

Institute for International Political Economy at the Berlin School of Economics and Law (IPE)



Hochschule für Wirtschaft und Recht Berlin

Berlin School of Economics and Law

Inflation is always and everywhere ... a conflict phenomenon: post-Keynesian inflation theory and energy price driven conflict inflation, distribution, demand and employment

Eckhard Hein

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1. Introduction

- Empiral studies: rise in inflation in the course of Covid crisis and the war in Ukraine has been associated with rising profits/profit shares (Bivens 2022, Dullien et al. 2023, Ferguson/Storm 2023, Konczal/Lusiani 2022, Matamaros 2023, Stiglitz/Regmi 2023, Ragnitz 2022, Storm 2022a, 2022b, Tölgyes/Piecek 2023)
- Profit-driven inflation or 'sellers' inflation' (Weber/Wasner 2023) as opposed to (government spending driven) excess aggregate demand or excess money-supply driven inflation
- Underlying causes: higher import prices, higher energy prices, bottlenecks due to disruptions in global value chains, higher mark-ups of firms, lower labour force participation due do Covid, changes in the structure of demand, ...
- Relationship with post-Keynesian theory of inflation?

Some clarifications at the beginning

• Inflation requires inconsistent claims of main group of actors and may be triggered by any increase in claims:

(1) rentiers and firms (broad profit share, including retained profits, interest and dividends)

- ➔ profit-driven conflict inflation
- (2) workers (real wage, wage share)
- → wage-driven conflict inflation
- (3) government (net tax revenues)
- → tax-driven conflict inflation
- (4) external sector (import prices in domestic currency)
- → external cost-/import price-driven conflict inflation

>Inflation is always and everywhere a conflict phenomenon.

Distinction between demand-pull, cost-push, imported, ... inflation can only relate to the trigger but not to the essence of inflation.

1. Introduction

- 2. Post-Keynesian theory of inflation I: The Keynes, Kaldor, Robinson tradition and Marglin's reconciliation of real wage resistance and the principle of effective demand
- 3. Post-Keynesian theory of inflation II: The Kalecki, Rowthorn, Dutt tradition and the modern textbook presentations in the Blecker/Setterfield and Lavoie and in the Hein/Stockhammer variant
- 4. Effects of an imported energy price increase and policy implications in the Rowthorn and Hein/Stockhammer approach
- 5. Conclusions

2. Post-Keynesian theory of inflation I: Keynes, Kaldor, Robinson, Marglin

- Keynes (1930, Ch. 10): The fundamental equations for the value of money
- Income inflation: changes in the rate of efficiency earnings (unit labour costs, unit normal profits)
- Profit inflation: excess demand, i.e. inequality of saving and investment (due to deviation of money rate of interest from Wicksellian real rate)
- Keynes (1936, Ch. 21): The theory of prices
- Semi-inflation: discontinuous increase in wage unit below full employment, determined by psychology of workers and by policies of employers and trade unions
- Absolute (true) inflation: increase in effective demand at full employment causes rise in prices and money wages

Post-Keynesian growth and distribution theory – Kaldor and Robinson

- Flexible prices in the goods market relative to sticky nominal wages adjust saving to investment (in the long run)
- Without real income resistance of any social group, an increase in prices is a temporary equilibrium adjustment phenomenon

'Without a continued rise in money wages inflation could not go on as a *process* in time-since whatever forces were present in the economy making for a rise in prices, they could only have caused a once-and-for-all rise in prices which would in itself have served to eliminate the excess demand that gave rise to it.' (Kaldor 1959, p. 292, emphasis in original)

➢Inflation arises if any group resists re-distribution

➢ Real wage resistance → inflation barrier (Robinson 1956, 1962)

- Robinson (1938): currency devaluation induced price-wage-price spiral as explanation for great German inflation (1922-23)
- Kaldor (1959): profit-wage-price spiral: workers' desire to share in rising profits drives wage inflation
- Kaldor (1976): imported comodity price-price-wage-price spiral in early/mid 1970s, associated with recession (buffer stocks to dampen inflation)

Figure 3: Marglin's (1984) reconciliation of real wage resistance and the principle of effective demand



Marglin's (1984) hybrid model

- Marxian and Kaldorian/Robinsonian features
- Overdetermined model
- Wage inflation depends positively on deviation of wage share from workers' target, price inflation on deviation of rate of profit from firms' target
- Distribution equilibrium at p^=w^: neither workers attain their target wage share nor can capitalists realise their investment plans

Figure 4: An increase in imported energy prices in Marglin's (1984) model



Effects of an increase in (imported) energy prices:

- Harcourt (2006, Chpt. 6): application to post-WWII growth episodes
- Lower animal spirits (or export surplus) dampen excess demand in the goods market
- Higher imported energy prices increase workers' target wage share
- Case 1: lower accumlation, lower profit rate/share and higher inflation (as shown) → stagflation
- Case 2 (not shown): lower accumlation, lower profit rate/share and lower inflation → disinflationary/ deflationary slowdown/recession

Problems:

- Model assumes permanent normal utilisation
- Increase in workers' target wage share is always contractionary, wage-led demand/growth impossible
- Increase in energy prices has no direct effect on firms' target profit share or rate, indirect effect is negative
- Rising energy prices and rising profit rate/share impossible
- What about inflation expectations?

3. Post-Keynesian theory of inflation II: Kalecki, Rowthorn, Dutt, and modern textbooks

Basic framework (Kalecki 1954)

- Flexible prices only in the primary sector → changes in demand trigger changes in prices
- Mark-up pricing on unit variable costs in industry and services → changes in demand trigger changes in capacity utilisation, which is endogenous beyond the short run
- Mark-up is determined by degree of price competition, overhead costs and bargaining power of trade unions
- Profit share (including overheads) and wage share of direct labour are detemined by: Mark-up, ratio of unit raw material costs to unit direct labour costs (ratio z), and sectorial composition

Basic Kaleckian open economy model (Hein/Vogel 2008)

- Raw materials are imported, output competes in international markets
- Domestic distributon depends on: Mark-up and ratio between unit imported raw material costs and unit wage costs (ratio z), i.e. on nominal exchange rate, foreign price (inflation) and domestic wage (inflation)
- Real devaluation (falling nominal wages, rising foreign prices, nominal devaluation) raise domestic profit share even with a constant mark-up

Post-Keynesian/Kaleckian modelling frameworks

1. Dutt (1987), Blecker/Setterfield (2019), Lavoie (1992, 2014, 2022)

- Dutt (1992), Cassetti (2002, 2003), Palley (2007), Rochon/Setterfield (2007), Setterfield (2007, 2009, 2022), ...
- > No or incomplete 'indexation' in wage inflation and no or incomplete pass-through in price inflation
- > Inconsistent claims generate constant inflation/deflation and distribution at any rate of employment, no inflation barrier
- Consistent claims generate zero inflation

2. Rowthorn (1977), Hein/Stockhammer (2011), Hein (2023)

- Arestis/Sawyer (2005), Hein/Stockhammer (2010), Lavoie (2006), Sawyer (2002), Stockhammer (2008), ...
- > Adaptive inflation expectations of workers in wage inflation equation, complete or incomplete pass-through in price inflation
- > Inconsistent claims generate unexpected (dis-)inflation and changes in distribution at any rate of employment deviating from the inflation barrier (NAIRU, SIRE)

'... there is a NAIRU at any point in time, but it is neither exogenous nor is it a strong attractor for actual unemployment.' (Stockhammer 2008, p. 500-501)

> Only consistent claims generate constant rate of inflation and constant income distribution

> Consistent claims equilibrium is endogenous to aggregate demand and economic policies (endogenous) aspirations, labour market persistence, capital stock effects, real interest rate, tax rate and real exchange rate effects on targets, ...) 10

Figure 5: Conflicting claims, distribution and inflation in the Dutt, Blecker/Setterfield and Lavoie framework



- Workers' target wage share (Ω^T_W) depends on structure of the labour market and the employment rate (e)
- Firms' target profit/wage share (Ω^{T}_{F}) given by constant mark-up
- Wage inflation (w[^]) and price inflation (p[^]) with incomplete indexation:

(8)
$$\hat{\mathbf{w}}_{t} = \boldsymbol{\varphi}_{1} \left(\boldsymbol{\Omega}_{W}^{T} - \boldsymbol{\Omega}_{t-1} \right) + \boldsymbol{\varphi}_{2} \hat{\mathbf{p}}_{t-1}, \quad \boldsymbol{\varphi}_{1} > 0, 1 \ge \boldsymbol{\varphi}_{2} \ge 0,$$

(9)
$$\hat{\mathbf{p}}_{t} = \pi_{1} \left(\Omega_{t-1} - \Omega_{F}^{T} \right) + \pi_{2} \hat{\mathbf{w}}_{t}, \quad \pi_{1} > 0, 1 \ge \pi_{2} \ge 0.$$

- Stable upwards sloping Phillips curve
- Stable profit-squeeze distribution curve ($\Omega(e)$)
- Wage-led demand and employment regime (e(Ω))
 (with constant labour productivity)
- Stable equilibrium

Problems:

• Why should strong workers targeting a higher wage share not fully include adaptive inflation expectations in wage inflation?

Figure 6: Conflicting claims, changes in distribution and unexpected inflation in the Rowthorn and Hein/Stockhammer framework



- Workers' target wage share (Ω^T_W) depends on structure of the labour market and the employment rate (e)
- Firms' target profit/wage share (Ω^{T}_{F}) given by constant mark-up
- Wage inflation (w[^]) with adaptive expectations/full indexation, price inflation (p[^]) with only partial pass-through of excess wage inflation

(14)
$$\hat{\mathbf{w}}_{t} = \omega \left(\mathbf{e}_{t} - \mathbf{e}^{N} \right) + \hat{\mathbf{p}}_{t-1}, \qquad \omega \ge 0.$$

(15) $\hat{\mathbf{p}}_{t} = \vartheta \omega \left(\mathbf{e}_{t} - \mathbf{e}^{N} \right) + \hat{\mathbf{p}}_{t-1}, \qquad 1 \ge \vartheta \ge 0.$

- Excess wage inflation exceeds unexpected price inflation
- Profit-squeeze distribution curve
- Wage-led employment curve with real debt effects
- Around the stable inflation rate of employment (SIRE = e^N)
- No stable but shifting Phillips curve, positive or negative unexpected inflation
- No stable but rotating profit-squeeze distribution curve
- Wage-led employment curve is shifting outwards because of real debt effect (normal case, debt burdened regime)
- Unstable equilibrium: SIRE/NAIRU is 'not a strong attractor' (Sawyer 2002)

4. Effects of an imported energy price increase and policy implications in the Rowthorn and Hein/Stockhammer approach

Four step qualitative graphical description :

- 1. Increase in imported energy prices and hence in real exchange rate starting from distribution equilibrium
- 2. Firms take advantage of supply constraints and increase mark-ups
- 3. Inflation targeting central bank drive long-term real interest rate up
- 4. Post-Keynesian alternative policy approach

Figure 7.1: An increase in imported energy prices in the Rowthorn and Hein/Stockhammer framework



Open economy

- Workers' distribution target does not change, firms' target profit/wage share is affected by real exchange rate
- Real exchange is affected by unexpected inflation
- Profit squeeze distribution curve rotating towards workers' target
- Wage-led employment curve with positive unexpected inflation/real debt effects and positive effects of real exchange rate via net exports

Increase in imported energy prices and hence real exchange rate (orange)

- Iower target wage share curve of firms
- Iower profit-squeeze distribution curve
- shift of wage-led employment curve to the right (higher real exchange rate, lower real debt)
- Unexpected inflation Phillips curve shifts upwards

New unstable temporary position (no. 2)

- Iower wage share (with constant mark-up)
- Iower employment rate
- ➢ lower SIRE (e^N)
- higher unexpected price inflation

Counter-tendencies towards initial position

- Unexpected inflation lowers real exchange rate and increases firms' target wage share, hence the SIRE, and the distribution curve.
- Employment curve is positvely affected by unexpected inflation, but negatively by falling real exchange rate.

Figure 7.2: Firms take advantage of supply constraints and raise the mark-up in the Rowthorn and Hein/Stockhammer framework



Higher mark-up due to bottlenecks and supply constraints (green)

- Self-correcting tendencies are undermined
- Firms' target wage share curve shifts down
- Profit-squeeze distribution curve shifts down
- Wage-led employment curve shifts to the left (loss of international price competitiveness)
- Upwards shift of unexpected inflation Phillips curve

New unstable temporary position (no. 3)

- Lower wage share
- Lower employment rate
- Lower SIRE
- Higher unexpected inflation rate

Counter tendencies

- Unexpected inflation lowers real exchange rate and increases firms' target wage share, hence the SIRE, and the distribution curve.
- Employment curve is positvely affected by unexpected inflation, but negatively by falling real exchange rate.

Figure 7.3: An increase in the long-term real interest rate in the Rowthorn and Hein/Stockhammer framework



Inflation targeting central bank policies drive up long-term real interest rates (blue)

- Undermines self-correcting tendencies
- Firms' target wage share shifts down (interest cost channel)
- Profit squeeze distribution curve shifts down
- Wage-led employment curve shifts to the left (normal case)
- Phillips curve for unexpected inflation shifts up

Possible new unstable temporary 'equilibrium' (no. 4)

- Lower wage share
- Lower employment rate
- Lower SIRE
- Lower unexpected inflation rate
- Instability because of rising wage share in wage-led economy, real debt effects of unexpected inflation, which also lowers real exchange rate, raises firms' target wage share curve, dampens unexpected inflation, but shifts distribution curve up, ...
- Further interest hikes required to stabilize inflation; effect on e has to be stronger than on e^N.
- Central bank contributes to stagflation

Figure 7.4: An alternative policy approach in the Rowthorn and Hein/Stockhammer





PK alternative policy approach (red, no. 5)

- Share the burden of a higher real exchange rate and stabilise domestic distribution: constant wage share with constant labour productivity means lower real wages – and lower real profits
- Induce firms' target wage share to return to initial equilibrium by lowering the aggregate mark-up according to the rise in z-ratio
- Central bank policies targeting low long-term real interest rate, taxing extra profits, price caps, competition policies, reducing bottlenecks via public investment
- Align workers' target wage share with the feasible wage share given by firms' pricing, i.e. make make SIRE a corridor and Phillips curve horizontal in a relevant range → Wage bargaining coordination
- Follow wage norm in the medium to long run: nominal wage rate should rise at target rate of inflation plus trend productivity growth for the economy as a whole
- Target rate of inflation should be in line with inflation rate of main trading partners, to contribute to constant nominal and real exchange rates
 international coordination
- Fiscal policy demand management can shift employment curve to maximum employment rate consistent with constant inflation at the target rate,
- Tax and social policies should reduce inequality and support lower income households carrying the burden

5. Conclusions

- Broad PK agreement: the essence of inflation is distribution conflict (Braga/Serrano 2023) with different potential triggers
- Inflation is always and everywhere a conflict phenomenon!
- Istinction between demand-pull, profit-claims-push, wage-cost-push, tax-push, imported goods-push, currency devaluation-push, ... inflation can only relate to the trigger but not to the essence of inflation
- Broad PK agreement: pass-through of wage (dis-)inflation is incomplete (with few exceptions: Hein 2006, Lavoie 2006, Setterfield 2009, Herr 2014) and nominal wage bargaining has not only inflation but also distribution effects
- Broad PK agreement on required policy responses (I hope ...): moderate distribution conflict by incomes policies aligning wage share targets of workers and firms, complemented by low interest rate monetary policies, functional finance fiscal policy & re-distribution policies, international coordination

- Different views on the role of inflation expectations for wage inflation (adaptive expectations vs. no/incomplete 'indexation')
- Different views on stable price Phillips curve and on existence of an (*endogenous and unstable!!!*) inflation barrier (SIRE, NAIRU)
- Distinguish different inflation regimes (Rowthorn 1977, Bastian/Setterfield 2015, 2020, Charles et al. 2021)?
- Model presentations have relied on profit-squeeze distribution curves and wage-led demand and employment regimes
- Frameworks is open for analysing wage-squeeze distribution and profit-led demand and employment curves, too, and thus different combinations and regimes

- Modelling distribution conflict, (unexpected) inflation and real exchange rate
- Exogenous real exchange rate?

>Endogenous real exchange rate with respect to domestic inflation?

- Real exchange rate targeting by means of nominal exchange rate policies (Blecker 2011, Bastian/Setterfield 2020, Lavoie 2022: ch: 8)?
- Limitations of aggregate models for analysing energy/commditiy price shocks
- Sectoral approaches and models: Kaldor (1976), Wildauer et al. (2023, but only for closed economy),
- Finally: Correlation of rising inflation and rising profit shares may be due to:

➢rising ratio of material to wage costs, as shown,

➢rising mark-ups, as shown,

>changes in the firm and sectoral compositon,

>unit overhead labour /fixed cost digression in an economic expansion ...

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Chapter 5: Post-Keynesian macroeconomic models with conflict inflation

Chapter 6: A post-Keynesian co-ordinated macroeconomic polics mix



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