

Diagnosing the Italian Disease

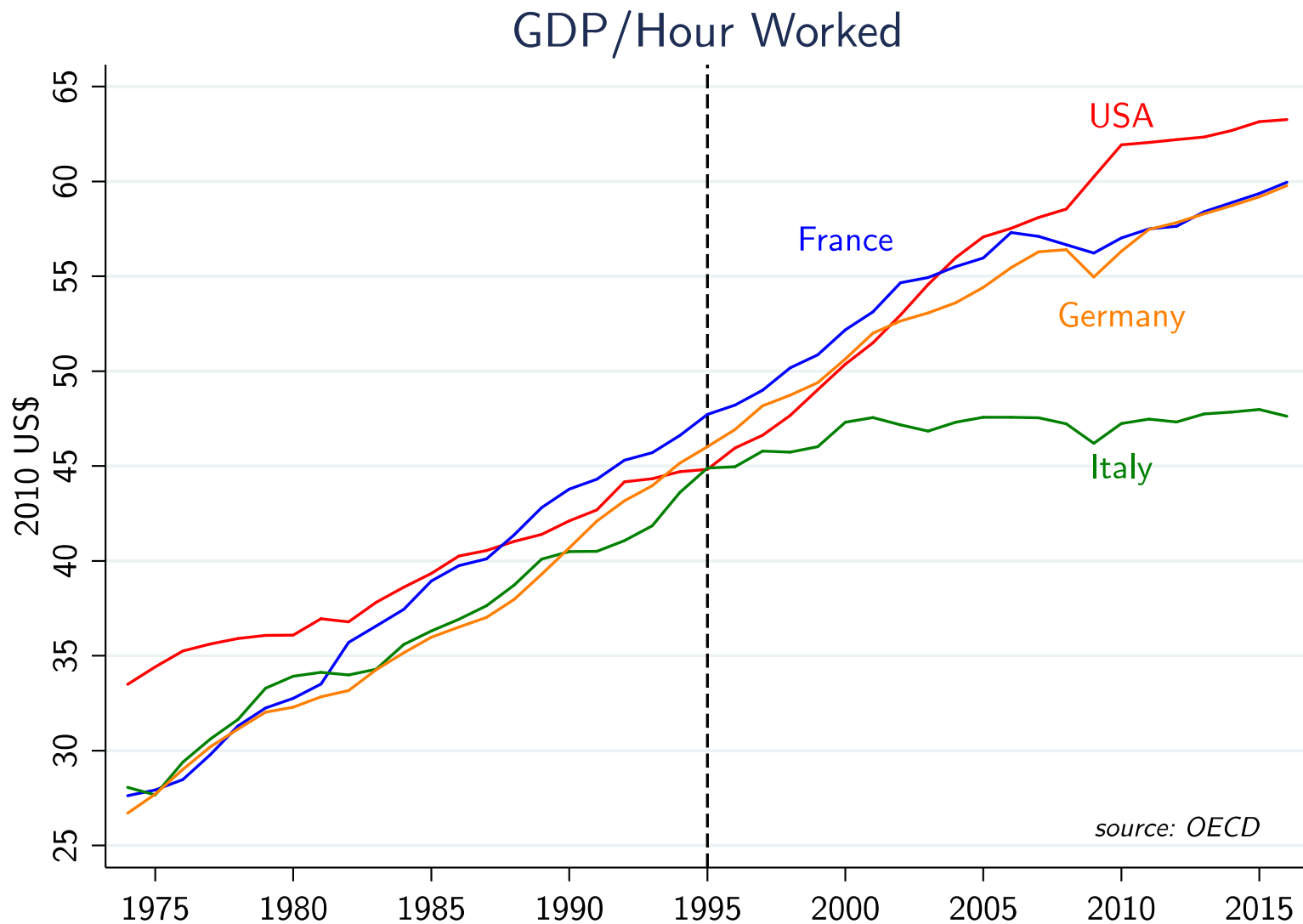
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An Italian Disease?



A Puzzle

- Best macro conditions in 30 years
- Slowdown is not driven by Italian sectoral composition
- It is unlikely to be driven by inefficient capital accumulation as in Gopinath et al. (2017)
 - GFCF increased only from 18% to 21% from 1994 to 2007 vs. an increase from 21% of GDP to 31% in Spain
- Driven by within sector TFP (-6% vs 15%)

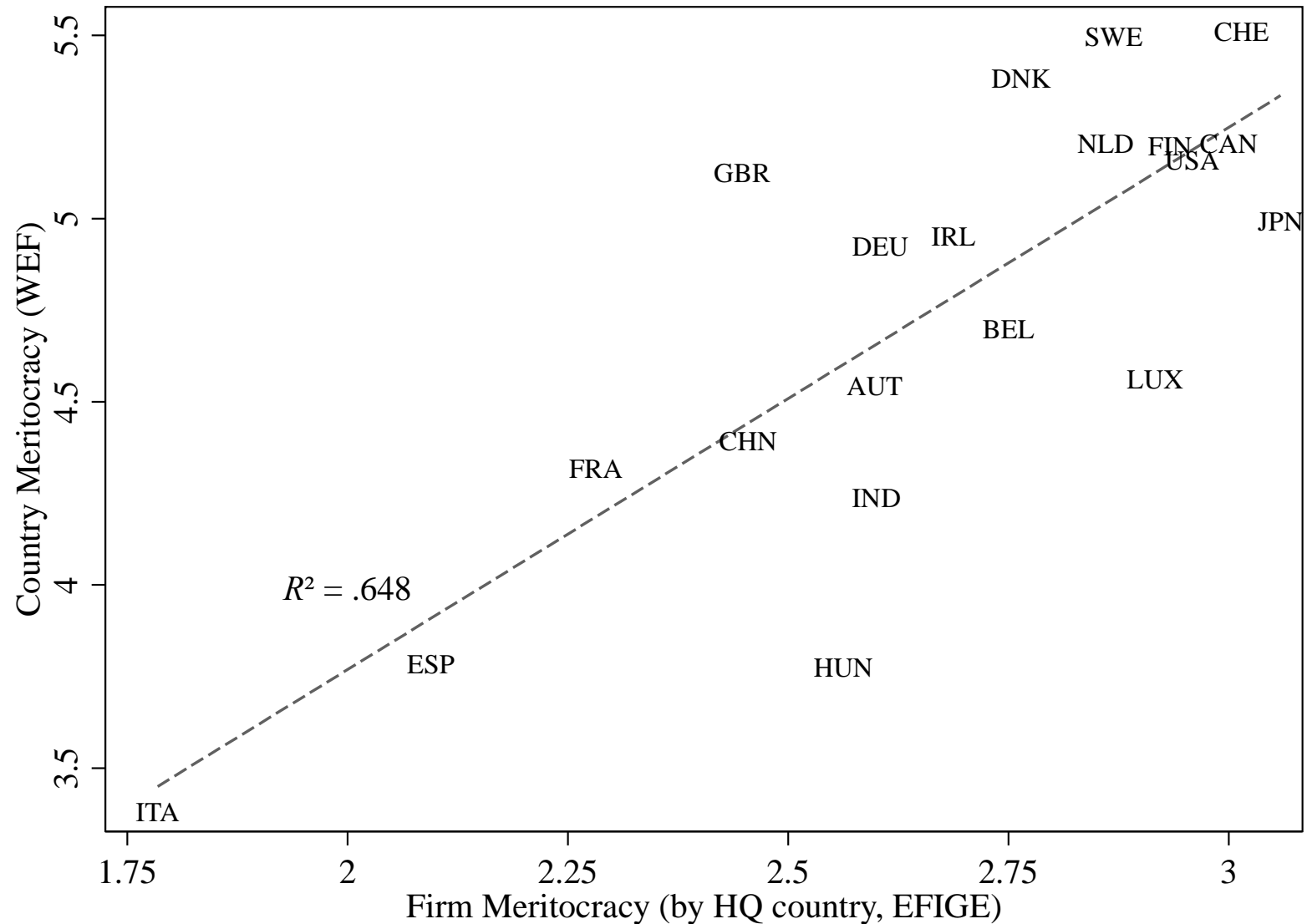
Possible Shocks

- Information and Communication Technology (ICT) Revolution
- China shock: construct an ADH-style measure using WIOD
- Euro accession: look at trade openness in 1995
- Employment laws: Botero et al. (2003), OECD
- Institutional decline

Why ICT

- Wealth of evidence on the complementarity of ICTs and meritocratic management practices
 - Bresnahan et al. (2002), Brynjolffson & Hitt (2003), Garicano & Heaton (2010), Bloom, Sadun & VR (2012)
- Key dimension: meritocracy in the selection and rewarding of talent. Why: ICT → accountability!
- Bandiera et al. (2008) document rampant cronyism in the management of Italy's firms

Measuring meritocratic management



Sector-level (1996-2006)

- EU KLEMS growth accounting (18 countries, 23 sectors)
- Trade data: WIOD and OECD-WTO TiVA data
- merged to various other country/sector-level indicators

Firm-level (2001-2007)

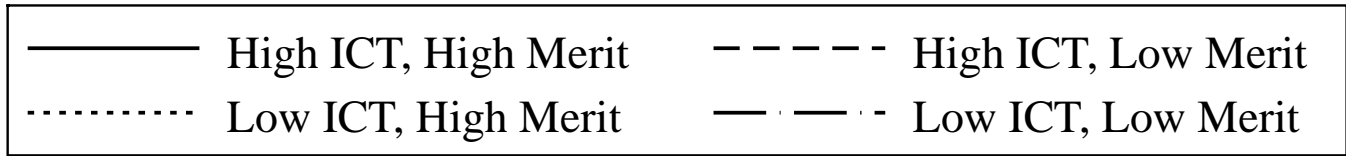
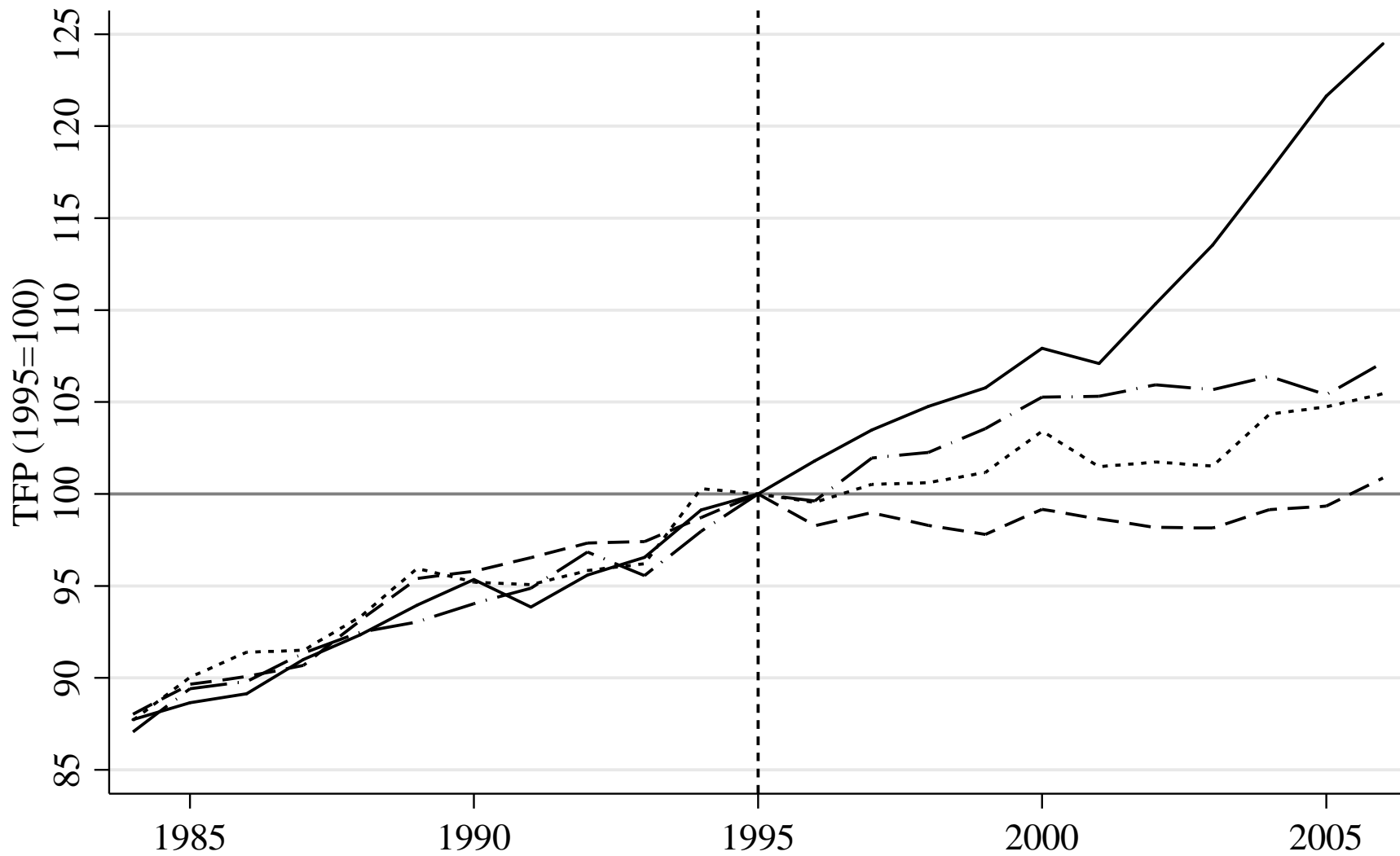
- EFIGE: survey of approx. 15,000 manufacturing firms from 7 EU countries matched to BvD firm financials

Empirical strategy (double diff)

- Does TFP grow faster in more meritocratic countries in more ICT-intensive sectors?
- ICT Capital Contribution to GDP Growth
= ICT capital growth x ICT capital compensation share
- Clear risk of reverse-causation: RBC more ICT capital accumulation in countries/sectors where TFP grows faster
- Country and sector fixed effects in all specifications.
- No effect on non-ICT capital, and in 1985-1995.
- IV: average ICT contr. across countries (sector variation)

Sector-level TFP regressions

	(1)	(2)	(3)	(4)	(5)
	$\Delta \log \text{TFP}_{96-06}$	$\Delta \log \text{TFP}_{96-06}$	$\Delta \log \text{TFP}_{96-06}$	$\Delta \log \text{TFP}_{96-06}$	$\Delta \log \text{TFP}_{85-95}$
	OLS	OLS	OLS	IV	OLS
ICT Contribution	-0.350 (0.598)	-5.247** (2.151)		-4.714*** (1.620)	0.414 (6.171)
ICT Contribution \times Country Meritocracy		1.094** (0.510)		0.833** (0.342)	0.030 (1.201)
Non-ICT Contribution			0.525 (2.171)		
Non-ICT Contribution \times Country Meritocracy			-0.077 (0.444)		
R ²	0.338	0.350	0.339	0.344	0.153
Kleibergen-Paap underid. test P-value				0.000	



Robustness

- We replace country meritocracy with a variety of other country-level confounders (shadow economy, average firm size, human capital, GMAT scores)
- Exclude Italy, as well as Emerging Europe
- Production function mismeasurement
- Corrections for imperfect competition (markups/ distortions)

This explains up to 80% of
Italy's missing TFP growth

	(1) $\Delta\log\text{TFP}_{01-07}$ OLS	(2) $\Delta\log\text{TFP}_{01-07}$ OLS	(3) $\Delta\log\text{TFP}_{01-07}$ OLS
Firm Meritocracy	-0.001 (0.002)	-0.001 (0.002)	-0.002 (0.002)
Firm Meritocracy \times ICT Contribution	2.181*** (0.695)	2.123*** (0.687)	2.355*** (0.724)
Employees with degree			0.055** (0.023)
Employees with degree \times ICT Contribution			-8.445 (8.163)
Labor Frictions		0.002 (0.004)	
R ²	0.034	0.038	0.035
Observations	9,486	7,309	9,482
Country \times Sector Fixed Effects	✓	✓	✓

Robust Standard Errors in Parentheses

* p<.10, ** p<.05, *** p<.01

	(1) ICT Usage O.Probit	(2) ICT Usage O.Probit
Firm Meritocracy	0.127*** (0.013)	0.113*** (0.013)
Firm Meritocracy × ICT Contribution	13.078** (5.177)	12.358** (5.244)
Employees with degree		0.770*** (0.119)
Employees with degree × ICT Contribution		-29.676 (33.180)
Observations	14,204	14,196
Country × Sector Fixed Effects	✓	✓

Alternative explanations

- China shock: construct an ADH-style measure using WIOD
- Euro accession: look at trade openness in 1995
- Employment laws: Botero et al. (2003), OECD
- Institutional decline: construct a sector-level measure of government dependence, interact with change in QoG.
- 1997 reforms: shadow employment emerging.
- Temporary contracts/gerontocracy (Daveri & Parisi 2010)

Why does the market not fix this? (no reallocation)

	(1)	(2)	(3)
	Financial constraints	Labor Frictions	Bureaucratic Frictions
	Probit	Probit	Probit
Italy	-0.135 (0.213)	0.364 (0.450)	0.242 (0.399)
Firm Meritocracy	-0.059** (0.027)	-0.090** (0.042)	-0.075*** (0.026)
Firm Meritocracy × Italy	0.063** (0.028)	0.059 (0.043)	0.075*** (0.028)
Observations	11,950	11,950	11,950
Sector Fixed Effects	✓	✓	✓
Standard errors clustering variable	Country	Country	Country

Robust Standard Errors in Parentheses

* p<.10, ** p<.05, *** p<.01

Conclusion

- The data suggests that crony management prevented Italian firms from benefiting from the productivity-enhancing effects of ICT.
- This is the most plausible explanation for Italy's productivity growth disease
- Policy prescriptions?
 - ✓ Hard to induce changes in management selection
 - ✓ The most promising intervention is to eliminate the conditions that made loyalty-based management optimal in Italy