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Determinants of bank branches presence in local areas: the case of Italy

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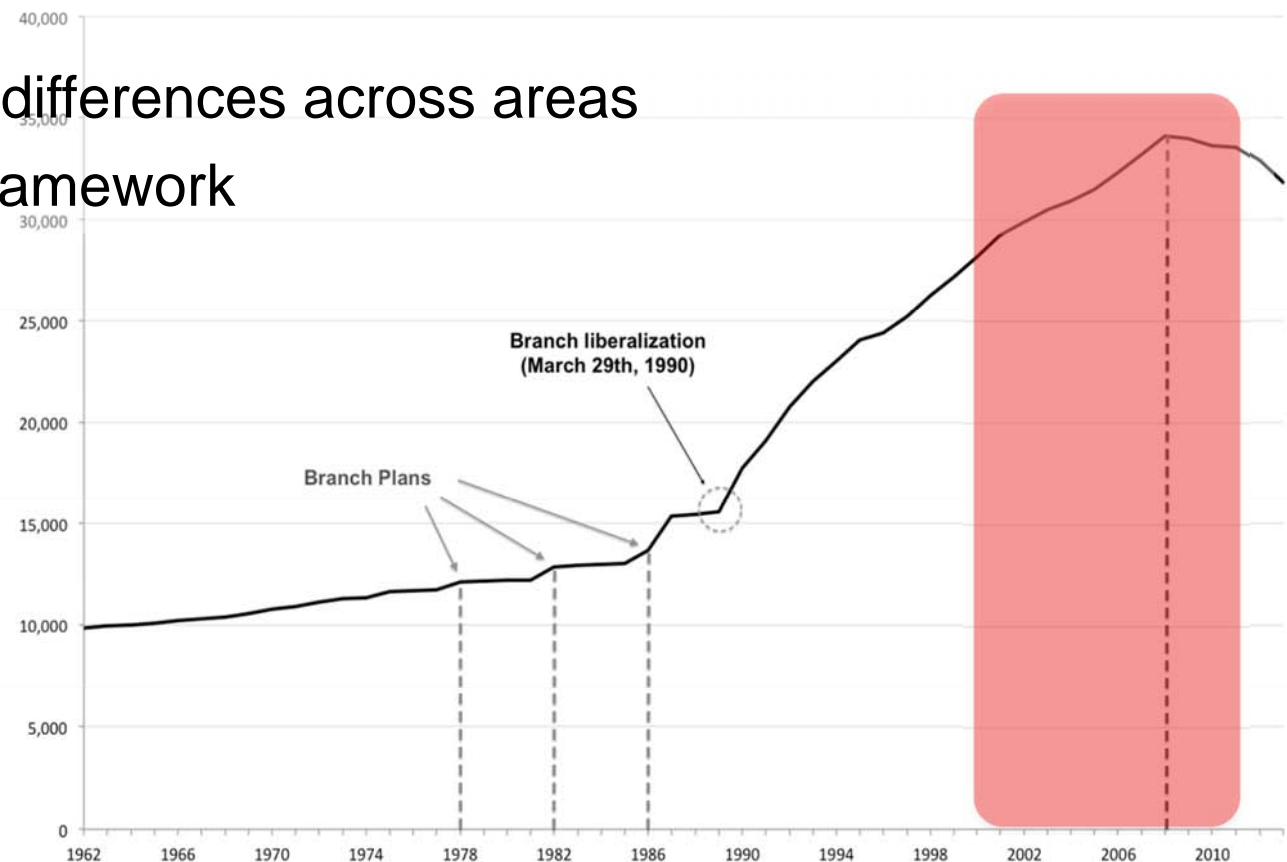
Dynamic of bank branches in Italy

- Bank branches presence is directly influenced by local socio-economic conditions (Okeahalam, 2009)
- Evolution in information technology has reduced the importance of geographical location
- Physical proximity to the customer still remains a crucial element for
 - safeguarding competitive advantages
 - providing better services
- For the banking sector the quality of service is highly influenced by the interaction between customer and bank officer



Dynamic of bank branches in Italy

- From a planned system to a liberalized one
- Irrational exuberance and rationalization of the network
- Italy shows:
 - Socio-economic differences across areas
 - Common legal framework





- Spatial competition (Hotelling, 1929; Salop, 1979; Ho and Hishii, 2011)
- Relationship banking (Elyasiani and Goldberg, 2004)
- Finance-growth link (Levine, 2004)
- “Banking desert” and Financial Exclusion (Alamá and Tortosa-Ausina, 2012)
- Reasons why banks choose a specific territory for the expansion of their branch network (Huysentruyt et al., 2012)



Research question and Contribution to literature

- Our study focuses on the determinants that explain the presence of bank branches, disentangling the importance of
 - socio-economic features of local areas
 - competitive condition of the banking market
- **Which are the drivers that explain the attractiveness of different areas for the banking system?**
- Contributions:
 - geographical scope
 - peculiar time span



- Dataset:
 - Variables: number of bank branches and socio-economic data (sources Bank of Italy and ISTAT)
 - Reference entities: Italian provinces (NUTS3 level)
 - Time span: annual data from 2000 to 2011
- Model specification: GMM estimation in dynamic panel-data (Arellano and Bover, 1995; Blundell and Bond, 1998)

$$Branches_{i,t} = \beta_0 + \beta_1 Branches_{i,t-1} + \beta_2 MACRO_{i,t} + \beta_3 BANK_{i,t} + \beta_4 Crisis_t + \varepsilon_{i,t}$$

- $i = \text{province } 1, 2, \dots, 110$
- $t = \text{year } 2000, \dots, 2011$



Variables description

Type	Variable	Description	Source
Dep. Var.	Branches	Number of bank branches in each province	Bank of Italy
MACRO	Depend_index	Population under 14 and over 65 years old / population between 14 and 65 years old	ISTAT
	Pop_2	Dummy variable: 1 if population is between 200,000 and 500,000 inhabitants	ISTAT
	Pop_3	Dummy variable: 1 if population is between 500,000 and 1 million inhabitants	ISTAT
	Pop_4	Dummy variable: 1 if population is over 1 million	ISTAT
	PC_VA	Per-Capita Value Added (th. Euros)	ISTAT
	Nat_mort_P	Difference between firm nativity and mortality index (Primary sector)	ISTAT
	Nat_mort_S	Difference between firm nativity and mortality index (Secondary sector)	ISTAT
	Nat_mort_T	Difference between firm nativity and mortality index (Tertiary sector)	ISTAT
BANK	Deposits	Customer deposits (1 lag, bn. Euros)	Bank of Italy
	HHI	Herfindahl Hirschman Index of branches (1 lag)	Bank of Italy
	Coop_MS	Credit Cooperatives (BCC) Market Share	Bank of Italy
Crisis	Crisis	Dummy variable: 1 for years 2009-2010-2011	



Descriptive statistics: mean values

	ITALY	North West	North East	Centre	South
Obs	1320	300	264	264	492
Branches	292	395	394	300	171
Depend_index	52.22	53.34	52.84	54.02	50.24
Pop_2	0.50	0.40	0.55	0.70	0.44
Pop_3	0.23	0.24	0.41	0.13	0.20
Pop_4	0.09	0.15	0.00	0.05	0.12
PC_VA	20.65	24.32	25.99	21.97	14.85
Nat_mort_P	-2.17	-1.80	-3.03	-2.07	-1.99
Nat_mort_S	-1.92	-2.05	-1.99	-1.95	-1.80
Nat_mort_T	2.11	1.67	1.66	2.42	2.46
Deposits	5.70	9.45	5.91	6.75	2.74
HHI	0.14	0.13	0.10	0.11	0.17
Coop_MS	11.05	8.27	18.37	11.33	8.67



Regression results

Variables	GMM	NW	NE	C	S
L1_Branches	0.906*** (0.013)	0.896*** (0.021)	0.864*** (0.022)	0.952*** (0.02)	0.462*** (0.031)
Depend_index	- 2.448*** (0.387)	-1.432** (0.684)	-1.045 (0.655)	0.424 (0.536)	0.085 (0.47)
Pop_2	1.389 (7.507)	5.774 (9.835)	24.139** (9.669)	4.767 (5.36)	34.165*** (6.084)
Pop_3	- 1.245 (8.151)	15.82 (12.57)	42.999*** (11.838)	18.448** (8.471)	42.473*** (7.646)
Pop_4	46.514*** (12.449)	66.664*** (18.588)		207.692*** (28.108)	107.191*** (11.06)
PC_VA	2.705*** (0.341)	-0.314 (0.982)	0.677 (0.726)	0.708 (0.609)	-0.387 (0.469)
Nat_mort_P	1.172** (0.557)	-0.726 (1.151)	0.538 (0.72)	0.858 (0.597)	-0.251 (0.401)
Nat_mort_S	0.533 (0.718)	1.379 (1.675)	2.492** (0.996)	1.559** (0.652)	-0.416 (0.598)
Nat_mort_T	- 1.641** (0.8)	-5.391*** (1.864)	-3.13*** (1.09)	-1.668** (0.842)	0.268 (0.667)
Deposits	0.661*** (0.145)	0.782*** (0.247)	3.295*** (0.898)	-1.099*** (0.22)	13.01*** (0.93)
HHI	- 81.609*** (23.045)	-257.937*** (79.873)	-287.68*** (85.022)	-105.047* (56.372)	-37.419** (18.866)
Coop_MS	- 0.563*** (0.188)	-1.117** (0.467)	-0.202 (0.17)	-0.176 (0.287)	-1.411*** (0.271)
Crisis	- 10.997*** 1.442	-14.471*** 3.84	-25.509*** 2.714	-9.319*** 1.875	-9.23*** 1.577
_cons	122.574*** 22.341	164.182*** 36.041	97.09*** 36.422	-0.251 26.556	41.527 28.125



Final remarks

- Bank branches number is positively associated to sound socio-economic conditions (VA, working forces), number of potential customers (population), and cash availability (deposits)
- Productive environment evolution and characteristics influence the presence of bank branches (primary vs. tertiary sector)
- Market concentration represents a barrier to entry
- Ambiguous interpretation of the negative coefficient for Coop_MS: a barrier to entry or safeguard against "bank desert"?

Thanks for your attention