

POLITICAL COMPETITION AND ECONOMIC PERFORMANCE:
EVIDENCE FROM ITALIAN REGIONS

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Political Competition and Economic Performance: Evidence from Italian Regions

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ABSTRACT

We test Besley, Persson and Sturm's (2006) theory of the relationship between political competition and economic performance, according to which, when the predominance of an ideological dimension creates a political rent, the party exploiting it selects lower quality politicians whose policy choices worsen economic performance. We examine the sample of 15 Italian Regions from 1980 to 2002 that exploits the institutional reforms of 1995 as an exogenous shock to pre-existing rents. We find evidence that higher political competition improves economic performance, through the choice of more efficiency-oriented policies.

Keywords: political competition, growth, redistribution, regional government

JEL Codes: D78, H71, H72, O17

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1. Introduction and literature review

Since Marshall's *Principles of Economics*, economists are trained to believe that market competition maximizes the welfare of the consumers, whereas monopoly and market power create economic rents that make producers better off. First public choice, then political economics exported this notion to political competition (Mueller, 2003; Persson and Tabellini, 2000). The classical treatments by Downs (1957) and Becker (1958) set the argument for the ensuing inquiries. Competition among political parties or candidates for office does maximize voters' welfare inasmuch as it reduces political rents, e.g., the tax price at which government services are supplied, and works as an information revealing mechanism, improving the efficiency of the principal-agent relationship between voters and elected representatives. The literature that followed these early contributions focussed on imperfections of the political market, such as rational ignorance, efficiency losses of representation, voting and decision making procedures, bundling in political decisions, problems of time inconsistency in politicians' incentives, as well as how alternative institutional frameworks affect the efficiency properties of political market equilibria. Yet all these inquiries shared the paradigmatic conviction that more political competition enhances citizens' welfare (Wittman, 1989, 1995; Stigler, 1972; Barro, 1973). Even when severe inefficiencies taint the electoral processes and institutions, competition among interest groups possess many of the welfare properties of market competition (McCormick and Tollison, 1981; Becker, 1983). To further strengthen the argument, political economics models have shown that lopsided political competition engenders welfare losses, due to excessive rent seeking (Polo, 1998) and inefficiencies in the provision of government services (Svensson, 1998).

The macroeconomic literature on economic growth examined the link between political competition and economic efficiency from the opposite point of view, namely, whether

greater degrees of economic efficiency, usually measured by higher income levels or growth rates, are correlated with more democratic governments (Barro, 1996; Barro and Sala-i-Martin, 2004). The underlying, and somewhat troublesome, assumption is that democratic regimes are associated with political competition, while dictatorial ones can be taken as the analogue of a monopolistic political market. The predictions are ambiguous: on the one hand, greater political competition is usually correlated with more economic freedom, lower constraints on the efficient allocation of resources and accumulation of knowledge, which leads to faster growth. On the other hand, dictatorships are supposed to redistribute less, be better able to control rent seeking, and face lower risk of wars of attrition than democracies, all factors that should induce a better economic performance than democracies, *ceteris paribus*. Empirical findings suggest a combined effect of democracy and freedom on growth; increases in democracy raises growth at low levels of political freedom but lowers growth when moderate levels of freedom have been attained. Przeworski (2000) find no statistical difference in growth performance of the two regimes, probably because it is questionable that dictatorships redistribute less than democracies (Wintrobe, 1998) and because the economic structure under dictatorships shows considerable variations, spanning from market oriented Chile under Pinochet to the planned economy of former . Soviet Union. All in all, the empirical analyses support the greater competition-greater efficiency hypothesis only in part (Wintrobe, 2007).

A recent paper by Besley, Persson and Sturm (2006) collapses the various arguments on the link between political competition and economic efficiency into a single model, using a straightforward argument. Individuals usually base their voting decisions on an economic dimension, related to the performance of the economy during the government tenure. In some cases, however, they consider an ideological dimension too, based on a non-economic and resilient issue such as race, religion, nation and the like. When ideology is relevant, it blunts

voters' responsiveness to economic issues and gives a disproportionate electoral advantage (a political rent) to one party. This lack of accountability allows the party to select low-quality politicians as candidates for holding political offices, and special interest groups, antithetical to growth, to capture the political process. The economic consequences are policy choices targeted at redistribution rather than at efficiency and income growth. Besley, Persson and Sturm (2006) test the predictions of the model on data about the U.S. States. They exploit the "Right to Vote" laws of 1965-1970s as an exogenous shock that destroyed the political rent enjoyed by the Democratic Party in the South since the end of the Civil War and consequently contributed to the ensuing growth take-off of the Southern States. They find strong empirical support for the hypothesis that tighter political competition produces higher State income levels and growth rates, lower tax pressure, more business friendly regulation and a higher quality of the Presidents.

The model is at the same time comprehensive and rigorous; as such it provides an important reference point for any inquiry on the matter. Furthermore, the empirical support it receives within the U.S. States sample is so impressive that it has already stimulated an empirical literature aimed at verifying the generality of these findings. This literature, however, lends only mixed support to the theory of Besley, Persson and Sturm (2006). Ashworth et al. (2006) examine the competition-efficiency nexus in a sample of Flemish municipalities. They find that political competition does have a beneficial effect on the efficiency of municipality performance; these effects, however, are in part mitigated in that such competition may lead to more fragmentation in governments that works against efficiency. In a panel of OECD countries, Padovano and Ricciuti (2007) fail to find empirical support for the predictions of Besley, Persson and Sturm (2006) for what it concerns both economic performance and fiscal policy. Contrary to the evidence related to lower levels of government, greater political competition at the national level appears to produce worse

economic performance and less efficient fiscal policies. When political rents are dissipated and offices are tightly contested, national politicians seem to resort to redistributive, rather than efficiency oriented, policies in order to buy votes. This short run political strategy reduces long run economic efficiency.

A possible reason why political competition seems to promote efficiency only in lower levels of government is that, compared to central governments, local ones are characterized by tighter constraints on the discretionary power of politicians. These constraints may take the form of yardstick competition, tighter control from higher government levels, a more limited set of competencies that reduces voters' information costs, or a lower salience of ideological issues. But one can also make the opposite argument, that lower levels of government may be more easily bailed out by higher ones, may be more easily captured by local interest groups and that a multiplicity of government levels may reduce political accountability². If so, political competition should promote more efficiency oriented policies and superior economic performance at the level of national governments, not of regional or state ones. Should this be the case, the empirical results of Besley, Persson and Sturm (2006), however strong, would not be general.

The Italian Regions provide an appropriate and interesting testing ground to the theory for three main reasons. First, the radical institutional reforms of 1995, which transformed their government structure from a parliamentary system elected via proportional representation to an effectively presidential one with an electoral system resembling a first-past-the-post, are generally believed to have produced an upward shift in the competitiveness of Italian regional politics (Veronese, 2007). This discontinuity should make it easier to detect evidence of increased competition and the changes it induced on policy choices and economic efficiency.

² See Rodden (2003) for a review of the alternative theories.

Second, the Italian regional governments have a limited set of political competencies, which should guarantee a fairly tight agency relationship between voters and their representatives. The preservation of political rents should therefore be more difficult for incumbent parties and politicians and this should foster political competition. Third, the limits in the policy choices should make it easier to evaluate their efficiency profile. Hence, in this paper we examine the main implications of the Besley, Persson and Sturm (2006) model on a sample of data drawn from the Italian Regions for the 1980-2002, centered on the 1995 institutional reform.

The rest of the paper is organized as follows. Section 2 presents the theoretical model. Section 3 provides a brief description of the Italian Regional institutions and politics. Section 4 describes the data, the strategy for the empirical analysis and the empirical model. Section 5 illustrates the empirical results for economic efficiency and fiscal policy. Section 6 reassumes the main results of the analysis, compares them with the rest of the literature and points out avenues for future research.

2. The theoretical model

In this section we provide a simplified version of Besley, Persson and Sturm's (2006) model³ to illustrate how political competition may affect policy and economic growth via the quality of politicians and the type of policy choices. We suppose that political competition in a given sub-central government level, that we hereby call the Region, is characterized by two parties that select candidates for the elections of the President of the Regional government. Each Region is composed by two groups of citizens, one that hold a traditional asset (called

³ The model of Besley, Persson and Sturm (2006) is, in turn, a modified version of the model economy and probabilistic voting of Persson and Tabellini (2000).

land), and another that draws incomes only from a more technologically advanced and modern sector. The traditional sector is here represented as agriculture and the modern one as a capital intensive activity; the logic of the argument is however applicable to any economy where a group of industries is less productive than another. This set-up reflects the situation of many countries, where regional economies are characterized by different levels of development and convergence is not achieved for a variety of reasons, such as increasing returns to scale, clustering in production or quality of fiscal policies (Krugman, 1991; Padovano, 2007). In the model, policy is set by the elected President and redistributes resources among the two sectors in a way that maximizes the political returns to the President. Owners of the traditional asset protect their quasi-rents by lobbying and are more or less successful depending on the quality of the President. Lopsided political competition consists in an electoral advantage of one party arising from a surplus of committed voters. This surplus is in turn generated by one party's advantage in representing a set of non-economic, resilient issues, called ideology, which can be thought of as race, religion, nation and the like. In the American South race could be the example, in Italy could be religion, in many countries, before the fall of the Berlin Wall, could be an anti-Communist ideological stance. We do not explain why one party has an advantage in representing this issue. The degree of political competition increases as this ideological dimension, and the annexed electoral advantage, loses importance. When it exists, however, such electoral advantage reduces the dominant party's incentive to appeal to swing voters, who are not committed on ideological issues and are prepared to vote against candidates susceptible to lobbying. For the sake of simplicity, and with no loss of generality, the model assumes away all differences between the parties except for the asymmetric political support for their stance on non-economic issues. The timing of the model is as follows. First, each of the parties picks a candidate for President under uncertainty about a popularity shock. Second, this shock is realized as voters vote. Third,

whoever is elected President receives transfers from vested interests and selects a policy. At the last stage, private economic choices are made.

The next three subsections deal with these choices in reverse order. Thus, we first describe the economic model, then the political model, and finally the full politico-economic equilibrium.

2.1. The economic model. The model economy is composed of two sectors, the traditional and the new one, and of two time periods. The key question for the politico-economic performance nexus is how the owners of traditional factors can protect their quasi-rents and how such protection affects economic growth.

Consider a finite population of size M , where each citizen differs in their economic and political type (political types are discussed in the next subsection). Economic types, denoted by $I \in \{K, L\}$ refer to the ownership of factors. One group, $I = K$ has $(1 - \alpha)M$ members, owns no land and is referred to as “capitalists”. The other group, $I = L$ with size αM , is referred to as “landowners”, each endowed with the same amount of land l / α , where l is land per capita in the population. Every citizen has the same period 1 endowment, y_1 , which can be consumed or invested in either of the two sectors $S \in \{T, N\}$, where T stands for “traditional” and N for “new”. The period 1 budget constraint of an individual from group I is thus

$$c_1^I + k^{I,T} + k^{I,N} = y_1 \tag{1}$$

where c_1^I is his first-period consumption and $k^{I,T}$ and $k^{I,N}$ are his investments in the traditional and new sector, respectively.

In period 2, the same consumption good can be produced with two different technologies, associated with the two different sectors of production. In the new sector, production requires only capital and takes place according to a linear technology $Y^N = MAk^N$, where Y^N is output of the new sector and k^N per-capita investment in the new sector. The traditional sector

has a well-behaved, constant-returns-to-scale production technology $Y^T = MQ(k^T, l)$, where Y^T is output of the traditional sector, and k^T per-capita investment in the traditional sector. We assume that $Q(k^T, l)$ is increasing in both arguments and that $Q_{kk} < 0$, $Q_{ll} > 0$ and $Q_{lk} > 0$.

A citizen in group I evaluates economic outcomes by the quasi-linear utility function:

$$V^I = H(c_1^I) + c_2^I \quad (2)$$

where c_j^I is consumption in period j and $H_c > 0$, while $H_{cc} < 0$.

Relative profitability of capital in the two sectors will be affected by a host of different policies, including regulatory, industrial, labour market, and commercial policies. For simplicity, we represent such detailed policies by a catchall sectorial tax $\tau \geq 0$, levied on the output of the new sector. The per-capita tax proceeds τAk^N are distributed as an equal lump sum transfer f to every individual in the economy. Inasmuch as we do not make any assumption about the tax rate relative to the transfer, the President's redistributive choices may benefit any sector. The period 2 budget constraint of an individual from group I is thus:

$$c_2^I = (1 - \tau)Ak^{I,N} + Q_k k^{I,T} + Q_l l^I + f \quad (3)$$

where l^I denotes per-capita holdings of land in group I ; furthermore we have exploited that in equilibrium the reward to each factor equals its marginal product. When savings and investments are chosen, the tax rate τ is already known, because economic choices are made after political choices. Optimal economic decisions imply that in (an interior) equilibrium:

$$H_c(y_1 - k^{I,T} - k^{I,N}) = A(1 - \tau) = Q_k(k^T, l) \quad (4)$$

In equilibrium each person thus invests the same amount $k^I = k^{I,T} + k^{I,N}$, irrespective of whether she owns any land, and, since marginal rates of return are equal, individuals are indifferent between the two forms of investment. As H_{cc} is negative, we get a savings

function, $k^l = K(\tau)$, which defines per capita investment as a declining function of the sectorial tax. However, as $Q_{kk} < 0$ per capita investment in the traditional sector is an increasing function of the tax on the new sector, $k^T = K^T(\tau)$. Moreover, this implies that the quasi-rents to land $R(\tau) = Q_l(K^T(\tau), l)$ are an increasing function of the tax as $Q_{lk} > 0$.

Substituting this information into the utility function (2) yields:

$$V^l(\tau) = F(\tau) + R(\tau)(l^l - l) \quad (5)$$

where $F(\tau)$ is defined as

$$F(\tau) = H(y_1 - K(\tau)) + A(K(\tau) - K^T(\tau)) + Q(K^T(\tau), l) \quad (6)$$

and where we have the per capita budget constraint: $f = \tau A(K(\tau) - K^T(\tau))$. The expression $F(\tau)$ is the indirect utility of a hypothetical person, who owns the average per capita amount of land. The indirect utility function V^l illustrates the conflict of interest between landowners and capitalists. Since $F_\tau(0) = 0$ and $R_\tau(0) > 0$, landowners with above average land holdings prefer a strictly positive value of τ , even though a positive tax rate depresses the return to capital⁴. The utilitarian optimum is to set $\tau = 0$, as average utility has a maximum at the point $\tau = 0$.

The two key results of the economic model for the growth rate and the structure of the economy are, first, that the growth rate (of GDP and GDP per-capita)

$$g(\tau) = \frac{M(y_2 - y_1)}{My_1} = \frac{1}{y_1} [A(K(\tau) - K^T(\tau)) + Q(K^T(\tau), l)] - 1 \quad (7)$$

⁴ Differentiating (6) with respect to τ yields $F_\tau = [(A - H_c)K_\tau + (Q_k - A)K_\tau^T]$. From (4) $\tau = 0$ implies that $A = H_c$ and $A = Q_k$ which in turn implies $F_\tau(0) = 0$. Given the convexity of technology and preferences this is also the unique global maximum.

is a decreasing function of the tax on the modern sector τ . Intuitively, the tax depresses growth for two reasons: it distorts the accumulation as well as the allocation of capital between the two sectors. Second, the share of the modern sector in period 2 output:

$$s^N(\tau) = \frac{Ak^N}{y_2} = \frac{A(K(\tau) - K^T(\tau))}{A(K(\tau) - K^T(\tau)) + Q(K^T(\tau), l)}$$

is also a decreasing function of the tax on the modern sector. The results of this subsection are summarized as follows:

Proposition 1. *A higher tax rate on the modern sector reduces the growth rate and increases the share of the traditional sector in output. Owners of land prefer a strictly positive tax rate on the modern sector, while the utilitarian optimum is to set the tax equal to zero.*

2.2 The Political Model. As mentioned above, each citizen has a political type P , defined by the utility obtained from non-economic issues. We distinguish three types: Centre Left, Centre Right and Independents, $P \in \{CL, CR, 0\}$. Partisan voters, who vote invariantly for one party, make up a share $1 - \sigma$ of the population. Let $\delta(P, p)\Delta$ be the utility gain of a partisan from having his preferred political type, p , in the President's office. Only the Centre Left and the Centre Right are organized in parties, which field candidates for Presidential office, $p \in \{CL, CR\}$. Thus, we set $\delta(CL, CR) = \delta(CR, CL) = 0$, and $\delta(P, P) = 1$. As explained below, independents also care about the parties' stance on non-economic issues, but to a smaller degree than partisans.

The political part of the model involves 1) interest groups, 2) political parties and elected Presidents, and 3) voters. We next describe each of these players.

1) *Interest groups.* Agents who benefit from the use of capital in traditional technologies become vested interests and have strong incentives to get organized in order to protect their quasi-rents. In sectors based on new technologies, where no such rents exist, interest groups

are harder to form, especially before the necessary factors or skills have been accumulated. As policy decisions precede economic decisions in the model, we assume that only economic group L lobbies the elected President and his party, by paying a per member transfer t in exchange for policy favours.

To simplify the analysis, we assume that the land owning group L only consists of ideologically motivated citizens from both parties. After the election, however, any political conflict is uncertain. Moreover, as all members own the same amount of land, there is no policy conflict within the group. The utility level of the representative interest-group member, at the point of lobbying, is:

$$V^{P,L}(\tau, t) = V^L(\tau) - t = F(\tau) + \frac{1-\alpha}{\alpha} R(\tau)l - t \quad (8)$$

2) *Parties and Elected Presidents.* Each of the two parties, CL and CR , comprises a small fraction of ideologically motivated citizens, with $P \in \{CL, CR\}$. We rule out any direct vested interests in the party, by assuming that all party members are capitalists, i.e., they are economic type K . Parties pick candidates for President among the party members. In the spirit of the citizen-candidate models of Besley and Coate (1997), candidate selection makes policy promises credible.

After the election, the candidate elected President picks the policy τ and decides how much transfers to take from the special interest. Elected candidates share any transfers they receive with party members, according to a fixed rule where the party's share is given by ρ (where $\rho < 1 - 1/M$, to rule out trivial results). Party members differ in the amount of "shame" they attach to any bribe received. Let q , with $0 \leq q \leq 1$ denote the discounting due to shame, so a unit of transfers has value $1 - q$ to a politician. In the following, we refer to q as the "quality" of a candidate. The preferences of an elected President, at the point where he sets policy, can thus be written as:

$$\begin{aligned}
V^{G,K}(q, \tau, t) &= V^K(\tau) + (1 + \rho)(1 - q)t\alpha M + \Delta = \\
&= F(\tau) - R(\tau)l + (1 + \rho)(1 - q)t\alpha M + \Delta
\end{aligned} \tag{9}$$

The party share of transfers is split equally between members. Let the number of party members (in each party) be mM with $m < \frac{1}{2}(1 - \sigma)$ and denote the average quality of party members by q^P . We assume that parties are ‘‘Coasian’’, inasmuch as they maximize the indirect utility of the average member and that $\frac{\rho}{m}(1 - q^P) > 1$.

The utility of the average party member when the policy is τ and transfers are t is:

$$V^{P,K}(\tau, t) = V^K(\tau) + \delta(P, p)\left(\Delta + \frac{\rho}{m}(1 - q^P)t\alpha\right) \tag{10}$$

Selecting a candidate for Presidential office thus amounts to picking a type q_p , which affects the level of t if the election is won by party P .

3) *Voters*. The two groups are defined by the political types above. A share $1 - \sigma$ of the population, the types $P \in \{CL, CR\}$, strongly prefers one of the parties due to non economic issues. We assume this preference to be strong enough that committed citizens vote for their preferred party no matter what; in the lexicon of the model, their utility gain Δ is large enough to dominate any economic concerns). Of these committed voters, a fraction $(1 - \lambda)/2$ prefers party CL . To fix ideas on the Italian sample, during the so-called First Republic we think about Catholic religion and anti-Communist ideology as the salient non-economic issue and the Christian Democrats (here the CL party) as having an advantage among the committed voters in this dimension, i.e., $\lambda > 0$.

The remaining share σ of voters are independent, type $P = 0$, swing voters. We have already assumed that all landowners are partisans, so all swing voters are found among the capitalists. Thus, the economic payoff to a swing voter of having party $p \in \{CL, CR\}$ in office is $v_p = V^K(\tau_p)$, depending on the party’s tax policy as evaluated by a capitalist. In addition,

swing voters have an individual party preference, $\omega[\delta(0, CL) - \delta(0, CR)]$, for or against party CL 's relative stance on non-economic issues, with $\omega \geq 0$ distributed among the voters.

A swing voter casts her ballot for party CL whenever:

$$\eta + \omega + v_{CL} - v_{CR} > 0$$

where η is an aggregate popularity shock. If G_ω denotes the conditional density function for ω , it is easy to show that party CL wins when:

$$\sigma[1 - 2G_\omega(-\eta - v_{CL} - v_{CR})] + (1 - \sigma)\lambda > 0$$

To simplify, ω is assumed uniform on $[-\frac{1}{2\phi}, \frac{1}{2\phi}]$, with $\frac{1}{2\phi} < \Delta$; all swing voters have weaker preferences on non-economic issues than the partisan voters. We may use the support of the ω distribution to gauge the relative salience of non-economic issues among the swing voters, with a higher value of ϕ capturing lower salience.

Under this parameterization, the condition for a Centre Left party win becomes:

$$\sigma\phi[\eta - v_{CL} - v_{CR}] + (1 - \sigma)\lambda > 0$$

corresponding to the following critical value of the popularity:

$$\hat{\eta} = \kappa - [v_{CL} - v_{CR}]$$

where the composite parameter

$$\kappa = \frac{1 - \sigma}{\sigma} \frac{\lambda}{\phi}$$

is our key measure of (lack of) political competition. To further simplify the algebra, let η be uniform on $[-\frac{1}{2\xi}, \frac{1}{2\xi}]$. We assume that parties pick their candidates for President knowing the distributions of ω and η , but not the realization of η . At that point in time, the probability of a Centre Left win is:

$$P_{CL}(\kappa - v_{CL} - v_{CR}) = \begin{cases} 1 & \text{if } \xi[\kappa + v_{CL} - v_{CR}] \geq \frac{1}{2} \\ \frac{1}{2} + \xi[\kappa + v_{CL} - v_{CR}] & \\ 0 & \text{if } \xi[\kappa + v_{CL} - v_{CR}] \leq -\frac{1}{2} \end{cases} \quad (11)$$

Hence, this probabilistic voting model predicts the electoral success of the Centre Left to primarily depend on two factors. One is the degree of political competition κ ; another is any utility difference in the eyes of the swing voters between the policies pursued by the Centre-Left and Centre-Right candidates, $v_{CL} - v_{CR}$.

Equation (11) shows why κ is crucial in affecting the probability that the Centre Left win. The model is useful in identifying the factors that make political competition stiffer, i.e., κ closer to zero. The model shows that political competition increases as:

- 1) λ falls, i.e., as the Centre Left's advantage in terms of committed supporters decline;
- 2) σ becomes large, i.e., swing voters make up a larger fraction of the voting population;
- 3) ϕ goes up, because the salience of non-economic issues among the swing voters decreases.

Post election politics. The candidate and party winning the election is described by the pair $\{q_p, p\}$. In the post-election lobbying game, suppose the elected President can make a take-it-or-leave-it offer to the interest group. But the reservation utility of an interest group member cannot fall below the utility of a capitalist (e.g., because of the possibility of land sales), i.e., $V^K(\tau) = F(\tau) - R(\tau)l$. It follows from (8) that equilibrium transfers satisfy

$$t = \frac{R(\tau)l}{\alpha}$$

In other words, the rent from land is fully captured and transferred to the President and his party. Since $R_\tau > 0$, higher taxes go hand in hand with higher transfers.

The President's ex post payoff is therefore

$$F(\tau) + \Delta + R(\tau)l + (1 + \rho)(1 - q_p)M - 1 \quad (12)$$

Since there is no commitment in policy, the equilibrium tax rate is the ex post optimal tax rate for the elected President, i.e.,

$$\tau(q_p) = \arg \max_{\tau \in [0,1]} \{F(\tau) + \Delta + R(\tau)l + (1 + \rho)(1 - q_p)M - 1\} \quad (13)$$

It is easy to show that $\tau(q_p)$ is a declining function (see Besley, Persson and Sturm, 2006). Higher quality Presidents attach less value to transfers and are less prone to exchange money for policy favors to vested interests.

Pre election politics. The main check on rent extraction by parties is the contest over swing-voter support. Effectively, parties compete by offering equilibrium utility levels of their candidates to the swing voters which are made “incentive compatible” by picking Presidents who deliver such policies. The range of utility levels $[\underline{v}, \bar{v}]$ a party can credibly offer, however, depends on the range of possible Presidents.

We can now write the pre-election maximands of the Centre Left party:

$$v_{CR} + P_{CL}(\kappa + v_{CL} - v_{CR})[\Delta + W(v_{CL}) - v_{CR}] \quad (14)$$

and the Right Wing party:

$$\Delta + W(v_{CR}) - P_{CL}(\kappa + v_{CL} - v_{CR})[\Delta + W(v_{CL}) - v_{CR}] \quad (15)$$

where we have used that party members obtain the same utility as ordinary capitalists if their party does not gain office.

The trade-off facing parties should now be clear. Offering a higher utility to the swing voters - i.e., picking a higher quality Presidential candidate (someone with higher q_p) - they raise their chance of winning. This, however, reduces the rents they capture if winning (τ and hence t will be lower). The full politico-economic equilibrium reveals how this trade-off is resolved by party strategies. The only difference between the parties is captured by κ , which

measures the extent of political competition. As we will see, because $\kappa > 0$ the Centre Left (more generally the party with an inherent electoral advantage) are less pro-growth. Intuitively, a party with a larger set of committed voters is tempted to pick politicians who care more about rents, protect the rents and the size of the traditional sector, and thereby retard growth.

2.3 Politico economic equilibrium. In this section, we study the equilibrium predictions of the model with respect to changes in political competition as measured by κ . An equilibrium is a pair of utility levels $\{v_{CL}, v_{CR}\} \in [\underline{v}, \bar{v}]^2$, which forms a Nash equilibrium in pre election game between the two parties, given the equilibrium behaviour of voters, interest groups and elected Presidents, as described above. To fix ideas, we focus on the case where $\kappa > 0$, i.e., the electorate is biased towards the Centre Left.

We will study the equilibrium of the model when two assumptions hold:

$$\textit{Assumption 1} \quad \frac{1}{2} \frac{\rho(1-q^P)}{m} > 1 \quad (16.1)$$

This guarantees that the party reaction functions slope upwards in a neighbourhood of \bar{v} .

We also postulate

$$\textit{Assumption 2} \quad \frac{1}{2} \frac{\rho(1-q^P) - m}{m} > \xi\Delta \quad (16.2)$$

This says that the party's marginal cost in terms of foregone rents exceeds the marginal benefit in terms of ideological stance, at the point where no protection is given to the traditional sector. As a result, (dominant) parties will tend to pick an outcome where $v_p < \bar{v}$. Clearly, Assumptions 1 and 2 hold for small enough m or q^P , since then rents are concentrated in a small elite or the party members do not have large inhibitions in extracting political rents. The key result linking policies and political competition (proven in Besley, Persson and Sturm, 2006) is:

Proposition 2 *Suppose that Assumptions 1 and 2 hold, then an equilibrium exists and the effect of political competition on economic outcomes has three ranges:*

1. *For κ above an upper threshold (κ_H) the Centre Left pursue their own preferred (anti-growth) policy by optimally picking bad Presidents who win for sure and take bribes from the traditional sector which they protect.*

2. *For κ in an intermediate range above a lower threshold (κ_L), the Centre Right pick highly pro-growth policies, and the Centre Left still choose bad candidates for President, but are somewhat constrained. As competition increases, the probability of observing a Right Winger President goes up and the Centre Left improve the quality of their Presidential candidates. Hence, taxes go down, while the quality of politicians, the output share of the modern sector and economic growth go up with competition.*

3. *For κ close enough to zero, the party ranking and the effect of political competition on policy and economic growth are ambiguous.*

The results in this section form the basis for our empirical analysis. While not estimating a structural model, the theoretical structure is used to guide our measurement (e.g., of the key parameter κ that captures the degree of political competition). We test directly the main prediction in Proposition 1, that greater political competition raises incomes levels and growth rates. We also test the link suggested by the model, namely that political competition affects growth-promoting policy.

3. A brief description of Italian Regional politics and institutions

The Italian Constitution, promulgated in 1948, foresees the principle of decentralization of the government functions and the establishment of Regional Governments (Article 5 and Title V of the Constitution). Italy has thus been divided in 20 Regions (see Appendix A for the list of names and abbreviations). Five of them, the first to be established between 1948 and 1963, enjoy a special statute (*Regioni a Statuto Speciale*, or RSS), because of their multilingual status, borderline position or particularly low level of development. The remaining 15 Regions, characterized by an “ordinary statute” (*Regioni a Statuto Ordinario*, or RSO), were established in 1970, 22 years after the Constitutional provision.

According to the Constitution, Regional Governments have the major responsibility of health care and of regional administration, plus certain aspects of social services, environment, local transportation, housing culture and tourism. The difference between the RSO and the RSS lies chiefly in the provision of grants from the Central Government, which is much more generous for the RSS (Brosio, Maggi and Piperno, 2003).

Until the early 1990s the institutional framework and the politics of the RSO largely replicated those of the National Government, being based on proportional representation and on a parliamentary system, with a 5-year renewable tenure length for Regional legislators. This created a lack of accountability, instability of Regional governments and a general dissatisfaction with the quality of regional politics. This situation led to an important reform (law n. 43/1995) that modified both the electoral system and the tenure length of regional legislators. The mechanism to elect the members of the regional Council switched from a pure proportional representation system to a mixed one. Eighty percent of the legislators are elected on the basis of provincial lists (art. 1, par. 2 of the 1995 law) and the remaining twenty percent by a majoritarian system on the basis of regional lists (art. 1, par. 3). Moreover, a top-up for the majority in two steps ensures that the absolute majority of the legislators be held by the coalition linked to the regional list that obtained the relative majority of the votes. The

reform also reduced the tenure length of the Council from five to two years if the confidence relationship between the Council and the Cabinet breaks down during the first two years. Finally, the President is not directly elected but indicated before the election by the coalition that supports her or him. The new electoral rules foreseen by the reform were first applied in the 1995 regional elections. In 1999 a further reform step was introduced: a constitutional law again modified the election of the President (art. 122 of the Constitution), stating that the President of the Regional Government is elected by universal and direct suffrage, unless the Regional Statute establishes otherwise. The elected President appoints and dismisses the members of the Regional Government. The first direct election of the President took place in the regional elections of the year 2000.

This reform considerably affected the ways and mores of Italian regional politics. Alternation in government, already present, augmented significantly in the three elections held under the new institutional system. To make an example, in the last electoral round, 5 regions out of 20 (Calabria, Lazio, Piemonte, Puglia and Sardegna) swung from the center-right to the center-left coalition, a remarkable shift given the traditional stability of Italian politics. The direct election of the Governor also prompted the adoption of political practices usually featured in accountable systems of government, like the publishing of electoral programs (although still by a minority of candidates), the deliverance of a programmatic speech before the Regional Council in coincidence with the confidence debate that marks the investiture of the Regional Government, the adoption of long term budget documents, as well as other initiatives in the same vein.

Another factor that increased political competition was the dramatic political changes that took place in Italy at the beginning of the 1990s, when a wave of corruption scandals swept away the pre-existing political parties. Especially at the level of national politics, these parties enjoyed large political rents because of the impossibility of the Communist Party to alternate

in Government with the Christian Democrats, although since 1948 it has always been the second largest party in Italy, because of its incompatibility with the set of Italy's international alliances. When this stalemate broke down at the beginning of the 1990s, it was replaced by a system of new parties, slowly aggregating in two coalitions, usually called the *Polo* (Centre-Right) and the *Ulivo* (Centre-Left), alternating in government both at the national and at the regional level.

Research about the effects of the 1995 institutional reforms on the competitiveness of Italian regional politics and on the economic performance of the Regions is virtually nonexistent. Veronese (2007) tests predictions along the lines of Besley, Persson and Sturm (2006) on data on Italian local governments, which underwent a similar move from parliamentarism to presidentialism in 1993. She finds evidence that the institutional reform generated more political competition and greater accountability, measured as an increase in the differentiation between the executive and the legislative branch. This differentiation is in turn correlated with more, not less, government spending.

4. Empirical analysis

4.1. Empirical strategy. We verify the predictions of Besley, Persson and Sturm's (2006) theoretical model considering the relationship between political competition, on the one hand, and income levels, output growth and public spending, on the other. To this end we adopt the same strategy as Besley, Persson and Sturm (2006), by looking at the electoral margin between the two largest parties as the indicator of political competition and using the 1995 institutional reform as the exogenous shock to the political rents that possibly existed during the pre-1995 parliamentary regime. In this way, political competition is considered as a long run, structural phenomenon, affected by structural events like institutional reforms characterized by considerable durability, rather than as the outcome of day-to-day policy

struggles or of electoral contests. We also resort to fixed effects and year dummies, to do away with conditioning phenomena not directly related with the political competition-economic performance relationship, and use a series of control variables to “clean” the estimates as much as possible. In the light of the mixed evidence discussed above, and of the possibility that it be due to the choice of unsuitable testing grounds, we adopt a “Give Theory a Chance” empirical strategy, in that we aim at specifying an empirical model and at choosing a testing ground as close as possible to that described in the model of Besley, Persson and Sturm (2006). Finally, given the crucial role of the institutional reform of 1995 in our estimates, we limit the sample to the 15 Regions with an Ordinary Statute (RSO), since they were the only ones to be affected by the reform.

It must be emphasized that Proposition 1 and 2 of the model predict a positive correlation between political competition and economic performance through the link of the quality of politicians and of their policy choices, which should be more efficiency oriented the more government offices are contestable. Such link is an essential component of the theory. Finding only a positive correlation between economic performance and political competition does not amount to a “verification” of the model. The relationship could either develop through other channels, especially in the presence of transfers from higher government levels, or policy could simply be irrelevant in a world of rational expectations, or even the relationship might in fact go the other way round. One could indeed make the argument that higher levels of development stimulate political competition, because higher income is generally associated with higher voting turnout or lower tolerance of the *status quo*. The sample of the Italian Regions does not allow checking the quality of the Presidents as Besley, Persson and Sturm (2006) do, namely, interpreting high quality State Governors as those associated with above trend Regional incomes. In Italy, the Presidents of the Regions are *de facto* directly elected since 1995 (*de jure* since 2000); the short time series does not allow enough degrees of

freedom for that type of analysis. Data about the expenditure levels of Regional spending programs are however available until the year 2000. We will thus investigate the link between political competition and economic performance by looking at the policy choices of the Regions. Finally, to rule out problems of reverse causation, we estimate the model using an IV technique, which models political competition using drivers that are plausibly independent from economic development. Appendix B describes the data sources.

4.2. Income levels. To model the relationship between income levels and political competition, we resort to the same specification of Besley, Persson and Sturm (2006):

$$y_{it} = \alpha_1 \kappa_{it} + \alpha_2 \mathbf{Z} + v_i + u_t + \varepsilon_{i,t}, \quad (17)$$

where y_{it} is the log of real income per capita in region i at time t , v_i is a region fixed effect, u_t is a time-dummy, and ε_{it} is the error term. Our key variable is κ_{it} , the indicator of political competition, which, in the empirical analysis, is captured by the difference in votes between the first and the second largest parties for the elections before 1995, and between the winning and the losing coalition for the elections after 1995. Two control variables compose the \mathbf{Z} vector⁵. First, to verify whether is pre- or post-electoral political competition to matter, we control for the percentage of seats held in the Regional Council by the winning majority (variable *MAJ*). Second, the literature on war of attrition (Alesina and Drazen, 1991) assigns an important role to political fragmentation in determining policy choices. The variable *FRAC* measures the probability that two legislators picked at random belong to different parties. All models are log linear and coefficients are estimated using robust standard errors clustered by regions that allow for region specific serial correlation. Table 1 reports the results.

⁵ We have tried a battery of control variables, including government partisanship, the ratio between the transfers received from the central government and the Region's total revenues, as well as other specification of the electoral budget cycle. We report only those who more consistently turn out significant in the analysis.

Table 1 about here

Column (1) in Table 1 displays estimates of (17) by OLS for annual data between 1980 and 2002. The positive sign of sign of α_1 implies a strong negative correlation between political competition and income per-capita, contrary to what Besley, Persson and Sturm (2006) predict. Yet, this result is not conclusive, because the coefficient α_1 gives us the causal effect of political competition on y_{it} as long as κ_{it} is uncorrelated with ε_{it} . In the context of our analysis, this condition may fail because of omitted factors influencing both economics and politics. The institutional reform of 1995 may have destroyed pre-existing political rents and increased competition because under the new system voters felt that they could “choose” the Regional government instead of seeing it emerge from party politics, as it was the case under the previous institutional framework. The disappearance of the old political parties and the (slow) emergence of the two new coalitions might have contributed to reinforce political competition: average voting turnout of regional elections in fact increased after 1995. At the same time, the new political setup emerging after the wave of scandals of the early 1995 could have reduced corruption and liberated resources to be invested in the productive sectors, thereby raising output independently, although there is no decisive evidence of such an outcome (Golden and Picci, 2005). Furthermore, as already pointed out, it could also be the case that higher income stimulates political competition, thereby rising problems of reverse causation. To solve these potential problems, we resort to an IV strategy, just as in Besley, Persson and Sturm (2006). We instrument political competition by introducing a dummy for the 1995 year, which takes the value of 0 before and 1 afterwards. This dummy captures both the institutional reform of 1995 and the fact that the ensuing Regional elections were contested by two coalitions of parties organized before the elections, instead of a constellation of parties that form the governing and opposing coalitions after the elections. These changes

are plausibly independent of economic change. The IV-strategy also addresses another possible bias in the estimate of α_1 . Our measure of political competition, the margin between the first and second major contestants in the elections, fluctuates temporarily from one election to the next. These short-run fluctuations will poorly approximate the comparative statics of κ_{it} in the model, which correspond to long-run changes in the degree of electoral competition. An IV strategy relying on an institutional reform holds the additional advantage of removing the downward bias associated with such measurement error. Given the nature of the variables (lower margins indicate greater competition) this bias may be responsible for the “wrong” sign obtained in OLS estimates. We thus consider a first-stage equation:

$$\kappa_{it} = r_i + s_t + \beta_1 d1995 + \eta_{it} \quad (18)$$

where r_i is a region fixed effect and s_t a year fixed effect. The instruments $d1995$ is a year dummy that discriminates between elections before and after 1995. Results from the IV version corresponding to (17), using (18) as the first stage, are found in column (2). The estimated α_1 coefficient in this case is negative and statistically significant, suggesting that in the new institutional setting, increased political competition has a positive casual effect on regional per capita income. The change of coefficient from the OLS to the IV estimates seems to be attributable to the bias in the OLS estimates of column (1). Pre electoral political competition seems to matter, as the coefficient on *MAJ* is not distinguishable from 0, while it was borderline significant in the OLS estimates. This is consistent with the nature of the institutional reforms of 1995, aimed at making the parties precommit to a stable coalition and at increasing government stability. Furthermore, there is no evidence of war of attrition in the estimates (the coefficient on *FRAC* is not significant), but there is of a political business cycle: electoral years coincide with above average levels of per capita income.

4.3. Output growth. The second relationship is a Barro growth regression augmented with political variables:

$$gy_{it} = \gamma_1 \kappa_{it} + \gamma_2 \mathbf{Z} + \gamma_3 gy_{it-1} + v_t + u_t + \xi_{it}, \quad (19)$$

This dynamic specification serves two purposes. First, it differences out any source of unobserved heterogeneity in levels of income. Thus, we now allow (through the fixed regional effects) for long-term differences in average growth across regions. Second, it considers Solow-style convergence in incomes per capita, to rule out that changes in political competition are not picking up the fact that some Regions grew faster just because they were initially poorer. We thus include lagged income growth gy_{it-1} on the right-hand side of (19)⁶.

The results of the IV estimates of equation (19) are reported in column 3 of Table 1. They confirm the previous findings using regional per capita incomes: political competition has the expected negative sign and is strongly significant. Furthermore, the size of the γ_1 coefficient is not negligible: halving a political rent increases the regional growth rate of 0.7 percentage points. We do not find evidence of convergence, in fact the growth paths of Italian Regions diverged during the 1980s and the early 1990s, only to restart a process of very slow convergence in the second half of the 1990s (Padovano, 2007). Again, pre-election competition obfuscates the post-election one, although there is some evidence that wars of attrition within regional governments are associated with slower output growth.

4.3. Fiscal policy. So far the results indicate that more political competition is associated with higher income levels and growth. Now we must examine whether this

⁶ An alternative specification would have included the initial level of regional per capita income, regional population growth and regional net physical investments. As consistent data about the distribution of capital across Italian Regions are not entirely reliable, we have opted for the more encompassing gy_{it-1} variable.

correlation is due to more efficiently-oriented policy choices of the Regional governments, as Proposition 1 and 2 hold.

As noted in Section 3, Italian Regions have the main responsibility of two spending programs, health care and regional administration. They share the responsibility of efficiency-augmenting programs, such as transport and education, with other government levels. In the spirit of the model, we focus our attention on the two programs for which the responsibility can be more directly and exclusively attributed to the Regional governments. As neither of these programs directly stimulates economic performance, rather are characterized by high levels of waste and pork-barrel spending, we reinterpret the prediction of the model postulating that tighter political competition should be associated with lower spending in health care and even more in regional administration. In other words, high quality politicians signal their competence by reducing waste in health care spending and by streamlining the regional bureaucracy, and viceversa. Finally, to gauge some information about the other programs, we test the implications of the model on total regional spending as well.

The model that we estimate is specified as follows:

$$\mathbf{G}_{it} = \delta_1 \kappa_{it} + \delta_2 \mathbf{Z} + v_i + u_t + \psi_{it} \quad (20)$$

where the vector \mathbf{G}_{it} is composed by total real per capita spending of Region i in time t , real spending per capita in healthcare, and real spending per capita in administration. Table 2 reports the IV results for the three dependent variables in column (1), (2) and (3), respectively⁷.

Table 2 about here

⁷ We have estimated also the OLS specification and found the same downward bias detected in the regression for the income levels, most likely due to the same reasons. We have therefore omitted reporting the OLS estimates.

The bottom line result is that tighter political competition does decrease public spending per capita, both in total terms and for what it concerns spending for health care and for regional administration. Because of the presence of waste, rent seeking, pork barrel and common pool situations in Italian government spending, this result runs is consistent with the prediction of Besley, Persson and Sturm (2006), that more competition promotes efficiency enhancing policies. There thus seem to be a divergence between the tests of the theory run in various contexts at the level of subnational governments, which are generally in line with the predictions of Besley, Persson and Sturm (2006), and those of the tests run at the level of national governments, which so far suggest that tighter political competition pushes national governments to spend and to redistribute more in order to buy votes. Regional fixed effects rule out the possibility that the estimates of equation (20) BE due to the level of economic development of the Region or to any other Region specific factor. Year fixed effect deprive the estimates of the influence of the business cycle. The other regressors included in the Z vector are also in line with theory. Electoral years are characterized by higher spending and more fragmented coalitions tend to spend more to solve problems of war of attrition. Quite interestingly, MAJ is now positive and highly significant, implying that a larger government majority in the Regional Council is needed to approve increases in spending programs. These results suggest that the reform of 1995 indeed strengthened the control of the President of the Region over his majority, thereby creating incentives for the delivery of more efficiency oriented policy choices.

5. Conclusions

In this paper we have tested the main predictions of Besley, Persson and Sturm (2006) in a context as close as possible to the theoretical model, to verify its capability to explain situations other than the development of the Southern States of the U.S. In many ways the

Italian Regions underwent a similar historical evolution, as the institutional reforms of 1995 and the changes of the political actors of the early 1990s destroyed political rents and provided a one and for all stimulus to political competition, just like the Right to Vote Acts of 1965-1970 did in the American South. This ensures that in both contexts political competition is interpreted in terms of long run structural events, not as short run electoral outcomes, a relevant feature that is often missing in the empirical literature related to the model of Besley, Persson and Sturm (2006).

The estimates generally lend empirical support to the predictions of the theory. There is evidence of a positive correlation between political competition and economic performance of the Italian Regions, as well as of that more political competition forces Regional governments to make efficiency-enhancing policy choices. The short time series does not allow testing the other prediction, that tighter political competition pushes parties to select higher quality candidates for the governorship.

The current panorama of the empirical literature sees the theory of Besley, Persson and Sturm (2006) being confirmed at the level of subcentral governments in various contexts – the U.S. States (Besley, Persson and Sturm, 2006), the Flemish municipalities (Ashworth et al., 2006), and now the Italian Regions – but not at the level of national governments. There, in a panel of OECD countries, Padovano and Ricciuti (2007) find evidence that greater political competition is correlated with an increase of short-term, redistributive policy choices, aimed at buying votes, which depress economic performance.

This dichotomy of empirical findings suggests that future research should move along two avenues. The first is to insist in the empirical analysis, to verify that the dichotomy persist when new samples are examined and other testing procedures are explored. The second avenue is theoretical, as it departs from the acceptance of the dichotomy and moves towards a more articulate description of the link between political competition and economic

performance. In other words, the link evidenced by Besley, Persson and Sturm (2006) might hold in certain institutional contexts, but could be less relevant in others, i.e., it might be institutions sensitive. This might explain why at the level of national governments greater political competition seems to stimulate less efficiency-oriented fiscal policies, but at the level of subcentral governments it does not. This may be due to a variety of factors, one being that there are tighter constraints on the discretionary power of politicians of subcentral governments, in the forms of yardstick competition, of tighter control from higher government levels, of a more limited set of competencies that reduces voters' information costs, or of a lower salience of ideological issues. Another may be that national governments have a wider array of competencies, which multiply the number of dimensions along which parties and candidates may compete and exchange in order to stifle political competition. In other words, national political markets are closer to a setting of monopolistic competition whereas subnational ones are closer to perfect competition. Be that as it may, in that κ_{it} there seems to be more than has met the eye of Besley, Persson and Sturm (2006).

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Table 1. Economic Performance

Dependent variable	y_{it} (1)	y_{it} (2)	gy_{it-1} (3)
κ_{it}	4.65 ⁰⁰⁸ (0.055)	-1.18 ⁰⁰⁷ (0.043)	-0.014 (0.000)
ELY	1.24 ⁰⁰⁸ (0.01)	3.84 ⁰⁰⁷ (0.00)	
FRAC	3.15 ⁰⁰⁸ (0.095)	5.72 ⁰⁰⁶ (0.071)	-0.018 (0.00)
MAJ	-8.65 ⁰⁰⁸ (0.086)	2.76 ⁰⁰⁶ (0.101)	0.002 (0.401)
gy_{it-1}			0.0342 (0.00)
Constant	2.88 ⁰⁰⁸ (0.012)	8.33 ⁰⁰⁷ (0.00)	0.096 (0.00)
Time and region dummies	Yes	Yes	Yes
$d1995$	No	Yes	Yes
Estimation method	OLS	IV	IV
Obs.	255	255	225
σ^2	5.20 ⁰¹⁴	7.16 ⁰¹⁴	0.0006
Wald (joint)	27.54 (0.00)	5.176 ⁰⁰⁵ (0.00)	5945 (0.00)

Table 2. Fiscal policy

Dependent variable	Total expenditures per capita (1)	Health care expenditures per capita (2)	Expenditures in Public Administration per capita (3)
κ_{it}	2651.83 (0.00)	430.821 (0.00)	104.006 (0.00)
ELY	1753.24 (0.00)	558.277 (0.00)	44.996 (0.00)
FRAC	2981.91 (0.00)	588.878 (0.00)	98.796 (0.00)
MAJ	2589.8 (0.00)	505.052 (0.00)	87.517 (0.00)
Constant	-1231.23 (0.001)	244.989 (0.00)	-65.89 (0.00)
Time and region dummies	Yes	Yes	Yes
$d1995$	Yes	Yes	Yes
Estimation method	IV	IV	IV
Obs.	255	243	244
σ^2	1554828	22038.6	3378.078
Wald (joint)	3.356 ⁰⁰⁴ (0.00)	7.168 ⁰⁰⁴ (0.00)	2.966 ⁰⁰⁴ (0.00)

APPENDIX A: LIST, ABBREVIATIONS AND TYPE OF STATUTE OF THE ITALIAN REGIONS

N.	AREA	NAME	ABBREVIATION	STATUTE
1	North	Val d'Aosta	VDA	Special
2	North	Piemonte	PIE	Ordinary
3	North	Lombardia	LOM	Ordinary
4	North	Trentino-Alto Adige	TAA	Special
5	North	Veneto	VEN	Ordinary
6	North	Liguria	LIG	Ordinary
7	North	Friuli-Venezia Giulia	FVG	Special
8	Center	Emilia Romagna	ERO	Ordinary
9	Center	Toscana	TOS	Ordinary
10	Center	Marche	MAR	Ordinary
11	Center	Umbria	UMB	Ordinary
12	Center	Lazio	LAZ	Ordinary
13	Center	Abruzzo	ABR	Ordinary
14	South	Campania	CAM	Ordinary
15	South	Molise	MOL	Ordinary
16	South	Puglia	PUG	Ordinary
17	South	Basilicata	BAS	Ordinary
18	South	Calabria	CAL	Ordinary
19	South	Sicilia	SIC	Special
20	South	Sardegna	SAR	Special

APPENDIX B: DATA SOURCES

Economic data for the Regions are drawn from the CREMOS database (www.cremos.it) and ISTAT, (ISTAT (various years) *I Conti Economici delle Regioni*, Roma ISTAT). Data on political results are from the database of Ministero dell'Interno (www.interno.it), while those on public spending by the Regions are again from ISTAT.