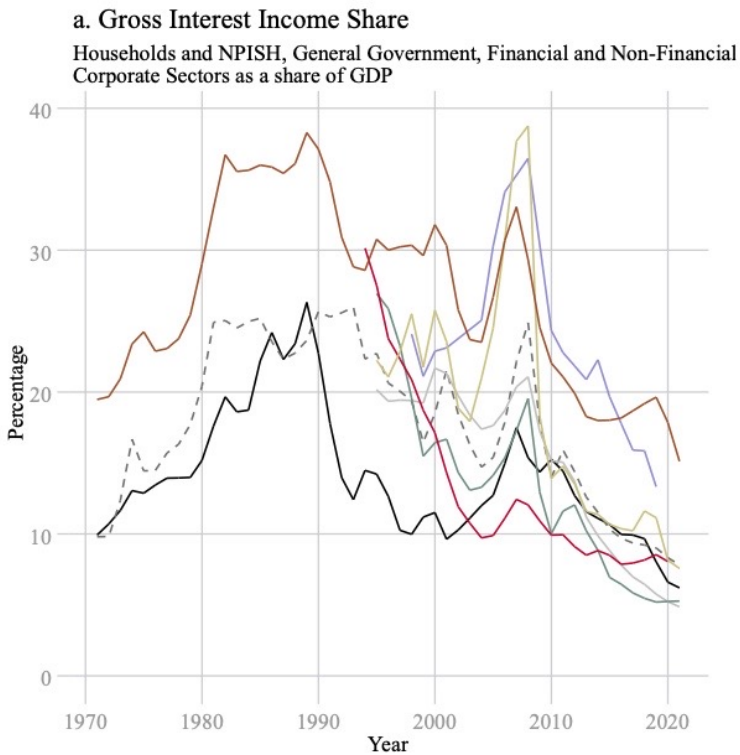uOttawa

Political Economy

- The Taylor rule left Keynesians out-maneuvered politically due to the confusion arising from the two gaps in the reaction function.

- It subverted the dual mandate since the two gaps are merely informative in the quest of aligning the real interest rate (r) with the presumed natural rate (ρ).

- Over the last year, as inflation fighting has now been reprioritized, central bankers are under enormous political pressure to get back to this neo-Wicksellian interpretation of the Taylor rule.

- It has become a policy hot potato that is used in this political blame game of why central bankers have not sufficiently prevented inflation from taking hold during the pandemic.

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Macroeconomic variables
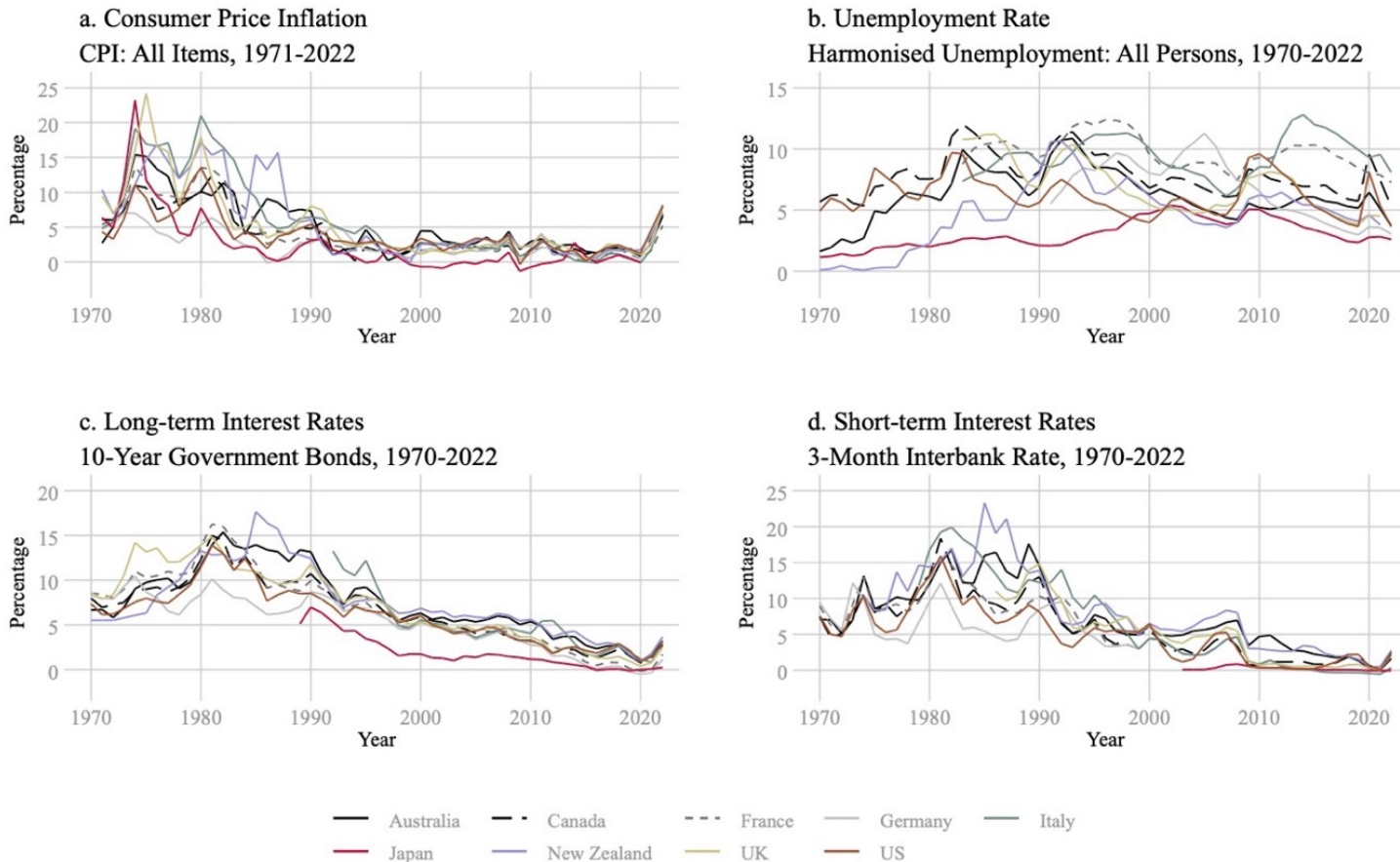
Source: Monthly Monetary and Financial Statistics (MEI), OECD.Stat

Gross Interest Income Shares

a. Gross Interest Income Share

Households and NPISH, General Government, Financial and Non-Financial Corporate Sectors as a share of GDP

b. Gross Interest Income Share

Households and NPISH as a share of GDP

Legend: Australia, Canada, France, Germany, Italy, Japan, New Zealand, UK, US

NPISH: Non-Profit Institutions Serving Households

Source: Tables 1 & 14A, System of National Accounts (SNA), OECD.Stat

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Net Interest Income Shares

a. Net Interest Income Share
Households and NPISH as a share of GDP

b. Net Interest Income Share
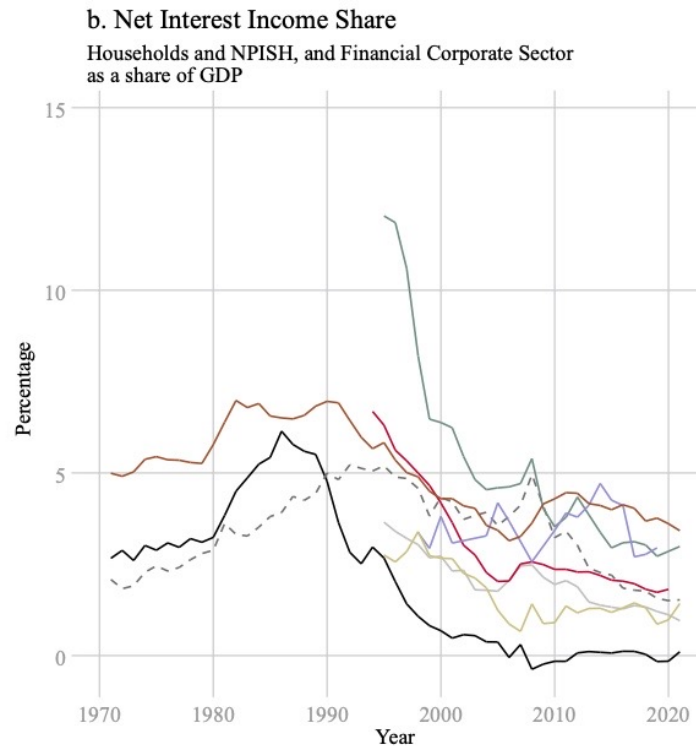Households and NPISH, and Financial Corporate Sector
as a share of GDP

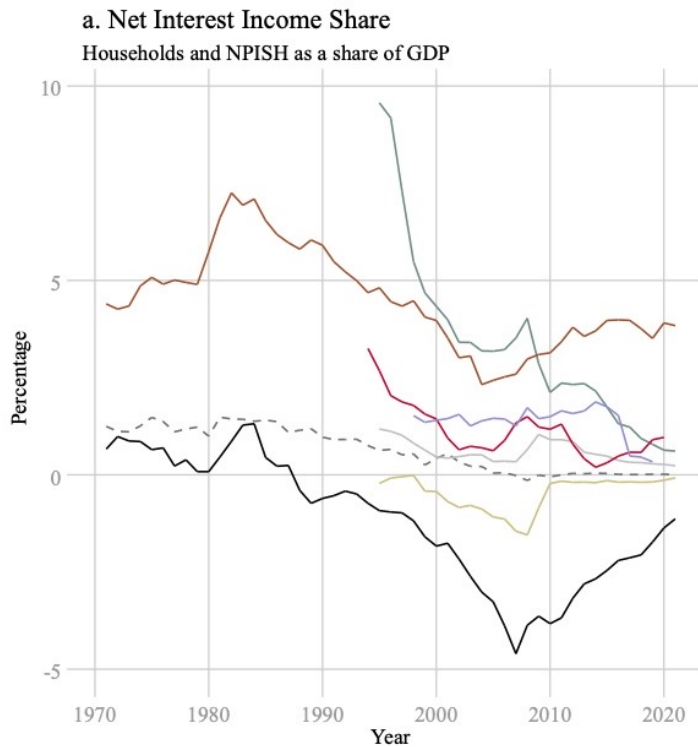Legend: Australia, Canada, France, Germany, Italy, Japan, New Zealand, UK, US

NPISH: Non-Profit Institutions Serving Households
Source: Tables 1 & 14A, System of National Accounts (SNA), OECD.Stat

Pasinetti index (PI)

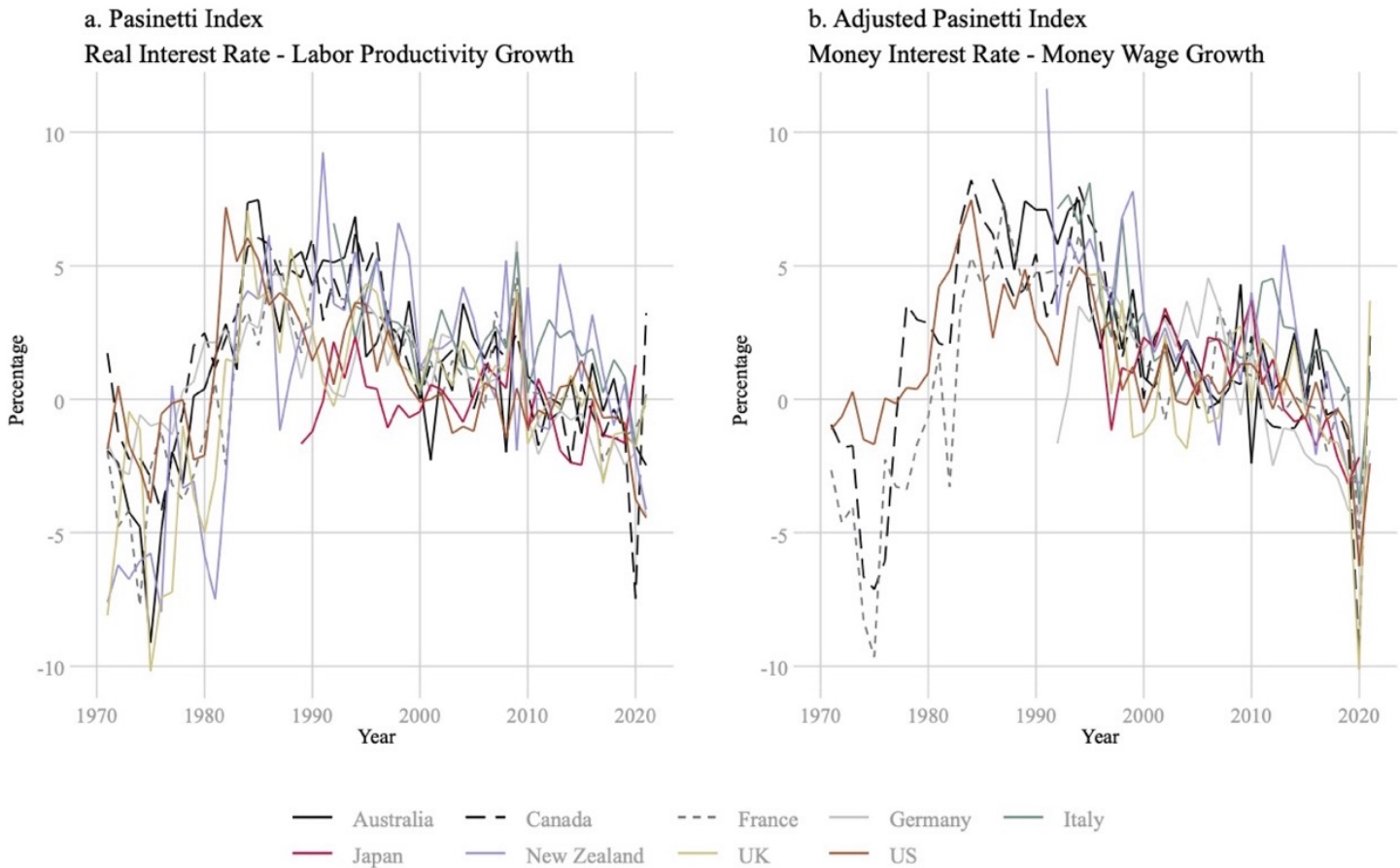a. Pasinetti Index
Real Interest Rate - Labor Productivity Growth

b. Adjusted Pasinetti Index
Money Interest Rate - Money Wage Growth

Source: Key Economic Indicators (KEI) & Productivity and ULC - Annual, OECD.Stat

Wicksell Rule versus Taylor Rule

The older Wicksell rule is very similar but with three fundamental differences:

1) The real rate ρ is the outcome of the setting of the money rate in relation to the inflation rate, which can only be known *ex post*.

2) Wicksell ignored the output gap, since actual output was always tending towards potential output or full employment.

3) For Wicksell (1898) the achievement of price stability meant that $\pi^* = 0$ and not the usual 2 percent target of central banks.

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ρ is different from Wicksell's natural rate

Wicksell's two-interest rate theory is composed of:

a) A "natural" rate of interest (*rho*) determined by real factors of "productivity and thrift", where *rho* is unobservable, but the variable manifests itself indirectly via prices' movements. Hence, *rho* is not explicitly identified in Wicksell's reaction function.

b) A money rate of interest (*i*) regulated by the reaction function of the central bank that is focused on controlling the inflation rate.

The interaction between these two interest rates explains the dynamics of inflation.

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Wicksellian I-S relation

Rates of
interest

S

Natural rate

Money rate

I'

Saving

Money
creation

I

I, S
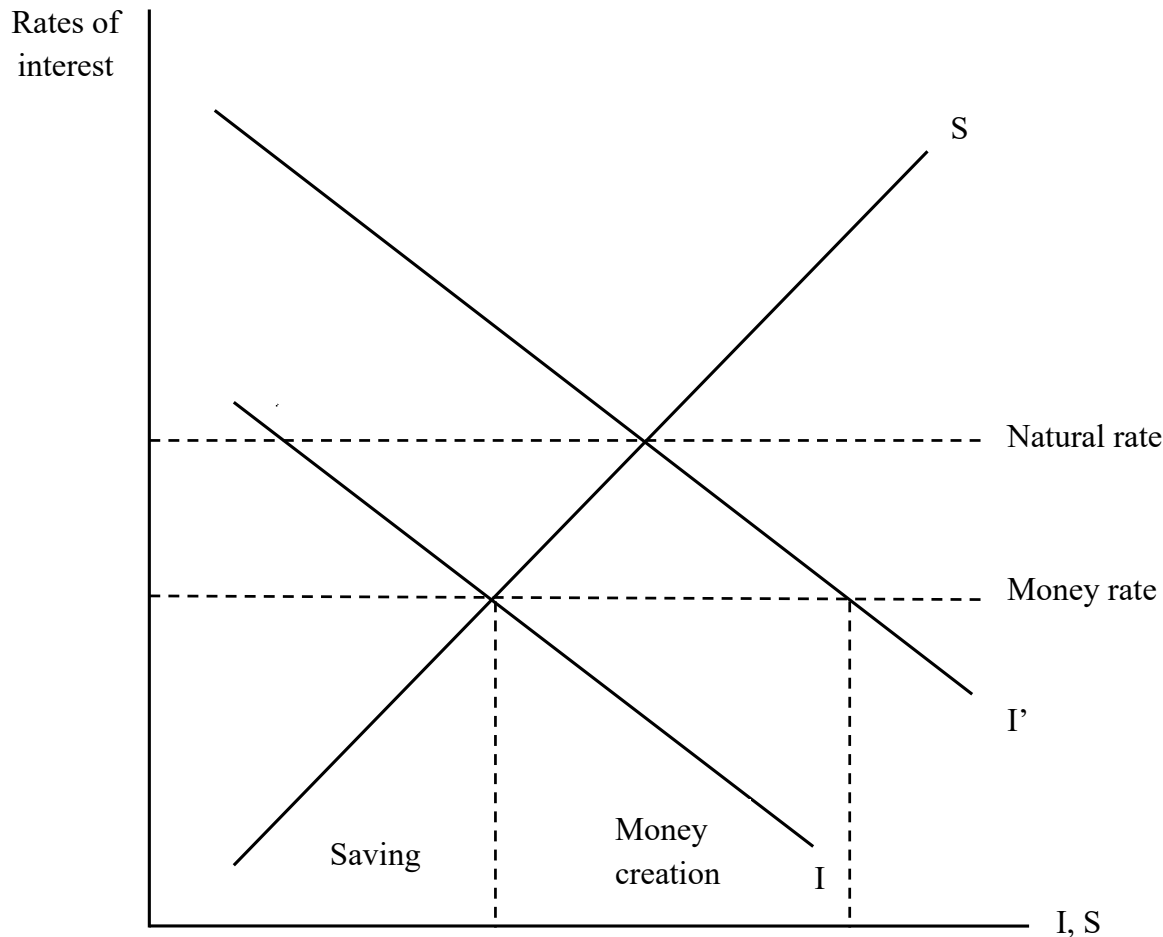
I is a function of *rho* and *S* is a function of *i*.

Assuming a shock that raises *rho*, then *rho > I* and *I' > S*.

*P*rices must go up unless *i* is raised by the CB.

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Wicksell rule

The Wicksell rule is a nominal variant of the Taylor rule:

$$i = c + \alpha'(\pi - \pi^*) + \beta'(q - q^*) \qquad\qquad [4]$$

where *c* is not Wicksell's natural rate (*rho*). However, he assumed $\pi^* = 0$ and $q = q^*$, such that equation [4] reduces to:

$$i = c + \alpha'(\pi) \qquad\qquad [5]$$

in which the value of *α'* could be greater, equal to, or less than unity. Note: there is no explicit appearance of the natural rate in the above reaction function, except that when *π = 0,* then *i = rho.*

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Ex Post Real Rate of Interest under Wicksell Rule
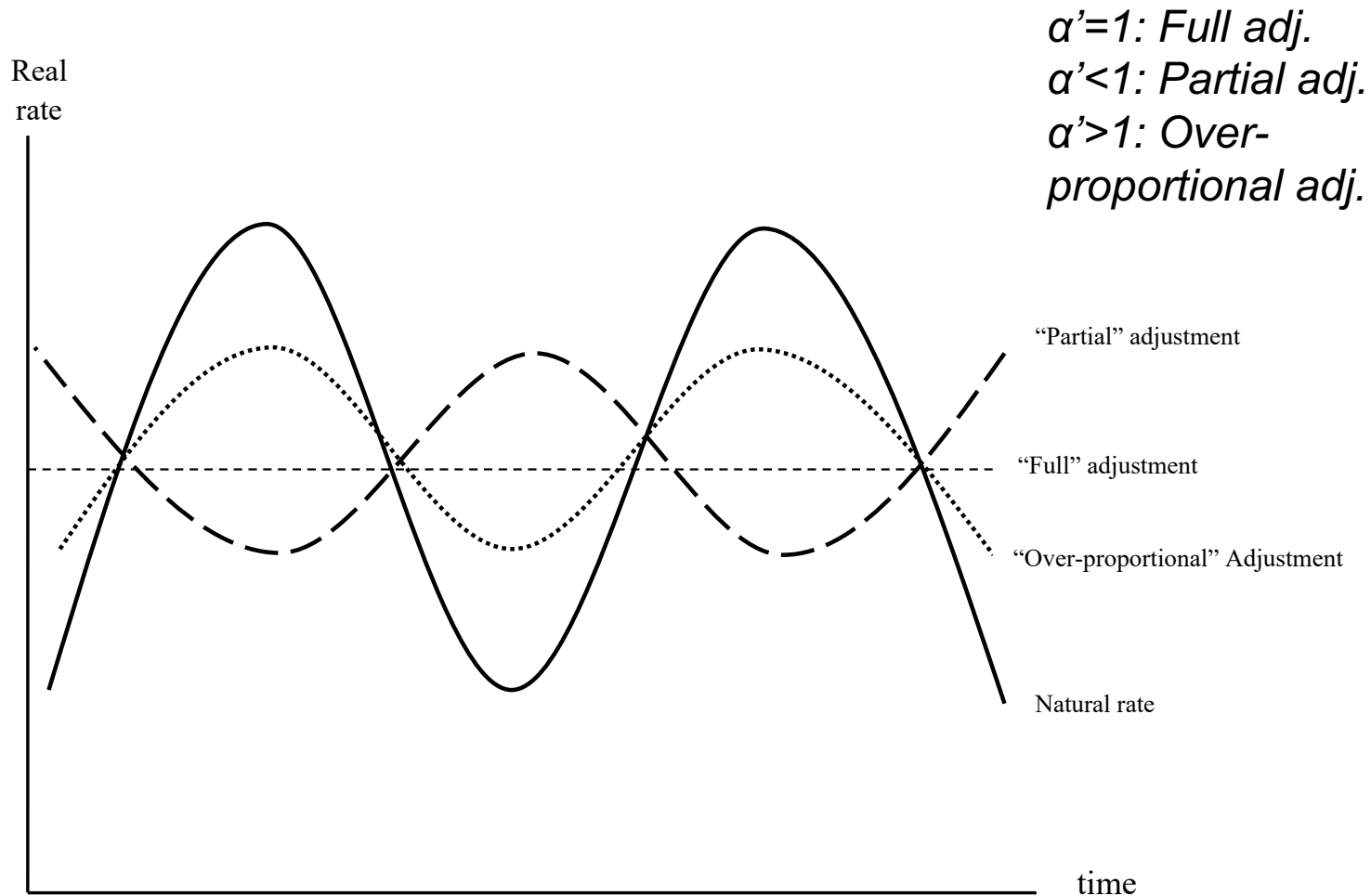
$α'=1$: Full adj.
$α'<1$: Partial adj.
$α'>1$: Over-proportional adj.

Rounding up

- Depending on the value of *rho*, the real rate of interest could be constant or could move counter-cyclically or pro-cyclically depending on the specific central bank response function.

- The Taylor rule: the central bank must raise the real rate, $i - \pi$, whenever $\pi > \pi^*$, entailing a uniquely pro-cyclical movement of the *ex post* real rate of interest (unless offset by a sharp rise in the output gap ($q - q^*$)).

- The empirical consequences: easy to verify by simply analyzing if inflation and real rates are positively or negatively correlated in an economy in which the central bank is targeting inflation.

- Which behavior do interest rates follow? Is it a Wicksell rule, or a Taylor rule? And which of these behaviors are best compatible with the stylized facts on rentier income that were previously presented?

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Table 1. Fixed Effects and Pooled OLS Regressions of Wicksell and Taylor Rules, Annual: 1973-2022

	Wicksell Rule: Money Interest Rate				Taylor Rule: Real Interest Rate			
	Fixed Effects		Pooled OLS		Fixed Effects		Pooled OLS	
	1	2	3	4	5	6	7	8
Inflation	0.345***	0.387***	0.371***	0.390***	-0.304***	-0.255***	-0.179***	-0.153***
	(0.0476)	(0.0541)	(0.0793)	(0.0847)	(0.0615)	(0.0758)	(0.0533)	(0.0574)
Unemployment rate	-0.125*	-0.0973	-0.0783***	-0.0839**	-0.140	-0.0971	-0.0751**	-0.0838*
	(0.0638)	(0.0863)	(0.0235)	(0.0403)	(0.0756)	(0.0977)	(0.0304)	(0.0483)
AR (1)	0.528***	0.516***	0.604***	0.606***	0.536***	0.530***	0.637***	0.647***
	(0.0634)	(0.0631)	(0.0478)	(0.0486)	(0.0585)	(0.0581)	(0.0605)	(0.0589)
Unemployment rate: 2008-2022		-0.0594		0.0150		-0.0858		0.0308
		(0.0725)		(0.0452)		(0.0784)		(0.0553)
Inflation: 2008-2022		-0.436**		-0.228**		-0.551***		-0.259*
		(0.140)		(0.115)		(0.144)		(0.132)
Unemployment rate: 2020-2022		0.0275		-0.00400		-0.0131		-0.0687
		(0.0515)		(0.0364)		(0.0858)		(0.0772)
Inflation: 2020-2022		0.00741		-0.215		-0.0646		-0.390*
		(0.201)		(0.142)		(0.252)		(0.233)
Constant	2.906***	2.469***	2.098**	1.963*	2.856***	2.224***	1.538*	1.380
	(0.788)	(0.733)	(0.926)	(1.000)	(0.670)	(0.645)	(0.787)	(0.861)
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	361	361	361	361	361	361	361	361
R-squared	0.955	0.956	0.960	0.961	0.899	0.904	0.893	0.896
Number of countries	9	9			9	9		

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The 9 countries are Australia, Canada, France, Germany, Italy, Japan, New Zealand, US, and UK.

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Table 2. Fixed Effects and Pooled OLS Regressions of Wicksell and Taylor Rules, Quarterly: 1973q1-2022q4

| | Wicksell Rule: Money Interest Rate | | | | Taylor Rule: Real Interest Rate | | | |
| | Fixed Effects | | Pooled OLS | | Fixed Effects | | Pooled OLS | |
	1	2	3	4	5	6	7	8
Inflation	0.0891***	0.108***	0.0870***	0.0963***	-0.154***	-0.124**	-0.0877***	-0.0650*
	(0.0250)	(0.0276)	(0.0291)	(0.0336)	(0.0337)	(0.0405)	(0.0296)	(0.0332)
Unemployment rate	-0.0593**	-0.0576*	-0.0282***	-0.0322***	-0.0801*	-0.0597	-0.0342***	-0.0336**
	(0.0228)	(0.0293)	(0.00619)	(0.0114)	(0.0390)	(0.0541)	(0.00930)	(0.0149)
AR (1)	0.842***	0.832***	0.883***	0.880***	0.769***	0.751***	0.844***	0.837***
	(0.0315)	(0.0333)	(0.0162)	(0.0168)	(0.0457)	(0.0471)	(0.0205)	(0.0208)
Unemployment rate: 2008-2022		-0.00372		0.0113		-0.0291		0.0101
		(0.0199)		(0.0119)		(0.0379)		(0.0169)
Inflation: 2008-2022		-0.127**		-0.0599*		-0.251***		-0.118**
		(0.0432)		(0.0351)		(0.0587)		(0.0475)
Unemployment rate: 2020-2022		-0.00571		-0.0190		-0.0370		-0.0660**
		(0.0179)		(0.0127)		(0.0467)		(0.0259)
Inflation: 2020-2022		0.0322		-0.0150		-0.160		-0.256***
		(0.0437)		(0.0249)		(0.115)		(0.0748)
Constant	1.779***	1.683***	1.414***	1.381***	0.961	0.638	0.230	0.0724
	(0.241)	(0.244)	(0.225)	(0.255)	(0.526)	(0.545)	(0.489)	(0.518)
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,416	1,416	1,416	1,416	1,416	1,416	1,416	1,416
R-squared	0.983	0.983	0.985	0.985	0.947	0.949	0.947	0.949
Number of countries	9	9			9	9		

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Notes: The 9 countries are Australia, Canada, France, Germany, Italy, Japan, New Zealand, US, and UK.

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Conclusions

- "Inflation first" is equivalent to "rentier first" monetary policy.

- Regression results are consistent with central banks following primarily a Wicksellian-type reaction function, at least before the GFC.

- "Inflation first" policies seem to characterize a regime of high rentier income shares between the 1980s and the GFC, by observing the evolution of interest income and PI measures.

- Following the GFC, however, we observe a regime of low rentier income shares concomitant with "flexible" inflation-targeting policies (resembling, to some extent, pre-monetarist Keynesian policies).

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Grazie per la vostra attenzione!

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A1. Rentier Income: Interest Income Shares

- For Keynes, a 'rentier' is the person who would be making a living chiefly out of interest income payments.

- The 2008 SNA specifies four institutional sectors, abstracting from the rest of the world sector (ROW), which theoretically yield the following identity:

$$R_h + R_f + R_c + R_g = P_h + P_f + P_c + P_g \qquad [2]$$

from here we can derive different interest income shares – by dividing by GDP – for several industrialized countries.

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A2. Descriptive Statistics

Table A. Descriptive Statistics, Pool of Selected Countries

Variable	Short-term interest rate	CPI inflation	Unemployment rate
Annual Data: 1973-2022			
Mean	5.6	4.3	6.7
Standard Deviation	4.8	4.4	2.7
Min	-0.5	-1.3	0.1
Max	23.3	24.2	12.8
Observations	400	448	400
Quarterly Data: 1973q1-2022q4			
Mean	5.6	4.3	6.8
Standard Deviation	4.9	4.5	2.6
Min	-0.5	-2.2	1.1
Max	25.7	26.5	13.3
Observations	1599	1785	1552

Notes: Countries are Australia, Canada, France, Germany, Japan, Italy, New Zealand, United Kingdom, United States

Source: OECD.Stat

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