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Public Opinion and Enlargement

A Gravity Approach

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ABSTRACT

This paper examines European Union (EU) member state attitudes toward enlargement. We use Eurobarometer data for aggregate national support from 1996 to 2002 for the accession of each of 13 candidate countries – the 10 that will join the EU in 2004 plus Bulgaria, Romania, and Turkey. Analyzing our cross-section time series, we find, first, that the level of support correlates positively with the share of the candidate country in the total exports of the member state and negatively with the distance between the capitals of the member state and the candidate country. This finding supports the hypothesis that common identity, or ‘we-feeling,’ grows with interaction (Deutsch et al., 1957). Second, support correlates negatively with the relative importance of agriculture in domestic employment. Since agriculture triggers EU financial flows, this finding supports the view that attitudes toward integration are policy related (Gabel, 1998b, 1998c). Third, support is lower when both the member state and the candidate country are predominantly Catholic. This suggests that, although Catholics may desire a deeper Europe (Nelsen et al., 2001), they oppose a wider Europe.

KEY WORDS

- enlargement
- European integration
- Karl Deutsch
- public opinion
- religion

Introduction

Popular attitudes within existing member states are important for the success of enlargement. Whether the example is the sequence of Irish referenda (first negative and then positive), the Autumn 2002 parliamentary debate in the Netherlands, or the off-hand comments of the President of the European Convention – what is clear is that public opinion matters. But it is less clear how public opinion is structured. This is true particularly with reference to the attitudes of specific member states toward specific candidate countries. We can make assertions about the sentiments of the French toward the Romanians or the Germans toward the Poles, but there is almost no literature positing a set of general propositions about how one country should be expected to view another.

Karl Deutsch et al. (1957) offer an argument about the development of trans-national affinities in their work on security communities in the North Atlantic. Deutsch argued that lasting communities of integration rely on

a matter of mutual sympathy and loyalties; of 'we-feeling', trust, and mutual consideration; of partial identification in terms of self-images and interests; of mutually successful predictions of behavior, and of cooperative action in accordance with it – in short, a matter of perpetual dynamic process of mutual attention, communication, perception of needs, and responsiveness in the process of decision-making. (Deutsch et al., 1957: 36)

Much of this is difficult to capture directly. Nevertheless, the argument can be simplified for analysis. As Rosamond (2000: 44) suggests, 'the guiding hypothesis of transactionalist work on integration [like Deutsch's] was that a sense of community *among* states would be a function of the level of communication between states.' The assumption is that interaction breeds familiarity, which in turn promotes the 'we-feeling' or attitudinal sympathy that Deutsch believed to be a key to success. Hence, Deutsch's work is identified as the basis for the 'affinitive' strand of the 'transactions approach' to the study of integration (hereafter referred to as the transactions-affinities approach).

Despite this widespread recognition, Deutsch's work has not had a deep impact on the integration literature, at least in comparison with some of his contemporaries such as Ernst Haas or Stanley Hoffmann (Hansen, 1969; Caporaso, 1998). Although a number of writers pursued the transactions-affinities approach through the late 1950s and 1960s (Inglehart, 1967; Puchala, 1970; Scheingold, 1971), many of these same writers came to view Deutsch's theory as unworkable by the early 1980s (Puchala, 1981). The weak impact of Deutsch's work also derived from the early inclusion of transactions variables

– such as distance or interaction between countries – into more readily testable institutionalist (or ‘functionalist’) accounts (Haas and Schmitter, 1964; Barrera and Haas, 1969). Although this functionalist research program did not cover exactly the same questions as Deutsch’s transactions-affinities approach, it was close enough to draw attention away from the Deutschian tradition.

These factors continue to mitigate Deutsch’s influence on the study of European integration today. Hence, where the more contemporary literature has referred to Deutsch, it has also tended to avoid the causal mechanism linking international transactions to the development of a sense of community, partial identification or ‘we-feeling.’ Sandholz (1998: 136) and Stone Sweet and Brunell (1998: 64) deploy the notion of transactions as a motive force for self-interested policy adaptation by narrowly focused interest groups rather than as a motor for the development of transnational affinities. Dalton and Eichenberg (1998: 256, 281) highlight Deutsch’s concern for national values as an obstacle to integration. Nelsen and Guth (2003: 91) assert that ‘the original six countries of the European Economic Community possessed what Deutsch (1957) termed a “we-feeling” precisely because they shared Catholic cultures’ – and therefore, presumably, not because they maintained a high level of interaction per se. Meanwhile, the few works that do emphasize the role of transnational affinities in the relationship between interaction and integration argue from a theoretical and not an empirical basis (Howe, 1995). Such arguments do not provide a test of Deutsch’s transactions-affinities approach but rather examine the implications of assuming that Deutsch is right.

Eichenberg and Dalton (1993) provide something close to an empirical test of the transactions-affinities approach. Using aggregate national data, they demonstrate that popular support for integration correlates positively with the level of intra-European trade. Hence, they argue that ‘the growth of intra-EC trade has been a major stimulus to “Europeanist” sentiment’ (Eichenberg and Dalton, 1993: 523). However, their findings do not support the contention that transactions have brought national communities together. Rather they suggest that national populations are sensitive to the link between European integration and the growth of intra-European trade. Given the prominence of market-opening as a policy objective of the European Economic Community, Eichenberg and Dalton’s (1993) findings could more easily be interpreted as confirming the view that attitudes toward integration reflect economic or policy concerns (Gabel, 1998b: 85) and not transnational affinities per se. Indeed, this policy-related implication is the predominant interpretation of such findings (Eichenberg, 1998: 5).

The purpose of this article is to provide a more direct test of the transactions-affinities approach to attitudes about integration within the

context of enlargement. Using aggregate national response data from Eurobarometer, we examine whether the level of transactions between existing member states and specific candidate countries can explain support in the member states for the accession of those specific candidate countries. At the same time, we test whether aggregate national support can be explained as a function of policy-relevant variables for relative income per capita or agricultural employment. We also consider whether support can be explained as a result of other types of special relationships that may be independent of the level of transactions between countries. The analysis is presented in five parts. The first locates the role of transnational affinities within the existing literature on popular attitudes toward European integration. The second introduces the data for analysis. The third describes the model and the estimation technique. The fourth section presents the findings. The fifth section concludes.

Literature

Why do we need Deutsch? The existing literature on public opinion and European integration has developed largely without reference to the notion of transnational affinities, a sense of community, or 'we-feeling' between member states. Instead, the literature focuses almost exclusively on attitudes toward European integration as a project or toward national participation in the European Union. Within that literature, two strands predominate – one centering on the importance of economic (or partisan) rationality and the other focused on the resilience of national (or religious) identity. For sake of concision, we refer to these strands in terms of 'rationality' and 'identity.'

The 'rationality' strand, illustrated by Eichenberg and Dalton (1993) and Gabel (1998b), focuses attention on why national populations accept to participate in European integration. In broad terms, the argument is that support for integration is a function of the benefits derived from membership. Since these benefits are not evenly distributed across all groups in society, this support may fracture across existing political or party cleavages. Indeed, the impact of integration may be so important as to induce a new national–international cleavage within national political discourse (Hix, 1999). Hence, the interesting questions from this perspective center on why particular groups support integration in some areas over others (Hooghe, 2003). They consider whether public opinion accurately reflects underlying economic rationality (Anderson, 1998; Gabel, 1998a). And they ask how the public balances its political allegiance to national and supranational organizations (van Kersbergen, 2000).

The 'identity' strand of the public opinion literature focuses more

prominently on opposition to European integration, although clearly this has implications for support as well. The argument is that attitudes toward integration derive, at least in part, from a reluctance to share political power with foreigners – except, perhaps, where domestic politics is already regarded as untrustworthy (Sánchez-Cuenca, 2000). By implication, the determinants of popular attitudes must reside in the distinction between the foreign and the domestic. However, that distinction may have many sources. It may emanate from shared experience or from common assessments of national performance (Kritzinger, 2003). It may stem from religion (Nelsen et al., 2001; Nelsen and Guth, 2003), or it may derive from more complicated notions of national identity (Deflem and Pamel, 1996; Carey, 2002).

This literature has largely omitted the question of how countries view each other within the European project. When European integration embraced only a small number of relatively similar countries, that omission was unremarkable. Now that the European Union is expanding to include a much wider variety of countries, however, it becomes more glaring. Whether or not the existing member states accept to participate in integration, it is now increasingly likely that they will hold strong views about integrating with other specific member states. Hence, it is necessary to consider a range of questions about the structure of national attitudes toward other countries. First, does transnational affinity reflect the level of transactions between countries? Second, are such affinities influenced by the likely level of financial flows that take place within the European Union? And, third, to what extent do attitudes across countries reflect historic animosities, friendships, or transnational, i.e. religious, notions of community? These are the questions that we address.

Data

Our measure for affinity between countries is derived from the aggregate national responses to a single question in the Eurobarometer surveys. Respondents within the existing member states were asked: 'For each of the following countries, would you be in favor or against it becoming part of the European Union in the future?'

The respondents were then presented with a list of countries. This list of countries was not always the same from year to year, and not all of the countries on the list were actually candidates for membership. For example, the list contained 24 countries in 1996 and only 11 countries in 1998. The longer 1996 list included countries that did not wish to join the EU, such as Iceland and Switzerland, and countries that the EU would not accept as candidates, such as Bosnia and Serbia. The shorter 1998 list excluded two countries that

were eager to participate in the accession process: Malta and Turkey. We chose to assemble aggregate national responses with reference to the 13 actual candidate countries¹ over a seven-year period from 1996 to 2002 – albeit without responses relative to Turkey or Malta in the 1998 cross-section. As a result, we have 1335 observations for analysis organized in 195 panels – one for each combination of member state and candidate country.² For our analysis, we focus on two measures of aggregate responses: net support, measured as the ratio of support over the sum of support and opposition (taken as a percentage), and non-response (as a percentage of respondents). Summary statistics for these measures of the dependent variable are provided in Table 1. These statistics are presented both in aggregated form and by member state or candidate country.

We use three different proxies to capture the level of transactions between the member states and the candidate countries for use as independent variables. First, we measure the distance between national capitals in kilometers. Second, we calculate the share of exports from the member state to the candidate country in the total exports of the member state.³ Third, we create a dummy variable to represent shared borders, where 1 meant that the frontiers of the member state and the candidate country were contiguous and 0 meant they were not. These proxies are not comprehensive and we could easily include a much wider array of measures for interaction. However, they are recognized as being suitable for analysis within the transactions literature (Puchala, 1970).

We also use two different variables to capture the policy implications of enlargement. First, we calculate a measure of relative wealth or poverty, using the ratio of per capita income in the candidate country to per capita income in the member state. Second, we calculate a measure of relative dependence on agricultural employment, using the ratio of the agricultural share in total employment in the candidate country relative to the member state.⁴ Summary statistics for these independent variables are provided in Table 2.

Finally, we rely on a series of dummy variables (coded 1,0) to represent historic relationships or transnational communities.⁵ Our initial estimations included variables for:

- the Nordic member states and the Baltic states;
- Greece and Turkey;
- Greece and Cyprus;
- Germany, Poland, and the Czech Republic;
- Germany and Turkey;
- countries sharing a common religion;⁶
- countries sharing the Catholic religion.

Table 1 Dependent variables: Non-response rates and net support (%)

	<i>Non-response (dkn_{ij})</i>		<i>Net support (nsp_{ij})</i>	
	<i>Mean</i>	<i>Std. dev.</i>	<i>Mean</i>	<i>Std. dev.</i>
Aggregate	21.90	7.80	56.70	15.50
<i>By member states</i>				
Austria	20.29	5.26	41.05	13.79
Belgium	18.55	6.11	43.46	7.19
Britain	30.65	3.85	55.75	9.36
Denmark	13.11	3.50	63.92	14.17
Finland	17.26	2.72	60.06	12.80
France	19.96	3.35	36.17	8.21
Germany	19.97	3.23	43.97	10.00
Greece	14.78	4.15	65.36	15.15
Ireland	34.35	5.21	65.70	8.63
Italy	21.92	3.81	58.63	8.99
Luxembourg	17.53	2.37	47.27	11.26
Netherlands	16.10	2.83	61.98	9.30
Portugal	31.90	4.14	58.87	7.87
Spain	31.69	2.72	73.26	4.87
Sweden	20.38	6.52	75.06	10.42
<i>By candidate countries</i>				
Bulgaria	22.87	7.50	52.49	14.60
Cyprus	21.66	7.50	60.92	14.57
Czech Republic	21.50	7.57	60.85	13.11
Estonia	22.67	8.42	57.12	16.24
Hungary	20.05	7.60	65.60	11.47
Latvia	23.09	8.33	56.60	15.30
Lithuania	22.99	8.23	55.93	15.41
Malta	21.46	6.60	66.96	11.56
Poland	19.49	7.40	62.20	14.41
Romania	21.87	7.52	49.66	15.56
Slovakia	22.84	7.65	54.59	13.68
Slovenia	23.60	7.77	51.82	12.92
Turkey	20.29	8.11	41.70	13.91

Notes: The variables are derived from aggregate national responses within each of the 15 existing member states to the question 'For each of the following countries, would you be in favor or against it becoming part of the European Union in the future?' with respect to each of 13 candidate countries over the period 1996 to 2002. The total number of observations is 1335, observations relating to Malta and Turkey in 1998 were not reported. Net support is (support/[support + opposition]).

Source: Eurobarometer (various).

Table 2 Independent variables: Trade, distance, wealth, and agriculture

<i>Aggregate data only</i>	<i>Mean</i>	<i>Std Dev.</i>	<i>Min.</i>	<i>Max.</i>
Share in total exports (%)	0.45	0.64	0.00	5.74
Distance between capitals (kms)	1642	796	63	3825
Relative per capita income (ratio) ^a	0.24	0.19	0.03	1.14
Relative agricultural employment (ratio) ^a	4.73	5.78	0.10	44.52

^a Both ratios are candidate country over member state.

Source: IMF, *Direction of Trade Statistics*; European Commission *AMECO Database*.

Not all of these variables were significant in the analysis and some could not be used at the same time. Therefore, we narrowed down the list of prior relationships to four: Nordic–Baltic, Greece–Turkey, Greece–Cyprus, and Catholic.

Model

The model that we use is based loosely on the ‘gravity’ model deployed in economics to study patterns of international trade.⁷ The economic version of the model explains the dollar value of goods flowing from one country to another (dependent variable) as a function of the product of income and population in both countries as well as the distance between them. The precise micro-foundations of the gravity model remain subject to debate as does its functional form. Nevertheless, the model’s success at statistically explaining patterns of trade between countries is undisputed (Anderson, 1979; Bergstrand, 1985).

We chose the gravity model for two reasons. First, it is dyadic and therefore focuses on relations between specific countries rather than on the characteristics of individual countries per se. This dyadic structure is appropriate to our interest in the aggregate support expressed in particular EU member states for the accession of particular candidate countries. Second, the gravity model uses distance as an independent variable to capture a wide array of factors that can explain relative ease of interaction between countries.

Our analysis departs from the conventional gravity model in four ways. First, we have changed the model specification to include straight percentages on the left-hand side and natural logs on the right-hand side (rather than using natural logs on both sides). This change improves the overall performance of the estimation and is no less arbitrary than the original multiplicative

structure. Second, we include both trade flow and distance on the right-hand side in a single ratio of trade over distance. We place trade on the right-hand side of the equation as a proxy for transactions and we combine it with distance to eliminate the problematic correlation between trade and distance that lies at the basis of the original gravity estimation. Third, we have combined the income and population variables into a single variable for relative income per capita. The reason for doing so is two-fold. It allows us to eliminate a source of multicollinearity because income and population are highly correlated and it also casts the variables into an affective measure that is more appropriate to the way respondents in the member states will evaluate the relative wealth of the candidate countries. Fourth, we have included additional variables to account for relative agricultural production and pre-existing relationships. The basic equation that we estimate is as follows:

$$Y_{ijt} = \alpha + \beta_1 tbd_{ijt} + \beta_2 rpc_{ijt} + \beta_3 agg_{ijt} + \beta_4 BORDER_{ij} + \beta_5 GREECE_i TURKEY_j + \beta_6 GREECE_i CYPRUS_j + \beta_7 CATHOLIC_{ij} + \beta_8 NORDIC_i BALTIC_j \quad (1)$$

In this equation, variables in uppercase are either percentages (dependent variable) or dummies (coded 1,0). We estimated two different dependent variables (Y): one was the rate of non-response as a percentage of total respondents within member state i when asked about their support for the membership of candidate countries j at time t . The other was the ratio of support to the sum of support and opposition within member state i concerning candidate j at time t . Our independent variables were the natural logs of trade importance over distance (tbd_{ijt}), relative per capita income (rpc_{ijt}), and relative agricultural employment (agg_{ijt}). We also included dummies for common borders, Greece–Turkey, Greece–Cyprus, Catholic, and Nordic–Baltic.

We included a number of control variables on the right-hand side of the equation, because we estimated this equation as a pooled cross-section time series. Specifically, we introduced a separate dummy variable for each member state and for each candidate country (although not a separate dummy variable for each of the 195 member state–candidate country panels). We also introduced dummy variables for each year of analysis.⁸

Such country and year controls do not eliminate all problems with the cross-section time series estimation strategy. To begin with, it is likely that the error terms have a different variance from one panel to the next, i.e. heteroskedastic error terms, and also that they are correlated across panels, i.e. serial correlation. In order to account for these problems, we have followed the strategy advocated by Beck and Katz (1995) and used OLS estimates of the coefficients but ‘panel-corrected’ standard errors.

A further problem arises from the potential for autocorrelation in the dependent variable. Autocorrelation exists when observations of the

dependent variable are correlated across time within panels (as opposed to serial correlation, which occurs across panels at the same point in time). In the present context, French support for Romanian accession to the European Union in 1997 could be some function of French support for Romanian accession to the European Union in 1996. As a theoretical proposition, this implies that the data collected in 1997 should be in some way dependent upon the data collected in 1996. If we were in fact measuring 'French' support, that argument would be easy to make. However, we use aggregate data from public opinion polls based on statistically independent samples. Continuing with the same illustration, the values do not represent France per se, although they are meant to be representative of French public opinion. Within this context, the attitudes expressed in any two samples of French public opinion may be correlated, but the error terms should not be. Hence, the theoretical account for autocorrelation rests on a fallacy of composition – an assumption that sample attitudes *are* population attitudes and so any deviations from the mean estimate can persist over time.

This a priori rejection of autocorrelation is unlikely to convince most analysts for whom autocorrelation is a statistical feature of the data and not a specific theoretical relationship between observations. Therefore, it is prudent to check the analysis under the more conservative assumption that there is some persistence in the dependent variable over time that will show up as a correlation of the error terms within panels. Here too, however, the literature confronts us with a dilemma. Should we assume that the pattern of autocorrelation is panel specific or should we view persistence as a more general feature across all panels? The question is equivalent to considering whether any stickiness in French attitudes toward Romania will have much the same structure as any stickiness in Irish attitudes toward Malta.

There is no obvious theoretical justification for constraining the coefficient of autocorrelation (ρ) to be the same across panels – particularly in the present case but also more generally. Beck and Katz (1995: 638) argue that we should constrain ρ because we tend to constrain all other coefficients in cross-section time series estimates. However, this theoretical argument for constraining ρ to be equal across all panels is more an appeal to aesthetics than a justification. In fact, in cross-section time series we assume that most things differ from case to case except for those for which we test a hypothesis of common influence. The purpose of adding a single coefficient for autocorrelation is not to test whether a constrained coefficient is appropriate. Rather it is to see what will happen to the regression as a whole once we correct for a ρ that we *assume* to be the same across all panels. Because it is an assumption and not a hypothesis, support for this common ρ should be much stronger than for the inclusion of any other common factor among the independent variables.

Beck and Katz (1995: 639–40) make a more compelling statistical argument for constraining the coefficient of autocorrelation to be the same across panels. Using simulation experiments, they demonstrate that model estimates relying on panel-specific coefficients tend to understate the variability of the standard errors for estimated coefficients. Hence, it is possible (though not certain) that analysts who rely on panel-specific standard errors will generate inaccurate findings. Moreover, this possibility of inaccuracy varies with the number of time periods t , the stickiness of the independent variables, and ρ . The fewer the number of time periods, the more sticky the independent variables. And the more tightly distributed the estimates of ρ , the more likely it is that the use of panel-specific correction of autocorrelation would result in overconfidence in the estimation of other coefficients.

The trade-off implied by Beck and Katz (1995) is between potential bias and mis-specification. If we rely solely on panel-specific coefficients for autocorrelation, we risk bias in our estimates of the standard errors. If we rely on constrained coefficients for autocorrelation, we risk mis-specifying the model. Given the strong hold that Beck and Katz (1995) have on the practice of cross-section time series analysis in political science (Morrow et al., 1998), we choose to estimate all three models – one with no correction for autocorrelation (model 1), one with panel-specific correction (model 2), and one with model-constrained correction (model 3). Our preferred estimates are those without correction for autocorrelation. Panel-specific corrections fit the data closely but potentially obscure important relationships between the independent and dependent variables. Common corrections tend to worsen the overall performance of the model.

When correcting for autocorrelation, we have relied on an AR(1) process using lagged residuals as regressors instead of a lagged dependent variable (Plümper et al., forthcoming). Moreover, we have used a Prais–Winstone transformation in order to retain the start-points in the estimation (Prais–Winstone regression) for models 2 and 3. To reiterate, the standard errors in all three cases are panel corrected.

Results

The first question we consider is whether the level of transactions actually informs national attitudes – leaving aside for the moment whether the underlying attitudes are either negative or positive. We derive an answer through the analysis of non-response rates. Our prior is that individuals with more information are more likely to express an opinion than are individuals with less information. Hence, we would expect non-response rates to decline with

Table 3 Estimates using non-response rates as the dependent variable

<i>Independent variable</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>	
	<i>Coefficient</i>	<i>PCSE^a</i>	<i>Coefficient</i>	<i>PCSE^a</i>	<i>Coefficient</i>	<i>PCSE^a</i>
Constant	7.47	5.19	10.25*	5.29	10.17*	6.09
Trade-by-distance (<i>tbd_{ijt}</i>)	-0.54***	0.08	-0.45***	0.09	-0.55***	0.09
Relative income per capita (<i>rpc_{ijt}</i>)	-0.55	1.62	0.73	1.51	-0.18	1.75
Relative agricultural employment (<i>agg_{ijt}</i>)	1.06	1.54	1.27	1.70	0.15	1.86
<i>BORDER_{ij}</i>	-1.78***	0.24	-1.40***	0.20	-1.79***	0.32
<i>GREECE_jTURKEY_j</i>	-3.93***	0.85	-4.55***	0.93	-4.15***	1.24
<i>GREECE_jCYPRUS_j</i>	-7.75***	0.64	-8.38***	0.86	-7.72***	0.89
<i>CATHOLIC_{ij}</i>	0.24***	0.09	0.06	0.14	0.21**	0.11
<i>NORDIC_jBALTIC_j</i>	-4.43***	0.48	-4.80***	0.49	-4.36***	0.62
Adjusted <i>R</i> ²	.84		.94		.80	
Coefficient of autocorrelation (ρ)	not applicable		panel specific		0.27	

Notes: Variables in lower case are in natural logs. Variables in upper case are dummies (coded 1,0). The variables are as follows: *tbd_{ijt}* is the ratio of trade importance over distance; *rpc_{ijt}* is relative per capita income; *agg_{ijt}* is relative agricultural employment; *BORDER_{ij}* indicates a shared border (1) or its absence (0); *GREECE_jTURKEY_j* is for attitudes in Greece relative to Turkey; *GREECE_jCYPRUS_j* is for attitudes in Greece relative to Cyprus; *CATHOLIC_{ij}* is when both member state and candidate country are Catholic; *NORDIC_jBALTIC_j* is for attitudes in Nordic countries toward the Baltic states. Coefficients on the dummies for member states, candidate countries, and years are not reported. The total number of observations is 1335 and the number of estimated coefficients is 41.

^a PCSE = panel-corrected standard error.

* significant at 10% threshold, ** significant at 5% threshold, *** significant at 1% threshold

any decrease in the distance between national capitals and with any increase in the relative importance of exports from the member state to the candidate country. This means the coefficient on our trade-by-distance variable (tbd_{ijt}) should be negative. We also expect non-response rates to be lower in the presence of a common border. Furthermore, we expect non-response rates to decline for each of our relationship variables: i.e. Greece–Turkey, Greece–Cyprus, Catholic, and Nordic–Baltic. Within the context of this argument, we have no strong theoretical expectations about the relationship between non-response rates and our relative income per capita or agricultural employment variables. The results for our estimations of non-response rates are presented in Table 3. We do not report the coefficients on year and country dummies.

The data provide strong confirmation for our theoretical expectations. The coefficient on trade and distance is negative and statistically different from zero – as are the coefficients on common borders, Greece–Turkey, Greece–Cyprus, and Nordic–Baltic. The variables for relative income and agricultural employment are not significant. The only surprise is in the coefficient on $CATHOLIC_{ij}$. Without correcting for autocorrelation, the coefficient is positive and statistically significant at the 1% threshold ($t = 2.62$). The implication is that respondents in predominantly Catholic member states are less likely to express an opinion, i.e. are more likely not to respond, when asked about the accession of predominantly Catholic candidate countries. This curious finding disappears once we correct for panel-specific autocorrelation (model 2), but it returns when the coefficient of autocorrelation is constrained to be the same across panels (model 3). We have no strong theoretical explanation for the positive coefficient on $CATHOLIC_{ij}$.⁹ This may be a result of cross-pressures. Respondents in predominantly Catholic member states are aware of predominantly Catholic candidate countries but they are also ambivalent about their accession to the European Union. We return to this issue in the conclusion.

In comparing across the models, two factors stand out. First, we find little evidence to suggest that the panel-specific correction for autocorrelation overstates the statistical significance of the estimated coefficients. Some of the t -statistics on the estimated coefficients are higher with panel-specific ρ s than when ρ is constrained to be the same across all panels. Second, there is a clear decline in explained variability with the move from panel-specific correction for autocorrelation to a single estimate of ρ . Indeed, the level of explained variation with a common correction for autocorrelation is even lower than without any correction for autocorrelation. Although these observations cannot settle the statistical argument about whether it is in fact necessary to correct for autocorrelation in this instance, they do suggest that constraining

Table 4 Estimates using net support (i.e. support/[support + opposition]) as the dependent variable

Independent variable	Model 1		Model 2		Model 3	
	Coefficient	PCSE ^a	Coefficient	PCSE ^a	Coefficient	PCSE ^a
Constant	68.55***	6.40	63.47***	7.89	61.03***	9.08
Trade-by-distance (<i>tbd_{ijt}</i>)	0.87***	0.21	0.65**	0.31	0.36	0.36
Relative income per capita (<i>rpc_{ijt}</i>)	-2.15	1.35	-2.50	1.66	-1.59	1.83
Relative agricultural employment (<i>agg_{ijt}</i>)	-7.30***	2.37	-5.60**	2.79	-5.80*	3.27
<i>BORDER_{ij}</i>	3.17***	0.71	2.48*	1.49	4.42***	1.18
<i>GREECE_iTURKEY_j</i>	-35.27***	5.15	-34.40***	5.06	-37.93***	8.68
<i>GREECE_iCYPRUS_j</i>	23.24***	2.45	25.34***	3.33	25.20***	3.80
<i>CATHOLIC_{ij}</i>	-2.89***	0.25	-2.48***	0.48	-2.67***	0.40
<i>NORDIC_iBALTIC_j</i>	14.73***	1.04	15.93***	1.59	17.04***	1.68
Adjusted <i>R</i> ²	.82		.96		.79	
Coefficient of autocorrelation (ρ)	not applicable		panel specific		0.46	

Notes: Variables in lower case are in natural logs. Variables in upper case are dummies (coded 1,0). The variables are as follows: *tbd_{ijt}* is the ratio of trade importance over distance; *rpc_{ijt}* is relative per capita income; *agg_{ijt}* is relative agricultural employment; *BORDER_{ij}* indicates a shared border (1) or its absence (0); *GREECE_iTURKEY_j* is for attitudes in Greece relative to Turkey; *GREECE_iCYPRUS_j* is for attitudes in Greece relative to Cyprus; *CATHOLIC_{ij}* is when both member state and candidate country are Catholic; *NORDIC_iBALTIC_j* is for attitudes in Nordic countries toward the Baltic states. Coefficients on the dummies for member states, candidate countries, and years are not reported. The total number of observations is 1335 and the number of estimated coefficients is 41.

^a PCSE = panel-corrected standard error.

* significant at 10% threshold, ** significant at 5% threshold, *** significant at 1% threshold

ρ to be the same across all panels worsens the performance of the model as a whole.

Once having ascertained that transactions do have an influence on non-response rates, the second set of questions we consider is whether there is any evidence of a sense of community, we-feeling, or transnational affinity in the data. We hope to find the answers in our analysis of the data for national aggregate net support.

If transactions do induce a sense of we-feeling or transnational affinity, then we would expect levels of net support to correlate positively with trade importance and negatively with the distance between national capitals. Therefore, we expect the coefficient on our trade-by-distance variable (tbd_{ijt}) to be positive. We expect the coefficient on our border dummy to be positive as well. However, we should also control for the influence of policy-related calculations of self-interest. Within the European Union, there are substantial financial flows from countries that are relatively rich to countries that are relatively poor and from countries that do not have large agricultural sectors to countries that do. Therefore, we should expect net support for the accession of any given country to correlate positively with relative income per capita (rpc_{ijt}) and negatively with relative employment in agriculture (agg_{ijt}). Finally, we should expect Greece to show less support for Turkey than the model would otherwise predict (negative coefficient) and more support for Cyprus (positive coefficient). Nordic states will show high support for Baltic candidates. And Catholic member states should show relatively high support for Catholic candidate countries. The results for our estimations of net support are presented in Table 4. Again, we do not report the coefficients on year and country dummies.

The results of this analysis are more mixed than for non-response rates. When we do not correct for autocorrelation (model 1), we find a clearly significant positive correlation between aggregate net support and our proxies for measuring the level of interaction between member states and candidate countries (tbd_{ij} and $BORDER_{ij}$). However, the statistical significance of these coefficients decreases with the introduction of a panel-specific correction for autocorrelation. The positive correlation remains significant at the 5% level for trade-by-distance and at only the 10% level for common borders. When we constrain the coefficient of autocorrelation to be the same across all panels (model 3), the coefficient on the trade-by-distance variable ceases to be statistically different from zero but the coefficient on the common border dummy improves ($t = 3.75$). We conclude that there is some evidence that interaction encourages a sense of community, we-feeling, or transnational affinity, at least as measured in terms of net support for accession.

The two policy variables also yield mixed findings. The coefficient on

relative income per capita bears an unexpected sign in all three models and is nowhere statistically different from zero. This suggests that respondents are not influenced by considerations of the relative wealth or poverty of the candidate countries. By contrast, the coefficient on relative agricultural employment has the appropriate sign and an acceptable level of statistical significance – at the 1% level before correction for autocorrelation, at the 5% level with panel-specific correction, and at the 10% level when the coefficient of autocorrelation is constrained to be the same across panels. This suggests that respondents are less supportive of enlargement to countries that are relatively dependent upon agricultural employment and so are likely to receive relatively high transfers under the European Union's Common Agricultural Policy.

The dummy variables for relations between Greece and Turkey, Greece and Cyprus, and the Nordic member states and the Baltic candidate countries ($NORDIC_i$, $BALTIC_j$) all yield coefficients with the appropriate sign and at a very high level of statistical significance ($|t| > 4$ in all cases). The dummy variable representing combinations of Catholic member states and Catholic candidate countries is also highly statistically significant ($|t| > 5$ in all cases) but takes the wrong sign. By implication, Catholic member states show less (and not more) support for Catholic candidate countries than the model would predict. As in the case of non-response rates, we have no strong theoretical explanation for why this coefficient assumes the wrong sign. We return to this issue in the conclusion.

Implications

The findings of our data analysis can be summarized as follows. First, we have clear evidence that interaction reduces non-response rates. This evidence conforms to our assumption that respondents with more information are more likely to express an opinion about the accession of specific candidate countries. Nevertheless, analysis of non-response rates does not tell us what that opinion will be. Therefore, we look to net support in order to assess whether interaction promotes a sense of community, we-feeling, or transnational community. What we find is that interaction does play such a role. Respondents in member states are more likely to support the accession of candidate countries that are relatively important trading partners, are located in close geography proximity, or share a common border. This finding broadly confirms the transactions-affinities approach advocated by Karl Deutsch.

Moreover, this pattern of support remains evident even when we control for the adverse policy consequences associated with relatively low per capita

income or relatively high dependence on agricultural employment. Aggregate response rates do show some sensitivity to such policy-relevant concerns – specifically in relation to agriculture – and yet they remain influenced by variables such as proximity and trade. These findings help us to connect with the ‘rational’ strand of the literature analyzing public opinion toward European integration. They also suggest that we have something to add to that literature in terms of the role of interaction in fostering transnational affinities.

Historic relations also matter in aggregate support for accession. When we focus on the eastern Mediterranean and the Baltic regions, we find that both affinities and animosities come into play. Such historic relationships not only reduce non-response rates. They tend to influence aggregate opinions as well. Of course, none of this is surprising. What is important is that all of it is consistent. Interaction may help foster a sense of we-feeling, community, or transnational affinity; but such sentiments are also self-reinforcing. These findings also help us to link to the ‘identities’ strand of the literature analyzing public opinion toward European integration.

The role of the Catholic religion is less clear cut. Respondents in predominantly Catholic member states are more likely not to respond when asked about the accession of predominantly Catholic candidate countries and they are less likely to voice support. Thus, even if we accept arguments that Catholics favor deeper integration (e.g. Nelsen et al., 2001), we must reconsider whether they favor enlargement. We suggest two possibilities. First, it may be that the Catholicism practiced in the existing member states is somehow different (less devout, less conservative, less evangelical) than the Catholicism practiced in candidate countries. Second, it may be that respondents in predominantly Catholic member states support European integration as a means of diluting the influence of the Catholic Church in their daily lives. This second line of analysis connects with arguments made by scholars such as Sánchez-Cuenca (2000): where public opinion regards Europe as an alternative to domestic conditions, respondents may be less eager to integrate with countries that have similar characteristics than with countries that are more fundamentally different. Under either explanation, respondents would be less willing to express any opinion or more willing to voice a negative opinion than our underlying model for transactions and affinities would predict.

Notes

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- 1 Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, Turkey.
- 2 The number of observations is calculated according to the following equation: 15 member states * 13 candidate countries * 7 years – 30 for Turkey and Malta in 1998.
- 3 The statistics were taken from the IMF *Direction of Trade Statistics Yearbook*; 2002 values were calculated using data from only the first three quarters of the year.
- 4 The data source in both instances is the Annual Macroeconomic Database of the Economics and Finance Directorate of the European Commission; see http://europa.eu.int/comm/economy_finance/indicators/annual_macro_economic_database/ameco_en.htm. Where agricultural data in the candidate countries were absent in 2002 and, in some instances, in 1996, we approximated using lags or leads and using period averages. The choice of approximation made no difference to the analysis and we have presented results using lags or leads.
- 5 The justification for separating out these relationships is similar to that for the use of proxies for formal ‘alliances’ or traditional ‘rivalries’ in the democratic peace literature (see, for example, Li and Sacko, 2002; Tures, 2002).
- 6 Member states coded as Catholic are Austria, Belgium, France, Ireland, Italy, Luxembourg, Portugal, and Spain. The rest are coded as Protestant or Orthodox (Greece). Candidate countries coded as Catholic are the Czech Republic, Hungary, Lithuania, Malta, Poland, Slovakia, and Slovenia. Bulgaria, Cyprus, and Romania are Orthodox. Estonia and Latvia are Protestant. Turkey is Muslim.
- 7 This gravity approach is different from the ‘null model’ deployed by Savage and Deutsch (1960) for identifying empirical anomalies for analysis.
- 8 In our estimates we had to exclude the dummies for one member state, one candidate country, and one year. The reference categories are Germany (for member states), Poland (for candidate countries), and 1996 (for years). We experimented with other reference categories, but these did not have a significant impact on the analysis.
- 9 The results for the $CATHOLIC_{ij}$ variable in relation to non-response rates and net support were surprising enough that we chose to re-estimate the equations using actual measures of the Catholic population in the member states and candidate countries. A new variable was created using the product of the proportion of Catholics in the member states and the proportion of Catholics in the candidate country. Because these proportions are less than 1, the product of proportions is a continuous variable bounded by 0 and 1 that is skewed toward 0 (e.g. $0.75 * 0.75 = 0.375$). In this way, the continuous variable closely approximates the performance of the variable (coded as 1,0) that we used in the original model. The results of estimations using this new variable were substantially the same as those using the dummy variable. We also chose to examine the sensitivity of the coefficient to different model

specifications and functional forms, in a weak version of the 'extreme bounds test' proposed by Leamer (1983, 1985). The coefficient remained statistically significant and with a consistent sign in all iterations.

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