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Does social capital matter for European regional growth?

Anabel Forte [a], Jesús Peiró-Palomino [a], Emili Tortosa-Ausina [b,c,*]

[a] *Universitat de València, Spain*
[b] *Department of Economics, Universitat Jaume I, Campus del Riu Sec, 12071 Castelló de la Plana, Spain*
[c] *Ivie, Spain*

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A B S T R A C T

This paper analyzes the role of different elements of social capital in economic growth for a sample of 85 European regions during the period 1995–2008. Despite the remarkable progress that social capital and European regional economic growth literatures have experienced over the last two decades, initiatives combining the two are few, and entirely yet to come for the post-1990s period. Recent improvements in data availability allow this gap in the literature to be closed, since they enable the researcher to consider the traditionally disregarded Eastern and Central European (ECE) regions. This is particularly interesting, as they are all transition economies that recently joined the European Union, with relatively low levels of social capital. On the methodological side, we follow the Bayesian paradigm, which enables us to make direct inferences on the parameters to be estimated and deal with parameter uncertainty, leading to a deeper understanding of the relationships being investigated. In particular, we analyze three indicators of social capital, namely social trust, associational activities and social norms. Results suggest that the two former might have some implications for regional growth while social norms are a weaker predictor for growth.

1. Introduction

The study of the implications of social capital on economic growth has received major attention over the last two decades. Definitions of social capital are manifold and this is a handicap for scholars to easily transfer the concept from theory to empirical applications. However Putnam (1993) proposed a definition that quickly became widely accepted, namely, the "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions". Triggered by Putnam's (1993) findings, which suggested that differences in social capital are important for explaining regional disparities in institutional and economic performance in Italy, scholars began to consider social capital as a potential driver for economic development in other geographical contexts. The wide array of relevant theories and results arising from different studies may even have contributed to the increasing attention to social capital in the economic growth literature.

Today, the number of contributions at the country level has increased remarkably, among which some relevant publications are Knack and Keefer (1997), Whiteley (2000), Zak and Knack (2001), Dearmon and Grier (2009), or Doh and McNeely (2011). However, at the regional level, which was actually the tenor of Putnam's pioneering study, contributions are still scant. The case of the European regional context is not an exception, and considering European regions rather than countries is not trivial, since one-third

* Corresponding author at: Department of Economics, Universitat Jaume I, Campus del Riu Sec, 12071 Castelló de la Plana, Spain. Tel.: +34 9643871681; fax: +34 964728591.
E-mail address: tortosa@uji.es (E. Tortosa-Ausina).

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of the European budget is devoted to regional policies. More specifically, the EU has specific policies (known as the Regional Policy of the EU or Cohesion Policy) addressed to both improve the economic wellbeing of its regions (i.e., to promote growth) and to reduce the magnitude of regional disparities (i.e., to promote convergence). There has been a corresponding growth in the literature analyzing how growth and convergence patterns in the EU have evolved over the last three decades, and especially since the 1980s when some of the cohesion countries (Greece, Ireland, Portugal and Spain) had just joined the former European Economic Community. Relevant examples of this literature include, but are not restricted to, Sala-i-Martin (1996), Quah (1996), López-Bazo et al. (1999), Neven and Gouymte (1995), Canaleta et al. (2002), Rodríguez-Pose and Fratesi (2004), or Ezcurra et al. (2007), among many others, which deal with different aspects of European regional growth and convergence.

In this specific geographic and institutional setting, if we constrain the focus of the analysis to the impact of social capital on regional economic growth, the number of contributions shrinks dramatically. Significant examples include Schneider et al. (2000) and Beugelsdijk and Van Schaik (2005), both of which confine their analysis to the late nineties. However, their results using the common proxies for social capital—i.e., generalized trust (or social trust) and associational life (density of associations)—not only partly contradict what social capital theories predict, namely, that social capital positively affects growth, but also those results found by other studies at both the country and regional level. In particular, Schneider et al. (2000) found that trust was negatively related to growth, whereas Beugelsdijk and Van Schaik (2005) found non-significant effects from trust to growth but reported a positive effect from associationism to growth.

Meanwhile, from a methodological point of view, some of the limitations revealed by the most commonly used parametric (frequentist) analysis in order to set robust arguments in economic growth models have led scholars such as, for instance, Henderson et al. (2012), to use alternative non-parametric methodologies. One particular branch of the economic growth literature has been paying detailed attention to Bayesian methods, popularized by Fernández et al. (2000). In particular, some available studies such as Durlauf et al. (2012), Crespo-Cuaresma et al. (2011, 2012) and Moral-Benito (2012), among others, use Bayesian Model Averaging (BMA), a powerful tool for variable and model selection; however the contributions in the field of growth using Bayesian methods to do *inference* are more scant (see, for instance Masanjala and Papageorgiou, 2008).

However, this debate on models and methods has not been transferred to the literature on the impact of social capital on regional European growth, which is especially relevant taking into account that the existing studies partly contradict well-established theories on the impact of social capital on growth. In this context, our study evaluates the role of different dimensions of social capital on the economic growth of 85 European regions for the 1995–2008 period. With respect to the existing literature, the contribution is twofold. First, as opposed to previous approaches in this literature, most of which were *frequentist*, we consider *Bayesian* (inference) methodologies, which provide us with richer results in terms of complete probability distributions, namely posterior densities. Bayesian methods are relatively incipient in the specific context of social capital and economic growth (see Horvath, 2012), and their consideration may shed some light on the implications of social capital for growth, the links between which have not been entirely uncovered despite the remarkable research initiatives of the last few years.

A second contribution is related to the selected sample, which not only is larger than previous studies, but also includes regions from Eastern and Central European (ECE) countries that joined the European Union in the 2004 and 2007 enlargements. Previous evidence on the links between social capital and regional growth in Europe is exclusively confined to Western region samples. The interest in considering the new members' regions, basically ECE regions, lies in the fact that most of them are transition countries with highly eroded social capital levels and, nowadays, they have relatively low social capital levels compared to their Western counterparts (Fidrmuc and Gërxhani, 2008). Although several studies have focused on growth and convergence processes in ECE regions (see, for instance Ezcurra et al., 2007; Crespo-Cuaresma et al., 2012), social capital issues have not yet been addressed. In addition, apart from the large size of the sample, it encompasses a period for which there is no previous evidence on the links between social capital and growth. This period (1995–2008) is particularly relevant for two reasons: (i) it was a period of unprecedented growth for most European regions; (ii) it witnessed profound changes in the European Union, including the enlargement to include 15 new members (corresponding to the 1995, 2004 and 2007 enlargements), the creation of the Eurozone (1999), and advances in integration at different levels (corresponding to the Amsterdam, Nice and Lisbon Treaties).

The remainder of the paper is structured as follows. Section 2 provides some insights on the theoretical links between social capital and growth. Section 3 provides information on the sample and the variables of social capital used and Section 4 presents the empirical methodology. Section 5 displays the main results and, finally, Section 6 concludes.

2. On the links between social capital and economic growth

The theory states that social capital has positive implications for the performance of organizations as well as stimulating economic growth at the society level. The concept of "social capital" firstly appeared in Hanifan (1916), who found that social attitudes such as cooperation and participation were essential for rural schools in the state of Virginia to function well. Following a long parenthesis, sociological studies such as Arrow (1972) and Sen (1977) argued that the existence of social capital in society plays a major role in systems' operations and that societies need some norms and rules of conduct to be viable. However, studies formally evaluating the implications of social capital on institutional and economic performance from a macroeconomic perspective did not appear until the nineties; of particular note were the contributions by Putnam (1993) and Knack and Keefer (1997).

The links between social capital and economic development are complex and heterogeneous, and some authors such as Torsvik (2000) called for a major clarification of the channels through which social capital affects growth. Despite the difficultly of this task, virtually all scholars agree that the effects of social capital are seen in reduced transaction costs.