

# **When Does a Competitive Labor Market produce “Good” Flexibility?**

**I. What does flexibility do?**

**II. What flexibility does a competitive labor  
market produce?**

Richard B. Freeman, Harvard, NBER, CEP, LSE  
'Flexibilit eit Arbeitsmarkt', Jan 21, 2011

# Two propositions Underlie the Belief in the Virtues of Labor Market Flexibility

1. “All” forms of flexibility produce good economic outcomes and bring us closer to equilibrium clearing – the Invisible Hand ideal.
2. Competitive labor market creates good flexibility while institutions constrain optimal adjustments.

# **This presentation rejects both propositions**

1. Flexibility is not always good. Like fat and cholesterol there is good and bad. There is probably an inverse U shaped curve linking any form of flexibility to economic outcomes.
2. Real world competitive labor market – US -- does not produce anything that resembles Invisible Hand market clearing and flexibility. It produces surprising rent-sharing/rent-extraction --> jobless recoveries?

# The latest on Fats

**GOOD:** Monounsaturated fats lower total cholesterol/bad LDL cholesterol; increases good LDL cholesterol. Polyunsaturated fats also lower total cholesterol and LDL cholesterol. Omega 3 fatty acids.

**BAD:** Saturated fats raise total blood cholesterol & LDL cholesterol. Trans fats that "hydrogenate" liquid oils for better shelf life are bad. Recent debate over whether saturated fats "really bad"

But some fats needed for nutrient absorption, nerve transmission, maintaining cell membrane. Too much -> obesity, heart disease and certain cancers.

# **1. What does flexibility do in comparative statics partial equilibrium model?**

**Le Chatelier theorem says that constraints produce lower elasticities and thus less output in short run than long run. Thus, flexibility raises output.**

**But flexibility is 2<sup>nd</sup> order property in most economic models. Cobb-Douglas first order approximation; CES second order, with differences in  $\sigma$  (elasticity of substitution) have modest impact on output.**

# Flexibility in Growth Model

If flexibility affects Investment and R&D, it affects growth and could have much bigger dynamic effect than effect on comparative statics.

But cross-country regressions show no effect of measures of labor market flexibility (Fraser Institute, World Bank cost of business) or of changes in measures of labor market flexibility on GDP per capita growth. In labor EPL affects the distribution of employment and unemployment more than it affects the levels.

# **Flexibility operates on many margins**

Price/wage flexibility: Profit-sharing and group/individual performance pay is flexible while minimum wage, overtime pay rules are mandated by law or collective bargaining.

Quantity flexibility -- employment protection legislation; hours limits; training by employers; temporary jobs. Workers effort, labor participation and retirement, investment in education, self-employment.

# **Substantial country differences in flexibility margins during 2008-10 recession**

Adjustment largely through employment – US, Spain, Ireland, Latvia

Adjustment largely through hours --- Germany, Czech, Slovakia, Greece

Adjustment largely through hourly productivity --Netherlands, Japan, UK, Romania.

Source: EU, Employment in Europe 2010, chart 12b



# BLS Mfg data show declining productivity per hour as job-saving mode of response.

Chart 1. Percent changes in manufacturing output per hour, 2008-2009

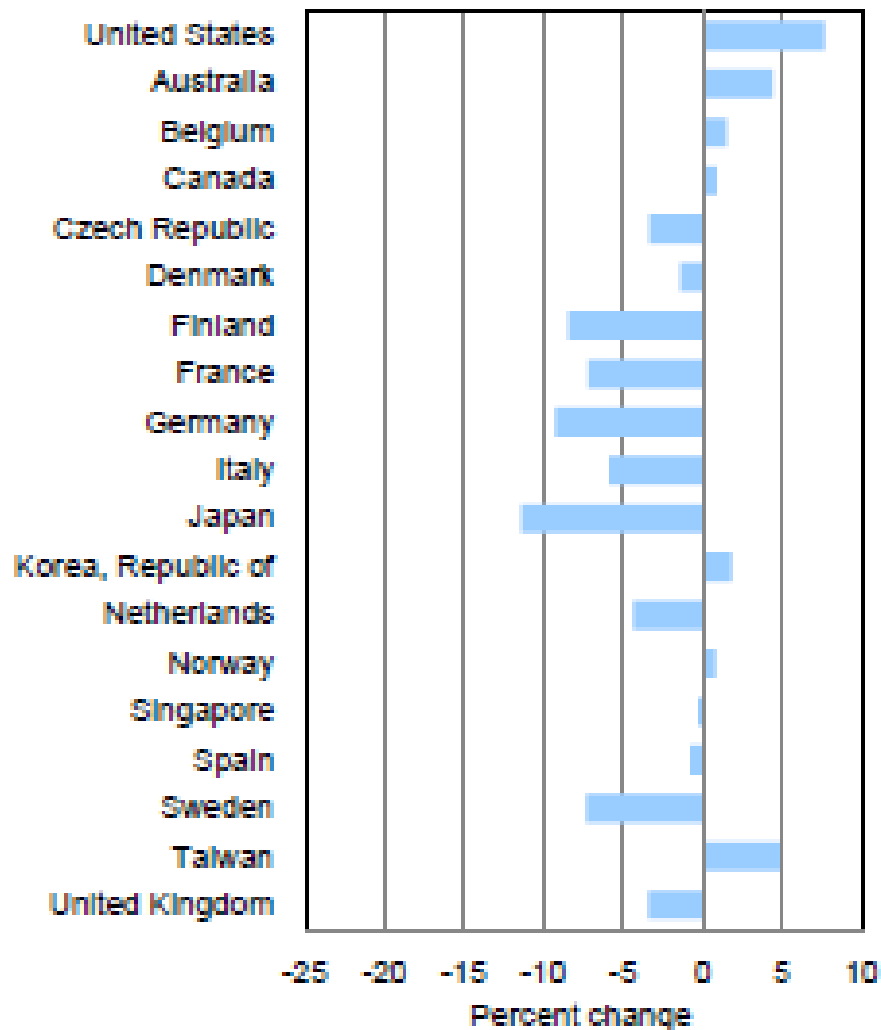
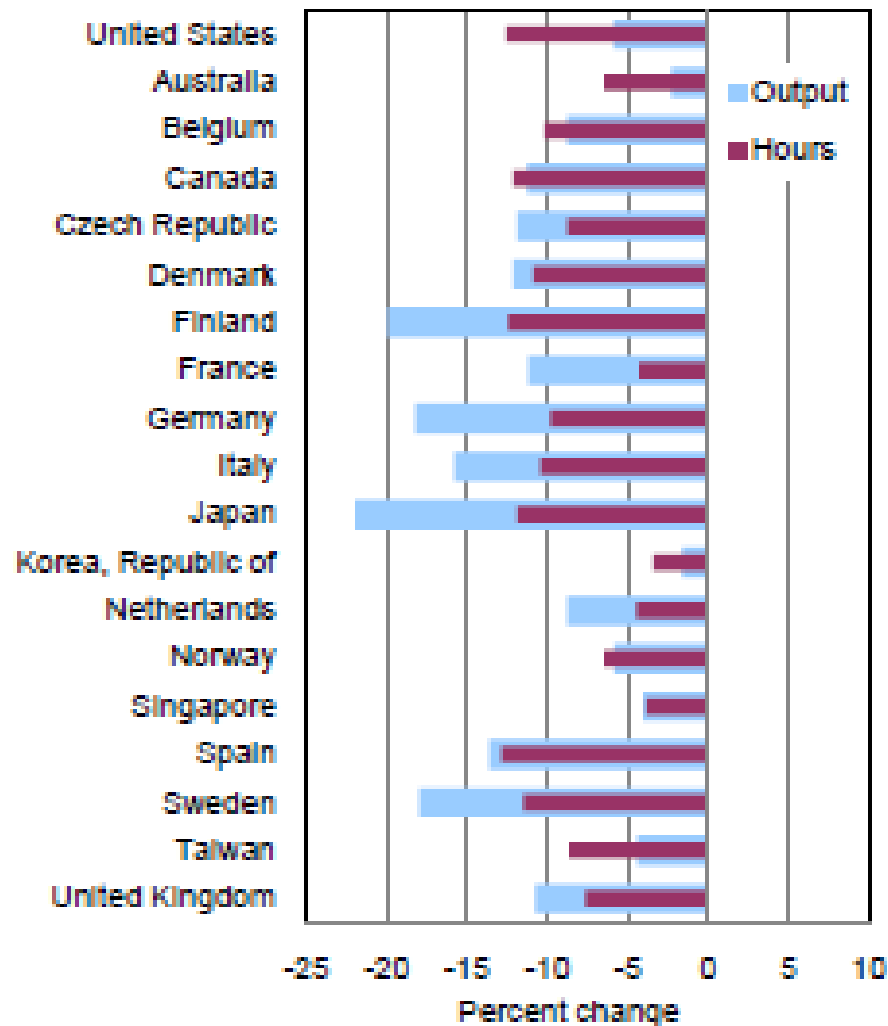


Chart 2. Percent changes in manufacturing output and hours, 2008-2009



# The Variation is immense

The United States had the largest productivity increase, 7.7%.

Japan had the steepest productivity decline, -11.4%.

Within EU, Belgium 1.2% vs Germany -9.3%

Netherlands, -4.4% vs Denmark -1.4%, with DK having larger hours drop than NL

# Flexibility can be bad

Wage deflation/price deflation → high real interest rates that lowers investment and growth.

Wage inflation → price inflation → currency crisis/hyperinflation

Short run transition probability for employment-unemployment > unemployment-employment  
--> elongated recessions, high U as norm

Long run temporary jobs → less training, less safety at work, loss of OJT/experience

# **Inflexibility can be good**

**Behavioral: commitment devices to fight short-termism/hyperbolic discounting for individual benefit.**

**Bargaining: commit to get your “fair share”**

**Externalities: force agents to respond along more socially desirable margins – early warning systems for plant closure; search for work/train employees instead of ditching them**

**Hard rock power of constraint in creating innovation? Recessions are constraint**

## 2. Mirror, mirror, on the wall, who has the most flexible labor market of all?



The US, of course, silly economist. By all the metrics, the US is peak competitive/flexible major advanced economy. Just count the ways ... little pvt sector collective bargaining, low minimum wage, little EPL, low UI benefits ... high mobility of labor; low cost of starting/closing business



# Thus, we expect

Macro-adjustments -- More wage than quantity; big employment/output (E/O) elasticity; large EU, UE transition --> rapid cyclic recovery, mostly short U spells

Micro-adjustments – Large wage diffs by skill but single pay for similar skills; At industry/firm level, firms as (Salter model) wage takers --> big E/O elasticity. For given  $(O/E)'$  or  $O'$ , low correlation with  $W'$ ; hopefully high  $E'$  with  $O/E$  or  $O'$  so labor shifts to more productive/growing areas

# What do we get in Aggregate?

Wage vs quantity?

30 years of aggregate productivity growth with stagnant real wages;

Cyclic wage adjustments

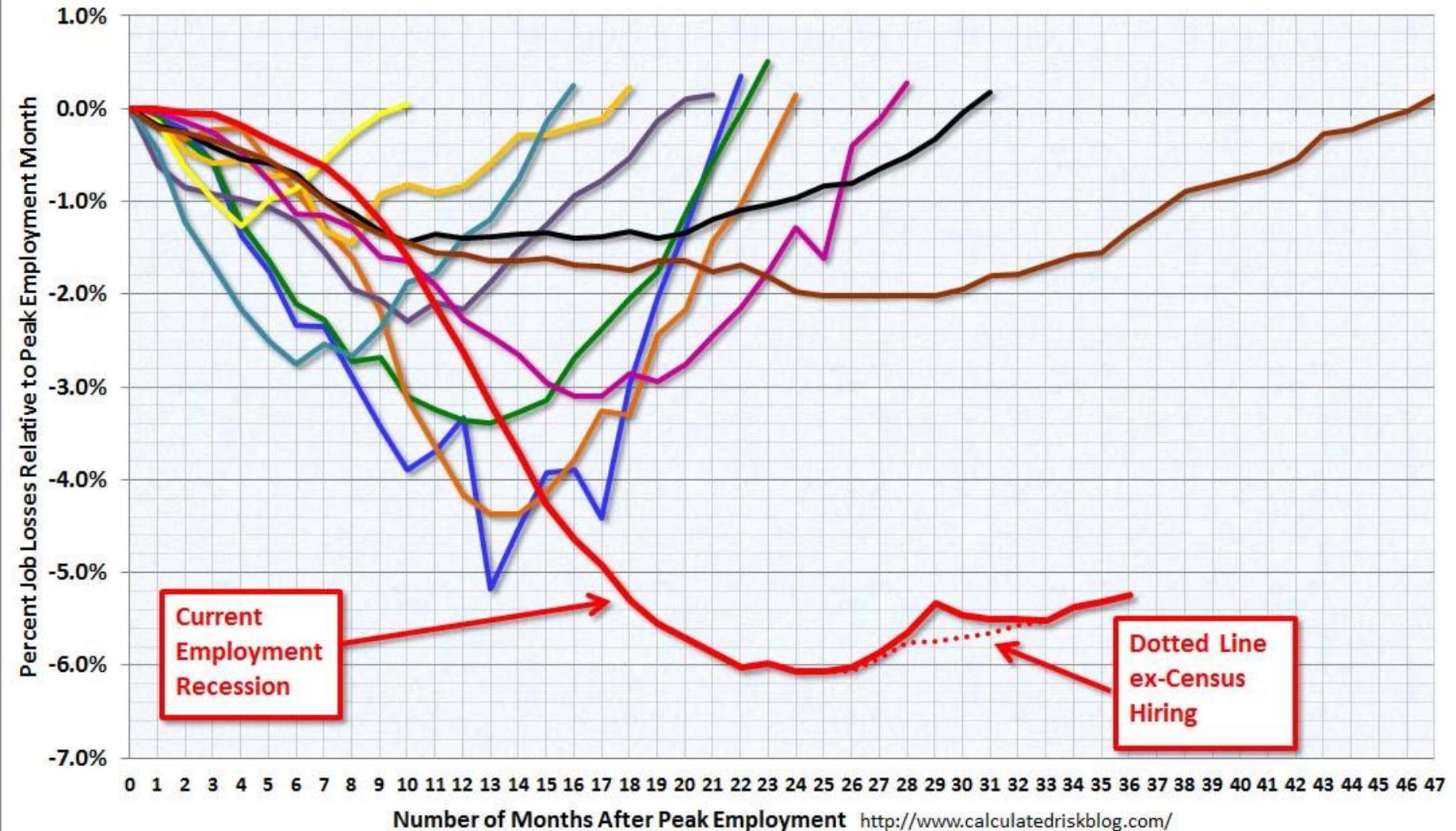
Gross mobility of labor across sectors but industry/occupation change no different than in other advanced countries: all have shifted work force by roughly similar amounts.

Education differentials high but stagnant investment in education

# US strategy fire people fast to restore profits, don't hire them back until ... 2020?

Percent Job Losses in Post WWII Recessions

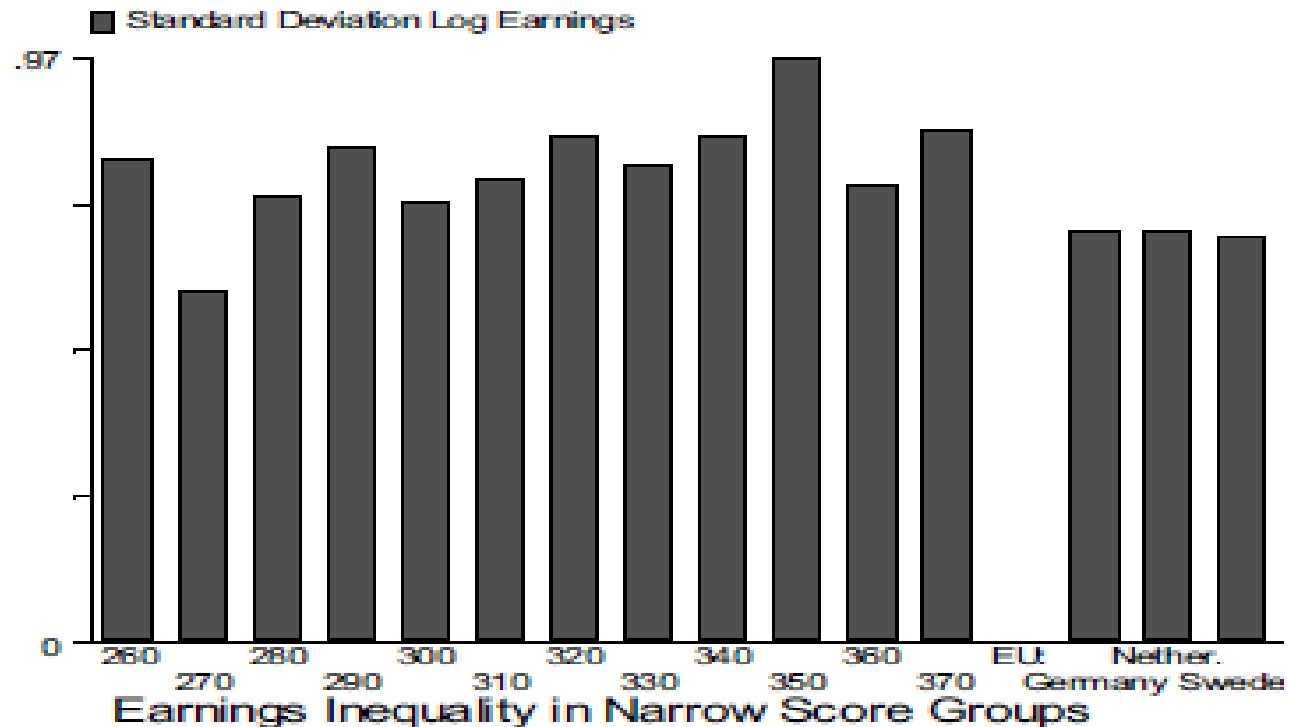
1948 1953 1958 1960 1969 1974 1980 1981 1990 2001 2007





# Micro Wage Behavior: individuals

Figure 3: Wage inequality in Narrow US Score Groups



**Source:** National Adult Literacy Survey for US; International Adult Literacy Survey for other countries. We break the NALS sample of US workers into groups based on test score. For example, group 260 includes all persons with a score of 258-262. The average number of observations in each group is 286. We compare earnings inequality within each group to earnings inequality of each country. The average standard deviation of log earnings in these twelve groups is .79. The comparable figure for the four countries is Germany .68, Netherlands .67, Sweden .68, and US .86 (in the NALS, or .93 in the IALS).

Micro: Establishment level analysis: large rising wage differences among plants (Barth, Bryson, Davis, Freeman, 2010 – under revision)

	1992	1997	2002	<b>92-02</b>
<i>Full year /LEHD unit</i>				
Variance total	0.461	0.481	0.509	<b>0.048</b>
Variance within	0.260	0.269	0.273	<b>0.013</b>
Variance between	0.201	0.212	0.237	<b>0.036</b>
Share between	0.436	0.441	0.465	<b>0.740</b>

# The result: 3/4ths of Rising Dispersion of wages in US is fragmentation of establishment

	1977	1982	1987	1992	1997	2002	92-02	77-02
V(ln individual wage)	0.515	0.552	0.565	0.576	0.599	0.617	<b>0.041</b>	<b>0.102</b>
V(ln establishment average)	0.332	0.362	0.412	0.413	0.443	0.446	<b>0.033</b>	<b>0.114</b>
<i>Corrected LBD comparison</i>								
<i>Using LEHD data:</i>								
Covariance ( $\mu_f, \sigma_f$ )				0.014	0.019	0.019	0.005	
Variance ( $\sigma_f$ )				0.045	0.043	0.042	-0.003	
1/4* Vt + Cov ( $\mu_f, \sigma_f$ )				0.026	0.029	0.030	0.004	
Variance (lnw) corrected				0.387	0.414	0.416	0.029	
Implied share between establishments				0.671	0.691	0.674	0.707	

# Some attributes of increased dispersion, 1977 to 2007

1- Rising dispersion of ln wages associated with greater increase in productivity dispersion:

increase  $\sigma$  ln wages = 0.14 points

increase  $\sigma$  ln Output/E = 0.34 points!

2- Rise in dispersion of ln wages is in multi-establishment firms (which have greater choice and may be less market-constrained):

	1977	2002	2007
Single establishment firms	0.34	0.39	0.40
Multi establishment firms	0.29	0.47	0.51

# What are the implications of rising pay dispersion among plants for employment growth?

If it is rent-sharing or upward-sloping demand, the response of pay to shifts in demand → slower job recovery

Analysis of changes across 667,376 establishments in 5 year periods (1977-1982, 1982-1987 ...) with OLS and IV:

Model A: take productivity growth  $(O/E)'$  as exogenous.

$$(OLS) \quad W' = .29 (O/E)' + \dots \text{ and } E' = -0.25 (O/E)' + \dots$$

$$(IV) \quad W' = .13 (O/E)' + \dots \text{ and } E' = 0.03 (O/E)' + \dots$$

Model B: Take sales growth  $(O)'$  as exogenous

$$W' = .13 (O)' + \dots \text{ and } E' = 0.45 (O)' + \dots$$

## **Conclusion**

Labor Market flexibility is oversold cure for economic ailments. We need flexibility and constraints. Margins of flexibility differ in impacts. Some margins do well in solving some problems but too much flexibility can also cause economic harm.

That market-dominated US produces fragmentation of wages at establishment level, massive within skill group pay differences raises questions about how competitive real world market operates without institutional structure/constraint. Maybe the Invisible Hand needs some visible help to produce good flexibility.

# Thanks!

