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## EU Enlargement and Satisfaction with Democracy: A Peculiar Case of Immizerising Growth

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## EU Enlargement and Satisfaction with Democracy: A Peculiar Case of Immizerising Growth

Barbara Dluhosch, Daniel Horgos and Klaus W. Zimmermann<sup>1</sup>

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### Abstract

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Studies on EU enlargement mostly focus on its welfare-economic and much less so on its public-choice dimension. Yet, the latter may be as important as the former when it comes to sustain integration. This paper aims at filling the gap by exploring theoretically and empirically how enlargement of multi-level systems like the EU affects satisfaction with democracy (SWD) and voter turnout (PART). In order to assess the effects of a widening in membership, we present a novel approach that draws on the probability of being outvoted. We find that, given the institutional arrangement, enlargement tends to depress SWD. Our theoretical results are backed by empirical evidence in German Eurobarometer data displaying a tendency towards a decline in SWD that shows up in a significant fall in PART with growth in EU-membership.

**JEL:** F55, D72, H77

**Keywords:** European Union, Enlargement, Multi-level Systems, Democracy, Regime Satisfaction

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# EU Enlargement and Satisfaction with Democracy: A Peculiar Case of Immizerising Growth

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**Abstract.** Studies on EU enlargement mostly focus on its welfare-economic and much less so on its public-choice dimension. Yet, the latter may be as important as the former when it comes to sustain integration. This paper aims at filling the gap by exploring theoretically and empirically how enlargement of multi-level systems like the EU affects satisfaction with democracy (SWD) and voter turnout (PART). In order to assess the effects of a widening in membership, we present a novel approach that draws on the probability of being outvoted. We find that, given the institutional arrangement, enlargement tends to depress SWD. Our theoretical results are backed by empirical evidence in German Eurobarometer data displaying a tendency towards a decline in SWD that shows up in a significant fall in PART with growth in EU-membership.

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# 1. Introduction

European integration was intended to be a role model in terms of peace keeping. Several decades later, the EU and the EMU project in particular appear to lie in shambles. Even though Europe might not be at the brink of falling apart, it is conflict rather than cooperation that seems to dominate the scene. The frictions are symptomatic for a much wider phenomenon, namely an increasing dissatisfaction with Europe and a growing gap between the people's identification with Europe and the politicians in the driving seat heading forward (e.g. Zimmermann & Just 2001; McLaren 2007; Haller 2010). In its Sept 3, 2011 issue, the British weekly magazine 'The Economist' wrote that the growing gap is less a matter of crisis but of bad design. Accordingly, "...the *méthode Monnet* has brought two problems. One is that it alienates voters. Elected governments must increasingly answer for policies they do not fully control, while voters have no power to 'throw the bums out' in Brussels. The European Parliament, self-aggrandising and mediocre, cannot fill the democratic deficit" (p.53).

Discontent appears to be on the rise despite the economic benefits the EU was supposed to deliver. Apparently, there is a (political) price tag attached to the economic gains from integration. Even the most ardent proponents of economic integration confess that the process of EU integration has fallen short of expectations and that the institutional arrangement has not kept pace with the rapid process of enlargement. The result is a misallocation of tasks if compared to Oates' (1999) economic criteria. Rather, in a variant of Popitz' (1927) law, the European level has de facto acquired more and more power to the account of nation states. Anecdotal evidence on the flourishing European bureaucracy is legacy as much as it is an illustration of Niskanen's (1971) theory of bureaucracy. The same applies essentially to the economic misconception of the whole Euro-project which not only has put the cart before the horse but also went off track because of too lax a rule of the game. By extending the underwriting of sovereign debt towards a joint liability and thus effectively increasing transfer pay-

ments, politics broadens the scope of the European level while the population seems to become more and more skeptic. Taken together, all of these failures amount to a much deeper, public-choice related issue, namely a looming threat that identification with Europe and the whole European idea as envisioned by the founding fathers is at risk (e.g. Goodhart 2011). Moreover, dissatisfaction with the EU and especially its enlargement seems to undermine the functioning of the political system in the *nation states* when democracy as well as the legitimacy of European institutions are discredited in the eye of the citizen. Yet, regime satisfaction is the cement of societies (e.g. Diamond 1999), including those in Europe.

After a short sketch of the literature (section 2) we demonstrate by means of a theoretical model of voter representation that growth in EU membership carries a heavy price tag indeed (section 3). While enlargement may be associated with economic benefits (depending on its proper design), the political acceptance declines as the likelihood to be pushed into the minority position increases. From a public-choice perspective, EU enlargement comes at a price even when the local as well as the national level continue to be represented in the political process and even when enlargement amounts to a pure replication of the multi-level structure prior to enlargement. Our theoretical conclusions are then (section 4) substantiated empirically by econometric results showing an enlargement-related decline in satisfaction with democracy (SWD) in corresponding Eurobarometer data for Germany as well as a significant fall in voter turnout (PART). The article finishes with some conclusions (section 5).

## **2. Where We Start From**

In some sense, the issue we are focusing on is a classical externality problem: abstracting from the legitimacy of the political process in Brussels far away from Europe's citizens, we examine the impact of European enlargement on regime satisfaction in the member states of the EU, here, exemplified by Germany as by far the largest nation state within

the EU and the Eurozone. Since the citizens of the EU are only very indirectly involved in the process of EU enlargement (via the political delegation of power), decisions in high politics may impose direct (e.g. taxation) or indirect (e.g. discomfort, alienation or even anxiety) external costs on them that may affect their degree of satisfaction with democracy<sup>1</sup> in general and in their home countries in particular. Evidently, the image of EU institutions is also influenced by perceptions of these processes within the citizenry, yet the more narrow aspect of the image of EU institutions is not our central topic, although we will have to touch on these aspects shortly.

From a *purely economic angle*, perspectives on membership and the image of the EU should reflect the perceived net benefits of the citizens in different countries which is exactly the result of an early study by Anderson & Reichert (1995): the attitude towards EU membership is mainly gauged on a (narrow) cost-benefit basis; those, who are either directly (via the EU budget) or indirectly (via market forces) likely to benefit from EU integration are in favor of membership et vice versa. Since there is good reason to assume that distributional issues rise in tandem with diversity in membership, either by Stolper-Samuelson effects or real exchange rate adjustments via direct price changes (as far as EMU is concerned), it may seem straight forward that public support heads south with enlargement. Eichenberg & Dalton (2007) indeed explain the sharp decline in support for European integration in the post-Maastricht era by distributional perspectives gaining dominance vis-à-vis the aggregate (economic) performance (on individual versus aggregate income and thus distributional concerns as individually perceived, see also Jaime-Castillo 2006). On a similar account, Rohrschneider & Lovelless (2010) consider the public evaluation of the EU as a political entity a non-linear function of (national) GDP per capita and quality of national governance.

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<sup>1</sup>Sure enough, SWD is fuzzy and thus very hard a concept to get to grips with (see Canache, Mondak & Seligson 2001 and Wagner, Dufour & Schneider 2003 on measurement problems). Even more so, previous studies suggest that there is not a single (most important) issue that matters for SWD. As to the former, measures and polls trying to capture SWD may in fact monitor sort of the general public support for the EU with support an amalgamation of various perceptions (see Easton 1975).

*But the bare bones of economics are surely not all that counts* (see Anderson 1998). Böhnke (2008) finds that the extent to which the narrow economic cost-benefit analysis matters for (life) satisfaction in the EU varies widely and thus accounts for substantial differences across member countries. Similarly, and following Rohrschneider & Loveless (2007; 2010), the extent to which political as opposed to economic criteria are crucial heavily depends on the economic status quo with *political* procedures being more important the better the national macroeconomic performance. Since all of those studies use the rather broadly defined dependent variable “EU support” (or “(life) satisfaction in the EU”)<sup>2</sup>, Karp, Banducci & Bowler (2003) try to narrow down to the part of satisfaction associated with democracy in particular by asking whether EU institutions are considered as *legitimate*, a study that is closely related to Pacheco & Lange (2010), who consider *actual political participation* as indicator for life satisfaction. Using Eurobarometer data, Karp et al. isolate three important effects: economic benefits of EU-membership, confidence in EU-institutions and cognitive mobilization à la Inglehart (1970). They find that the EU-mediated distribution of benefits strongly shapes satisfaction. However, whether EU-citizens distinguish between national and European matters depends on information and knowledge about the EU (Rohrschneider 2002 and Scheuer & Schmitt 2009): the more they know about the EU, the lower is their EU-specific satisfaction with democracy. Widening the perspective and trying to focus more closely on SWD, Wagner, Schneider & Halla (2009) consider satisfaction mainly a matter of *institutional quality*.<sup>3</sup> Based on an international study, they find that the rule of law, corruption, size of the shadow economy, various regulations, and the amount of checks and balances in the political system do have a significant effect on SWD while preferences for ideology (either left or right), the quality of monetary policy, union density, proportional representation, plurality and political fractionalization do not.

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<sup>2</sup>See Inglehart & Klingemann (2000) for a discussion of the nexus between various measures of well-being and regime satisfaction regarding democracy.

<sup>3</sup>In similar spirit, Bjørnskov, Dreher & Fischer (2010) consider institutions as important. However, they employ a much broader concept of subjective well-being while at the same time they admit that results vary considerably with the specific measures of happiness or satisfaction.



Notwithstanding the importance of these matters, *enlargement of the Union* is seldom on the research agenda as a determinant of SWD. Karp & Bowler (2006) are an exception but they consider SWD as exogenous and the process of enlargement as dependent variable with dissatisfaction exerting a significant negative effect on attitudes towards widening as well as deepening. However, from a public-choice perspective, SWD is an outcome of institutional design rather than an input to it. Seen from this angle, dissatisfaction with EU enlargement may simply occur because voting leverage decreases in the sense that a single vote is losing its relative weight (see Downs 1957) or because, based on the rational ignorance argument, voters have different informational costs and thus different knowledge influencing attitudes towards EU integration as well as voting behavior (e.g. Tillman 2011).

Dismissing the Downsian argument on account of its paradoxical results, we start out from the hypothesis that satisfaction is a matter of *procedures rather than outcomes*. Thus, our approach is very much in the spirit of Brennan & Buchanan (1985) according to whom satisfaction means agreement to rules (see also Frey & Stutzer 2005). If the people were asked which sorts of decision-making rules most likely deliver satisfaction to them, they surely would prefer those that give them a saying and track preferences the closest. While Riker & Schaps (1957), Scharpf (1988), Rose-Akerman (1981) and Tsebelis (2002), to name a few, focus on the costs of decision making in multi-level systems in the narrow sense, our focus is on the *external costs* of voting procedures, i.e. the likely ex-post costs of a decision if a particular rule is applied (see Buchanan & Tullock 1962). From this perspective, “feeling represented” is crucial when it comes to satisfaction with procedures. This notion is in line with empirical work by Rohrschneider (2002; 467) and Ehin (2008) who found people’s perceptions of being represented at the European level to be a crucial determinant of EU-support even when controlling for a number of economic, political, social and individual aspects.<sup>4</sup> However, they lack a

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<sup>4</sup>The “representation effect” in the Rohrschneider-study was the stronger the higher the countries are ranked according to the International Country Risk Guide supposedly measuring the quality of institutions at the national level. However, it was the interaction between institutional quality at the national level and representation at the European level that shaped individuals’ support

theoretical explanation as to why multi-layered systems of governance might inherently score lower on the “representation scale”.

As to representation it seems straight forward to suppose that winners assess a voting rule (or more generally democracy) more favorably than losers (Anderson & Tverdova 2001; Blais & Gelineau 2007); as a corollary, the number of those actually outvoted may be a specific source of dissatisfaction with democracy. However, as has been pointed out by Anderson & Guillory (1997), the political winner-loser divide is not as sharp as one might expect with respect to SWD but mediated by the political system. As to the latter, Curini, Jou & Memoli (2012) identify the dynamics (i.e. the possibility of change) more or less inherent to a democratic regime as blurring the clear distinction between those satisfied and those not as winners and losers. Invoking Brennan & Buchanan’s (1985) veil of ignorance (that is citizens not knowing whether they are on the winning or losing side in the future) it thus seems likely that citizens agree at the constitutional level on minimizing the maximum number of those probably (in contrast to those actually) outvoted as a normative criterion when choosing political rules. Therefore, the source of SWD in our theoretical model stems from the *ceteris-paribus* likelihood of being outvoted rather than from actually being outvoted.

In order to display the effect of enlargement on the likelihood of being outvoted we will draw on a model of federalism as developed by Holzinger, Schneider & Zimmermann (2011), who, in the spirit of Pennock (1959) and Wagner (1971), assess the public-choice consequences of various federal schemes. However, their focus was on federalism in the narrow sense: allowing a high variability of the number and combination of jurisdictions involved in particular policy issues, their analysis concentrated on the minimization of dissent as measured by the maximum number of those possibly outvoted under majority rule in a multilevel system of a *given population size*. Our focus and model by contrast

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of the EU while the quality of institutions per se turned out to be insignificant. By focusing on the “representation effect”, we abstain from the legitimacy-discussion (see Ehin 2008 for a short survey) nor do we suppose that the national and the international level are evaluated on different grounds.

is on enlargement. That means that *population size varies* as new member states enter.<sup>5</sup>

Moreover, when taking the model to the data, we have to distinguish between what people might (just) pretend with respect to EU enlargement and how they actually feel about it. The two may be very different animals. The former is usually tracked by surveys while the latter shows up at the voting booth. Consequently, we look at SWD in Eurobarometer data (that is stated preferences) and in voter participation (that is revealed preferences). In order to circumvent problems of cross-country comparisons in SWD giving rise to biased estimates as outlined in Canache, Mondak & Seligson (2001), Linde & Ekman (2003), Inglehart (2003), and Ariely & Davidov (2011), we share the perspective of Scheuer & Schmitt (2009) in that we concentrate on German, that is, national data.<sup>6</sup> Thus, unlike previous studies, we not only present empirical evidence whether SWD is on the decline (see Cusack 1999 in the context of German unification) but we also provide a theoretical, public-choice inspired, explanation with enlargement of political “clubs” at its centre.

### 3. A Theory of SWD in Expanding Multi-level Systems

Suppose that  $n$  countries formed a community with a supranational level and with each of them holding  $z$  regional jurisdictions. Hence, there were  $l = 3$  levels, a supranational, a national, and a regional one. Taken together, countries had a population-size of  $P$ . In order to simplify matters, we will assume without loss of generality that old as well as new member countries are symmetrical in that they host the same number of regional jurisdictions as well as the same number of voters. At each level, the majority rule is

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<sup>5</sup>Naturally, this presupposes that voters distinguish between European, national and regional decisions when voting at each level. Empirical work by Rohrschneider & Clark (2009) suggests that this assumption is sufficiently safe.

<sup>6</sup>There is good reason to assume that internal consistency is substantially higher in case of intra-country data than in case of cross-national data that are riddled with differences in what actually is measured (e.g. is it satisfaction with democracy or more generally regime satisfaction?) and methodological problems (e.g. one-to-one versus multifaceted relationships distorting results) that might require tapping additional information for consistency.

applied with respect to political decisions.<sup>7</sup> Consequently, if  $x$  countries of identical structure join the club, we have club-members  $(n + x)$ , a total of  $z \cdot (n + x)$  regions, and total population increases to  $P \cdot (1 + x/n)$ .

Now consider a representative jurisdiction at each of the  $l = 3$  levels. The maximum number of voters  $V_F$  that might be outvoted within this jurisdiction after additional countries gaining membership is

$$(V_F)_S = \frac{1}{2} \cdot \frac{(n+x)}{n} \cdot P - 1 \quad (V_F)_N = \frac{1}{2} \cdot \frac{1}{n} \cdot P - 1 \quad (V_F)_R = \frac{1}{2} \cdot \frac{1}{n} \cdot \frac{P}{z} - 1 \quad (1)$$

for the supra-national level (S), a particular country (N) and region (R) respectively. Consequently, the maximum number  $V_M$  outvoted in the whole club after enlargement  $(V_M)_a$  adds up to

$$\begin{aligned} (V_M)_a &= (V_F)_S + (n+x) \cdot (V_F)_N + (n+x) \cdot z \cdot (V_F)_R \\ &= 3 \cdot (n+x) \cdot \frac{P}{2 \cdot n} - (1 + (z+1) \cdot (n+x)) \end{aligned} \quad (2)$$

with

$$(V_M)_b = \frac{3}{2}P - (1 + (z+1) \cdot n) \quad (3)$$

the corresponding number before enlargement.<sup>8</sup> In order to assess the frustration of being outvoted we must somehow relate the maximum number of those outvoted in eqs.(2) and (3) to the number of jurisdictions at the various levels involved in decision making, that is, sort of an interaction variable ( $I$ ). Supposing that all jurisdictions at each level are intertwined via decision making,  $I$  is exactly the number of jurisdictions

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<sup>7</sup>As is well known since Buchanan & Tullock (1962), the particular voting scheme (i.e. absolute, relative or qualified majority) does affect results quantitatively. However, it does not mess up our argument in qualitative terms. Henceforth, we can economize and safely stick to simple majority voting.

<sup>8</sup>Note that the first term is a linear function of the number  $l$  of levels, in this case 3.

times the respective population at each level after enlargement

$$\begin{aligned} I_a &= \left(\frac{n+x}{n}\right) \cdot P + (n+x) \cdot \frac{1}{n} \cdot P + (n+x) \cdot z \cdot \frac{1}{n \cdot z} \cdot P \\ &= 3 \cdot P \cdot \left(1 + \frac{x}{n}\right) \end{aligned} \quad (4)$$

and  $I_b = 3 \cdot P$  before. In the more general case of  $l$  levels we obtain  $I_a = l \cdot P \cdot (1 + x/n)$  and  $I_b = l \cdot P$  respectively.

Hence, the relative frustration  $R_a = (V_M)_a / I_a$  after enlargement is

$$R_a = \frac{1}{2} - \left[ \frac{1 + (z+1) \cdot (n+x)}{3 \cdot (n+x)} \right] \cdot \frac{n}{P} \quad (5)$$

Now compare this to the relative frustration  $R_b$  before enlargement

$$R_b = \frac{1}{2} - [1 + (z+1) \cdot n] \cdot \frac{1}{3 \cdot P} \quad (6)$$

According to the differential impact of membership  $R_a - R_b$  on dissatisfaction, frustration unambiguously increases with enlargement (as the first derivative with respect to  $x$  is positive)<sup>9</sup>

$$R_a - R_b = \underbrace{\frac{1}{3}}_{\text{1st term}} \cdot \underbrace{\frac{x}{n}}_{\text{2nd term}} \cdot \underbrace{\frac{1}{P \cdot \left(1 + \frac{x}{n}\right)}}_{\text{3rd term}} > 0 \quad (7)$$

Note that the increase in frustration – or the decrease in satisfaction with democracy – is *smaller* the larger the number of levels  $l$  (with  $l = 3$  as displayed) and the larger the club before enlargement (as measured by either  $P$  or  $n$ ). It is *larger* though the larger the number of new member states entering. However, note that although the 3rd term, that is, the pure population-boosting effect, per se mildens the increase in frustration, there is no chance to have one's cake and eat it too. The population boosting is inevitably associated with the fact that new members enter the club. One

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<sup>9</sup>We have not divided here by  $x$  since we consider a bunch of countries entering at the same time.

simply cannot buy into the (favorable) population dynamics without admitting new members. Given the institutional arrangement at the various levels, those already a member always do worse on this account when granting membership to newcomers. The frustration applies unless additional levels are introduced, population grows within member countries or the institutional arrangement with respect to who votes on what is modified.

Sure, theoretically, one can disaggregate the enlargement effect on SWD into two components, namely, the pure population dynamics and the newcomer aspect, with the second term in eq.(7) catering to the latter and the third term in eq.(7) to the former. Taking the first derivative of eq.(7) with respect to the ratio of new and old members ( $x/n$ ), we obtain the effect of enlargement at the margin, conditional on the institutional arrangement as outlined in eq.(4)

$$\begin{aligned} \frac{\partial (R_a - R_b)}{\partial \left(\frac{x}{n}\right)} &= \frac{1}{3} \left[ \frac{1}{\left(1 + \frac{x}{n}\right) \cdot P} - \left(\frac{x}{n}\right) \cdot \frac{1}{\left(1 + \frac{x}{n}\right)^2 \cdot P} \right] \\ &= \frac{1}{3} \cdot \frac{1}{\left(1 + \frac{x}{n}\right)^2 \cdot P} > 0 \end{aligned} \quad (8)$$

Figure 1 displays the details. It shows how satisfaction with democracy is affected as membership grows (i.e.  $(x/n)$  increases) as well as the various components that add up to (dis-)satisfaction according to eq.(7). Each of the three components is measured separately on the LHS vertical axis. The scale shows the natural logarithm of each component as well as the total effect in order to better illustrate how the components add up. The thin solid curve (2nd term) that is upward sloping reveals the main driving force in dissatisfaction, that is (the log of) the ratio of newcomers to previous members. Dissatisfaction is milder though, the larger the population and the more subnational levels are involved that ensure that citizens can participate in political decision making. The former is illustrated by the slightly downward sloping dashed line (3rd term), the

latter by the dotted horizontal (1st term). Taken together, they account for the upward sloping gray curve with the empty diamonds. This is the total effect of enlargement on SWD (log) as the ratio of new to old member countries continues to increase.

<Figure 1 about here>

The vertical scale on the RHS shows the same result measured in real numbers (corresponding to the thick black curve). Notably, as displayed in eq.(8) and reflected in Fig.1, dissatisfaction increases in the enlargement scenario.<sup>10</sup>

In the next section, we will empirically substantiate that enlargement is associated with external costs in public-choice perspective (given the institutional arrangement with respect to the number of levels and the interaction). In illuminating the gap between actual developments (that is enlargement) and satisfaction with the democratic process we will distinguish between the stated preferences of citizens as obtained in surveys and the revealed preferences as indicated by voter turnout. The difference is crucial: while for various reasons in surveys citizens may still pay lip service to the

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<sup>10</sup>Here, we implicitly adopted an insider's perspective. However, the newcomers share in the pessimistic outlook. They have three options: they can *i*) keep their autonomy, *ii*) join the existing club, *iii*) form a new club by themselves. Let subscript *E* refer to the countries entering the club. The differential impact of *ii*) as opposed to *i*) yields  $R_a - R_{b,E} = ((z + 1) \cdot n \cdot (1 + \frac{x}{n}) - 2) / (6 \cdot (1 + x/n) \cdot P) > 0$  since  $z \geq 1 \wedge (n + x) \geq 1$  after joining. Similar when comparing *iii*) to *i*): recall that countries each hold  $P/n$  citizens, so that  $n$  appears in the frustration index although they do not join the club of  $n$ . If  $R_{a,X}$  is the frustration index in a club of  $x$ , the impact is  $R_a - R_{a,X} = 1 / (3 \cdot (x/n) \cdot (1 + x/n) \cdot P) > 0$ . The negative outlook is actually in line with casual evidence from surveys according to which support for European integration deteriorated even in countries in which integration is rated highly as is the case in Bulgaria (see Tanasoiu & Colonescu 2008). Hence, it may be premature to suppose that European accession in any case lends stability to newly adopted and fragile democratic regimes such as, for instance, the succession states of the former Yugoslavia. Taking these results seriously, one might wonder why some clubs (like the EU) are so attractive to non-member countries or even why they emerged in the first place. However, two points are worth emphasizing. First, here, the focus is on a single issue, namely SWD. Other costs and benefits are left out of consideration. Second, once in place, clubs unfold their own lives as representative government and bureaucracy may further group interests, even if they are in the minority. The clash between the popularity of (some) clubs and SWD is exactly our point: the subjective individualism employed here may deliver substantially different results than the actual process in which integration is riddled with public-choice issues. What the people want and what the politicians in the driver's seat aim for in securing their (personal) benefits may be very different.

European project, voter turnout may tell a much different story. And voter turnout indeed reveals a decline in SWD that is significantly linked to frustration with the process of enlargement.

## 4. Empirical Evidence: Effects of EU Enlargement on Regime Satisfaction

After having explored the implications of enlargement on regime satisfaction theoretically, we address the empirical side of the story in this section. In particular, we examine the effects of EU enlargement using German time-series data. The empirical focus is on Germany because of two special country characteristics: *i*) economic importance: a large and economically dominant country as Germany is of particular interest because standing aloof from democracy would presumably have destabilizing effects on the European Union as a whole; *ii*) double enlargement: Germany actually experienced two enlargement processes at the same time, namely national (re-)unification and European integration. The national experience of (re-)unification might have had an effect on how satisfied the Germans are with respect to EU enlargement and how a further enlargement is perceived, an aspect, that makes the country even more interesting to examine through the lense of the EU-enlargement-SWD nexus. Before discussing the estimation technique and interpreting the results, we will briefly provide some details on the data.

### 4.1. Our Data Set

In order to examine the impacts of EU enlargement on regime satisfaction we consider two endogenous variables that capture different dimensions, namely *i*) satisfaction with democracy (SWD) as stated and *ii*) as revealed in the form of voter participation (PART). Survey information on SWD as proclaimed is provided by the Eurobarometer



Interactive Search System of the European Union. Those surveyed are asked “On the whole, are you very satisfied, fairly satisfied or not at all satisfied with the way democracy works?”. They may answer with “very satisfied”, “fairly satisfied”, “not very satisfied”, “not at all satisfied”, or “don’t know”. We grouped the answers anew in order to tap information on how many of the interviewees were either “very satisfied” or “fairly satisfied” (in percent of those surveyed). As regards PART, we use election data to the German national parliament (in percent of eligible voters) from the German Federal Statistical Office.<sup>11</sup>

In addition, we need information on the process of EU enlargement as exogenous variable. Therefore, we designed five proxies considering different dimensions of the enlargement process which might, according to our theory, affect regime satisfaction (though to different degrees):<sup>12</sup>

- i) European population (pop)* consists of the total EU-population at a point in time (year  $t$ ) and thus varies when new members enter the club.
- ii) Geography of the EU (space)* tracks the (geographical) dimension of the EU with the expansion in membership (measured in  $\text{km}^2$ ).
- iii) Number of EU member states (no. of countries)* refers to the total number of club members.
- iv) EU-GDP* is supposed to capture the economic dimension with aggregated GDP for the EU as a whole in real terms.<sup>13</sup>
- v) EU-GDP pc.* Finally, we use real GDP per capita as further indicator of the change in the welfare of Europe’s citizens.

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<sup>11</sup>Raw data are accessible at [http://ec.europa.eu/public\\_opinion/cf/index.cfm?&lang=en](http://ec.europa.eu/public_opinion/cf/index.cfm?&lang=en) and [http://www.bundeswahlleiter.de/de/bundestagswahlen/BTW\\_BUND\\_09/presse/77\\_Repr\\_WS\\_tat.html](http://www.bundeswahlleiter.de/de/bundestagswahlen/BTW_BUND_09/presse/77_Repr_WS_tat.html) respectively.

<sup>12</sup>Data are collected from the Penn World Tables (PWT), the OECD Labor Force Statistics, the CIA Factbook and the World Development Indicators.

<sup>13</sup>We consider GDP in billion constant US dollar (based on the year 2000), and converted from domestic currencies using official exchange rates in 2000.

If it were possible to empirically separate out these different dimensions of the enlargement process and their contribution to SWD, they could be expected to affect SWD and PART somewhat differently. This was, for instance, the case in our theoretical section with respect to population and club member size. However, the disaggregation of the process of EU enlargement (e.g. into changes in population and the number of EU member states, that is *i*) and *iii*)), is more of a thought experiment and thus solely relevant in theoretical perspective. Empirically, the components of adding new members and changes in total population can hardly be disentangled. This is essentially at the heart of the problem that “one cannot have one’s cake and eat it too”. Empirically, it is the joint (or net) effect that matters. We will thus use the different proxies *i*)-*v*) alternatively, that is as (imperfect) substitutes. *GDP pc* is somewhat of an exception as regards the substitutability. We will come back to this issue later.

Besides these variables of main interest, we included several control variables for Germany from PWT data (namely aggregate GDP, GDP per capita, both at PPP, and openness, that is the sum of imports and exports over GDP, at 2005 constant prices) and from the IMF Economic Outlook (unemployment rate, inflation rate). The resulting data set has the structure of a time series for Germany with annual information from 1976 - 2009. It thus contains satisfaction with democracy (SWD) and voter participation (PART) as endogenous variables and five proxies for EU enlargement (*pop*, *space*, *no. of countries*, *EU-GDP*, *EU-GDP pc*) as main exogenous variables, as well as control variables of German data (*GE-GDP*, *GE-GDP pc*, *openness*, *unemployment rate*, *inflation rate*).

## 4.2. Some Descriptive Statistics of the Data

Before delving into the econometric analysis, we present a brief descriptive overview of the main variables to get a better grasp at the data and to properly set up the estimation. Figure 2 depicts the time series of the two endogenous variables, that is SWD obtained via surveys and PART at the voting booth for Germany for 1976 - 2009.

<Figure 2 about here>

When considering the whole time span, SWD as well as PART trend downwards. However, in 1990/91, the time series also show a marked downward displacement effect. The displacement effect coincides with German re-unification, that is, a former socialist country with citizens that previously did not have the chance to practice democracy joining the West German system. The displacement effect may actually be traced back to two effects that are both related to re-unification. First, it may be partly explicable in terms of false hopes, i.e. the new citizens being dissatisfied with a new and unknown system and with bitter structural change looming at the horizon. Second, it may be due to the excess burden that fell on Western citizens in the organization and financing of the unification process which evidently turned out to become more costly than expected in the first unification-flush. The displacement effect seems to be more pronounced though in SWD than in PART data. At any rate, it seems safe to assume that German re-unification has had additional effects on regime satisfaction and, thus, needs to be explicitly accounted for in the econometric regressions below.

A second “eye catcher” is an upward bouncing of the indices in the mid-nineties, also arguably related to the prospect of EU enlargement moving (even more) eastwards. For this it is necessary to keep in mind that the discussion of the EU moving eastwards, a possible fragility of the whole process of overthrowing the socialist regimes, the development of membership criteria, the accession negotiations and, last but not least, the evaluations, all started well before those countries actually were granted EU membership. Hence, the particularities of Eastern enlargement may well be reflected in the data, and in PART data even more than in SWD data. This applies in particular to German data in light of the (re-)unification experience. The fact that those countries were in a number of aspects fundamentally different compared to previous accession countries calls for proper design of the empirical analysis. We will come back to both of these aspects in detail in the next subsection.

<Figure 3 about here>

Figure 3 depicts the five variables that are supposed to proxy EU enlargement. Naturally, all of them increase with EU enlargement. *Space* and *no. of countries* do not vary for years between the steps of integration whereas *pop* and income (*EU-GDP* and *EU-GDP pc*) actually change because of two effects, namely country specific factors over the whole period (growth effect) and the widening of the EU (pure enlargement effect). In order to proxy enlargement properly, it is necessary to disentangle these two components. Consider e.g. EU-GDP. To extract the undiluted enlargement effect, we hold EU-GDP in 1976 constant (i.e. at the start of our time series) until 1981, when Greece joined the EU. In 1981, we add the Greek GDP. Again, we keep the proxy fixed over time until Portugal and Spain entered the EU in 1986. Then, we add the GDP of these two countries. We continue with this procedure consecutively. The newly created variables thus focus solely on “pure” enlargement as new members join the EU. Naturally, the “pure” variables can only be created for population (“*pop pure*”), EU-GDP (“*EU-GDP pure*”), and EU-GDP pc (“*EU-GDP pc pure*”). The other two variables, *space* and *no. of countries*, are not affected thereby. In order to track enlargement per se, we thus focus in the subsequent analysis on the “pure” variables rather than on the combined effects. Table 1 gives a first impression on cross correlations of proxies as well as the nexus between SWD and PART.

<Table 1 about here>

With an asterisk denoting bivariate statistical significance at the level of 1 percent, numbers indicate that EU enlargement is negatively correlated with SWD and PART. It is important to note that the pure version of *EU-GDP pc* is negatively correlated with

the other proxies and thus an inverse proxy for EU enlargement.<sup>14</sup> The correlations between the different EU-enlargement proxies are necessarily quite high (more than 90 percent when regarding *pop*, *space*, *no. of countries* and *EU-GDP*). An early interesting result is that correlations seem to be stronger for voter participation (PART) than for the survey information on satisfaction with democracy (SWD). This points to an interesting difference between revealed and stated preferences, an issue that will be discussed in more detail when presenting the regression results in the next section.

#### 4.4. Digging Deeper into the Data: Estimation and Results

In order to assess the implications of EU enlargement (“Enlarge”) on regime satisfaction econometrically, we regress

$$\text{SWD}_t = \beta_0 + \beta_1 \text{Enlarge}_t + \gamma \Delta_t + \tau X_t + t + u_t \quad (9)$$

$$\text{and } \text{PART}_t = \beta_0 + \beta_1 \text{Enlarge}_t + \gamma \Delta_t + \tau X_t + t + u_t \quad (10)$$

with satisfaction with democracy as stated (SWD) and as revealed in the form of voter participation (PART) as the endogenous variables. As exogenous variables, i.e. “Enlarge”, we consider the five EU-enlargement proxies (*pop pure*, *space*, *no. of countries*, *EU-GDP pure*, *EU-GDP pc pure*).  $\Delta_t$  is a matrix containing two dummy variables. They are supposed to pick up the two aspects discussed in the previous, descriptive, section. With a first dummy variable, “*d\_ger*”, we control for German re-unification by setting the dummy 1 for the years after reunification (that is 1991 - 2009) and 0 otherwise. With a second dummy, we distinguish two different periods of EU enlargement as alluded to beforehand. In line with other findings according to which enlargement-related announcement effects are quite strong in EU data (see Boeri et al. 1998, in

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<sup>14</sup>*Pure EU-GDP pc* decreased with the two Southern enlargement processes (that is 1981 and 1986) and increased with the Northern enlargement (1995), however, without reaching its previous level. With the Eastern enlargement in 2004 and 2007, *EU-GDP pc* decreased again while attaining finally, in 2010, its lowest level ever. Without Northern enlargement, European integration would thus statistically have resulted in a steady decline of per capita incomes.

particular p. 107-11, showing by means of Burns-Mitchell diagrams that the application of accession has had a strong impact on EU data, that is well before the applicants became actual members), we presume that people tend to first look at the particular characteristics and the actual status quo of the new (potential) members (for instance in terms of income), rather than at the economic prospects EU enlargement might offer within each country (growth effects) and which may be realized or not.<sup>15</sup> Seen from this angle, we can distinguish two subperiods in the data: *i*) 1976-1994 and *ii*) 1995-2009. The corresponding dummy variable, “*d\_east*”, is thus set 1 after 1995 and 0 previously. Though 1995 marks the date of Northern enlargement, we nevertheless decided to call the dummy “*d\_east*” since the second period, 1995-2009, is largely overshadowed by the application of accession from countries of the former communist block in the East (and thus economically and politically very different countries than in case of former waves of enlargement), the adoption of the Copenhagen criteria for EU membership in 1993 and the subsequent coverage of the evaluation process considering the “fitness” of the potential members in the press.<sup>16</sup> The other (country-specific) macroeconomic control variables (*GE-GDP*, *GE-GDP pc*, *inflation*, *unemployment*, and *openness* – all referring to Germany) are combined in matrix *X*. Since we investigate effects of a time series with the time dimension captured by *t*, error term *u* can be assumed to be characterized by serial autocorrelation. We tested for autocorrelation by calculating the Durbin-Watson statistic. In addition, we applied the Breusch-Godfrey LM test and Durbin’s alternative test. All of them point to the existence of strong serially correlated disturbances. Therefore, we corrected for autocorrelation by applying Prais-Winsten regressions. The Prais-Winsten method estimates parameters using generalized least squares with errors assumed to follow a first-order autoregressive process. Thus, estimation results are similar to using an ARMA model with an autoregressive lag of 1. To handle the relative small size of our sample we use the original Prais-Winsten

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<sup>15</sup>The status-quo orientation is also a well-known outcome of psychological research into economic matters. See Kahneman et al. (1991) for a short survey.

<sup>16</sup>For the Copenhagen criteria see the conclusions of the EU-presidency <http://europa.eu/rapid/pressReleasesAction.do?reference=DOC/93/3>.

instead of the Cochran-Orcutt transformation (Prais and Winsten, 1954). Finally, in order to control for heterogeneity and possible outliers, we apply robust Huber / White / Sandwich estimations. Table 2 presents the estimation results for the endogenous variable SWD.

<Table 2 about here>

The row “Enlarge” compiles results for the different model specifications corresponding to the alternative proxies one might use for capturing the impact of EU enlargement on SWD with the particular proxy used as delineated in the respective column. Results show that EU enlargement indeed seems to affect SWD negatively (remember that *pure EU-GDP pc* acts as an inverse proxy). However, with t-Statistics smaller than 1.5, the effect is not within the usually reported range of statistical significance.

German re-unification, by contrast, obviously has had a statistically significant negative effect at the level of 1 percent on SWD. Also, integration of the Eastern European countries has had a negative impact on how interviewees claim to be satisfied with democracy. Notably, while affecting SWD across all specifications, in three out of five model specifications the particularities of EU enlargement after 1994 depress SWD significantly. Hence, the fact that after 1994 the process of enlargement comprised a large number of comparatively small countries with low GDP, a lower degree of urbanization and a much different political and economic history and situation obviously raised concerns about the effects this might have on the working of the political regime in the EU. Doubts about the robustness of the newly gained political constitution of the acceding countries, the fitness of their markets and a possible fragmentation and paralyzation of the EU may have added to the skeptical perspective as regards SWD. While national income variables (*GE-GDP* as well as *GE-GDP pc*) do not affect the SWD answers significantly, *inflation* and *unemployment* do so. Both variables have a high statisti-

cally significant negative effect on SWD as stated. The economy's trade *openness*, by contrast, exhibits a statistically significant positive effect on regime satisfaction. The regressions are characterized by a negative time trend that we controlled for by including  $t$ , although the time effect is not at a high level of statistical significance. The transformed DW Statistics near 2 confirm that, after controlling for the time structure, results are free of any autocorrelation. With R-squares around 90 percent and F-values statistically significant at the level of 1 percent, the overall models are fitted well.

In the next set of regressions, we switch perspective to voter participation (PART) as endogenous variable which might be interpreted as revealed SWD. As this perspective focuses on what people actually do (here: participate in and practice of democracy), it may deliver a picture very different from opinions concerning regime satisfaction obtained in asking people what their thoughts on the working of the democratic process are. This notion rests on the assumption that citizens would not go to the voting booth if they were not confident that their vote matters (or there is at least a chance that it matters). Hence, we suppose that electoral participation reflects somehow trust in the system and therefore might be a better indicator for SWD than just asking the people what they think about enlargement or, more precisely, what they state.

<Table 3 about here>

Table 3 presents our results. Accordingly, EU enlargement has a clearly negative effect on voter turnout. In fact, the direct proxies *population* (pure), *space, no. of countries* and *EU-GDP* (pure) are negatively correlated with high levels of statistical significance, whereas the coefficient of the inverse enlargement proxy *EU-GDP pc* (pure) is estimated with a significant positive sign (t-Statistics range from around 2 to 2.7).

German re-unification shows a negative tendency on voter participation, however, not at a statistically significant level. Considering the two different periods of EU enlarge-



ment (before and after 1994), results exhibit a positive effect for the period after 1994 and in case of *population, space, no. of countries* and *EU-GDP* even significantly so. When asked about their opinion pertaining to EU enlargement on regime satisfaction, people expressed frustration as far as the particularities of the Eastern enlargement (after 1994) is concerned (with SWD as stated depressed), but obviously they hope that by participating in elections they might still be able to influence EU enlargement according to preferences. The income variables have no statistical significant effect on voter participation. This also holds for the *inflation rate*, but not for *unemployment* where we observe a similar phenomenon as in case of *d\_east*: the higher the unemployment rate, the more voters participate in elections. A rise in unemployment reduces regime satisfaction (as did Eastern enlargement), but citizens seem at least to trust the political process insofar as their going to the voting booth is perceived by them to still have some leverage on the adopted policies. The unemployment effect is highly statistically significant in all of the regressions at the level of one per cent. Also, trade flows show a (positive) statistical significant effect. Finally, voter participation is now also strongly characterized by a negative time trend that we captured with *t*. The DW Statistic, R-squared and F-values illuminate again the proper fit of the models. The statistical significant negative effect of EU enlargement on voter participation supports our theoretical findings above: as EU enlargement increases frustration of being outvoted, voter participation significantly decreases. However, this time, the negative effects are substantiated empirically as the EU-enlargement proxies turn out to be statistically significant.

Quite generally, interesting results surface when comparing the empirical findings on SWD and PART. We interpret the apparent discrepancy between individuals' stated and revealed preferences by means of the "spiral-of-silence" theory (cf. Noelle-Neumann and Petersen, 2004). In an interview situation (the stated preferences captured by SWD), the respondent gradually tends to comply with the opinion which is being presented to him by the mass media and the politicians as the majoritarian opinion.

This majoritarian opinion is the EU project comprising a Europe of peace, tolerance and respect for human rights, which is hard to criticize on rational and moral grounds – even if the respondent thinks that something is going wrong in that process. That seems to be the main reason why the effects of the enlargement variables in SWD are not statistically significant even if they tend to be negative. The picture differs when people reveal their preferences, i.e. when it comes to elections (captured by PART). Accordingly, EU enlargement reduces voter participation in a statistically significant manner. In contrast to interviews, voters clearly reject the actual process of enlargement by refusing their vote. However, based on the regressions above, this effect may be due to either the willingness to have a stronger saying in how the EU project proceeds or due to a rejection of EU enlargement per se. Actually, the phenomenon of stated versus revealed preferences is not a new one. Rather, it is at the heart of the “spiral of silence” theory. To state preferences publicly crucially depends on the perceived majority opinion, and for the perceived majority opinion the mass media play the decisive role, probably to the effect that the actual minority opinion is displayed by the media as if it were the majority opinion. Fearing to get socially isolated (social pressure to conform), people abstain from public articulation of their opinion (striving for consonance) so that the actual minority position seems to be the ruling opinion after some time. A precondition for this battle of opinions is that its theme is morally charged in the sense that it possesses the emotional potential to let the opinion of the actual majority appear not only as rationally wrong but also as morally reprehensible. And just that is the case regarding the process of European integration as allegedly peace maintaining at least in Germany. However, as we have seen, when it comes to elections, voters reveal their preferences. While the idea of the European project appears to be tolerated to some degree at least in surveys, a different picture emerges when considering voter participation – “all that glitters is not gold” (Shakespeare, *The Merchant of Venice*, 1596).

## 5. Conclusions

Though there are a number of (mostly political-science) studies exploring satisfaction with democracy, few of them investigate the issue with an eye on EU enlargement in particular and none of them approach the topic from a public-choice angle in examining the external costs associated with the enlargement of a union both theoretically and empirically. Economic studies, in turn, mostly illuminate the welfare-economic dimension of European economic and political integration. Yet, understanding how the process of EU integration is perceived within Europe's societies and how the corresponding design matters is fundamental when the European idea is supposed to have a future.

This is where our paper comes in. We develop a theoretical model that is supposed to bridge the gap in that it focuses on the external costs probably imposed on those outvoted in EU matters. By drawing on the maximum number of those possibly outvoted, we focus on the characteristics of procedures in decision making (aka rules) and how they do in the eyes of the citizens when it comes to a worst-case scenario. In essence, we adopt sort of a club-theoretic constitutional perspective along the lines of Brennan & Buchanan (1985) by presuming that, behind a veil of uncertainty, people prefer those arrangements that are most likely to minimize the number of "losers".

In this framework, we can show that frustration with enlargement of a union increases in the number of newcomers while it decreases in the number of levels involved in decision making and the size of the club prior to enlargement, with total population size dampening somewhat the frustration effect of enlargement. However, the frustration with enlargement applies, unless additional levels are introduced in the political system that allow to bring one's perspective in, population grows within member countries or the institutional arrangement with respect to who votes on what is modified. Put differently, satisfaction with democracy decreases with the multi-level system unchanged, that is, if enlargement primarily amounts to a replication of the political system prior to enlargement (or with EU widening for that matter). Notably, dissatisfaction with

the EU and the enlargement process in particular is not only endangering EU cohesion but also undermining the functioning of the political system in the respective nation states as it discredits democratic processes.

Armed with this theoretical set up, we explore how EU enlargement affected satisfaction with democracy in Germany and was thus perceived by the German public. While the choice of Germany might seem arbitrary at first, we actually picked Germany for two reasons. First, it allows us to track down the effects of two enlargement processes, namely a national and a European process. The experience of the former may affect thoughts on latter so that the effects of the European enlargement are accentuated. Second, being by far the largest country in Europe, sentiments and attitudes in Germany with respect to the EU are crucial for Europe. If support by the German public is crumbling, the whole project is likely to break down.

When taking the theory to the data we actually have to distinguish between what people say how they feel about EU enlargement and what they actually do. We track the former by Eurobarometer data (SWD according to stated preferences with respect to EU enlargement) and the latter by voter turnout in German election data (PART according to revealed preferences). In fact, while in Eurobarometer data we find a negative but insignificant relationship, election data reveal that PART significantly declined in Germany due to the process of EU enlargement. From a public-choice perspective, European enlargement thus constituted a quite peculiar case of immiserising growth. Obviously, the surveys on SWD cover dissent that shows up when it comes to exercising democracy. As a matter of fact, this phenomenon is quite familiar from the “spiral-of-silence” theory in the experience with opinion polls.

Hence, if the European idea is to survive, institutional arrangements have to be build bottom up rather than top down, thereby giving more of a saying to small(er) communities vis-à-vis Europe as a whole. Unfortunately, from this perspective, recent developments in the Eurozone are likely to pull Europe’s societies further apart rather than closer together. As has been pointed out by Bhidé (2012) with respect to Europe’s

sovereign debt crisis, Europe's institutions, including its political institutions, must to a much greater extent account for differences or even explicitly cater to differences within Europe than is currently the case if the European idea is supposed to survive. While, on face of it, this might seem paradoxical, our findings add to this notion.

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# Figures and Tables

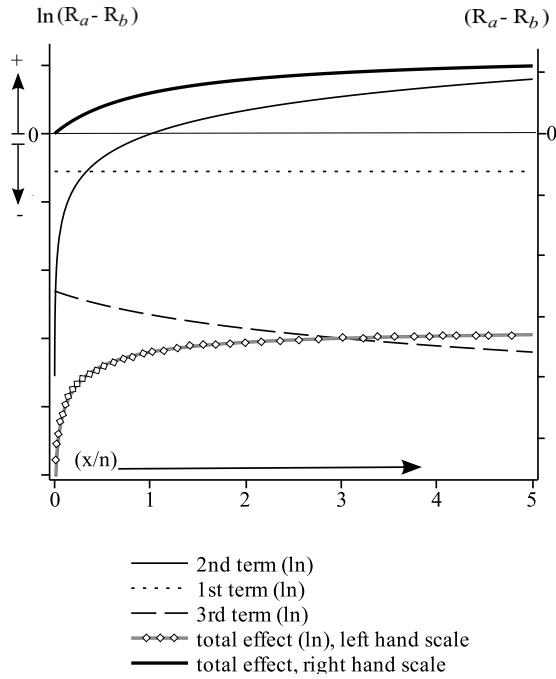


Figure 1: Impact of Enlargement on SWD (insiders' perspective)

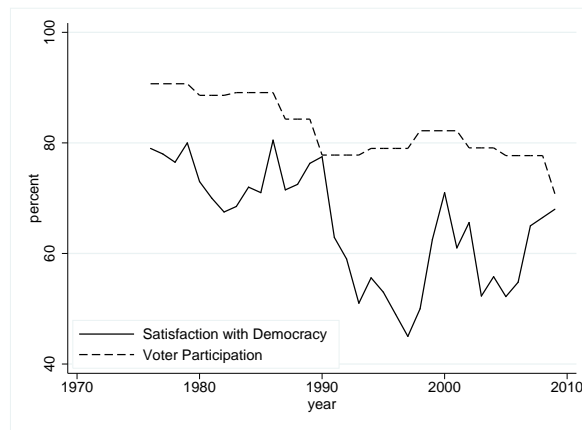


Figure 2: SWD and PART in Germany (1976 - 2009)

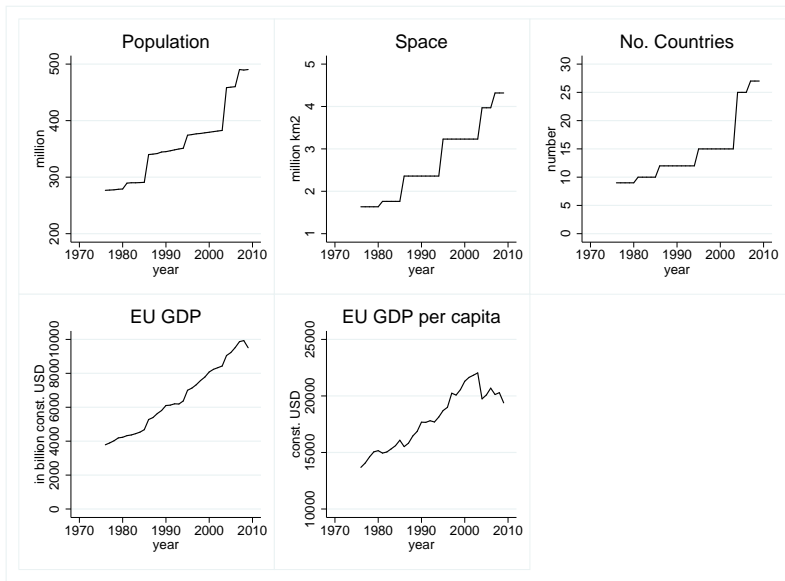


Figure 3: Five Dimensions of EU enlargement

Table 1: Bivariate Correlations

	SWD	PART	Pop (pure)	Space	No. of countries	EU-GDP (pure)	EU-GDP pc (pure)
SWD	1						
PART	0.6452*	1					
Pop (pure)	-0.4697*	-0.8172*	1				
Space	-0.5596*	-0.8082*	0.9713*	1			
No. of countries	-0.4180	-0.7194*	0.9749*	0.9421*	1		
EU-GDP (pure)	-0.5920*	-0.8308*	0.9632*	0.9949*	0.9172*	1	
EU-GDP pc (pure)	0.2020	0.6807*	-0.8879*	-0.7537*	-0.8808*	-0.7361*	1

\* indicating bivariate statistical significance at the level of 1 per cent

Table 2: Effects of EU enlargement on SWD (endogenous variable: SWD)

	Pop (pure)	Space	No. of countries	EU-GDP (pure)	EU-GDP pc (pure)
Enlarge	-7.23e-08 (-1.52)	-6.15e-06 (-1.42)	-.7610 (-1.46)	-.0095 (-1.43)	.0043 (1.46)
d_ger	-17.0393*** (-6.48)	-17.3144*** (-6.32)	-16.2467*** (-6.91)	-18.1735*** (-5.84)	-16.5979*** (-6.62)
d_east	-8.8362*** (-2.64)	-4.9187 (-1.26)	-7.7225** (-2.47)	-6.1113 (-1.63)	-12.3180*** (-2.68)
GE-GDP	-1.27e-06 (-0.03)	9.68e-07 (0.02)	-8.08e-06 (-0.18)	1.54e-05 (0.28)	-7.43e-06 (-0.15)
GE-GDP pc	.0015 (0.31)	.0014 (0.30)	.0014 (0.33)	.0006 (0.12)	.0017 (0.38)
Infl.	-2.7849*** (-4.36)	-2.8045*** (-4.25)	-2.5528*** (-4.56)	-2.8587*** (-4.17)	-2.7163*** (-4.39)
Unempl.	-3.4956*** (-6.51)	-3.5086*** (-6.35)	-3.3412*** (-6.73)	-3.3616*** (-6.80)	-3.5349*** (-6.30)
Openness	.5047*** (3.84)	.4648*** (3.70)	.6285*** (3.35)	.4087*** (3.59)	.5415*** (3.56)
t	-.4003 (-0.61)	-.4126 (-0.63)	-.4038 (-0.59)	-.5356 (-0.88)	-.3615 (-0.53)
constant	81.8667*** (2.95)	70.6841*** (2.85)	74.5253*** (2.74)	91.6950*** (2.97)	6.7738 (0.16)
No of Obs.	34	34	34	34	34
DW Statistic	1.9773	1.9640	2.0053	1.9564	1.9803
R-Squared	0.9209	0.9172	0.9243	0.9143	0.9210
Prob>F	0.0000	0.0000	0.0000	0.0000	0.0000

t-Statistics in parentheses

\* / \*\* / \*\*\* denoting statistical significance at the level of 10 / 5 / 1 per cent

Table 3: Effects of EU enlargement on PART (endogenous variable: PART)

	Pop (pure)	Space	No. of countries	EU-GDP (pure)	EU-GDP pc (pure)
Enlarge	-.520e-08*** (-2.69)	-.474e-06*** (-2.71)	-.4442* (-1.95)	-.0073** (-2.57)	.0029** (2.48)
d_ger	-1.5222 (-0.32)	-1.6110 (-0.34)	-1.1168 (-0.24)	-2.0659 (-0.44)	-1.2839 (-0.27)
d_east	3.9476* (1.69)	6.9009** (2.41)	4.4907* (1.78)	6.1795** (2.30)	1.4980 (0.65)
GE-GDP	-3.21e-05 (-0.65)	-3.22e-05 (-0.66)	-3.24e-05 (-0.63)	-2.42e-05 (-0.52)	-3.43e-05 (-0.68)
GE-GDP pc	.0038 (1.03)	.0039 (1.07)	.0036 (0.96)	.0036 (1.03)	.0039 (1.03)
Infl.	-.2627 (-0.82)	-.2870 (-0.88)	-.1187 (-0.37)	-.3392 (-1.03)	-.2151 (-0.67)
Unempl.	.9908*** (3.40)	.9802*** (3.31)	1.0962*** (3.63)	1.0932*** (3.76)	.9755*** (3.24)
Openness	.3631*** (3.34)	.3411*** (3.24)	.4190*** (3.14)	.3015*** (3.16)	.3833*** (3.24)
t	-1.5095*** (-5.00)	-1.5045*** (-4.86)	-1.5802*** (-5.45)	-1.5784*** (-5.06)	-1.5153*** (-5.03)
constant	68.0916*** (5.29)	60.3189*** (4.91)	60.2698*** (5.03)	78.4407 (5.08)	15.9213*** (0.79)
No of Obs.	34	34	34	34	34
DW Statistic	1.9424	1.9439	1.9056	1.9515	1.9249
R-Squared	0.9290	0.9288	0.9328	0.9287	0.9303
Prob>F	0.0000	0.0000	0.0000	0.0000	0.0000

t-Statistics in parentheses

\* / \*\* / \*\*\* denoting statistical significance at the level of 10 / 5 / 1 per cent