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# Too much of a good thing? On the growth effects of the EU's regional policy

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#### ABSTRACT

The European Union (EU) provides grants to disadvantaged regions of member states from two pools, the Structural Funds and the Cohesion Fund. The main goal of the associated transfers is to facilitate convergence of poor regions (in terms of per-capita income) to the EU average. We use data at the NUTS3 level from the last two EU budgetary periods (1994–1999 and 2000–2006) and generalized propensity score estimation to analyze to which extent the goal of fostering growth in the target regions was achieved with the funds provided and whether or not more transfers generated stronger growth effects. We find that, overall, EU transfers enable faster growth in the recipient regions as intended, but we estimate that in 36% of the recipient regions the transfer intensity exceeds the aggregate efficiency maximizing level and in 18% of the regions a reduction of transfers would not even reduce their growth. We conclude that some reallocation of the funds across target regions would lead to higher aggregate growth in the EU and could generate even faster convergence than the current scheme does.

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#### 1. Introduction

As the budget of the European Union (EU) becomes tighter and major recipients of European regional transfers struggle with debt crises, questions about the proper utilization and effectiveness of transfers from the central EU budget to Europe's poorest regions are hotly debated. Since 1975, when the European Regional Development Fund (ERDF) was founded, a significant budget has been devoted to the reduction of regional imbalances, especially, in terms of per-capita income. The Treaty of Lisbon which entered into force in 2009 acknowledges *regional cohesion* as one of the key goals of the European Union. <sup>2</sup>

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<sup>&</sup>lt;sup>1</sup> The European Social Fund (ESF) and the European Agricultural Guidance and Guarantee Fund (EAGGF) were already founded in 1958 and 1962, respectively, but were focused on specific duties and were limited in scope. The Cohesion Fund was founded as late as 1992.

<sup>&</sup>lt;sup>2</sup> Article 174 of the Treaty on the Functioning of the European Union states: "[...] the Union shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favored regions" (see Official Journal C 115/127 09/05/2008).

The Union's regional policy goals are rooted in the perception that a common market requires a certain degree of homogeneity in economic development which is not necessarily an automatic outcome of the integration process but, eventually, has to be assisted by active policy interventions. Accordingly, with the EU enlargements to the south<sup>3</sup> and, more recently, to the east,<sup>4</sup> the disparities among the member countries of the Union increased sharply, and so did the scope of regional transfers. During the years 1975–1988, the ERDF budget represented on average 6.8% of the total Community budget, while during the current 2007–2013 programming period expenses aimed at cohesion make up 35.7% of the total Community budget, or 347.41 billion Euros at current prices (see European Commission, 1989, 2008). These expenses on cohesion policy stem from different funds: the ERDF contributes about 58%, the European Social Fund (ESF) about 22%, and the *Cohesion Fund* about 20%. The ERDF and the ESF are commonly referred to as the *Structural Funds* where the former focuses on infrastructure investments and the latter on employment measures.<sup>5</sup> The Cohesion Fund was established in the treaty of Maastricht and is intended to support the Structural Funds in strengthening the economic and social cohesion in the Union. The Cohesion Fund mainly finances environmental projects and trans-European transport infrastructure networks. In contrast to the Structural Funds, the Cohesion Fund operates on the national rather than the regional level.<sup>6</sup>

The heterogeneity of regional transfer intensity – defined as the amount of EU transfers in percent of a target region's beginning-of-period GDP – across recipient regions and programming periods is remarkable. Whereas some NUTS3 regions<sup>7</sup> received only negligible amounts of EU transfers in the order of less than a thousandth of a percent of their GDP, others faced a transfer intensity of 29% of their beginning-of period GDP. We will discuss this heterogeneity in more detail below.

It is sometimes argued that some regions use EU transfers increasingly inefficiently as they receive more transfers. Due to a lack of administrative capacity, part of the funds is not spent as intended but used for consumption purposes or subject to corruption.<sup>8</sup> If there are diminishing returns to EU regional transfers, knowing that they foster growth *on average*, as in Becker et al. (2010), is not enough.<sup>9</sup> In fact, it is important to understand how a varying treatment *intensity* (different amounts of EU transfers relative to GDP) affects regional growth. This will allow us to see up to which level transfers serve the intended goal of fostering regional growth and beyond which a further allocation of funds becomes inefficient. Estimation of that threshold for the EU's regional policy programmes calls for an identification strategy that goes beyond a binary transfer indicator and exploits variation in transfer intensity.

An argument for a declining treatment effect – and, eventually, existence of a *maximum desirable level of regional transfers* – arises naturally from neoclassical production theory and the assumption of diminishing returns to investment and investment-stimulating transfers (see Hirshleifer, 1958). Suppose that investment projects are financed and undertaken in the order of expected returns on investment. Then, a bigger number of investment projects carried out would be associated with a lower return to investments (or transfers). If diminishing returns to transfers were relevant, we could identify a maximum desirable level of the treatment intensity. Above that level, no additional (or even lower) per-capita income growth effects would be generated than at or below that threshold.

There is a similar argument for a *minimum necessary level of regional transfers* which is based on the big-push or poverty-trap theory of development, which states that transfers (or aid) have to exceed a certain threshold in order to become effective. For instance, this would be the case if the marginal product of capital were extremely low at too small levels of infrastructure or human capital (see Sachs et al., 2004). Alternatively, this could be the case if regions lagging behind were isolated from other developed regions (see Murphy et al., 1989, for arguments along those lines). When applying the big-push or poverty-trap theory to the least-developed NUTS3 regions in the EU, one would expect to find a

<sup>&</sup>lt;sup>3</sup> Greece joined the EU in 1981, and Spain and Portugal in 1986.

<sup>&</sup>lt;sup>4</sup> Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic, and Slovenia joined in 2004, and Bulgaria and Romania in 2007.

<sup>&</sup>lt;sup>5</sup> Until 2006, the Structural Funds included the European Agricultural Guidance and Guarantee Fund (EAGGF) and the Financial Instrument for Fisheries Guidance (FIFG) which have been replaced by the European Agricultural Fund for Rural Development (EAFRD) and the European Fisheries Fund (EFF), respectively. Both funds are no longer directly involved in cohesion policy.

<sup>&</sup>lt;sup>6</sup> Member states qualify for transfers from the Cohesion Fund if their GDP per-capita falls below 90% of the community average. The most significant amount of Structural Funds is transferred to regions with a per-capita GDP below 75% of the community average (so-called Objective 1 regions).

<sup>&</sup>lt;sup>7</sup> Eurostat defines NUTS3 regions as entities of between 150 and 800 thousand inhabitants. An exception is large cities with population of more than 800 thousand which are still usually NUTS3 regions in their entirety. The counterpart to a NUTS3 region in the United States would be a county. In France, they represent *Départements*, in Germany, they are equivalent to *Landkreise*, in Spain, they correspond to *Comunidades Autónomas*, and in the United Kingdom, they are associated with the *Unitary Authorities*.

<sup>&</sup>lt;sup>8</sup> See euobserver.com from October 20, 2009, "EU funds still vulnerable to fraud in Bulgaria", Handelsblatt from March 2, 2010 "Korrumpierter Staatsapparat: EU duldet Griechenlands Betrug seit Jahren", the New York Times from August 23, 2008, "EU cuts back funding to Bulgaria", or euractive.com from December 8, 2008, "Time to redesign the Structural Funds system".

<sup>&</sup>lt;sup>9</sup> Becker et al. (2010) provide an overview of the literature on the effects of the EU's regional transfers and conduct an evaluation of Objective 1 transfers, which make up two thirds of the EU's Structural Funds Programmes. More specifically, Becker et al. (2010) use a binary treatment indicator in a regression discontinuity design to study the causal effects of Objective 1 funds on GDP per-capita growth in recipient versus non-recipient regions. The discontinuity arises from the rule that EU regions whose GDP per-capita falls below 75% of the EU average are eligible for Objective 1 funds whereas regions above the 75% threshold are ineligible. Their results suggest that, in a best-case scenario, Objective 1 transfers generate a multiplier of approximately 1.2 so that every Euro of transfers generates 20 extra cents of GDP. However, that multiplier effect relates to Objective 1 treatment only, since other parts of the Structural and Cohesion Funds do not follow a clearly defined rule (75% threshold) and do not lend themselves to a regression discontinuity design for identification.

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