FONDAZIONE ENI ENRICO MATTEI

Knowing the right person in the right place: political connections and economic growth

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Milan, 4th March 2010

Motivations

- The existence of **long-lived economic and political elites** is often blamed for the low rate of technological innovation and economic growth (…*but similar turnover in Italy and US*)
- Entry barriers may be exploited to maintain rents of the insiders: high red tape costs (Doing Business 2006 ranks Italy 70 among 155 – *UPDATE: 78° in 2010!*)
- Starting a business requires a cost of 16% of income per capita in Italy, 5% in Germany and 1.2% in France (large variance in EU).

Ideas (1/2)

- Administrative and regulatory costs affect costs of doing business: these can be alleviated through **political connections**.
- New technologies always available, but society can **adopt them** or **not**: productivity gains (technology) vs cost gains (connection with politicians).
- A *politician-entrepreneur connection* needs time to become effective: only **persistence of same politicians** allows entrepreneurs to exploit cost advantages.

Ideas (2/2)

- Connections are useless if red-tape small (US)
- A **connected entrepreneur** maintains her monopoly power also in the presence of more productive producers.
- Not-too-long sighted voters **support** incumbent politicians to exploit current cost reduction.
- Incentives for entrepreneurs, politicians and voters are **aligned**: very stable equilibria.

Outline of presentation

- Related literature
- Data & Empirics
- Description of the model
- Conclusions
- New research project about Italy

Related literature (1/2)

- (Mostly) empirical literature on **political instability** and growth, surveyed by Carmignani (JEcSur, 2003). Negative association between instability and growth. Based on Emerging Countries
- Recent empirical analysis on connected firms. Faccio (AER, 2006): **political connections add to company values**. Faccio, et al. (JFinance, 2006): politically-connected firms are significantly more likely to be bailed out. Desai and Olofsgard (2008): same findings in Emerging Countries

Related literature (2/2)

- Merlo et al. (2008): Re-election rate in US Congress between 1951 and 1994 never fell below 80%. In Italy, between 1951 and 2008, never fell below 60% and was around 80% in several elections.
- Acemoglu, Aghion and Zilibotti (JEEA, 2006) and Aghion, Alesina and Trebbi (2008) incorporate a political-economy model where **firms lobby** the government to reduce economic competition (AAZ) and entry threat (AAT). *Conflicting interests*

Data sources

- Database of Political Institutions (DPI): democracy indicators, veto players
- World Development indicators (WDI): per capita GDP PPP, various controls
- International Country Risk Guide (ICRG): Bureaucratic Quality (range 0-4, OECD=3.56, our threshold 3.5)

Sample

- 51 developing and developed **democratic** countries, for the period 1975-2004:
  - **Low red-tape costs** countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Iceland, Ireland, Japan, Netherlands, New Zealand, Norway, South Africa, Sweden, Switzerland, UK, USA.
  - **High red-tape costs** countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cyprus, Ecuador, El Salvador, Greece, Guatemala, Honduras, India, Israel, Italy, Korea, Malaysia, Mexico, Nicaragua, Panama, Paraguay, Peru, Poland, Portugal, Senegal, Spain, Sri Lanka, Thailand, Trinidad and Tobago, Turkey, Uruguay, Venezuela.

Correlations

	$PERS$	$GROWTH$
$GROWTH$	-0.06	
GDP	0.10	-0.06
BQ	0.06	0.01

- **weak convergence**
- **weak corr(*PERS;GROWTH*)**

Specification 1

- Unbalanced panel of 5-year long periods
- *PERS*: political persistence as the average percentage of main political entities ("veto players") who remain in place in the government in any given year, relative to the previous one.

$$GROWTH_{it} = \beta_1 PERS_{it-1} + \upsilon_i + \eta_t + \varepsilon_{it}$$

Specification 1

	LSDV	LSDV	LSDV	LSDV
PERS_{t-1}	-0.024*	-0.032**	-0.001	-0.054**
	[0.014]	[0.015]	[0.015]	[0.022]
Observations	205	187	86	101
Countries	56	51	18	33
R^2	0.138	0.128	0.363	0.293

full sample of democracies

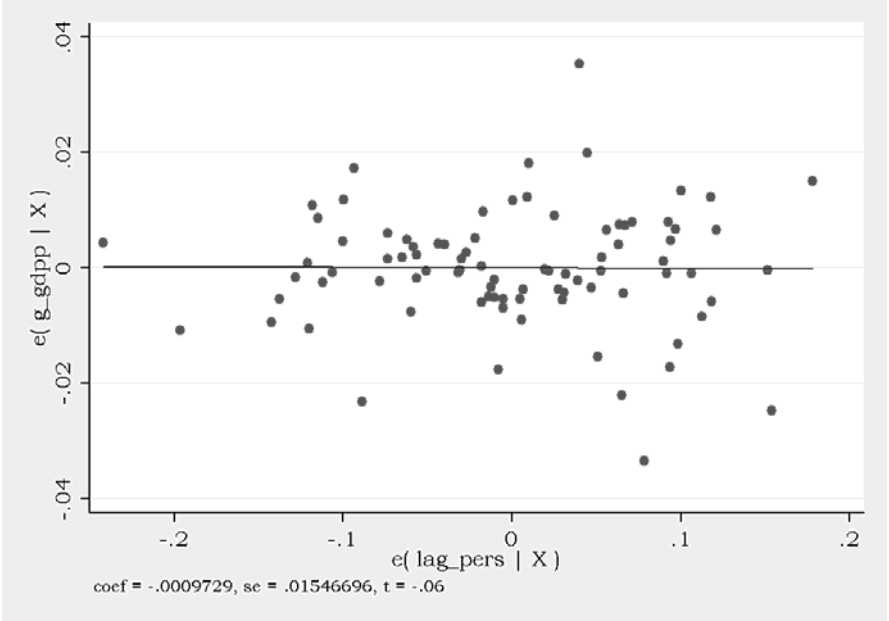
sample of democracies with BQ info

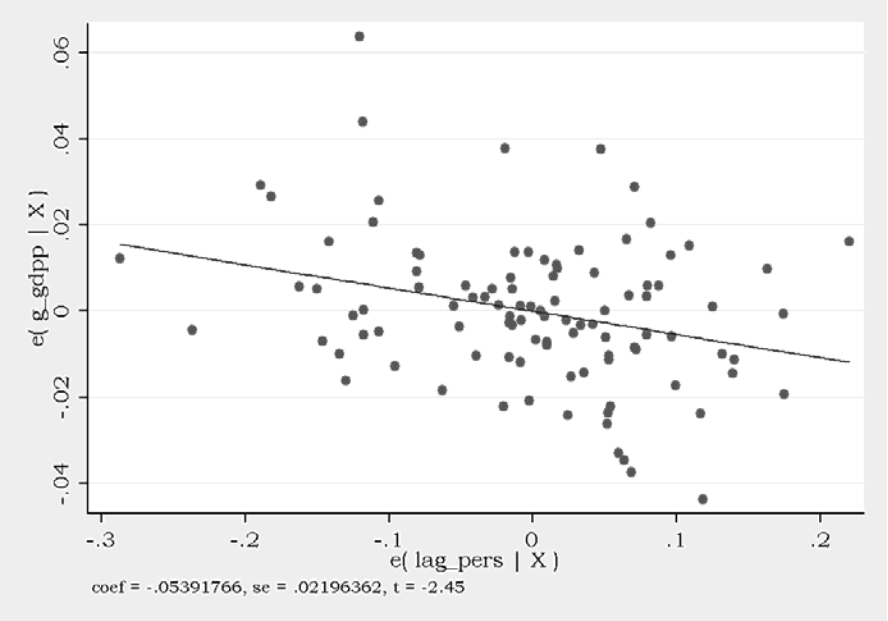
Low Cost

High Cost

(Country and time dummies included)

Specification 1





Partial correlation between *GROWTH* and *PERS* for Low Cost (left) and High Cost (right) countries

Specification 2

- **Differential effect of *PERS* in High/Low cost countries:**

$$GROWTH_{it} = \beta_1 PERS_{it-1} + \beta_2 \left(d_i^H * PERS_{it-1}\right) + \upsilon_i + \eta_t + \varepsilon_{it}$$

With the null hypothesis being:

$$\beta_1 = 0 \text{ and } (\beta_1 + \beta_2) < 0$$

Specification 2

	LSDV	LSDV	LSDV	LSDV	LSDV
PERS_{t-1}	-0.024*	-0.032**	-0.001	-0.054**	-0.017
	[0.014]	[0.015]	[0.015]	[0.022]	[0.023]
$d^H * \text{PERS}_{t-1}$					-0.026
					[0.030]
Observations	205	187	86	101	187
Countries	56	51	18	33	51
R^2	0.138	0.128	0.363	0.293	0.133
$\widehat{\beta}_1 + \widehat{\beta}_2$					-0.043**
					[0.020]

Specification 3

- Unbalanced panel of **yearly** observations
- *SPERS*: 3-year moving average of *PERS*
- IV strategy. Instruments for *SPERS* are

  (i) a dummy variable taking value one when legislative elections took place in the previous year (+),

  (ii) the number of years since the last legislative or executive election (-).

Specification 3

	(1) LSDV	(2) 2SLS	(3) 2SLS	(4) 2SLS	(5) 2SLS
$SPERS_t$	-0.022*	-0.012	-0.015	0.015	-0.002
	[0.013]	[0.057]	[0.050]	[0.038]	[0.052]
$d^H * SPERS_t$	0.016	-0.033	-0.070	-0.062	-0.048
	[0.015]	[0.061]	[0.054]	[0.044]	[0.057]
d^H					
$\widehat{\beta}_1+\widehat{\beta}_2$	-0.007	-0.044*	-0.055**	-0.047**	-0.050**
	[0.007]	[0.023]	[0.022]	[0.022]	[0.021]
R^2	0.19	0.16	0.16	0.05	0.17
Observations	1069	1069		985	1022
Number of countries	55	55	55	55	55
F		23.52	15.69	7.71	14.26
Sargan test			1.14	1.37	0.48

Specification 4

- Unbalanced panel of **yearly** observations
- *SPERS*: 3-year moving average of *PERS*
- Arellano-Bond estimation of AR(1) panel in per capita GDP

$$GDP_{it} = \delta_1 GDP_{it-1} + \beta_1 SPERS_{it} + \beta_2 (d_i^H * SPERS_{it}) + \gamma_i t + \upsilon_i + \eta_t + \varepsilon_{it}$$

Specification 4

	(1)	(2)	(3)
	2SLS	Arellano Bond GMM (L2)	Arellano Bond GMM (L3)
GDP_{t-1}	0.8239***	0.8121***	0.6676***
	[0.0196]	[0.0457]	[0.0294]
$SPERS_t$	0.0131	-0.0209	0.0023
	[0.0493]	[0.0244]	[0.0184]
$d^H * SPERS_t$	-0.0604	-0.0183	-0.0432*
	[0.0493]	[0.0339]	[0.0253]
$\widehat{\beta}_1 + \widehat{\beta}_2$	-0.0473**	-0.0392**	-0.0409***
	[0.0217]	[0.0171]	[0.0119]
R^2	0.96		
Observations	1022	1022	1022
Number of countries	55	55	55
F	33.73		
Sargan test	0.61	0.00	0.00
AR(2) test		0.00	0.00

Model: the environment

- Infinitely lived agents
- Linear utility, no savings: consumption=income
- Quality-ladder intermediate production (reference: Aghion-Howitt), Bertrand competition.
- Politicians are benevolent and seek re-election
- Workers care about wages

Model: timing and choice variables

1. Incumbent politician sets red tape costs, that impact on marginal cost of firms
2. Firms decide whether to innovate (productivity growth γ) or build connections with politicians
3. Workers vote over politicians (incumbent vs opponent)

Model: producer's trade-off

- Beginning of period *t*: incumbent monopolist + incumbent politician. *Potentially connected*
- Incumbent monopolist can invest in networking with politician, but this pays off **only if politician gets re-elected**. In this case incumbent competes with an unconnected (larger marginal costs) with superior technology
- Alternatively, incumbent monopolist can invest in new technology (network is lost) and innovate with probability λ

Model: workers' trade-off

- Conditional on the politician having set large red tape costs, aggregate income is higher if the operating firm is connected
- This means that workers have a trade-off in comparing short term benefits from connection with long term gains from technological upgrade
- If incumbent politician delivers higher utility to workers he gets re-elected, if workers are indifferent the incumbent is re-elected with exogenous probability π

Model: politico-economic equilibria

- Focus on Stationary Markov Perfect Equilibria (stationary strategies not depending on calendar time, see Maskin and Tirole)
- Two equilibria are possible, depending on γ, λ and π:

  1) **Bad equilibrium**: High red-tape costs, no innovation, persistence of same politician.

  2) **Good equilibrium**: Low red-tape, innovation, turnover of politicians.

Model: non-aligned good equilibrium

- The good equilibrium can be achieved because, even if the politician would have set high red-tape costs, the voters find it worth to not vote him again
- On the other hand, there are situations in which even if the voters would prefer high red-tape costs, the politician internalize the inefficiencies and choose for no red-tape costs.

Conclusions

- Empirical evidence on democratic countries shows a differential relation between political persistence and growth: negative in high red-tape costs countries
- Model shows that the interaction between politicians, firms and voters generates political equilibria that involve either perpetual innovation and replacement of the incumbent politician or stagnation and political persistence.
- Equilibria can be sustained by conflicting or aligned interests.

EXTRA: Research project about Italy

- We collected data on local politicians' careers (length in office, education, age, etc.)
- Constructed municipality-level indicators of political persistence (average longevity, turnover rates, etc.)
- Merged with firm-level data on innovation, investments, exports, etc.
- Preliminary results suggest no or weakly negative relation between persistence of politicians and innovation activity at firm level.

THANKS FOR YOUR ATTENTION!

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