

Flexible labour markets: good for jobs, bad for innovation?

**Contribution to the International Forum
APDC – think thank Lisbon Civic Forum
March, 27th 2009**

**Alfred Kleinknecht,
Professor, Economics of Innovation, TU Delft & Visiting Professor,
Université Panthéon Sorbonne, Paris I**

**(with thanks to Ronald Dekker, Federico Lucidi, Ro Naastepad,
Servaas Storm and Robert Vergeer)**

Related literature is downloadable from: www.eci.tbm.tudelft.nl

The standard neo-classical view

- **High European unemployment is due to labour market rigidity: the price of labour is downwardly rigid and cannot adapt to economic shocks**

Standard remedies:

- **Lower minimum wages**
- **Lower social benefits**
- **More tailor-made wage contracts (de-centralization of wage bargaining)**
- **Less rules that protect labour and make labour more expensive (e.g. easier firing)**
- **Reduce the power of trade unions (who act against the real interest of labour!)**

**'Liberal Market Economies' (LME) versus
'Coordinated Market Economies' (CME)
according to Hall & Soskice and others**

LME countries:

- **USA**
- **Canada**
- **Australia**
- **Ireland**
- **Great Britain**
- **New Zealand**

CME ('Rhineland'):

- **Most continental European countries**
- **Japan**

'Liberal Market Economies' (LME) versus 'Coordinated Market Economies' (CME)

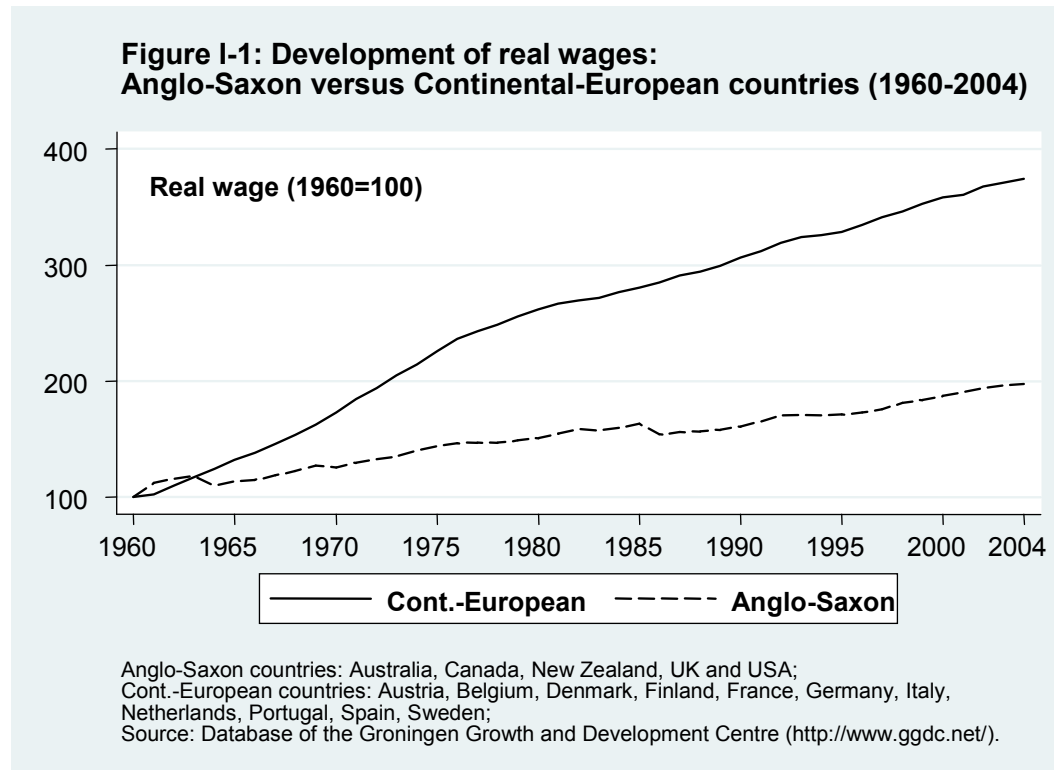
LME (Anglo-Saxon):

- **Easy hiring and firing**
- **Shorter stay in same firm**
- **Modest unemployment benefits**
- **Weak trade unions**
- **Labor relations are more 'conflictuous'**
- **Wage bargaining more de-centralized: income distribution more unequal**

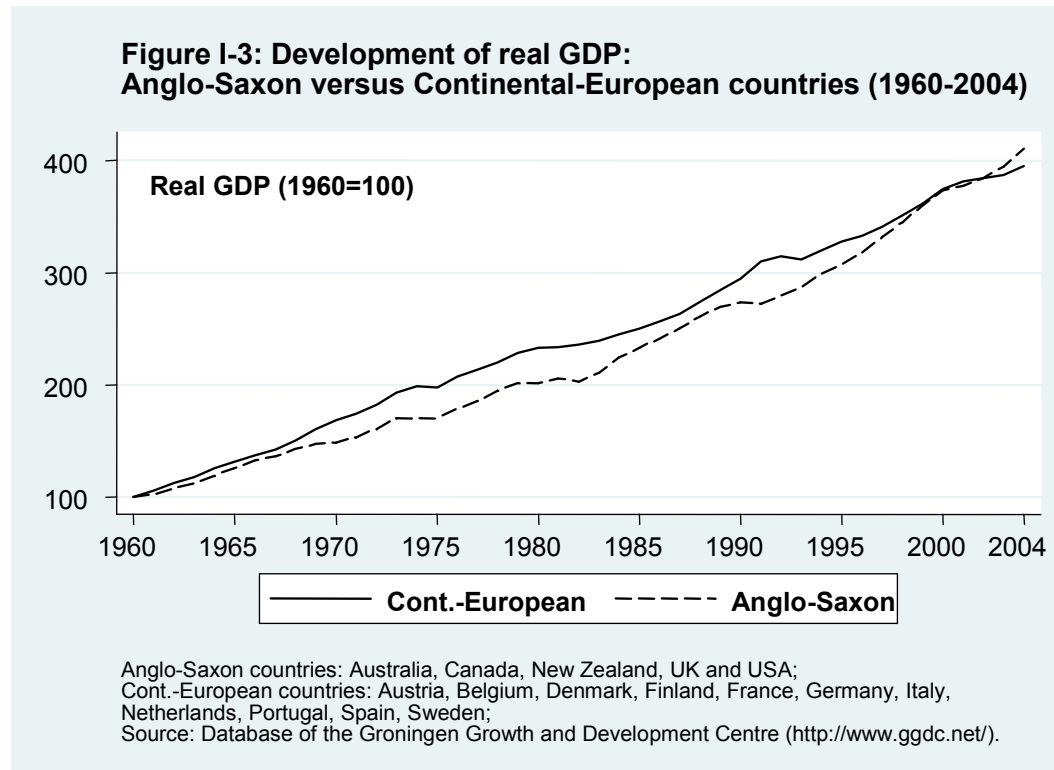
CME (Rhineland):

- **Protection against firing**
- **Longer stay in same firm**
- **Generous unemployment benefits**
- **Strong trade unions**
- **Labor relations are more 'co-operative'**
- **Wage bargaining more centralized: more income equality**

Differences in labour market institutions between LME en CME translate into 'automatic' wage restraint

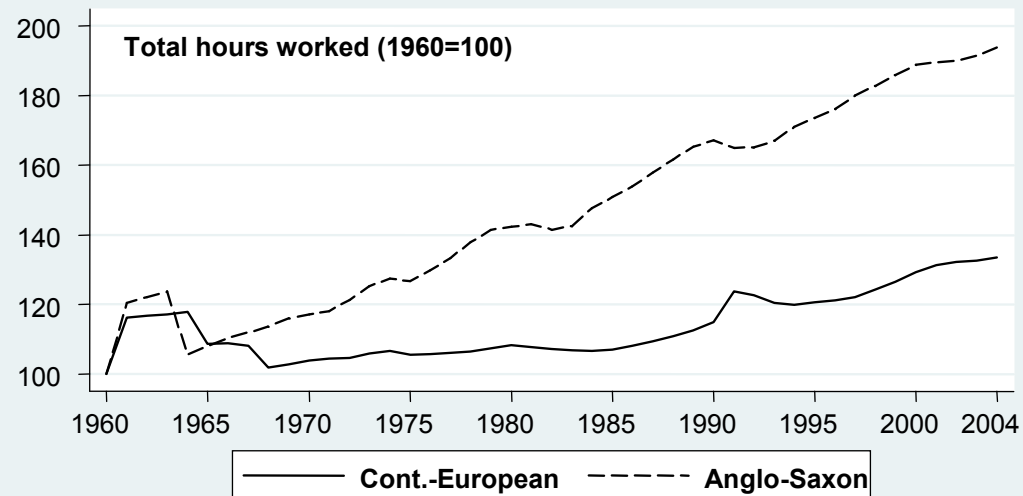


Remarkable: Despite differences in real wage growth, real GDP growth hardly differs



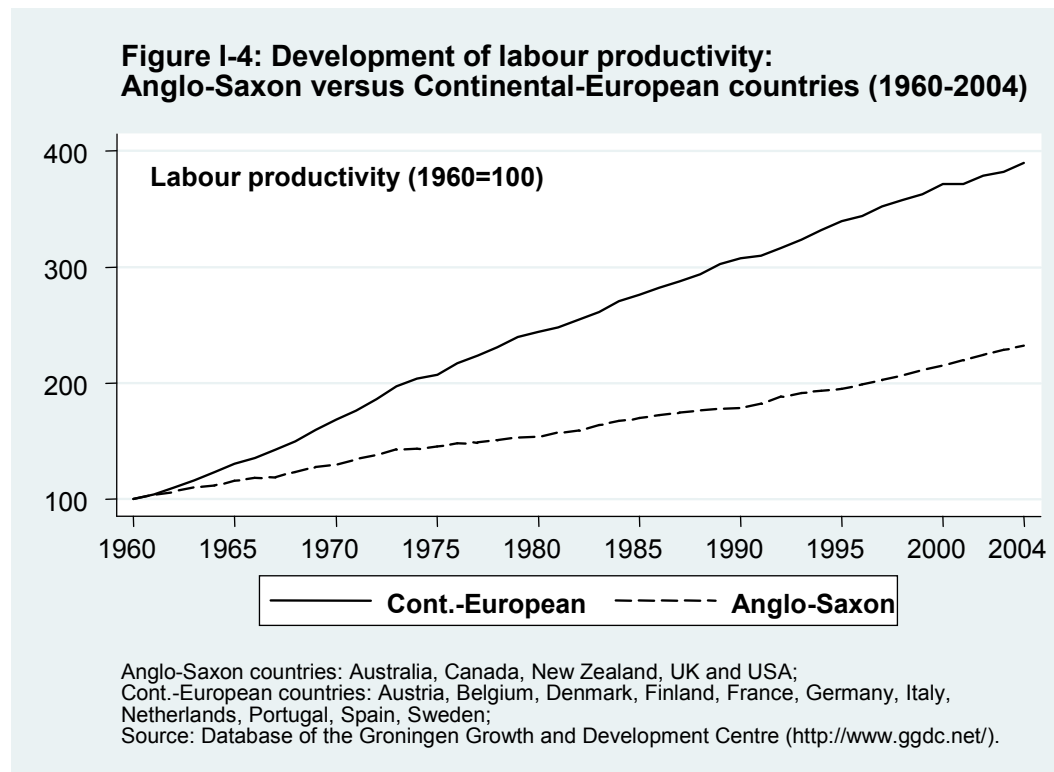
Anglo-Saxon countries need more labour hours for their GDP growth ... but is this 'good'?

Figure I-2: Development of total hours worked:
Anglo-Saxon versus Continental-European countries (1960-2004)

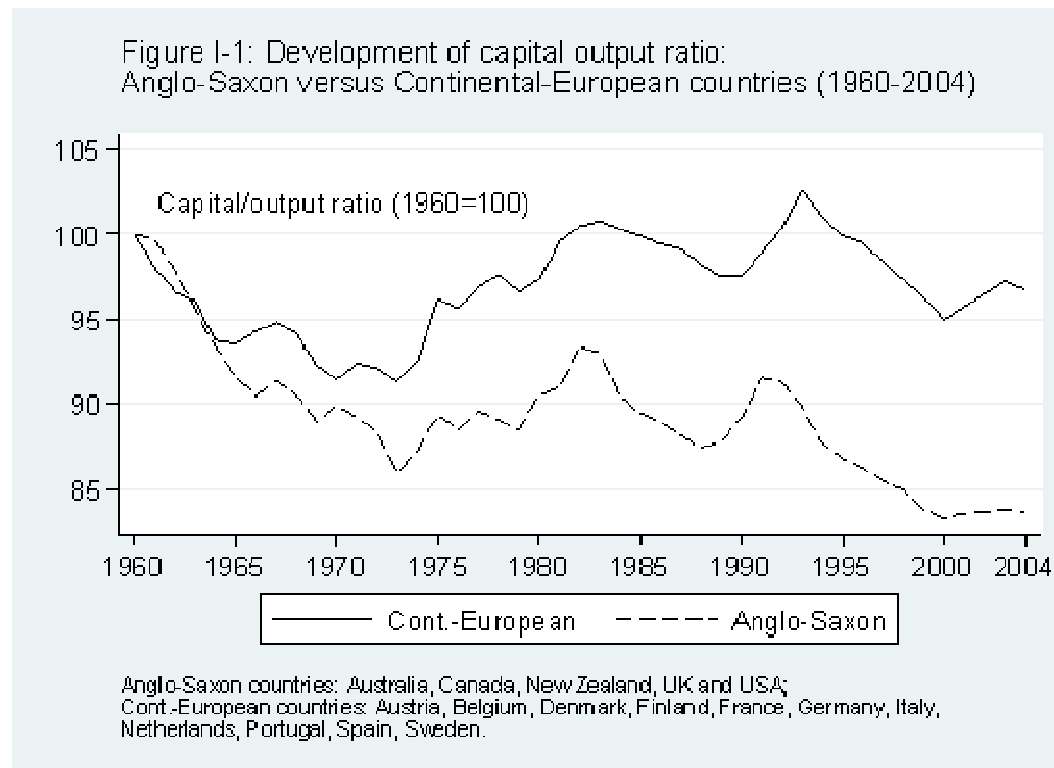


Anglo-Saxon countries: Australia, Canada, New Zealand, UK and USA;
Cont.-European countries: Austria, Belgium, Denmark, Finland, France, Germany, Italy,
Netherlands, Portugal, Spain, Sweden;
Source: Database of the Groningen Growth and Development Centre (<http://www.ggdc.net/>).

... due to a lower growth of their labour productivity
(i.e. GDP growth per labour hour)



... which is (among others) due to a lower growth of capital intensity (capital/output ratio)



**'Flexible' Anglo-Saxon versus 'rigid' European countries:
High labour productivity growth versus high employment intensity of
GDP growth**

	Average annual GDP growth		Average annual GDP growth <u>per hour worked</u>		Growth of labour hours per 1% GDP growth	
	Cont. European	Anglo-Saxon	Cont. European	Anglo-Saxon	Cont. European	Anglo-Saxon
1950-60	5.5	3.3	4.2	3.6	0.23	- 0.09
1960-73	5.1	4.1	5.2	2.7	- 0.03	0.34
1973-80	2.7	2.4	3.0	1.1	- 0.14	0.55
1981-90	2.6	3.2	2.4	1.4	0.07	0.55
1990-00	2.4	3.1	1.9	1.9	0.21	0.40
2000-04	1.3	2.5	1.1	1.6	0.15	0.35

Anglo-Saxon countries: Australia, Canada, New Zealand, US and UK. Cont-European countries: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Portugal, Spain, Sweden
Source: Groningen Growth and Development Centre (<http://www.ggdc.net/>); non-weighted average across countries.

Is there a causal link from wage growth to labour productivity growth?

Traditional argument:

- Labour productivity growth → wage growth (end of story)

My argument (to be proven):

- There must also be a link: wage growth → labour productivity growth

See the debate (in Dutch):

- Kleinknecht, A. & C.W.M. Naastepad: 'Loonmatiging schaadt productiviteitsontwikkeling wel', in *Economisch Statistische Berichten*, Vol. 89 (September 2004), p. 413-417.
- W.J. Jansen: 'Kleinknechthypothese mist empirisch bewijs!', *Economisch Statistische Berichten*, Vol. 89 (September 2004), p. 418.

Reasons for feedback from wages to labour productivity growth:

Neoclassical theory:

- **Factor substitution**
- **Vintage effect**
- **'Induced' technical change**

Evolutionary theory:

- **'Creative destruction' (Schumpeter)**
- **'Demand-pull' effect (Schmookler & Verdoorn)**

The feedback from wages to labour productivity growth

Our econometric estimates show:

- **1% less wage increase leads to 0.31-0.37% loss of labour productivity growth (within 9 years).**
- **Controls: Verdoorn effect; past productivity growth; gap towards the leading country; capacity utilization; service shares; country and year dummies.**
- **Coverage: 19 OECD countries, 1960-2004.**

Evidence from firm-level studies (Netherlands): Use of flexible labour reduces labour productivity growth

More 'flexible' firms (with many temporary contracts, manpower agency workers or a high labour turnover):

- pay, on average, lower wages (evidence from firm-level wage equations).
- Moreover, flexible workers earn lower hourly wages (person-level wage equations).
- This does not, however, translate into gain of market shares. Evidence from wage equations: flexible and rigid firms have the same sales growth.
- 'Flexible' firms show a lower growth of sales per worker (our proxy for labour productivity growth).
- Implication: 'Flexible' firms create more jobs – but is this 'good'?

Source:

- Kleinknecht, A., R.M. Oostendorp, M.P. Pradhan & C.W.M. Naastepad: 'Flexible labour, firm performance and the Dutch job creation miracle', in: *International Review of Applied Economics*, Vol. 20 (2006), pp. 171-187 (downloadable from: www.eci.tbm.tudelft.nl).

Similar results from Italy: Use of flexible labour and lower wage cost pressure reduce labour productivity growth

Evidence from 3.000 Italian manufacturing firms (2001-2003):

- **Higher use of fixed-term contracts reduces labour productivity growth;**
- **Higher labour turnover reduces labour productivity growth;**
- **Higher wage costs per worker in 2001 significantly increase labour productivity growth during 2001-3.**

Alternative specification:

- **If "wage costs per worker" are replaced by "shift in wage costs relative to capital costs during 1998-2000" ('Ricardo effect'), the latter also has a positive impact on labour productivity growth during 2001-3**

Control variables:

- **Verdoorn effect (growth of value added in a firm's sector of principal activity)**
- **Firm size and firm age**
- **Investment per worker**
- **Level of labour productivity (as a measure of a firm's relative distance towards best-practice firms)**
- **Sector and region dummies**

Source: Federico Lucidi & Alfred Kleinknecht: *Little Innovation, many jobs. An econometric analysis of the Italian labour productivity crisis* (manuscript under revision).

Why flexible labour markets might favour innovation and productivity growth - the static Walrasian view:

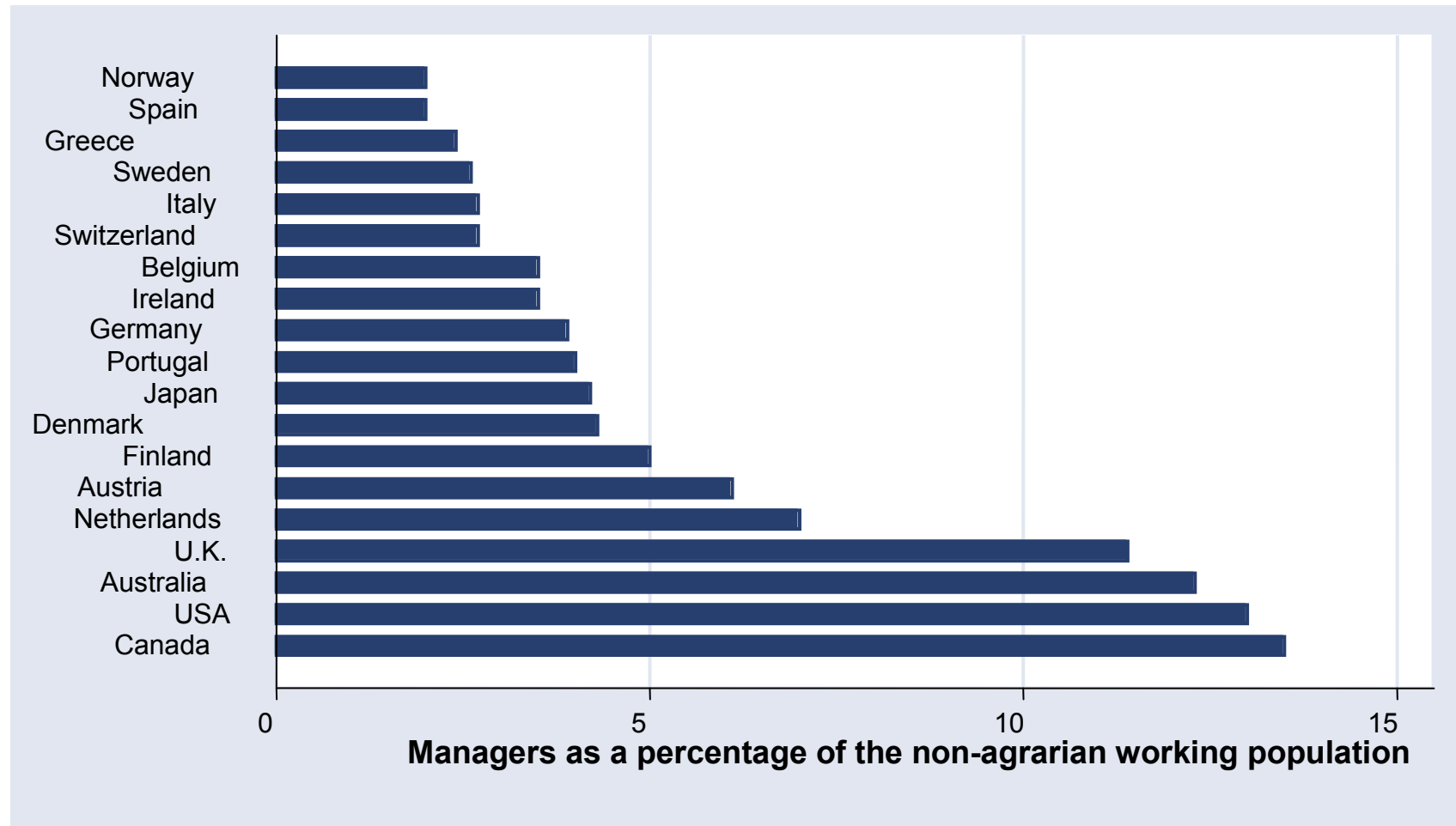
- **Difficult and expensive firing of redundant personnel frustrates labour-saving process innovations**
- **With easier firing, shifting labour from old and declining industries to innovative activities is easier**
- **Easier firing enhances the inflow of 'fresh blood' (i.e. of people with novel ideas and networks)**
- **The (latent) threat of easy firing reduces shirking**
- **Firms can more easily replace weak people by better personnel**

Why flexible labour markets might damage innovation and productivity growth - the Schumpeterian view:

Principal argument: Flexible 'hire & fire' reduces loyalty and commitment. Possible consequences are:

- **Greater chances that trade secrets and technological knowledge will leak to competitors, larger positive externalities leading to stronger under-investment in knowledge.**
- **There is more need for monitoring and control. Anglo-Saxon countries have substantially larger management bureaucracies which are frustrating for creative people (Kleinknecht et al. 2006).**

Share of managers in working population (19 OECD countries, 1984-1997)



Why flexible labour markets might damage innovation and productivity growth - the Schumpeterian view (continued):

- **Lower investment in manpower training as pay-back periods become shorter.**
- **Personnel have fewer incentives to invest in firm specific knowledge (e.g. safety instructions)**
- **A larger personnel turnover weakens the 'historical memory' of organizations and the 'learning organization'.**

Why flexible labour markets might damage innovation and productivity growth - the Schumpeterian view (continued):

Schumpeter I model:

- **'Entrepreneurial model': new firm foundation (e.g. in ICT, biotechnology); inventor-entrepreneur ('Garage business').**

Schumpeter II model:

- **'Routinized innovation model': Professionalized R&D labs in large firms. Incremental innovations based on continuous accumulation of (tacit) knowledge with strong path dependencies**

Impression from trade statistics:

- **Anglo-Saxon countries perform better on Schumpeter I regime**
- **'Old Europe' performs much better in Schumpeter II regimes**

Why flexible labour markets might damage innovation and productivity growth - the Schumpeterian view (continued):

- **Continuous accumulation (over long periods) of (tacit) knowledge for incremental innovation in a Schumpeter II 'routinized' innovation regime is favoured by continuity in labour relations.**
- **A Schumpeter II regime gives incentives to reallocation of work within internal labour markets (functional flexibility) rather than via external labour markets (numerical flexibility). The cumulative nature of knowledge makes insider-outsider labour markets attractive to employers.**

Why flexible labour markets might damage innovation and productivity growth - the Schumpeterian view (continued):

- **People on the shop floor possess much of the (tacit) knowledge required for process innovations. People threatened by easy firing have incentives not to reveal knowledge relevant to labour-saving process innovations.**
- **Easy firing of personnel will change power relations in firms. People will less easily criticize (top) management decisions. Lack of critical feedback from the shop floor can favour problematic management practices.**

Why flexible labour markets might damage innovation and productivity growth - the Schumpeterian view (continued):

- **Tougher and more centralized wage claims by strong trade unions in rigid European labour markets put pressure on technological laggards, thus favouring labour productivity growth**
- **This works via stronger creative destruction; capital-labour substitution, vintage effects, and (most likely) via Verdoorn effects and Schmooklerian 'demand-pull' effects**

In a nutshell: Walras versus Schumpeter

What is efficient in a static Walrasian general equilibrium framework can be counter-productive in a dynamic Schumpeterian world!

Rounding up (1):

Are flexible labour markets good for labour productivity growth?

Evidence at macro and micro level:

- **Flexible labour relations and wage restraint lead a to lower growth of labour productivity and a more labour-intensive growth (ironically resembling the factor-intensive growth pattern in Eastern Europe before 1989!)**
- **A low-productive and labour-intensive growth path is problematic with an ageing population in Europe!**

Rounding up (2):

Does deregulation of labour markets reduce unemployment rates?

- **Yes: Nickell, Nunziata & Ochel, 'Unemployment in the OECD: What do we know?', in: *Economic Journal*, Vol. 115: 1-27.**
- **Doubts: According to our (still unpublished) re-estimates, their results are not robust! → It is doubtful whether the 'flexible' countries indeed have lower unemployment rates (in spite of their labour-intensive growth!)**

**Download related papers
from:**

www.eci.tbm.tudelft.nl

(→ publications)