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No. 4954

## THE IMPACT OF TURKEY'S MEMBERSHIP ON EU VOTING

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Discussion Paper No. 4954  
March 2005

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CEPR Discussion Paper No. 4954

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## **ABSTRACT**

### The Impact of Turkey's Membership on EU Voting

In this paper, we evaluate the impact of Turkey's membership on EU voting. The aspects that we discuss are decision-making efficiency and the distribution of power in the EU's leading decision making body the Council of Ministers. We compare two alternative Council voting rules: those accepted in the Treaty of Nice and implemented by the Accession Treaty of ten 2004 entrants and the rules that are laid down in the Constitutional Treaty.

JEL Classification: C71, D71 and F02

Keywords: constitutional treaty, EU, Turkey and voting

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Submitted 26 January 2005

# The impact of Turkey's membership on EU voting

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## 1. Introduction

The Treaty of Nice in 2001 and the Constitutional Treaty in 2004 radically reformed the Council of Ministers' voting rules.<sup>1</sup> Political acceptance of the Constitutional Treaty rules was achieved in Brussels summit in June 2004. Soon after in November 2004 the Nice rules came into effect in November 2004. The changes made in the Constitutional Treaty were postponed by five years and even that requires that the Constitution will be ratified in all 25 member states of. The next enlargement is penciled 2007 when Bulgaria and Romania should enter. They, thus, enter under the current Nice rules but the next new members are likely to join under the rules of the Constitutional Treaty.

In this paper, we evaluate the impact of Turkey's membership on EU voting. The aspects that we discuss are decision making efficiency and the distribution of power in the EU's leading decision making body the Council of Ministers. We compare two alternative Council voting rules: those accepted in the Treaty of Nice and implemented by the Accession Treaty of ten 2004 entrants and the rules that are laid down in the Constitutional Treaty.

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<sup>1</sup> Legally, the Accession Treaty of 10 new member states 2004 implemented the voting system agreed politically in the Nice Treaty. The voting rules of the Constitutional Treaty comes into force on 1 November 2009 if it is ratified in all member states.

## 2. Council of Minister voting reforms

The Constitutional Treaty explicitly sets out two sets of Council's voting procedure and implicitly recognizes the current system set up by the Accession Treaty (Article 24):

### *Up to 31 October 2004*

The pre-Treaty of Nice rules apply, i.e. qualified majority voting with weighted votes and the old majority threshold of 71% to win. The numbers of votes for the incumbent 15 are unchanged; those for the 10 newcomers are a simple interpolation of EU15 votes as specified in the Accession Treaty.

### *From 1 November 2004 to 31 October 2009*

The Nice Treaty rules apply (as per the "Draft Council Decision relating to the implementation of Article I-24"). The Nice rules maintain the basic 'qualified majority voting' framework, but add two extra criteria concerning the number of yes-voters and the population they represent. Specifically, the vote threshold is 72.2% of the Council votes (232 of the 321 votes), the member threshold is 50% of members (13 members), and the population threshold is 62% of the EU population.<sup>2</sup>

### *From 1 November 2009*

The Constitutional Treaty (CT) rules apply, so weighted voting is out and double majority is in. A winning coalition must represent at least 55% EU members and 65% of the EU population. A last-minute Summit compromise inserted the requirement at least 15 members vote 'yes', but this is irrelevant; 15 members of 25 is 60% and thus greater than 55%, but by the time these rules take effect, the EU should have 27 members and 55% of 27 is 15 (Bulgaria and Romania are penciled in for membership in 2007). The 15 member rule will be redundant when it takes effect. Turkey's and Croatia's membership will, in any case, materialize after that date.

To come into force, the CT rules need ratification of all member states. The fall-back position is the Nice-rules, which make it possible that Turkey and Croatia enter under the Nice rules. Therefore, in the following we evaluate these two rules in the EU-25 and EU-29 and compare especially the impact of Turkey's membership on the countries of EU-25 who have the most substantial say in the ratification process of the Constitution.

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<sup>2</sup> The rules that take effect in November 2004 are not those agreed at the Nice Summit, December 2000. The deal struck at 4 a.m. at the end of the longest EU Summit in history was a political commitment. The legally binding changes are in the Accession Treaty. Since EU leaders eventually realized how inefficient the Nice rules were, they improved efficiency by lowering the vote threshold from the 74% mentioned in the Nice Treaty.

### 3. Our tools of assessment

#### ***Capacity to act***

‘Capacity to act’ and ‘decision-making efficiency’ are slippery concepts. There is, however, a quantitative tool in voting game theory that helps make things more precise. The so-called ‘passage probability’ gauges how likely it is that the Council would approve a randomly selected issue – random in the sense that each EU member would be equally likely to vote for or against it. The best way to describe this measure is to explain how it is calculated.

First, the computer calculates all possible coalitions among EU members, namely every possible combination of yes- and no-votes by EU members (there are 134 million possible coalitions in the EU27). Then the computer checks each coalition to see if it is a winning coalition under the Nice voting system; this is done using each member’s actual weight on the three criteria (votes, members, population) and the three thresholds. The passage probability tells us what fraction of these coalitions are winning coalitions. It is called the passage probability because it is the likelihood that a random proposal would attract a winning coalition, assuming all coalitions are equally likely (random in the sense that member states do not know what their stance would be). Admittedly, this is a crude measure, but it is objective, precise and its strengths and shortcomings are clear.

Even if the exact passage probability is meaningless (the Commission does not put forth random proposals), Figure 1 shows that the Nice Treaty fails on efficiency grounds since it implies a level of efficiency that is far, far below that of the EU15. Indeed, the Nice reforms actually made matters worse. Admitting 12 new members without any reform would have cut the passage probability to a third of its already low level, namely to 2.5%. With the Nice reforms, the figure drops even further to 2.1%. We note that the main source of the lower efficiency is the high threshold of the Nice rules for Council votes. A second, cruder but more transparent efficiency-measuring tool – i.e. blocking-minority analysis – confirms these efficiency findings.

As with the ability to act, there can be no perfect measure of power, but even imperfect measures are useful when considering complex voting rules since a voting scheme’s political acceptability turns almost completely on its power implications.

The measures we use are called the Normalised Banzhaf Index (NBI) and the Shapley-Shubik index (SSI). In plain English, they gauge how likely it is that a nation finds itself in a position to “break” a winning coalition<sup>3</sup> on a randomly selected issue. Thus, the NBI and SSI tell us how influential a country is likely to be on a randomly chosen issue. More concretely,

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<sup>3</sup> In the literature, the term ‘swing’ is quite often used instead of ‘break’..

The NBI assumes that each possible coalition has the same probability of occurrence. This makes all winning coalitions equally likely too and the measurement of power is simply counting the score of breaking positions for each player. To get a relative measure of power this is then divided by the total number of scores. Of course, on particular issues various countries may be much more or much less powerful – especially if they are part of a like-minded group (see Baldwin, Berglof, Giavazzi and Widgren 2001 for details and simple numerical examples), but the NBI has recently proved its worth especially as an un-bribeable tool in assessing and designing voting rules.

To make our way to approach political power more transparent let us illustrate how it works with the following simple example. Consider a simple three person voting body, like the Council of Ministers, with voters labeled with A, B and C. Suppose that A has four votes, B has 2 votes and C has one vote. The total number of votes is seven. Let us assume that five votes are needed to pass proposals. Here, we have three winning coalitions

AB, AC, ABC

where the actors that are able to “break” a winning coalition are underlined. Now, A has three breaking positions, B has 2 and C only one. The number of breaking positions is six, which means that the NBI of A is  $1/2$ , whereas the NBIs of B and C are  $1/3$  and  $1/6$  respectively.

The SSI tries to capture a different abstract voting model. It assumes that voters have different intensities to accept or reject a proposal. Suppose that these intensities can be expressed on a line having the extremes of more spending and less spending. For instance when the issue is the support for hillside farmers it may be that A is the most reluctant to increase spending, then B leaving C as the most favourable to increase support for this purpose. On the other day, the issue might be the inclusion of reindeer meat in the CAP’s price support mechanism, This time we might get a different order of preferences.

In general, one can think that after considering a big enough number of issues all preference orders of A, B and C are equally likely. In our numerical example we get six orderings as follows

ABC ACB BAC BCA CAB CBA

where the critical voter is underlined. A critical voter exerts power as (s)he is able to break a winning coalition. In the first order ABC, B can do that by breaking a winning coalition AB. Voter A favours more spending on this issue than B. Therefore A is not critical. Should voter A try to break the winning coalition AB by voting against spending, voter B would have already broken that as (s)he is less eagerly in favour of spending. In the example, voter A has four pivotal positions, voters B and C one each. In relative terms we get  $2/3$  for A and  $1/6$  for both B and C. If SSI is a meaningful estimate for power and if power politics is able to explain EU budget these should be A’s, B’s and C’s budget shares respectively.

Clearly, these measures of power do not provide a detailed description of real-world voting procedures. For instance they lack all strategic aspects, like who makes the proposal to be voted on or the sequence of moves. They both contain, however, some information of voters' preferences understood as intensities of holding a favourable position. On the other hand, the measures consider all possible orderings of intensities (SSI) or presume equal likelihood of all coalitions (NBI), which makes them a very long-term concept. For a general evaluation of voting rules this is a desirable property.

The example above demonstrates that the NBI and SSI can have very different values. Which one we should then choose? There is no clear answer to that but as a rough distinction if one is interested in voting rules as such the NBI is more advantageous but if one is more interested in decision-making and bargaining under certain rules knowing that actors communicate then the SSI is far more suitable tool.<sup>4</sup>

## 4. Turkey's impact

### 4.1 Implications on EU's capacity to act

Turkey's membership would have only moderate implications for the passage probabilities as Figure 1 shows. This is not surprising since moving from 27 members to 29 does not change much. Although Croatia increases the number of small nations in the EU Turkey's large population means that there is little damage in efficiency. (Efficiency, if not legitimacy, tends to be higher when a large share of power is in the hands of just a few nations.) As usual, the Nice rules – which are essentially unworkable even in the EU27 – become even less viable in an EU29. The vote thresholds that are used in calculations are extrapolations of the current Nice/Accession Treaty threshold. In EU-29, it is 276 out of total 381 votes plus the two additional criteria: at least 15 member states and 62 per cent of population. In EU-27, it is 250 out of total 345 votes plus the two additional criteria: at least 14 member states and 62 per cent of population.

As usual, the Nice rules – which are essentially unworkable even in the EU27 – become even less viable in an EU29. The same does not hold for the Constitutional Treaty's voting rules. The passage probability jumps drastically from the Nice rules low levels up to the level of EU-12 and even higher. Surprisingly, under the Constitutional Treaty's rules the EU's ability to act is improving when its membership expands from 25 to 27 or 29. There is only a slight drop from EU-27 to EU-29 from 12.9 to 12.2 per cent.<sup>5</sup>

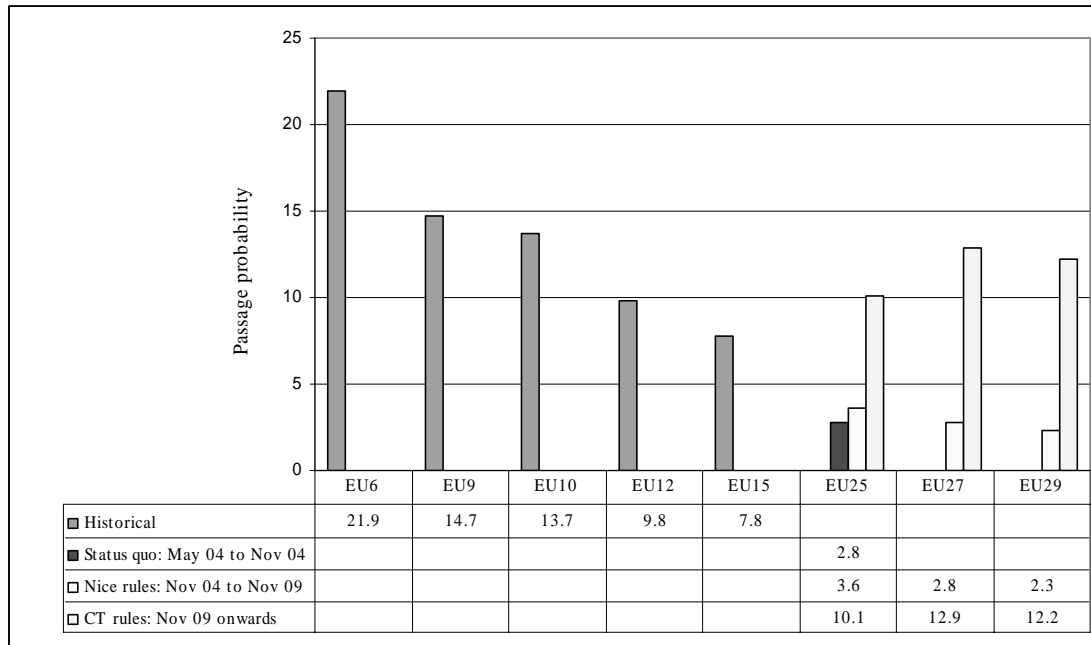
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<sup>4</sup> See e.g. Laruelle and Widgrén (1998), Widgrén (1994) and Laruelle and Valenciano (2004). A recent empirical application of the SSI is Kauppi and Widgrén (2004).

<sup>5</sup> Note that in EU-28 (EU-27 + Turkey), the passage probability is 11.2 per cent, hence lower than it is in EU-29 (see Baldwin and Widgrén 2003b). That is because the membership quota - 55 per cent of membership – is 16 in both EU-28 and EU-29. It is thus closer to 55 per cent in EU-29 than in EU-28 the exact numbers being 55.2 and 57.1 per cent respectively.



Figure 1. Passage probabilities in the EU Council 1957-2004 and after the entry of Bulgaria, Romania Croatia and Turkey



Notes: The figure shows the passage probability which measures the likelihood of that randomly selected issue would pass in the Council of Ministers. Source: Authors' calculations.

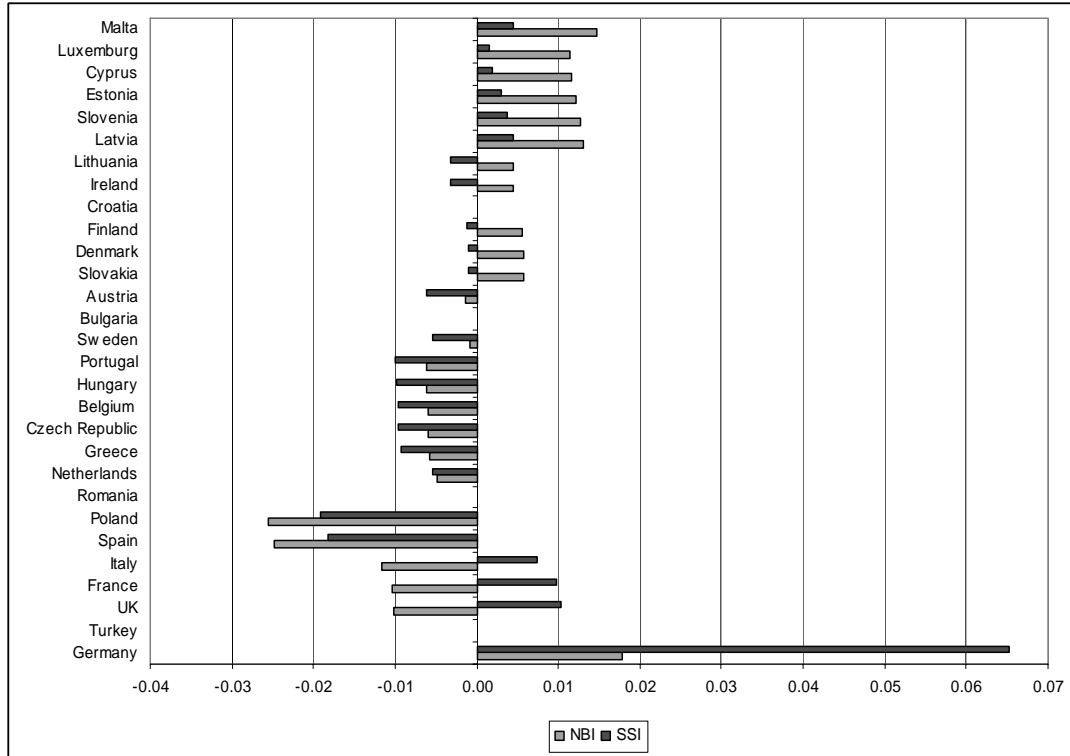
In sum, the passage probability calculations demonstrate that Turkey's membership does not deteriorate EU's ability to act. Under the Constitutional Treaty's rules, the effect of Croatia and Turkey together is significantly smaller – one percentage point – than Turkey's alone. The most important impact on EU's capacity to act is due to the switch from the Nice rules to the Constitutional Treaty's rules.

#### 4.2 The impact on the distribution of power

The Constitutional Treaty and the Nice rules have substantial differences in power evaluation as well. Figure 2 shows the difference of these rules in terms of the NBI and SSI in EU-25 and Figure 3 the respective numbers in EU-29. The difference is measured in percentage points.

Figure 2 shows that before Turkey's entry the CT rules favour the four biggest nations and the six smallest, i.e. Latvia and smaller, if the comparison is made using the SSI. Based on the NBI the conclusion is somewhat different: then Germany and Slovakia and smaller countries would gain from the CT rules compared to the Nice rules. Note that this result differs from what was obtained in Baldwin and Widgrén (2004b) for EU-27 where the NBI showed exactly the same pattern as the SSI here.

Figure 2. Change in power in EU-25, Nice to CT rules, %-points

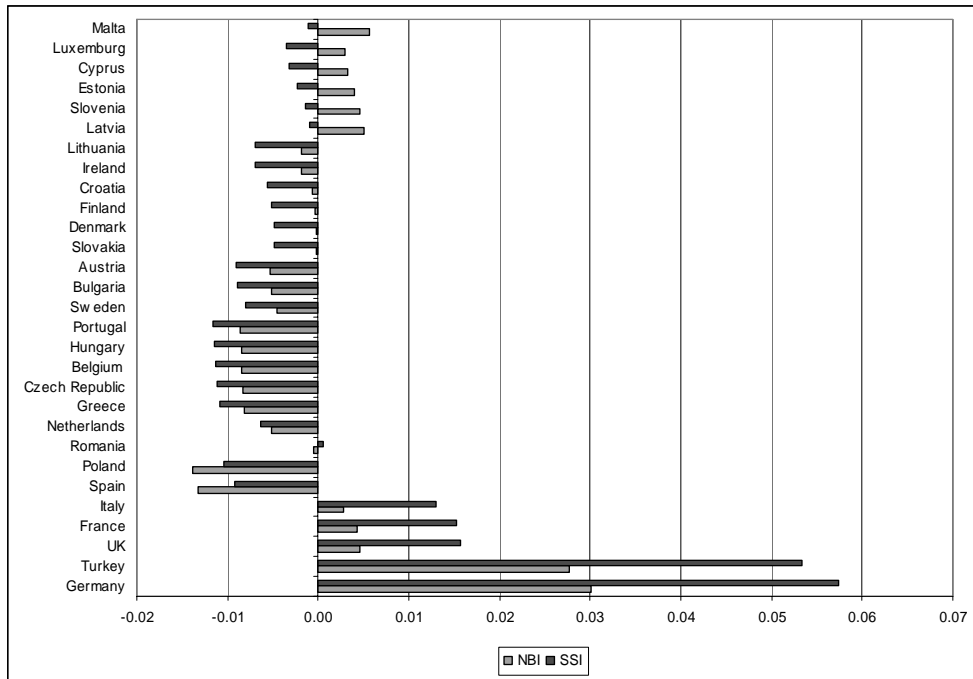


Source: Authors' calculations.

After Turkey's entry the biggest nations gain more from the CT rules than in EU-25. This holds for both power measures. For the smallest countries the effect is ambiguous: the NBI shows gains for Latvia and smaller nations whereas the SSI shows small losses. Otherwise both indices show consistent results.

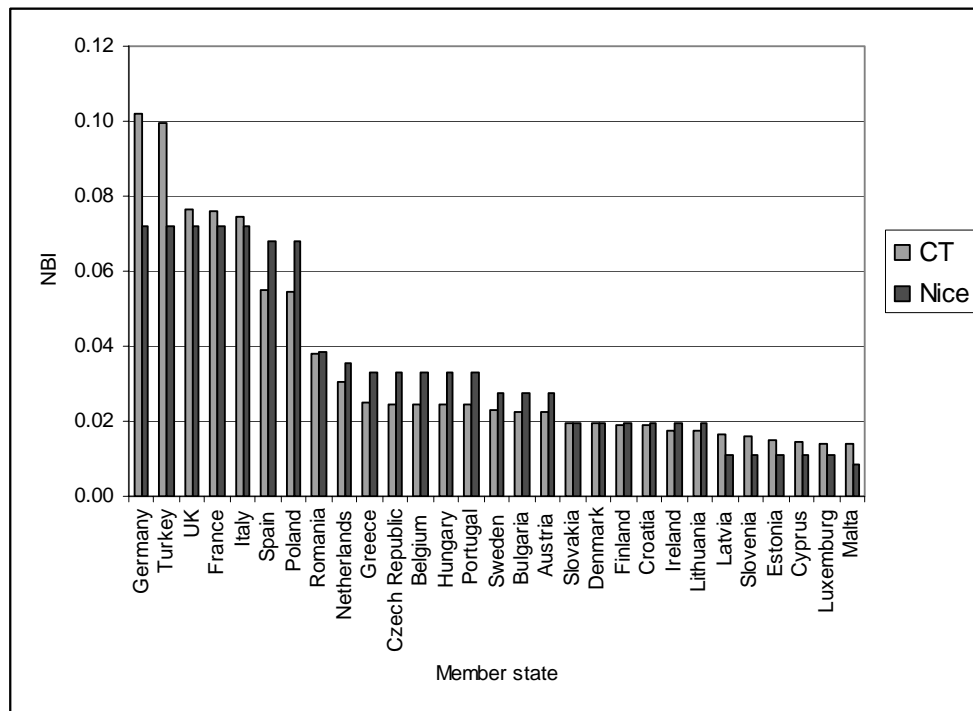
Figure 4 makes an explicit comparison of the Nice and CT rules. The figure shows the NBI-values under both rules. The message of the figure is very clear. The countries that gain the most from the CT rules are the biggest nations Germany and Turkey. The biggest losers are Spain and Poland but also the medium-sized countries from the Netherlands to Austria. That might affect these countries' attitude either towards the ratification of Constitution or Turkey's membership. An interested reader can find both index-values in EU-25 and EU-29 in Appendix.

Figure 3. The power difference between the CT and Nice rules in EU-29, %-points



Source: Authors' calculations.

Figure 4 The NBI-values under the Nice and CT voting rules in EU-29



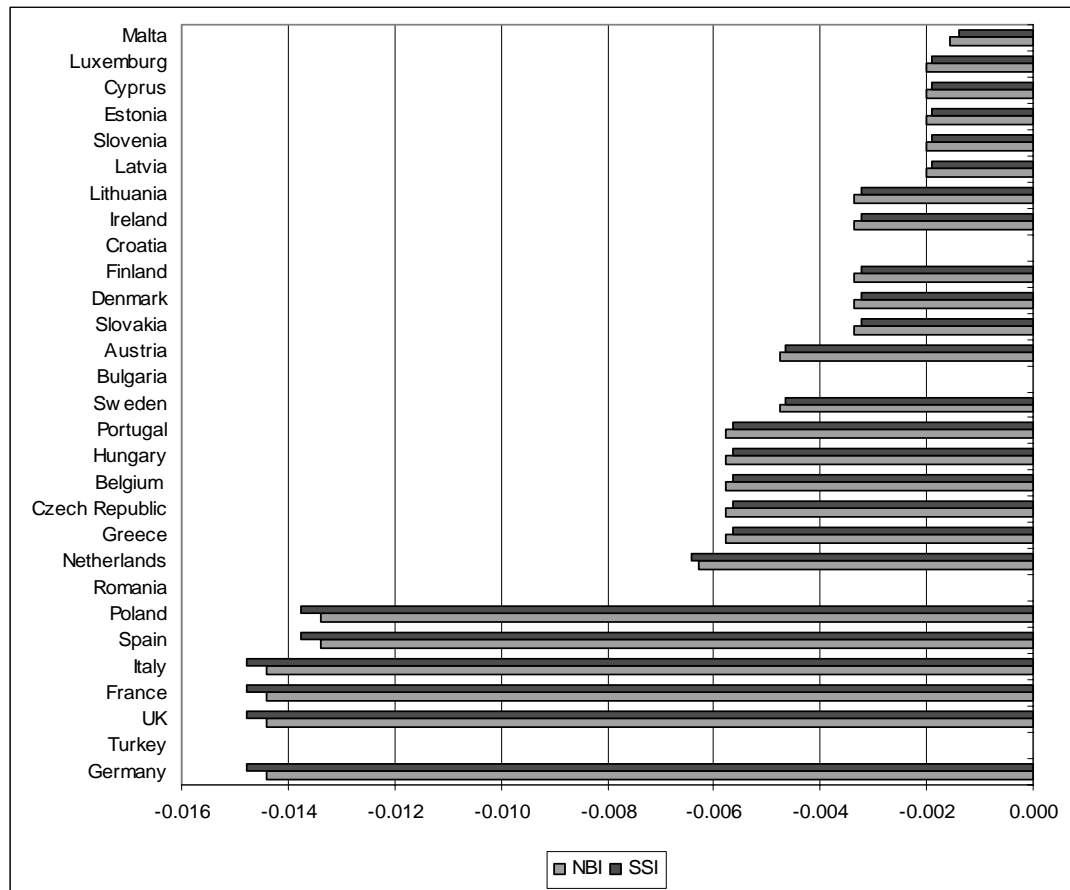
Source: Authors' calculations.

## Enlargement's impact on incumbent's power

Figures 5 and 6 evaluate the impact of the enlargement from EU-25 to EU-29 in terms of both power indices. In Nice the countries' power losses are proportional to their sizes. Germany, the biggest country loses most while the smaller nations lose less. The relative losses are of the same magnitude. This reflects the fact that in weighted voting power indices tend to converge to voting weights if the number of actors increases and if the voting weights have relatively small variance.

In figure 6, the result is more interesting. When evaluated by the NBI the expansion from EU-25 to EU-29 benefits France and the UK.<sup>6</sup> The losses of other big countries are very small (the Netherlands and larger nations). For the countries smaller than Rumania the losses are slightly increasing towards the smallest nations. The SSI gives, however, somewhat different picture. The most notable exceptions are the biggest countries, especially Germany. The power loss of the Netherlands remains small.

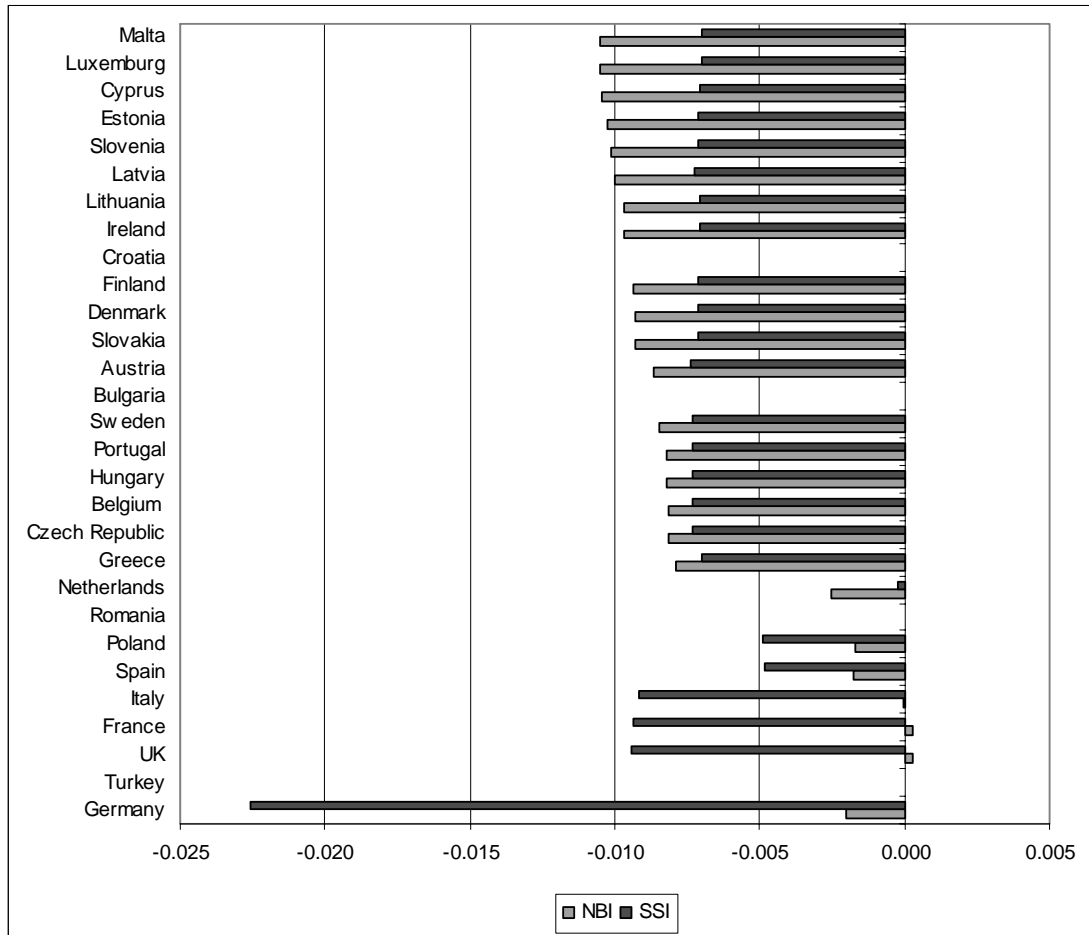
Figure 5. *Enlargement's impact on EU25 power, %-points, Nice rules*



Source: Authors' calculations.

<sup>6</sup> This phenomenon is often referred to as the paradox of new members.

Figure 6. *Enlargement's impact on EU25 power, %-points, CT rules*



Source: Authors' calculations.

## 5. Conclusions

This paper investigates the decision-making impact of expanding the EU from 25 to 29 via new memberships for Bulgaria, Romania, Turkey and Croatia. We focus on a measure of the EU's capacity to act – the passage probability – and the power distribution among members.

As far as the capacity to act is concerned, the enlargement is projected to have relatively little impact, as long as the CT voting rules come into effect. In particular, Turkey's membership has only a negligible effect on EU's capacity to act. The answer, however, is quite different if the CT is rejected and the Nice Treaty rules remain in place. Under the Nice voting rules, the 25-to-29 enlargement would substantially lower the EU25's ability to act. Thus, our findings confirm that the enlarged EU cannot function well under the

Nice Treaty rules. It also suggests that if the CT is rejected, the Nice voting rules must be reformed before further enlargement.

As far as power is concerned, we find that Turkey will have a big impact. Under either the Nice or CT rules, Turkey would be the second most powerful member of the EU29. Under the CT rules, Turkey would be substantially more powerful than France, Italy and Britain, while under the Nice rules the power differences among the 50-million-plus members would be small. Plainly, this might decrease the acceptability of the Constitutional Treaty and/or Turkey's membership.

The 25-to-29 enlargement's impact on the voting power of EU incumbents depends heavily upon the rules. Under the CT rules, the enlargement lowers the power of all incumbents on a fairly even basis with the marked exception of Germany; Germany loses more than twice as much as any other member. Under the Nice rules, the power loss is more heavily skewed towards big incumbents. Again, all incumbents are projected to lose power, but power loss increases progressively with member size. For example, the power loss to France under the Nice rules is something like 7 times larger than the power loss to Malta.

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## Appendix

*Table A1. Power indices under CT rules*

<i>Member state</i>	<i>NBI_EU29</i>	<i>NBI_EU25</i>	<i>SSI_EU29</i>	<i>SSI_EU25</i>
Germany	0.10203	0.10407	0.13556	0.15816
Turkey	0.09960		0.13152	
UK	0.07644	0.07614	0.09389	0.10332
France	0.07611	0.07587	0.09339	0.10278
Italy	0.07469	0.07475	0.09121	0.10041
Spain	0.05491	0.05670	0.06313	0.06798
Poland	0.05429	0.05602	0.06203	0.06694
Romania	0.03786		0.03664	
Netherlands	0.03052	0.03715	0.02701	0.03440
Greece	0.02495	0.03304	0.01991	0.02721
Czech Republic	0.02474	0.03287	0.01964	0.02693
Belgium	0.02463	0.03279	0.01950	0.02680
Hungary	0.02453	0.03271	0.01936	0.02666
Portugal	0.02442	0.03262	0.01922	0.02651
Sweden	0.02314	0.03162	0.01758	0.02489
Bulgaria	0.02250		0.01676	
Austria	0.02239	0.03103	0.01663	0.02403
Slovakia	0.01940	0.02870	0.01288	0.02000
Denmark	0.01940	0.02870	0.01288	0.02000
Finland	0.01918	0.02854	0.01261	0.01975
Croatia	0.01886		0.01221	
Ireland	0.01768	0.02737	0.01077	0.01785
Lithuania	0.01768	0.02737	0.01077	0.01785
Latvia	0.01628	0.02630	0.00905	0.01631
Slovenia	0.01585	0.02598	0.00853	0.01568
Estonia	0.01521	0.02547	0.00774	0.01487
Cyprus	0.01445	0.02490	0.00680	0.01384
Luxemburg	0.01413	0.02465	0.00641	0.01342
Malta	0.01413	0.02465	0.00641	0.01342

Source: Authors' calculations

Table A2. *Power indices under Nice rules*

<i>Member state</i>	<i>NBI_EU29</i>	<i>NBI_EU25</i>	<i>SSI_EU29</i>	<i>SSI_EU25</i>
Germany	0.07189	0.08630	0.07814	0.09292
Turkey	0.07189		0.07814	
UK	0.07189	0.08630	0.07814	0.09292
France	0.07189	0.08630	0.07814	0.09292
Italy	0.07189	0.08630	0.07814	0.09292
Spain	0.06821	0.08159	0.07237	0.08613
Poland	0.06821	0.08159	0.07237	0.08613
Romania	0.03832		0.03615	
Netherlands	0.03565	0.04195	0.03340	0.03983
Greece	0.03305	0.03881	0.03082	0.03648
Czech Republic	0.03305	0.03881	0.03082	0.03648
Belgium	0.03305	0.03881	0.03082	0.03648
Hungary	0.03305	0.03881	0.03082	0.03648
Portugal	0.03305	0.03881	0.03082	0.03648
Sweden	0.02771	0.03246	0.02560	0.03024
Bulgaria	0.02771		0.02560	
Austria	0.02771	0.03246	0.02560	0.03024
Slovakia	0.01954	0.02291	0.01777	0.02099
Denmark	0.01954	0.02291	0.01777	0.02099
Finland	0.01954	0.02291	0.01777	0.02099
Croatia	0.01954		0.01777	
Ireland	0.01954	0.02291	0.01777	0.02099
Lithuania	0.01954	0.02291	0.01777	0.02099
Latvia	0.01124	0.01324	0.00999	0.01190
Slovenia	0.01124	0.01324	0.00999	0.01190
Estonia	0.01124	0.01324	0.00999	0.01190
Cyprus	0.01124	0.01324	0.00999	0.01190
Luxemburg	0.01124	0.01324	0.00999	0.01190
Malta	0.00841	0.00998	0.00755	0.00895

Source: Authors' calculations