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Supranational integration and national reorganization: On the Maastricht treaty's impact on fiscal decentralization in EU countries

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Abstract

We explore the implications of European integration for fiscal decentralization in EU member states with a dataset on 21 OECD countries over the 1975-2000 period. The difference-in-difference methodology is used to establish causality. EU member states are classified as the treatment and non-EU OECD countries as the control group. The Maastricht treaty is interpreted as a quasi-experimental policy intervention that substantially advanced European integration. Our results suggest that tax decentralization has increased in EU countries after the signing of the Maastricht treaty. The treaty's effect on expenditure decentralization also seems to be positive, but is less clear-cut.

Keywords: Fiscal decentralization, Maastricht treaty, supranational integration, institutional change
JEL codes: F15, F53, H77

1 Introduction

It is evident that the deepening economic and political integration in the European Union (EU) has been accompanied by a successive reduction of national control over various policy areas. The introduction of the common currency and the simultaneous renunciation of control over monetary policy to the supranational European Central Bank (ECB) by member states is only one, but perhaps the most obvious, indication of these realignments in political power.[1]

While a large literature analyzes the consequences of European integration for the relationship between European institutions and national governments[2], its implications for the internal organization of member states are less well explored. In most countries, both constitutional and/or central government stipulations determine a particular allocation of authority between the tiers of government. The emergence of a new tier at the European level disturbs this equilibrium. It is, therefore, of interest to ask how member states will react to this disturbance. Will central governments be able to compensate for the loss of authority to supranational institutions by expanding their powers at the cost of subnational governments? Or will economic and political integration coincide with an increase in subnational autonomy?

In this paper, we analyze the implications of European integration for the extent of subnational autonomy in EU member states. Our empirical strategy focuses on the Treaty on European Union (henceforth Maastricht treaty) which was signed by the twelve member states of the European Community (EC) in 1991. We interpret the Maastricht treaty as a quasi-experimental policy intervention that substantially advanced economic and political integration in the EU, and explore with the difference-in-difference methodology whether this progression towards an unified European polity has had an effect on the extent of *fiscal decentralization* in member states.

Our results indicate that the treaty has led to an expansion of tax decentralization in EU countries. The results with regard to expenditure decentralization are less straightforward, but seem to suggest that this aspect of subnational autonomy has also increased after the signing of the treaty.

This paper contributes to the discussion on the implications of economic integration for the scope and structure of the public sector. It is also related to the literature on the determinants of (de-) centralization. Furthermore, even though it is concerned with developments in the EU, its findings might be of interest to countries in other parts of the world that are attempting to coordinate their policies at a supranational level.[3]

The remainder of this paper is structured as follows. The theoretical arguments that link economic integration with (fiscal) decentralization, and the existing empirical evidence are surveyed in section 2. We describe our methodology and the data in section 3. The results are collected in section 4. Finally, we conclude in section 5.

2 Economic integration and fiscal decentralization: Theoretical arguments and empirical evidence

Several contributions suggest that globalization– a term that is used in this literature interchangeably with economic integration– increases the number of countries. Alesina and Spolaore (1997), for example, develop a Hotelling-type model where the optimal size of a country is determined, at given levels of international trade, by two countervailing effects: On the one hand, the size of the market and thus the ability to exploit scale economies increases in country size; on the other hand, citizens experience greater "preference costs" in larger countries because public goods are "farther away". Within this framework,

[1] See Schmidt (1999) for a comprehensive account of these developments.

[2] See, among others, Persson and Tabellini (1996), Persson and Tabellini (1997), and Alesina and Wacziarg (1999).

[3] Examples for similar but far less ambitious projects are NAFTA and ASEAN.

economic integration reduces the relative benefits of a large country size by allowing access to foreign markets.[4]

Even though these contributions are concerned with the breakup of nations, it is true that secessions are radical and often costly measures. A less costly way to achieve regional self-rule is through decentralization. By implementing an appropriate degree of decentralization, the economic benefits of separation can generally be obtained without the need to incur the costs of achieving and maintaining independence (Bolton and Roland, 1997). Alesina and Spolaore (2003) therefore expand their previous contributions accordingly and consider decentralization as an alternative to outright independence.

For EU countries, decentralization of political and fiscal authority is clearly more relevant than the political independence of regions. Even though demands for regional autonomy have increased in several EU countries[5] (Newhouse, 1997), there has been since World War II not a single instance of secession. Therefore, if the underlying argument of the literature on the size of nations is true, we should observe for EU countries that economic integration leads to more decentralization rather than to the proliferation of new countries.

Another argument for why globalization could be positively associated with decentralization is that citizens might want to balance the loss of control to "global" forces which necessarily follows an increase in international trade with an expansion of local autonomy. This argument suggests that central governments will successively loose power to both supra- *and* subnational institutions as economic integration proceeds, leaving them eventually only with a rudimentary set of responsibilities (World Bank, 2000).

It is not certain, however, that globalization necessarily leads to more decentralization. There are a number of countervailing effects which suggest the opposite relationship. Cameron (1978) and Rodrik (1998), for example, argue that more integrated economies are more susceptible to economic shocks, and thus require more stabilization policies and interregional redistribution, both of which tend to be conducted at the national level.

Furthermore, instead of diminishing the role of central governments, the ability of individual regions to survive as independent entities when the economy is globalized might actually lead to an expansion of central authority. If the majority of the population of a country values its territorial integrity highly and perceives regional autonomy as a precursor for secession, it might respond to the "threat" of secession by giving the central government additional powers (Garrett and Rodden, 2003). The central government might then intervene in different ways. On the one hand, it could increase the cost of secession by enhancing its coercive potential through an expansion of the military apparatus. On the other hand, it could improve the incentives for remaining in the unified nation by increasing interregional transfers to those regions that can credibly threaten to secede (Treisman, 1999). If it is difficult for the central government to credibly commit to these transfers, it could also allocate political power to institutions through which it can force its own hand. The central government could, for example, introduce a strong second chamber with regional representation or expand the number of legislative areas in which qualified majorities are required to pass legislation (Kyriacou, 2009).

Why are we so prominently discussing the implications of globalization in a study that is supposedly concerned with the consequences of European integration? The reason is that globalization and European integration, even though they are in principle distinct phenomena, share many similarities. Within the EU, formal trade barriers have been abolished, informal barriers have been reduced, and there are no restrictions for capital and labor mobility. These developments combined with the fact that EU countries predominantly trade with each other imply that the common market in Europe constitutes a form of

[4] See Bolton et al. (1996) and Ruta (2005) for a survey of this literature. Ruta (2005) also discusses economic integration within the context of the EU.

[5] Examples include the Basque Region and Catalonia in Spain, Wales and Scotland in Great Britain, and Flanders and Wallonia in Belgium .

advanced globalization. Thus, European integration should affect EU member states in the same way as globalization does, making the literature on the consequences of globalization for the shape and structure of countries relevant for this study.

Apart from the literature on globalization in general, there are also some contributions that specifically address the implications of European integration for intergovernmental relations within member states. These contributions generally echo the findings of the literature on globalization. For example, a popular interpretation of the deepening supranational integration is that a new federal state is evolving in Europe (Bednar et al., 1996). John (1996) describes several alternative scenarios for how European statehood might influence the relationship between central and subnational governments within individual member states.[6] These scenarios can be summarized as follows: (i) European level institutions and local governments expand their power at the cost of the central government. As a consequence, an "Europe of Regions" emerges.[7] (ii) Central governments expand their power at the cost of subnational governments by arguing that they require more authority to influence decisions at the European level. This scenario implies an increase in centralization. (iii) European institutions expand their power equally at the cost of both central and subnational governments. Therefore, there is no change in the extent of decentralization within member states.

Overall, it is unclear from a theoretical perspective whether globalization in general and European integration in particular will lead to more or less decentralization. This question has therefore to be answered empirically. The existing contributions, however, are ambiguous. With regard to the link between globalization and the size of nations, Alesina and Wacziarg (1998) and Alesina et al. (2000) find that there is a positive correlation between openness to trade and the size of a country. While this result is not directly related to the discussion on decentralization, it supports the hypothesis that increased economic integration makes it feasible for citizens to organize themselves in smaller political entities. Garrett and Rodden (2003), on the other hand, reach the opposite conclusion. They find that economic integration is correlated with increases in fiscal centralization. Finally, the study by Stegarescu (2004), which is probably the one most closely related to this paper, investigates both the consequences of globalization in general and European integration in particular. He finds relatively weak evidence that globalization has increased fiscal decentralization in OECD countries, but no evidence indicating a relationship between European integration and fiscal decentralization.

3 Methodology and data

While we have discussed in the previous section the implications of economic integration on decentralization in general, we will only consider its impact on *fiscal decentralization* in the empirical part of this paper. We discuss in subsection 3.1 this particular variant of decentralization. Our methodological approach is explained and motivated in subsections 3.2 and 3.3. Finally, the dataset used in the regressions is described in subsection 3.4.

3.1 Types of decentralization

The general concept of decentralization has different dimensions, all of which try to capture the extent of subnational autonomy. A useful classification is provided by Treisman (2002). For example, one aspect of the relationship between central and subnational governments that is related to the level of *political decentralization* is whether local decision makers are appointed by the central government or

[6] John (1996) considers six different scenarios. However, not all of the are relevant for the discussion of the implications of European integration on decentralization.

[7] See Drèze (1993) for further elaboration on this point, and also the literature on "glocalization", for example Sharma (2005).

elected by their constituency. Another variant is known as *fiscal decentralization* and pertains to the fiscal autonomy of subnational governments: the extent of subnational control over tax instruments and public expenditures.

The empirical literature on decentralization is primarily concerned with fiscal decentralization. This has several reasons. First, the results from the theory on fiscal federalism are especially applicable to this aspect of subnational autonomy. Second, fiscal decentralization is a particularly accurate indicator of subnational autonomy because the ability to fund projects and collect revenues at ones own discretion lies at the heart of political authority. Third, fiscal decentralization can be measured more subtly than other types of decentralization, which often can only be captured by dummy variables.

It should be noted at the outset that a fiscally decentralized state is not the same as a federation. The defining characteristic of a federation is that the competencies of the federal and subnational tiers of government are demarcated by the constitution and not subject to the discretion of the central government, or, at most, only in a limited manner. Subnational governments in federations, however, do not necessarily have more fiscal autonomy than in unitary states. For example, subnational governments in France, which is a unitary state, have significantly more tax autonomy than those in Germany, which is a federation (Stegarescu, 2005).

We follow the literature and use the extent of fiscal decentralization as a proxy for subnational autonomy. Fiscal decentralization is traditionally measured by the IMF's GFS data, and is calculated as the share of subnational expenditures in total government expenditures (*expenditure decentralization*) or as the share of subnational revenues in total government revenues (*revenue decentralization*). These IMF measures have been widely criticized on the grounds that they fail to capture the "real" extent of decentralization. The problem is that these measures do not indicate whether subnational governments have the authority to decide independently on taxes and spending, or whether they simply collect revenues and spend according to central government regulations. Therefore, they might give a very misleading picture of the real extent of subnational fiscal autonomy (Ebel and Yilmaz, 2002).

OECD (1999) provides an alternative measure of fiscal decentralization for several OECD countries. This measure is superior to the IMF's GFS measures because it tries to capture the extent of independent subnational decision making power. It is constructed as the the ratio of subnational tax revenues from taxes for which rates and/or bases are determined by subnational governments, and general government tax revenues. This measure of fiscal decentralization therefore captures the extent of *tax decentralization*. While using the same classification as OECD (1999), Stegarescu (2005) extends the cross-section data of the OECD into a panel dataset.[8] Since variation over the time dimension is necessary for the methodology proposed in this paper, we use his database in the regressions.

Unfortunately, a similar measure for the expenditure side of the budget is, to our knowledge, not available. We therefore measure expenditure decentralization with a variable that is supplied in a World Bank database. This database is, in turn, based on the IMF's GFS data.

In figure 1, we depict the evolution of tax decentralization in several countries from 1975-2000. For some countries, data is only available up to 1999 (notably Australia and Belgium). As can be seen, there is significant cross-country variation, e. g. tax decentralization in Switzerland is about fifteen times as high as in Austria (see also table 6 in the appendix). There is also some amount of within-variation. For example, tax decentralization in Belgium, Spain and Italy has started to increase around the beginning of the nineties.

The evolution of the expenditure decentralization variable in the same set of countries is depicted in figure 2. Data is only available up to 1998 for some countries. While a similar amount of cross-country

[8] Actually, three different measures are provided. But only one of these captures subnational autonomy in its "pure" form and is therefore used in this study. The other two measures take subnational revenue from shared taxes and intergovernmental transfers into account.

Tab. 4: Impact of the Maastricht treaty on tax and expenditure decentralization, Reclassification of control and treatment groups, 1975-2000

	OLS 1	FE 1	OLS 2	FE 2	OLS 3	FE 3	OLS 4	FE 4
	b/t	b/t	b/t	b/t	b/t	b/t	b/t	b/t
Maastricht	0.631***	0.645***	0.582***	0.589***	0.582*	0.589**	0.054	0.255**
(Tax decentralization)	(2.784)	(7.784)	(3.100)	(7.353)	(1.875)	(2.279)	(0.534)	(2.397)
Maastricht	0.026	0.171***	0.070	0.160***	0.070	0.160	0.011	0.087***
(Expend. decentralization)	(0.232)	(3.679)	(0.718)	(3.881)	(0.545)	(1.424)	(0.560)	(3.577)

[1] Denmark, Great Britain, and Sweden are classified as members of the control group instead of as members of the treatment group
[2] The models include additional control variables for which results are not reported (compare with table 2 and 3)

Tab. 5: Impact of the Maastricht treaty on tax and expenditure decentralization, Reclassification of treatment start for former EFTA members, 1975-2000

	OLS 1	FE 1	OLS 2	FE 2	OLS 3	FE 3	OLS 4	FE 4
	b/t	b/t	b/t	b/t	b/t	b/t	b/t	b/t
Maastricht	0.012	0.371***	0.109	0.212***	0.109	0.212	0.031	0.078
(Tax decentralization)	(0.049)	(5.192)	(0.519)	(3.242)	(0.326)	(1.098)	(0.455)	(1.115)
Maastricht	-0.145	0.069*	0.050	0.026	0.050	0.026	-0.023	0.006
(Expend. decentralization)	(-1.527)	(1.719)	(0.574)	(0.756)	(0.416)	(0.371)	(-1.132)	(0.330)

[1] The *Maastricht* variable for Austria, Finland, and Sweden is 1 as of 1995, for remaining EU countries as of 1992
[2] The models include additional control variables for which results are not reported (compare with table 2 and 3)

5 Conclusion

In this paper, we have explored the nexus between European integration and subnational fiscal autonomy. Two aspects of subnational fiscal autonomy were considered: tax and expenditure decentralization. Whereas our results indicate that the Maastricht treaty has caused a significant increase in tax decentralization, the results with regard to expenditure decentralization are less striking. While the baseline regressions suggest that the treaty has had no effect on expenditure decentralization, additional estimations provide some, albeit weak, evidence that expenditure decentralization has increased in the aftermath of the treaty's adoption. In view of these results, we conclude that European integration has led to an expansion of fiscal decentralization in member states. If this finding is any indication for the future, it suggests that the EU is indeed headed towards an "Europe of Regions".

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Tab. 6: Included countries and averages (over time) of variables

Code	Country	Tax dec.	Exp. dec.	Openness	Population	GDP p. c.	Left	President	Federation	Fractionalization	EU member
AUT	Austria	3.49	31.57	70.8	7747.69	22248.58	3.54	0	1	0.22	1
BEL	Belgium	13.18	12.54	128.32	9958.94	21223.04	2.28	0	0.28	0.44	1
DNK	Denmark	29.83	56.69	70.14	5163.93	22373.74	2.92	0	0	0.14	1
ESP	Spain	11.62	23.56	39.76	38635.21	15780.06	3.29	0	0	0.43	1
FIN	Finland	26.57	42.47	57.76	4944.81	19394.01	2.69	1	0	0.18	1
FRA	France	13.95	19.32	44.34	55904.68	20230.8	3	1	0	0.21	1
GBR	United Kingdom	9.93	28.7	53.57	57119.9	19370.38	2.23	0	0	0.29	1
GER	Germany	7.45	39.62	47.91	69225.58	20370.35	2.23	0	1	0.33	1
GRC	Greece	0.28	.	43.81	10069.95	15355.68	3.27	0	0	0.11	1
IRL	Ireland	3.53	28.21	118.18	3509.31	15381.91	1.73	0	0	0.1	1
ITA	Italy	2.45	23.29	42.52	56319.21	20008.87	2.36	0	0	0.18	1
NLD	Netherlands	4	31.01	109.99	14770.69	21972.88	2.19	0	0	0.45	1
PRT	Portugal	1.62	9.79	60.62	9883.84	12062.53	2.04	0	0	0.07	1
SWE	Sweden	42.18	40.18	64.7	8513.16	21984.47	3.62	0	0	0.16	1
AUS	Australia	20.42	48.74	33.75	16323.57	20951.4	3.2	0	1	0.42	0
CAN	Canada	52.23	59.71	58.61	26854.96	22466.51	1	0	1	0.66	0
CHE	Switzerland	56.86	51.64	69.72	6659.35	27587.77	2	1	1	0.56	0
JPN	Japan	33.65	.	21.67	121325.8	20528.56	1.15	0	0	0.19	0
NOR	Norway	26.41	38.24	74.15	4218.88	26150.86	3.73	0	0	0.11	0
NZL	New Zealand	6.17	.	57.55	3397.26	17806.26	2.27	0	0	0.46	0
USA	United States	37.31	43.05	20.15	246119.9	26559.71	1	1	1	0.52	0

[1] Summary statistics for tax decentralization, expenditure decentralization, and population are calculated for the levels of these variables and not the logit and log transformations used in the regressions for easier interpretability
[2] The (average) federalism dummy for Belgium is neither 0 nor 1 because this country changed its institutional structure during the sample period
[3] Data for Germany before 1991 pertains to West-Germany only