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Manufacturing in Europe, 1995-2010: Reconfiguring Interests and Institutions

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Sectors and Nations

- Varieties of Capitalism
 - Manufacturing as a sector brings a certain set of interests – specific skills and the demand for social protection and the coordinated economy (Hall and Soskice, Thelen)
 - The sector is largely fixed, and a ‘fit’ is posed between techno-economic sectoral and political-economic national characteristics
 - The importance of the sector shapes the political economy of the nation
 - Manufacturing largely consigned to the world of ‘incremental learning’ in ‘coordinated economies’
- Nation-centred approaches
 - National worlds of production – case studies of factories in action
 - Comparative survey research on workplaces (Lorenz and Valeyre)
 - National differences on similar techno-economic terrain
- Overall
 - The presence of a limited set of recognisable workplace regimes across countries; but also...
 - These vary by sector but there are also significant national differences in worlds of production

Advancing the Comparative Study of Workplace Regimes

- Lorenz and Valeyre (2005): based on the labour process / work organisation:
 - Lean
 - Learn
 - Taylor
 - Simple
- Substantive
 - Adding in employment relationship (precarity) and working time (new work regime combinations)
 - Looking at national differences within sectors e.g. in manufacturing

Methodology

- Data:
 - European Working Conditions Survey, 1995 to 2010 (merged)
- Unit of analysis:
 - Employees within manufacturing, EU-15*
- Variables: work organisation, employment relationship & time
- Analysis
 - Latent Class Analysis
 - Regimes
 - Country Clusters
 - Regression

Work Regimes in Manufacturing

L & V's original regimes

- **Lean** : moderate autonomy, high learning, high intensity*
- **Learn**: high autonomy, high learning, low intensity
- **Taylor**: low learning, low autonomy & high intensity (w/ relatively high precarity)
- **Simple**: low learning, low to moderate autonomy & low intensity (w/ relatively high precarity)

*intensity: production norms, quality standards, customers, boss, machine speed, colleagues pace, task rotation, deadlines

Plus new regimes

- **Learn extend**: high autonomy & learning, low intensity, over 48 hours/week*
- **Lean shift**: high learning, moderate autonomy, high intensity, weekends, nights & shift work

A Richer Picture of Regimes

Lean and Learning

- Empowered Workers
- Pressured Workers – especially external controls (deadline, customers)
- New forms of control are not necessarily alternatives to older forms of control, e.g.
 - Deadlines are closely linked to machine speed
 - Customer and Boss control partly overlap

Differences

- Autonomy
 - Relatively higher in Learn and Learn extend
- Time Bargains
 - Lean Shifts and Extended Learning
- Training and Learning
 - Lean – higher training, lower learning
 - Learning – lower training, higher learning

Worlds Data (Multi-level Latent Class Analysis)

Continental / Liberal	Nordic	Southern (Mediterranean)
49.43%	31.71%	18.86%
Austria 95, 00 & 05	Austria 10	Greece 95, 00, 05 & 10
Belgium 95, 00, 05 & 10	Denmark 95, 00, 05 & 10	Portugal 95, 00, 05 & 10
France 95, 00, 05 & 10	Finland 95, 00, 05 & 10	Spain 00 & 05
Germany 95, 00, 05, & 10	Netherlands 95, 00, 05 & 10	
Ireland 95, 00, 05 & 10	Sweden 95, 00, 05 & 10	
Italy 95, 00, 05 & 10	UK 95	
Spain 95 & 10		
UK 00, 05 & 10		

Worlds of Manufacturing Work

	Continental / Liberal	Nordic	Southern
	49.43%	31.71%	18.86%
<i>learn</i>	0.19	0.40	0.07
<i>lean</i>	0.22	0.14	0.20
<i>simple</i>	0.18	0.09	0.30
<i>Taylor</i>	0.18	0.05	0.32
<i>lean shifts</i>	0.13	0.20	0.04
<i>learn extend</i>	0.10	0.12	0.06

Predicting work regime by W of W

(Fractional multinomial logistic regression w/ref simple & Mediterranean)

	Odds ratio		w/controls	Odds ratio		% reduct
Learn			Learn			
Nordic	5.047762 *		Nordic	4.744984 *		-6.00%
Liberal	2.036071 *		Liberal	1.568137 *		-23.00%
Continental	2.775997 *		Continental	2.300164 *		-17.10%
_cons	0.619569 *					
Lean			Lean			
Nordic	2.47712 *		Nordic	2.325466 *		-6.10%
Liberal	2.947531 *		Liberal	2.595671 *		-11.90%
Continental	1.721263 *		Continental	1.63608 *		-4.90%
_cons	0.696795 *					
Taylor			Taylor			
Nordic	0.679058 *		Nordic	0.553618 *		-18.50%
Liberal	1.188037		Liberal	1.146845		-3.50%
Continental	0.982054		Continental	1.011476		3.00%
_cons	0.998109					
Lean shifts			Lean shifts			
Nordic	4.898064 *		Nordic	3.571615 *		-27.10%
Liberal	3.075997 *		Liberal	2.414519 *		-21.50%
Continental	2.890062 *		Continental	2.610237 *		-9.70%
_cons	0.343991 *					
Learn extend			Learn extend			
Nordic	4.421217 *		Nordic	3.972839 *		-10.10%
Liberal	3.596025 *		Liberal	2.083151 *		-42.10%
Continental	2.434609 *		Continental	1.815601 *		-25.40%
_cons	0.258498					

“Within-world” analysis

(FMLR within each country grouping)

		Learn	Lean	Taylor	Lean_Shift	Learn-Extend
Occupation	Nordic	Mgr/ Prof/ Assoc Prof	Mgr/ Prof/ Assoc Prof	Operators	Operators	Mgr/ Prof
					No clerical	
	Liberal	Mgr/ Prof	Mgr/ Prof	Operators	Not cler/ elem	Mgr/ Prof
				Elementary/ Craft		
	Continental	Mgr/ Prof/ Assoc Prof	Not clerical, oper or ele	Operators	Not cler/ serv/ elem	Mgr/ Prof
			Not service	Elementary/ Craft		
	Mediterranean	Not operator, elem or craft	Not elementary	Operators		Mgr
				Elementary/ Craft		
			Not clerical			
Company Size	Nordic	Not small firms	Medium*	Not small firms	Large firms	Largest firms
	Liberal	-	Large firms*	Medium to large	Large Firms – big effect	Largest firms
	Continental	Large firms	Large firms	Not small firms	Large Firms – big effect	-
	Mediterranean	Not small firms	Not small firms	Large firms	Large Firms – big effect	
Gender	Nordic	Male	Male	Women*	Male	Male
	Liberal	-	-	-	Male	Male
	Continental	Male	Male	-	Male	Male
	Mediterranean	Male	Male	Women	Male	Male

Conclusion.....

- Within manufacturing, we find a structured menu of regimes across countries
 - Between lean and learning
- Within regimes, the Persistence of Class, Gender, Organisation and Politics
 - More learning for Professionals, Men, Large Firms and Nordics
- Missing Liberal world of production
 - Not 2 varieties (continental/liberal merge)
 - Not 4 worlds of work, but 3

Post-industrial work ...

- Next step: how different manufacturing regimes affect the shape of service work regimes and how these vary across countries and country groupings
- Cannot assume what the 'manufacturing effect' is
- Need to look more seriously at how exit from the industrial era shaped the post-industrial political economy

merged	learn	lean	simple	Taylor	lean shifts	learn extend	(cont)	learn	lean	simple	Taylor	lean shifts	learn exte
Cluster Size	0.2338	0.192	0.1751	0.1651	0.1379	0.0963							
Indicators							UnforeseenProblems						
Contract							yes	0.9589	0.92	0.574	0.4231	0.8597	0.9866
permanent	0.9204	0.8285	0.7373	0.7547	0.901	0.9118	no	0.0411	0.08	0.426	0.5769	0.1403	0.0134
fixed term	0.0445	0.0876	0.1095	0.1067	0.0534	0.0482	ComplexTasks						
other	0.0351	0.0839	0.1533	0.1386	0.0456	0.04	yes	0.8004	0.8053	0.2178	0.2613	0.6653	0.9241
FixedTime							no	0.1996	0.1947	0.7822	0.7387	0.3347	0.0759
yes	0.6904	0.8503	0.8511	0.9016	0.817	0.203	Deadlines						
no	0.3096	0.1497	0.1489	0.0984	0.183	0.797	most or all of the time	0.3155	0.6214	0.1335	0.5214	0.4275	0.6801
Hours							sometimes	0.2686	0.2274	0.2182	0.2539	0.2677	0.2062
under 20 hours	0.0339	0.0116	0.0528	0.0102	0.0193	0.0001	almost never or never	0.4159	0.1513	0.6483	0.2248	0.3048	0.1137
20 - 34 hours	0.1003	0.0597	0.1227	0.0559	0.0767	0.0039	Customers						
35-47 hours	0.8236	0.8527	0.7926	0.8527	0.8458	0.5366	Yes	0.5573	0.7269	0.428	0.3711	0.4277	0.8306
48 hours plus	0.0422	0.076	0.0319	0.0812	0.0582	0.4594	No	0.4427	0.2731	0.572	0.6289	0.5723	0.1694
Weekends							ProductionNorms						
yes	0.1762	0.2817	0.3195	0.3117	0.7351	0.7688	Yes	0.358	0.8702	0.2357	0.8545	0.8083	0.5831
no	0.8238	0.7183	0.6805	0.6883	0.2649	0.2312	No	0.642	0.1298	0.7643	0.1455	0.1917	0.4169
NightShift							MachineSpeed						
Nights / Shifts	0.0147	0.0369	0.0458	0.1748	0.6269	0.0459	Yes	0.0917	0.5987	0.1274	0.8244	0.7101	0.148
Nights / No shifts	0.0222	0.0284	0.0442	0.0561	0.0798	0.2851	No	0.9083	0.4013	0.8726	0.1756	0.2899	0.852
Shifts / No nights	0.0239	0.0901	0.0662	0.1944	0.2214	0.005	Boss						
No nights / No shift	0.9391	0.8447	0.8438	0.5747	0.0719	0.664	Yes	0.1742	0.6818	0.4166	0.7573	0.3896	0.2896
Pay							No	0.8258	0.3182	0.5834	0.2427	0.6104	0.7104
Basic Pay only	0.4283	0.464	0.6357	0.488	0.0992	0.2532	CollPaceTaskRot						
Basic Pay Plus	0.5489	0.4949	0.3055	0.4636	0.8396	0.6871	Coll Pace and Task Rot	0.1664	0.4956	0.1418	0.358	0.4726	0.3533
No Basic Pay	0.0228	0.0412	0.0588	0.0484	0.0612	0.0597	Task Rotation only	0.3372	0.1218	0.1787	0.0747	0.3113	0.1609
EmployerTrain							Coll Pace only	0.1465	0.2873	0.1831	0.37	0.1021	0.2054
Yes	0.4238	0.2971	0.0746	0.1001	0.5061	0.6081	neither	0.3498	0.0953	0.4963	0.1974	0.114	0.2804
No	0.5762	0.7029	0.9254	0.8999	0.4939	0.3919	QualityStandards						
LearnNewThings							Yes	0.766	0.9651	0.5783	0.893	0.9675	0.8085
Yes	0.9289	0.9074	0.414	0.331	0.8154	0.9559	No	0.234	0.0349	0.4217	0.107	0.0325	0.1915
No	0.0711	0.0926	0.586	0.669	0.1846	0.0441	Autonomy						
							Yes (task, method and speed)	0.7558	0.4244	0.2907	0.0316	0.3191	0.7296
							some (task, method and / or speed)	0.2193	0.4162	0.4443	0.2424	0.442	0.2397
							none	0.0248	0.1594	0.265	0.7261	0.239	0.0307