



Business churn, sectoral performance, and economic policy

CompNet

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Banca d'Italia

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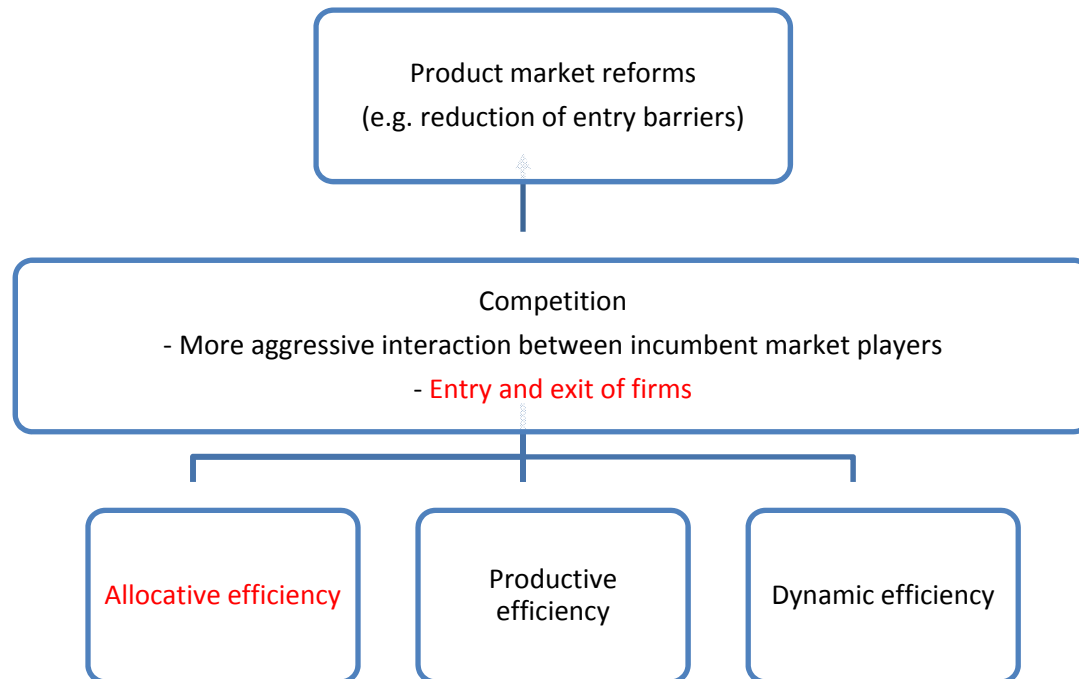


Plan

- *Business dynamics*
- *Allocative efficiency*
- *Relationship between business dynamics and allocative efficiency*
- *Implications for policy*

From policy to outcomes

Access to finance
necessary for
business dynamics





What is competition?

- *Competition brings about reallocation of output from less efficient to more efficient firms (Boone)*
- *Most productive firms expand their market shares at the expense of the less productive ones (Schumpeter's creative destruction)*
- *This requires well-functioning financial markets*

Data

- *Industry-level data from Eurostat*
 - Structural Business Statistics
 - Business demography data
- *2000-2010*
- *Most EU countries*
- *Linking NACE Rev. 2 to NACE Rev. 1.1 at letter level (e.g. manufacturing, construction,...)*

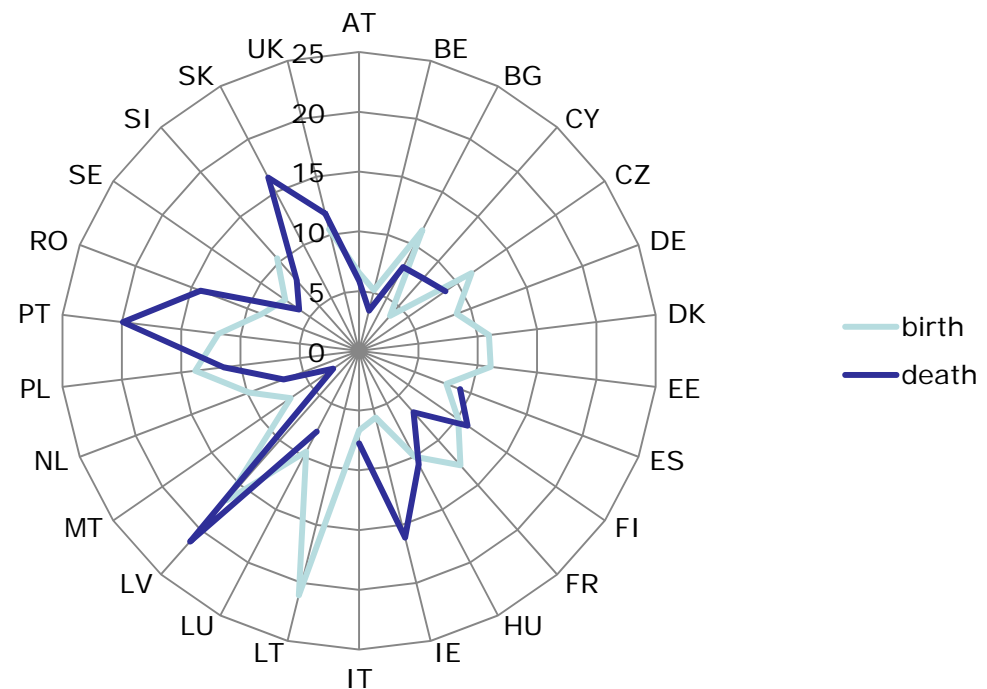
Entry and exit of firms in the EU

Birth and death are positively correlated in most MS...

... but not in e.g. FR, IE, PT

Birth rate high in LT

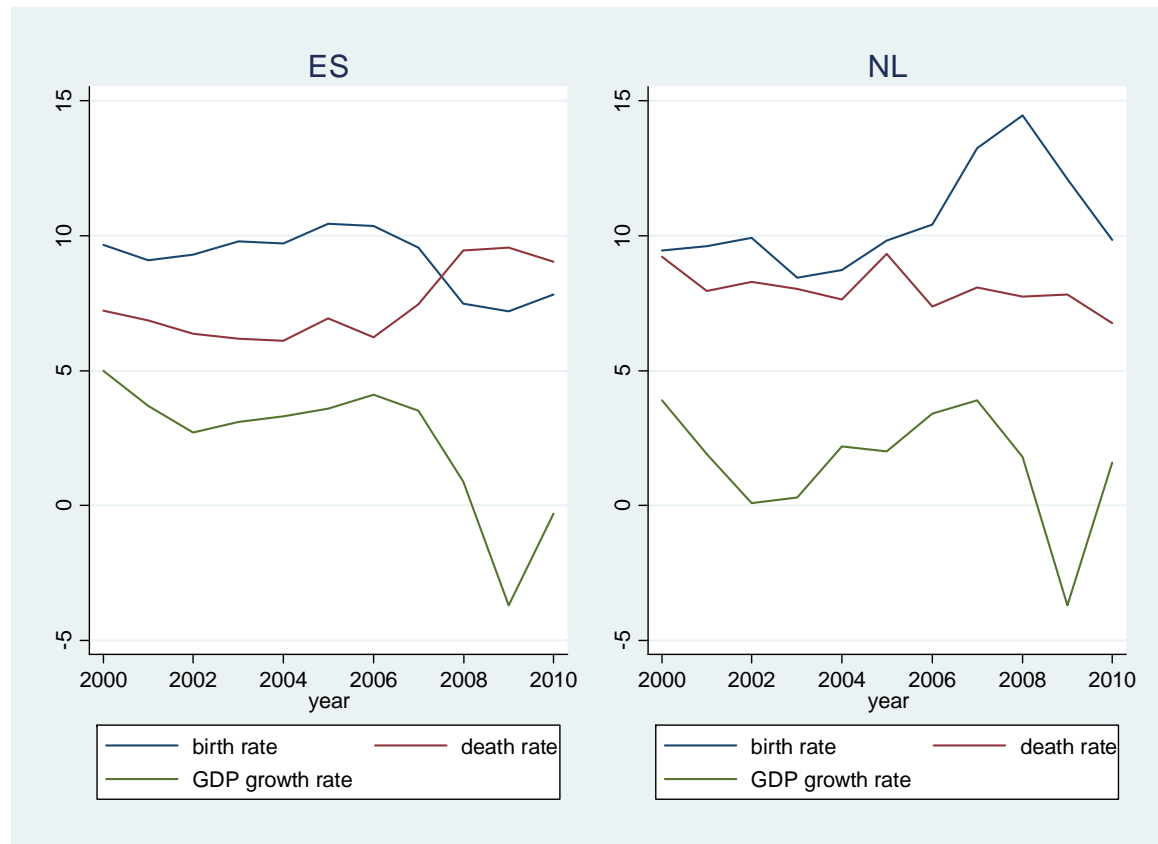
Death rate high in PT



Entry and exit over time in ES and NL

Birth and death
become decoupled in
ES

Reduction in
business churn in NL

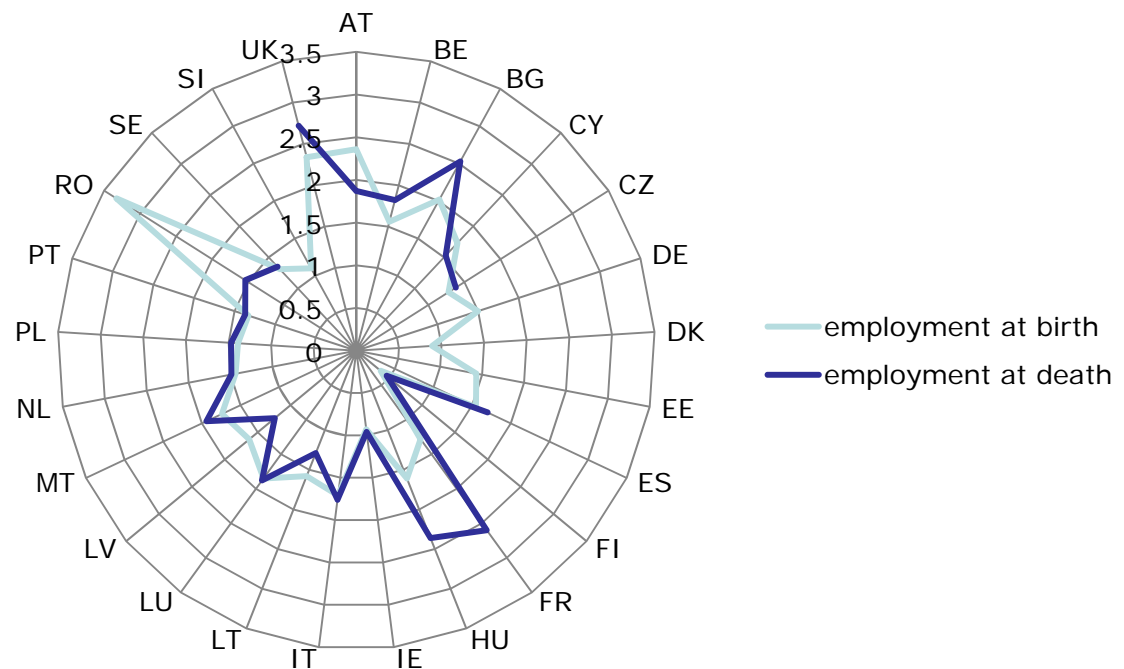


Firm size at entry and exit in the EU

Firm size at birth and death in same order of magnitude

BG, FR, HU: firm size at birth < death

AT, RO: firm size at birth > death



Interdependencies in firm dynamics

	Birth	Lagged birth	Death	Lagged death
Birth	1			
Lagged birth	0.80	1		
Death	0.42	0.39	1	
Lagged death	0.40	0.40	0.78	1

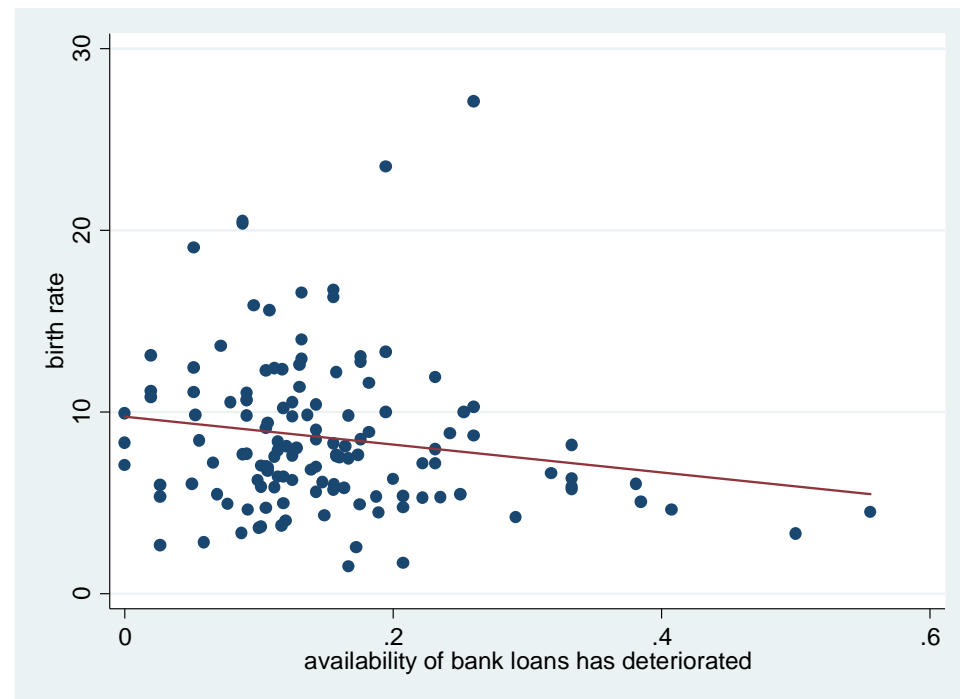
"Granger-causality" between lagged death and birth consistent with Schumpeterian **replacement** effect

"Granger-causality" between lagged birth and death consistent with Schumpeterian **displacement** effect

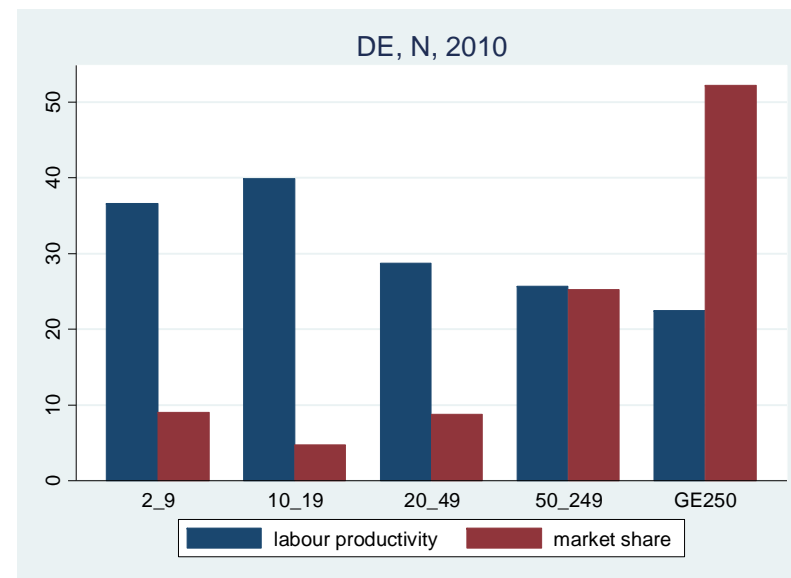
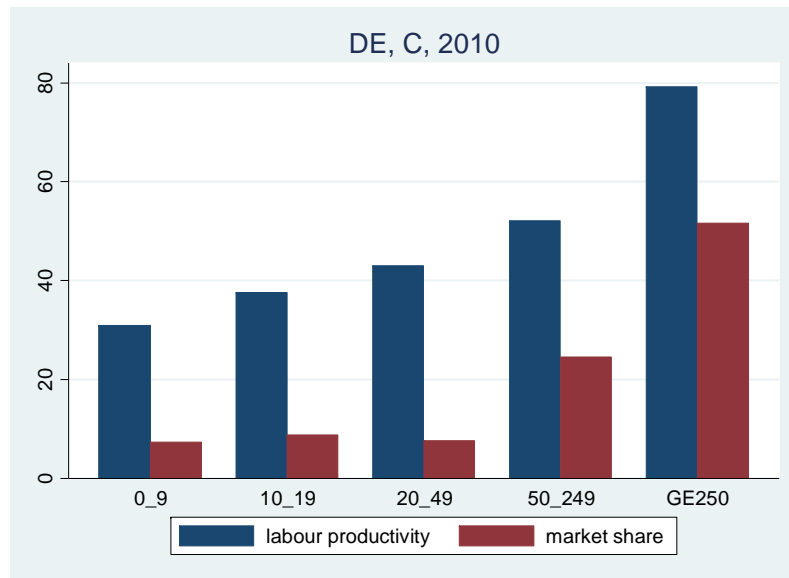
Financing constraints reduce birth rates

SAFE survey

$$\text{Birth} = 9.7 - 7.7 * \text{AVAIL}$$



Allocative efficiency

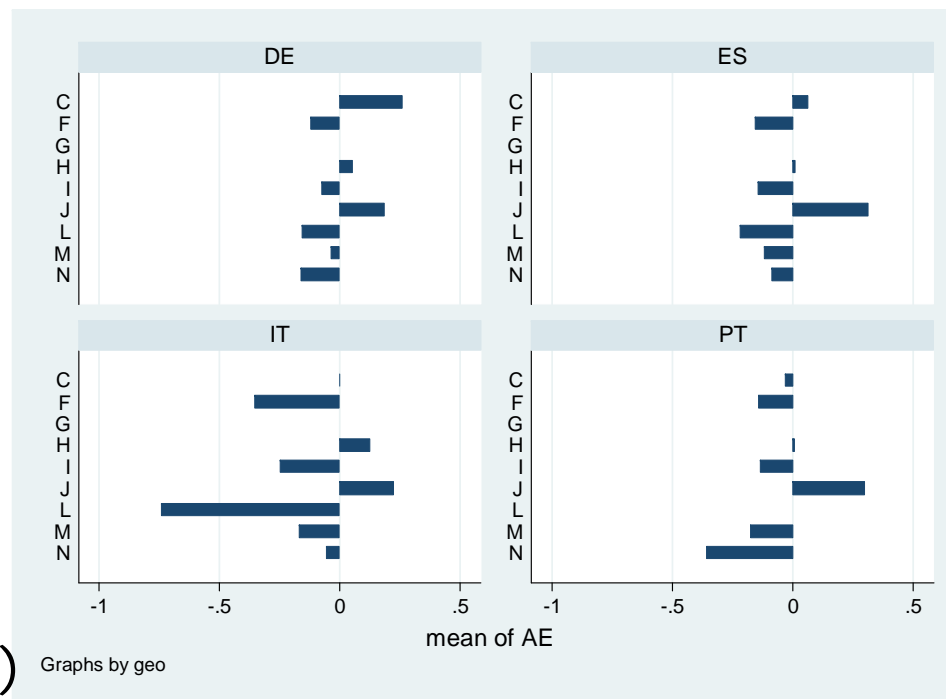


In German manufacturing the most productive firms have the highest market share;
this is not the case in support service activities

AE-index for selected countries

AE relatively low in services

- Manufacturing (C)
- Construction (F)
- Transport (H)
- Hotels and food (I)
- ICT (J)
- Real estate act. (L)
- Professional services (M)
- Support services (N)



Business dynamics and allocative efficiency

FE:

RE:

Impact of entry on AE

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	AE Fixed effects	AE Random effects	AE Fixed effects	AE Random effects	AE Fixed effects	AE Random effects
birth _t	0.003*** (0.001)	0.003*** (0.001)	0.002* (0.001)	0.002* (0.001)	0.003*** (0.001)	0.003*** (0.001)
employment at birth _t	0.016*** (0.003)	0.016*** (0.003)	0.018*** (0.005)	0.017*** (0.005)	0.038*** (0.007)	0.034*** (0.007)
birth _{t-1}			0.001 (0.001)	0.001 (0.001)		
employment at birth _{t-1}			0.003 (0.004)	0.003 (0.004)		
employment at birth _t ²					-0.002*** (0.001)	-0.002*** (0.001)
Observations	998	998	862	862	998	998
R-squared	0.619		0.655		0.623	
Standard errors in parentheses						
*** p<0.01, ** p<0.05, * p<0.1						
Sector- and year-dummies are included.						

Birth rate and firm size at birth increases AE

If firm size at birth increases by 1 worker, AE is increased by 2-4%

Impact of exit on AE

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	AE Fixed effects	AE Random effects	AE Fixed effects	AE Random effects	AE Fixed effects	AE Random effects
death _t	-0.001* (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)
employment at death _t	0.010*** (0.004)	0.009** (0.004)	0.009* (0.005)	0.009* (0.005)	0.040*** (0.009)	0.033*** (0.009)
death _{t-1}			-0.001 (0.001)	-0.001 (0.001)		
employment at death _{t-1}			-0.001 (0.005)	-0.001 (0.005)		
employment at death _t ²					-0.003*** (0.001)	-0.003*** (0.001)
Observations	936	936	779	779	936	936
R-squared	0.612		0.644		0.617	

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1
 Sector- and year-dummies are included.

Firm size at death increases AE

Conclusions

- *AE-indicator comparable with data from CompNet (ECB WP 1634)?*
- *AE relatively low in services*
- *AE related with business dynamics*
 - Market entry increases AE
 - Firm size at birth and death increases AE
- *Deeper understanding of business dynamics necessary for effective policy design*
 - Role of access to finance
 - Role of product market regulation

Future research

- *Two-step procedure to investigate the impact of policy on AE through the transmission channels birth and death*
- *Step 1: Impact of policy on birth / death*
- *Step 2: Impact of predicted birth / death on AE*

Implications for policy

- *Policy efforts to revitalise competitiveness are of paramount importance to absorb idle productive resources; firm dynamics are intimately connected with the business environment and the quality of public institutions*
- *A key policy action is to make sure that banks resume their role as financiers of new business activities and lenders to viable firms; this would improve allocative efficiency*

Full report available from ECFIN website (European Economy series):

http://ec.europa.eu/economy_finance/publications/european_economy/2013/pdf/ee8_en.pdf

