

# Unemployment in Post Keynesian macroeconomics

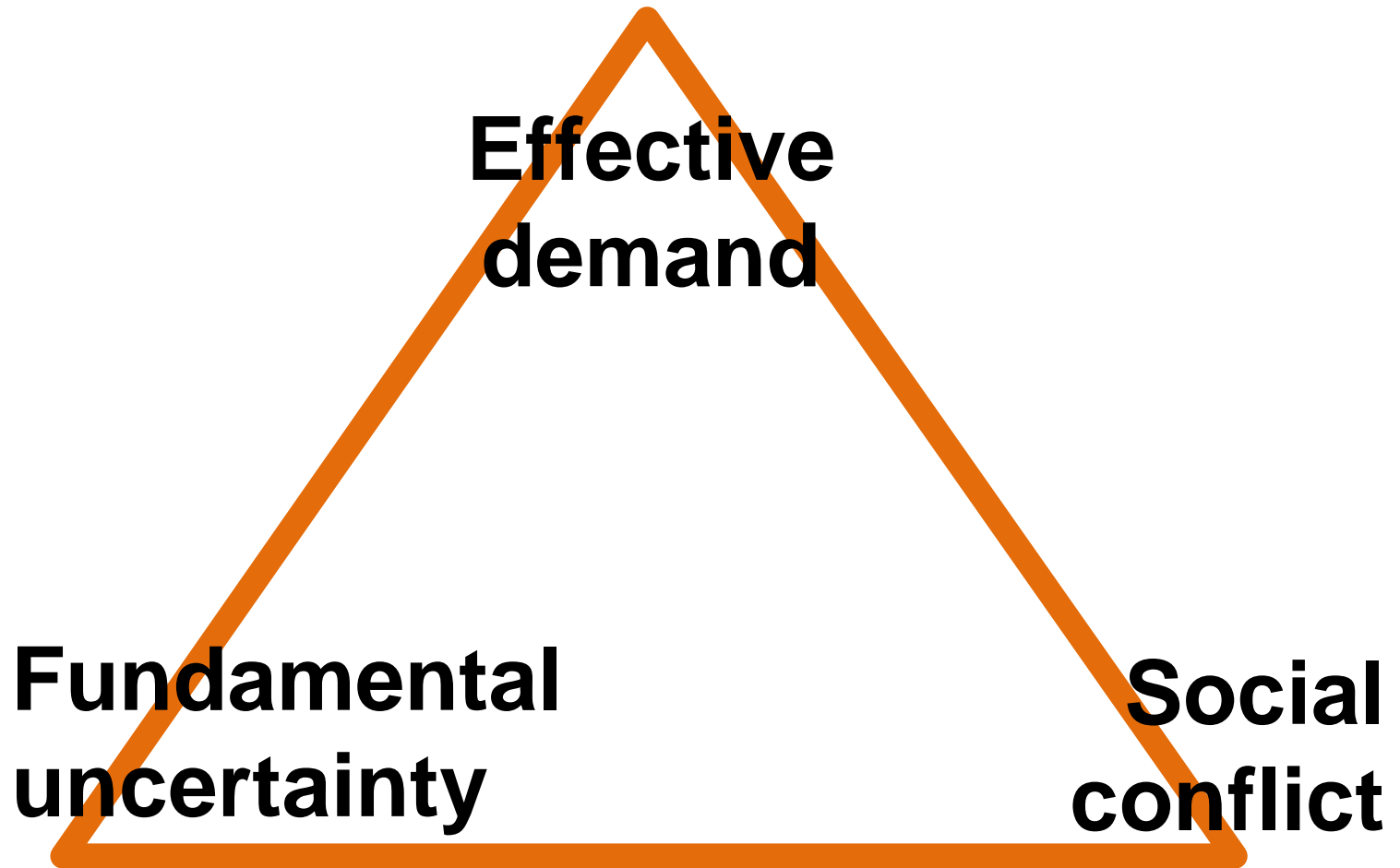
*FMM Summer School, Aug 2013*

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Kingston University*

# Overview

- PK macro of unemployment
  - Model with effective demand und social conflict
  - Illustrate difference between Post Keynesian and New Keynesian („mainstream“) and Marxian theories of unemployment
  - Using the NAIRU model
- 1. Theories. basics
- 2. Theory: a PK NAIRU model
  - A general NAIRU model
  - different closures: demand, NAIRU determination
- 3. The debate on European unemployment
  - Mainstream: labor market institutions(LMI) vs Keynesian explanation: demand deficiency (monetary pol, accumulation)
  - Stockhammer and Klar (2011)
- 4. Conclusion & other issues

# Post Keynesian Economics



# Unemployment and wages in different economic paradigms

	Unemployment	Wages (distribution)
Neoclassical	Imperfection in LR and SR (unempl as disequilibrium)	MPL (technology)
New Keynesian	Demand in SR, imperfections in LR (unempl in equilibrium)	Technology +/- rents b/e of imperfections
Marxian	Reserve army of the unemployed – necessary to maintain work discipline	Degree of exploitation, class struggle
Keynesian	Lack of demand	MPL, but determined by demand
Post-Keynesian/ Kaleckian	Lack of demand	Wage share determined by degree of 'monopoly power'

- Keynes (GT; Lavoie 2003)
  - Assumes perfect competition (flex prices)
  - Eff D (animal spirits)  $\rightarrow Y^{IS} \rightarrow \text{Empl} (E^*)$
  - $W/P = \text{MPL} @ E^*$
- Kalecki
  - Assumes mark up pricing
  - Eff D (...)  $\rightarrow Y^{IS} \rightarrow \text{Empl} (E^*)$
  - $W \rightarrow P$
  - $W/P \leftarrow$  mark up (for a given productivity; MPL assumed constant)

# “mainstream” (?!)

Textbooks	Neoclassical = Walrasian
Macroeconomics (academic)	NK (NAIRU)  <i>≠ DSGE</i>
Economic policy	NAIRU story (lab mkt inflexibility)  <i>≠ Neoliberalism</i>

# A digression

		Coordination failure / stability	
		<i>Stable/efficient</i>	<i>Unstable/dysfunctional</i>
Distributional conflict	<i>Harmony</i>	Neoclassical (NC) econ	New Keynesian (NK) econ (in SR)
	<i>Conflict</i>	Marxian (Mx) econ	Post-Keynesian (PK) econ

# conflict

- Effect on demand (wage-led vs profit-led)
- Effect on inflation (wage and price inflation)
- Effect on economic policy (Kalecki 1943)
- Effect on labour productivity



# E.O.Wright (2000) Working-class power, capitalist-class interest and class compromise, AJS

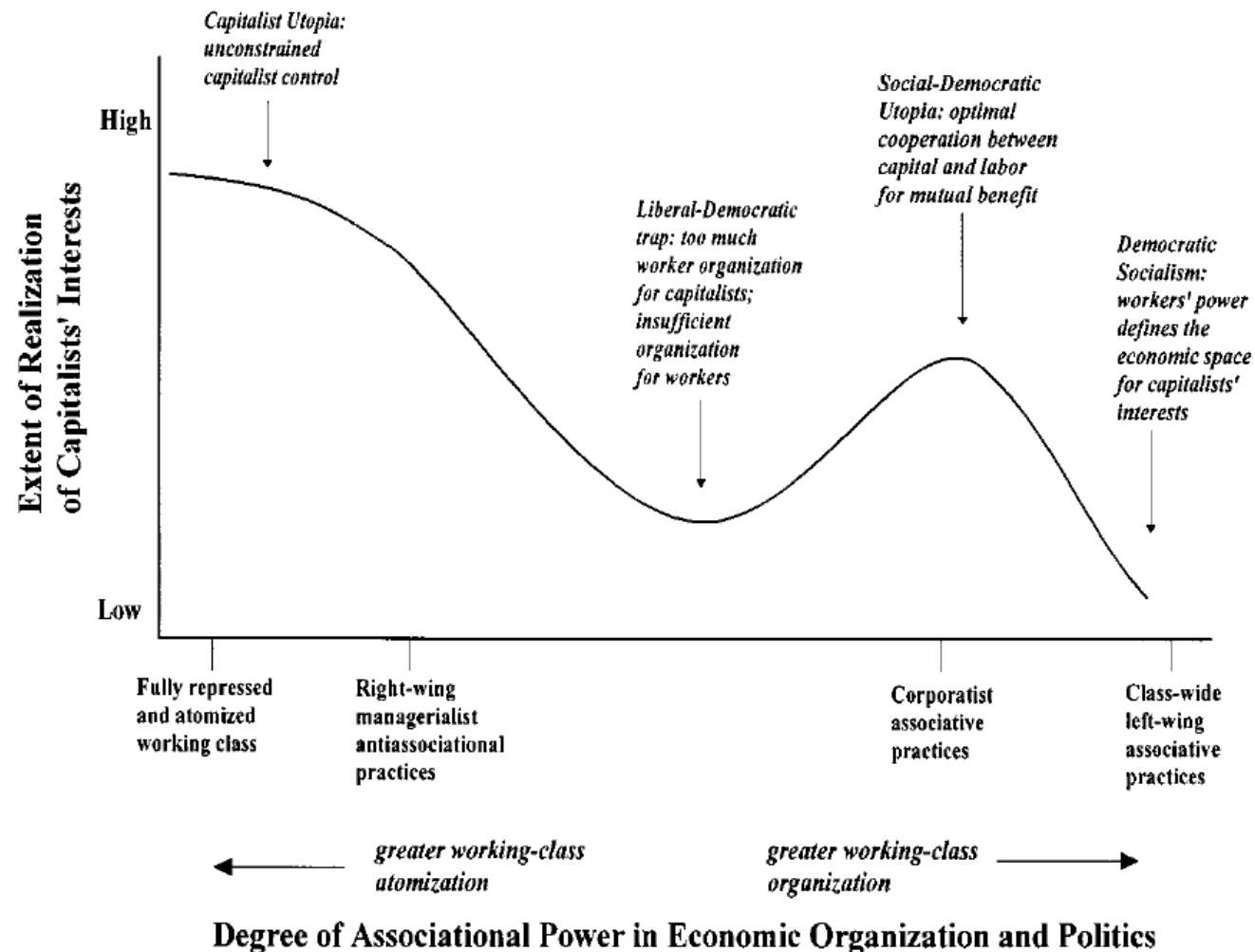


FIG. 10.—Expanded model of working-class associational power and capitalists' interests.

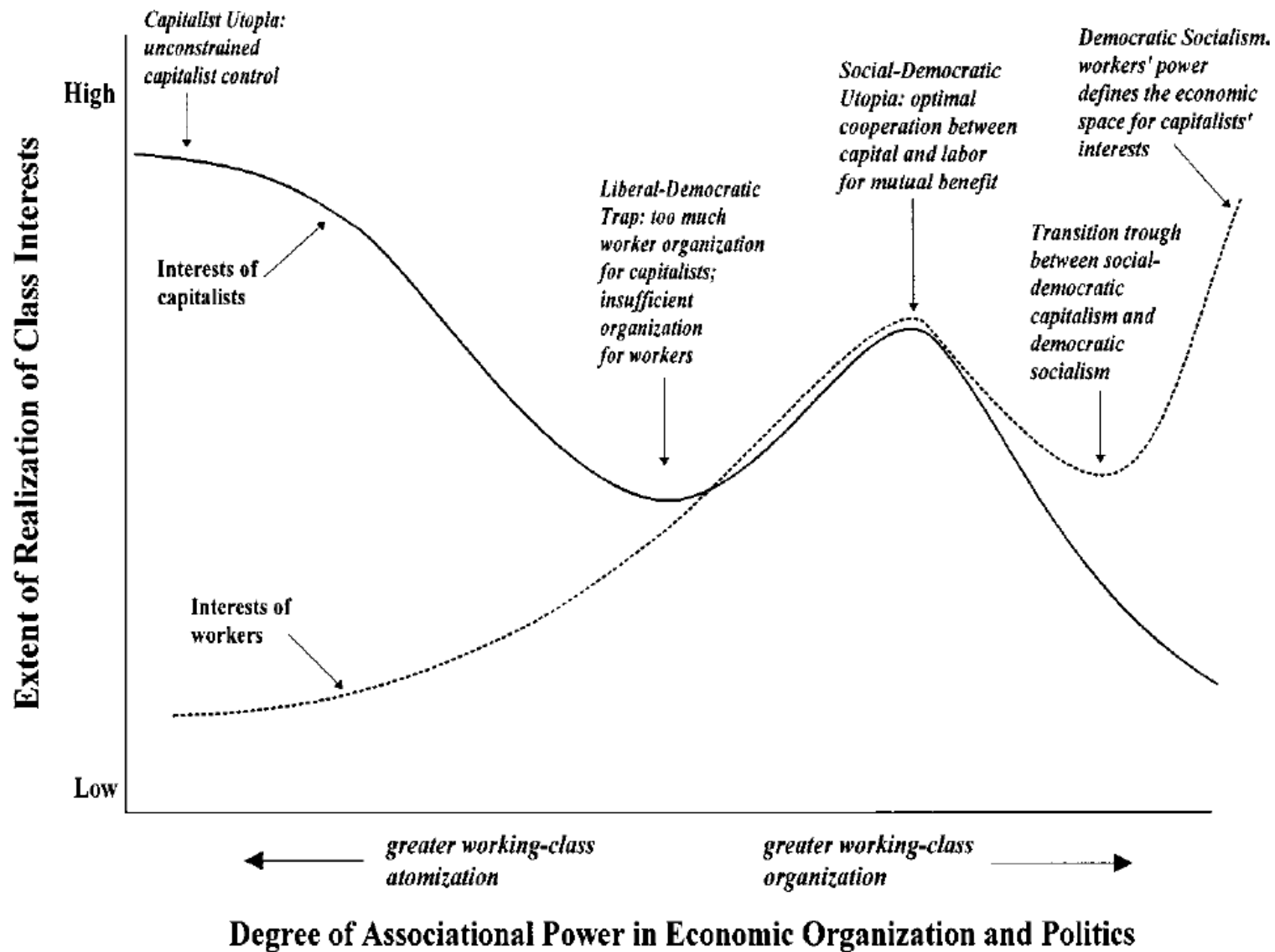


FIG. 11.—Working-class associational power, working-class interests, and capitalists' interests.

# *Unemployment in Post Keynesian macroeconomics*

## I. The NAIRU model and different theories of unemployment

# Outline

- NAIRU model
  - NAIRU *model* and NAIRU *story*
  - NAIRU model: WBC-, PS-curves -> Phillips-Curve
  - Demand closure
  - NAIRU closure: exogenous or endogenous?
- Monetarist NAIRU?
- A New Keynesian (NNKS) NAIRU
- A Post Keynesian (PK) NAIRU
- a Marxist quasi-NAIRU

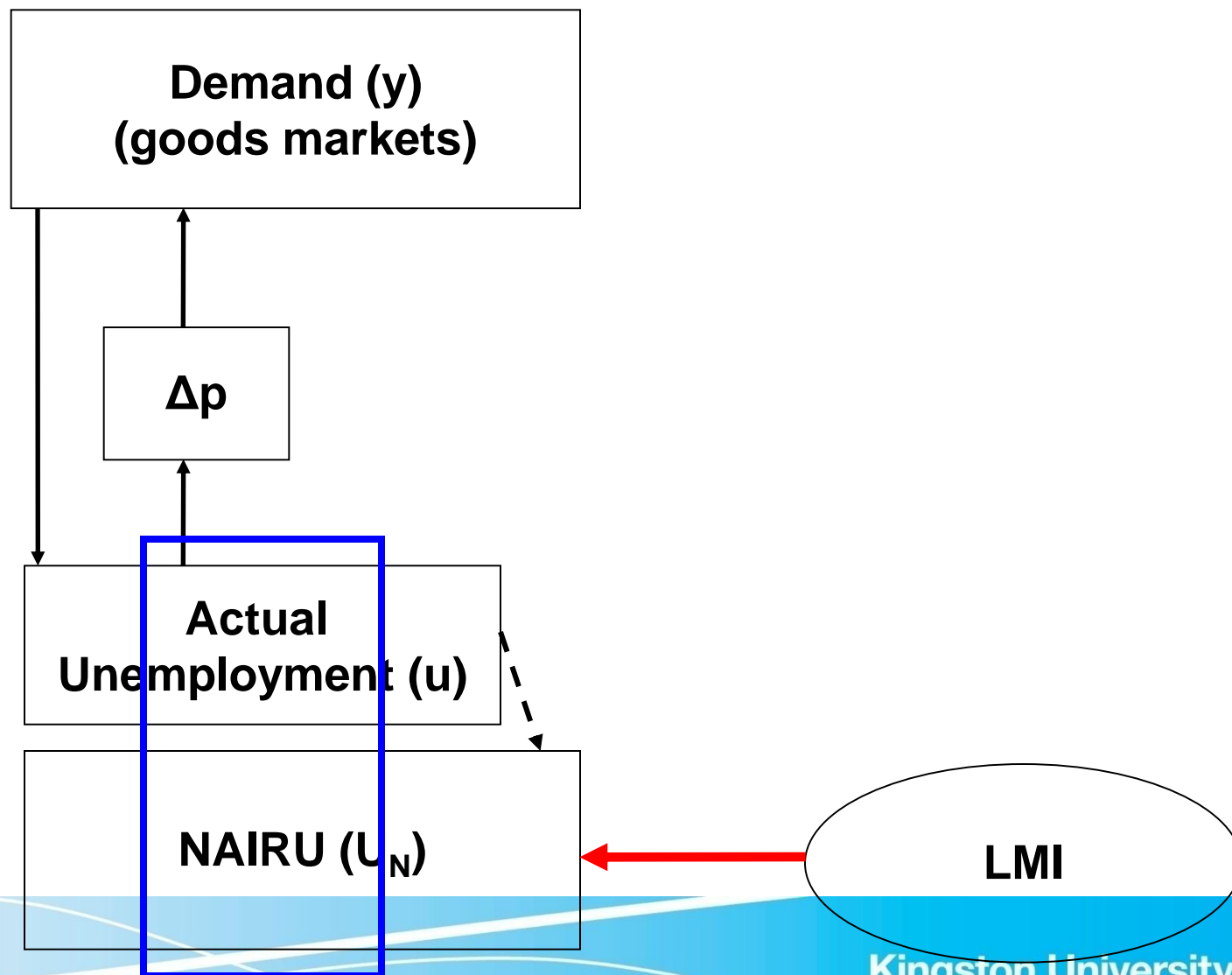
# NAIRU theory—everything clear?

- “the NAIRU is approximately a synonym for the natural rate of unemployment” (Ball and Mankiw 2002, 115)
- “The NAIRU model was developed by Post Keynesian economists.” (de Brunhoff 2005, 216)
- “provide a Post Keynesian explanation of persistent high unemployment rates (...) so that the reader can comprehend why this explanation differs from that of NAIRU proponents” (Davidson 1998, 818)
- “Marx and Kalecki ... share a common conclusion with natural rate proponents, in that they would all agree that positive unemployment rates are the outgrowth of class struggle over distribution of income ” (Pollin 1998, 5f)

# NAIRU *theory* vs NAIRU *story*

- NAIRU *theory*: theory of the relation between inflation and unemployment
  - NAIRU *story*: the „mainstream“ NAIRU explanation of European unemployment
    - Actual unemployment is determined by the NAIRU
    - The NAIRU is determined exogenously by labor market institutions (LMI)
    - The rise of unemployment in Europe is due to changes in LMI („overgenerous welfare states“)
- => Cut unemployment benefits ... !

# Standard NAIRU story

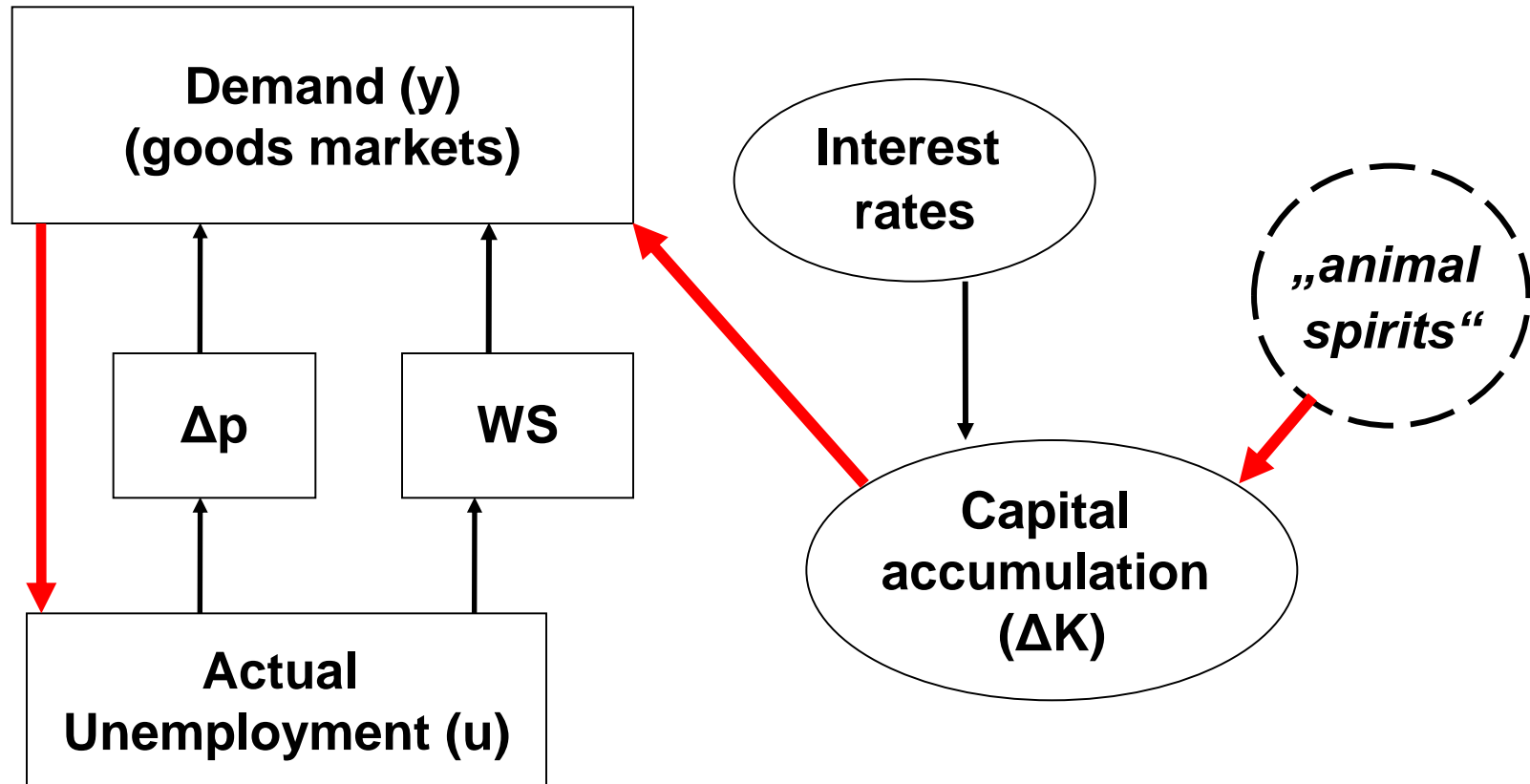


# Keynes

- “The theory can be summed up by saying given the psychology of the public, the level of output and employment as a whole depends on the amount of investment.”
- Keynes 1937 (QJE), 221



# Keynes' approach

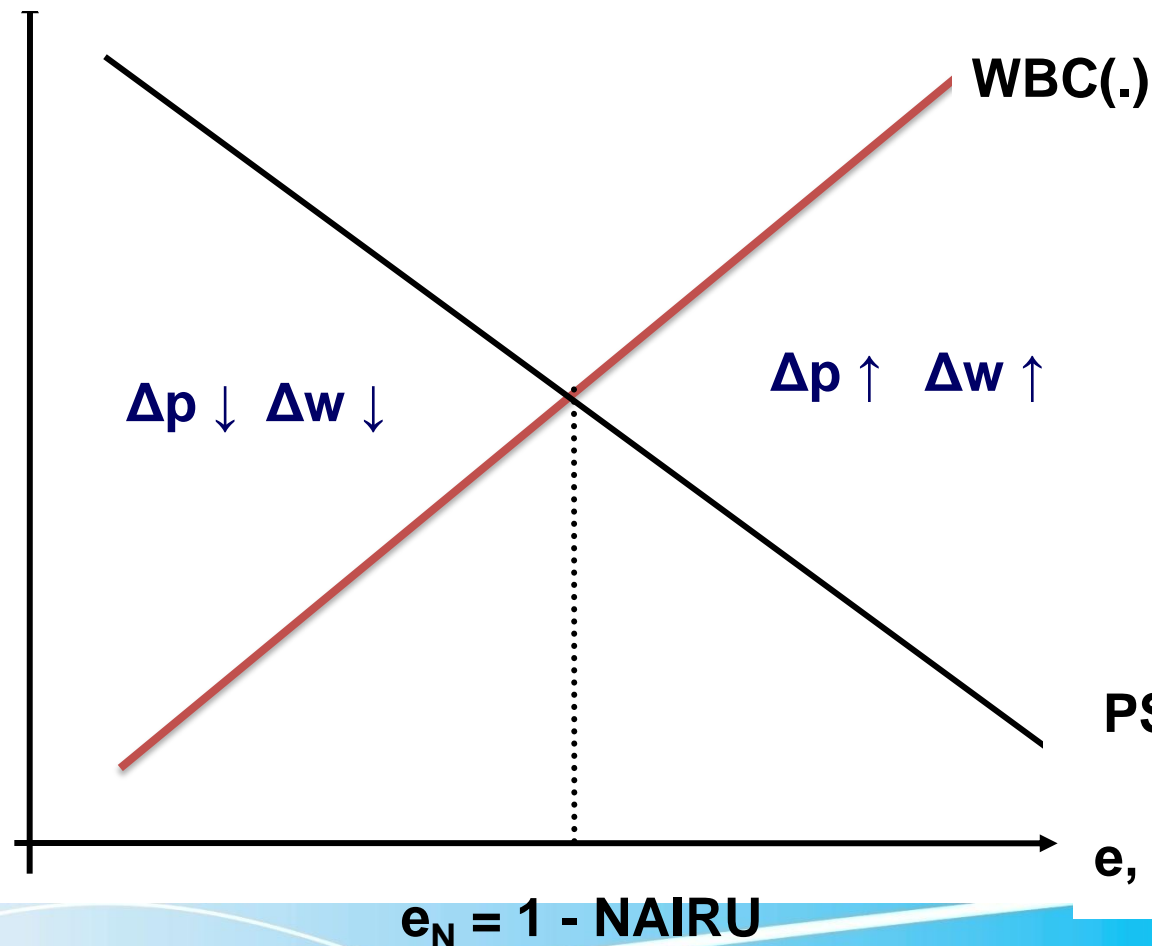


# NAIRU: wage bargaining

- Instead of LS there is a wage bargaining curve (WBC)
  - Collective bargaining: bargaining position of unions will depend on unemployment
  - Efficiency wages: at higher employment levels, higher wages are necessary to elicit the same labor effort
- NAIRU unemployment = involuntary unemployment

# NAIRU model: labour market

W/P



Note1 : an increase in unemployment benefits, will shift the WBC, whereas it would cut off the LS curve

Note2: what happens if we're off-equilibrium?

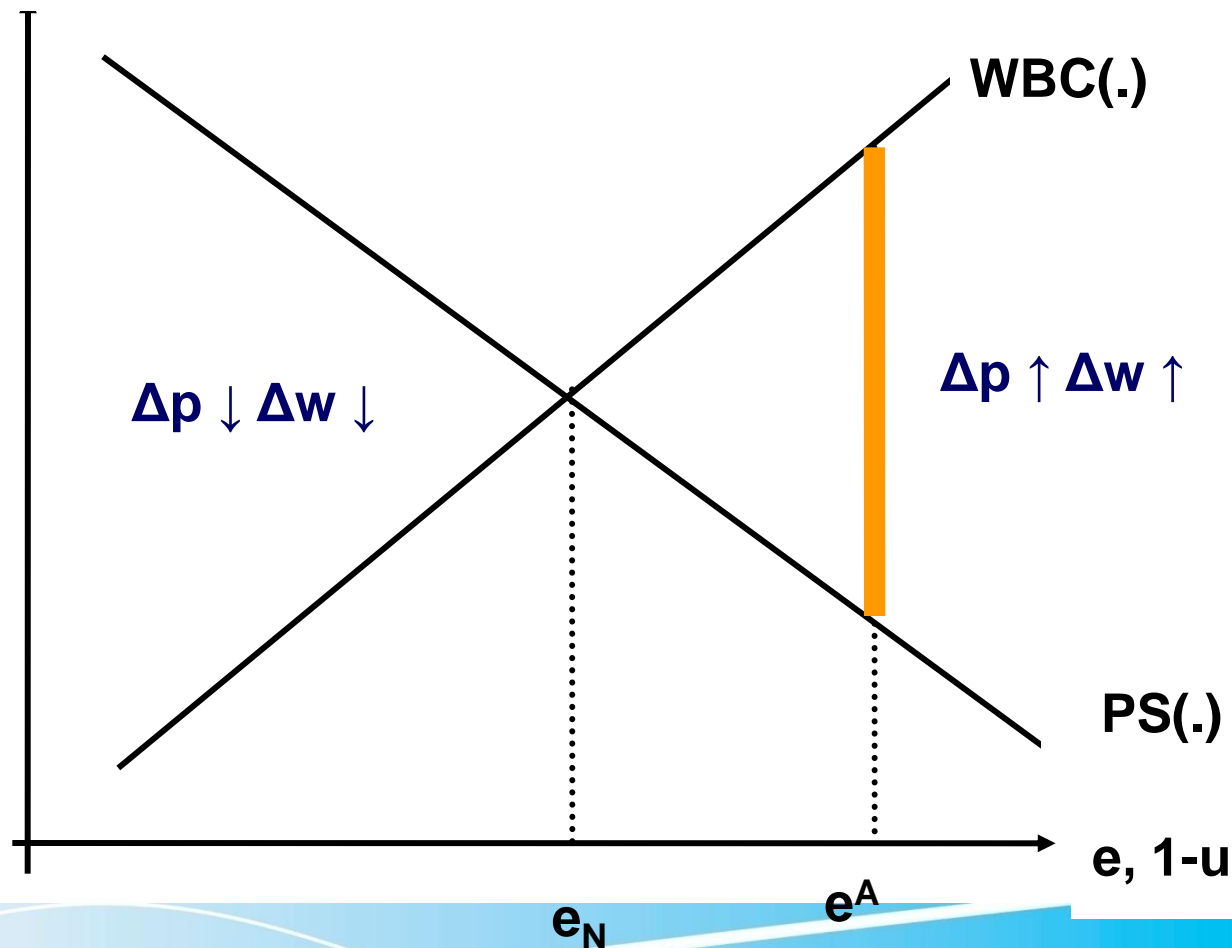
Change in inflation

$PS(.)$  (not employment!)

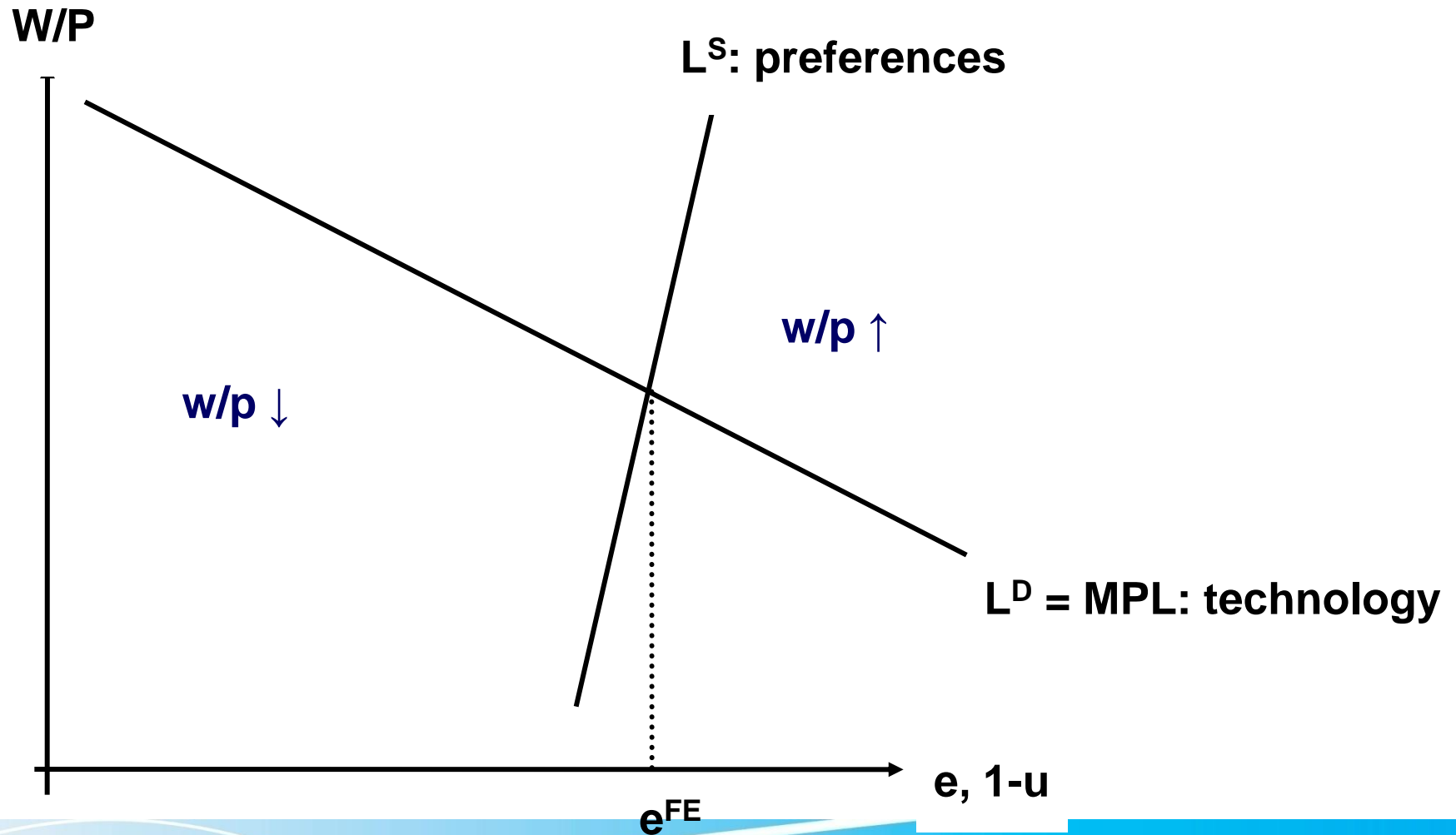
Adjustment depends on how the goods market reacts!

# NAIRU model: Actual employment ( $e^A \leftarrow Y^{IS}$ )

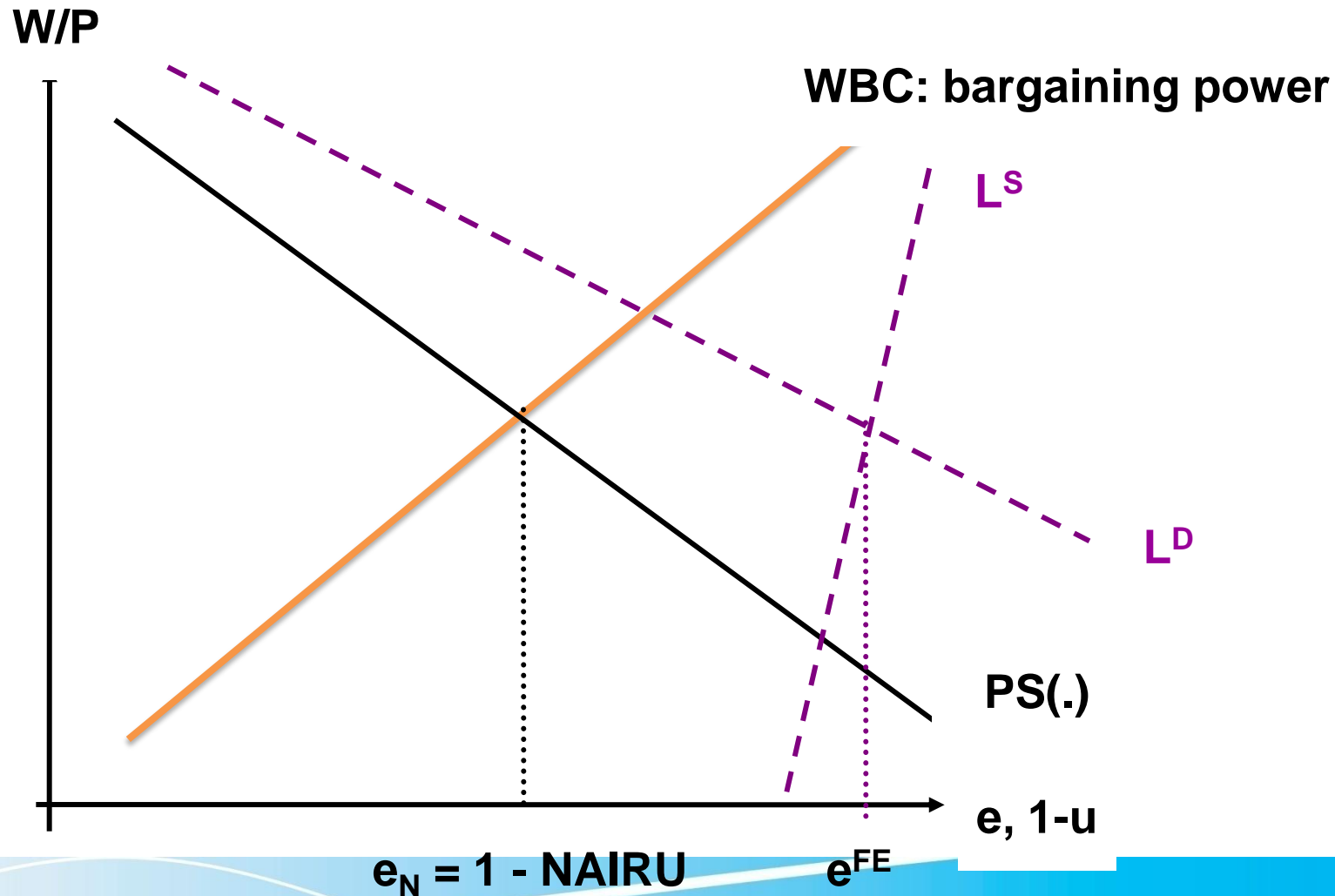
W/P



# Walrasian labour market



# notional labor demand in NAIRU and Walrasian model



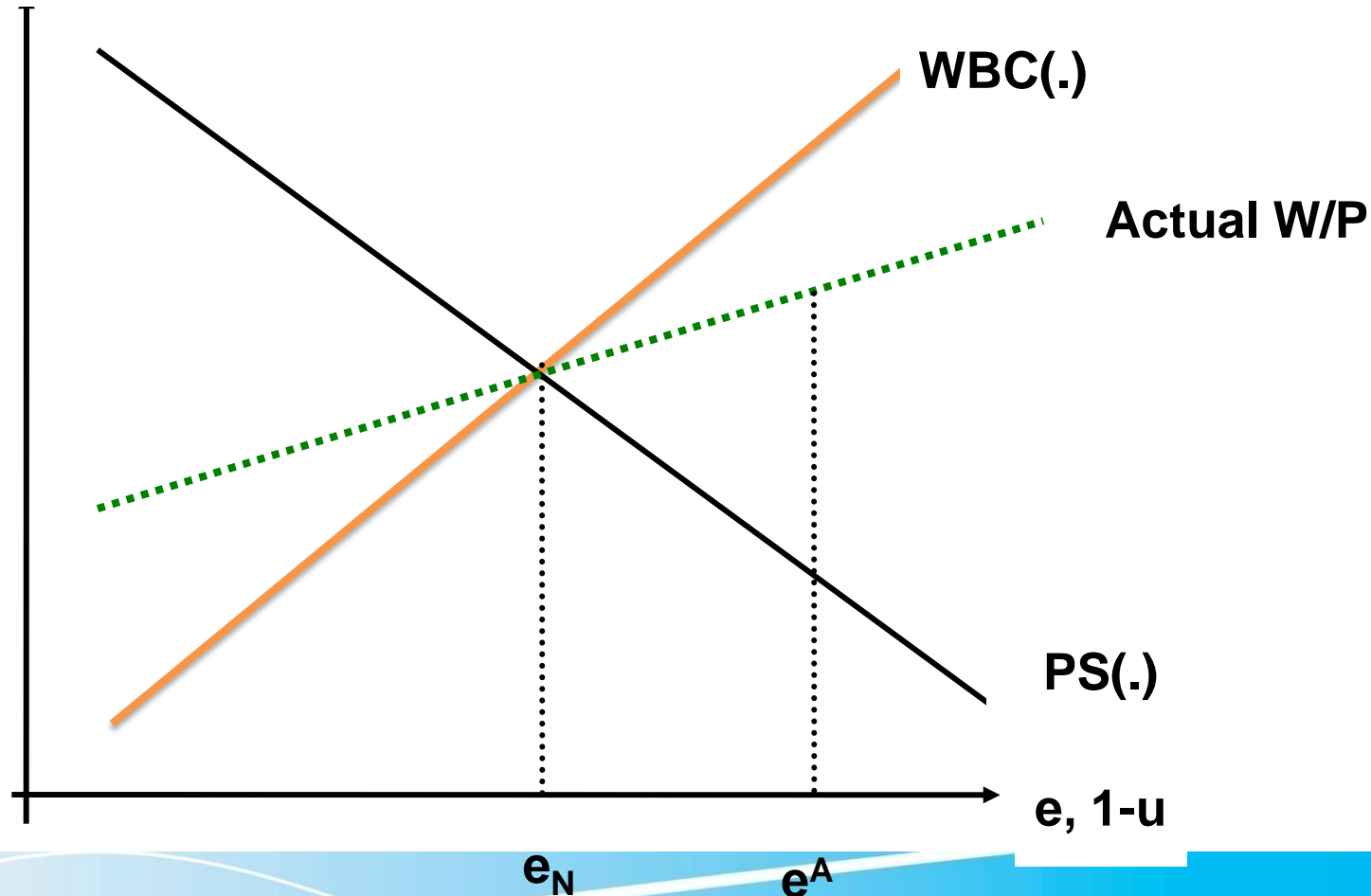
# NAIRU model: labour market

- *Assume const labor productivity*
  - Wage claims (WBC):  $(1-\pi)^W = w_0 - w_1 u$
  - Profit claims (PS):  $\pi^R = \pi_0$
  - Actual wage share:  $(1-\pi) = w_0 - w_1 u - w_2 p^U$
  - Actual profit share:  $\pi = \pi_0 - \pi_2 p^U$
  - *Adaptive expectations:*  $p^E = p_{t-1}, p^U = \Delta p$
  - PC:  $\Delta p = (w_0 + \pi_0 - 1)/(\pi_2 + w_2) + w_1/(\pi_2 + w_2) \cdot u(y)$
  - $u = u_N - (\pi_2 + w_2)/w_1 \Delta p$
  - NAIRU:  $u_N = (w_0 + \pi_0 - 1)/w_1$
- Phillips Curve: PC:  $p = p(u, u_N; p_{t-1})$

Note: “inflation”  
here is a wage-  
price spiral

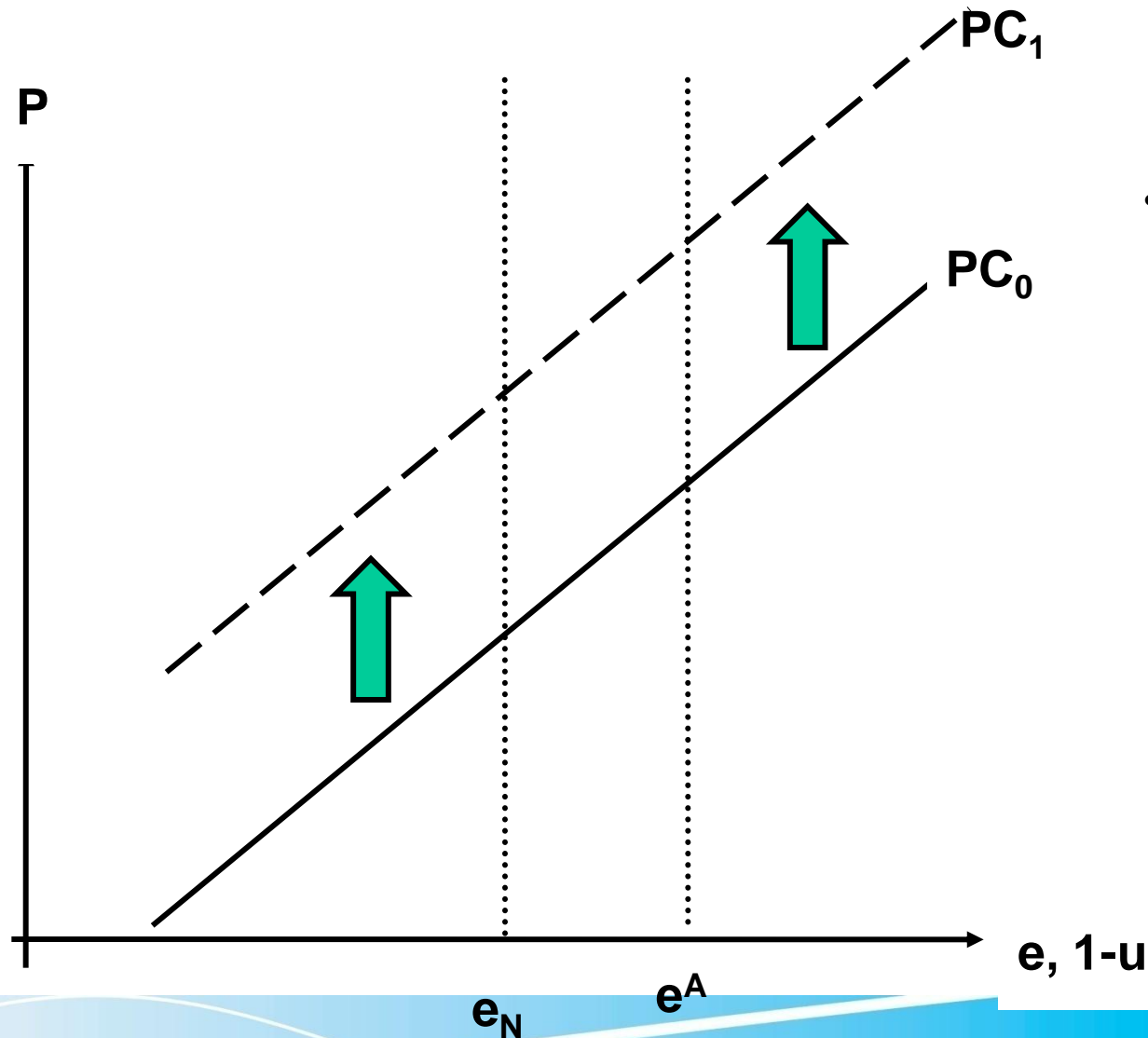
# NAIRU model: actual W/P (or WS)

W/P





**PC:  $p(u, u_N, p_{t-1})$**

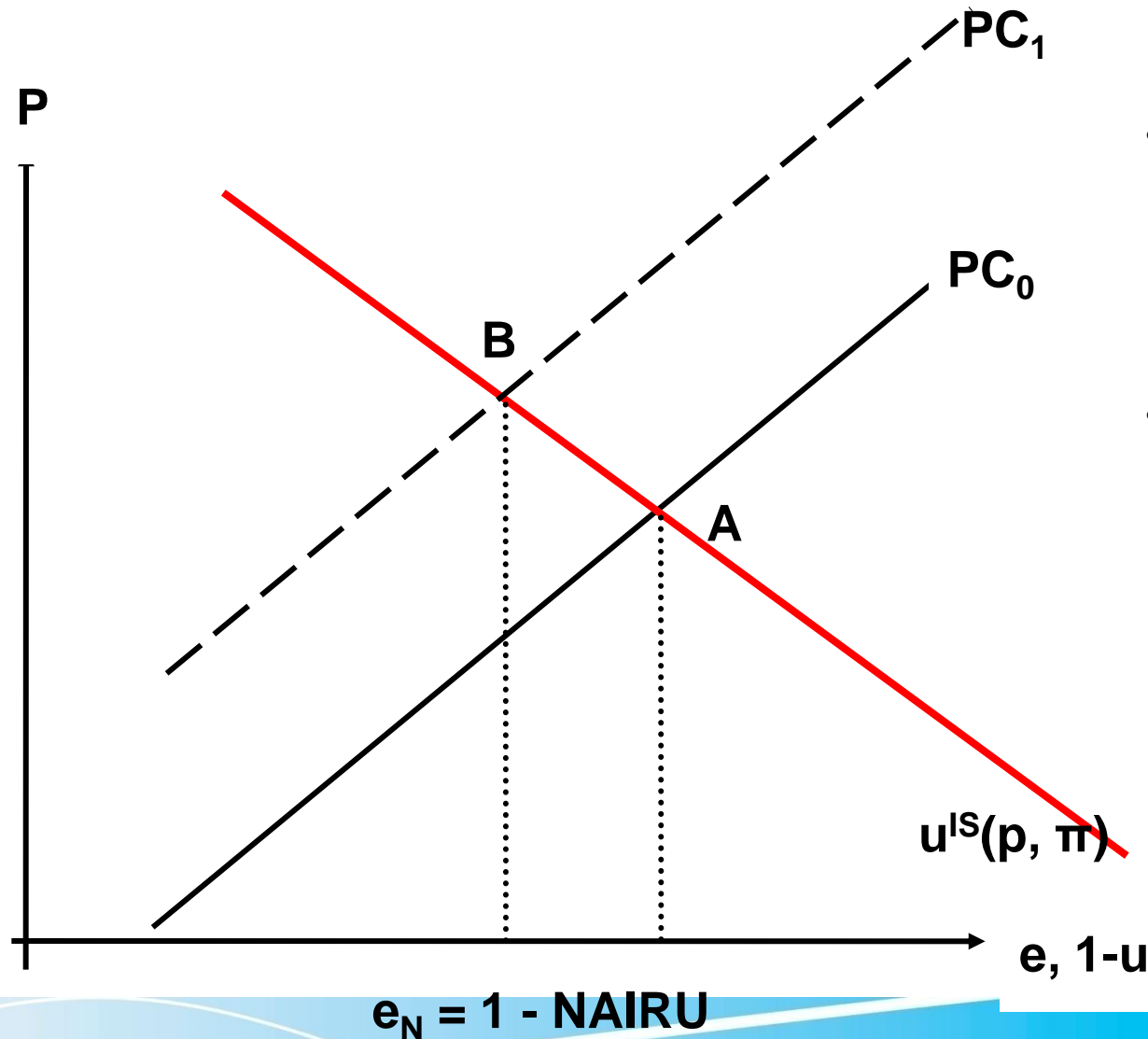


- PC will shift upward if inflation is higher than expected

## NAIRU model: demand side

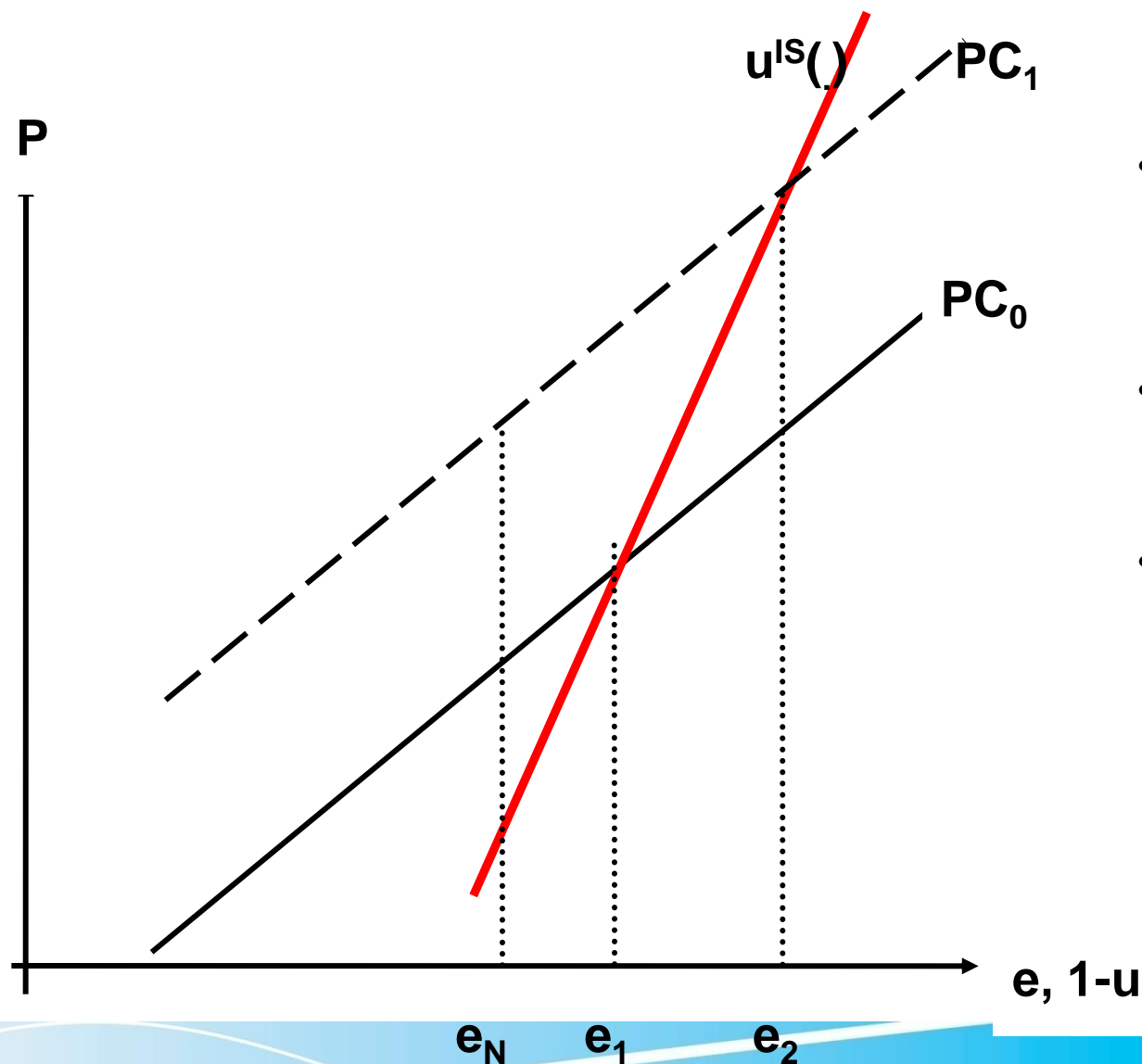
- Demand:  $y = y_0 + y_2 p + y_3 \pi$  [8]
  - $y = y_0 + y_2(\Delta p + p_{t-1}) + y_3 \pi$
- Employment:  $u = n - y$  [7]
- [8] in [7]:  $u^I = u(\Delta p, \pi)$

# IS-curve: $u^{IS} = u(p, \pi)$



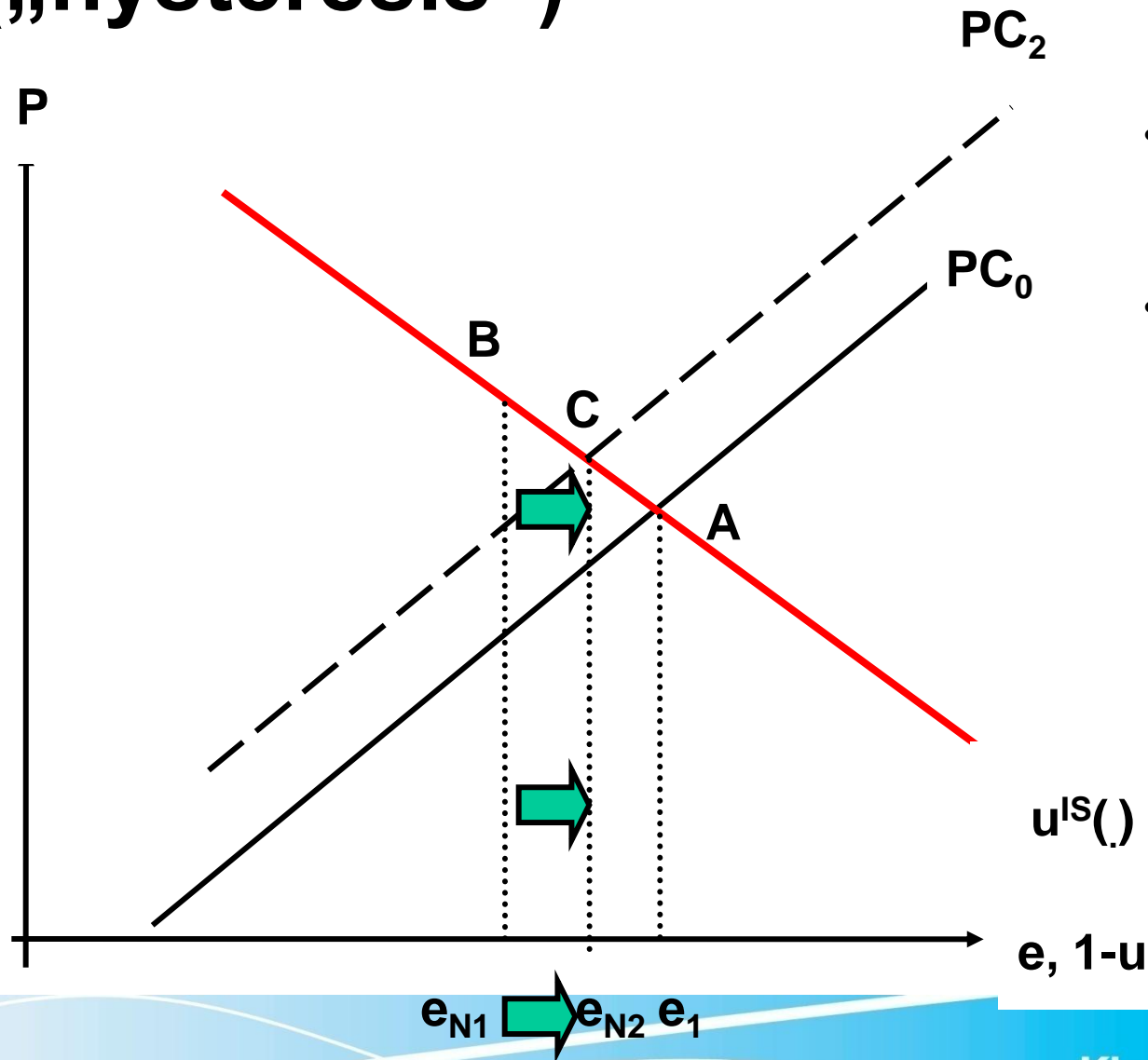
- $u^{IS}$  denotes the employment level given the equilibrium in the goods market
- If the IS curve is downward sloping, we'll get back *towards* the NAIRU

# NAIRU model: IS-curve



- A priori the slope of the curve can be positive or negative
- Negative: (standard) real balance effect
- Positive: real debt effect

# NAIRU model: NAIRU endogeneity („hysteresis“)



- Even if the IS curve is well behaved...
- The NAIRU itself may shift due to the *temporarily* high level of employment

# NAIRU model closures

- What demand function is assumed?  $u^I = u(p, \pi)$ 
  - How does  $\Delta p$  affect demand?
  - How does  $\Delta \pi$  affect demand?
- What does  $u_N$  depend on?
  - Is it exogenous or endogenous?
  - NAIRU:  $\hat{u}_N = \lambda(u - u_N)$ .  $\lambda = 0$ ?
- What are the policy conclusions?

# NK, PK and Mx closures

	<i>Demand closure</i> $y_1 (=dY/dp)$ $y_2 (=dY/dWS)$		<i>NAIRU closure</i>
<i>NK</i>	Negative (b/e of CB?)		exogenous or quasi-exogenous
<i>PK</i>	positive (without CB)	Positive (wage-led D)	endogenous
<i>Mx</i>		Negative (profit-led D)	(endogenous)

# Monetarist NRU $\neq$ NAIRU (?)

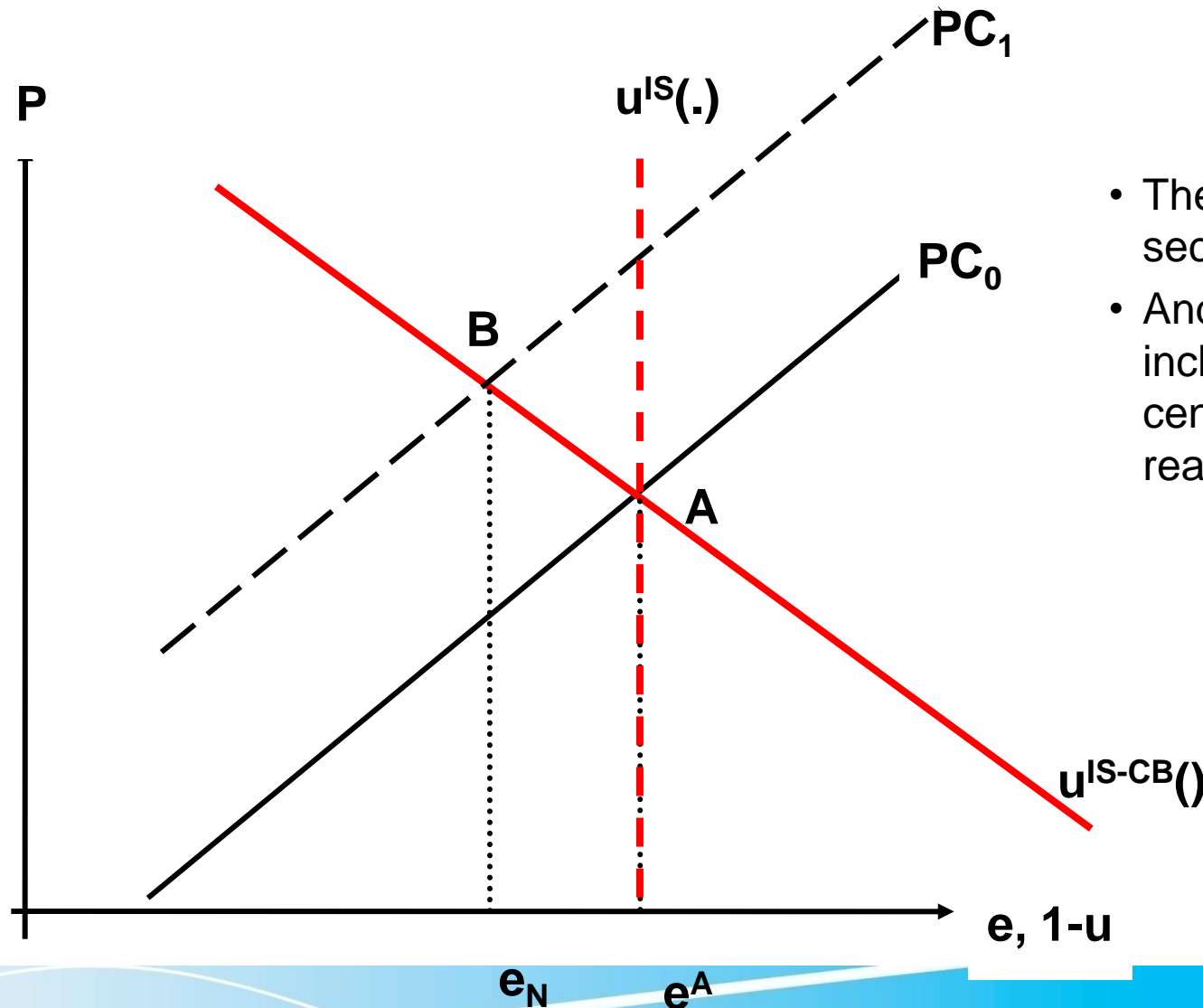
- Demand:  $y = y_0 + y_2(m-p)$ 
  - Real balance effect provides automatic stability
  - No conflict inflation, but misperceptions
- NAIRU:  $u_{NRU} = u(LMI, \text{demographics}); \lambda=0$
- Natural Rate (Friedman) = voluntary unemployment
- ... but policy conclusions of NAIRU story similar to Monetarist policies: cut unemployment benefits
- ...



# New Keynesian NAIRU closures

- Demand closure:  $y^{IS} = y_0 + y_2(i-p)$ ;  $y_1 < 0$ 
  - Exogenous money supply (Layard, Nickell & Jackman 1991)
  - **or**
  - CB reaction function (Taylor Rule)  $i^{CB} = i_0 + i_2(p-t)$ 
    - *No economic automatism!*
  - Only works if inflation is non-trivially positive
    - $y^{IS-CB} = y_0 + y_1(i_0 + i_2(p-t_p) - p)$ ;  $y_1 < 0$ ;  $dy/dp < 0$
- NAIRU closure
  - Hysteresis: different wage elasticities for short-term unemployed and long-term unemployed ( $u^{LT}$ )
  - (if  $u^{LT} = u_{t-1}$ ) effectively a partial adjustment process with endogenous short-run NAIRU and exogenous long-run NAIRU
  - Quasi-exogenous NAIRU

# New Keynesian NAIRU

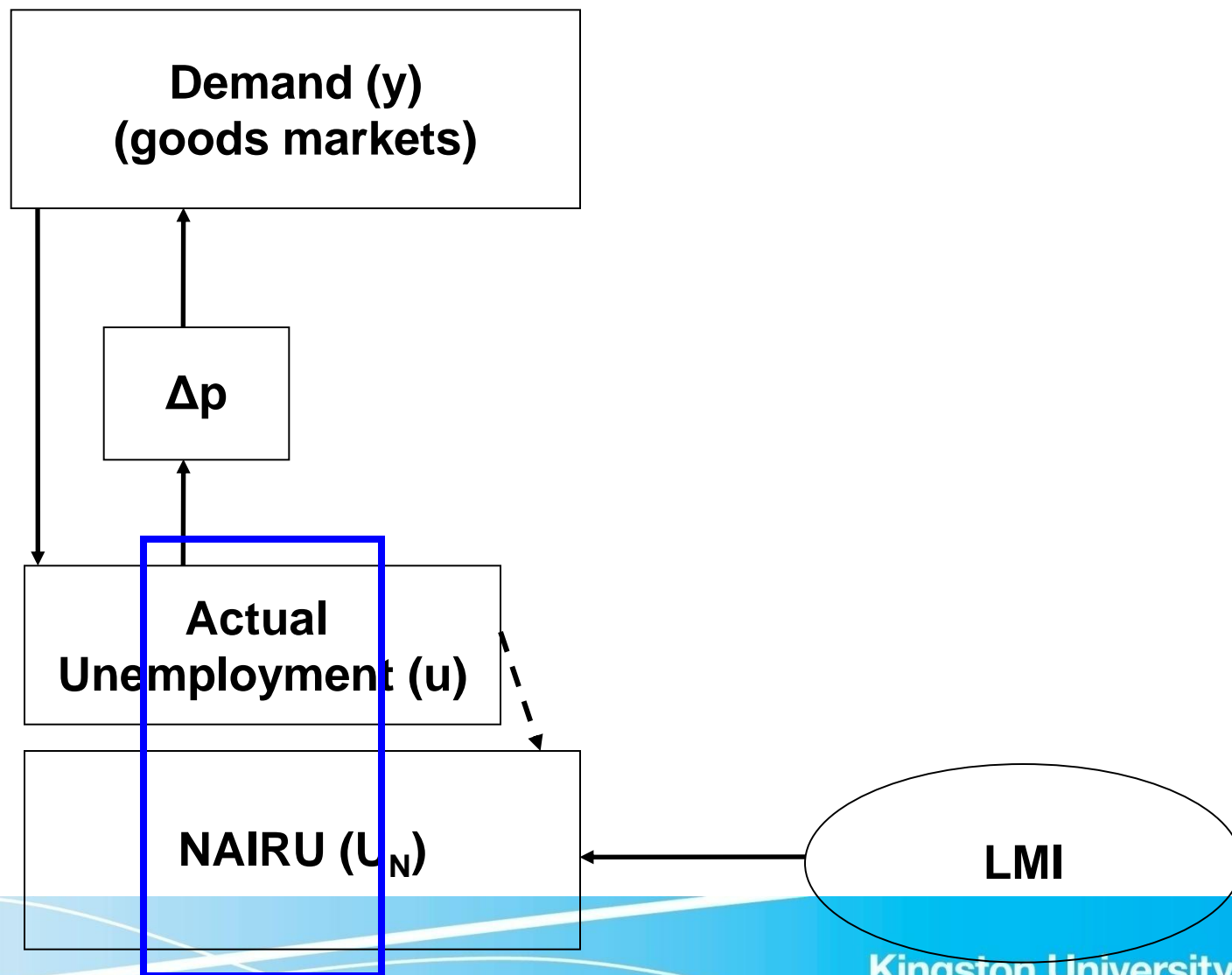


- There is a private-sector  $u^{IS}$
- And an  $u^{IS-CB}$  that includes the central bank reaction function

# New Keynesian NAIRU

- In SR fiscal or monetary policy can manipulate output and employment, but only at the cost of unexpected inflation.
  - If  $u < > \text{NAIRU}$  gov't can speed up adjustment
- In LR inflation will erode demand and  $u$  goes back to NAIRU.
  - NAIRU a strong attractor in the long run
- What caused increased unemployment?
  - Disagreement: LMI (Nickell et al 2005, IMF 2003, OECD 2006) or policy (Ball 1999)

# Standard NAIRU story

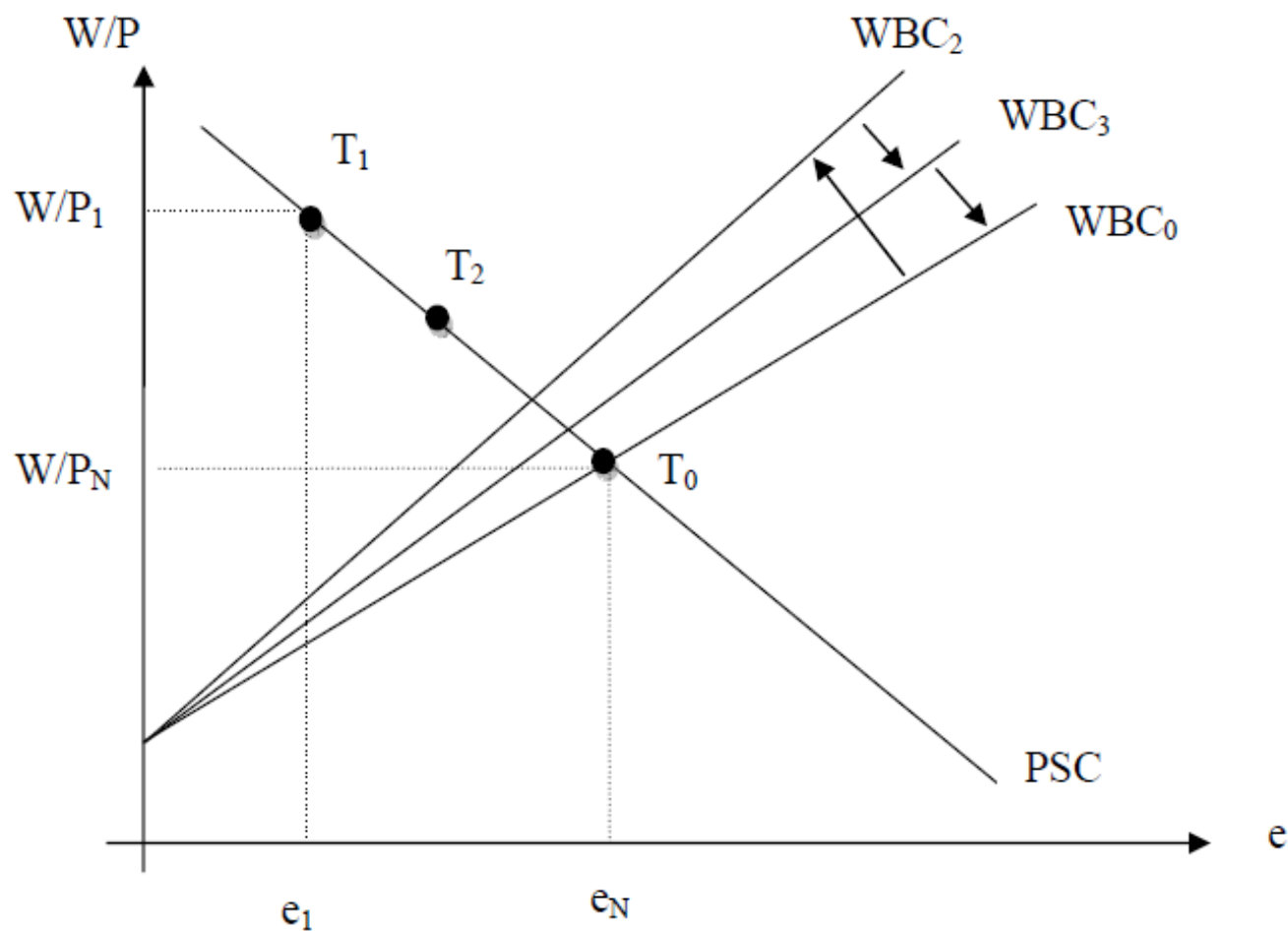


# NK: persistence vs hysteresis

- See Nickell (1998)
- Long-term unemployed have weaker effect on wages than short-term unemployed
- Hysteresis: special case where long-term unemployed have *no* effect on wages

# NK unemployment persistence

Figure 3: Standard unemployment persistence



# New Keynesian policy

- If  $u_N = f(\text{LMI})$ , then NAIRU story (cut unemployment benefits ...) (Nickell)
- If hysteresis: economic policy becomes very effective (Ball)
- Empirical issue whether LMI did in fact „worsen“

# PK reactions to NAIRU

- Reactions divided
- *Rejection*: NAIRU is pre-Keynesian, because WS function assumes  $MP_L$  (Davidson 1998)
- *Extending* the NAIRU model: similar to conflict inflation (Arestis & Co)
- Conflict inflation
  - $\Delta p = (w_0 - w_1 u + \pi_0 + \pi_1 z - 1)/w_2$
  - Inflation as result of unresolved distributional conflict
    - No presumption that distributional aspirations are exogenous or stable
  - Little empirical work (Setterfield and Lovejoy)
  - Mostly interpreted as theory of inflation, not of unemployment



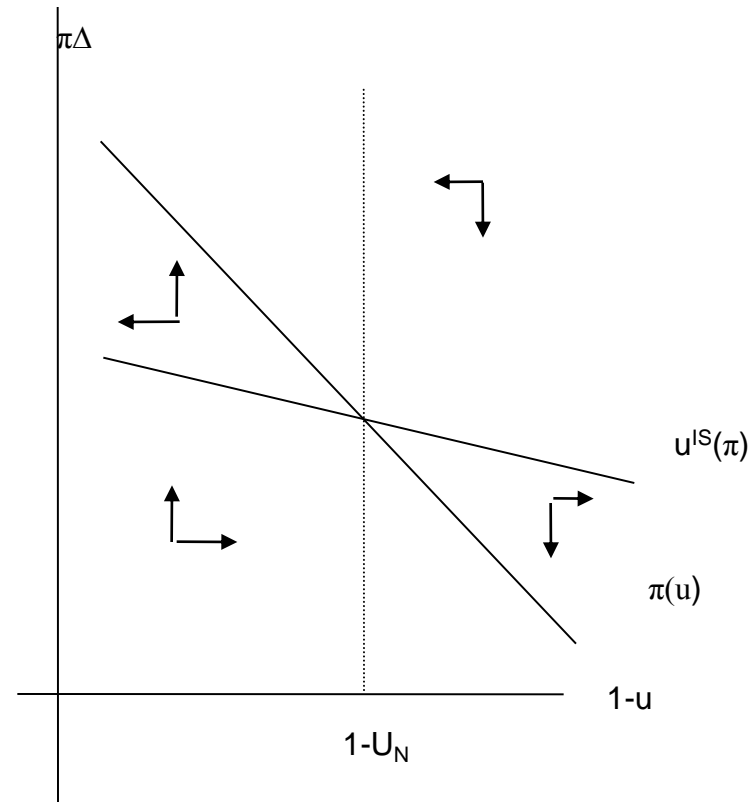
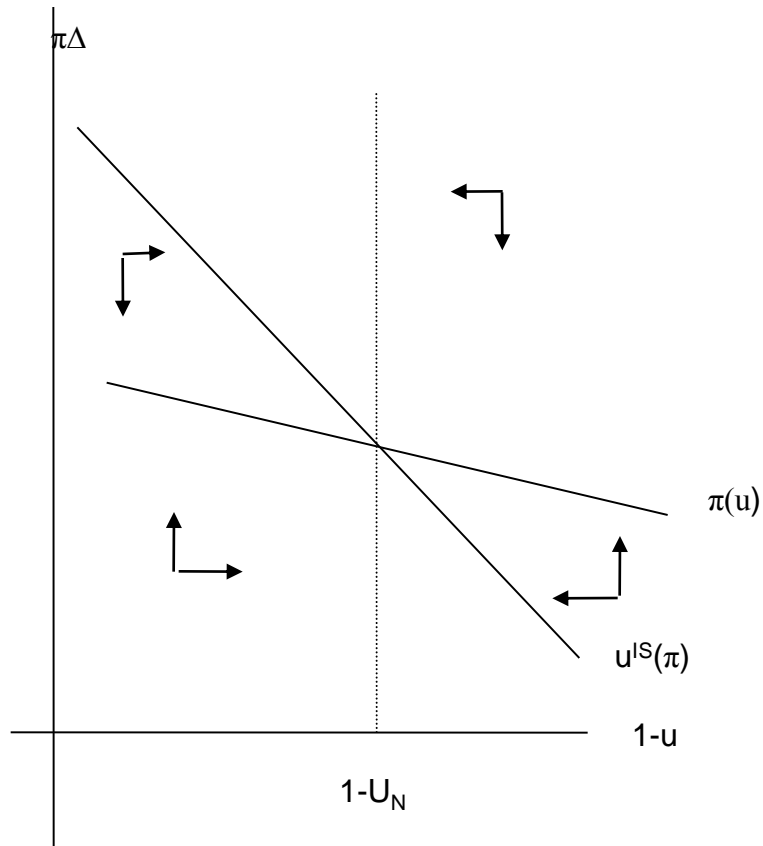
# A PK NAIRU model

- So what's the difference?
- Labour demand need not be downward sloping in  $W/P$  (wage-led demand)
- Aggr D need not be negative in  $P$  (debt deflation)
- → NAIRU not a strong attractor (unstable equi)
- NAIRU is endogenous

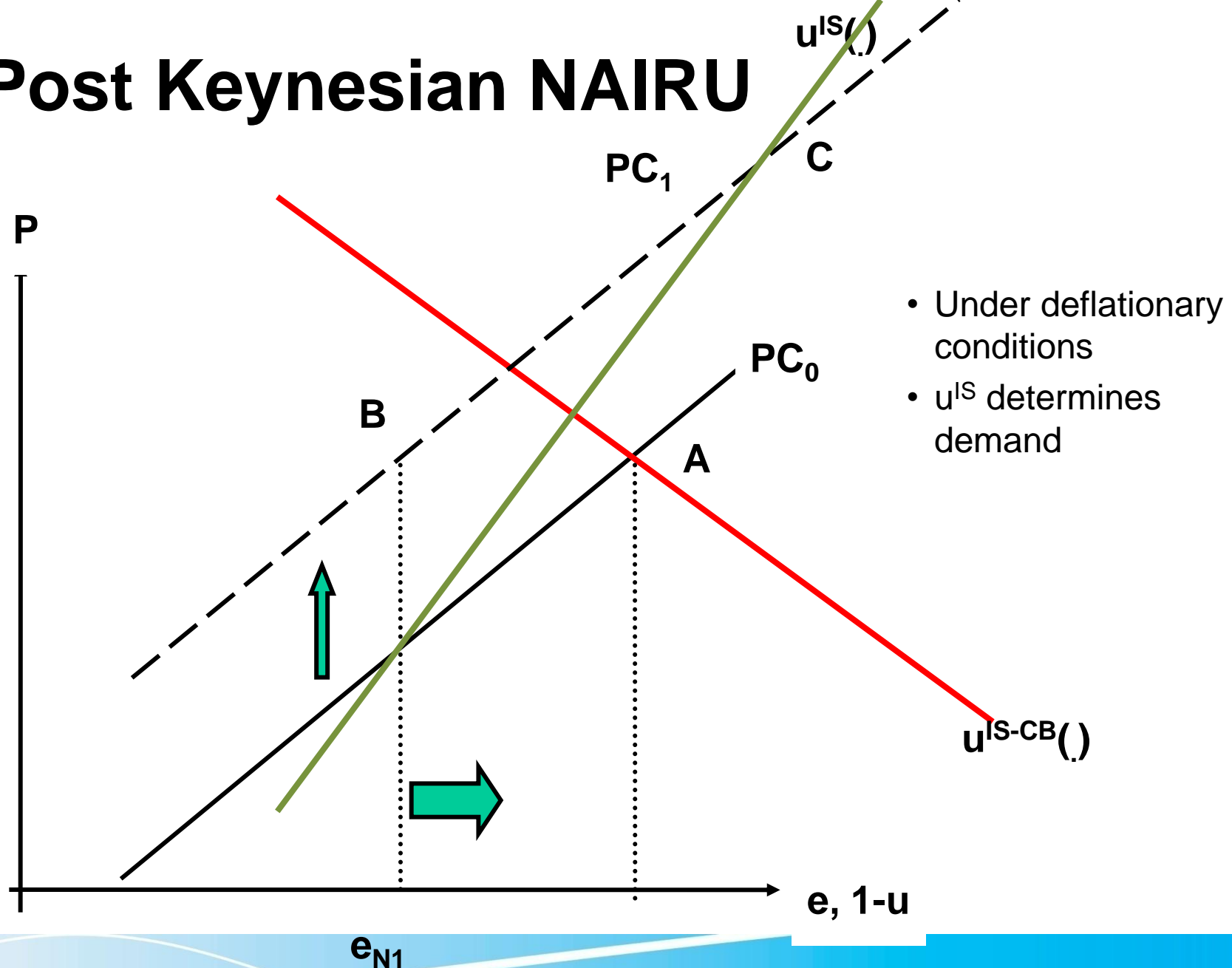
# PK demand closure

- Demand closure:  $y^{IS} = y_0 + y_3\pi + y_4(\text{Debt}-p)$ ;  $y_3 < 0$ 
  - Feedback from inflation to demand not negative
  - Distribution affects demand: wage-led demand (Kalecki)
- NAIRU equilibrium is likely to be private-sector unstable.
- With CB reaction function
  - $y^{IS-CB} = y_0 + y_2(i^{CB}-p) + y_3\pi + y_4(\text{Debt}-p)$
- CB ability to stabilize is asymmetric because of lower bound of nominal interest rates!

# Stable and unstable PK NAIRUs



# Post Keynesian NAIRU



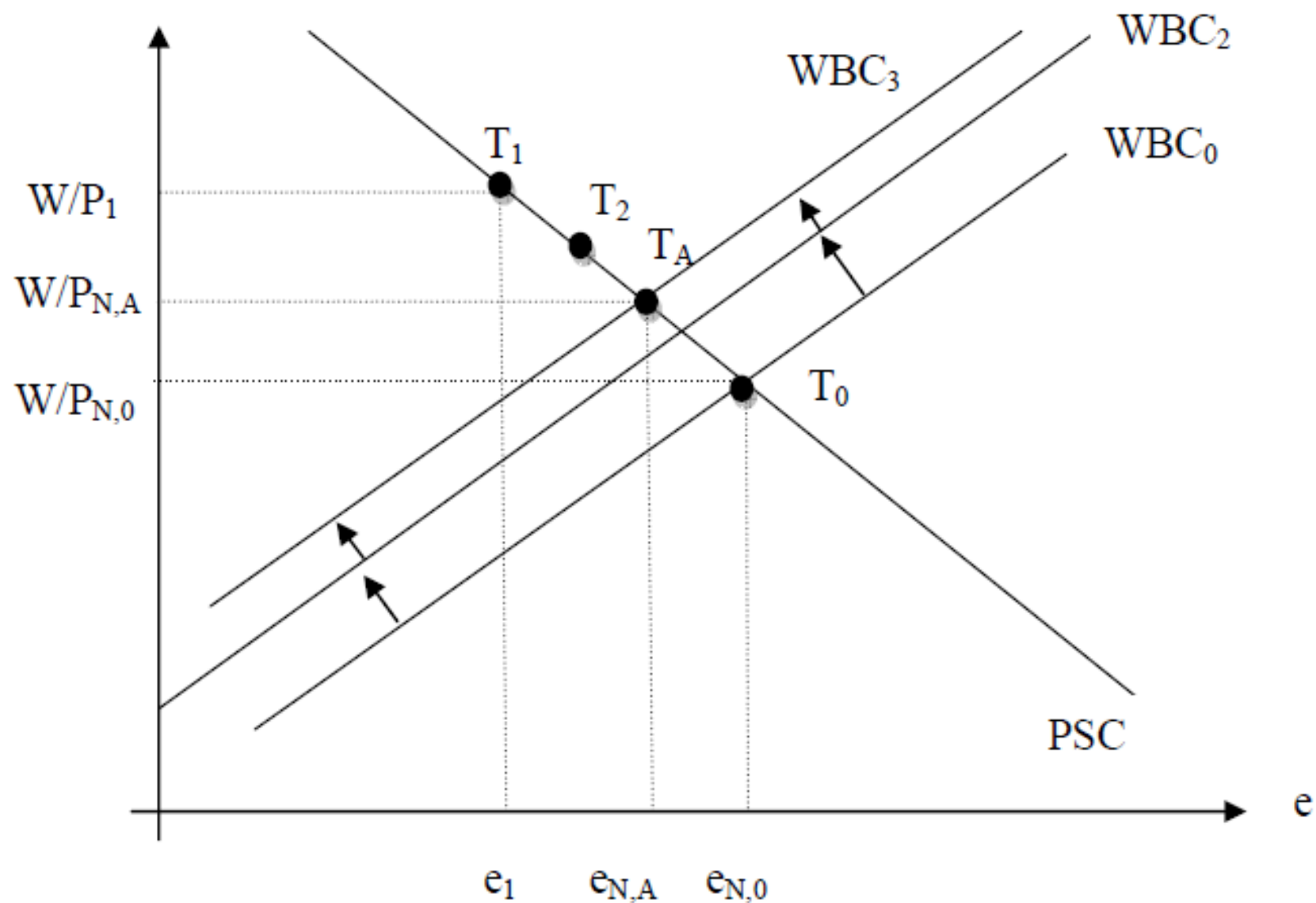
# PK NAIRU closure: NAIRU endogenous

- Endogenous wage aspirations: workers (and the unemployed) regard wage of other workers as „normal“ and/or get used to current wage level

$$\hat{w}_0 = v.[(1-\pi) - (1-\pi)^W] \Rightarrow u_N = f(u_{t-1})$$

- Difference to NK persistence: Not weak wage effects of long-term unemployed, but a shift of the reference wages („normal wage“) (Skott 2005)
- Capital stock: imperfect substitution
- Capital stock: increased  $K$  (for given  $Y$ ) reduces price setting power of firms (Rowthorn)
- Profit claims / mark up depends on (long-term) interest rate
  - $\pi^R = \pi_0(i-p)$  (Hein 2008)

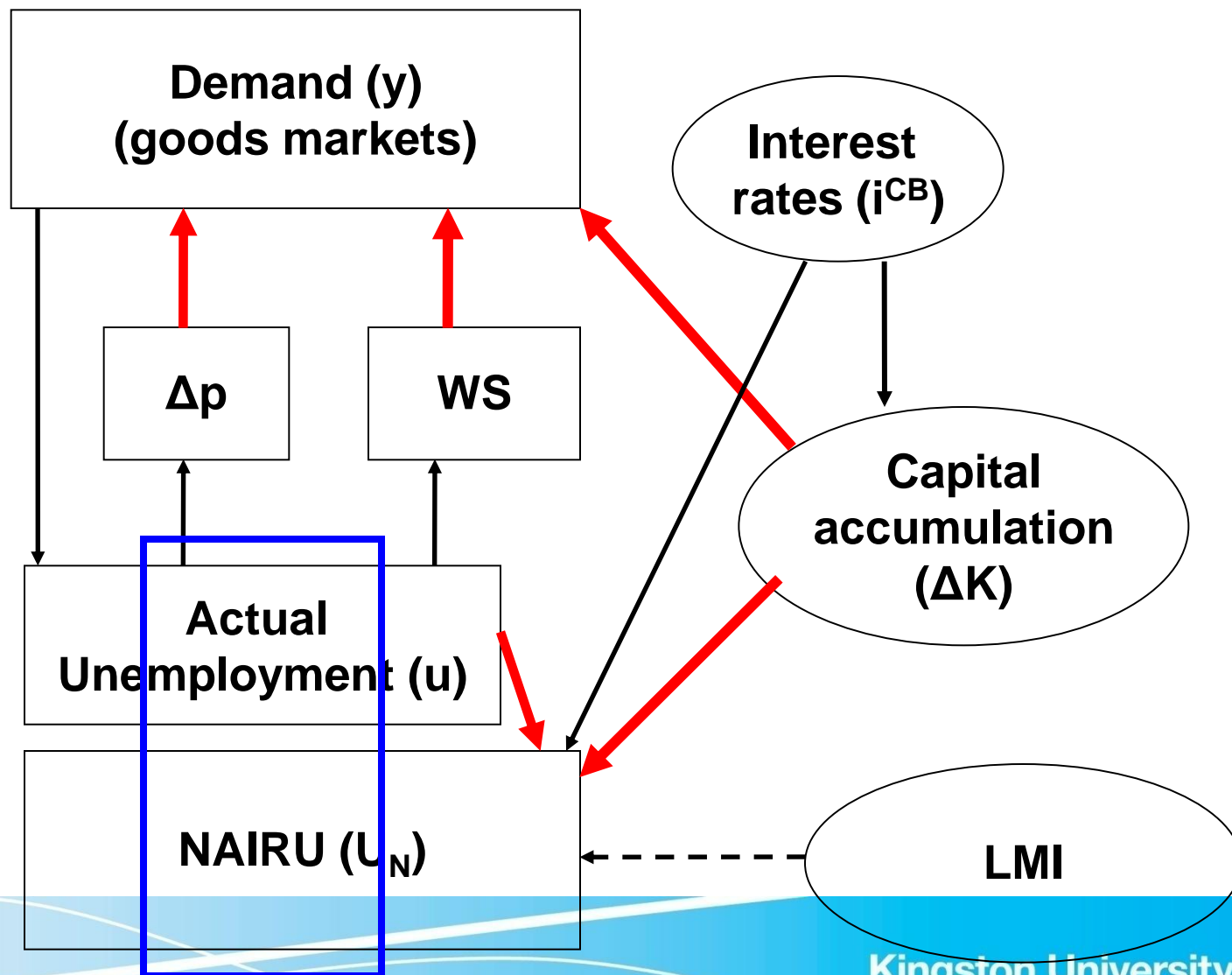
**Figure 4: NAIRU endogeneity due to social wage norms**



# A Post Keynesian NAIRU?

- At any point in time there is a NAIRU (= a short-term Phillips curve)
- ... but it is neither exogenous
- ... nor is it strong attractor
- NAIRU: as much an outcome as a determinant of macroeconomic performance.

# A Post-Keynesian NAIRU





# A Marxian NAIRU?

- Not *one* Marxian theory, here: profit squeeze crisis
- While few Marxists have discussed the NAIRU model explicitly, there are striking parallels
  - Wages as outcome of a bargaining process/class struggle
  - Unemployment as a workers' discipline device
- stress on class struggle rather than LMI
- cyclical movements of actual unemployment rather than a stable NAIRU (Goodwin cycle)
- Demand closure:  $\Delta y = y_0 + y_2 \Delta \pi$ , with  $y_2 > 0$ 
  - The profit share affects demand positively (profit-led growth)
- NAIRU = equilibrium "RAU"?, endogenous?

# NAIRU model closures

- NAIRU *model*: wage bargaining and Phillips curve
- NAIRU *story*:
  - Exogenous NAIRU
  - Actual  $u$  is determined by NAIRU
  - Eu  $u$  driven by LMI
- NAIRU model needs closures
- What demand function is assumed?
  - How does  $\Delta p$  affect demand?
  - How does  $\Delta \pi$  affect demand?
- What does  $u_{\text{NAIRU}}$  depend on?
  - Is it exogenous or endogenous?

# NK, PK and Mx closures

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<i>Mx</i>		Negative (profit-led D)	(endogenous)

# Open Q & what's missing?

- Problems of the NAIRU model
  - pro-cyc wage share ...
- Omissions
  - exogenous productivity (Storm)
  - Workers aspire to be fully compensated for inflation (Setterfield)
- Production function?
  - Keynes (*GT*): yes
  - Neoricardian critique, other criticisms (team work)
  - Kaleckian pragmatism: const MPL until max output
- Demand or conflict?
  - No theory of production
  - Mark up pricing or bargaining?
- Political contradictions of full employment

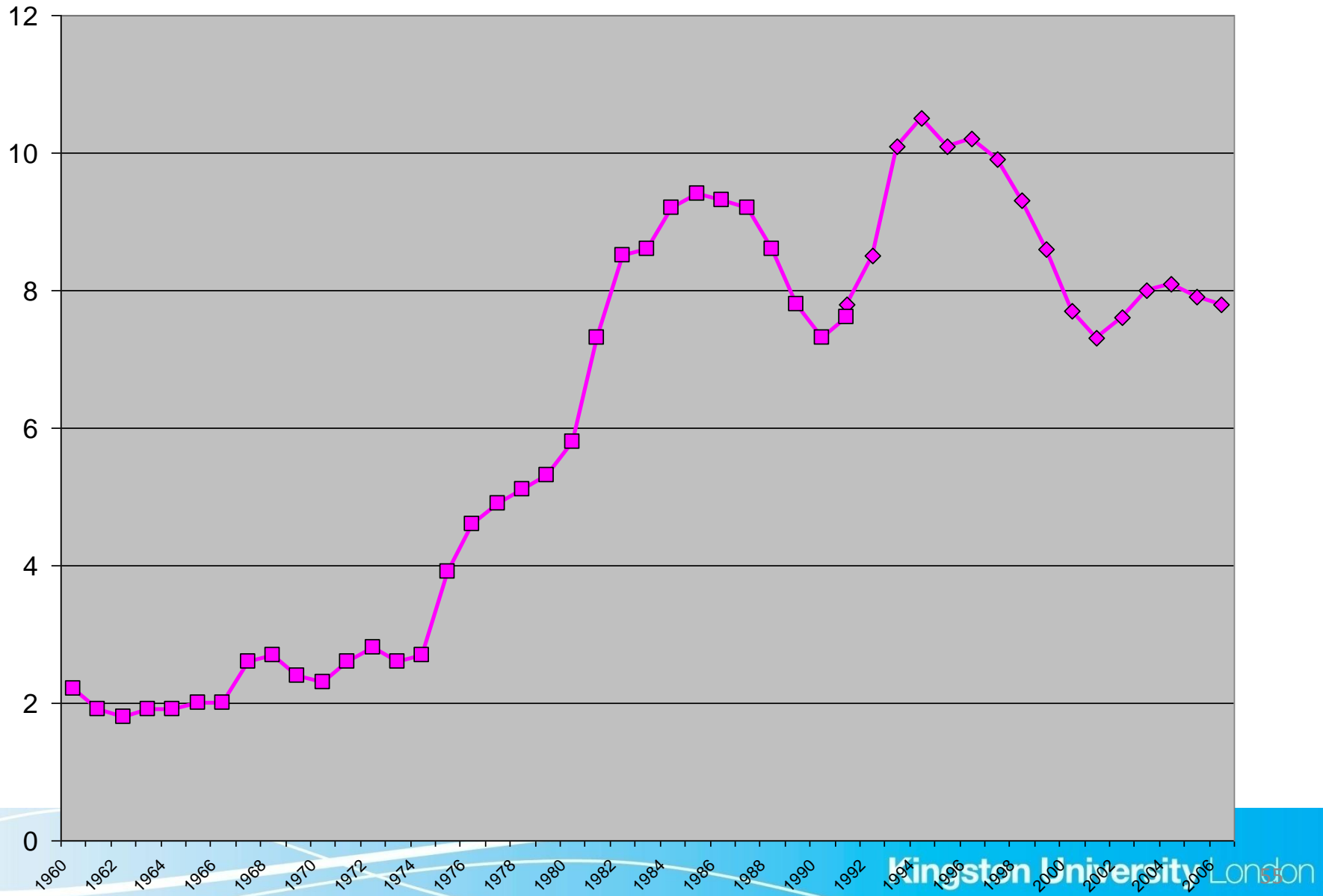
# *Unemployment in Post Keynesian macroeconomics*

## II. The debate on European unemployment

# structure

- Some stylized facts on Eu unemployment
- Mainstream NAIRU story
- Keynesian (empirical) explanations
- Stockhammer & Klar (2011)

# Unemployment Rate, EU15

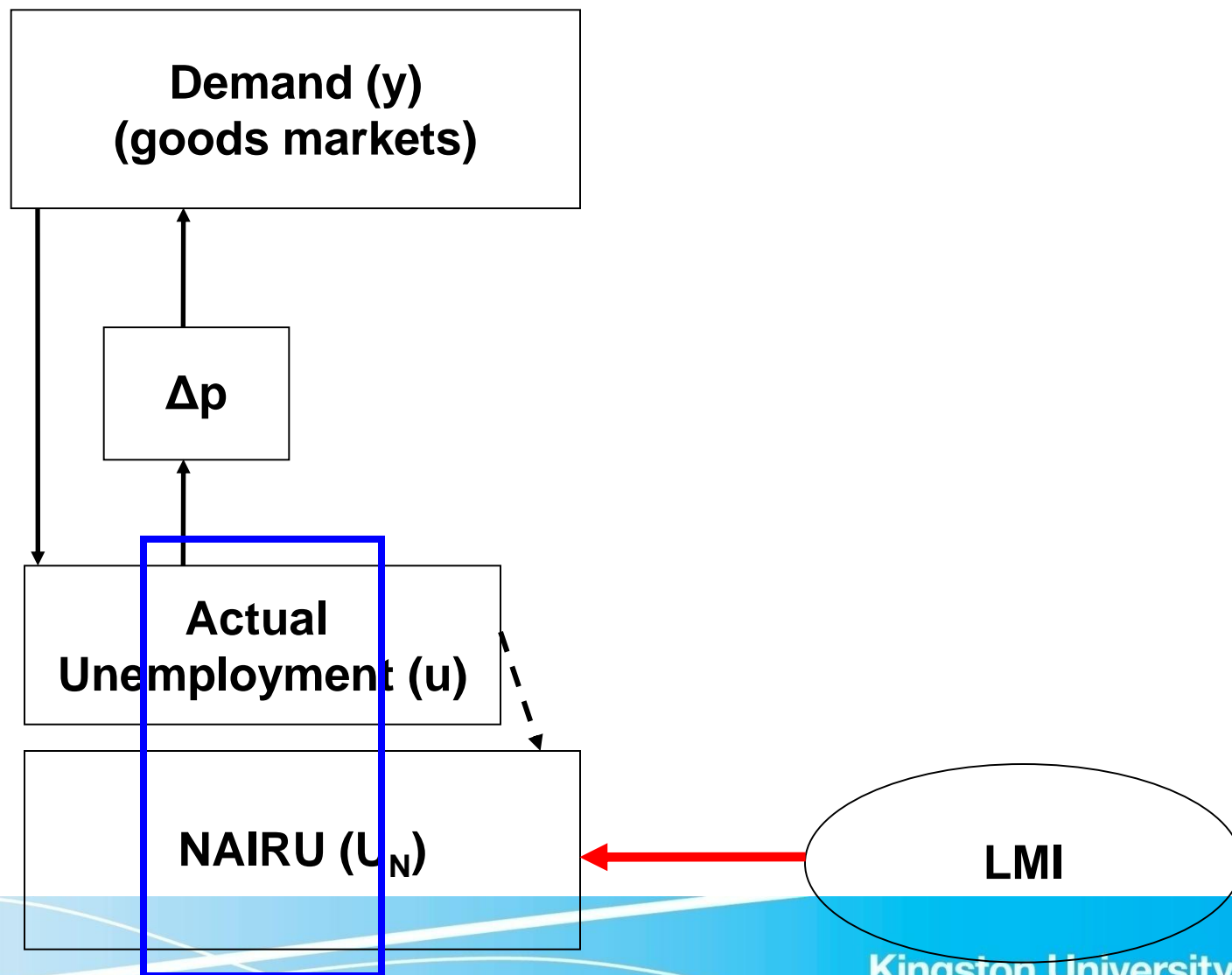


# Why?

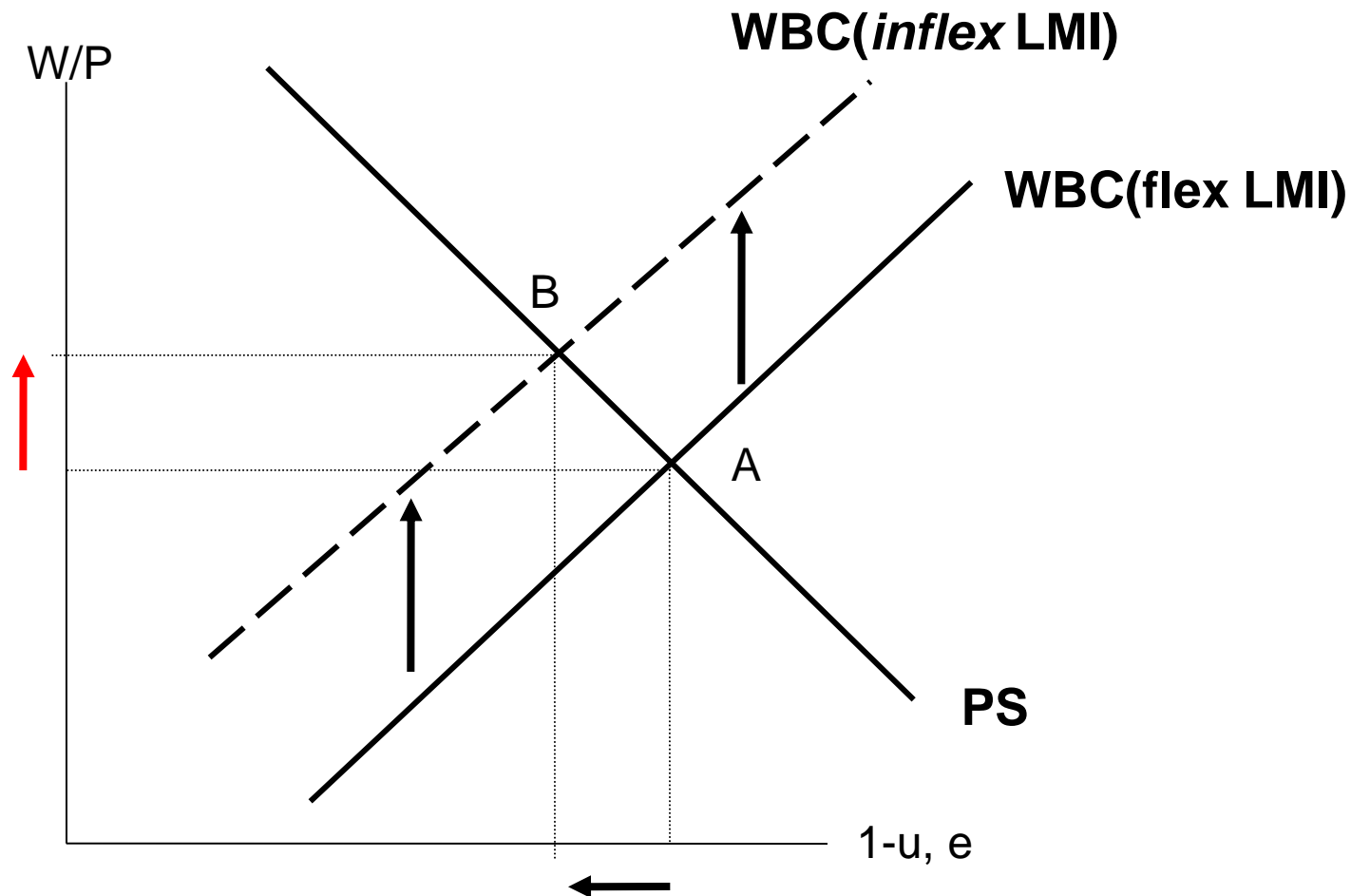
- “broad movements in unemployment across the OECD can be explained by shifts in labour market institutions” (Nickell et al EJ 2005, 1).
- „high unemployment in many industrial nations is an unintended byproduct of their redistributionist welfare states“ (Krugman 1994, 51)



# Standard NAIRU story

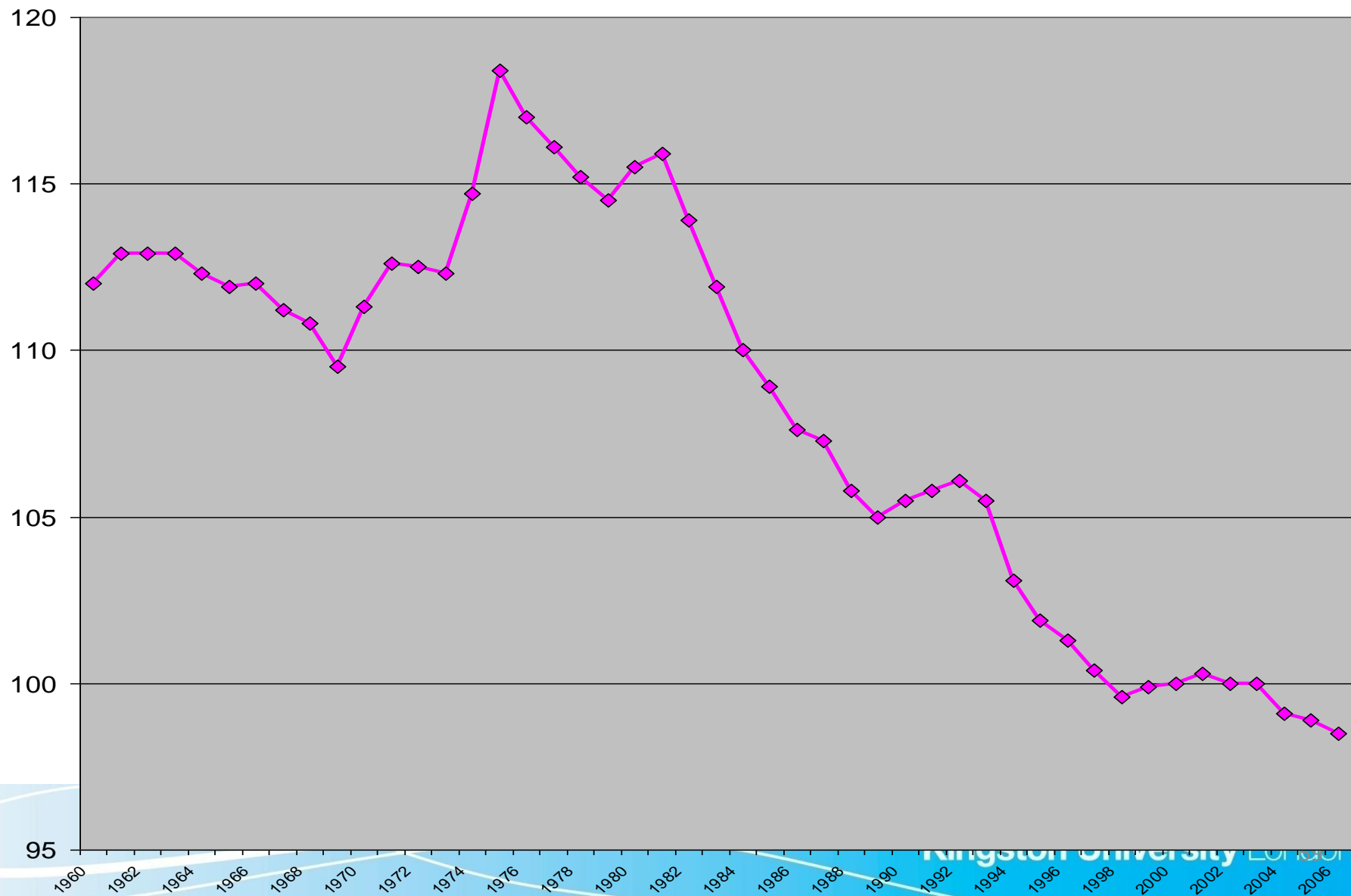


# NAIRU story: high $u$ and high $W/P$

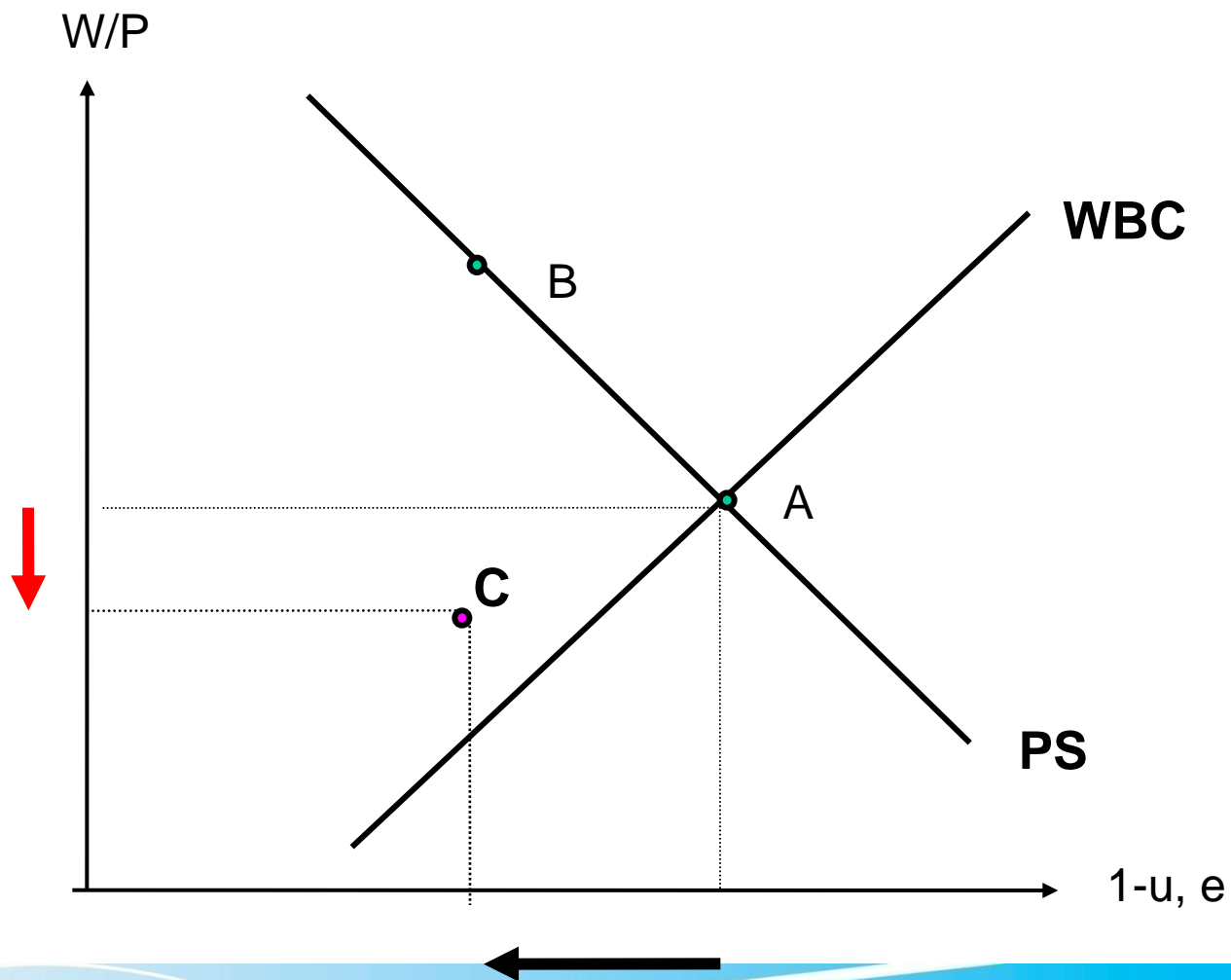


$$e_N = 1 - \text{NAIRU}$$

## Real unit labor costs (2000 = 100), EU15



# Stylized facts: high $u$ and low $W/P$



# Mainstream analyses of European unemployment

- (marginally) changing targets of the mainstream
  - In 80s: unions too strong & wages too high
  - 90s: labor market rigidities
  - wage *spread* too low, flexicurity, PMR interactions
- empirical work on the NAIRU:
  - (ex post) reconstructing the NAIRU via Kalman filter
  - (ex ante) explaining actual unemployment by NAIRU determinants controlling for changes in inflation: panel  $u=f(\text{LMI}, \text{MS})$ 
    - OECD 1994: Jobs Study
    - LNJ 1991, Nickell 1997, Nickell et al 2005
    - IMF 2003, EC
    - OECD Employment Outlook 2006
    - Variations: interactions Blanchard & Wolfers 2000
    - Skilled vs unskilled workers' share (EC 2007)

Table 6.3. Four different regimes of labour market functioning<sup>a</sup>

	OECD unweighted average	High employment outcomes		Low employment outcomes	
		English-speaking countries, mainly <sup>b</sup>	North European countries, mainly <sup>c</sup>	Countries of continental and southern Europe, mainly <sup>d</sup>	Countries of eastern Europe <sup>e</sup>
Employment protection legislation	2.01	1.38	2.13	2.71	1.83
Generosity of unemployment benefit system <sup>f</sup>	27.81	18.23	39.86	36.17	9.69
Active labour market programmes <sup>g</sup>	29.25	15.76	64.14	25.84	3.46
Tax wedge <sup>h</sup>	27.10	18.54	27.42	34.33	32.43
Union coverage	59.96	30.75	83.33	82.57	38.33
Union co-ordination	2.88	1.88	3.92	3.79	1.33
Product market regulation	1.42	1.20	1.28	1.55	1.97
Employment rate	67.11	70.92	71.91	62.54	58.00
Unemployment rate	7.47	5.30	4.79	8.97	15.12
Total LMP expenditures <sup>f</sup>	1.86	0.98	2.68	2.60	0.82
of which: ALMP expenditures <sup>f</sup>	0.76	0.39	1.31	0.94	0.25
Income inequalities (Gini Index) <sup>k</sup>	29.35	31.50	25.58	29.85	31.35
Relative poverty rate <sup>l</sup>	9.64	11.78	7.77	9.86	7.05

- a) This country classification is derived from a Principal Component Analysis (see Annex 6.A1), a simple statistical technique which helps to identify existing combinations of policy settings and to highlight similarities and differences across countries. However, some countries are barely representative of the group of countries to which they belong, being close to the frontier between two regimes of labour market functioning. This is for instance the case for Austria, Finland, Germany, Ireland, Japan, Korea, Portugal, Sweden and Switzerland, as shown in the Annex 6.A1.
- b) This group of countries includes Australia, Canada, Japan, Korea, New Zealand, Switzerland, the United Kingdom and the United States.
- c) This group of countries includes Austria, Denmark, Ireland, the Netherlands, Norway and Sweden.
- d) This group of countries includes Belgium, Finland, France, Germany, Italy, Portugal and Spain.
- e) This group of countries includes the Czech Republic, Poland and the Slovak Republic.

# OECD 2006

- “on average, extremely different degrees of “interventionism” in almost each selected policy area (with the exception of product market regulation) may lead to very similar employment and unemployment rates. This suggests that there is not a single road for achieving good employment performance.” 192
- ... And then they give the standard policy recommendations

# A. Set appropriate macroeconomic policy

- A1. Macroeconomic policy should aim at price stability and sustainable public finances so as to keep interest rates low and encourage investment and labour productivity
- A2. Macroeconomic policy should be used to help stabilise the economy in order to reduce the risk that transitory increases in unemployment
  - **Monetary policy should pursue medium-term price stability by reacting to both inflationary and disinflationary shocks**
  - **Fiscal policy should aim to restore and maintain sound public finances so that automatic stabilisers can be allowed to operate, supplemented as required and feasible by discretionary policy. This is particularly important in countries that cannot employ monetary policy for that purpose.**



## B. Remove impediments to labour market participation as well as job-search

- B1. Unemployment benefit replacement rates and duration, as well as social assistance benefits provided to individuals who can work, should be set at levels that do not discourage job search excessively
- *Make other non-employment benefits more work-oriented (B4-B5)*
- B6. Family-friendly policies, including childcare support, as well as working-time arrangements
- *Adjust taxes and other transfer programmes to make work pay (B7)*

# C. Tackle labour- and product-market obstacles to labour demand

- *Ensure that wages and labour costs respond to labour market developments (C1-C3)*
  - C1. Ensure that minimum wages are set at levels that do not harm job creation significantly for low-productivity workers.
- *Enhance competition in product markets (C4-C5)*
- *Make sure that employment protection legislation helps labour-market dynamism and provides security to workers (C7-C8)*
- *Promote transitions to formal employment*
  - C9. Transitions to formal employment should be promoted through: lower taxes on low-paid employment going hand-in-hand with better compliance of other taxes (notably on small businesses);
- D. Facilitate the development of labour force skills and competencies

# Keynesian explanations

- Criticism of explanatory power of LMI-story
- Demand deficiency
  - Fiscal policy
  - Monetary policy (EMU)
  - Capital accumulation (taken to be quasi-exogenous)

# It's not labor market institutions!

"While labor market institutions can potentially explain cross country differences today, they do not appear able to explain the general evolution of unemployment over time."

- Blanchard & Wolfers 2000, *EJ*, p. 2

"the Layard and Nickell model seems unable to explain the increase in European unemployment"

- Madsen 1998, *Economic Journal*, p. 862

"Simple, cross-country comparisons suggest that EPL has little or no effect on overall unemployment."

- *OECD Employment Outlook* 1999, 50

"labor market policies are not important causes of the unemployment successes and failures since 1985."

- Ball 1999, *Brookings Papers* .., 191

# LMI, cont'd

- “no meaningful relationship between [the] OECD measure of labor market deregulation and shifts in the NAIRU.”
- Baker et al 2005, 107
- „We find no systematic support for the deregulatory view. Indeed, employment protection, benefit replacement rates, and tax wedge do not seem to have a significant impact on unemployment. At the same time, we find a robust positive association between union density and unemployment.“
- Baccaro and Rei 2007, 563

# Fiscal policy

- There is surprisingly little on the effects of fiscal policy
- Until crisis mainstream hasn't done research on the multiplier any more
  - Hemming et al (2002): exp multiplier close to 1
  - Recent OECD Economic Outlook: close to 1
- Since crisis it's being rediscovered
  - Various IMF; De Long & Summers 2012 BPEA; Eggertson & Krugman 2012 QJE
  - normal times and ZLB (or 'liquidity trap' or debt overhang)
- Not many estimates by Post Keynesians
  - Hein and Truger (2005): PDR on GDP growth 0.24
- None of these calculates or estimates effects on employment

# Monetary policy

- If you look carefully, it's in the mainstream studies (e.g. IMF 2003),
  - but it's ignored when discussing policy
- Baccaro & Rei, Baker et al
- Ball 1994, 1997: episode analysis of effects of monetary policy during recession on unemployment and OECD-NAWRU 5 years later (update: Stockhammer & Sturn 2012)

# Capacity utilization and unemployment (Bean 1994 JEL)

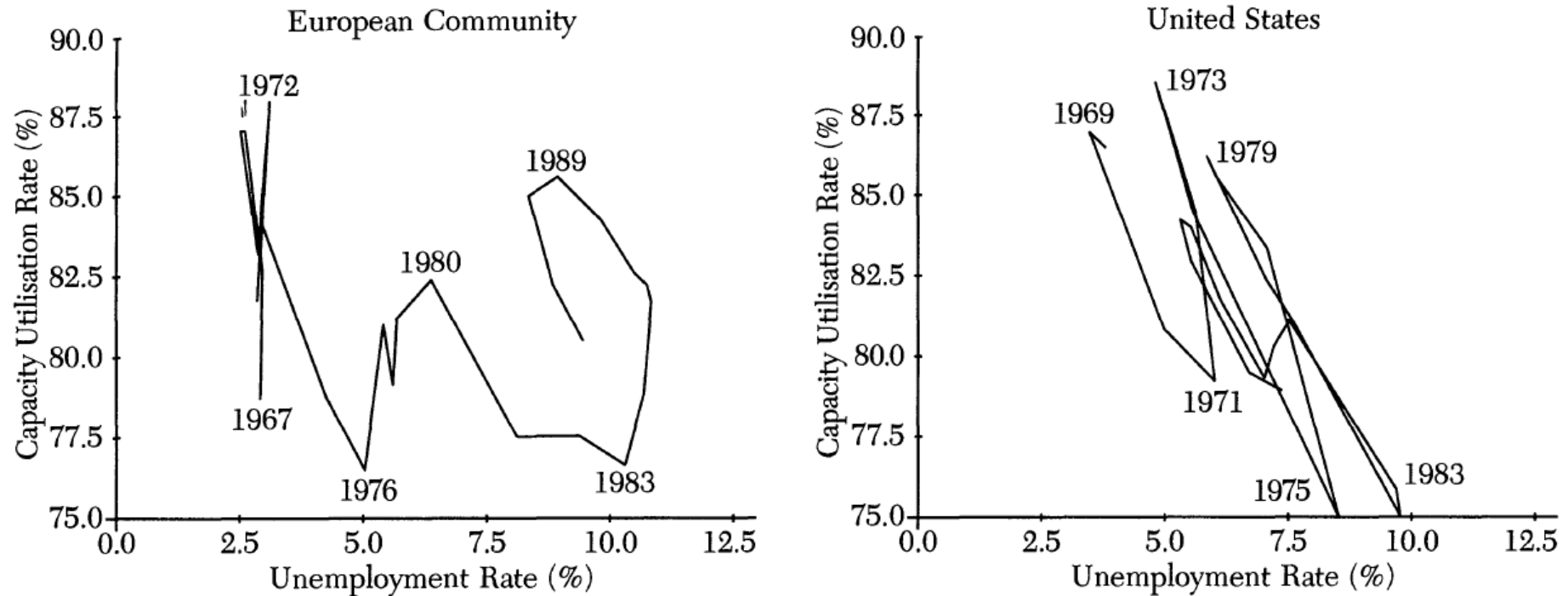


Figure 7. Capacity Utilization and Unemployment



# Capital accumulation

- Almost entirely ignored by mainstream (*now*, not in 1980s!)
- Rowthorn 1995: cross country regression of 10 OECD countries, changes in unemployment and  $K$  between 1960-73 and 1973-92
- Alexiou and Pitelis 2003: panel of 13 OECD countries, annual data, various macro variables and  $K$
- Stockhammer 2004: 5 OECD countries, annual data, time series analysis, some LMI,  $K$
- Arestis & Co 2007: VECMs for 9 OECD countries, quarterly data, unemployment and wage equations, UB, strike,  $K$
- Stockhammer and Klär 2011 CJE

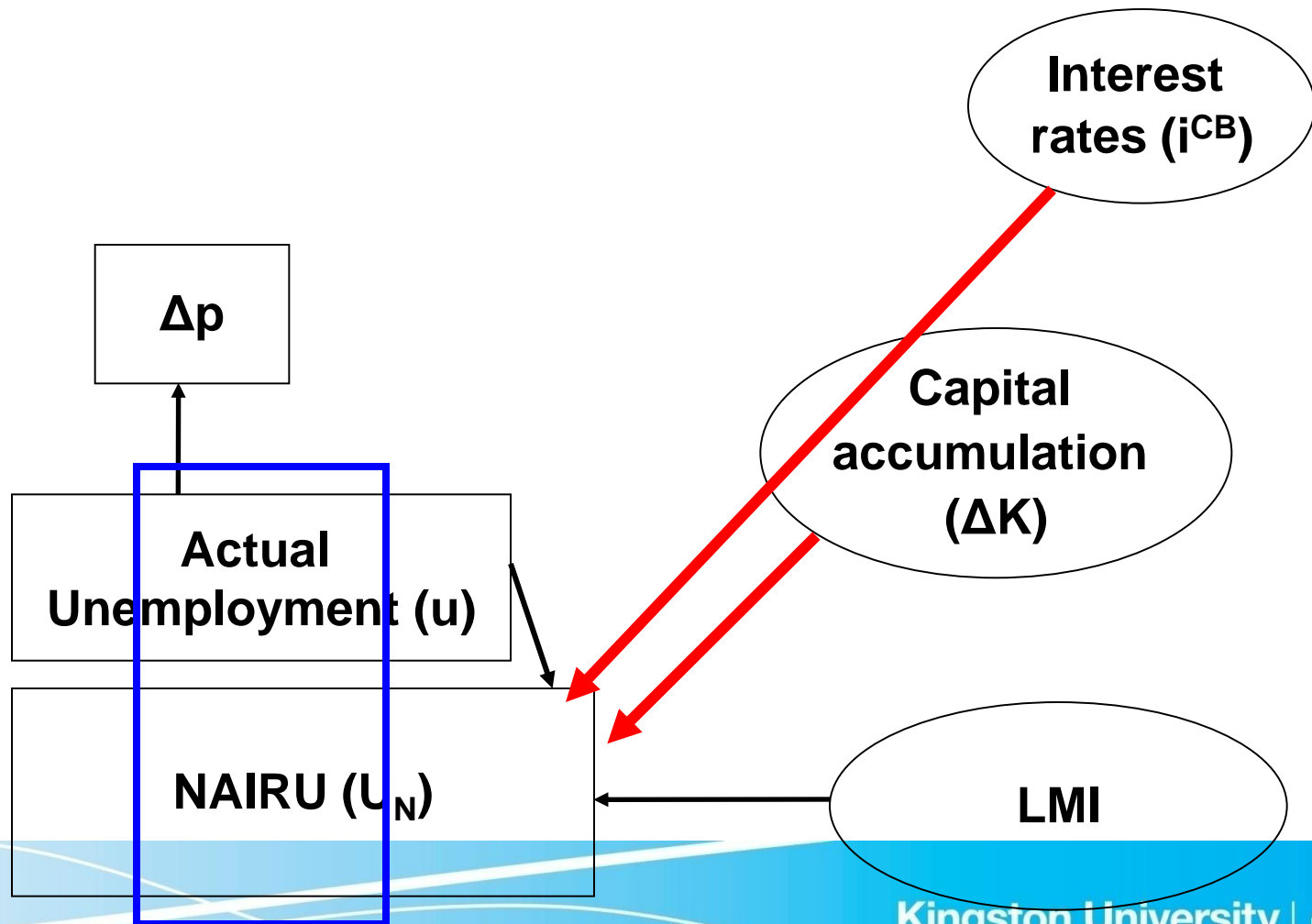
## Review of the empirical literature

- **Large mainstream literature on LMI and unemployment**
  - (Nickell 1997, Blanchard & Wolfers 2000 (interaction of LMI and macroshocks), IMF 2003, Nickell et al 2006)
- **Two principal Keynesian criticisms:**
  - LMI explanation does not actually work empirically (Howell et al 2007), Baccaro and Rei (2007)
  - Capital accumulation matters (Rowthorn 1995, 1999, Stockhammer 2004, Palacio-Vera et al 2006, Arestis et al 2007)
    - Demand (and hysteresis)
    - Limited substitutability (Rowthorn 1999)
- **Usually not both elements in the same study**
  - Exceptions: Stockhammer 2004, Arestis et al 2007
  - But: time-series = only limited LMI set, small range of countries

# Classification of the empirical [econometric] literature explaining unemployment

	<i>Econometric approach</i>			<i>LMI controlled for</i>			<i>Macro shocks controlled for</i>		
	TS	Dyn.P	Sta.P	None	some	many	none	some	K
Nickell 1997			X			X	X		
Blanchard & Wolfers 2000			X			X		X	
Bassanini & Duval 2006		X				X		X	
Nickell et al 2007		x	x			x		x	
Baccaro & Rei 2007		X	X			X		X	
Stockhammer 2004	X				X				X
Palacio-Vera et al 2006	X			X				X	X
Arestis et al 2007	X				X				X

# Stockhammer & Klar 2011



# Econometric Model & Data

- $u_{NAIRU} = f(LMI, MS, \Delta K)$
- **panel least squares regression**
- **DATA**
  - Bassanini & Duval 1982-2003
    - most up-to-date OECD dataset
    - Basis of OECD Empl Outlook 2006
  - Baker, Glyn, Howell, Schmitt 1960-99
    - Updated and revised version of Nickell & Nunziata LMI-DB
  - $u$ ,  $K$ ,  $CPI$ : EU AMECO
    - Capital stock or investment?
  - 20 Countries (all Western OECD and JP, without LU and GR)
- **All data transformed into non-overlapping 5-yr-avgs**

# Regression results (BD 83-03 dataset)

	3			4			5			6		
	LMI + MS + ACCU			LMI + MS + ACCU			LMI + MS + ACCU			LMI + MS + ACCU		
				(no period effects)			(incl. $\Delta$ INFL)			(in differences)		
UB	0.01	0.58		0.02	1.06		0.02	0.75		-0.03	-1.00	
BD	-1.09	-0.82		-0.03	-0.02		-1.08	-0.83		-2.35	-2.21	**
EPL	-0.72	-1.05		-0.63	-1.05		-0.77	-1.12		-0.79	-1.20	
<b>UD</b>	<b>0.13</b>	<b>4.01</b>	<b>***</b>	<b>0.09</b>	<b>2.25</b>	<b>**</b>	<b>0.13</b>	<b>4.14</b>	<b>***</b>	<b>0.09</b>	<b>3.02</b>	<b>***</b>
COORD	-0.77	-1.09		-1.25	-2.78	**	-0.97	-1.35		-0.63	-0.71	
<b>CBC</b>	<b>-0.04</b>	<b>-4.16</b>	<b>***</b>	<b>-0.03</b>	<b>-2.76</b>	<b>***</b>	<b>-0.04</b>	<b>-4.32</b>	<b>***</b>	<b>-0.05</b>	<b>-3.89</b>	<b>***</b>
TW	0.08	1.18		0.10	1.61		0.08	1.27		0.04	0.73	
PMR	0.39	0.94		-0.13	-0.41		0.41	1.00		0.66	1.79	
<b>INT</b>	<b>0.54</b>	<b>3.02</b>	<b>***</b>	<b>0.55</b>	<b>4.77</b>	<b>***</b>	<b>0.55</b>	<b>2.99</b>	<b>***</b>	<b>0.22</b>	<b>1.62</b>	<b>*</b>
<b>TOTS</b>	<b>0.14</b>	<b>2.27</b>	<b>**</b>	<b>0.06</b>	<b>1.30</b>		<b>0.13</b>	<b>2.27</b>	<b>**</b>	<b>0.02</b>	<b>0.45</b>	
LDS	0.11	1.46		0.12	1.85	*	0.11	1.58		0.07	1.00	
TFPS	0.96	0.10		6.06	0.65		0.28	0.02		0.09	1.59	
<b>ACCU</b>	<b>-0.87</b>	<b>-2.61</b>	<b>**</b>	<b>-0.92</b>	<b>-3.31</b>	<b>***</b>	<b>-0.87</b>	<b>-2.61</b>	<b>**</b>	<b>-1.69</b>	<b>-7.03</b>	<b>***</b>
$\Delta$ INFL							0.14	0.56				
R <sup>2</sup> (adj.)	0.92			0.99			0.92				0.72	
n	93			93			93				73	
DW	2.18			2.16			2.22				1.74	

White period standard errors & covariance (d.f. corrected); no weights (except variant 4: cross section weights). \*, \*\*, \*\*\* denote significance at the 10, 5, and 1% level, respectively

# Regression results based on Baker et al dataset (1960-99)

**Table 2:** Unemployment effects of Institutions, macro shocks, and capital accumulation

Baker et al dataset (1960-1999)												
	3			4			5			6		
	LMI + MS + ACCU			LMI + MS + ACCU			LMI + MS + ACCU			LMI + MS + ACCU		
				(no period effects)			(incl. ΔINFL)			(in differences)		
UB	-2.64	-1.00		-1.57	-1.07		-2.62	-1.00		-1.19	-0.70	
BD	-1.63	-0.90		-0.33	-0.33		-1.65	-0.91		-1.77	-1.37	
EPL	-1.09	-0.73		-0.55	-0.50		-1.06	-0.71		-2.05	-3.32	
UD	6.02	1.54		-0.93	-1.45		-0.93	-1.41		5.78	3.01	***
COORD	-0.94	-1.42		2.78	1.27		6.39	1.62		-0.14	-0.35	
TW	3.14	0.43		11.51	3.51	***	2.77	0.38		2.36	1.34	
INT	0.25	3.10	**	0.28	3.99	***	0.23	2.80	**	0.16	2.90	***
TOTS	-0.25	-0.73		-0.32	-1.06		-0.28	-0.83		-0.14	-0.42	
ACCU	-0.59	-1.51		-1.05	-4.66	***	-0.55	-1.39		-0.93	-3.30	***
ΔINFL							-0.21	-1.05				
R <sup>2</sup> (adj.)	0.81			0.84			0.81			0.48		
n	149			149			149			129		
DW	0.92			1.13			0.92			1.68		

# Findings I

- **LMI do play a role, but a minor one**

- Few are consistently statistically significant, many display perverse signs
- Only Union Density (UD) statistically significant (and with the expected sign) across data sets and different specifications
- In line with Baccaro and Rei (2007), Howell et al (2005)

- **Demand shocks do play an important role**

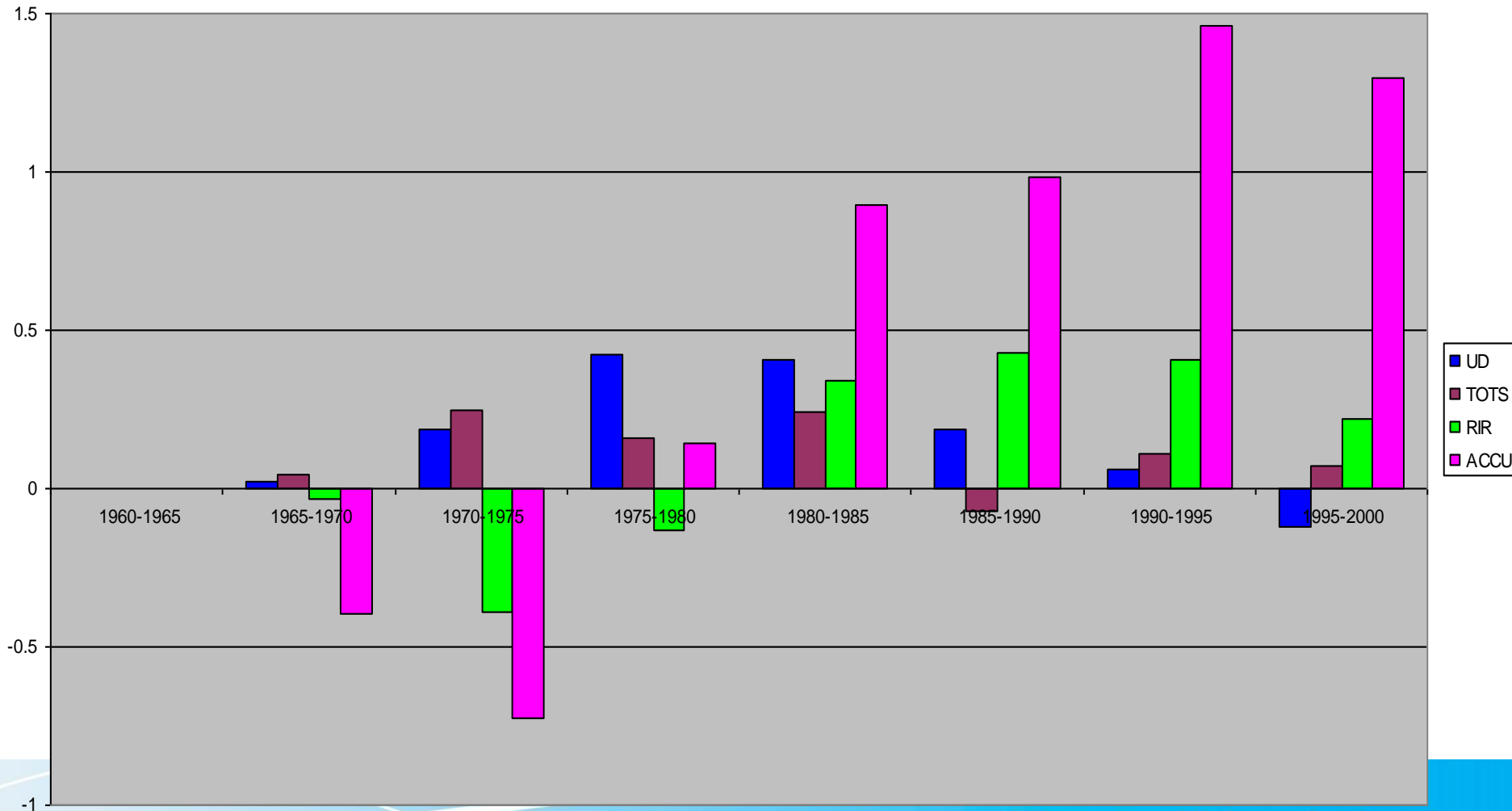
- Strong (and significant) effect of real interest rates
  - +1%-pt. real interest rate  $\rightarrow$  +0.5%-pts. unemployment rate
- Strong (and significant) effect of ACCU
  - +1% ACCU  $\rightarrow$  -0.9%-pts. unemployment rate

- **Supply shocks play some (minor) role**

- TOT, LD have effects, particularly in the short (BD) sample



# Contributions to unemployment in %pts relative to 1960-64 for 'mean country' (BGHS dataset)



## Findings II

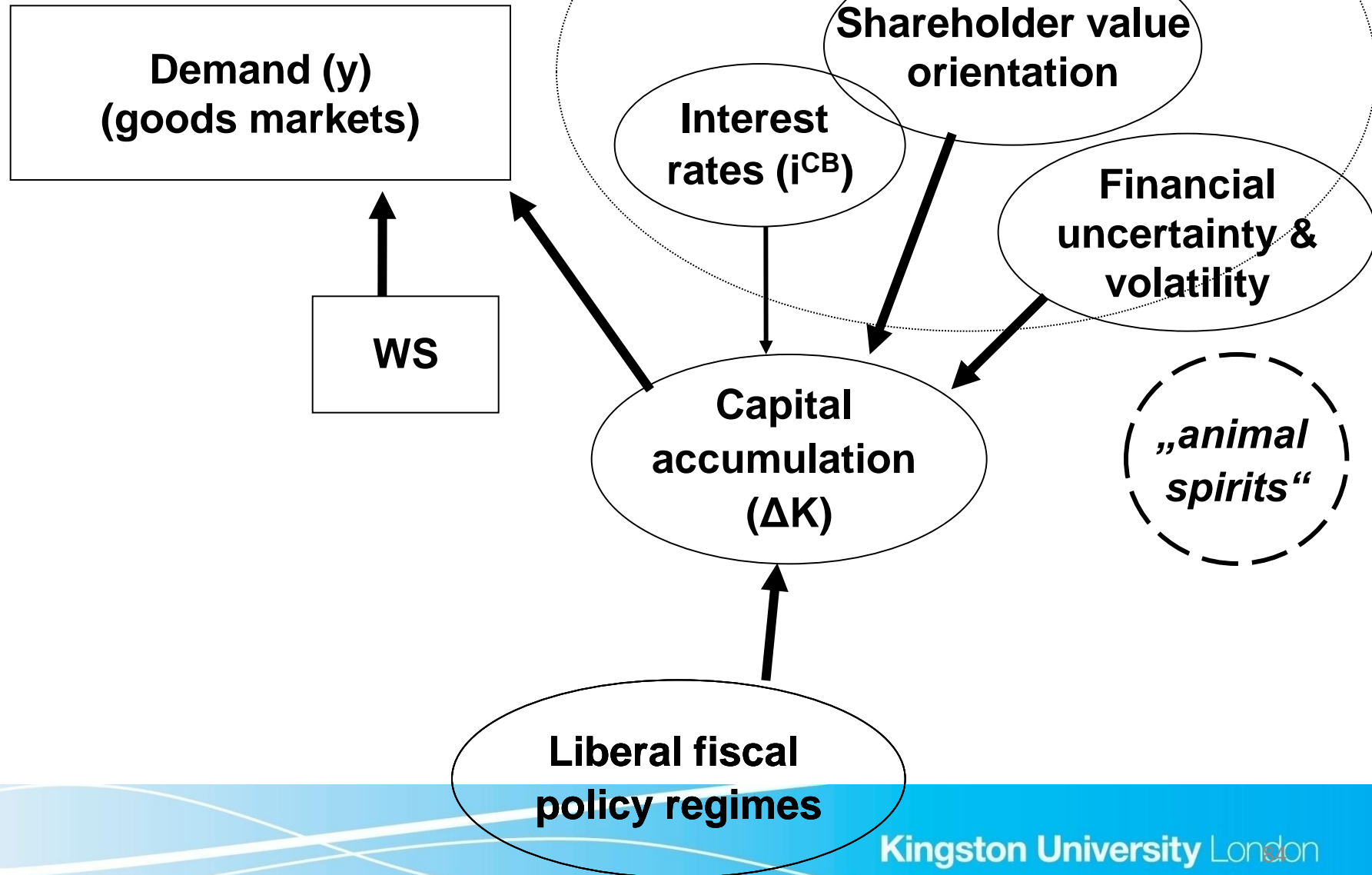
- **Economic relevance over time**

- Early 70s: INT and ACCU lower unemployment, from 80s on strong positive effects: high real interest rates and diminished ACCU raise unemployment
- 70s and 80s: UD contributes to unemployment, in 90s the effect is negative
- From mid 80s on, TW contributes to unemployment (however typically insignificant in our study, as opposed to B&D 2006)

# Summary / conclusion

- **The degree of capital accumulation has a strong impact on unemployment in the medium run**
- **Real interest rate shocks play a significant role even when ACCU is simultaneously controlled for**
- **The effects of LMI are relatively modest and unrobust**
  - Only Union Density delivers consistent (positive) effect
  - Counteracted by COORD (or CBC)
  - Some role for TW; ‚perverse‘ results for EPL, UB
- **Investment (flow) seems to play a larger role (as a demand shock) than the capital stock (as a supply variable)**
- **Policy conclusions:**
  - focus on LMI as explanations for persistent unemployment is misguided – labour market reforms will not cure unemployment
  - Encourage investment / capital accumulation

# Why did accumulation slow down?



# Conclusion and some loose ends

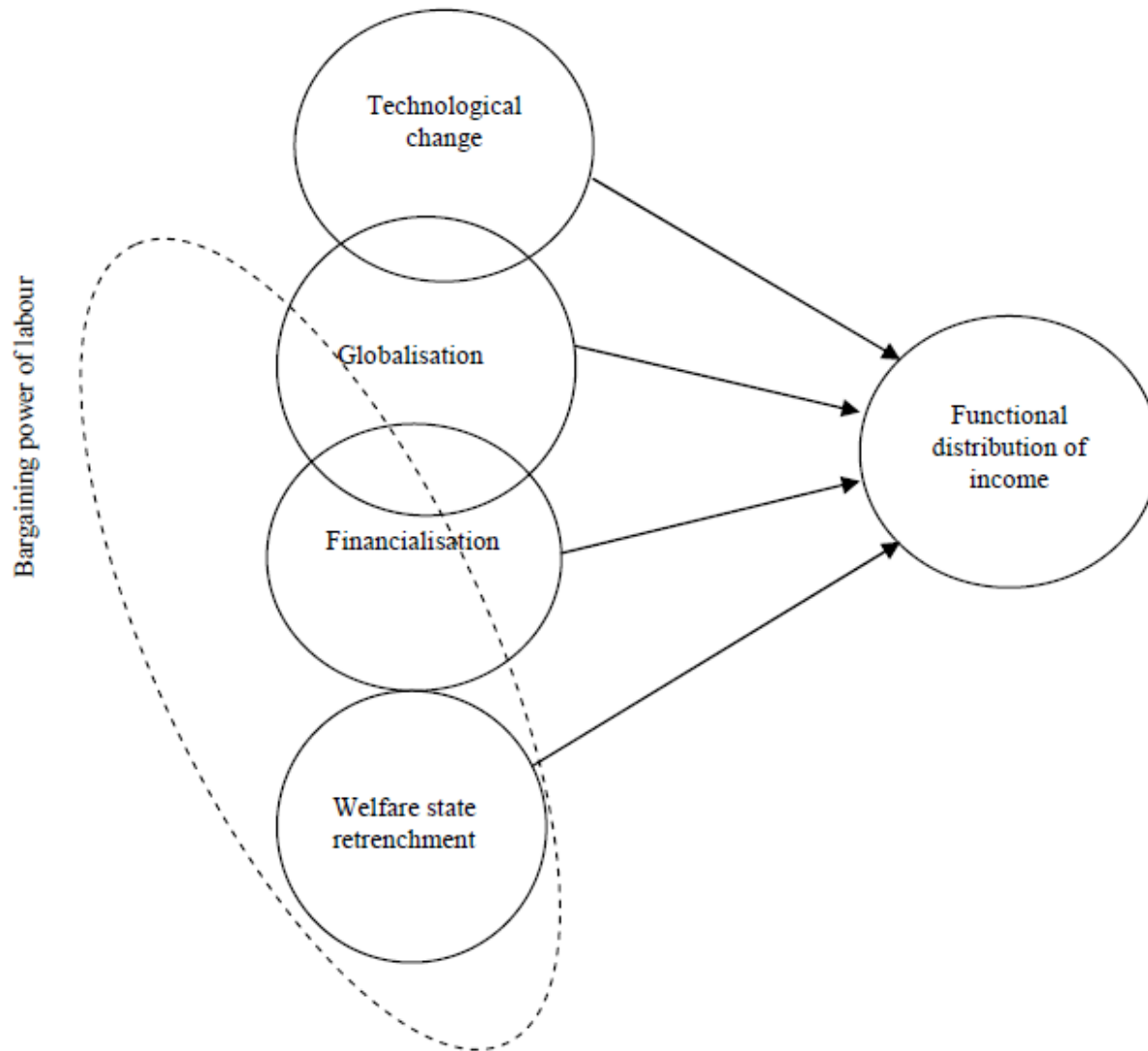
- Distribution
- Loose ends
- Policy conclusions

# Determinants of income distribution

- Dramatic changes in (functional as well as personal) income distribution in past three decades
- Until recently ignored by mainstream
  - Then a lot on personal distribution
  - And some on personal (IMF 2007, EC 2007): it's technological change
  - Critical mainstream (Rodrik) highlights globalisation
- Social sciences: Kristal (2011), Korpi, Bengtsson (2012)
- Little by PK
  - Some on financialization and distribution (Argitis & Pitelis 2006 CPE: UK, USA)
  - Jayadev (2007 CJE) on financial globalisation
  - Little that brings together changes in labour relations and changes in finance

# Stockhammer (2013 ILO)

## Determinants of income distribution



# Overview baseline variables

## $WS = f(\text{fin}, \text{tech}, \text{wfst}, \text{glob})$

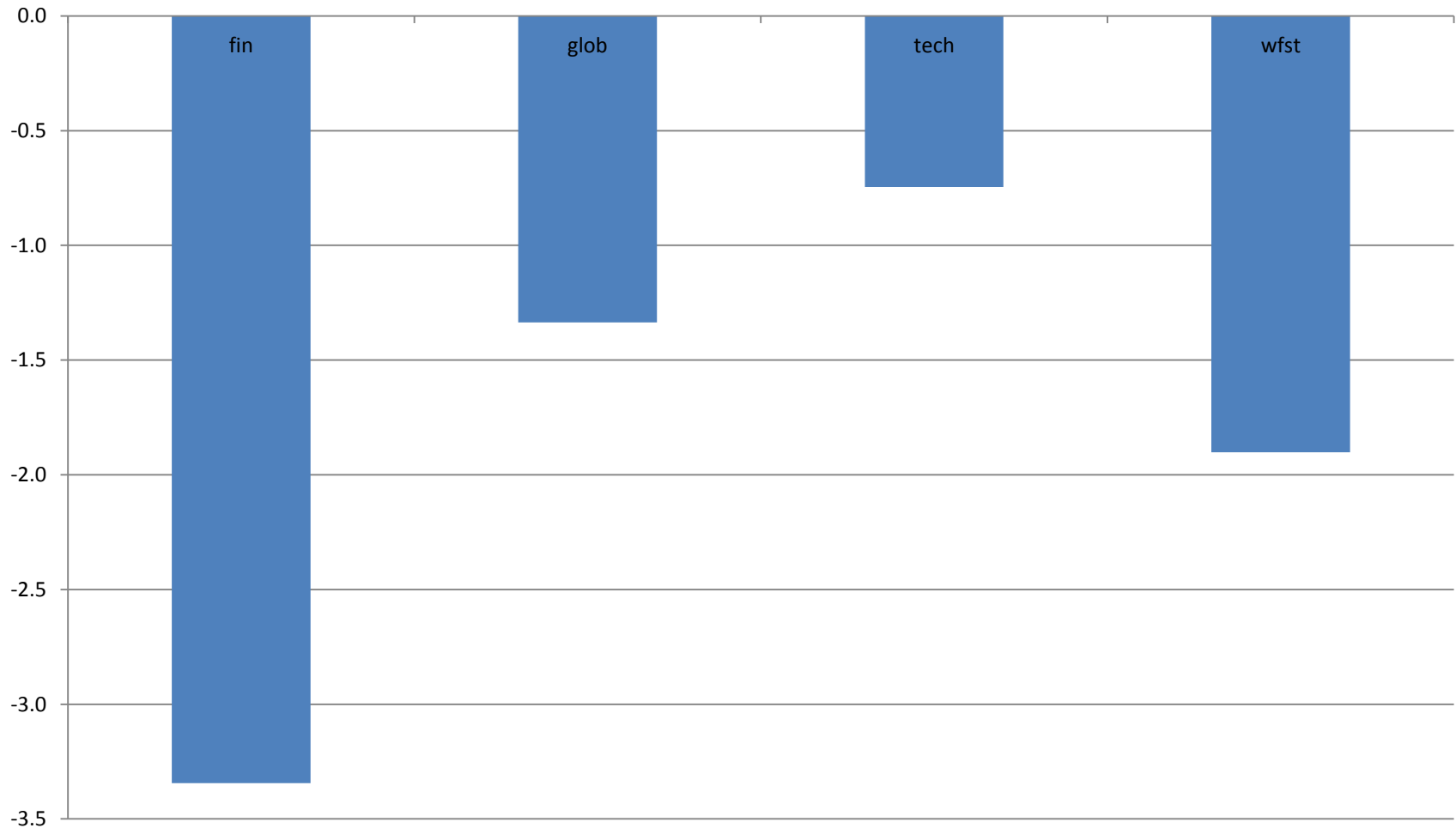
	ALL/DVP	ADV
financialisation	FINGLOB	FINGLOB
globalisation	OPEN	OPEN ToT
Welfare state	CG	CG UNION
Technological change	GDPpw IND AG	KL ICT



# Baseline specification (ADV)

	coeff	t-value
GROWTH	-16.43	-5.22***
LOG(FINGLOB)	-2.42	-3.37***
OPEN	-5.89	-3.21***
TOT	-4.55	-2.57**
CG	0.93	3.84***
UNION	0.10	1.78*
LOG(KL_KLEMS)	-7.03	-1.82*
LOG(ICT_KLEMS)	1.44	1.64
obs	470	
adj r2	0.94	
dw	1.81	

## Contributions to the change in the wage share, advanced countries 1980/84-2000/04



# Production in Mx and PK theories

- Marxian:
  - production as a labour process - *exploitation*
  - Class struggle at point of production, work organisation ... (labour process debate)
  - Social theory of productivity growth in SSA: positive effect of W, cost of job loss, unemployment
- Post Keynesian
  - Productivity determined by demand (Kaldor)
  - (empirically oriented): high wages, labour market institutions can contribute to productivity growth
    - Storm and Naastepad (2009): 'rigid' LMI lead to higher productivity growth
    - Hein and Tarassow (2010): higher profit share has neg effect on pdy growth
    - Vergeer and Kleinknecht (2011): wage, LMI pdy growth
  - How does this go together with class conflict in production?
    - Note: Arestis & Biefang-Mariscal have effect of unemployment (cost of job loss) on effort

# Some other loose ends

- Labour market segmentation
  - Skilled/unskilled labour
  - Gender inequality and growth (Seguino 2000, Blecker & Seguino 2002; Freeman & Schettkat 2005)
  - Political Economy of Race
  - Youth unemployment?
- Working time
- Uncertainty and class struggle
  - distributional struggles around the distribution of uncertainty -‘job insecurity’ as uncertainty experience by workers (Stockhammer & Ramskogler 2008 JEI)
- Labour supply
  - Spencer 2004, Spencer and Sawyer 2011
- Standard labour demand and accounting identities
  - Anyadike-Danes & Godley (1989), Felipe & McCombie (2009)

# Economic policy conclusions

- Full employment as policy goal: demand policy
- Wage policy can't cure unemployment:
  - wage cuts are counterproductive: Danger of deflationary spiral
  - consumption propensity out of wages is higher than out of profits.
- NAIRU endogenous
- Capital accumulation/animal spirits as key variable to explain variations in unemployment
- Fiscal policy as key tool for stabilization

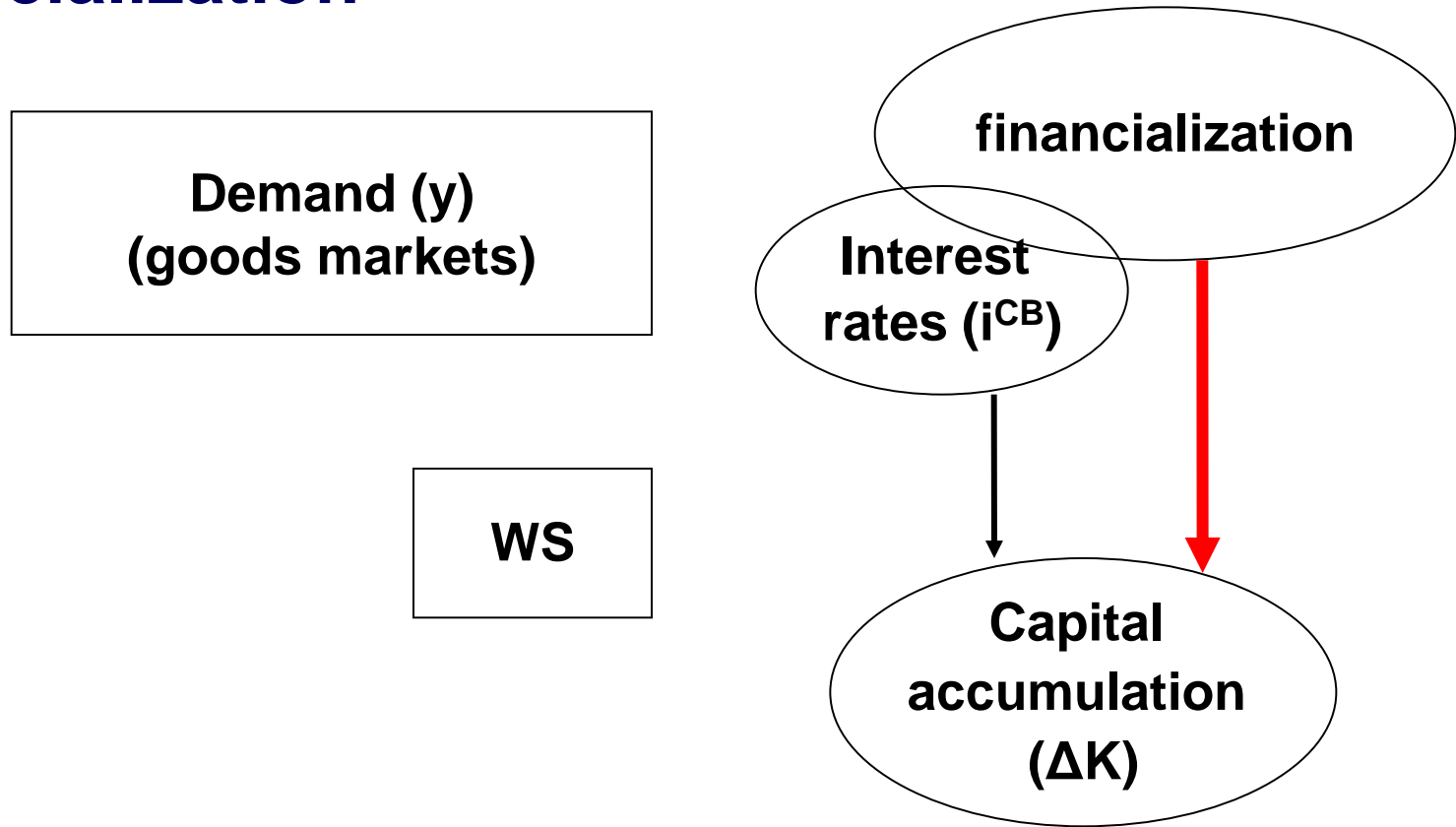


# Net Effects: $\Delta Y/\Delta WS$

## *Effects on private excess demand*

	<i>EU 12 (openness 15%)</i>	<i>Austria (openn. 50%)</i>
Consumption	0.37	0.36
Investment	-0.07	-0.15
<i>Domestic sector</i>	<i>0.30</i>	<i>0.21</i>
Net exports	-0.09	-0.39
Total effect	0.21	-0.18

# Financialization

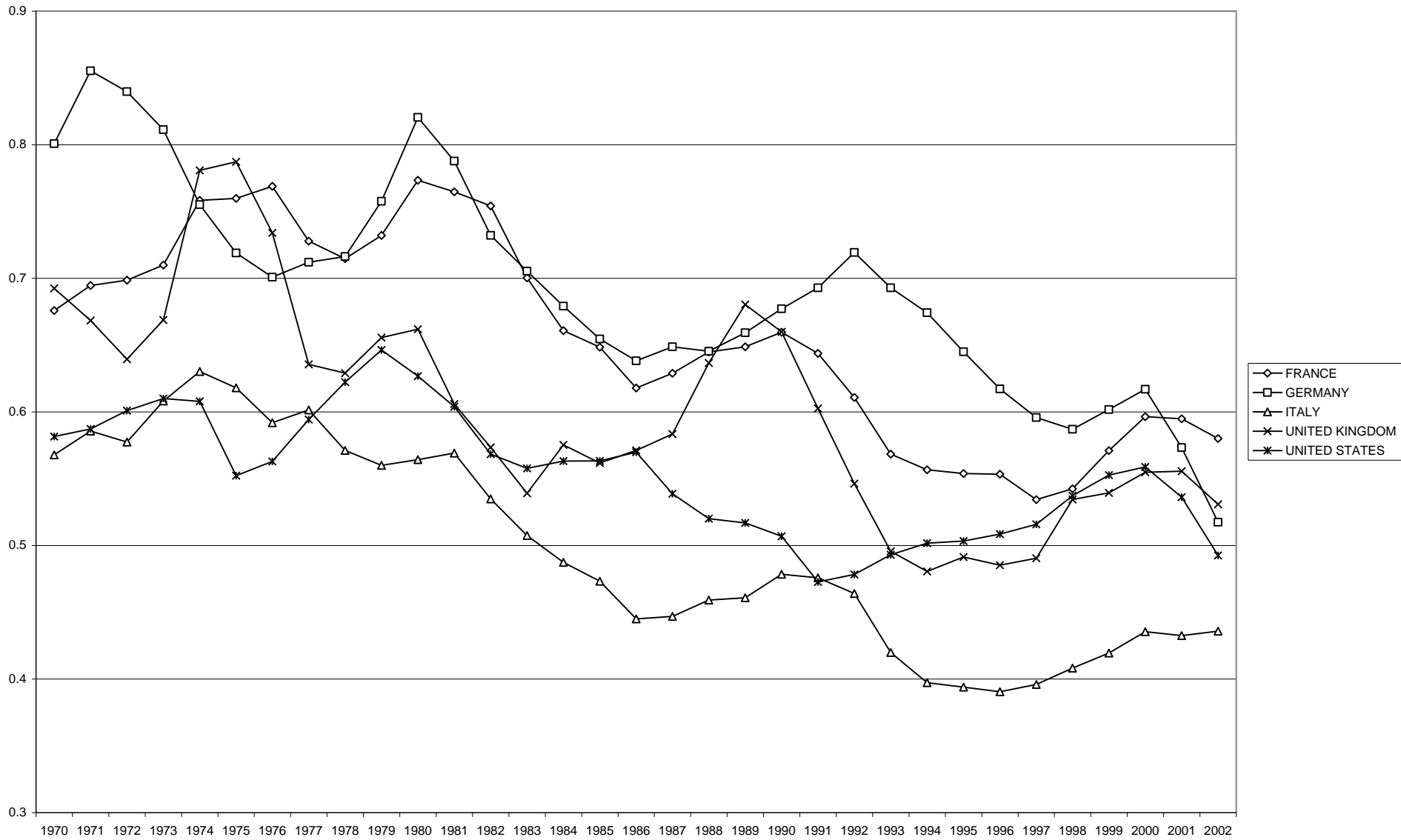




# Shareholder value orientation

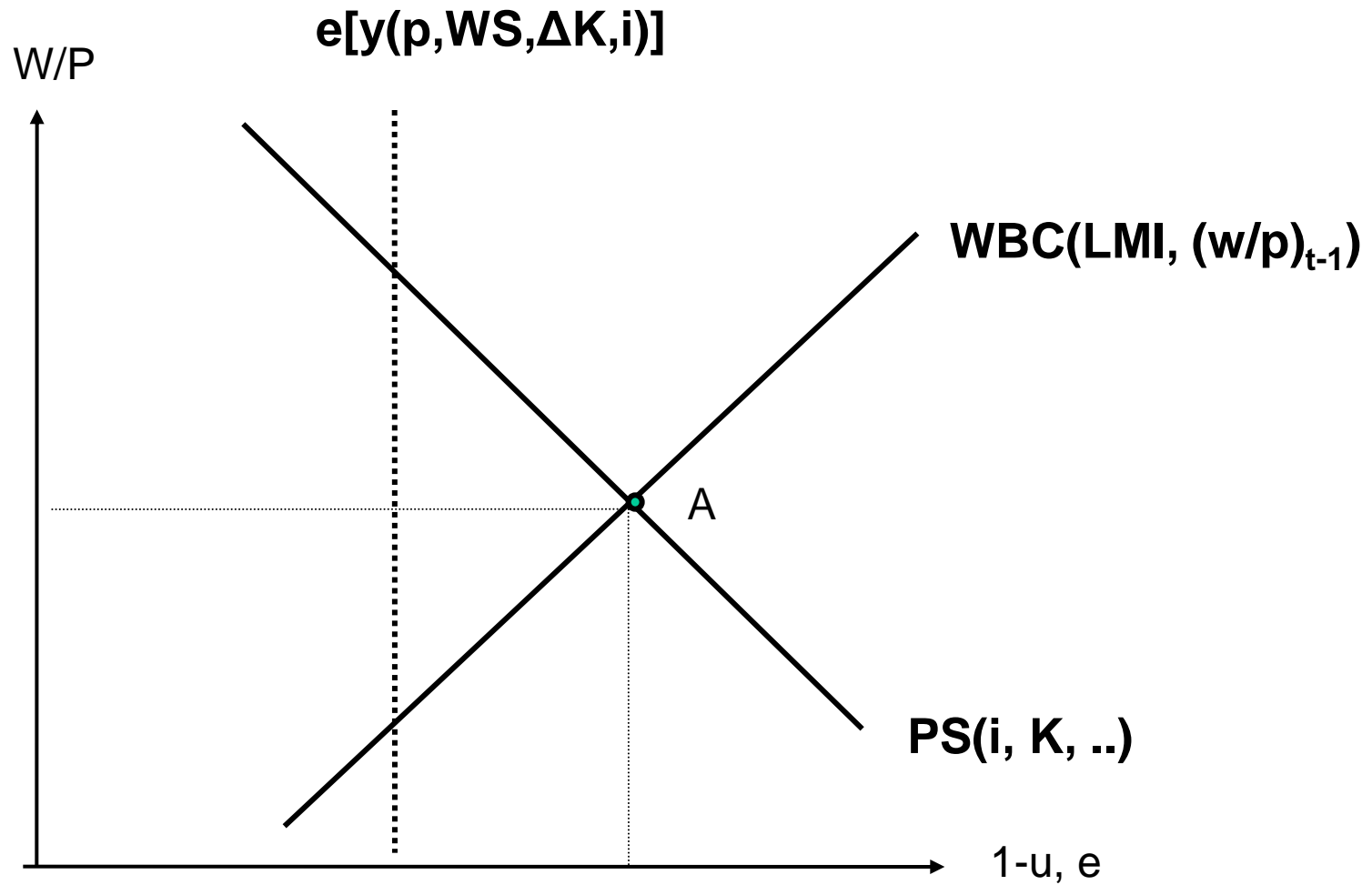
- *"profoundly altered patterns of managerial power and behaviour." (Baker and Smith 1998, 3)*
- *"Among the manifestations of this lack of control over management were the pursuit of market share and growth at the expense of profitability (...)." (OECD 1998, 17; emphasis added)*
- *management adopts owners' priorities:  $UM = U(g, r)$*

# Investment/operating surplus

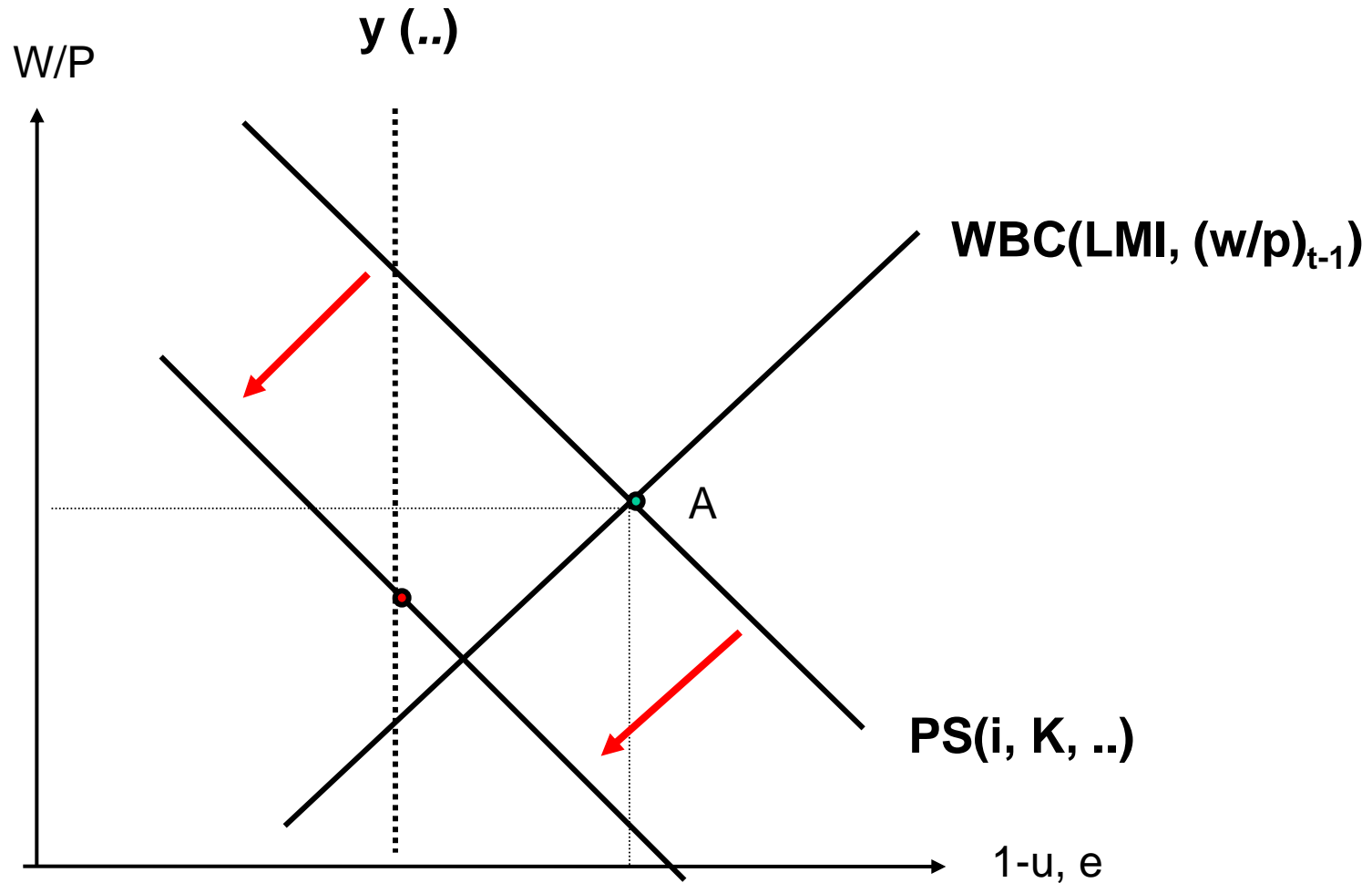




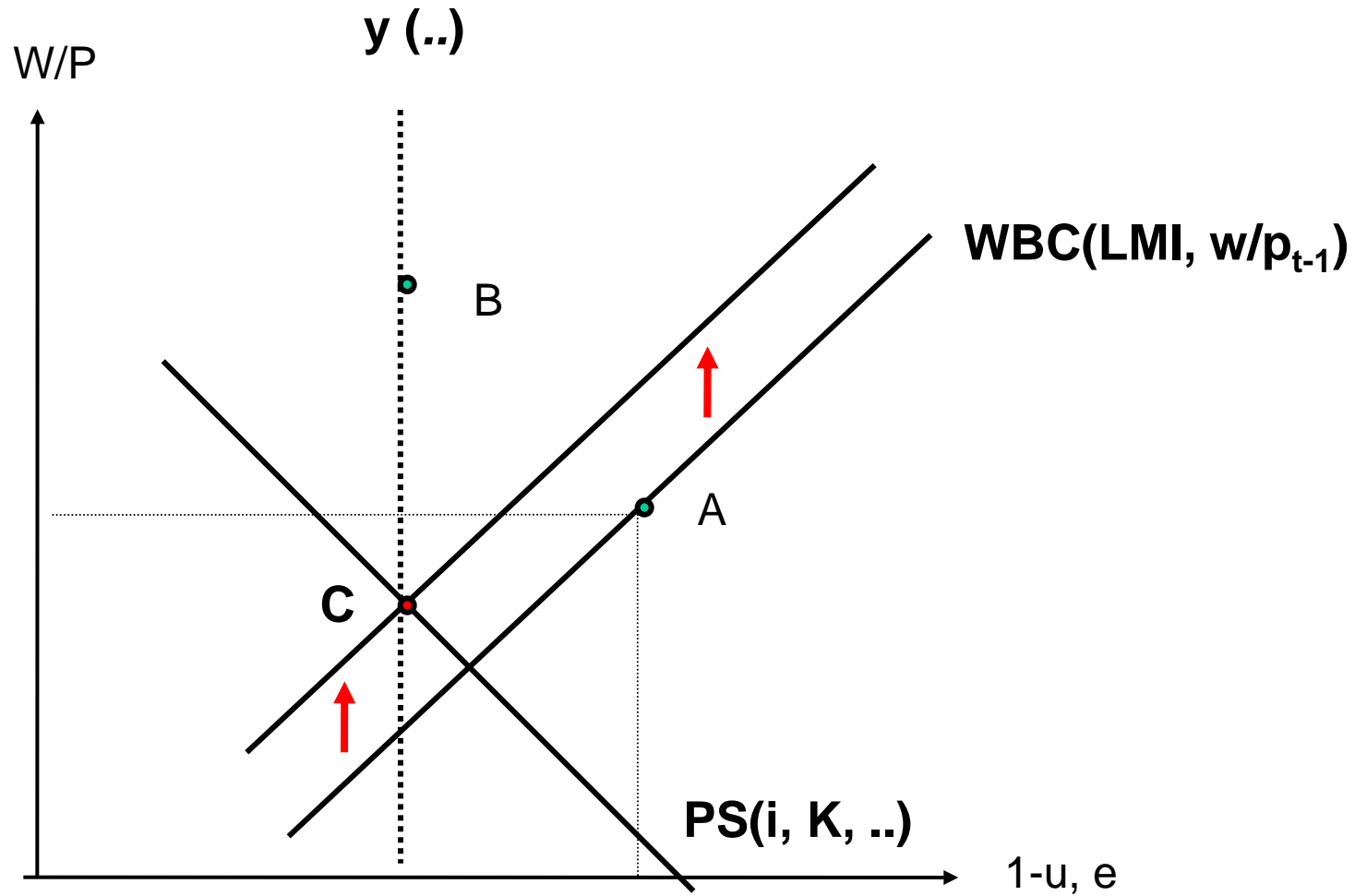
# Extended NAIRU model



# A Keynesian explanation, part 1



# A Keynesian explanation, part 2



# NAIRU model: different closures

- Simple NAIRU model
- Wage setting (WBC) and price setting (PS) function
  - Imply a NAIRU
  - Give a reduced form (expectations-augmented) Phillips Curve (PC)
- Employment determined by demand
- *Demand function:  $y = y_1 \cdot p + y_2 \cdot WS$* 
  - How does  $\Delta p$  affect demand?
  - How does  $\Delta WS$  affect demand?
- *Determination of the NAIRU ( $u_N$ )*
  - Is it exogenous (LMI) or endogenous („hysteresis“)?
  - NAIRU:  $\hat{u}_N = \lambda(u - u_N)$ .  $\lambda=0$ ?
  - Or:  $y(x)$  and  $u_N(x)$