

# **Networks and norms, and their effects on economic outcomes**

Lecture notes for the course of Economics and Policy of Networks

Prof. Fabio Sabatini

Sapienza University of Rome, Department of Economics and Law

# Not only networks

- The term “social capital” has so far been mentioned several times during the lectures.
- Much of the literature, in fact, considers networks as a form of capital and calls this form of capital “social”, to indicate an intangible asset that inheres the “social structure” of the economy.
- However, networks themselves do not exhaust the whole concept of social capital. There are other aspects of the social structure, with which networks are tightly interconnected, that constitute a form of capital or that, jointly with networks, contribute creating and accumulating (or destroying) social capital.
- We mentioned some of them in the past lectures...

# Not only networks

- Social obligations
- Connections
- Networks of relationships of mutual acquaintance and recognition
- Membership in groups
- Clubs
- Social influences
- **Culture**
- Social expectations
- Information channels
- **Social norms**
- Effective sanctions
- Social organizations
- **Trust**
- **Trustworthiness**
- The family
- The strength of family relationships

# Not only networks

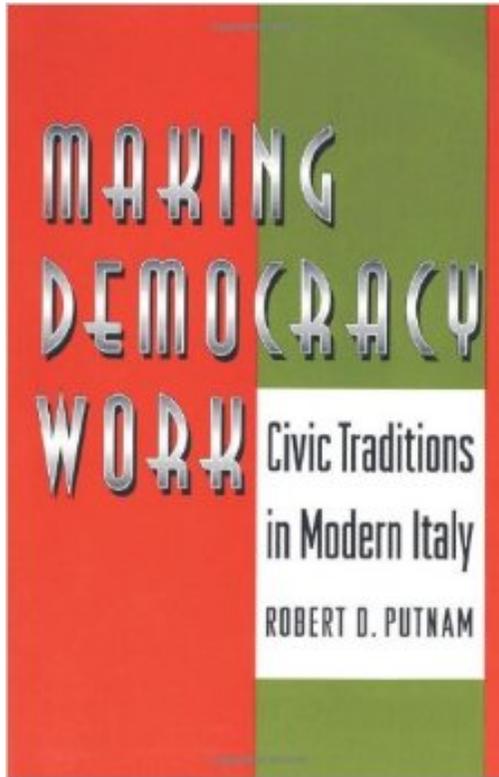
- The economic literature specifically focused on those assets hypothetically generated by networks that could, in principle, foster **cooperation, prosocial behavior**, the **economic activity** and, ultimately (in the long run and at the macro level), **growth**.
- Since the kinds of network that are more likely to have positive effects are **trust-intensive networks**, the economic research has given much attention to the concept of **trust**.
- After the publication of Putnam's (1993) seminal study, economists have extensively explored the **role of networks and trust in economic growth** and the complex relationships holding between networks and trust.
- We will deal with these issues in the following lectures.

# Plan of the next lectures

- Putnam's seminal studies (1993; 2000).
- Networks, trust, and growth.
- Are all networks alike?
- Introduction to the dark side of networks.
- Some methodological issues. You will see that Putnam's work also suffered from some (inevitable) empirical weaknesses that also affected the following literature, especially in economics.
- At the same time, Putnam et al. (1993) posed the basis for more complex empirical strategies for the identification of networks' effects.
- Introduction to instrumental variables, TSLS, natural experiments.

# Putnam's social capital

- After Coleman, Robert Putnam was the second to propose a very multidimensional definition of social capital.
- Putnam added to previous studies by:
  - “Making social capital work”: he operationalized the concept and empirically analyzed its possible effect on a range of supposed, economically relevant, outcomes.
  - Popularizing the concept through the publication of the **most cited study of the 1990s in social sciences**.



“Making Democracy Work: Civic Traditions in Modern Italy” has been pronounced by the editor of the *Quarterly Journal of Economics* as the most cited contribution across the social sciences in the 1990s (see Fine, 2001, p. 83).

After its publication, Putnam became one of the most influential social scientists and advisor of all the US democrat administrations.

According to Google Scholar, the book has been cited 36,863 times at the moment of preparing these slides.



# Objective of the study

- The book reports the results of a 10 years research analysing the **determinants of the institutional and economic performance** of the Italian regions.
- Special focus on the possible role of the **intangible factors of growth**.

# Putnam's analysis of networks (and trust) as social capital

- Putnam defined social capital as “**Features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for the mutual benefit**”.
- Putnam's social capital is a **shared resource**, a **public good** that serves to facilitate **collective action**.
- It seemed natural, at the time, to theorize, and empirically test, the existence of a **linkage between the presence of social capital and the strength and efficacy of democracy and democratic institutions**.

## **Open issues:**

- Which are the differences between Putnam's definition of social capital and those proposed by Bourdieu, Becker, and Coleman?
- Does collective action always lead to a better working democracy?
- Should we always trust grassroots movements?
- Do we have examples of grassroots movements supporting collective actions that actually weaken – instead of strengthening – democracy?

# Putnam's main results

- Statistically significant and positive correlation between social capital and indicators of the regional institutions' performance.
- In a follow-up study, Helliwell and Putnam (1995) found that social capital also is significantly and positively correlated with economic growth in the Italian regions.

# Measuring the institutions' performance

- Putnam looked for measures that could answer the following questions:
  - a. “Whatever else this institution is doing, is it conducting its crucial internal operations smoothly and with dispatch?”
  - b. “Are the governments prompt to identify social needs and propose innovative solutions? Does legislation enacted by the governments reflect a capacity to react comprehensively, coherently, and creatively to the issues at hand?”
  - c. “Are the regional governments successful in using the available resources to address the needs of a rapidly changing society? Have they succeeded in implementing their avowed policy objectives?”

# Measuring the institutions' performance

- In choosing the right indicators, it is of the greatest importance not to give governments credit (or blame) for matters *beyond their control*.
- In the language of policy analysis, **researchers should measure “outputs” rather than “outcomes”**—health care rather than mortality rates; environmental policy rather than air quality; economic development programs rather than business profits.

# 12 indicators of institutional performance

- To respond the 1st question (is the region conducting its crucial internal operations smoothly and with dispatch):
  - 1. Cabinet stability.**

The number of different cabinets installed in each region during the 1975-1980 and 1980-1985 legislative periods.
  - 2. Budget promptness.**

Average delay (from January 1) with which the budget was actually approved by the Regional council in the period 195-1985. Scores varied from the average January 27 of Friuli to the August 7 of Calabria.
  - 3. Statistical and information services.**

Breadth of the statistical and information facilities of the regions. At the bottom were 6 regions with no such facilities.

# 12 indicators of institutional performance

- To respond question b) (are governments prompt to identify social needs and propose solutions), Putnam built indicators of:

**4. Reform legislation.**

**5. Legislative innovation.**

- Putnam examined the entire legislative output of each region during the period 1978 to 1984 in 3 diverse policy areas:
  - economic development
  - territorial and environmental planning
  - and social services.

# 12 indicators of institutional performance

- To build the indicator of **reform legislation**, 3 criteria were used:
  - 1) **The comprehensiveness of the legislation**, that is, the degree to which the corpus of regional law produced during this period addressed a broad or narrow range of social needs.
  - 2) **The coherence of the legislation**, that is, the degree to which the various legislative initiatives were coordinated and internally consistent; for example, a program of aid for small business that was coordinated with job training and infrastructural projects ranked higher than one that (as Italians say) "showered" grants indiscriminately across the region.
  - 3) **The creativeness of the legislation**, that is, the degree to which it identified new needs, experimented with new services, or created incentives for new forms of private initiative.
- Each region was graded from 1 to 5 in each of the three policy sectors.
- The summed scores ranged from 15 for Emilia-Romagna, representing excellent performance in all three sectors, to 3 for Calabria and Molise, corresponding to poor performance in all three.

# 12 indicators of institutional performance

- To build the indicator of **legislative innovation** Putnam examined 12 topics on which similar laws appeared in many of the regions, including air and water pollution, promotion of fisheries, consumer protection, preventive medical clinics, strip mining regulation, hotel classification, wildlife protection.
- The metric was as follows: On average, across these twelve domains, how soon after **the first appearance of a model law** was it picked up by a given region? The region that pioneered a particular law was given a score of 100, and a region that had not adopted it at all was given a score of 0.14
- Average scores ranged from 74 for Emilia-Romagna to 4 for Calabria. He then built a synthetic indicator through a **principal component analysis (PCA)**.

# 12 indicators of institutional performance

- To respond to question 3) related to policy implementation, Putnam employed the following indicators:

## 6. **Day care centres.**

The number of regionally supported day care centers in operation by December 1983, standardized by the population of children aged 0 to 4.

Scores ranged from one center per 400 children in Emilia-Romagna to one center per 12,560 children in Campania

## 7. **Family clinics** (*consultori familiari*).

number of family clinics, standardized for regional population, in operation by May 1978.

## 8. **Industrial policy instruments.**

Which of an array of potential tools of industrial policy the region actually deployed: regional economic development plan, regional land use plan, industrial parks, regional development finance agencies, industrial development and marketing consortia, job-training programs.

A few regions, such as Friuli-Venezia Giulia, had used all six of these techniques as of 1984. Calabria, at the other extreme, had tried only two.

# 12 indicators of institutional performance

## 9. Agricultural spending capacity.

In 1977 the central government allocated substantial funds to each region (totaling roughly \$400 million) for investments in agriculture.

Administrative inefficiency kept several regions from spending any of the available funds at all, even in regions where agriculture is crucial. Spending ranged from 97% in Valle d'Aosta to 0% in Calabria and Molise.

## 10. Local Health Unit (*Unità sanitarie locali, USL*) Expenditures.

Considered that full funding for USLs was provided by central authorities, One measure of the readiness of each region to fulfill its responsibilities in this area is **per capita USL expenditures**, as of 1983, five years after the enactment of the national statute.

# 12 indicators of institutional performance

## 11. Housing and urban development.

- Beginning in 1971, and especially after 1978, the central government offered plentiful funding to each region to support subsidized housing (both public and privately owned), housing rehabilitation, and land acquisition for urban development.
- Regions were required to formulate four-year housing programs and to set criteria for the allocation of funds.
- Putnam gathered data in 1979, 1981, 1985, and 1987 on the ability of the regions to use these funds, as measured by the **fraction of the funds authorized by the central authorities that the region actually disbursed.**

# 12 indicators of institutional performance

## 12. Bureaucratic Responsiveness.

- To assess street-level responsiveness, Putnam and colleagues carried out one of the first field experiments in social sciences.
- In January 1983 they approached the bureaucracies in each region, requesting information about three specific (but fictitious) problems:
  - The health department was asked about reimbursement procedures for a medical bill incurred while the inquirer was on vacation abroad.
  - The vocational education department was asked about job training facilities for "a brother" just finishing junior high school.
  - The agriculture department was asked, on behalf of "a farmer friend," for information about loans and subsidies for experimental crops.
- The initial requests were made by mail, and the replies were evaluated for promptness, clarity, and comprehensiveness. If no timely reply was received, follow-up telephone calls and (when necessary) personal visits were made. In either case, the quality and alacrity of the response was evaluated.

# A synthetic index of institutional performance

- Putnam et al. (1993) then constructed a “summary index of institutional performance”, by means of a PCA on the following variables:

## COMPONENTS OF INDEX OF INSTITUTIONAL PERFORMANCE, 1978-1985

Variable 1	Reform legislation, 1978-1984
Variable 2	Day care centers, 1983
Variable 3	Housing and urban development, 1979-1987
Variable 4	Statistical and information services, 1981
Variable 5	Legislative innovation, 1978-1984 <sup>a</sup>
Variable 6	Cabinet stability, 1975-1985 <sup>b</sup>
Variable 7	Family clinics, 1978
Variable 8	Bureaucratic responsiveness, 1983
Variable 9	Industrial policy instruments, 1984
Variable 10	Budget promptness, 1979-1985 <sup>b</sup>
Variable 11	Local health unit spending, 1983
Variable 12	Agricultural spending capacity, 1978-1980

<sup>a</sup> Data for Variable 5 are unavailable for the five "Special Regions" (Valle d'Aosta, Trentino-Alto Adige, Friuli-Venezia Giulia, Sicilia, and Sardegna).

<sup>b</sup> Scoring for Variables 6 and 10 has been reversed from that described in the text, so that a high absolute score corresponds to high performance.

# A synthetic index of institutional performance

**TABLE 3.2**  
Index of Institutional Performance,  
1978–1985

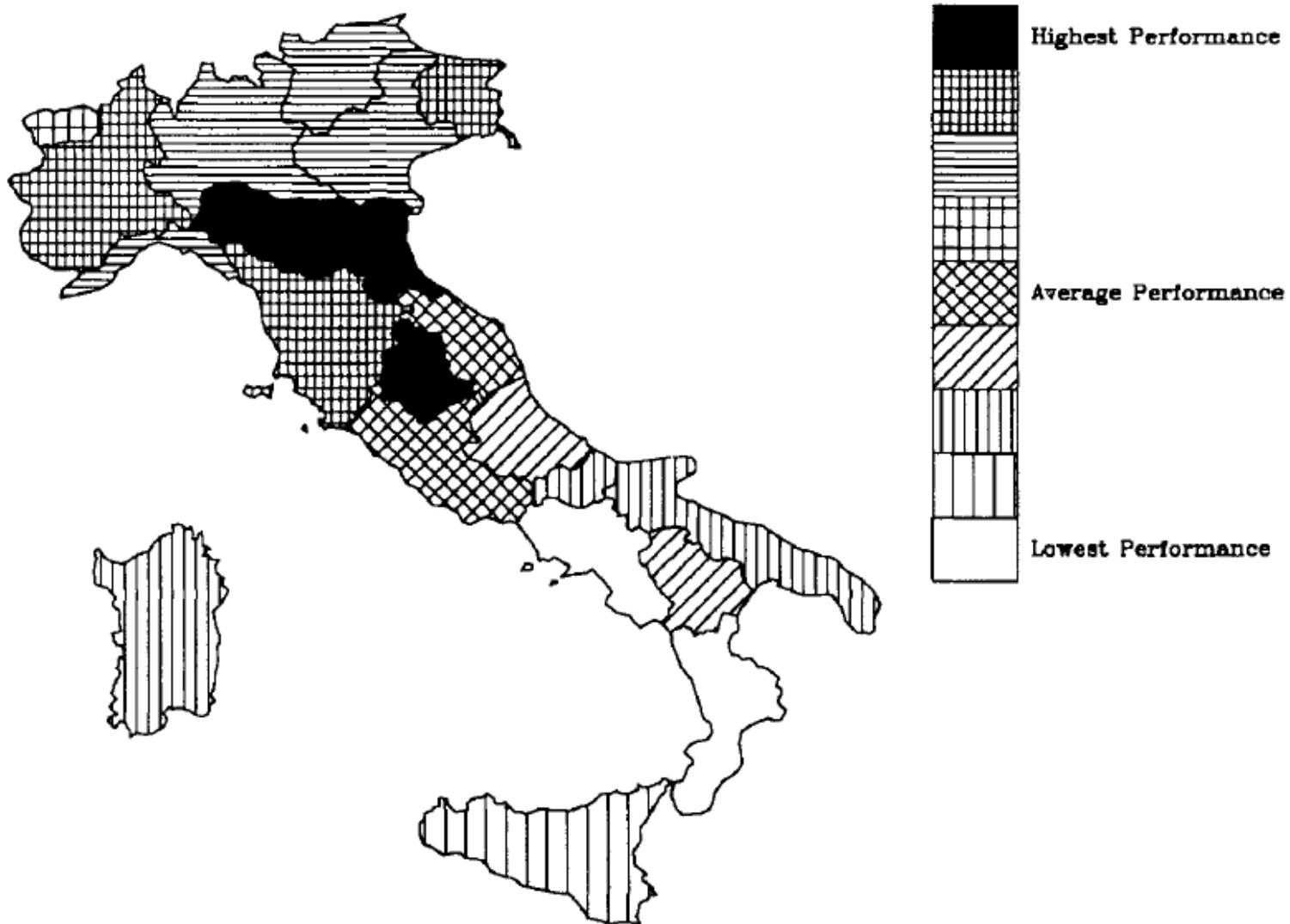
<i>Performance Indicator</i>	<i>Factor Loading</i>
Reform legislation, 1978–1984	0.874
Day care centers, 1983	0.851
Housing and urban development, 1979–1987	0.807
Statistical and information services, 1981	0.797
Legislative innovation, 1978–1984	0.779
Cabinet stability, 1975–1985 <sup>a</sup>	0.681
Family clinics, 1978	0.640
Bureaucratic responsiveness, 1983	0.625
Industrial policy instruments, 1984	0.580
Budget promptness, 1979–1985 <sup>a</sup>	0.577
Local health unit spending, 1983	0.545
Agricultural spending capacity, 1978–1980	0.468

<sup>a</sup> Scoring for cabinet stability and budget promptness has been reversed from that described in the text, so that a high absolute score corresponds to high performance.

Low factor loadings of these indicators show how much information you lose with PCA!

# A synthetic index of institutional performance

**FIGURE 4.1**  
Institutional Performance in the Italian Regions, 1978–1985



# The role of civic community

- Putnam theorized that the performance of democratic institutions is tightly linked to the strength of the “civic community”.
- The author identified 4 central aspects of civic community:
  - 1. Civic engagement:** Citizenship in a civic community is marked, first of all, by active participation in public affairs.
  - 2. Political equality:** Citizenship in the civic community entails equal rights and obligations for all. Such a community is bound together by horizontal relations of reciprocity and cooperation, not by vertical relations of authority and dependency.
  - 3. Solidarity, trust and tolerance.** Virtuous citizens are helpful, respectful, and trustful toward one another.
  - 4. Associations:** the social structures of cooperation.

# Measuring the civic community

- 1. Density of voluntary associations** (number of associations for every 100 residents). Includes sport clubs and associations concerning leisure time, cultural and scientific activities, music and theatre, technical or economic (?), health and social services.
- 2. The incidence of newspapers' readers.**

The idea for using this indicator is that newspapers, in Italy, constitute the most effective mean to get information on local communities' problems and events. People reading newspapers are thus better informed and more likely to get involved in community's life.

# Measuring the civic community

## 3. Voter turnout at referenda.

"Those who use the vote as an occasion for 'exchange' have scant motivation to go to the polls when the election (as in the case of the referendum) does not offer the possibility of obtaining immediate, personal benefits."

- The primary motivation of the referendum voter is concern for public issues, perhaps enhanced by a keener than average sense of civic duty, so that turnout for referenda offers a relatively "clean" measure of civic involvement

## 4. Incidence of preference voting.

# Putnam's indicators of social capital

In *Making Democracy Work*, social capital is measured with four indicators:

1) The **number of voluntary organizations**, including, for example, sport clubs and cultural circles.

2) The **number of local newspapers' readers**.

The idea for using this indicator is that newspapers, in Italy, constitute the most effective mean to get information on local communities' problems and events. People reading newspapers are thus better informed and more likely to get involved in community's life.

3) **Voter turn-out at referenda**.

Since voting for a referendum does not imply immediate and direct advantages, such a behaviour cannot be founded on the pursuit of personal aims. Therefore it has to be considered as a signal of civic spirit, which Putnam called "civicness".

4) **"Preference votes" in political elections**.

This is interpreted as an indicator of civic backwardness, since in the Italian political system preference votes have been historically used as a means for establishing client relationships and to obtain patronage favors (so called *voto di scambio*).

# A synthetic index of civic community

Once again, Putnam et al. (1993) performed a PCA on the 4 measures of civiness to build a single, synthetic, indicator of civic community.

High factor loadings show the convenience of using PCA this time.

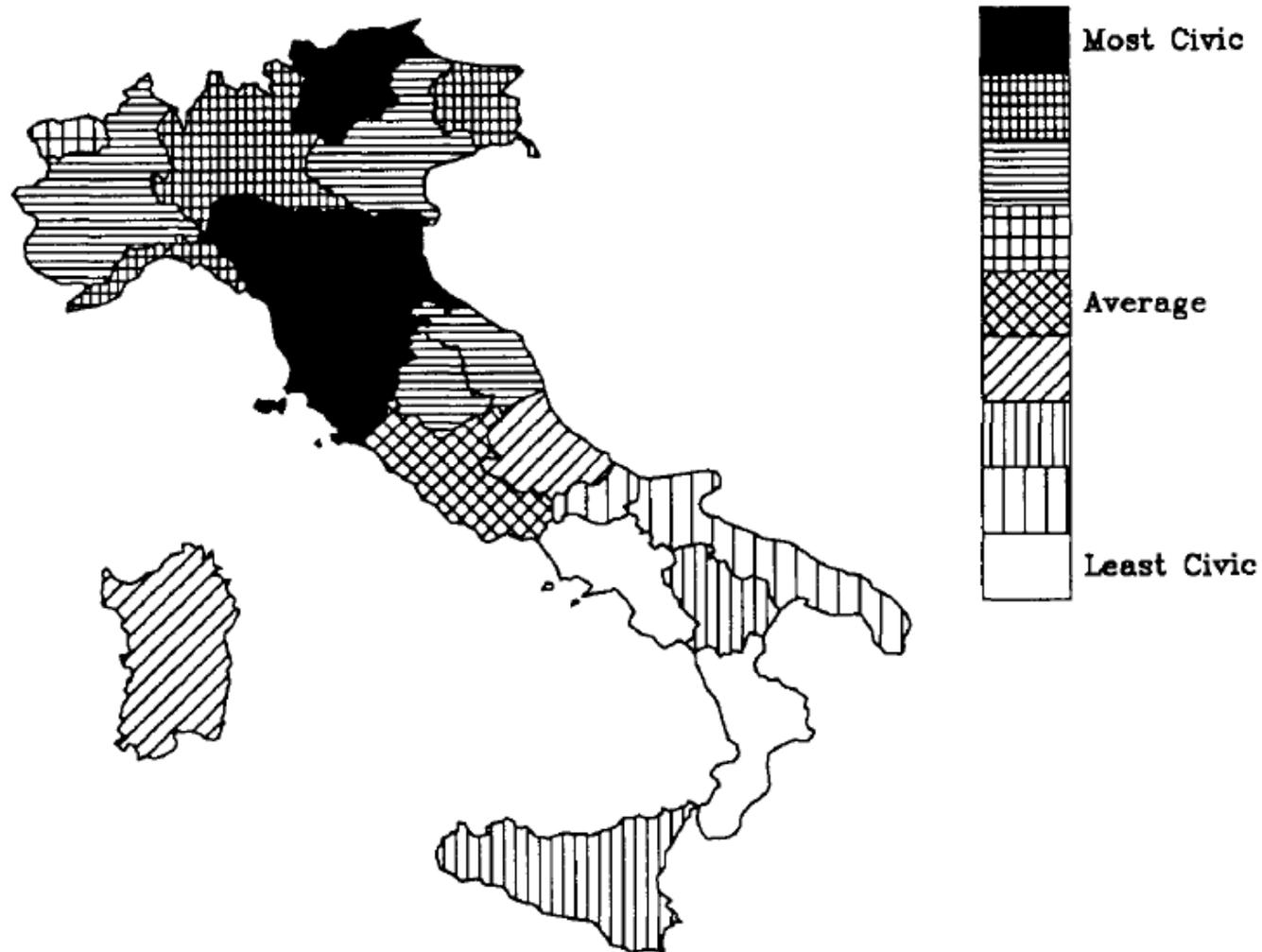
**TABLE 4.4**  
The Civic Community Index

<i>Component Measure</i>	<i>Factor Loading</i>
Preference voting, 1953–1979	–0.947
Referendum turnout, 1974–1987	0.944
Newspaper readership, 1975	0.893
Scarcity of sports and cultural associations, 1981	–0.891 <sup>a</sup>

<sup>a</sup> As indicated in the text, this variable is scored so that a higher number corresponds to a lower density of associations.

# A synthetic index of civic community

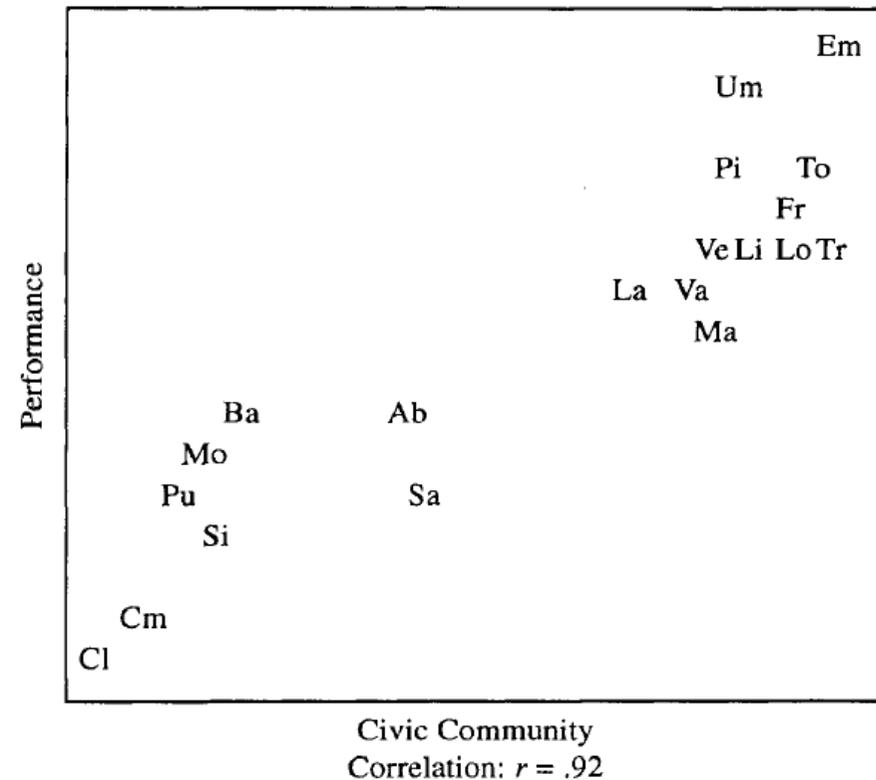
**FIGURE 4.4**  
The Civic Community in the Italian Regions



# Explaining the institutional performance

First Putnam et al. (1993) show there is a high correlation between the two synthetic indexes of civicness and institutional performance, to the point that “the predictive power of the civic community is greater than the power of economic development”. The correlation is even higher when accounting for the single components of the institutional performance.

**FIGURE 4.5**  
The Civic Community and Institutional Performance



# The Church and religion

- Organized religion, at least in Catholic Italy, is an alternative to the civic community, not a part of it.
- the Italian Church retains much of the heritage of the Counter-Reformation, including an emphasis on the ecclesiastical hierarchy and the traditional virtues of obedience and acceptance of one's station in life.
- Vertical bonds of authority are more characteristic of the Italian Church than horizontal bonds of fellowship.

## The Church and religion

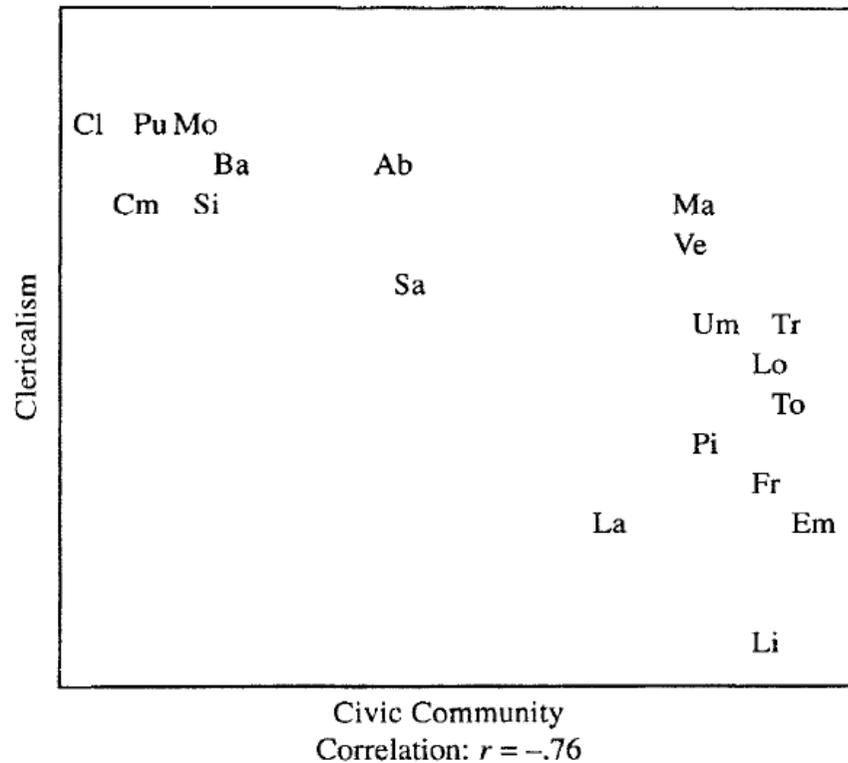
- To better analyse these aspects, Putnam et al. (1993) built a synthetic indicator of religiosity given by the first axis of a principal component analysis on some indicators of religious participation:

<i>Component measure</i>	<i>Loading</i>
Church marriage rate, 1976	0.952
Divorce rate, 1986	-0.915
Church marriage rate, 1986	0.862
Anti-Divorce Referendum, 1974	0.842
Divorce rate, 1973	-0.796
Survey: "Are you a religious person?"	0.792
Survey: "How often do you attend Church?"	0.783
Survey: "Is religion important to you?"	0.767

# The Church and religion

- At the regional level, all manifestations of religiosity and clericalism — attendance at Mass, religious (as opposed to civil) marriages, rejection of divorce, expressions of religious identity in surveys—are negatively correlated with civic engagement.
- At the individual level, too, religious sentiments and civic engagement seem to be mutually incompatible.

**FIGURE 4.12**  
Clericalism and the Civic Community



- **Open issues:**

- Does this negative relationship between religiosity and civic community still hold?
- Are all religions alike?
- What about the protestant ethic?
- How is the relationship between religiosity, civicness, prosocial behavior and economic development throughout the world?

# References

- Putnam, R. D., Leonardi, R., Nanetti, R. Y. (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press.  
Available in the Department's library (a Pdf copy for personal use can be provided by the professor by request).
- Putnam, R. D. (2000.) *Bowling Alone: The Collapse and Revival of the American Community*. New York: Simon & Schuster.  
Available in the Department's library (a Pdf copy for personal use can be provided by the professor by request).

# Highlights

- The “Italian job” by Putnam, Leonardi and Nanetti.
- Measuring the institutional performance.
- Measuring civic community, or “social capital”.
- Assessing the relationship between social capital and the institutional performance.
- Introduction to some methodological issues.

**Thank you!**