

DOES FINANCIAL SUPPORT FROM THE ERDF AND CF CONTRIBUTE TO CONVERGENCE IN THE EU? EMPIRICAL EVIDENCE AT NUTS 3 LEVEL*

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Abstract

Analysing papers that reveal by decomposing territorial inequalities in the EU that the share of disparities attributed to the NUTS 3 level has increased over the last 20 years, this paper aims to examine to what extent the financial support in 2000–2006 from ERDF and CF, which are the main regional policy tools but mainly are directed to address the issues arising at the NUTS 2 level, contributed to supporting convergence at the NUTS 3 level. Our research strategy relies on combining a conditional β -convergence model and a difference-in-differences (DiD) estimator. Estimations are generated for four alternative post-policy periods, two ways to measure policy intervention and for different funds as well as different expenditure categories. Our research results bring to light the question of potential negative outcomes of the EU's existing regional policy since the policy that is focused on the NUTS 2 level is enlarging imbalances within these regions, *i.e.*, among NUTS 3 regions.

Keywords: European Regional Development Fund (ERDF), Cohesion Fund (CF), regional disparities, convergence, NUTS 3, financial support

JEL Classification: O47, F15, R12, R58

1. Introduction

Cohesion policy (CP) is the main instrument used in the EU to support harmonious growth in member states (MS). Over different programming periods, the amount and direction of the investment reflect the EU's goals, and the effectiveness of the CP can be measured

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by comparing goals with achievements. The return on investment of EU Structural Funds (SF) is a broadly researched topic. The studies (Becker *et al.*, 2010, 2012, 2013, 2018; Mohl and Hagen, 2010; Pellegrini *et al.*, 2013; Rodriguez-Pose and Novak, 2013; Accetturo *et al.*, 2014; Pinho *et al.*, 2015 a,b; Rodriguez-Pose and Garcilazo, 2015; Di Cataldo, 2017; Gagliardi and Percoco, 2017, *etc.*) examined what impact the SF had on regional economic growth and convergence. The leading article by Becker *et al.* (2018) covering the last four programming periods reveals a positive but not very long-lived impact of the SF on per capita GDP and employment growth and an insignificant effect on private and public investment.

Positive SF contribution to growth is revealed by a lot of studies, but the effect depends on some conditions: absorptive capacity (Becker *et al.*, 2013; Pinho *et al.*, 2015a; Gagliardi and Percoco, 2017); intensity of transfers (Kyriacou and Roca-Sagalés, 2012; Pellegrini and Cerqua, 2016; Di Cataldo, 2017); expenditure category and intervention area (Pontarollo, 2017); and institutional quality (Becker, 2012; Kyriacou and Roca-Sagalés; Dotti, 2016). Moreover, the effect is not robust to the selected period and applied estimation methods. Also, it should be noted that previous contributions mainly focus on growth and convergence dynamics at the NUTS 1 and 2 levels, leaving the question whether SF investment contributed positively to convergence at the NUTS 3 level.

Research (Smetkowski and Wójcik, 2012; Bourdin, 2015; Hegerty, 2016; Percoco, 2017) reveals that convergence occurs at the national but not the regional level and that disparity is sharper and convergence is less clear when smaller territorial units are considered. Continuing the research by Butkus *et al.* (2018), which revealed by decomposing territorial inequalities in the EU up to the NUTS 3 level that disparities between smallest territorial units are growing and the share of inequalities attributed to NUTS 3 now is the highest for the last twenty years, this paper aims to examine effects of the CP on disparities among NUTS 3 regions.

Aiming to fill the gap of empirical research on how the EU's financial support contributes to regional convergence at the NUTS 3 level, the research integrates a conditional β -convergence model and a DiD estimator. Our empirical analysis is based on EU-25 NUTS 3 data and estimations generated for ERDF and CF allocations combined as well as for separate fund and expenditure categories using dummy variables for eligibility and alternatively funding intensity. The effect of support over the 2000–2006 programming period is estimated on regional convergence over 5–8 year periods each of which starts in 2007. For the robustness check, we alternatively estimated our model for two alternative post-policy periods as well as for reduced sample size.

The paper is organized as follows: Section 2 presents a literature review on SF impact on regional growth and convergence, Section 3 describes the methodology and

estimation strategy, the next section provides estimation results and discussion, and the last section concludes the paper.

2. Literature Review

Three theoretical approaches are commonly used to analyse the impact of SF on growth and convergence. The traditional approach is based on Solow (1956) and Swan's (1956) *neoclassical growth theory* further developed by Barro and Sala-i-Martin (1991, 1992) with assumptions of diminishing marginal returns and exogenous technological progress. According to Pinho *et al.* (2015a), if SF are transferred to capital-scarce regions, less developed economies should experience faster economic growth in the short run compared to more developed ones and, in the long run, the growth rates should become similar due to decreasing return on capital investments. According to this approach, exogenously determined technological development increases the steady-state regional growth rate. The most relevant study adapting neoclassical theory to estimate SF impact on growth is by Pinho *et al.* (2015b). Applying a conditional β -convergence model, the research evaluated SF impact on EU-12 NUTS 1 and 2 regions over the period 1995–2009 and came to the general conclusion that the SF had a positive impact on real income growth only in richer, highly educated and more innovative regions.

The second strand of the research is based on the *endogenous growth theory*, assuming constant returns to capital, endogenous technological progress, and local externalities. Theory argues that economic growth is primarily the result of endogenous rather than exogenous factors. It assumes that public investments stimulate private capital expenditure (Romer, 1990). As Romer (1990, 1994) emphasizes, investing in human capital, innovation and knowledge are important growth factors. Theory focuses on the positive externalities and the dissemination of knowledge in a knowledge-based economy and states that economic growth and the impact of endogenous factors on growth depend on the institutional environment. Only a few studies analysing the return on SF payments over the 2000–2006 programming period have used this growth theory and its applications differ. For example, Kutan and Yigit (2007) applied a stochastic endogenous growth model to evaluate the impact of SF and CF transfers on convergence and growth in 5 EU MS using quarterly state-level data for 1980–2004. The study revealed a positive effect on convergence in the short run and on overall growth due to capital accumulation. Varga and Veld (2010) used endogenous modelling to analyse CP effects on economic growth in EU-16 MS that receive large allocations of funds over the period 2000–2006. The study revealed a positive return of CP in less developed EU MS and that the return is higher in the medium and long run.

The third strand of growth theory is related to the *new economic geography* (Fujita *et al.*, 1999), which states that regional economic development depends on transportation costs, economies of scale and the share of manufacturing in regional income. In this framework, transport improvement and development of accessibility of interregional transportation infrastructures promote competitiveness and cohesion (Vickerman *et al.*, 1999). We did not find any research concerning returns on SF support over the period 2000–2006 which would be based purely on the economic geographic approach. Typically, research models are not grounded in a single approach; they are more or less eclectic, integrating two or even all three approaches and thus our presented division of the research according to the theoretical approach adopted is to some extent a matter of subjectivity.

The main results of studies that combine several theoretical approaches are presented in the online Appendix A.

It should be noted that all the research has evaluated effects of SF payments at the country, NUTS 1 and 2 levels, except two studies. Fratesi and Perucca (2014) examined the impact of SF payments over 2004–2006 on GDP growth rate over 2006–2010 covering NUTS 3 regions of EU–10 MS. The study concludes that regional policy is not very effective per se, but its effectiveness depends on “territorial capital”. Gagliardi and Percoco (2017) investigated SF impact on economic growth covering 1233 NUTS 3 EU–25 regions and found a positive effect on growth only in lagging regions, which usually have a lower absorption capacity. Hence, these results contradict the findings of Fratesi and Perucca (2014). Analysis of previous studies has also revealed that there is no research examining the impact of SF payments over 2000–2006 on convergence at the NUTS 3 level. Thus, our research will fill this gap.

3. Data and Model

Aiming to estimate the effect of the ERDF and CF on convergence among NUTS 3 regions in the EU, *i.e.*, to examine whether SF investment has had a positive return, we combined a neoclassical conditional β -convergence approach and a DiD estimator. The most general equation (Barro, Sala-i-Martin, 1991, 1992) to estimate conditional β -convergence takes the form:

$$\frac{1}{P-p} \ln \left(\frac{gdp_p}{gdp_p} \right) = \alpha + \beta \cdot \ln(gdp_{i,p}) + other\ growth\ controls_i + u_i, \quad (1)$$

where $\frac{1}{P-p} \ln \left(\frac{gdp_p}{gdp_p} \right)$ is the average growth rate of regional per capita GDP from the initial period p to P , $gdp_{i,p}$ is the initial per capita GDP in the region i , and remaining

are the usually interpreted constitutions of a common growth equation based on cross-sectional data. An estimated negative and significant β would signal an inverse correlation between the initial per capita GDP and its growth rate over the following years, *i.e.*, convergence.

One of the *other growth controls* that we would like to include in Equation 1 is ERDF and CF funding, which is primarily directed to lagging regions aiming to boost their growth. In this research, we take the approach to CP as to quasi or natural experiment conditions when a policy intervention affects only a part of regions leaving a naturally occurring contrast group. Non-randomness of funding eligibility leads to inhomogeneous treatment and control groups in terms of *other growth controls*. It would not be a problem if these factors are in a zero correlation with eligibility (which is probably not true since regional growth factors are the main conditions for funding eligibility) or we could control them in the growth Equation 1, which is also not very likely having a scarcity of proxies for growth factors at the NUTS 3 level. All that would probably lead to the fact that the error term (which accounts for unobservable growth factors) in the growth Equation 1 would be in a non-zero correlation with eligibility to treatment and thus there would be condition inconsistency of OLS estimates in the cross-sectional regression.

To address this issue, we can alternatively construct a DiD estimator taking advantage of two period data for the same cross-sections, *i.e.*, one before the policy intervention and one after. Having the same cross-sections over both periods gives us the advantage of controlling for differences between the treatment and control groups already before the CP took place. Comparing the pre-policy contrast with the one observed after the policy intervention, we can estimate the effect of the latter using the DiD estimator:

$$\delta_1 = \left(\overline{gr_{T,t2}} - \overline{gr_{C,t2}} \right) - \left(\overline{gr_{T,t1}} - \overline{gr_{C,t1}} \right), \quad (2)$$

where $gr_{T,t2}$ is the growth rate over the *post-policy period (post-pp)* for the region in the *treatment group (tg)*, $gr_{C,t2}$ is the growth rate over *post-pp* for the region in the *control group (cg)*, $gr_{T,t1}$ is the growth rate over the *pre-policy period (pre-pp)* for the region in the *tg*, and $gr_{C,t1}$ is the growth rate over *pre-pp* for the region in the *cg*. The bar above the variables indicates group average. Assignment into the *tg* and the *cg* over the 2000–2006 programming period (policy intervention period) is presented in the online Appendix B.

The estimator presented in Equation 2 allows us to estimate the size, but not the statistical significance of the intervention effect, and does not control for other factors that are important for growth. We can estimate the DiD and test its significance using the regression equation:

$$gr_i = \beta_0 + \delta_0 \cdot t2 + \beta_1 \cdot dT_i + \delta_1 \cdot t2 \cdot dT_i + \varepsilon_i, \quad (3)$$

where $t2$ is a dummy that equals 1 for *post-pp* and equals 0 for *pre-pp*, dT_i is a dummy that equals 1 if the region belongs to the *tg* and 0 otherwise. β_0 is the average regional growth rate in the *cg* over *pre-pp*, i.e., $\overline{gr_{C,t1}}$. δ_0 is equal to $\overline{gr_{C,t2}} - \overline{gr_{C,t1}}$ and shows how the average growth rate in the *cg* changed over *post-pp* compared to *pre-pp*. β_1 is equal to $\overline{gr_{T,t1}} - \overline{gr_{C,t1}}$ and shows the difference in the average growth rates between the *tg* and the *cg* over *pre-pp*. β_1 is expected to be positive, because according to the convergence hypothesis, less developed regions (LDR), which are under policy consideration, experience faster growth. δ_1 is the DiD estimator that shows how the difference in average growth rate between the *tg* and the *cg* changed over *post-pp* compared to *pre-pp*. A positive coefficient in δ_1 would be evidence of successful contribution of the ERDF and CF to regional convergence.

To control for other factors that might explain regional variation of growth rates, we combine Equations 1 and 3:

$$gr_i = \alpha + \beta \cdot \ln(gdp_{i,p}) + \delta_0 \cdot t2 + \beta_1 \cdot dT_i + \delta_1 \cdot t2 \cdot dT_i + other\ growth\ controls_i + \varepsilon_i, \quad (4)$$

where gr_i is the average growth rate of regional per capita GDP, *other growth controls_i* cover: average growth rate of working age population, sectoral mix (initial share of value added (VA) in the agriculture, industry and service sectors), dummies for capital, coastal region, port dummy, urban and rural dummies (intermediate region is set as a benchmark), country dummies to account for country-specific time trends (for data sources and descriptive statistics see the online Appendix C). We would like to stress here that a shortage of data on common neoclassical growth factors at the NUTS 3 level motivates us to proxy them using regional typologies and local information, which is quite usual in growth models (see Paas *et al.*, 2007; Cardoso and Pentecost, 2011; Folfas, 2016; Kramar, 2016; Butkus *et al.*, 2018) considering small-scale territories. We adopted the output approach and used the share of VA generated in industry, service and agriculture as an outcome of growth conditions created (or historically and geographically determined) in the regions. We assume that the sectoral distribution of generated VA (output) is strongly related to the availability of inputs and changes in the industry mix are not possible without alteration of inputs.

Since regions belonging to the treatment group cannot be treated equally in terms of treatment amount, we alternatively estimate the DiD interacting dT with funding (treatment) intensity $Tint$ (dedicated funds over 2000–2006 divided by GDP over the same period, see the online Appendix B). If a region did not receive funding, dT and $Tint$, as well as their interaction, all equal 0. If a region received funding, dT equals 1 and its interaction with $Tint$ is equal to $Tint$. Thus, to estimate the effect of treatment intensity, we can substitute dT with $Tint$ in Equation 4.

4. Estimation Results

Our empirical examination covers all EU-25 NUTS 3 regions and consists of many estimations having three cross-sections. The *first one* is determined by alternative post-policy periods. Studies at the NUTS 1 and 2 levels emphasize (but rarely, for example, Mohl and Hagen (2010), account for) that the effect of the SF may occur with a lag. This motivates us to search for the SF effect not during the policy intervention period (which could potentially be related to dummy effects due to the fact that the financial support becomes part of regional GDP), but over four post-policy periods – each of them starts in 2007, *i.e.*, right after the 2000–2006 programming period under investigation, and ends alternatively in 2011, 2012, 2013 and 2014. Thus, we use from 5-year up to 8-year average growth rate of per capita GDP rather than a year-to-year growth rate, because averages over longer periods are less sensitive to business cycle fluctuations, which is important since the financial crisis of 2008–2009 is a part of the post-policy period. The *second* cross-section is determined by two alternative methods used to measure CP interventions, *i.e.*, a binomial treatment dummy and treatment intensity. Since the results of previous papers (Rodriguez-Pose and Fratesi, 2002; Varga and Veld, 2010; Pontarollo, 2017) show that the effect of a policy intervention hinges on the intervention area and fund, the *third* cross-section consisting of 28 alternatives is determined by the SF under consideration and the intervention area (aims of funds and separate expenditure categories are provided in the online Appendix B). All in all, the number of estimations is equal to $4 \times 2 \times 28$, *i.e.*, 224. Table 1 provides summarised results of the estimated parameters on control variables.

The estimated coefficients of control variables and their statistical significance do not differ much from estimation to estimation, which is a sign of robustness (see online Appendix D). The estimated convergence parameter varies from -0.32 to -1.24 and shows a negative correlation between the initial per capita GDP and growth rate over the following years, providing evidence of a slow, but still significant, β -convergence among NUTS 3 regions in the EU-25. A positive correlation between growth and working-age population shows that labour force is an important growth component and intra-country migration of young people to urban regions could form a future growth obstruction for rural areas. The estimated negative parameters on the agriculture sector show that there is a negative correlation between dependency on this sector and future growth, *i.e.*, rural areas were growing at a slower rate compared to others. On the contrary, a bigger share of VA generated in the industry or service sectors is positively associated with future growth. The estimated parameters on industry are slightly higher compared to the ones on the service sector, but the difference is negligible and thus it is not possible

to single out the more important sector. Capital regions are growing 1.03–1.7% p. faster on average compared to others, evidencing a positive agglomeration effect on growth. The estimated coefficients of the other factors related to regional typologies and local information were not significant, and thus not directly related to growth opportunities, but they are still important for control in our equation. The coefficients of post-policy period dummies are negative, indicating that regions were growing 2–2.5% p. slower over the post-policy period compared to the pre-policy period. It is not unexpected, because the financial crisis forms a part of the post-policy period.

Table 1: Summary of estimated parameters on control variables

Control variable	Range of estimated parameter values		Percentage of statistically significant estimates at		Percentage of statistically insignificant estimates
	Min	Max	5% level	10% level	
Initial per capita GDP	−0.0124	−0.0032	100.0	–	–
Working age population growth	−4.083e−05	0.4521	56.7	9.4	33.9
Initial share of agriculture sector	−0.0017	−0.0004	100.0	–	–
Initial share of industry sector	0.0003	0.0017	100.0	–	–
Initial share of service sector	0.0002	0.0015	97.8	1.3	0.9
Capital dummy	0.0103	0.0170	100.0	–	–
Coastal dummy	−0.0007	0.0006	–	–	100.0
Port dummy	−0.0025	−0.0003	24.6	–	75.4
Urban dummy	−9.877e−05	0.0009	–	–	100.0
Rural dummy	−9.931e−05	0.0007	–	–	100.0

Source: Composed by authors.

Table 2 presents estimated parameters of DiD (see online Appendix D).

The estimated parameters of DiD vary greatly (in size as well as in effect direction and significance), considering different funds and expenditure categories, but the variation is small for the alternative post-policy periods (see Table 2). The estimated DiDs (in the estimations with treatment dummy) for all the funds and all the expenditure categories combined are negative and significant (the average for all the alternative post-policy periods is −0.0055). It shows a negative overall effect of SF investment over the 2000–2006 policy period on regional disparities at the NUTS 3 level over

the post-policy period. Our estimated coefficients on treatment dummies being positive show that treated were the regions which were growing faster over the pre-policy period (by approximately 0.4% p. compared to regions in the control group), which is not unexpected, because according to the convergence hypothesis, LDR experience faster growth rates. These findings are also confirmed by the estimates that include treatment intensity. We should stress here that CP, which was mainly directed to address problems at the NUTS 2 level, was not appropriate to reduce imbalances on a smaller scale. We see the same negative effect on disparity dynamics when analysing estimates on ERDF Objective 1 investment (combined as well as on separate expenditure categories within this fund). Regions covered by Objective 1 are regions corresponding to the NUTS 2 level and the main aim of this financial support instrument was to promote development and structural adjustment of lagging NUTS 2 regions. Our findings suggest that these investments did not help to reduce disparities among NUTS 3 regions.

Our findings strongly support the conclusion that only ERDF Objective 2 investments, aimed to promote the social and economic conversion of NUTS 3 level regions with structural difficulties, had a positive effect reducing regional imbalances. All the estimated parameters on the DiD are positive and significant (except Human resources). The effect of investment in Human resources was estimated as insignificant (negative and significant in some cases) and the biggest positive effect was found for Productive environment and Basic infrastructure. These findings are in line with economic geography theory, which emphasizes the importance of infrastructure for transportation costs and competition and productivity for growth, and provide no evidence to support endogenous growth theory, which argues that investment in human capital is the main economic growth driver. We should add here that probably not human capital itself but the way the financial support was used to enhance human capital did not have a positive effect on growth in LDR.

Estimates with the CF (and particularly with expenditures on Basic infrastructure) provide evidence of a negative financial support effect on regional disparities at the NUTS 3 level. Objective 1 regions with a GDP of less than 90% of the EU average were eligible for support using the CF. It financed only transport and environmental infrastructure projects, as well as technical support projects, including publicity and information campaigns. These investments did not positively contribute to the growth of NUTS 3-level LDR.

Estimates with the ERDF Urban (initiative for sustainable development in troubled urban districts) and INTEREG IIIA (whose aim was to stimulate interregional cooperation) funds provide ambiguous evidence. Almost all the estimated DiD parameters are negative, but not all are statistically significant. Thus, we cannot rigorously conclude that this kind of financial support negatively affected dynamics of the disparities at the NUTS 3 level, but on the other hand, we also see strong evidence that it had no positive effect.

Table 2: Estimated DiD parameters

Fund / expenditure category	Estimated DiD parameters for alternative post-policy period							
	2007–2011		2007–2012		2007–2013		2007–2014	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint
All funds and all exp. cat.	–0.005** (0.002)	–0.007* (0.001)	–0.006* (0.002)	–0.010* (0.001)	–0.006* (0.002)	–0.011* (0.001)	–0.006* (0.002)	–0.010 (0.001)
1. ERDF Objective 1 (all exp. cat.)	–0.014* (0.002)	–0.009* (0.001)	–0.017* (0.002)	–0.013* (0.001)	–0.018* (0.017)	–0.015* (0.001)	–0.015* (0.002)	–0.013* (0.001)
1.1. Productive environment	–0.013* (0.002)	–0.022* (0.004)	–0.017* (0.002)	–0.031* (0.004)	–0.018* (0.002)	–0.036* (0.004)	–0.015* (0.002)	–0.034* (0.004)
1.2. Human resources	–0.019* (0.002)	–0.196* (0.040)	–0.022* (0.002)	–0.232* (0.040)	–0.021* (0.002)	–0.289* (0.041)	–0.014* (0.002)	–0.235* (0.037)
1.3. Basic infrastructure	–0.013* (0.002)	–0.013* (0.001)	–0.017* (0.002)	–0.017* (0.002)	–0.018* (0.002)	–0.020* (0.002)	–0.015* (0.002)	–0.018* (0.001)
1.4. Miscellaneous	–0.014* (0.002)	–0.448* (0.045)	–0.018* (0.002)	–0.553* (0.044)	–0.020* (0.002)	–0.607* (0.045)	–0.017* (0.002)	–0.494* (0.041)
2. ERDF Objective 2 (all exp. cat.)	0.006* (0.002)	0.038* (0.013)	0.009* (0.002)	0.052* (0.013)	0.009* (0.002)	0.051* (0.014)	0.007* (0.002)	0.052* (0.012)
2.1. Productive environment	0.006* (0.002)	0.066* (0.019)	0.008* (0.002)	0.080* (0.019)	0.009* (0.002)	0.084* (0.019)	0.007* (0.002)	0.083* (0.018)
2.2. Human resources	–0.005** (0.002)	–0.707* (0.269)	–0.004 (0.002)	–0.564** (0.269)	–0.003 (0.002)	–0.332 (0.274)	–0.002 (0.002)	–0.159 (0.249)
2.3. Basic infrastructure	0.005* (0.002)	0.044 (0.033)	0.007* (0.002)	0.082** (0.033)	0.007* (0.002)	0.058*** (0.034)	0.005* (0.002)	0.065** (0.031)
2.4. Miscellaneous	0.002 (0.002)	0.484 (0.324)	0.005* (0.002)	0.899* (0.325)	0.005* (0.002)	0.677** (0.330)	0.004* (0.002)	0.805* (0.299)
3. Cohesion fund (all exp. cat.)	–0.013* (0.002)	–0.008* (0.003)	–0.022* (0.002)	–0.016* (0.003)	–0.023* (0.002)	–0.014* (0.003)	–0.017* (0.002)	–0.012* (0.003)
3.3. Basic infrastructure	–0.013* (0.002)	–0.008* (0.003)	–0.022* (0.002)	–0.017* (0.003)	–0.023* (0.002)	–0.015* (0.003)	–0.017* (0.002)	–0.013* (0.003)
3.4. Miscellaneous	0.004 (0.003)	0.273*** (0.139)	–0.002 (0.003)	0.126 (0.140)	–0.006** (0.003)	0.427* (0.142)	–0.005*** (0.003)	0.390* (0.128)
4. Urban (all exp. cat.)	–0.004 (0.003)	–0.096 (0.119)	–0.006*** (0.003)	–0.138 (0.119)	–0.009* (0.003)	–0.271** (0.120)	–0.008* (0.003)	–0.229** (0.109)
4.1. Productive environment	–0.002 (0.004)	0.200 (0.577)	–0.004 (0.004)	0.484 (0.577)	–0.008** (0.004)	–0.086 (0.587)	–0.008** (0.003)	–0.153 (0.532)
4.2. Human resources	–0.005 (0.003)	–0.607 (0.879)	–0.007** (0.004)	–0.474 (0.881)	–0.009** (0.004)	–0.971 (0.895)	–0.009* (0.003)	–1.053 (0.811)
4.3. Basic infrastructure	–0.005 (0.003)	–0.160 (0.162)	–0.006*** (0.003)	–0.262 (0.162)	–0.009* (0.003)	–0.435* (0.164)	–0.008* (0.003)	–0.352** (0.149)
4.4. Miscellaneous	–0.004 (0.003)	–2.077 (1.949)	–0.006*** (0.003)	–2.447 (1.952)	–0.009** (0.003)	–4.367** (1.982)	–0.009* (0.003)	–3.963** (1.799)
5. ERDF INTERREG IIIA (all exp. cat.)	–0.001 (0.002)	–0.040** (0.020)	–0.004** (0.002)	–0.077* (0.020)	–0.002 (0.002)	–0.104* (0.020)	–0.002 (0.002)	–0.082* (0.018)
5.1. Productive environment	–0.001 (0.002)	0.023 (0.044)	–0.004** (0.002)	–0.022 (0.044)	–0.002 (0.002)	–0.061 (0.045)	–0.002 (0.002)	–0.052 (0.041)
5.2. Human resources	–0.001 (0.002)	–0.308 (0.321)	–0.003*** (0.002)	–0.625*** (0.322)	–0.001 (0.002)	–0.849* (0.327)	–0.001 (0.002)	–0.639** (0.297)
5.3. Basic infrastructure	–0.001 (0.002)	–0.142* (0.036)	–0.004** (0.002)	–0.226* (0.036)	–0.002 (0.002)	–0.280* (0.037)	–0.002 (0.002)	–0.218* (0.033)
5.4. Miscellaneous	–0.001 (0.002)	–0.161 (0.242)	–0.004** (0.002)	–0.600** (0.242)	–0.002 (0.002)	–0.947* (0.245)	–0.002 (0.002)	–0.839* (0.223)
Productive environment (all funds ERDF+CF)	–0.005** (0.002)	–0.019* (0.004)	–0.006* (0.002)	–0.028* (0.004)	–0.007* (0.002)	–0.033* (0.004)	–0.006* (0.002)	–0.031* (0.004)
Human resources (all funds ERDF+CF)	–0.008* (0.002)	–0.209* (0.039)	–0.009* (0.002)	–0.244* (0.040)	–0.008* (0.002)	–0.298* (0.040)	–0.006* (0.002)	–0.240* (0.036)
Basic infrastructure (all funds ERDF+CF)	–0.005** (0.002)	–0.008* (0.001)	–0.006* (0.002)	–0.012* (0.001)	–0.007* (0.002)	–0.014* (0.001)	–0.007* (0.002)	–0.012* (0.001)
Miscellaneous (all funds ERDF+CF)	–0.008* (0.002)	–0.354* (0.042)	–0.009* (0.002)	–0.464* (0.041)	–0.010* (0.002)	–0.498* (0.042)	–0.008* (0.002)	–0.398* (0.038)

Notes: Td – estimates with treatment dummy, Tint – with treatment intensity, exp. cat. – expenditure category. The top figures are estimated DiD, the bottom figures report the robust standard errors. ***, **, * indicate statistically significant estimates at 10%, 5% and 1% levels, respectively. The table reports only *estimated parameters of DiD* retrieved from estimations presented in online Appendix D.

Source: Composed by authors.

The last four rows in Table 1 are for DiD parameters on the separate expenditure category combining all the funds. All the estimated parameters are negative and statistically significant, giving evidence that the financial support had a negative effect on the dynamics of disparities at the NUTS 3 level. Despite the strong positive effect of the ERDF Objective 2 investment, the amount of investment targeted to NUTS 2 outweighs the investment targeted to NUTS 3 (see online Appendix B for funding intensity) and the negative effect of the former outbalances the positive effect of the latter.

For the robustness check, we re-estimated our model for the 2009–2014 and 2010–2014 post-policy periods keeping the same sample (see Table E1 in on-line Appendix E) to minimise the effect of the financial crisis on the outcome variable. The general findings did not change. The results of the re-estimated model without PIIGS and the Baltics for the general post-policy periods (see Table E2) show the same direction of the impact, but the estimated parameter on DiD, *i.e.*, the effect on disparities, is smaller and less significant. The estimations without the least and the most funded regions (see Table E3), keeping the general post-policy periods, yield the same results as the general ones.

Having this evidence, we can argue that SF financial support, mainly directed to NUTS 2 regions, has a negative externality – it increases disparities among NUTS 3 regions, probably due to support concentration in a few NUTS 3 regions within NUTS 2 regions.

5. Conclusions and Policy Implications

The analysis of previous papers on regional growth and convergence revealed three main theoretical approaches commonly used to model the return on SF – neoclassical and endogenous growth theories and new economic geography. Although each of the three approaches emphasizes different growth forces, the majority of empirical research combines them, perceiving that one or two factors cannot explain all the dynamics of regional growth. Almost all the empirical studies that examine the question “What is the return on investment to support regional performance using ERDF and CF funds?” focus on growth effects of financial support and mainly test these effects on NUTS 1 and 2 regions.

The aim of our research was to analyse what effect financial support has on convergence dynamics at the NUTS 3 level because studies that have decomposed disparities in the EU have highlighted that the share of disparities attributed to the NUTS 3 level has increased over the last two decades. Aiming to empirically examine this outcome of the CP, we proposed a model that combines a conditional β -convergence approach and a DiD estimator. The estimation results revealed that SF funding over the 2000–2006 programming

period had an overall negative effect on convergence dynamics at the NUTS 3 level over the post-policy period. This is also supported by the evidence provided by estimations on separate funds (ERDF Objective 1 and CF) primarily directed to address problems in NUTS 2 regions. We found that only ERDF Objective 2, which aims to support structural conversion in NUTS 3 regions, contributed positively to convergence among them. We also found that only investment to support Basic infrastructure and Productive environment within the ERDF Objective 2 fund had a positive return. This evidence brings to light the question of potential negative outcomes of existing CP in the EU. Our findings support the hypothesis that regional policy, which is focused on NUTS 2 regions, is enlarging imbalances within these regions, *i.e.*, among NUTS 3 regions. The distribution of finances at the NUTS 2 level does not guarantee that support will reach the NUTS 3 regions that mostly need this support. Therefore, despite the fact that the majority of SF financial support is directed to solve problems arising in NUTS 2 regions, policymakers should make an attempt to introduce measures for distribution of support within NUTS 2 regions in a way that will not lead to growth in disparities at the NUTS 3 level.

We would like to highlight here some limitations of our research that were beyond the aim of our study but should be kept in mind when evaluating growth and convergence at the NUTS 3 level. Examining effects of financial support by fund and expenditure category, our research does not consider that the effect might also depend on country-specific factors (*i.e.*, differences between new and old MS, between countries with good and bad institutions, *etc.*) and that part of the effect can have the form of a positive spill-over. Estimating the effect over the post-policy period using 5–8 year averages does not necessarily diminish the possibility that a huge strategic project which was started in the last years of the programming period will have an effect over a much longer post-policy period compared to those considered (due to data limitations) by our research. All the alternative post-policy periods under consideration start in 2007, *i.e.*, right after the programming period, and they all cover the years of the Great Financial Crisis. Averaging the growth rates over 5–8 year periods diminishes, but does not eliminate, the effect of business cycles on the outcome. Since NUTS 3 regions are small entities, there is always a threat that research results could be affected to some extent by measurement issues. For example, GDP at the NUTS 3 level is estimated rather than calculated (as well as the amount of ERDF and CF funding, see online Appendix C). It is also likely that some part of the GDP at the NUTS 3 level is assignable to commuters and it becomes inaccurate to use per capita GDP as a proxy for the per capita income as well as to measure working-age population using local demographic statistics.

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Appendix A

Table A1. Main results of previous literature on SF effects

Research by	Covered period	Units	Econometric method applied	Outcome variable	Main result
Becker et al. (2010)	1989-1993, 1994-1999, 2000-2006	NUTS2 (193-285) and NUTS3 (1015-1213) regions (EU-25)	Cross sectional and panel: difference-in-difference regression discontinuity design (DID-RDD)	Economic and employment growth	Small and positive impact on economic growth, which is robust to period choice and estimation methods, applied. The significant positive effect on employment appears only in the 2000-2006 programming period
Mohl and Hagen (2010)	2000-2006	126 NUTS-1/ NUTS-2 regions (EU-6)	Spatial econometric estimator, GMM estimator	Economic growth	Positive and statistically significant impact on the economic growth. Regional spillovers do have a significant impact on the regional growth rates irrespective of which Objective and time lag is analysed
Kyriacou, Roca-Sagalés (2012)	1994-1999 and 2000-2006	14 EU countries Country-level	Feasible General Least Squares (FGLS), Seemingly Unrelated Regression (SUR)	Convergence	Positive impact on convergence and depends on the level of transfer intensity
Becker et al. (2013)	1989-1993, 1994-1999, 2000-2006	186-251 NUTS 2 regions (EU-25)	Cross sectional: a fuzzy regression discontinuity design (RDD)+HLATE	Economic growth	Positive impact on economic growth only on about 30% of the regions. While the treatment effect is insignificant for regions with a very low level of absorptive capacity.
Pellegrini et al. (2013)	1994-1999, 2000-2006	NUTS-2 regions (EU-15)	Regression discontinuity design (RDD)	Economic growth	Positive impact on economic growth.
Rodriguez-Pose and Novak (2013)	1994–1999 and 2000– 2006	133 (EU15) NUTS-1/NUTS-2 regions	Heteroscedasticity-robust fixed effects	Economic growth	Impact of SF on economic growth is insignificant
Accetturo et al. (2014)	2000-2006	NUTS-2 level	Regression discontinuity design (RDD)	Local endowments of trust and cooperation	The transfers reduce local endowments of trust and cooperation.
Fratesi and Perucca (2014)	2004-2006	NUTS-3 regions (10 CEE countries)	Ordinary Least Squares (OLS)	Economic growth	Regional policy is not much effective per se, but effectiveness depend on “territorial capital”.
Pihno et al. (2015a)	1995 – 1999, 2000 –2006 and 2007 – 2009	92 EU 12 NUTS 1 and NUTS 2 regions	Growth model by FE with Driscoll and Kraay’s correction	Economic growth	Positive impact on economic growth in richer, highly-educated and more innovative regions
Rodriguez-Pose and Garcilazo (2015)	1996–2007	169 European NUTS-1/NUTS-2 regions	Two-way fixed effect panel regression model	Economic growth	Positive impact on regional economic growth, but that above a threshold of cohesion expenditure
Dotti (2016)	2000-2006	NUTS 2 regions in France, Italy and Spain; and NUTS 1 in Germany and UK	Correlation analysis	Economic growth	SF support can lead to regional economic growth and productivity growth, but it depends on the effective distribution of SF, that is linked to political behaviour.
Pellegrini and Cerqua (2016)	1994-1999, 2000-2006, 2007-2013	208 NUTS-2 regions (EU-15)	Counterfactual causal analysis and RDD model	Economic growth	Positive effect on economic growth. However, the effect depends on the intensity of transfers.
Di Cataldo (2017)	1994-1999, 2000-2006, 2007-2013	Two UK NUTS-2 regions: 134 wards of Cornwall and the 94 wards of South Yorkshire	Synthetic control method, difference-in-differences (DID) model	Economic growth and unemployment	Positive impact on reduction of unemployment and on the promotion of economic growth, but this effect depends on funding intensity.

Gagliardi and Percoco (2017)	2000-2006	NUTS 2 regions in EU15 and EU27	Regression discontinuity design (RDD)	Economic growth	SF (expressed as ERDF plus ESF) and CF taken together have positive effect on regional growth. However, the effect depends on the intensity of transfers. Moreover, the effect for EU15 regions is lower comparing with EU27.
Gagliardi and Percoco (2017)	2000-2006	257 NUTS-2 and 1233 NUTS-3 regions (EU-15, EU-10)	Ordinary Least Squares (OLS)	Economic growth	Positive effect on economic growth in lagging regions.
Pontarollo (2017)	2000-2006	202 regions in EU15	Semi-parametric model	Economic growth, productivity	SF support effect depends on intervention area. Expenditure on infrastructure had positive impact on GVA per worker growth, but had a weakly negative impact on per capita GDP growth. Expenditure on human capital had positive impact on per capita GDP growth, but did not have significant impact on GVA per worker growth.
Becker et al. (2018)	1989-1993, 1994-1999, 2000-2006, 2007-2013	NUTS-2 regions (187 in 1989-93, 209 in 1994-99, 253 in 2000-06, and 253 in 2007-2013) of EU-25	A fuzzy regression discontinuity design (RDD)	Economic growth	Positive impact on economic growth is though not very long-lived: the effects of losing. The effects on economic growth are weaker during the Crisis than before.

Appendix B

Table B1. Assignment of regions into control and treatment groups and treatment intensity

Fund / expenditure category	Number of regions in		Funding intensity in treatment group over policy intervention (2000–2006) period Funding-to-GDP ratio (%)		
	Control group	Treatment group	Min.	Average	Max.
All funds and all expenditure categories	244	1007	0.000157	0.50429	13.506
1. ERDF Objective 1^{1,2} (all expenditure categories)	837	414	0.0000165	0.8266	12.376
<i>1.1. Productive environment</i>	838	413	0.0000165	0.26806	2.7806
<i>1.2. Human resources</i>	1025	226	0.0000977	0.026831	0.40655
<i>1.3. Basic infrastructure</i>	843	408	0.00035604	0.53847	9.6107
<i>1.4. Miscellaneous</i>	884	367	0.000000269	0.015715	0.24877
2. ERDF Objective 2^{1,3} (all expenditure categories)	712	539	0.00007	0.078011	0.42617
<i>2.1. Productive environment</i>	714	537	0.0000143	0.050923	0.33620
<i>2.2. Human resources</i>	1051	200	0.000000321	0.0045651	0.033262
<i>2.3. Basic infrastructure</i>	772	479	0.0000189	0.026861	0.29975
<i>2.4. Miscellaneous</i>	803	448	0.00000803	0.0020597	0.042162
3. Cohesion fund⁴ (all expenditure categories)	1006	245	0.010217	0.44076	2.7355
<i>3.1. Productive environment</i>					
<i>3.2. Human resources</i>					
<i>3.3. Basic infrastructure</i>	1006	245	0.0072947	0.43704	2.7355
<i>3.4. Miscellaneous</i>	1131	120	0.0000962	0.0075874	0.13914
4. ERDF Urban⁵ (all expenditure categories)	1171	80	0.0000057	0.014437	0.12237
<i>4.1. Productive environment</i>	1185	66	0.00000499	0.0030871	0.025497
<i>4.2. Human resources</i>	1181	70	0.00000206	0.0024767	0.013445
<i>4.3. Basic infrastructure</i>	1175	76	0.00019551	0.0092983	0.10953
<i>4.4. Miscellaneous</i>	1178	73	0.00000364	0.00097517	0.0067776
5. ERDF INTERREG IIIA⁶ (all expenditure categories)	829	422	0.00075	0.03416	0.80787
<i>5.1. Productive environment</i>	829	422	0.00041239	0.012210	0.52220
<i>5.2. Human resources</i>	841	410	0.0000462	0.0023949	0.039610
<i>5.3. Basic infrastructure</i>	829	422	0.0000792	0.016747	0.29187
<i>5.4. Miscellaneous</i>	830	421	0.00000637	0.0028850	0.044615
Productive environment (all funds ERDF+CF)	246	1005	0.00010066	0.14268	2.7806
Human resources (all funds ERDF+CF)	540	711	0.00000044	0.011437	0.40655
Basic infrastructure (all funds ERDF+CF)	285	966	0.0000286	0.35964	10.740
Miscellaneous (all funds ERDF+CF)	326	925	0.000000269	0.0096069	0.25676

- ¹ *ERDF* during 2000–2006 was intended to help eliminate the main regional imbalances in the EU; therefore, it should have contributed reducing the gap between the regions of various development levels and the least-favoured regions and islands, including rural areas. *ERDF* should have contributed to social and economic regeneration of cities and urban neighbourhoods in crisis under the EU initiatives as well as to financing cross-border, transnational and interregional cooperation.
- ² *The aims of ERDF Objective 1* were to solve the problems in regions: to increase the level of investments, to decrease the unemployment rate, to decrease the lack of services for business and individuals and to improve poor basic infrastructure. Objective 1 was the main priority of the EU cohesion policy. The EU worked according to the Treaty of Rome to “promote harmonious development” and aims particularly to “narrow the gap between the development levels of the various regions”. This is why 69.7% of the SF were planned to be allocated to Objective 1, including 4.3% for transitional support (i.e. a total of EUR 135.9 billion) and were allocated for the development of lagging regions (Council regulation: general provisions on the Structural Funds, 1999).
- ³ *The aims of ERDF Objective 2* were to renew all areas, which have structural difficulties: industrial, rural and urban or are dependent on fisheries. Usually this situation is in regions whose development level is close to the EU average, such regions face with different types of socio-economic difficulties, which include: the complicated evolution of industrial or service sectors; the crisis situations in urban areas; the declining traditional activities in rural areas; the difficulties affecting fisheries activity. All these difficulties are often the source of high unemployment level. Objective 2 was to contribute to the social and economic conversion of regions with structural difficulties other than those eligible for Objective 1. Eligibility was depended on the ceiling of population and on the set of specific criteria to each region. It was planned that 11.5% of the SF will be allocated to Objective 2, including 1.4% for transitional support (i.e. a total of EUR 22.5 billion) (Council Regulation: general provisions on the Structural Funds, 1999).
- ⁴ *Cohesion Fund*. All the regions of Objective 1 of the EU Member States with a GDP of less than 90% of the EU average were supported by a special solidarity fund called Cohesion Fund (CF). It financed only the transport and environmental infrastructure projects, as well as technical support projects, including publicity and information campaigns. The CF financed projects only in some EU Member States in 2000–2004, it was namely Greece, Portugal, Ireland and Spain. The majority of their territory was covered by Objective 1. Only a few Objective 2 regions in Spain received assistance from the CF, which co-finances environmental protection and transport projects. Since 2004, new EU member states have been included: the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia. The CF was allocated to countries rather than to regions (Fratesi and Perucca, 2014). In the period between 2000 and 2006, total resources available for commitments for Ireland, Greece, Portugal and Spain were EUR 18 billion, and additional total resources available for commitments for Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia in the period from the date of accession to 2006 were EUR 7.6 billion (Council regulation: establishing a Cohesion Fund, 2006).
- ⁵ *Urban* is the EU Initiative of the *ERDF* for sustainable development in the troubled urban districts for the period 2000–2006. The aim of Urban II was to promote the design and implementation of innovative development models for the social and economic regeneration of troubled urban areas. The programming documents during the period 2000–2006 of the regions eligible for priority Objectives 1 and 2 comprised integrated measures of social and economic development covering many urban areas. Through an integrated territorial approach, these measures should have contributed to the balanced development or conversion of the regions concerned. Furthermore,

the measures financed under Objective 3 should also have strengthened social cohesion in the towns not covered by Objectives 1 and 2.

- ⁶ *INTERREG III* is an EU initiative which aim was to stimulate interregional cooperation in the EU in 2000–2006. INTERREG III was the part of the ERDF. This phase of the INTERREG initiative was designed to strengthen social and economic cohesion across the EU, by fostering the balanced development of Europe through: (i) *cross-border cooperation* for developing cross-border social and economic centres through common development strategies; (ii) *transnational cooperation* by involving national, regional and local authorities to promote better integration within the EU by creating the large groups of European regions; and (iii) *interregional cooperation* by creating networks for improving the effectiveness of regional development policies and instruments through large-scale information exchange and sharing of experience. Particular attention has been paid to the integration of remote regions, which share external borders with the candidate countries. INTERREG III was made from three priorities and had a total budget of EUR 4.875 billion.

The common objectives of all financial support expenditure categories: (i) productive environment – financing of assisting SMEs, RDTI and large businesses, of development telecommunications and the information society; (ii) human resources – financing of education and training, social inclusion decisions; (iii) basic infrastructure – financing of transport infrastructure, energy and the environment, partly reflecting the CF’s support to the latter, environment and environmental expenditure in enterprises, social infrastructure (generalised information from Ex post evaluation of cohesion policy programmes 2000–2006, 2009).

Appendix C

Table C1. Description of the data for the research

Variable		Source of the data	Notes
Full name	Short name		
Regional per capita gross domestic product at constant prices	gdp	Eurostat	The main source of the data is <i>ESA 2010 (reg_eco10gdp)</i> , subsection for <i>Gross domestic product (GDP) at current market prices by NUTS3 regions (nama_10r_3gdp)</i> . To correct the changes at price levels over time, we used <i>Price index (implicit deflator), 2010=100, euro (PD10_EUR)</i> . To calculate per capita GDP we used <i>Average annual population to calculate regional GDP data (thousand persons) by NUTS 3 regions (nama_10r_3popgdp)</i> . Data for per capita GDP and population in aforementioned Eurostat data sources is not available prior to 2000. Data for 1995–1999 on <i>Gross domestic product (GDP) at current market prices at NUTS level 3</i> and <i>Average annual population</i> was retrieved from <i>nama_r_e3gdp</i> and <i>demo_r_d3avg</i> datasets that were available on Eurostat previously and merged with currently available dataset.
Working age population	pop	Eurostat	The main source of the data is <i>Average annual population by age groups (thousand persons) by NUTS 3 regions (nama_10r_3pop)</i> . Data for population in aforementioned Eurostat data sources is not available prior to 2000. Data for 1995–1999 on <i>Average annual population</i> was retrieved from <i>demo_r_d3avg</i> datasets that were available on Eurostat previously and merged with currently available dataset.
Share of value added created in agriculture sector	Agriculture	Eurostat	The main source of the data is <i>Gross value added at basic prices by NUTS 3 regions (nama_10r_3gva)</i> . Data in aforementioned Eurostat data sources is not available prior to 2000. Data for 1995 – 1999 on <i>Gross value added at basic prices at NUTS level 3</i> was retrieved from <i>nama_r_e3vabp95</i> .
Share of value added created in industry sector	Industry		
Share of value added created in service sector	Service		
Dummy variable for capital region	Capital dummy	Eurostat	Information for NUTS 3 typologies and local information were collected from <i>Regional typologies and local information corresponding to NUTS 3 (available at http://ec.europa.eu/eurostat/documents/345175/6807882/Ttypologies+and+local+information+corresponding+to+NUTS3.xls)</i>
Dummy variable for costal region	Costal dummy		
Dummy variable for region with a port	Port dummy		
Dummy variable for urban region	Urban dummy		
Dummy variable for rural region	Rural dummy		
Treatment dummy	dT	European Commission	Concerning ERDF and CF, DG REGIO has carried out some analyses reflecting on allocations and expenditures at NUTS3 levels across time. The data resulting from these analyses is published on the "Data for research" page of EC website (http://ec.europa.eu/regional_policy/en/policy/evaluations/data-for-research/). In particular, for the period 2000-2006, you can refer to the following link: http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/expost2006/expenditure_final_annex1.xls (Breakdown by NUTS3 level regions and sectors). Please note that all data is the result of estimation procedures. The details of the procedure and its limitations are described in the Report available at: http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/expost2006/expenditure_final.pdf
Treatment intensity	Tint		

Table C2. Growth averages of per capita GDP and working age population

Variable	Group ⁽¹⁾	Pre-policy period	Post-policy period			
		1995-1999	2007-2011	2007-2012	2007-2013	2007-2014
Average year-to-year growth rate of per capita GDP at constant prices, %	Control	2.31	0.06	-0.01	1.16	0.92
	Treatment	2.56	-0.32	-0.51	0.70	0.54
Average year-to-year growth rate of working age population, %	Control	0.506	0.233	0.272	0.328	0.390
	Treatment	0.123	0.148	0.106	0.078	0.073

⁽¹⁾ Here control group consists of 244 NUTS 3 regions that did not received any support from ERDF and CF over 2000-2006 programming period. Treatment group consists of 1007 NUTS 3 regions that received funding from ERDF and/or CF during the same period. Analysing separate funds or expenditure categories distribution of regions between treatment and control group varies, but total number of regions remains the same.

Table C3. Averages of quantitative control variables in control and treatment groups

Variable	Group ⁽¹⁾	Average in 1995	Average in 2007
Per capita GDP at constant prices, EUR	Control	24907	33281
	Treatment	18982	24946
Share of value added in Agriculture sector, %	Control	2.73	1.44
	Treatment	5.48	2.99
Share of value added in Industry sector, %	Control	25.37	23.64
	Treatment	24.08	22.53
Share of value added in Service sector, %	Control	66.42	69.35
	Treatment	63.49	67.34
Share of value added in Construction sector ⁽²⁾ , %	Control	5.48	5.57
	Treatment	6.95	7.14

⁽¹⁾ Here control group consists of 244 NUTS 3 regions that did not received any support from ERDF and CF over 2000-2006 programming period. Treatment group consists of 1007 NUTS 3 regions that received funding from ERDF and/or CF during the same period. Analysing separate funds or expenditure categories distribution of regions between treatment and control group varies, but total number of regions remain the same.

⁽²⁾ Construction sector is omitted from the estimations due to exact collinearity which would occur if all sectors making up 100% of Value Added are included.

Table C4. Distribution of regions in the control and treatment groups according to location specific factors and urban-rural typology

Group ⁽¹⁾	Capital region, %	Coastal region, %	Port region, %	Urban-rural typology		
				Rural region, %	Intermediate region ⁽²⁾ , %	Urban region, %
Control	7	26	28	15	37	48
Treatment	4	37	38	39	38	23

⁽¹⁾ Here control group consists of 244 NUTS 3 regions that did not received any support from ERDF and CF over 2000-2006 programming period. Treatment group consists of 1007 NUTS 3 regions that received funding from ERDF and/or CF during the same period. Analysing separate funds or expenditure categories distribution of regions between treatment and control group varies, but total number of regions remain the same.

⁽²⁾ Intermediate region is omitted category and set as a benchmark type of the region.

Appendix D

Table D1. Estimations for 2007–2011 post-policy period

	All funds and all expenditure categories		1. ERDF Objective 1									
			All expenditure categories		1.1. Productive environment		1.2. Human resources		1.3. Basic infrastructure		1.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0097	0.0060	−0.0131	0.0029	−0.0124	−0.0054	0.0007	0.0113	−0.0116	0.0090	0.0008	0.0243
	(0.0175)	(0.0171)	(0.0180)	(0.0171)	(0.0180)	(0.0175)	(0.0175)	(0.0171)	(0.0180)	(0.0170)	(0.0175)	(0.0168)
Initial per capita GDP	−0.0119**	−0.0113**	−0.0107**	−0.0116**	−0.0107**	−0.0115**	−0.0122**	−0.0118**	−0.0108**	−0.0117**	−0.0112**	−0.0121**
	(0.0016)	(0.0015)	(0.0016)	(0.0015)	(0.0016)	(0.0016)	(0.0015)	(0.0016)	(0.0016)	(0.0015)	(0.0016)	(0.0015)
Population growth	0.3667**	0.3803**	0.3388**	0.3768**	0.3417**	0.3540**	0.3806**	0.3815**	0.3428**	0.3920**	0.3486**	0.3710**
	(0.0648)	(0.0633)	(0.0646)	(0.0632)	(0.0646)	(0.0643)	(0.0640)	(0.0635)	(0.0648)	(0.0630)	(0.0641)	(0.0626)
Agriculture	−0.0016**	−0.0014**	−0.0015**	−0.0014**	−0.0015**	−0.0016**	−0.0015**	−0.0016**	−0.0015**	−0.0014**	−0.0014**	−0.0013**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0015**	0.0015**	0.0017**	0.0016**	0.0017**	0.0017**	0.0017**	0.0015**	0.0017**	0.0015**	0.0016**	0.0014**
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0014**	0.0014**	0.0015**	0.0014**	0.0015**	0.0015**	0.0015**	0.0014**	0.0015**	0.0014**	0.0014**	0.0013**
	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.01648**	0.0170**	0.0162**	0.0170**	0.0162**	0.0168**	0.0165**	0.0169**	0.0163**	0.0169**	0.0161**	0.0165**
	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0004	0.0003	0.0004	0.0003	0.0003	0.0004	0.0003	0.0003	0.0004	0.0003	0.0002
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0005	−0.0004	−0.0006	−0.0004	−0.0006	−0.0004	−0.0005	−0.0005	−0.0006	−0.0004	−0.0006	−0.0004
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.001)	(0.0012)	(0.0012)
Urban dummy	−0.0004	−0.0009	−0.0011	−0.0009	−0.0011	−0.0007	−0.0012	−0.0007	−0.0011	−0.0009	−0.0011	−0.0010
	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Rural dummy	−0.0001	0.0006	0.0007	0.0006	0.0007	0.0004	0.0006	0.0002	0.0007	0.0005	0.0006	0.0004
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0010)
Post-policy period dummy (<i>t2</i>)	−0.0194**	−0.0212**	−0.0196**	−0.0213**	−0.0197**	−0.0217**	−0.0201**	−0.0224**	−0.0198**	−0.0216**	−0.0199**	−0.0216**
	(0.0019)	(0.00097)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)
Treatment group dummy (<i>dT</i>)	0.0041**		0.0108**		0.0106**		0.0114**		0.0104**		0.0095**	
	(0.0015)		(0.0015)		(0.0015)		(0.0018)		(0.0015)		(0.0015)	
Difference-in-difference estimator (<i>t2</i> × <i>dT</i>)	−0.0048**		−0.0135**		−0.0134**		−0.0194**		−0.0132**		−0.0138**	
	(0.0020)		(0.0017)		(0.0017)		(0.0021)		(0.0017)		(0.0018)	
Treatment intensity (<i>Tint</i>)		0.0059**		0.0077**		0.0213**		0.1560**		0.0100**		0.2745**
		(0.0008)		(0.0009)		(0.0032)		(0.0300)		(0.0013)		(0.0367)
Post-policy period dummy * Treatment intensity (<i>t2</i> × <i>Tint</i>)		−0.0067**		−0.0091**		−0.0220**		−0.1961**		−0.0127**		−0.4482**
		(0.0009)		(0.0011)		(0.0038)		(0.0404)		(0.0015)		(0.0448)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.4790	0.4920	0.4919	0.4946	0.4916	0.4873	0.4958	0.4837	0.4910	0.4945	0.4908	0.4982

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D1. (continued)

	Productive environment (all funds ERDF+CF)		2. ERDF Objective 2									
			All expenditure categories		2.1. Productive environment		2.2. Human resources		2.3. Basic infrastructure		2.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0093	−0.0015	0.0117	0.0153	0.0119	0.0162	0.0183	0.0181	0.0134	0.0148	0.0126	0.0167
	(0.0175)	(0.0176)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0172)	(0.0171)
Initial per capita GDP	−0.0119**	−0.0116**	−0.0116**	−0.0119**	−0.0116**	−0.0121**	−0.0119**	−0.0119**	−0.0117**	−0.0118**	−0.0118**	−0.0120**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.3652**	0.3559**	0.4122**	0.4251**	0.4115**	0.4204**	0.3897**	0.3976**	0.4081**	0.4102**	0.4093**	0.4091**
	(0.0648)	(0.0649)	(0.0637)	(0.0640)	(0.0637)	(0.0639)	(0.0639)	(0.0638)	(0.0638)	(0.0641)	(0.0641)	(0.064)
Agriculture	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0015**	0.0016**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0014**	0.0015**	0.0014**	0.0014**	0.0014**	0.0014**	0.0013**	0.0013**	0.0014**	0.0014**	0.0014**	0.0014**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0165**	0.0168**	0.0165**	0.0164**	0.0165**	0.0164**	0.0167**	0.0164**	0.0165**	0.0165**	0.0165**	0.0163**
	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0003	0.0003	0.0005	0.0003	0.0005	0.0004	0.0005	0.0003	0.0003	0.0002	0.0001
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0005	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0003	−0.0005	−0.0004	−0.0004	−0.0003	−0.0003
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	−0.0005	−0.0006	−0.0009	−0.0009	−0.0009	−0.0009	−0.0005	−0.0006	−0.0008	−0.0007	−0.0007	−0.0004
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0001	0.0002	0.00013	0.0003	0.00012	0.0003	−0.0002	−0.0002	−3,327e−05	−2,950e−05	−7,439e−06	6,092e−05
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy (t_2)	−0.0192**	−0.0214**	−0.0261**	−0.0246**	−0.0260**	−0.0247**	−0.0223**	−0.0227**	−0.0253**	−0.0237**	−0.0240**	−0.0236**
	(0.0018)	(0.0010)	(0.0012)	(0.0010)	(0.0012)	(0.0010)	(0.0010)	(0.0009)	(0.0012)	(0.0010)	(0.0011)	(0.0010)
Treatment group dummy (dT)	0.0043**		−0.0044**		−0.0042**		0.00042		−0.0028**		−0.0032**	
	(0.0015)		(0.0013)		(0.0013)		(0.0017)		(0.0013)		(0.0013)	
Difference-in-difference estimator ($t_2 \times dT$)	−0.0051**		0.0061**		0.0059**		−0.0054**		0.0049**		0.0019	
	(0.0020)		(0.0016)		(0.0016)		(0.0022)		(0.0016)		(0.0017)	
Treatment intensity ($Tint$)		0.0178**		−0.0406**		−0.0642**		0.0392		−0.0487**		−0.6755**
		(0.0033)		(0.0099)		(0.0141)		(0.2085)		(0.0246)		(0.2362)
Post-policy period dummy * Treatment intensity ($t_2 \times Tint$)		−0.0190**		0.0379**		0.0646**		−0.7072**		0.0443		0.4839
		(0.0039)		(0.0133)		(0.0190)		(0.2692)		(0.0331)		(0.3244)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.4792	0.4844	0.4808	0.4809	0.4806	0.4818	0.4793	0.4797	0.4793	0.4782	0.4788	0.4792

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D1. (continued)

	Human resources (all funds ERDF+CF)		Basic infrastructure (all funds ERDF+CF)		Miscellaneous (all funds ERDF+CF)		3. Cohesion fund					
							All expenditure		3.3. Basic		3.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0146 (0.0173)	0.0116 (0.0172)	0.0084 (0.0175)	0.0111 (0.0170)	0.0178 (0.0172)	0.0239 (0.0169)	0.0250 (0.0170)	0.0165 (0.0171)	0.0250 (0.0170)	0.0166 (0.0171)	0.0180 (0.0171)	0.0158 (0.0171)
Initial per capita GDP	−0.0121** (0.0016)	−0.0117** (0.0016)	−0.0118** (0.0016)	−0.0113** (0.0015)	−0.0122** (0.0016)	−0.0119** (0.0015)	−0.0114** (0.0016)	−0.0115** (0.0016)	−0.0114** (0.0016)	−0.0115** (0.0016)	−0.0124** (0.0016)	−0.0121** (0.0016)
Population growth	0.3750** (0.0643)	0.3755** (0.0635)	0.3663** (0.0646)	0.3949** (0.0631)	0.3643** (0.0649)	0.3827** (0.0630)	0.3805** (0.0632)	0.4038** (0.0636)	0.3805** (0.0632)	0.4037** (0.0636)	0.3968** (0.0636)	0.3871** (0.0639)
Agriculture	−0.0016** (0.0002)	−0.0016** (0.0002)	−0.0016** (0.0002)	−0.0013** (0.0002)	−0.0015** (0.0002)	−0.0013** (0.0002)	−0.0012** (0.0002)	−0.0015** (0.0002)	−0.0012** (0.0002)	−0.0015** (0.0002)	−0.0017** (0.0002)	−0.0017** (0.0002)
Industry	0.0015** (0.0001)	0.0015** (0.0001)	0.0015** (0.0001)	0.0015** (0.0001)	0.0015** (0.0001)	0.0014** (0.0001)	0.0013** (0.0001)	0.0014** (0.0001)	0.0013** (0.0001)	0.0014** (0.0001)	0.0015** (0.0001)	0.0015** (0.0001)
Service	0.0014** (0.0001)	0.0014** (0.0001)	0.0014** (0.0001)	0.0013** (0.0001)	0.0013** (0.0001)	0.0013** (0.0001)	0.0012** (0.0001)	0.0013** (0.0001)	0.0012** (0.0001)	0.0013** (0.0001)	0.0014** (0.0001)	0.0014** (0.0001)
Capital dummy	0.0165** (0.0022)	0.0168** (0.0022)	0.0164** (0.0022)	0.0170** (0.0022)	0.0164** (0.0022)	0.0165** (0.0022)	0.0164** (0.0022)	0.0168** (0.0022)	0.0164** (0.0022)	0.0168** (0.0022)	0.0161** (0.0022)	0.0167** (0.0022)
Costal dummy	0.0003 (0.0013)	0.0003 (0.0013)	0.0004 (0.0013)	0.0005 (0.0013)	0.0002 (0.0013)	0.0003 (0.0013)	0.0003 (0.0013)	0.0004 (0.0013)	0.0003 (0.0013)	0.0004 (0.0013)	0.0004 (0.0013)	0.0003 (0.0013)
Port dummy	−0.0004 (0.0012)	−0.0005 (0.0012)	−0.0006 (0.0012)	−0.0004 (0.0012)	−0.0003 (0.0012)	−0.0004 (0.0012)	−0.0003 (0.0012)	−0.0004 (0.0012)	−0.0003 (0.0012)	−0.0004 (0.0012)	−0.0005 (0.0012)	−0.0004 (0.0012)
Urban dummy	−0.0008 (0.0012)	−0.0007 (0.0012)	−0.0005 (0.0012)	−0.0009 (0.0011)	−0.0007 (0.0012)	−0.0010 (0.0011)	−0.0010 (0.0011)	−0.0007 (0.0012)	−0.0010 (0.0011)	−0.0007 (0.0012)	−0.0005 (0.0012)	−0.0006 (0.0012)
Rural dummy	−2,310e−06 (0.0011)	0.0002 (0.0011)	−9,679e−05 (0.0011)	0.0006 (0.0011)	−1,993e−05 (0.0011)	0.0004 (0.0011)	0.0005 (0.0011)	0.0001 (0.0011)	0.0005 (0.0011)	0.00011 (0.0011)	−0.0002 (0.0011)	−0.0002 (0.0011)
Post-policy period dummy ($t2$)	−0.0188** (0.0013)	−0.0220** (0.0010)	−0.0197** (0.0017)	−0.0216** (0.0009)	−0.0173** (0.0016)	−0.0213** (0.0009)	−0.0213** (0.0010)	−0.0228** (0.0009)	−0.0213** (0.0010)	−0.0228** (0.0009)	−0.0234** (0.0009)	−0.0233** (0.0009)
Treatment group dummy (dT)	0.0039** (0.0012)		0.0043** (0.0014)		0.0037** (0.0014)		0.0146** (0.0027)		0.0146** (0.0027)		0.0100** (0.0035)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0080** (0.0016)		−0.0046** (0.0019)		−0.0081** (0.0018)		−0.0135** (0.0021)		−0.0135** (0.0021)		0.0044 (0.0027)	
Treatment intensity ($Tint$)		0.1550** (0.0294)		0.0072** (0.0010)		0.2183** (0.0347)		0.0089** (0.0024)		0.0090** (0.0024)		−0.0426 (0.1366)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.2089** (0.0395)		−0.0084** (0.0011)		−0.3544** (0.0416)		−0.0082** (0.0029)		−0.0084** (0.0029)		0.2731* (0.1394)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.4826	0.4843	0.4794	0.4918	0.4816	0.4927	0.4880	0.4803	0.4880	0.4804	0.4808	0.4783

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D1. (continued)

	4. ERDF Urban									
	All expenditure categories		4.1. Productive environment		4.2. Human resources		4.3. Basic infrastructure		4.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0162	0.0154	0.0164	0.0157	0.0161	0.0160	0.0162	0.0156	0.0162	0.0154
	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)
Initial per capita GDP	−0.0120**	−0.0120**	−0.0120**	−0.0119**	−0.0120**	−0.0120**	−0.0120**	−0.0120**	−0.0120**	−0.0120**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.3875**	0.3868**	0.3901**	0.3915**	0.3879**	0.3885**	0.3862**	0.3887**	0.3891**	0.3867**
	(0.0642)	(0.0641)	(0.0642)	(0.0640)	(0.0642)	(0.0641)	(0.0642)	(0.0640)	(0.0642)	(0.0641)
Agriculture	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0165**	0.0166**	0.0164**	0.0166**	0.0165**	0.0166**	0.0165**	0.0166**	0.0166**	0.0167**
	(0.0023)	(0.0022)	(0.0023)	(0.0022)	(0.0023)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0002	0.0003	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0004	−0.0004	−0.0005	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004
	(0.0012)	(0.0013)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0013)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	−0.0007	−0.0006	−0.0007	−0.0006	−0.0006	−0.0007	−0.0007	−0.0006	−0.0006	−0.0006
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0002	−0.0001	−0.0001	−0.0002	−0.0002	−0.0001	−0.0002	−0.0001	−0.0002	−0.0001
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy ($t2$)	−0.0229**	−0.0231**	−0.0231**	−0.0232**	−0.0229**	−0.0231**	−0.0229**	−0.0231**	−0.0229**	−0.0231**
	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)
Treatment group dummy (dT)	0.0025		0.0025		0.0028		0.0031		0.0024	
	(0.0024)		(0.0026)		(0.0025)		(0.0024)		(0.0024)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0042		−0.0019		−0.0047		−0.0048		−0.0043	
	(0.0032)		(0.0036)		(0.0035)		(0.0033)		(0.0034)	
Treatment intensity ($Tint$)		0.1291		0.3120		0.8212		0.1730		2,210
		(0.0844)		(0.4104)		(0.6265)		(0.1151)		(1,388)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.0962		0.2000		−0.6066		−0.1601		−2,077
		(0.1185)		(0.5769)		(0.8794)		(0.1618)		(1,949)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.4778	0.4779	0.4776	0.4778	0.4778	0.4778	0.4779	0.4779	0.4777	0.4779

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D1. (continued)

	5. ERDF INTERREG IIIA									
	All expenditure categories		5.1. Productive environment		5.2. Human resources		5.3. Basic infrastructure		5.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0164	0.0172	0.0164	0.0164	0.0162	0.0168	0.0164	0.0177	0.0164	0.0167
	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0172)	(0.0171)	(0.0171)	(0.0171)	(0.0171)
Initial per capita GDP	−0.0120**	−0.0121**	−0.0120**	−0.0120**	−0.0120**	−0.0120**	−0.0120**	−0.0121**	−0.0120**	−0.0120**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.3979**	0.3986**	0.3979**	0.3982**	0.3973**	0.3989**	0.3979**	0.3993**	0.3978**	0.3967**
	(0.0638)	(0.0638)	(0.0638)	(0.0638)	(0.0638)	(0.0638)	(0.0638)	(0.0637)	(0.0638)	(0.0638)
Agriculture	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0015**	−0.0016**	−0.0016**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0015**	0.0014**	0.0015**	0.0015**	0.0015**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**	0.0014**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0166**	0.0165**	0.0166**	0.0166**	0.0166**	0.0166**	0.0166**	0.0165**	0.0166**	0.0166**
	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	−0.0007	−0.0007	−0.0007	−0.0007	−0.0006	−0.0007	−0.0007	−0.0008	−0.0007	−0.0007
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0002	−8,269e−05	−0.0002	−0.0002	−0.0002	−0.0002	−0.0002	4,754e−05	−0.0002	−0.0002
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy ($t2$)	−0.0228**	−0.0228**	−0.0228**	−0.0233**	−0.0230**	−0.0230**	−0.0228**	−0.0226**	−0.0228**	−0.0231**
	(0.0011)	(0.0009)	(0.0011)	(0.0009)	(0.0011)	(0.0010)	(0.0011)	(0.0009)	(0.0011)	(0.0010)
Treatment group dummy (dT)	0.0005		0.0005		0.0003		0.0005		0.0004	
	(0.0013)		(0.0013)		(0.0013)		(0.0013)		(0.0013)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0014		−0.0014		−0.0006		−0.0014		−0.0014	
	(0.0017)		(0.0017)		(0.0017)		(0.0018)		(0.0017)	
Treatment intensity ($Tint$)		0.0175		−0.0256		0.0768		0.0753**		0.0586
		(0.0146)		(0.0319)		(0.2361)		(0.0273)		(0.1822)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.0395**		0.0230		−0.3083		−0.1421**		−0.1611
		(0.0196)		(0.0440)		(0.3213)		(0.0361)		(0.2419)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.4775	0.4783	0.4775	0.4775	0.4774	0.4776	0.4775	0.4807	0.4776	0.4775

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D2. Estimations for 2007–2012 post-policy period

	All funds and all expenditure categories		1. ERDF Objective 1									
			All expenditure categories		1.1. Productive environment		1.2. Human resources		1.3. Basic infrastructure		1.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0129	0.0066	−0.0186	0.0019	−0.0178	−0.0038	−0.0061	0.0111	−0.0175	0.0077	−0.0051	0.0222
	(0.0175)	(0.0170)	(0.0179)	(0.0170)	(0.0179)	(0.0175)	(0.0176)	(0.0172)	(0.0180)	(0.0169)	(0.0174)	(0.0167)
Initial per capita GDP	−0.0076**	−0.0071**	−0.0060**	−0.0075**	−0.0061**	−0.0073**	−0.0080**	−0.0073**	−0.0061**	−0.0076**	−0.0064**	−0.0080**
	(0.0016)	(0.0015)	(0.0016)	(0.0015)	(0.0016)	(0.0016)	(0.0015)	(0.0016)	(0.0016)	(0.0015)	(0.0016)	(0.0015)
Population growth	0.2084**	0.2441**	0.1809**	0.2375**	0.1835**	0.2104**	0.2293**	0.2233**	0.1835**	0.2519**	0.1848**	0.2108**
	(0.0654)	(0.0633)	(0.0646)	(0.0632)	(0.0645)	(0.0645)	(0.0643)	(0.0639)	(0.0647)	(0.0629)	(0.0641)	(0.0626)
Agriculture	−0.0015**	−0.0013**	−0.0014**	−0.0013**	−0.0014**	−0.0015**	−0.0015**	−0.0015**	−0.0014**	−0.0013**	−0.0013**	−0.0012**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0011**	0.0012**	0.0012**	0.0012**	0.0012**	0.0013**	0.0011**	0.0012**	0.0011**	0.0011**	0.0010**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0009**	0.0009**	0.0010**	0.0010**	0.0010**	0.0010**	0.0011**	0.0009**	0.0010**	0.0009**	0.0009**	0.0008**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0149**	0.0150**	0.0143**	0.0151**	0.0144**	0.0151**	0.0149**	0.0153**	0.0145**	0.0150**	0.0142**	0.0148**
	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0005	0.0003	0.0004	0.0004	0.0004	0.0005	0.0004	0.0004	0.0004	0.0003	0.0003
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0012	−0.0012	−0.0014	−0.0012	−0.0014	−0.0012	−0.0013	−0.0012	−0.0014	−0.0012	−0.0014	−0.0011
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	0.0002	−0.0003	−0.0005	−0.0003	−0.0005	−7.516e−05	−0.0004	0.0001	−0.0004	−0.0003	−0.0004	−0.0003
	(0.0012)	(0.0011)	(0.0011)	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Rural dummy	−0.0003	0.0006	0.0007	0.0006	0.0007	0.0003	0.0005	−4.815e−05	0.0007	0.0005	0.0007	0.0003
	(0.0011)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0010)	(0.0011)	(0.0010)
Post-policy period dummy (<i>t2</i>)	−0.0202**	−0.0222**	−0.0206**	−0.0225**	−0.0206**	−0.0229**	−0.0217**	−0.0242**	−0.0207**	−0.0229**	−0.0209**	−0.0232**
	(0.0019)	(0.0010)	(0.0010)	(0.0009)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0009)	(0.0010)	(0.0009)
Treatment group dummy (<i>dT</i>)	0.0040**		0.0130**		0.0128**		0.0132**		0.0126**		0.0122**	
	(0.0015)		(0.0015)		(0.0015)		(0.0018)		(0.0015)		(0.0015)	
Difference-in-difference estimator (<i>t2</i> × <i>dT</i>)	−0.0062**		−0.0173**		−0.0172**		−0.0216**		−0.0169**		−0.0177**	
	(0.0020)		(0.0017)		(0.0017)		(0.0021)		(0.0017)		(0.0018)	
Treatment intensity (<i>Tint</i>)		0.0068**		0.0089**		0.0234**		0.1770**		0.0118**		0.3312**
		(0.0008)		(0.0009)		(0.0032)		(0.0299)		(0.0013)		(0.0364)
Post-policy period dummy * Treatment intensity (<i>t2</i> × <i>Tint</i>)		−0.0097**		−0.0125**		−0.0308**		−0.2318**		−0.0172**		−0.5534**
		(0.0009)		(0.0011)		(0.0038)		(0.0404)		(0.0015)		(0.0444)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.4843	0.5073	0.5047	0.5098	0.5043	0.4971	0.5045	0.4906	0.5034	0.5103	0.5039	0.5134

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D2. (continued)

	Productive environment (all funds ERDF+CF)		2. ERDF Objective 2									
			All expenditure categories		2.1. Productive environment		2.2. Human resources		2.3. Basic infrastructure		2.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0125	0.0010	0.0097	0.0147	0.0100	0.0162	0.0190	0.0193	0.0120	0.0144	0.0111	0.0165
	(0.0175)	(0.0176)	(0.0172)	(0.0171)	(0.0172)	(0.0171)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)
Initial per capita GDP	−0.0075**	−0.0075**	−0.0069**	−0.0073**	−0.0069**	−0.0075**	−0.0074**	−0.0075**	−0.0070**	−0.0072**	−0.0071**	−0.0073**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.2073**	0.2128**	0.2524**	0.2595**	0.2514**	0.2567**	0.2301**	0.2358**	0.2465**	0.2427**	0.2559**	0.2454**
	(0.0654)	(0.0651)	(0.0642)	(0.0647)	(0.0642)	(0.0646)	(0.0646)	(0.0645)	(0.0643)	(0.0647)	(0.0647)	(0.0645)
Agriculture	−0.0015**	−0.0015**	−0.0015**	−0.0015**	−0.0015**	−0.0015**	−0.0015**	−0.0015**	−0.0015**	−0.0015**	−0.0015**	−0.0015**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0012**	0.0011**	0.0010**	0.0011**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0011**	0.0010**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0009**	0.0010**	0.0009**	0.0009**	0.0009**	0.0009**	0.0008**	0.0008**	0.0009**	0.0008**	0.0009**	0.0008**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0149**	0.0151**	0.0147**	0.0147**	0.0148**	0.0148**	0.0151**	0.0148**	0.0148**	0.0148**	0.0149**	0.0147**
	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0003	0.0003	0.0005	0.0004	0.0006	0.0004	0.0006	0.0003	0.0004	0.0003	0.0002
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0012	−0.0012	−0.0011	−0.0012	−0.0011	−0.0011	−0.0011	−0.0013	−0.0012	−0.0012	−0.0011	−0.0011
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	0.0003	−1,148e−06	−0.0001	−3,427e−05	−0.0001	−9,877e−05	0.0004	0.0003	3,404e−08	0.0001	0.0001	0.0004
	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0012)	(0.0012)	(0.0011)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0003	9,563e−05	−4,652e−06	4,451e−06	−1,636e−05	5,672e−05	−0.0005	−0.0004	−0.0002	−0.0003	−0.0002	−0.0002
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy (t_2)	−0.0200**	−0.022**	−0.0291**	−0.0270**	−0.0290**	−0.0270**	−0.0245**	−0.0247**	−0.0282**	−0.0260**	−0.0269**	−0.0258**
	(0.0019)	(0.0010)	(0.0012)	(0.0011)	(0.0012)	(0.0010)	(0.0010)	(0.0010)	(0.0012)	(0.0010)	(0.0011)	(0.0010)
Treatment group dummy (dT)	0.0042**		−0.0060**		−0.0059**		−0.0007		−0.0040**		−0.0046**	
	(0.0015)		(0.0013)		(0.0013)		(0.0017)		(0.0013)		(0.0013)	
Difference-in-difference estimator ($t_2 \times dT$)	−0.0064**		0.0085**		0.0083**		−0.0035		0.0073**		0.0046**	
	(0.0020)		(0.0016)		(0.0016)		(0.0022)		(0.0016)		(0.0017)	
Treatment intensity ($Tint$)		0.0197**		−0.0453**		−0.0707**		−0.0744		−0.0557**		−0.7912**
		(0.0033)		(0.0099)		(0.014)		(0.2089)		(0.0246)		(0.2364)
Post-policy period dummy * Treatment intensity ($t_2 \times Tint$)		−0.0277**		0.0524**		0.0797**		−0.5636**		0.0819**		0.8985**
		(0.0039)		(0.0133)		(0.0190)		(0.2694)		(0.0332)		(0.325)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	25
R ²	0.4845	0.4936	0.4886	0.4868	0.4883	0.4877	0.4834	0.4842	0.4864	0.4836	0.4849	0.4846

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D2. (continued)

	Human resources (all funds ERDF+CF)		Basic infrastructure (all funds ERDF+CF)		Miscellaneous (all funds ERDF+CF)		3. Cohesion fund					
							All expenditure		3.3. Basic		3.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0152	0.0113	0.0103	0.0113	0.0188	0.0227	0.0274	0.0179	0.0274	0.0179	0.0187	0.0170
	(0.0173)	(0.0172)	(0.0175)	(0.0169)	(0.0173)	(0.0168)	(0.0168)	(0.0171)	(0.0168)	(0.0171)	(0.0172)	(0.0172)
Initial per capita GDP	−0.0076**	−0.0073**	−0.0074**	−0.0070**	−0.0077**	−0.0076**	−0.0061**	−0.0066**	−0.0061**	−0.0066**	−0.0076**	−0.0076**
	(0.0016)	(0.0016)	(0.0016)	(0.0015)	(0.0016)	(0.0015)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.2167**	0.2179**	0.2045**	0.2573**	0.2020**	0.2247**	0.2373**	0.2501**	0.2373**	0.2498**	0.2329**	0.2274**
	(0.0648)	(0.0639)	(0.0652)	(0.0630)	(0.0653)	(0.0630)	(0.0630)	(0.0641)	(0.0630)	(0.0641)	(0.0643)	(0.0646)
Agriculture	−0.0015**	−0.0015**	−0.0015**	−0.0012**	−0.0015**	−0.0011**	−0.0009**	−0.0013**	−0.0009**	−0.0013**	−0.0015**	−0.0016**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0008**	0.0009**	0.0007**	0.0009**	0.0010**	0.0010**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0008**	0.0009**	0.0009**	0.0008**	0.0008**	0.0008**	0.0006**	0.0007**	0.0006**	0.0007**	0.0008**	0.0008**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0148**	0.0152**	0.0148**	0.0149**	0.0147**	0.0147**	0.0142**	0.0146**	0.0142**	0.0146**	0.0142**	0.0150**
	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0003	0.0004	0.0005	0.0003	0.0003	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0011	−0.0012	−0.0012	−0.0012	−0.0011	−0.0012	−0.0011	−0.0012	−0.0011	−0.0012	−0.0012	−0.0011
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	3,116e−05	0.0001	0.0003	−0.0004	9,064e−05	−0.0004	−0.0004	−6,753e−05	−0.0004	−6,795e−05	0.0002	0.0002
	(0.0011)	(0.0011)	(0.0012)	(0.0011)	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0012)	(0.0012)
Rural dummy	−0.0002	−1,359e−05	−0.0003	0.0005	−0.0003	0.0004	0.0006	−2,197e−05	0.0006	−1,939e−05	−0.0004	−0.0005
	(0.0011)	(0.0011)	(0.0011)	(0.0010)	(0.0011)	(0.0010)	(0.0010)	(0.0011)	(0.0010)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy ($t2$)	−0.0200**	−0.0237**	−0.0204**	−0.0228**	−0.0185**	−0.0226**	−0.0222**	−0.0243**	−0.0222**	−0.0243**	−0.0249**	−0.0251**
	(0.0013)	(0.0010)	(0.0017)	(0.0009)	(0.0016)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)
Treatment group dummy (dT)	0.0044**		0.0047**		0.0042**		0.0192**		0.0192**		0.0136**	
	(0.0012)		(0.0014)		(0.0014)		(0.0026)		(0.0026)		(0.0036)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0093**		−0.0061**		−0.0091**		−0.0219**		−0.0219**		−0.0018	
	(0.0016)		(0.0019)		(0.0018)		(0.0021)		(0.0021)		(0.0028)	
Treatment intensity ($Tint$)		0.1759**		0.0084**		0.2725**		0.0105**		0.0107**		−0.0969
		(0.0294)		(0.0010)		(0.0343)		(0.0024)		(0.0024)		(0.1369)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.2445**		−0.0123**		−0.4637**		−0.0164**		−0.0167**		0.1259
		(0.0395)		(0.0011)		(0.0412)		(0.0029)		(0.0029)		(0.1399)
n	2502	2502	2502	2	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.4893	0.4913	0.4848	0.5076	0.4874	0.5078	0.5064	0.4890	0.5064	0.4891	0.4854	0.4824

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D2. (continued)

	4. ERDF Urban									
	All expenditure categories		4.1. Productive environment		4.2. Human resources		4.3. Basic infrastructure		4.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0170	0.0162	0.0172	0.0164	0.0169	0.0169	0.0170	0.0164	0.0170	0.0161
	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)
Initial per capita GDP	−0.0074**	−0.0075**	−0.0074**	−0.0073**	−0.0074**	−0.0075**	−0.0074**	−0.0075**	−0.0074**	−0.0075**
	(0.0016)	(0.0016)	(0.0016)	(0.00157)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.2192**	0.2202**	0.2214**	0.2244**	0.2194**	0.2224**	0.2185**	0.2228**	0.2207**	0.2198**
	(0.0648)	(0.0647)	(0.0649)	(0.0646)	(0.0648)	(0.0647)	(0.0648)	(0.0646)	(0.0649)	(0.0647)
Agriculture	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**
	(0.0001)	(0.0001)	(0.0001)	(0.00014)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0149**	0.0150**	0.0147**	0.0150**	0.0149**	0.0150**	0.0148**	0.0150**	0.0149**	0.0150**
	(0.0023)	(0.0022)	(0.0023)	(0.0022)	(0.0023)	(0.0022)	(0.0023)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0012	−0.0011	−0.0012	−0.0012	−0.0012	−0.0012	−0.0012	−0.0011	−0.0011	−0.0011
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00022	0.0002	0.0002
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy (t_2)	−0.0247**	−0.0250**	−0.0249**	−0.0252**	−0.0247**	−0.0250**	−0.0247**	−0.0249**	−0.0247**	−0.0249**
	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0010)	(0.0010)	(0.0009)	(0.0010)	(0.0009)
Treatment group dummy (dT)	0.0033		0.0035		0.0037		0.0038		0.0033	
	(0.0024)		(0.0026)		(0.0025)		(0.0024)		(0.0024)	
Difference-in-difference estimator ($t_2 \times dT$)	−0.0059*		−0.0041		−0.0068**		−0.0063*		−0.0059*	
	(0.0032)		(0.003552)		(0.0035)		(0.0033)		(0.0034)	
Treatment intensity ($Tint$)		0.1542*		0.3669		0.8751		0.2112*		2,582*
		(0.0844)		(0.4107)		(0.6273)		(0.1152)		(1,389)
Post-policy period dummy * Treatment intensity ($t_2 \times Tint$)		−0.1378		0.4839		−0.4737		−0.2622		−2,447
		(0.1186)		(0.5772)		(0.8806)		(0.1620)		(1,952)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.4829	0.4829	0.4826	0.4833	0.4830	0.4827	0.4830	0.4829	0.4828	0.4829

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D2. (continued)

	5. ERDF INTERREG IIIA									
	All expenditure categories		5.1. Productive environment		5.2. Human resources		5.3. Basic infrastructure		5.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0175	0.0184	0.0175	0.0177	0.0173	0.0172	0.0175	0.0179	0.0175	0.0188
	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0172)	(0.0171)	(0.0172)	(0.0172)
Initial per capita GDP	−0.0074**	−0.0076**	−0.0074**	−0.0075**	−0.0074**	−0.0075**	−0.0074**	−0.0078**	−0.0074**	−0.0075**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.2347**	0.2372**	0.2347**	0.2336**	0.2341**	0.2342**	0.2347**	0.2416**	0.2345**	0.2308**
	(0.0644)	(0.0643)	(0.0644)	(0.0645)	(0.0644)	(0.0645)	(0.0644)	(0.0641)	(0.0644)	(0.0644)
Agriculture	−0.0016**	−0.0015**	−0.0015**	−0.0016**	−0.0015**	−0.0015**	−0.0015**	−0.0014**	−0.0015**	−0.0015**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**	0.0008**	0.0009**	0.0008**	0.0008**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0149**	0.0148**	0.0149**	0.0150**	0.0149**	0.0149**	0.0149**	0.0147**	0.0149**	0.0149**
	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0011	−0.0011	−0.0011	−0.0011	−0.0011	−0.0011	−0.0011	−0.0012	−0.0011	−0.0011
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	8,521e−05	7,561e−07	8,521e−05	0.0001	0.0001	0.0001	8,521e−05	−0.0001	8,032e−05	0.0001
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0011)	(0.0012)	(0.0012)
Rural dummy	−0.0004	−0.0002	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−6,396e−05	−0.0004	−0.0003
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy ($t2$)	−0.0239**	−0.0244**	−0.0239**	−0.0250**	−0.0242**	−0.0247**	−0.0239**	−0.0241**	−0.02392**	−0.0246**
	(0.0011)	(0.0010)	(0.0011)	(0.0010)	(0.0011)	(0.0010)	(0.0011)	(0.0009)	(0.0011)	(0.0010)
Treatment group dummy (dT)	0.0013		0.0013		0.0012		0.0013		0.0013	
	(0.0013)		(0.0013)		(0.0013)		(0.0013)		(0.0013)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0037**		−0.0037**		−0.0029*		−0.0037**		−0.0037**	
	(0.0017)		(0.0017)		(0.0017)		(0.0017)		(0.0017)	
Treatment intensity ($Tint$)		0.0340**		−0.0072		0.2739		0.1118**		0.2688
		(0.0146)		(0.0320)		(0.2363)		(0.0272)		(0.1822)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.0771**		−0.0217		−0.6246*		−0.2259**		−0.5997**
		(0.0196)		(0.0441)		(0.3219)		(0.0360)		(0.2421)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.4833	0.4854	0.4833	0.4824	0.4828	0.4830	0.4833	0.4903	0.4833	0.4835

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D3. Estimations for 2007–2013 post-policy period

	All funds and all expenditure categories		1. ERDF Objective 1									
			All expenditure categories		1.1. Productive environment		1.2. Human resources		1.3. Basic infrastructure		1.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0176	0.0110	−0.0140	0.0066	−0.0131	0.0006	−0.0023	0.0181	−0.0130	0.0123	−0.0022	0.0272
	(0.0178)	(0.0171)	(0.0181)	(0.0171)	(0.0181)	(0.0177)	(0.0179)	(0.0174)	(0.0182)	(0.0170)	(0.0176)	(0.0168)
Initial per capita GDP	−0.0072**	−0.0067**	−0.0058**	−0.0072**	−0.0059**	−0.0071**	−0.0077**	−0.0071**	−0.0059**	−0.0073**	−0.0061**	−0.0076**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.00159)	(0.0016)	(0.0016)	(0.0016)	(0.0015)	(0.0016)	(0.0015)
Population growth	0.0932	0.1578**	0.0850	0.1546**	0.0874	0.1122*	0.1199*	0.1120*	0.0870	0.1696**	0.0901	0.1098*
	(0.0670)	(0.0646)	(0.0660)	(0.0643)	(0.0659)	(0.0658)	(0.0660)	(0.0654)	(0.0661)	(0.0640)	(0.0652)	(0.0639)
Agriculture	−0.0016**	−0.0012**	−0.0014**	−0.0014**	−0.0014**	−0.0016**	−0.0016**	−0.0015**	−0.0014**	−0.00131**	−0.0013**	−0.0012**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0011**	0.0011**	0.0012**	0.0012**	0.0012**	0.0012**	0.0013**	0.0010**	0.0012**	0.0011**	0.0011**	0.0010**
	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)
Service	0.0008**	0.0008**	0.0009**	0.0009**	0.0009**	0.0009**	0.0010**	0.0007**	0.0009**	0.0008**	0.0008**	0.0007**
	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0147**	0.0146**	0.0142**	0.0148**	0.0142**	0.0148**	0.0149**	0.0150**	0.0143**	0.0147**	0.0140**	0.0146**
	(0.0023)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0023)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
Costal dummy	−0.0005	−0.0003	−0.0004	−0.0004	−0.0004	−0.0004	−0.0003	−0.0005	−0.0004	−0.0004	−0.0005	−0.0005
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0016	−0.0015	−0.0017	−0.0015	−0.0017	−0.0015	−0.0016	−0.0015	−0.0018	−0.0015	−0.0017	−0.0015
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	0.0004	−0.0003	−0.0004	−0.0003	−0.0004	3,720e−06	−0.0002	0.0003	−0.0004	−0.0003	−0.0004	−0.0002
	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0012)	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Rural dummy	−0.0009	8,078e−05	0.0002	7,498e−05	0.0002	−0.0002	−3,669e−05	−0.0006	0.0002	−7,229e−06	0.0002	−0.0002
	(0.0011)	(0.0011)	(0.0011)	(0.0010)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0010)	(0.0011)	(0.0010)
Post-policy period dummy (<i>t2</i>)	−0.0076**	−0.0091**	−0.0077**	−0.0094**	−0.0077**	−0.0098**	−0.0093**	−0.0112**	−0.0078**	−0.0099**	−0.0077**	−0.0104**
	(0.0019)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0009)	(0.0010)	(0.0009)
Treatment group dummy (<i>dT</i>)	0.0041**		0.0130**		0.0128**		0.0133**		0.0128**		0.0131**	
	(0.0015)		(0.0015)		(0.0015)		(0.0019)		(0.0016)		(0.0015)	
Difference-in-difference estimator (<i>t2</i> × <i>dT</i>)	−0.0061**		−0.0181**		−0.0180**		−0.0206**		−0.0178**		−0.0202**	
	(0.0020)		(0.0017)		(0.0017)		(0.0021)		(0.0017)		(0.0018)	
Treatment intensity (<i>Tint</i>)		0.0071**		0.0095**		0.0251**		0.1862**		0.0127**		0.3464**
		(0.0008)		(0.0009)		(0.0033)		(0.0303)		(0.0013)		(0.0367)
Post-policy period dummy * Treatment intensity (<i>t2</i> × <i>Tint</i>)		−0.0110**		−0.0147**		−0.0361**		−0.2888**		−0.0204**		−0.6068**
		(0.0009)		(0.0011)		(0.0039)		(0.0409)		(0.0015)		(0.0449)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.3692	0.4036	0.3950	0.4098	0.3945	0.3895	0.3909	0.3800	0.3938	0.4111	0.3991	0.4108

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D3. (continued)

	Productive environment (all funds ERDF+CF)		2. ERDF Objective 2									
			All expenditure categories		2.1. Productive environment		2.2. Human resources		2.3. Basic infrastructure		2.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0172	0.0054	0.0146	0.0198	0.0150	0.0210	0.0237	0.0237	0.0172	0.0205	0.0168	0.0222
	(0.0178)	(0.0178)	(0.0174)	(0.0174)	(0.0174)	(0.0174)	(0.0175)	(0.0174)	(0.0174)	(0.0175)	(0.0175)	(0.0174)
Initial per capita GDP	−0.0072**	−0.0073**	−0.0065**	−0.0069**	−0.0066**	−0.0071**	−0.0070**	−0.0071**	−0.0067**	−0.0069**	−0.0068**	−0.0070**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.0925	0.1138*	0.1375**	0.1402**	0.1362**	0.1382**	0.1129*	0.1195*	0.1289*	0.1233*	0.1381**	0.1291*
	(0.0670)	(0.0665)	(0.0658)	(0.0665)	(0.0658)	(0.0663)	(0.0663)	(0.0663)	(0.0659)	(0.0665)	(0.0663)	(0.0662)
Agriculture	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0012**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**
	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0008**	0.0009**	0.0008**	0.0007**	0.0008**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0008**	0.0007**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Capital dummy	0.0147**	0.0148**	0.0146**	0.0145**	0.0146**	0.0146**	0.0149**	0.0147**	0.0146**	0.0147**	0.0147**	0.0145**
	(0.0023)	(0.0022)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)
Costal dummy	−0.0005	−0.0005	−0.0005	−0.0003	−0.0005	−0.0003	−0.0005	−0.0003	−0.0005	−0.0005	−0.0005	−0.0007
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0014)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0016	−0.0015	−0.0015	−0.0015	−0.0015	−0.0015	−0.0014	−0.0016	−0.0015	−0.0015	−0.0014	−0.0014
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	0.0004	7,375e−05	8,241e−05	0.0002	8,950e−05	0.0001	0.0005	0.0005	0.0002	0.0004	0.0003	0.0006
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0009	−0.0004	−0.0006	−0.0006	−0.0006	−0.0005	−0.0010	−0.0009	−0.0008	−0.0009	−0.0008	−0.0007
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy ($t2$)	−0.0073**	−0.0091**	−0.0166**	−0.0143**	−0.0165**	−0.0144**	−0.0119**	−0.0121**	−0.0155**	−0.0131**	−0.0142**	−0.0130**
	(0.0019)	(0.0010)	(0.0012)	(0.0011)	(0.0012)	(0.0011)	(0.0010)	(0.0010)	(0.0012)	(0.0010)	(0.0012)	(0.0010)
Treatment group dummy (dT)	0.0044**		−0.0060**		−0.0058**		0.0003		−0.0039**		−0.0043**	
	(0.0015)		(0.0013)		(0.0013)		(0.0018)		(0.0013)		(0.0013)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0065**		0.0089**		0.0087**		−0.0031		0.0074**		0.0045**	
	(0.0020)		(0.0016)		(0.0016)		(0.0022)		(0.0017)		(0.0017)	
Treatment intensity ($Tint$)		0.0217**		−0.0425**		−0.0690**		−0.0714		−0.0441*		−0.7307**
		(0.0033)		(0.0100)		(0.0144)		(0.2124)		(0.0250)		(0.2402)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.0331**		0.0508**		0.0841**		−0.3321		0.0579*		0.6770**
		(0.0039)		(0.01350)		(0.01928)		(0.2738)		(0.0337)		(0.3298)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.3695	0.3852	0.3748	0.3716	0.3743	0.3731	0.3674	0.3676	0.3716	0.3676	0.3694	0.3690

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D3. (continued)

	Human resources (all funds ERDF+CF)		Basic infrastructure (all funds ERDF+CF)		Miscellaneous (all funds ERDF+CF)		3. Cohesion fund					
							All expenditure		3.3. Basic		3.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0184	0.0182	0.0151	0.0155	0.0228	0.0265	0.0306*	0.0223	0.0306*	0.0223	0.0234	0.0234
	(0.0178)	(0.0174)	(0.0177)	(0.0170)	(0.0175)	(0.0170)	(0.0170)	(0.0174)	(0.0170)	(0.0174)	(0.0174)	(0.0174)
Initial per capita GDP	−0.0072**	−0.0070**	−0.0071**	−0.0066**	−0.0074**	−0.0074**	−0.0056**	−0.0064**	−0.0056**	−0.0064**	−0.0069**	−0.0073**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.1035	0.1084*	0.0896	0.1693**	0.0883	0.1247*	0.1491**	0.1348**	0.1491**	0.1349**	0.1180*	0.1011
	(0.0665)	(0.0654)	(0.0668)	(0.0645)	(0.0669)	(0.0645)	(0.0646)	(0.0659)	(0.0646)	(0.0659)	(0.0659)	(0.0661)
Agriculture	−0.0016**	−0.0015**	−0.0016**	−0.0012**	−0.0015**	−0.0012**	−0.0009**	−0.0014**	−0.0009**	−0.0014**	−0.0015**	−0.0017**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0007**	0.0009**	0.0007**	0.0009**	0.0010**	0.0010**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0008**	0.0007**	0.0008**	0.0007**	0.0007**	0.0007**	0.0005**	0.0006**	0.0005**	0.0006**	0.0007**	0.0007**
	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0002)
Capital dummy	0.0146**	0.0149**	0.0146**	0.0145**	0.0146**	0.0144**	0.0140**	0.0145**	0.0140**	0.0145**	0.0139**	0.0150**
	(0.0023)	(0.0023)	(0.0023)	(0.0022)	(0.0023)	(0.0022)	(0.0022)	(0.0023)	(0.0022)	(0.0023)	(0.0023)	(0.0023)
Costal dummy	−0.0005	−0.0005	−0.0004	−0.0003	−0.0006	−0.0005	−0.0004	−0.0004	−0.0004	−0.0004	−0.0004	−0.0005
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0015	−0.0015	−0.0016	−0.0015	−0.0015	−0.0015	−0.0014	−0.0015	−0.0014	−0.0015	−0.0016	−0.0014
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	0.0003	0.0003	0.0005	−0.0003	0.0003	−0.0003	−0.0003	0.0002	−0.0003	0.0002	0.0004	0.0006
	(0.0012)	(0.0012)	(0.0012)	(0.0011)	(0.0012)	(0.0011)	(0.0011)	(0.0012)	(0.0011)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0007	−0.0006	−0.0008	4,548e−05	−0.0007	−9,931e−05	0.0001	−0.0006	0.0001	−0.0006	−0.0008	−0.0011
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy (<i>t2</i>)	−0.0080**	−0.0107**	−0.0075**	−0.0098**	−0.0054**	−0.0098**	−0.0095**	−0.0118**	−0.0095**	−0.0117**	−0.0120**	−0.0124**
	(0.0013)	(0.0010)	(0.0017)	(0.0010)	(0.0016)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)
Treatment group dummy (<i>dT</i>)	0.0044**		0.0050**		0.0049**		0.0198**		0.0198**		0.0147**	
	(0.0012)		(0.0014)		(0.0014)		(0.0027)		(0.0027)		(0.0036)	
Difference-in-difference estimator (<i>t2</i> × <i>dT</i>)	−0.0081**		−0.0066**		−0.0098**		−0.0230**		−0.0230**		−0.0057**	
	(0.0016)		(0.0019)		(0.0018)		(0.0021)		(0.0021)		(0.0028)	
Treatment intensity (<i>Tint</i>)		0.1857**		0.0088**		0.2743**		0.0094**		0.0097**		−0.2899**
		(0.0298)		(0.0010)		(0.0348)		(0.0025)		(0.0025)		(0.1387)
Post-policy period dummy * Treatment intensity (<i>t2</i> × <i>Tint</i>)		−0.298**		−0.0138**		−0.4981**		−0.0142**		−0.0145**		0.4269**
		(0.0400)		(0.0011)		(0.0418)		(0.0030)		(0.0030)		(0.1418)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.3730	0.3813	0.3703	0.4034	0.3738	0.4013	0.3981	0.3727	0.3981	0.3730	0.3710	0.3691

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D3. (continued)

	4. ERDF Urban									
	All expenditure categories		4.1. Productive environment		4.2. Human resources		4.3. Basic infrastructure		4.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0220	0.02143	0.0223	0.0219	0.0220	0.0222	0.0221	0.0216	0.0223	0.0213
	(0.0174)	(0.0174)	(0.0174)	(0.0174)	(0.0174)	(0.0174)	(0.0174)	(0.0174)	(0.0174)	(0.0174)
Initial per capita GDP	−0.0070**	−0.0072**	−0.0071**	−0.0071**	−0.0070**	−0.0071**	−0.0071**	−0.0072**	−0.0071**	−0.0072**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.0972	0.1030	0.0987	0.1077	0.0985	0.1045	0.0963	0.1061	0.0994	0.1012
	(0.0664)	(0.0663)	(0.0665)	(0.0663)	(0.0664)	(0.0664)	(0.0664)	(0.0662)	(0.0665)	(0.0663)
Agriculture	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.00162**	−0.0016**	−0.0016**	−0.0016**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Capital dummy	0.0147**	0.0148**	0.0146**	0.0148**	0.0147**	0.0148**	0.0147**	0.0148**	0.0147**	0.0148**
	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)
Costal dummy	−0.0005	−0.0005	−0.0005	−0.0006	−0.0005	−0.0005	−0.0005	−0.0005	−0.0005	−0.0005
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0015	−0.0015	−0.0015	−0.0015	−0.0015	−0.0015	−0.0015	−0.0015	−0.0015	−0.0015
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0010	−0.0009	−0.0009	−0.0009	−0.0010	−0.0009	−0.0009	−0.0009	−0.0010	−0.0009
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy ($t2$)	−0.0118**	−0.0121**	−0.0119**	−0.0124**	−0.0119**	−0.0122**	−0.0118**	−0.0122**	−0.0119**	−0.0121**
	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)
Treatment group dummy (dT)	0.0042*		0.0048*		0.0047*		0.0050**		0.0044*	
	(0.0024)		(0.0026)		(0.0025)		(0.0024)		(0.0025)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0086**		−0.0079**		−0.0090**		−0.0093**		−0.0088**	
	(0.0033)		(0.0036)		(0.0035)		(0.0034)		(0.0034)	
Treatment intensity ($Tint$)		0.1847**		0.4745		1,0130		0.2517**		3,0600**
		(0.0857)		(0.4173)		(0.6370)		(0.1169)		(1,4100)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.2708**		−0.0856		−0.9709		−0.4354**		−4,3670**
		(0.1204)		(0.5867)		(0.8945)		(0.1644)		(1,9820)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.3684	0.3681	0.3679	0.3672	0.3683	0.3673	0.3686	0.3685	0.3683	0.3681

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D3. (continued)

	5. ERDF INTERREG IIIA									
	All expenditure categories		5.1. Productive environment		5.2. Human resources		5.3. Basic infrastructure		5.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0226	0.0235	0.0226	0.0232	0.0225	0.0224	0.0226	0.0228	0.0226	0.0248
	(0.0174)	(0.0174)	(0.0174)	(0.0175)	(0.0175)	(0.0175)	(0.0174)	(0.017)	(0.0174)	(0.0174)
Initial per capita GDP	−0.0071**	−0.0073**	−0.0071**	−0.0071**	−0.0071**	−0.0071**	−0.0071**	−0.0074**	−0.0071**	−0.0071**
	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0016)
Population growth	0.1172*	0.1291**	0.1172*	0.1185*	0.1158*	0.1209*	0.1172*	0.1376**	0.1172*	0.1192*
	(0.0661)	(0.0659)	(0.0661)	(0.0661)	(0.0661)	(0.0661)	(0.0661)	(0.0655)	(0.0661)	(0.0659)
Agriculture	−0.0016**	−0.0015**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.0016**	−0.00144**	−0.0016**	−0.0015**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**	0.0010**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**	0.0007**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)
Capital dummy	0.0148**	0.0145**	0.0148**	0.0147**	0.0148**	0.0147**	0.0148**	0.0145**	0.0148**	0.0146**
	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)	(0.0023)
Costal dummy	−0.0005	−0.0005	−0.0005	−0.0005	−0.0005	−0.0005	−0.0005	−0.0005	−0.0005	−0.0005
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Port dummy	−0.0015	−0.0015	−0.0014	−0.0014	−0.0015	−0.0014	−0.0015	−0.0015	−0.0015	−0.0014
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Urban dummy	0.0003	0.0001	0.0004	0.0003	0.0004	0.0003	0.0004	−1,087e−05	0.0004	0.0003
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Rural dummy	−0.0009	−0.0007	−0.0009	−0.0009	−0.0009	−0.0009	−0.0009	−0.0005	−0.0009	−0.0008
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Post-policy period dummy ($t2$)	−0.0118**	−0.0115**	−0.0118**	−0.0122**	−0.0121**	−0.0118**	−0.0118**	−0.0113**	−0.0118**	−0.0117**
	(0.0011)	(0.0010)	(0.0011)	(0.0010)	(0.0011)	(0.0010)	(0.0011)	(0.0010)	(0.0011)	(0.0010)
Treatment group dummy (dT)	0.0009		0.0009		0.0007		0.0009		0.0009	
	(0.0013)		(0.0013)		(0.0013)		(0.0013)		(0.0013)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0019		−0.0019		−0.0011		−0.0019		−0.0019	
	(0.0017)		(0.0017)		(0.0017)		(0.0017)		(0.0017)	
Treatment intensity ($Tint$)		0.0448**		0.0123		0.3705		0.1304**		0.4091**
		(0.0148)		(0.0328)		(0.2399)		(0.0275)		(0.1847)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.1038**		−0.0609		−0.8494**		−0.2795**		−0.9467**
		(0.0199)		(0.0448)		(0.3267)		(0.0365)		(0.2454)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.3670	0.3737	0.3670	0.3673	0.3667	0.3684	0.3670	0.3815	0.3670	0.3705

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D4. Estimations for 2007–2014 post-policy period

	All funds and all expenditure categories		1. ERDF Objective 1									
			All expenditure categories		1.1. Productive environment		1.2. Human resources		1.3. Basic infrastructure		1.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0280*	0.0216	0.0025	0.0180	0.0031	0.0132	0.0139	0.0283*	0.0042	0.0228	0.0107	0.0359**
	(0.0162)	(0.0156)	(0.0166)	(0.0156)	(0.0166)	(0.0161)	(0.0164)	(0.0159)	(0.0166)	(0.0155)	(0.0160)	(0.0154)
Initial per capita GDP	−0.0042**	−0.0041**	−0.0033**	−0.0046**	−0.0033**	−0.0043**	−0.0047**	−0.0041**	−0.0034**	−0.0045**	−0.0034**	−0.0048**
	(0.0015)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.00141)	(0.0014)	(0.0014)
Population growth	0.0175	0.0581	0.0034	0.0564	0.0021	0.0129	0.0082	0.0014	0.0007	0.0677	0.0050	0.0059
	(0.0608)	(0.0589)	(0.0602)	(0.0586)	(0.0601)	(0.0597)	(0.0605)	(0.0595)	(0.0603)	(0.0584)	(0.0594)	(0.0583)
Agriculture	−0.0009**	−0.0006**	−0.0008**	−0.0007**	−0.0008**	−0.0009**	−0.0009**	−0.0008**	−0.0008**	−0.0006**	−0.0007**	−0.0006**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0005**	0.0005**	0.0006**	0.0006**	0.0006**	0.0007**	0.0007**	0.0005**	0.0006**	0.0006**	0.0006**	0.0005**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0003**	0.0004**	0.0005**	0.0005**	0.0005**	0.0005**	0.0006**	0.0003**	0.0005**	0.0004**	0.0004**	0.0003**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0110**	0.0109**	0.0106**	0.0111**	0.0106**	0.0111**	0.0112**	0.0112**	0.0107**	0.0110**	0.0104**	0.0110**
	(0.0021)	(0.0020)	(0.0020)	(0.0020)	(0.0020)	(0.0020)	(0.0020)	(0.0021)	(0.0020)	(0.0020)	(0.0020)	(0.0020)
Costal dummy	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0002	0.0003	0.0003	0.0002	0.0002
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Port dummy	−0.0024**	−0.0024**	−0.0025**	−0.0024**	−0.0025**	−0.0024**	−0.0024**	−0.0023**	−0.0025**	−0.0024**	−0.0025**	−0.0023**
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Urban dummy	0.0008	0.0001	0.0001	0.0001	0.0001	0.0004	0.0004	0.0007	0.0001	0.0002	0.0001	0.0003
	(0.0011)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0011)	(0.0011)	(0.0010)	(0.0010)	(0.0010)	(0.0010)
Rural dummy	−0.0002	0.0006	0.0007	0.0006	0.0007	0.0005	0.0004	4,159e−05	0.0007	0.0006	0.0007	0.0004
	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)
Post-policy period dummy (<i>t2</i>)	−0.0117**	−0.0133**	−0.0123**	−0.0136**	−0.0124**	−0.0138**	−0.0142**	−0.0153**	−0.0125**	−0.0140**	−0.0123**	−0.0145**
	(0.0017)	(0.0009)	(0.0010)	(0.0009)	(0.00010)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0008)
Treatment group dummy (<i>dT</i>)	0.0037**		0.0103**		0.0101**		0.0090**		0.0098**		0.0107**	
	(0.0014)		(0.0014)		(0.0014)		(0.0017)		(0.0014)		(0.0014)	
Difference-in-difference estimator (<i>t2</i> × <i>dT</i>)	−0.0058**		−0.0150**		−0.0149**		−0.0142**		−0.0146**		−0.0172**	
	(0.0018)		(0.0016)		(0.0016)		(0.0019)		(0.0016)		(0.0016)	
Treatment intensity (<i>Tint</i>)		0.0058**		0.0079**		0.0216**		0.1480**		0.0104**		0.2916**
		(0.0007)		(0.0009)		(0.0030)		(0.0276)		(0.0011)		(0.0335)
Post-policy period dummy * Treatment intensity (<i>t2</i> × <i>Tint</i>)		−0.0096**		−0.0130**		−0.0338**		−0.2349**		−0.0177**		−0.4940**
		(0.0008)		(0.0010)		(0.0036)		(0.0372)		(0.0014)		(0.0410)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.4078	0.4367	0.4268	0.4426	0.4264	0.4270	0.4181	0.4152	0.4254	0.4429	0.4319	0.4388

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D4. (continued)

	Productive environment (all funds ERDF+CF)		2. ERDF Objective 2									
			All expenditure categories		2.1. Productive environment		2.2. Human resources		2.3. Basic infrastructure		2.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0275*	0.0168	0.0263*	0.0295*	0.0266*	0.0303*	0.0329**	0.0329**	0.0289*	0.0306*	0.0280*	0.0316**
	(0.0162)	(0.0162)	(0.0159)	(0.0158)	(0.0159)	(0.0158)	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0158)
Initial per capita GDP	−0.0042**	−0.0044**	−0.0037**	−0.0038**	−0.0037**	−0.0039**	−0.0040**	−0.0040**	−0.0038**	−0.0039**	−0.0038**	−0.0039**
	(0.0015)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0015)	(0.0015)	(0.0014)	(0.0015)	(0.0014)	(0.0014)
Population growth	0.0185	0.0111	0.0163	0.0091	0.0152	0.0093	0.0027	0.0020	0.0064	0.0012	0.0147	0.0074
	(0.0608)	(0.0606)	(0.0598)	(0.0604)	(0.0598)	(0.0602)	(0.0601)	(0.0601)	(0.0599)	(0.0603)	(0.0602)	(0.0600)
Agriculture	−0.0009**	−0.0009**	−0.0008**	−0.0009**	−0.0008**	−0.0008**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0005**	0.0006**	0.0005**	0.0004**	0.0005**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0005**	0.0004**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0003**	0.0005**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0110**	0.0111**	0.0109**	0.0109**	0.0109**	0.0109**	0.0111**	0.0110**	0.0109**	0.0110**	0.0110**	0.0108**
	(0.0021)	(0.0020)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)
Costal dummy	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	0.0002	0.0002	0.0001
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Port dummy	−0.0024**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0022**
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Urban dummy	0.0009	0.0005	0.0006	0.0007	0.0006	0.0006	0.0009	0.0009	0.0007	0.0008	0.0007	0.0009
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Rural dummy	−0.0002	0.0003	4,195e−05	−1,865e−05	2,880e−05	2,298e−05	−0.0003	−0.0002	−0.0001	−0.0002	−9,036e−05	−0.0001
	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.00010)	(0.0010)	(0.0010)
Post-policy period dummy (<i>t2</i>)	−0.0116**	−0.0132**	−0.0196**	−0.0182**	−0.0196**	−0.0182**	−0.0161**	−0.0161**	−0.0184**	−0.0170**	−0.0179**	−0.0169**
	(0.0017)	(0.0009)	(0.0011)	(0.0010)	(0.0011)	(0.0010)	(0.0009)	(0.0009)	(0.0011)	(0.0010)	(0.0011)	(0.0009)
Treatment group dummy (<i>dT</i>)	0.0039**		−0.0043**		−0.0042**		−0.0003		−0.0024**		−0.0032**	
	(0.0014)		(0.0012)		(0.0012)		(0.0016)		(0.0012)		(0.0012)	
Difference-in-difference estimator (<i>t2</i> × <i>dT</i>)	−0.0059**		0.0071**		0.0070**		−0.0007		0.0051**		0.0042**	
	(0.0018)		(0.0015)		(0.0015)		(0.0020)		(0.0015)		(0.0015)	
Treatment intensity (<i>Tint</i>)		0.0190**		−0.0327**		−0.0536**		0.004		−0.0328		−0.6386**
		(0.0030)		(0.0092)		(0.0131)		(0.1927)		(0.0227)		(0.2180)
Post-policy period dummy * Treatment intensity (<i>t2</i> × <i>Tint</i>)		−0.0307**		0.0520**		0.0830**		−0.1591		0.0646**		0.8045**
		(0.0036)		(0.0123)		(0.0175)		(0.2486)		(0.0306)		(0.2993)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.4079	0.4230	0.4108	0.4098	0.4106	0.4110	0.4054	0.4054	0.4080	0.4063	0.4074	0.4075

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D4. (continued)

	Human resources (all funds ERDF+CF)		Basic infrastructure (all funds ERDF+CF)		Miscellaneous (all funds ERDF+CF)		3. Cohesion fund					
							All expenditure		3.3. Basic		3.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0294*	0.0282*	0.0265	0.0251	0.0313**	0.0349**	0.0358**	0.0313**	0.0358**	0.0313**	0.0333**	0.0334**
	(0.0160)	(0.0159)	(0.0161)	(0.0155)	(0.0159)	(0.0155)	(0.0156)	(0.0158)	(0.0156)	(0.0158)	(0.0158)	(0.0158)
Initial per capita GDP	−0.0042**	−0.0041**	−0.0042**	−0.0039**	−0.0043**	−0.0045**	−0.0032**	−0.0035**	−0.0032**	−0.0035**	−0.0039**	−0.0043**
	(0.0014)	(0.0014)	(0.0015)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0015)	(0.0014)
Population growth	0.00533	−4,083e−05	0.0178	0.0658	0.0186	0.0156	0.0451	0.0184	0.0451	0.0187	0.0025	0.0143
	(0.0604)	(0.0594)	(0.0605)	(0.0588)	(0.0607)	(0.0589)	(0.0593)	(0.0599)	(0.0593)	(0.0599)	(0.0598)	(0.0599)
Agriculture	−0.0009**	−0.0008**	−0.0009**	−0.0006**	−0.00082**	−0.0006**	−0.0004**	−0.0007**	−0.0004**	−0.0007**	−0.0008**	−0.0010**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0005**	0.0005**	0.0005**	0.0005**	0.0004**	0.0004**	0.0003**	0.0004**	0.0003**	0.0004**	0.0004**	0.0004**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0003**	0.0003**	0.0003**	0.0004**	0.0003**	0.0003**	0.0002	0.0003*	0.0002	0.0003*	0.0003*	0.0003**
	(0.00014)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)
Capital dummy	0.0110**	0.0112**	0.0110**	0.0108**	0.0109**	0.0109**	0.0106**	0.0107**	0.0106**	0.0107**	0.0103**	0.0112**
	(0.0021)	(0.0021)	(0.0021)	(0.0020)	(0.0021)	(0.0020)	(0.0020)	(0.0021)	(0.0020)	(0.0021)	(0.0021)	(0.0021)
Costal dummy	0.0002	0.0002	0.0003	0.0003	0.0002	0.0002	0.0003	0.0002	0.0003	0.0002	0.0003	0.0002
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Port dummy	−0.0023**	−0.0023**	−0.0024**	−0.0024**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0024**	−0.0023**
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Urban dummy	0.0007	0.0007	0.0008	0.0001	0.0008	0.0003	0.0003	0.0006	0.0003	0.0006	0.0008	0.0010
	(0.0011)	(0.0011)	(0.0011)	(0.0010)	(0.0011)	(0.0010)	(0.0010)	(0.0011)	(0.0010)	(0.0011)	(0.0011)	(0.0011)
Rural dummy	−0.0001	6,514e−05	−0.0001	0.0006	−7,051e−05	0.0004	0.0006	3,089e−05	0.0006	3,494e−05	−0.0001	−0.0004
	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)
Post-policy period dummy (<i>t2</i>)	−0.0131**	−0.0149**	−0.0111**	−0.0140**	−0.0106**	−0.0141**	−0.0140**	−0.0156**	−0.0140**	−0.0156**	−0.0159**	−0.0163**
	(0.0012)	(0.0009)	(0.0016)	(0.0009)	(0.0015)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)
Treatment group dummy (<i>dT</i>)	0.0029**		0.0045**		0.0041**		0.0161**		0.0161**		0.0125**	
	(0.0011)		(0.0013)		(0.0013)		(0.0024)		(0.0024)		(0.0033)	
Difference-in-difference estimator (<i>t2</i> × <i>dT</i>)	−0.0058**		−0.0068**		−0.0078**		−0.0173**		−0.0173**		−0.0046*	
	(0.0015)		(0.0017)		(0.0017)		(0.0019)		(0.0019)		(0.0026)	
Treatment intensity (<i>Tint</i>)		0.1479**		0.0070**		0.2281**		0.0067**		0.0069**		−0.2668**
		(0.0271)		(0.0009)		(0.0317)		(0.0022)		(0.0022)		(0.1257)
Post-policy period dummy * Treatment intensity (<i>t2</i> × <i>Tint</i>)		−0.240**		−0.0119**		−0.3982**		−0.0124**		−0.0127**		0.3901**
		(0.0364)		(0.0010)		(0.0381)		(0.0027)		(0.0027)		(0.1283)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R ²	0.4089	0.4160	0.4092	0.4360	0.4105	0.4307	0.4264	0.4103	0.4264	0.4105	0.4088	0.4076

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D4. (continued)

	4. ERDF Urban									
	All expenditure categories		4.1. Productive environment		4.2. Human resources		4.3. Basic infrastructure		4.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0320**	0.0315**	0.0322**	0.0320**	0.0319**	0.0322**	0.0321**	0.0317**	0.0322**	0.0314**
	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0158)	(0.0159)
Initial per capita GDP	−0.0040**	−0.0041**	−0.0040**	−0.0040**	−0.0040**	−0.0041**	−0.0040**	−0.0041**	−0.0041**	−0.0041**
	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)
Population growth	0.0200	0.0153	0.0192	0.0107	0.0185	0.0128	0.0195	0.0123	0.0180	0.0164
	(0.0602)	(0.0602)	(0.0602)	(0.0601)	(0.0602)	(0.0602)	(0.0602)	(0.0601)	(0.0602)	(0.0602)
Agriculture	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0110**	0.0111**	0.0109**	0.0111**	0.0110**	0.0111**	0.0110**	0.0110**	0.0111**	0.0111**
	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)
Costal dummy	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.00016
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Port dummy	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**	−0.0023**
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Urban dummy	0.0009	0.0008	0.0008	0.0009	0.0009	0.0008	0.0009	0.0008	0.0009	0.0008
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Rural dummy	−0.0003	−0.0002	−0.0002	−0.0002	−0.0002	−0.0002	−0.0002	−0.0002	−0.0002	−0.0002
	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)
Post-policy period dummy ($t2$)	−0.0157**	−0.0160**	−0.0158**	−0.0162**	−0.0158**	−0.0161**	−0.0157**	−0.0161**	−0.0157**	−0.0160**
	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)
Treatment group dummy (dT)	0.0040*		0.0047**		0.0044*		0.0044**		0.0042*	
	(0.0022)		(0.0024)		(0.0023)		(0.0022)		(0.0022)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0083**		−0.0080**		−0.0086**		−0.0084**		−0.0086**	
	(0.0030)		(0.0033)		(0.0032)		(0.0031)		(0.0031)	
Treatment intensity ($Tint$)		0.1765**		0.4958		0.9377		0.2384**		2,8630**
		(0.0778)		(0.3785)		(0.5778)		(0.1061)		(1,2790)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.2290**		−0.1530		−1,0530		−0.3520**		−3,9630**
		(0.1092)		(0.5323)		(0.8114)		(0.1492)		(1,7980)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.4071	0.4066	0.4067	0.4059	0.4070	0.4059	0.4071	0.4068	0.4071	0.4066

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table D4. (continued)

	5. ERDF INTERREG IIIA									
	All expenditure categories		5.1. Productive environment		5.2. Human resources		5.3. Basic infrastructure		5.4. Miscellaneous	
	Td	Tint	Td	Tint	Td	Tint	Td	Tint	Td	Tint
const	0.0326**	0.0331**	0.0326**	0.0331**	0.0325**	0.0325**	0.0326**	0.0323**	0.0326**	0.0342**
	(0.0159)	(0.0158)	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0159)	(0.0157)	(0.0159)	(0.0158)
Initial per capita GDP	−0.0040**	−0.0042**	−0.0040**	−0.0041**	−0.0040**	−0.0040**	−0.0040**	−0.0044**	−0.0040**	−0.0041**
	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0015)	(0.0015)	(0.0014)	(0.0014)	(0.0014)	(0.0014)
Population growth	0.0012	0.0137	0.0012	0.0007	0.0026	0.0033	0.0012	0.0231	0.0012	0.0060
	(0.0600)	(0.0598)	(0.0600)	(0.0600)	(0.0600)	(0.0600)	(0.0600)	(0.0597)	(0.0600)	(0.0598)
Agriculture	−0.0009**	−0.0008**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0009**	−0.0008**	−0.0009**	−0.0008**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Industry	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**	0.0004**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Service	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**	0.0003**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Capital dummy	0.0110**	0.0109**	0.0110**	0.0110**	0.0111**	0.0110**	0.0110**	0.0108**	0.0110**	0.0109**
	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.0021)	(0.002)
Costal dummy	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Port dummy	−0.0022**	−0.0023**	−0.0022**	−0.0023**	−0.0023**	−0.0023**	−0.0022**	−0.0023**	−0.0022**	−0.0023**
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Urban dummy	0.0007	0.0006	0.0007	0.0007	0.0008	0.0007	0.0007	0.0005	0.0007	0.0007
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0010)
Rural dummy	−0.0002	−6,815e−05	−0.0002	−0.0002	−0.0002	−0.0002	−0.0002	6,539e−05	−0.0002	−0.0001
	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)
Post-policy period dummy ($t2$)	−0.0158**	−0.0155**	−0.0158**	−0.0161**	−0.0160**	−0.0158**	−0.0158**	−0.0154**	−0.0158**	−0.0156**
	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)	(0.0010)	(0.0009)
Treatment group dummy (dT)	0.0003		0.0003		0.0003		0.0003		0.0002	
	(0.0012)		(0.0012)		(0.0012)		(0.0012)		(0.0012)	
Difference-in-difference estimator ($t2 \times dT$)	−0.0015		−0.0015		−0.0008		−0.0015		−0.0015	
	(0.0015)		(0.0015)		(0.0016)		(0.0015)		(0.0015)	
Treatment intensity ($Tint$)		0.0334**		0.0074		0.2565		0.0980**		0.3276*
		(0.0134)		(0.0295)		(0.2176)		(0.0250)		(0.1674)
Post-policy period dummy * Treatment intensity ($t2 \times Tint$)		−0.0823**		−0.0518		−0.6390**		−0.2181**		−0.8338**
		(0.0181)		(0.0406)		(0.2966)		(0.0332)		(0.2227)
n	2502	2502	2502	2502	2502	2502	2502	2502	2502	2502
R²	0.4055	0.4104	0.4055	0.4058	0.4053	0.4064	0.4055	0.4156	0.4056	0.4087

Table reports OLS estimates. All regressions include country dummies but not shown for reasons of space. Td – estimates with treatment dummy, Tint – with treatment intensity. Robust standard errors are reported in parentheses. * indicates significance at the 10 percent level, ** indicates significance at the 5 percent level

Table E1. Estimated DiD parameters for alternative post-policy periods

Fund / expenditure category	Two alternative post-policy periods			
	2009–2014		2010–2014	
	Td	Tint	Td	Tint
All funds and all exp. cat.	–0.006* (0.002)	–0.009* (0.001)	–0.006* (0.002)	–0.011* (0.001)
1. ERDF Objective 1 (all exp. cat.)	–0.016* (0.002)	–0.011* (0.001)	–0.017* (0.010)	–0.014* (0.001)
<i>1.1. Productive environment</i>	–0.015* (0.002)	–0.027* (0.004)	–0.017* (0.002)	–0.035* (0.004)
<i>1.2. Human resources</i>	–0.021* (0.002)	–0.214* (0.040)	–0.018* (0.002)	–0.262* (0.039)
<i>1.3. Basic infrastructure</i>	–0.015* (0.002)	–0.015* (0.002)	–0.017* (0.002)	–0.019* (0.002)
<i>1.4. Miscellaneous</i>	–0.016* (0.002)	–0.501* (0.045)	–0.019* (0.002)	–0.551* (0.043)
2. ERDF Objective 2 (all exp. cat.)	0.008* (0.002)	0.045* (0.013)	0.008* (0.002)	0.052* (0.013)
<i>2.1. Productive environment</i>	0.007* (0.002)	0.073* (0.019)	0.008* (0.002)	0.084* (0.019)
<i>2.2. Human resources</i>	–0.005 (0.002)	–0.636*** (0.269)	–0.003 (0.002)	–0.246 (0.262)
<i>2.3. Basic infrastructure</i>	0.006* (0.002)	0.063** (0.033)	0.006* (0.002)	0.062** (0.033)
<i>2.4. Miscellaneous</i>	0.004* (0.002)	0.692* (0.325)	0.005* (0.002)	0.741* (0.315)
3. Cohesion fund (all exp. cat.)	–0.018* (0.002)	–0.012* (0.003)	–0.020* (0.002)	–0.013* (0.003)
<i>3.3. Basic infrastructure</i>	–0.018* (0.002)	–0.013* (0.003)	–0.020* (0.002)	–0.014* (0.003)
<i>3.4. Miscellaneous</i>	0.001 (0.003)	0.200 (0.140)	–0.006*** (0.003)	0.409* (0.135)
4. Urban (all exp. cat.)	–0.005*** (0.003)	–0.117 (0.119)	–0.009* (0.003)	–0.250** (0.115)
<i>4.1. Productive environment</i>	–0.003 (0.004)	0.342 (0.577)	–0.008** (0.004)	–0.120 (0.560)
<i>4.2. Human resources</i>	–0.006* (0.004)	–0.541 (0.880)	–0.009* (0.004)	–1.012 (0.853)
<i>4.3. Basic infrastructure</i>	–0.006*** (0.003)	–0.211 (0.162)	–0.009* (0.003)	–0.394** (0.157)
<i>4.4. Miscellaneous</i>	–0.005*** (0.003)	–2.262 (1.951)	–0.009* (0.003)	–4.165** (1.891)
5. ERDF INTERREG IIIA (all exp. cat.)	–0.003** (0.002)	–0.059* (0.020)	–0.002 (0.002)	–0.093* (0.019)
<i>5.1. Productive environment</i>	–0.003** (0.002)	0.001 (0.044)	–0.002 (0.002)	–0.057 (0.043)
<i>5.2. Human resources</i>	–0.002*** (0.002)	–0.467*** (0.322)	–0.001 (0.002)	–0.744** (0.312)
<i>5.3. Basic infrastructure</i>	–0.003** (0.002)	–0.184* (0.036)	–0.002 (0.002)	–0.249* (0.035)
<i>5.4. Miscellaneous</i>	–0.003** (0.002)	–0.381** (0.242)	–0.002 (0.002)	–0.893 (0.234)
Productive environment (all funds ERDF+CF)	–0.006* (0.002)	–0.024* (0.004)	–0.007* (0.002)	–0.032* (0.004)
Human resources (all funds ERDF+CF)	–0.009* (0.002)	–0.227* (0.040)	–0.007* (0.002)	–0.269* (0.038)
Basic infrastructure (all funds ERDF+CF)	–0.006* (0.002)	–0.010* (0.001)	–0.007* (0.002)	–0.013* (0.001)
Miscellaneous (all funds ERDF+CF)	–0.009* (0.002)	–0.409* (0.042)	–0.009* (0.002)	–0.448* (0.040)

Notes: Td – estimates with treatment dummy, Tint – with treatment intensity. exp. cat. – expenditure category. Upper number is estimated parameter on DiD, bottom reports robust standard error. ***, ** and * indicate statistically significant estimated DiD at 10%, 5% and 1% levels, respectively. Table reports estimated parameter on DiD retrieved from estimations available upon request from the corresponding author. Estimations include full sample, but are performed over two alternative (2009–2014 and 2010–2014) post-policy periods that compared with general estimations do not cover years just before and during the crisis and starts after the year when old (n+2) and new (n+3) EU MS could spend the last allocation available. Encompassing longer period, i.e. including year 2015 or 2016 could at some extent cover the effects of the allocations of the next programming period (2007–2013).

Source: composed by authors.

Table E2. Estimated DiD parameters for the sample without PIIGS and the Baltics

Fund / expenditure category	Number of regions in Control group	Number of regions in Treatment group	Estimated DiD parameters for alternative post-policy period							
			2007–2011		2007–2012		2007–2013		2007–2014	
			Td	Tint	Td	Tint	Td	Tint	Td	Tint
All funds and all exp. cat.	224	752	–0.003 (0.003)	–0.005* (0.001)	–0.004 (0.003)	–0.007* (0.001)	–0.004 (0.003)	–0.007* (0.001)	–0.004 (0.003)	–0.007* (0.001)
1. ERDF Obj. 1 (all exp. cat.)	731	245	–0.009* (0.003)	–0.006* (0.001)	–0.011* (0.003)	–0.009* (0.001)	–0.012 (0.025)	–0.010* (0.001)	–0.010* (0.003)	–0.009* (0.001)
1.1. Productive environment	732	244	–0.009* (0.003)	–0.015* (0.006)	–0.011* (0.003)	–0.021* (0.005)	–0.012 (0.003)	–0.024* (0.006)	–0.010* (0.003)	–0.024* (0.006)
1.2. Human resources	854	122	–0.013* (0.003)	–0.133** (0.056)	–0.015* (0.003)	–0.154* (0.054)	–0.014* (0.003)	–0.199* (0.062)	–0.010* (0.003)	–0.166* (0.054)
1.3. Basic infrastructure	737	239	–0.009* (0.003)	–0.009* (0.001)	–0.011* (0.003)	–0.011* (0.003)	–0.013* (0.003)	–0.014* (0.003)	–0.011* (0.003)	–0.013* (0.002)
1.4. Miscellaneous	767	209	–0.010* (0.003)	–0.306* (0.064)	–0.012* (0.003)	–0.380* (0.062)	–0.014* (0.003)	–0.431* (0.068)	–0.012* (0.003)	–0.353* (0.064)
2. ERDF Obj. 2 (all exp. cat.)	522	454	0.004 (0.003)	0.026 (0.019)	0.006** (0.003)	0.036*** (0.018)	0.006*** (0.003)	0.034 (0.021)	0.005 (0.003)	0.037*** (0.019)
2.1. Productive environment	524	452	0.004 (0.003)	0.048 (0.027)	0.006** (0.003)	0.055** (0.027)	0.006** (0.003)	0.060** (0.029)	0.005 (0.003)	0.054*** (0.028)
2.2. Human resources	788	188	–0.003 (0.003)	–0.494 (0.375)	–0.003 (0.003)	–0.391 (0.383)	–0.002 (0.003)	–0.227 (0.425)	–0.001 (0.003)	–0.104 (0.400)
2.3. Basic infrastructure	582	394	0.003 (0.003)	0.031 (0.047)	0.005 (0.003)	0.057 (0.047)	0.005 (0.003)	0.040 (0.053)	0.003 (0.003)	0.044 (0.051)
2.4. Miscellaneous	608	368	0.001 (0.003)	0.338 (0.461)	0.003 (0.003)	0.629 (0.465)	0.003 (0.003)	0.469 (0.514)	0.003 (0.003)	0.541 (0.491)
3. Cohesion fund (all exp. cat.)	868	108	–0.009* (0.003)	–0.005 (0.004)	–0.016* (0.003)	–0.011* (0.004)	–0.016* (0.003)	–0.010** (0.005)	–0.011* (0.003)	–0.009 (0.005)
3.3. Basic infrastructure	868	108	–0.009* (0.003)	–0.006 (0.005)	–0.016* (0.003)	–0.012* (0.004)	–0.016* (0.003)	–0.010** (0.005)	–0.011* (0.003)	–0.009 (0.005)
3.4. Miscellaneous	894	82	0.003 (0.004)	0.181 (0.198)	–0.001 (0.004)	0.090 (0.203)	–0.004 (0.004)	0.306 (0.209)	–0.004 (0.005)	0.276 (0.220)
4. Urban (all exp. cat.)	921	55	–0.003 (0.004)	–0.062 (0.163)	–0.004 (0.004)	–0.091 (0.158)	–0.006 (0.004)	–0.178 (0.175)	–0.005 (0.004)	–0.151 (0.156)
4.1. Productive environment	931	45	–0.001 (0.006)	0.132 (0.794)	–0.003 (0.005)	0.319 (0.768)	–0.005 (0.006)	–0.057 (0.866)	–0.005 (0.004)	–0.105 (0.763)
4.2. Human resources	925	51	–0.003 (0.004)	–0.406 (1.233)	–0.005 (0.005)	–0.314 (1.177)	–0.006 (0.005)	–0.644 (1.325)	–0.006 (0.004)	–0.730 (1.176)
4.3. Basic infrastructure	925	51	–0.003 (0.004)	–0.108 (0.229)	–0.004 (0.005)	–0.174 (0.217)	–0.006 (0.005)	–0.300 (0.247)	–0.006 (0.004)	–0.249 (0.217)
4.4. Miscellaneous	928	48	–0.003 (0.004)	–1.414 (2.769)	–0.004 (0.004)	–1.640 (2.656)	–0.006 (0.005)	–3.080 (2.994)	–0.006 (0.005)	–2.804 (2.713)
5. ERDF INTERREG IIIA (all exp. cat.)	672	304	–0.001 (0.003)	–0.027 (0.029)	–0.003 (0.003)	–0.053*** (0.028)	–0.001 (0.003)	–0.074** (0.030)	–0.001 (0.003)	–0.059** (0.028)
5.1. Productive environment	672	304	–0.001 (0.003)	0.016 (0.063)	–0.003 (0.003)	–0.015 (0.062)	–0.001 (0.003)	–0.040 (0.069)	–0.001 (0.003)	–0.037 (0.065)
5.2. Human resources	676	300	–0.001 (0.003)	–0.222 (0.462)	–0.003 (0.003)	–0.431 (0.458)	–0.001 (0.003)	–0.607 (0.503)	–0.001 (0.003)	–0.415 (0.470)
5.3. Basic infrastructure	672	304	–0.001 (0.003)	–0.099*** (0.050)	–0.003 (0.003)	–0.157* (0.051)	–0.001 (0.003)	–0.192* (0.057)	–0.001 (0.003)	–0.143* (0.053)
5.4. Miscellaneous	928	48	–0.001 (0.003)	–0.112 (0.344)	–0.003 (0.003)	–0.417 (0.346)	–0.001 (0.003)	–0.650 (0.380)	–0.001 (0.003)	–0.568 (0.365)
Productive environment (all funds ERDF+CF)	226	750	–0.003 (0.003)	–0.013** (0.006)	–0.004 (0.003)	–0.020* (0.006)	–0.005 (0.003)	–0.023* (0.006)	–0.004 (0.003)	–0.021* (0.007)
Human resources (all funds ERDF+CF)	448	528	–0.005*** (0.003)	–0.140* (0.055)	–0.006** (0.003)	–0.172* (0.057)	–0.006 (0.003)	–0.207* (0.062)	–0.004 (0.003)	–0.172* (0.060)
Basic infrastructure (all funds ERDF+CF)	265	711	–0.004 (0.003)	–0.006* (0.002)	–0.004 (0.003)	–0.009* (0.001)	–0.005 (0.003)	–0.009* (0.002)	–0.005 (0.003)	–0.008* (0.002)
Miscellaneous (all funds ERDF+CF)	301	675	–0.005*** (0.003)	–0.235* (0.060)	–0.006** (0.003)	–0.333* (0.059)	–0.007** (0.003)	–0.357* (0.062)	–0.006 (0.003)	–0.282* (0.065)

Notes: Td – estimates with treatment dummy, Tint – with treatment intensity. exp. cat. – expenditure category. Upper number is estimated parameter on DiD, bottom reports robust standard error. ***, ** and * indicate statistically significant estimated DiD at 10%, 5% and 1% levels, respectively. Table reports estimated parameter on DiD retrieved from estimations available upon request from the corresponding author. Estimations are performed on reduced sample (976 regions) over four general post-policy periods. Sample does not cover regions of Portugal, Italy, Ireland, Greece, Spain, Lithuania, Latvia and Estonia that were considered as affected by Great Financial Crisis the most.

Source: composed by authors.

Table E3. Estimated DiD parameters for the sample without least and most intensively funded regions

Fund / expenditure category	Number of regions in Control group	Number of regions in Treatment group	Estimated DiD parameters for alternative post-policy period							
			2007–2011		2007–2012		2007–2013		2007–2014	
			Td	Tint	Td	Tint	Td	Tint	Td	Tint
All funds and all exp. cat.	244	908	–0.004 (0.002)	–0.006* (0.001)	–0.005** (0.002)	–0.008* (0.001)	–0.005** (0.002)	–0.009* (0.001)	–0.005** (0.003)	–0.008* (0.001)
1. ERDF Obj. 1 (all exp. cat.)	789	363	–0.011* (0.002)	–0.007* (0.001)	–0.014* (0.002)	–0.011* (0.001)	–0.015 (0.021)	–0.012* (0.001)	–0.013* (0.002)	–0.011* (0.001)
<i>1.1. Productive environment</i>	790	362	–0.011* (0.002)	–0.018* (0.005)	–0.014* (0.002)	–0.026* (0.004)	–0.015 (0.002)	–0.030* (0.005)	–0.013* (0.002)	–0.029* (0.005)
<i>1.2. Human resources</i>	959	193	–0.016* (0.002)	–0.166* (0.047)	–0.018* (0.002)	–0.192* (0.045)	–0.018* (0.003)	–0.249* (0.051)	–0.012* (0.002)	–0.208* (0.045)
<i>1.3. Basic infrastructure</i>	794	358	–0.011* (0.002)	–0.011* (0.001)	–0.014* (0.002)	–0.014* (0.002)	–0.016* (0.003)	–0.018* (0.003)	–0.013* (0.003)	–0.016* (0.001)
<i>1.4. Miscellaneous</i>	830	322	–0.012* (0.002)	–0.382* (0.054)	–0.015* (0.002)	–0.475* (0.052)	–0.018* (0.003)	–0.539* (0.057)	–0.015* (0.003)	–0.441* (0.054)
2. ERDF Obj. 2 (all exp. cat.)	635	517	0.005** (0.002)	0.033** (0.016)	0.008* (0.002)	0.045* (0.015)	0.007* (0.003)	0.042** (0.018)	0.006** (0.003)	0.046* (0.016)
<i>2.1. Productive environment</i>	635	517	0.005** (0.002)	0.059* (0.023)	0.008* (0.002)	0.069* (0.023)	0.007* (0.003)	0.075* (0.024)	0.006** (0.003)	0.067* (0.024)
<i>2.2. Human resources</i>	955	197	–0.004*** (0.002)	–0.617*** (0.312)	–0.003 (0.002)	–0.489 (0.319)	–0.003 (0.003)	–0.284 (0.354)	–0.002 (0.003)	–0.130 (0.333)
<i>2.3. Basic infrastructure</i>	686	466	0.004*** (0.002)	0.038 (0.039)	0.006* (0.002)	0.071*** (0.039)	0.006** (0.003)	0.050 (0.044)	0.004 (0.003)	0.055 (0.042)
<i>2.4. Miscellaneous</i>	716	436	0.002 (0.002)	0.423 (0.384)	0.004*** (0.002)	0.787** (0.387)	0.004 (0.003)	0.586 (0.429)	0.003 (0.003)	0.676 (0.409)
3. Cohesion fund (all exp. cat.)	950	202	–0.011* (0.003)	–0.007*** (0.004)	–0.019* (0.002)	–0.014* (0.004)	–0.020* (0.003)	–0.012* (0.004)	–0.015* (0.003)	–0.011* (0.004)
<i>3.3. Basic infrastructure</i>	950	202	–0.011* (0.003)	–0.007*** (0.004)	–0.019* (0.002)	–0.015* (0.004)	–0.020* (0.003)	–0.013* (0.004)	–0.015* (0.003)	–0.011* (0.004)
<i>3.4. Miscellaneous</i>	1053	99	0.003 (0.004)	0.227 (0.165)	–0.002 (0.004)	0.113 (0.169)	–0.005 (0.004)	0.382** (0.175)	–0.004 (0.004)	0.345*** (0.183)
4. Urban (all exp. cat.)	1084	68	–0.003 (0.003)	–0.078 (0.136)	–0.005 (0.003)	–0.113 (0.131)	–0.007** (0.004)	–0.222 (0.145)	–0.007*** (0.004)	–0.188 (0.130)
<i>4.1. Productive environment</i>	1095	57	–0.002 (0.005)	0.165 (0.661)	–0.003 (0.004)	0.398 (0.640)	–0.007 (0.005)	–0.071 (0.722)	–0.007*** (0.004)	–0.131 (0.636)
<i>4.2. Human resources</i>	1093	59	–0.004 (0.004)	–0.508 (1.028)	–0.006 (0.004)	–0.392 (0.981)	–0.007 (0.005)	–0.805 (1.104)	–0.008** (0.004)	–0.913 (0.980)
<i>4.3. Basic infrastructure</i>	1085	67	–0.003 (0.004)	–0.135 (0.190)	–0.005 (0.003)	–0.217 (0.181)	–0.008** (0.004)	–0.375*** (0.206)	–0.007*** (0.004)	–0.311 (0.181)
<i>4.4. Miscellaneous</i>	1085	67	–0.003 (0.004)	–1.767 (2.308)	–0.005 (0.003)	–2.050 (2.213)	–0.008** (0.004)	–3.850 (2.495)	–0.007*** (0.004)	–3.505 (2.261)
5. ERDF INTERREG IIIA (all exp. cat.)	788	364	–0.001 (0.002)	–0.034 (0.024)	–0.003 (0.002)	–0.066* (0.023)	–0.002 (0.003)	–0.092* (0.025)	–0.002 (0.003)	–0.073* (0.024)
<i>5.1. Productive environment</i>	788	364	–0.001 (0.002)	0.020 (0.053)	–0.003 (0.002)	–0.019 (0.052)	–0.002 (0.003)	–0.050 (0.058)	–0.002 (0.003)	–0.046 (0.054)
<i>5.2. Human resources</i>	798	354	–0.001 (0.002)	–0.277 (0.385)	–0.003 (0.002)	–0.538 (0.382)	–0.001 (0.003)	–0.759*** (0.419)	–0.001 (0.003)	–0.518 (0.392)
<i>5.3. Basic infrastructure</i>	788	364	–0.001 (0.002)	–0.124* (0.042)	–0.003 (0.002)	–0.196* (0.043)	–0.002 (0.003)	–0.240* (0.048)	–0.002 (0.003)	–0.178* (0.044)
<i>5.4. Miscellaneous</i>	789	363	–0.001 (0.002)	–0.141 (0.287)	–0.003 (0.002)	–0.522*** (0.288)	–0.002 (0.003)	–0.813* (0.316)	–0.002 (0.003)	–0.710** (0.304)
Productive environment (all funds ERDF+CF)	244	908	–0.004 (0.002)	–0.017* (0.005)	–0.005** (0.002)	–0.024 (0.005)	–0.005** (0.002)	–0.029* (0.005)	–0.005** (0.003)	–0.026* (0.005)
Human resources (all funds ERDF+CF)	519	633	–0.007* (0.002)	–0.175* (0.046)	–0.008 (0.002)	–0.215 (0.048)	–0.007 (0.003)	–0.259* (0.052)	–0.005*** (0.003)	–0.214* (0.050)
Basic infrastructure (all funds ERDF+CF)	177	875	–0.004 (0.003)	–0.007* (0.001)	–0.005** (0.002)	–0.011 (0.001)	–0.006** (0.003)	–0.012* (0.001)	–0.006** (0.003)	–0.010* (0.001)
Miscellaneous (all funds ERDF+CF)	312	840	–0.007* (0.002)	–0.294* (0.050)	–0.008 (0.002)	–0.416 (0.050)	–0.009 (0.002)	–0.446* (0.052)	–0.007** (0.003)	–0.352* (0.054)

Notes: Td – estimates with treatment dummy, Tint – with treatment intensity. exp. cat. – expenditure category. Upper number is estimated parameter on DiD, bottom reports robust standard error. ***, ** and * indicate statistically significant estimated DiD at 10%, 5% and 1% levels, respectively. Table reports estimated parameter on DiD retrieved from estimations available upon request from the corresponding author. Estimations are performed on reduced sample (1152 regions) over four general post-policy periods. Samples does not cover regions with support intensity below bottom 5th and above top 95th percentile, i.e. below 0.005% and above 2.11% treatment intensity.

Source: composed by authors.