

Ratio Working Paper No. 183

The Eurovision Song Contest, Preferences and European Trade

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Acknowledgements: Patrik Gustavsson Tingvall gratefully acknowledges financial support from Torsten Söderbergs Research Foundation.

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Abstract

Already Beckerman (1956) and Linder (1961) suggested that international trade is not determined by supply side factors alone – perceptions about foreign countries and country preferences matter. We explore the relation between exports, cultural distance, income differences and country preferences as revealed by voting in the European Song Contest. We conclude that preferences influence trade through several channels, and that results of the European Song Contest are a robust predictor of bilateral trade.

JEL Classification: F14; F12

Keywords: International trade; Country preferences; Gravity model; The Eurovision Song Contest

1. Introduction

Although the bulk of international trade theory has focused mainly on supply side determinants like technology, factor endowments, and scale of production to explain patterns of comparative advantages and international trade, the importance of distance has also been recognized for a long time (or at least since the gravity model became a standard tool for empirical trade analysis in the 1960s (see e.g. Tinbergen, 1962). Countries that are far apart tend to have less bilateral trade than neighboring countries. One obvious reason is that transportation costs increase with geographic distance, but international business research has also noted other dimensions of distance. Countries that are located close to each other are often more similar to each other in terms of culture, institutions, preferences, and demand patterns than more distant countries, and these similarities can be expected to facilitate trade. Beckerman (1956) was one of the first authors to point out that trade relations are likely to be stronger when the “psychic distance” between the trade partners – and hence the cost for managing the trade transaction – are smaller. The “Uppsala School” of international business (Hörnell et al. 1973; Johansson and Vahlne 1977) popularized the concept, arguing that psychic distance is an important determinant of the firm’s internationalization process. The choice of export destinations and locations for foreign direct investment is not determined by objective economic data alone but also by how familiar the exporter or investor is with the target market.

In its original formulation, psychic distance was largely seen as a subjective construct, based on individual experiences and perceptions, but the concept has changed subtly over time (Håkanson and Ambos, 2010). In particular, it has increasingly been connected to objectively measurable determinants of information and transaction costs, which are likely to increase when there is a larger cultural difference between the countries. This shift is underlined by the most common operationalization of the psychic distance concept, which is Kogut and Singh’s (1988) cultural distance index, based on Hofstede’s (1980) work on cultural dimensions. Given the extensive debate on Hofstede’s model of cultural differences (see e.g. Shenkar 2001; Oyserman et al. 2002; Hofstede 2006; Javidian et al. 2006; Smith 2006; and the special issue on “Culture in International Business Research” in *Journal of International Business Studies*, Vol.

41, Issue 8, 2010), it is not surprising that the Kogut and Singh measure of cultural distance has been criticized. Apart from various methodological problems related to the design, implementation, and interpretation of surveys or questionnaires, it has been noted that the information used for Hofstede's (1980) classification of national cultures may be outdated, since beliefs, norms, and attitudes are likely to change over time (albeit slowly); it may be inappropriate to aggregate Hofstede's four dimensions of culture into a one-dimensional measure since all dimension may not be equally important; and the assumption of symmetry – i.e., that the cultural distance from A to B is equal to the distance from B to A – may be incorrect (see e.g. Shenkar 2001). Several alternative measures have therefore been presented over the past decades. For example, referring back to Beckerman's original definition of psychic distance, Håkanson and Ambos (2010) have recently proposed a survey-based proxy that captures the subjective perceptions of business managers, overcoming some of the weaknesses of the Kogut-Singh measure.

Another dimension of distance was proposed by Linder (1961), who pioneered the idea that countries with similar preferences and domestic demand patterns tend to trade more with each other. He argued that a country's exports will to a large extent be made up of products or product varieties that are first sold in the domestic market. When exported, these products will primarily be directed to markets where the demand for these specific product varieties is relatively high, i.e. countries where preferences are similar to those in the source country. As a result, much of world trade will take place between countries with similar preferences and demand patterns, and intra-industry trade in differentiated goods will make up for a significant share of total trade. To operationalize his arguments, Linder (1961) suggested that similarity in per capita income levels could be used as a proxy for the similarity in national preferences or demand. This accounts for the standard formulation of the Linder hypothesis, which asserts that countries at similar income levels will trade more with each other, controlling for other determinants of trade. However, given the significant income convergence that has taken place within regions like Western Europe since the 1960s, it is unclear whether the remaining income gaps are significant enough to cause differences in preferences.

A rare alternative to Linder's income similarity measure has recently been suggested by Felbermayr and Toubal (2010), who used the voting patterns from the Eurovision Song Contest (ESC) to construct proxies for country preferences.

A potential problem with these proxies for psychic or cultural distance and preferences is that they are all likely to be correlated with each other and with geographical distance: countries with similar cultures, preferences, and income levels tend to be clustered relatively close together. This means that attempts to control for any single one of the variables without accounting for the others may result in spurious correlations. The purpose of this paper is to explore the impact of distance and preferences in a setting where we are able to control for several of the proxies that have been used in the recent literature. In particular, we examine how the proxy based on the Eurovision song contest compares with a cultural distance measure based on Hofstede (1980) and Kogut and Singh (1988) and an income gap variable based on Linder (1961). To test the sensitivity of the results, we will also make estimations using the psychic distance proxy proposed by Håkanson and Ambos (2010). One interesting question is to what extent the different proxies can be expected to capture country preferences rather than transaction costs in bilateral trade.

The ESC is an annual pan-European song contest that has existed since the 1950s, and that is widely followed across Europe and in other parts of the world. It provides a unique set of information on country preferences both because it is available for an unusually long time period and because it can be seen as an unusually large social experiment. Since 1998, when televoting was introduced, more than 100 million people in different countries have simultaneously been exposed to exactly the same "stimuli" in the form of song performances and then encouraged to reveal their preferences by voting for their favorite songs. The result is an exceptional data base that has rarely been used to deepen our understanding of international trade. Some reasons for focusing on the Eurovision song contest proxy are that it is readily available for a large number of years, it is asymmetric, and it allows for preferences to change over time. Neither the standard cultural distance variable nor the psychic distance variable proposed by Håkanson and Ambos (2010) are available for many points in time (since they are based on extensive surveys that

are not carried out regularly), and both the cultural distance proxy and the income gap measures used in tests of the Linder hypothesis are symmetric.

We also extend substantial effort to address some of the econometric problems plaguing gravity estimations. In particular, we try to explicitly account for selection into trade and to sort out the impact of distance, culture, preferences, and other time-invariant (fixed effects) or slowly moving variables that are likely to affect results. The empirical analysis focuses on European countries during the time period 1973-2008.

The paper is organized as follows. With special attention to the ESC variable, section 2 provides details on data and the estimation model. Section 3 presents the results and section 4 concludes.

2. Data and Empirical Approach

We base our empirical analysis on the gravity model which has proven to explain trade remarkably well.

In its elementary form, the gravity model can be expressed as:

$$M_{ij} = T(r) \frac{Y_i Y_j}{d_{ij}^{-\varepsilon}} \quad (1)$$

where M_{ij} are imports from country i to country j , $Y_i Y_j$ is the joint economic mass of the two countries, d_{ij} is the distance between them, and $T(r)$ is a proportionality constant (Tinbergen (1962)). Theoretical support for the model was originally poor, but since the late 1970s, several theoretical developments have emerged. A significant leap forward was made by Anderson (1979) who formally derived the gravity equation from a differentiated product model. Other important development were presented by Bergstrand (1985, 1989) who derived the gravity model in a monopolistic competition setting. It is now well recognized that the model is consistent with several of the most common trade theories (Bergstrand (1990), Helpman and Krugman (1985), Deardorff (1998), and Baldwin and Taglioni (2006)).

We now discuss two important issues in empirical applications of the gravity model, namely presence of fixed effects and how to deal with selection and zero trade flows.

2.1. Fixed effects

Anderson and Van Wincoop (2003) applied a general equilibrium approach to the gravity model and showed that the traditional specification of the model suffers from an omitted variable bias as it does not take into account the effects of relative prices on trade patterns. Anderson and Van Wincoop suggest that the inclusion of a multilateral trade resistance term (MTR) in the form of importer and exporter fixed effects would yield consistent parameter estimates. However, there is also a cost for using fixed effects, since they eliminate all time invariant information in data. For example, geographical distance is time invariant and will therefore drop out from fixed-effect regressions. In addition, country preferences exhibit little variation over time and will therefore be estimated with large standard errors when using only within variation. In our context, this is unfortunate. Cross-sectional differences in preferences help us to understand the link between trade and consumer preferences and demand.

A common way to handle fixed effects is to include various region-specific dummy variables, so that some fixed effects are controlled for at the same time as the key variables of the model are kept in the estimations.¹

An alternative solution to the problem has been suggested by Plümer and Troeger (2007). They present the so called Fixed Effect Variance Decomposition (FEVD) estimator as a way to handle time invariant and slowly changing variables in a fixed effect model framework. The idea with the FEVD model is to construct a variable that captures unobserved heterogeneity and to use this as a regressor and thereby control for fixed effects. This allows us to control for fixed effects and at the same time use the information from cross sectional variation.

However, several researchers have recently questioned the FEVD model (Greene (2011a, 2011b), Breusch et al. (2011a, 2011b)). Some of the criticism against the FEVD estimators concerns its asymptotic properties and bias, that it underestimates standard errors, and that the FEVD model is a special case of the Hausman-Taylor IV procedure. In defense of the FEVD model, Plümer and Troeger (2011)

¹ Other approaches to control for fixed effects and MTR include a two-step approach suggested by Anderson and Van Wincoop (2003) that solves for MTR as a function of observables, and an alternative formulation including the calculation of a GDP-weighted remoteness index or a fixed effects regression approach (Feenstra 2002, 2004). For a discussion about fixed effect in the Gravity model, see also Benedicis and Vicarelli (2009) and Baldwin and Taglioni (2006).

emphasize the finite sample properties of the model and illustrate the advantages of the model with an extensive set of Monte Carlo simulations.² This ongoing debate suggests that there is reason to be cautious regarding the interpretation of results from the FEVD model. We therefore apply the FEVD estimator as a robustness test in order to explore how unobserved heterogeneity and firm level fixed-effects influence results.

2.2. Selection and zero trade flows

A second concern stems from the recognition that all firms are not equal: some firm's trade while others do not, and selection into trade is not random. More formally, Melitz (2003) and Chaney (2008) have showed how selection into trade is affected by sunk costs and productivity. Therefore, as barriers to trade vary, both the volume of previously traded goods and the number of traded goods will change. Helpman Melitz and Rubenstein (HMR) (2008) describe how changes in trade are related to changes in both the intensive and the extensive margin of trade and propose a way to handle the bias that will be induced if the margins are not controlled for. The HMR model can be expressed as an extended Heckman selection model that that controls for the fraction of exporting firms (heterogeneity).

Taking these concerns into account, we will build the analysis on results using several different estimation techniques. A key concern, obviously, is to examine to what extent the results are affected when we improve the control of fixed effects.

Our baseline Heckman model takes the following form.

$$\ln(X)_{ijt} = \alpha + \beta_1 Y_{it} Y_{jt} + \sum_p \beta_p \Gamma_{it} + \sum_r \beta_r \Omega_{rjt} + \lambda \Phi_{ijt} + \gamma_t + \varepsilon_{ijt} \quad (1)$$

where X_{ij} is export from country i to country j . $Y_i Y_j$ is the product of the countries' GDP, Ω contains measures of trade resistance including distance, MTR and dummies capturing effects of trade agreements and regional identity (EU membership and intra Eastern Europe trade), Γ includes our preference variables (cultural distance (CD), psychic distance (PD), Linder income gap ($INCGAP$), and the

² Some of the debate on the FEVD model is collected in a special section of *Political analysis* (Vol 19, No. 2, 2011).

Eurovision score variable (ESC), Φ is the inverse Mills ratio controlling for nonrandom selection into trade, γ_i is a period dummy and ε is the error term.

2.3 Data and variables

The data used in this study are collected from several different sources. The dependent variable in our gravity estimations is based on data on goods exports, defined at the four-digit SITC industry level, from the UN Comtrade database. In most of the regression equations, these data have been aggregated to total trade. For some estimations we have separated total trade into raw materials and other products (differentiated goods) to examine whether the effects of the distance variables differ between product categories. The underlying population covers all European countries during the period 1975-2008, but several countries drop out of the subsamples used for the estimations because of missing data: in particular, the former Soviet bloc countries are not included before the 1990s.

GDP and population figures are collected from the UN Statistical Division and are measured in USD, constant 1995 prices. The most important trade agreement is the European Union: membership data are collected from <http://www.oecd.org>. The geographical distance variable ($DIST$) is taken from CEPII (www.cepii.fr) and measured as the “Great Circle Weighted Distance”. This measure reflects the distance between two countries based on the distance between the largest cities of the two countries, with the inter-city distances weighted by the share of the city in the country’s total population. Weighted distance measures may be an improvement to unweighted distance measures, but neither is likely to be perfect. As Disdier and Head (2008) point out, great-circle routes often differ substantially from actual cargo routes. This notwithstanding, we assume that geographical distance proxies the transportation costs between the trade partners.

Apart from geographical distance, we will explore the impact of four other variables related to other dimensions of distance and preferences. The first one is a proxy for cultural distance (CD) that uses data from Hofstede’s (1980) categorization of the four dimensions of culture – power distance, uncertainty avoidance, individualism vs. collectivism, and masculinity vs femininity – to construct a one-dimensional

measure according to the widely used formula suggested by Kogut and Singh (1988). In line with the arguments of the “Uppsala School” (Hörnell et al. 1973, Johanson and Vahlne 1977), we assume that higher cultural distance will result in higher information and transaction costs for international trade. As an alternative, we have also used a survey-based psychic distance proxy (*PD*) from Håkanson and Ambos (2010).

To account for the Linder hypothesis, we include a measure of the difference in real per capita incomes (*PCIGAP*) between the trade partners (based on data from the UN Statistical division). A smaller per capita income gap is assumed to indicate that the products from the exporting country are better suited for the demand conditions in the target market. One reason is that per capita income differences may be related to product quality: wealthier consumers are likely to demand higher quality products, irrespective of which country they live in. Focusing more directly on country preferences, we have also constructed a variable based on the voting patterns in the Eurovision Song Contest (*ESC*). ESC data are collected from the Eurovision song contest homepage (www.eurovision.tv) and cover the period from 1975 to 2008. The ESC variable shows whether country *j* has a preference for songs from country *i*, and we assume that this preference may apply more generally to goods from country *i*. Earlier research has shown that biases in the ESC scores appear to be based on a complex set of “sociological likes and dislikes” (Clerides and Stengos 2006) related to history, geography, culture, religion, language and other factor, and it is reasonable to assume that these preferences are not only applicable to music. Suppressing time indices, the country preference variable distilled from the Eurovision Song Contest is formulated as:

$$ESC_{ji} = [(score_{ji} - average\ score_i) / stdv(score_i)]$$

where *j* is the country that votes and *i* the country that is assessed. Country *j* is assumed to have a positive preference for country *i* if it gives it a score that is higher than country *i*'s average score. The preference can also be negative, if the scores are lower than the average. Moreover, bilateral country preferences are

not restricted to be symmetric: country j may well have a positive preference for country i at the same time as country i has a negative preference for country j .³

The voting system used in the ESC since 1975 is of a Borda count type. Each country awards points to ten other countries (although the total number of participants is higher). The favorite song (or country) is given 12 points, the second most popular song receives 10 points, and the following eight songs are given points on a falling scale from 8 to 1. A country cannot vote for its own song. Once all countries have awarded their points, the winner is the song with the highest total score. Until 1997, each country's votes were determined by a national jury. In 1998, however, a new system was introduced: televoting, whereby the public is allowed to vote directly through telephone.⁴ Because the number of participating countries has increased rapidly in recent years, the contest has also introduced a qualification mechanism, with two semi-finals and a final. The ten highest scoring countries from each semi-final are qualified for the final, to which the host and the "Big Four" – Germany, France, Spain, and the United Kingdom – are directly qualified to the final.⁵ In other words, the final includes 25 participants.⁶

3. Results

We begin by estimating a standard gravity model by OLS to which we add various complications as we go along.

³ One weakness of this variable is that it does not fully reflect the highest and lowest country preferences. In the extreme case where all other countries have a strong preference for country i , it will not be recorded as a country preference, but rather as high song quality (since the average score for country i will be high). Similarly, the variable will not capture instances where all other countries dislike country i , since it will have a low average score. However, no country has received the highest score from all contestants and it is rare that a country receives a zero score from all others: since 1975, that has only happened about a dozen times.

⁴ Some countries had used televoting already earlier, in their national song selection processes, and five countries introduced televoting for the ESC final in 1997. In 2007, the total number of votes in the final (cast through telephone calls and SMS) was almost 9 million. In 2009, the voting system changed again, to a combination of televoting and jury voting: an estimated 122 million viewers were reported to follow the 2009 finals (<http://www.eurovision.tv/page/news?id=2823>).

⁵ Germany, France, Spain, and the United Kingdom are always directly qualified for the final because they are the largest financial contributors to the EBU.

⁶ The ESC has been subject to a fair amount of academic research. One of the main questions that have been explored is whether the voting patterns are systematic, reflecting strategic, political, or other similar considerations apart from the "artistic merit" of the songs. The answer appears to be yes – see e.g. Ginsburgh and Noury (2004), Spierdijk and Vellekoop (2006), Clerides and Stengos (2006), and Fenn *et al.* (2005). However, to the best of our knowledge, Felbermayr and Toubal (2010) and Taavo (2008) are the only earlier papers using ESC scores to explain trade patterns.

[Table 1 about here]

Table 1 shows the basic gravity model estimated by OLS. In columns 1-3, we estimate OLS models with no country fixed effects, where the preference variables are included one at the time. Column 4 estimates a model where *CD*, *INCGAP*, and *ESC* are included simultaneously (we do not introduce *PD* at this time, since it is only available for a smaller subsample). All three preference variables are significant with the expected sign, even when they are all included at the same time. This suggests that they pick up different aspects of preferences and demand.

In column 5-8, we increase the degree to which fixed effects are controlled. More precisely, in column 5-7, we introduce exporter country specific time dummies that are allowed to change every 5, 3, and 1 years, and in estimation 8 we include estimate a fixed effect model. Throughout these estimations, the *ESC* score variable is positive and significant. It is worth to note that using unit fixed effects, the estimated impact of the *ESC* variable drops and so does its significance (down to the 10% level). For the per capita income gap variable, the pattern is the opposite: this variable is not significant when using various country-dummy specifications, but becomes strongly significant when country-pair fixed effects are controlled for. One interpretation is that changes (rather than levels) in income matter for international trade. For the time invariant cultural distance measure *CD*, the estimated coefficient is not much affected by the inclusion/exclusion of country fixed effects. For the other variables, results are in line with theory and findings from earlier studies. The elasticity of trade with respect to geographical distance is in the neighborhood of unity and *GDP* has a strongly positive and significant impact. Looking at the region dummies, the estimated impact of EU15 membership is positive and more significant than that of the Eastern Europe dummy.

In Table 2 we consider non-random selection into exports and explore the possibility to control for unit fixed effects at the same time as we exploit the cross sectional variation in data.

[Table 2 about here]

Estimation 1 in Table 2 is a FEVD model. As seen in Table A1, most right-hand-side variables exhibit more variation in the cross-sectional dimension than over time, which means that they can be characterized as slowly changing variables. The FEVD results return a positive and significant coefficient for the *ESC* variable that is comparable in size to that in estimations with time-varying country fixed effects in Table 1, whereas the traditional FE-estimator applied in estimation 8 in Table 1 returns lower estimates. All other variables yield significant estimates with the expected sign.

In Estimation 2, we consider self-selection into exports and estimate a Heckman model with country dummies that are allowed to change every three years included (*MTR3*). The corresponding model with no control for selection is found in Table 1 is model 5. A first point to note is that tests indicate non-independency across the selection and target equations, suggesting that a selection procedure is warranted. However, the share of observations with zero trade is only about 5%, which suggests that the selection bias might not be severe. Comparing models with and without selection verifies this suggestion. That is, controlling for selection does not upset results, although individual coefficients change.

To take both selection and unit fixed effects into account, estimations 3-4 in Table 2 introduce selection models where we seek to control for both heterogeneity and fixed effects. In model 3, we estimate the HMR specification suggested by Helpman et al. (2008), where a variable “*z*”, defined as a combination of the Mills ratio and the probability of exports, is included in a selection framework. The results from this model do not deviate much from the standard Heckman formulation. In model 4, we return to the FEVD model but include control for selection. Again, it can be noted that the per capita income gap variable gains in efficiency when selection and unit fixed effects are controlled for. However, the overall impression is that results are remarkably robust and all preference variables – *CD*, *INCGAP*, and *ESC* – seem to add their own effects to the model. That is, the simultaneous significance of cultural distance, the income gap variable, and the *ESC* variable suggests that these variables pick up different aspects of preferences and demand. The significance of the income gap variable suggests that there is also some market segmentation related to product quality, with high-income countries preferring product

varieties from other high-income countries while the cultural distance variable CD is likely to capture the increase in transaction costs that arises when countries exhibit larger differences in culture.

The ESC-variable is found to be a significant predictor of European trade and to further analyze the assumption that ESC votes are related to country preferences rather than transaction costs, we continue by analyzing the performance of the ESC variable during different ESC voting regimes.

In 1998, televoting was introduced as the standard voting mechanism for the ESC. Up until this time, votes had been cast by national juries largely made up of professional musicians and people from the music industry. Given their professional relation to music, it might be argued that the preferences of the juries deviate from the popular preferences in their home country. More precisely, instead of appreciating the general style or national character of a song, professionals might pay more attention to the various technical aspects of the composition and the performance. Hence, country preferences might not be reflected very well in the ESC scores for the period before 1998. Conversely, votes cast through televoting might reflect popular preferences to a higher degree than votes laid by music industry professional. If this is indeed the case, it should be possible to detect a change in the estimated coefficients of the *ESC score* variables before and after 1998. Table 3 analyzes this issue.

[Table 3 about here]

Estimations 1-3 in Table 3 confirm the hypothesis that the changes in the voting system have influenced both the impact and the efficiency of the ESC variable. After the introduction of the televoting system, the estimated coefficient of the ESC variable increased with a factor of about four. However, the introduction of televoting is not the only major change that has occurred within the ESC. Another notable development is the entry of new countries into the ESC: in particular, the participation of Eastern European countries has increased since the mid-1970s. In the popular debate, it has been argued that country preferences are stronger among the Eastern European countries, and that this may explain why the top positions in the

ESC have tended to drift eastward.⁷ The presence of Eastern European countries might also be part of the reason why the ESC variable has a stronger impact after the late 1990s. To investigate whether the strength of the ESC variable is due to country composition rather than changes in the voting system, estimation 2-3 repeats estimations 1a-1b restricting the sample to ESC incumbents only, i.e. countries that participated in the ESC already in 1975, at the start of our sample period. Using incumbents only, there are no observations with zero trade, which means that selection model collapses into a standard non-selection model and we therefore estimate OLS and FEVD models on this sample.⁸

Using incumbent countries only, the increase in the impact and significance of the *ESC* variable after 1998 is a factor of about four and roughly of the same magnitude as with all countries included. Hence, the observed increase in the impact of the *ESC* variable cannot be attributed to the entry of new countries with different preferences, suggesting that changing from jury voting to televoting allows consumer preferences over countries to shine through.

In tandem with the increased coefficient for the ESC variable, we also note that we are more likely to encounter a negative impact of cultural distance on trade when the full, and more heterogeneous, sample of countries is applied. The incumbent countries are mainly western European countries with relatively similar cultural characteristics, which suggests that the impact of cultural distance may be less clear for this subsample.

3.1. Robustness

To further test the robustness and the character of our preference variables we perform a set of robustness tests. First, in estimation 1 in Table 4, we replace the cultural distance index *CD* with the psychic distance index *PD* suggested by Håkanson and Ambos (2010) and in estimation 2, we return to *CD* and re-estimate the model using the same sample as in estimation 1. The psychic distance index covers a smaller number of countries, mostly located in Western Europe, thereby reducing the variance in culture and institutional

⁷ For a description of the average score received by EU15 countries, see Figure A1. Table A3 shows that both Eastern European countries and EU15 countries give relatively high scores to countries from their own region. We also show the structure of the negative correlation between distance and *ESC SCORE*.

⁸ For the pre-televoting period there are a few observations with zero trade, but these zeros do not affect the results.

conditions. Although coefficients are not directly comparable across estimations, the results using the *PD* index verify previous results. Bilateral trade decreases with psychic distance and income gaps, whereas a relatively high ESC score is positively related to trade volumes. These results strengthen the idea that preferences have a role in determining trade patterns.

Estimation 3-4 separate trade flows into raw materials (approximately one-third of total trade) and other products (differentiated goods). Our hypothesis is that differentiated goods are more sensitive to consumer preferences than raw materials – this should result in stronger effects for the ESC variable in the sample for differentiated goods. By a similar reasoning, if cultural distance captures country differences that give rise to trade frictions, and frictions are especially important for trade in raw materials (where product differentiation cannot moderate the effects of cost and price differences), we expect raw materials to be more affected by cultural distance than differentiated goods, in particular since we are controlling for consumer preferences.

Results in estimations 3-4 support these expectations. For trade in raw materials, the negative estimated coefficient of cultural distance is about three times larger than for trade in differentiated goods. For the ESC variable, estimations 3-4 record a mild increase in the coefficient value for differentiated goods. Hence, raw materials appear to be less influenced by taste and preferences. Parallel with these results, we also find that the per capita income gap variable is negative and significant for raw materials and positive for differentiated goods. In other words, trade in differentiated goods is facilitated by small income gaps, whereas trade in raw materials is connected to large income gaps, suggesting, in line with the Hecksher-Ohlin theory, that trade in raw materials may be more affected by factor proportions and factor prices than trade in differentiated goods and intra-industry trade.

[Table 4 About here]

In short, results are robust with respect to the specification of and estimations procedure and support the hypothesis that votes cast in the ESC reveal consumer preferences that are strong enough to significantly

alter trade patterns. In addition, both cultural distance and the Linder hypothesis variable are found to be important predictors of international trade patterns. That is, these variables seem to be complementary to the ESC variable in that they seem to be connected to different aspects of demand and trade – cultural distance is likely to reflect cross-country differences that add to trade costs, while the Linder variable is related to income driven differences in demand.

As a final point, it should be noted that the robust and significant impact of the *ESC* variable may be due to the unique capacity of this proxy to capture changes in preferences that occur over time. This phenomenon is difficult to capture using variables that are based on history, religion, ethnicity, and similar country characteristics, which tend to be fixed over time. In addition, the *ESC* variable is not bounded to be monotonically related to distance, common borders, or other geographical units. Instead, it allows a country to have preferences that are independent of location, a feature that is difficult to capture with other standard grouping variables. Moreover, contrary to the hypothesis of e.g. Spierdijk and Vellekoop (2006) and Clerides and Stengos (2006), the significance of the ESC score variable does not diminish when other preference-related country characteristics are included in the model, pointing at strong complementarity between the applied distance and preference variables. As a test of robustness and omitted variable bias, Table A5 re-runs the estimations in Table 4 using the FEVD framework in a selection model set-up. Using the FEVD framework does not upset the conclusions suggesting that results in Table 4 are robust and not affected by insufficient control of fixed effects.

4. Concluding Remarks

With Beckerman (1956) and Linder (1961) as a starting point – asserting that psychic distance and country preferences are among the determinants of a country’s exports – this paper has explored the relation between exports, distance, and preferences in European trade. Four proxies for cultural or psychic distance and country preferences have been used in the analysis: a measure of cultural distance (CD) based on Hofstede’s (1980) dimensions of culture (following Kogut and Singh 1988), a psychic distance proxy (PD) based on the subjective perceptions of business managers from Håkanson and Ambos (2010), the per

capita income differences (*PCIGAP*) suggested by Linder (1961), and a measure for country preferences based on the European Song Contest (*ESC*) introduced by Taavo (2008) and Felbermayer and Toubal (2010). Together with conventional gravity variables like country size and geographical distance, these have been in a gravity equation to explain European trade during the period 1973-2008, and the resulting empirical model has been estimated using OLS, the Heckman selection model, and the Fixed Effect Variance Decomposition model proposed by Plumper and Troeger (2007). The main results are robust with respect to choice of estimator and model specification and can be summarized in three bullet points:

- The country preferences proxied by the *ESC* variable appear to explain bilateral trade flows. A stronger preference for country *i* in country *j*'s *ESC* votes suggests that country *j* will also import more goods from country *i*, controlling for other determinants of trade. The impact of the *ESC* variable is robust even with simultaneous inclusion of unit fixed effects and high frequency (year-by-year) time-varying country effects. Larger cultural distance, measured by the variables *CD* or *PD*, seems to inhibit bilateral trade, presumably because larger cultural distance adds to the transaction costs in international trade. While results are robust for the *ESC* variable and strong also for the *CD* and *PD* variables, the *PCIGAP* variable is somewhat weaker, although its coefficient is negative and significant in most estimations, in line with Linder (1961). The somewhat weaker results for *PCIGAP* may be related to the substantial income convergence that has taken place in Europe during the past decades: the per capita income differences between Western European countries may be so small that it is futile to look for significant income-related differences in demand and preferences.
- The change in the *ESC* voting procedures, from national juries made up of music professionals to televoting with broad popular participation, has raised both the estimated coefficient value and the significance level of the *ESC* variable. This suggest first, that televoting seems to reflect popular preferences better than does a professional jury, and second, that the *ESC* variable is indeed

related to preferences, rather than transaction costs or income-related differences in demand that did not change markedly during the period in focus.

- Distinguishing between raw materials and other products (differentiated goods) has a large impact on the estimated effect of the cultural distance variable PD. The negative impact on bilateral trade in raw materials is substantially larger than the impact on trade in other goods. This is consistent with the hypothesis that cultural distance influences bilateral trade through its impact on transaction costs: for raw materials, product differentiation cannot moderate the negative effects of higher transaction costs.

In other words, cultural or psychic distance and country preferences appear to be important determinants of international trade patterns. The fact that several of the proxies used to capture these cross-country differences tend to be significant even when they are included simultaneously in the estimations – together with the fact that the three main variables CD, ESC, and PCIGAP are not strongly correlated with each other – suggest that there are several different effects related to distance. The three effects discussed here are related to a) the increase in transaction costs that is likely to arise between pairs of countries that exhibit larger cultural differences, b) a demand effect that is related to subjective and changing country preferences, and c) a demand effect related to income differences, perhaps based on differences in product quality. The complex interactions and relations between these variables arguably reflect the complexity that can empirically be found in international business, and provide a strong motive for further research on the role of distance and preferences in international trade.

Some further comments on the comparison between the country preference variables ESC and PCIGAP are warranted. The *PCIGAP* variable is likely to have several weaknesses that complicate the interpretation of results. Firstly, it is not likely to be very useful for low-income countries, because it may capture partly off-setting effects. On the one hand, a large per capita income gap is assumed to reflect substantial dissimilarity in demand, which is expected to reduce exports. On the other hand, for a low-income country it also signals that the trade partner is a relatively rich country with wealthy consumers

and high labor costs that may motivate outsourcing of manufacturing production. These factors can be expected to raise exports from the low-income country. Hence, using income comparisons as an instrument to proxy country preferences may not work for all countries. Secondly, income convergence is likely to weaken the efficiency of the variable *PCIGAP*. It is not likely that country preferences would disappear even if factor prices and per capita incomes in Europe were equalized. On the contrary, product differentiation would probably become even more important if other sources of competitiveness diminish in importance, and part of this differentiation could be related to country of origin. Thirdly, the assumption implicit in the income gap variable, that country preferences are symmetric, is not necessarily correct. The two last of these weaknesses are to some extent handled by the *ESC* variable. Income convergence does not necessarily reduce the variation in *ESC* variable and it is not restricted to be symmetric. However, the first issue – that globalization is likely to undermine the independent “national” character of production and trade – remains a problem. The fact that multinational corporations are able to fragment their value chains and locate different activities in different countries makes it difficult to identify the “nationality” of a product. This is a reason to expect that the Linder hypothesis may become less relevant over time. On the other hand, the increasing technical sophistication of modern industry means that fixed costs and economies of scale are growing more important, which also raises the importance of product differentiation as a competitive strategy. Part of this differentiation may be related to the country of origin, which suggests that country preferences would remain important. Judging from our results, it is the latter effect that has dominated so far: globalization has not resulted in the erosion of country preferences, which remain a significant determinant of trade patterns among European economies. It is a topic for future research whether other forms of international interactions – for example, mergers and acquisitions or other types of foreign direct investment – are influenced by country preferences. It would also be interesting to know whether country preferences are as significant in other parts of the world as in Europe. If suitable proxies for these preferences are hard to find, there might be an economic reason to extend the *ESC* beyond Europe.

References

- Anderson J.E. 1979. A theoretical foundation for the gravity equation. *American Economic Review* 69(1), 106-116.
- Anderson, J.E., & van Wincoop, E. 2003. Gravity with gravitas: A solution to the border puzzle. *American Economic Review*, 93 (1), 170-192.
- Baldwin R., & Taglioni, D. 2006. Gravity for dummies and dummies for gravity equations. NBER Working Working Paper No. 12516.
- Beckerman, W. 1956. Distance and the Pattern of Inter-European Trade. *The Review of Economics and Statistics*, 38(1): 31-40.
- Bergstrand. J.H. 1990. The Heckscher-Ohlin-Samuelson model, the Linder hypothesis, and the determinants of bilateral intra-industry trade. *Economic Journal*, 100(4), 1216-1229.
- Benedictis, L.D., & Vicarelli, C. 2009. Dummies for Gravity and Gravity for policies: Mission impossible. Mimeo, Presented at the European Trade Study Group (ETSG) conference, Rome, 2009.
- Breusch, T., Kompas, T., Nguyen H.T.M., & Ward, M.B. 2011a. On the Fixed-Effects Vector Decomposition. *Political Analysis*, 19(2): 123-134 doi:10.1093/pan/mpq026.
- Breusch, T., Kompas, T., Nguyen H.T.M., & Ward, M.B. 2011b. FEVD: Just IV or just Mistaken. *Political Analysis*, 19(2): 165-169 doi:10.1093/pan/mpr012.
- Chaney, T. 2008. Distorted gravity: The intensive and extensive margins of international trade. *American Economic Review*, 98:4, 1707–1721.
- Clerides, S., & Stengos, T. 2006. Love thy neighbour, love thy kin: Strategy and biases in the Eurovision Song Contest. CEPR Discussion Paper No. 5732.
- Deardorff, A. 1998. Determinants of bilateral trade: does gravity work in a neoclassical world? In: Frankel, J. (Ed.), *The Regionalization of the World Economy*, University of Chicago Press, Chicago, pp. 7-32.
- Disdier, A.-C. & K. Head. 2008. The Puzzling Persistence of the Distance Effect on Bilateral Trade. *Review of Economics and Statistics*, 90(1), pp. 37-48.
- Felbermayr G.J. & Toubal F. 2010. Cultural proximity and trade. *European Economic Review*, 54 (2), 279-293.
- Feenstra R.C. 2002. Border effects and the gravity equation: Consistent methods for estimation. *Scottish Journal of Political Economy*, 49(5), 491-506.
- Feenstra, R.C. 2004. *Advanced International Trade: Theory and Evidence*, Princeton University Press, Princeton.

- Fenn, D., O. Suleman, O., Efstathiou, J., & Johnson, N.F. 2005. How does Europe make its mind up? Connections, cliques, and compatibility between countries in the Eurovision Song Contest. *Physica A: Statistical Mechanics and its Applications*, 360(2), 576-98.
- Ginsburgh, V.A., & Noury, A. 2004. Cultural voting: The Eurovision Song Contest. CORE Discussion Paper No. 2005/6, Catholic University of Louvain.
- Greenaway, D., Gullstrand, J., & Kneller, R. 2008. Firm Heterogeneity and the Gravity of International Trade. University of Nottingham, GEP, Discussion Papers No. 08/41.
- Greene, W. 2011a. Fixed Effects Vector Decomposition: A Magical Solution to the Problem of Time-Invariant Variables in Fixed Effects Models? *Political Analysis*, 19(2): 135-146 doi:10.1093/pan/mpq034.
- Greene, W. 2011b. Reply to Rejoinder by Plümper and Troeger. *Political Analysis*, 19(2): 170-172. doi:10.1093/pan/mpr011.
- Helpman, E., Krugman, P. 1985. Market Structure and Foreign Trade. MIT Press, Cambridge, MA.
- Helpman, E., Melitz, M., & Rubinstein, Y. 2008. Estimating trade flows: trading partners and trading volumes. *Quarterly Journal of Economics*, 123(2), 441-487.
- Hofstede, G. 1980. *Culture's Consequences*, Beverly Hills, California: Sage.
- Hofstede, G. 2006. What did GLOBE really measure? Researchers' minds versus respondents' minds. *Journal of International Business Studies*, 37(6), 882-896
- Håkanson, L., & Ambos, B. 2010. The antecedents of psychic distance. *Journal of International Management*, 16(3), 195–210.
- Hörnell, E., Vahlne, J-E, och Wiedersheim-Paul, F. (1973). *Export och utlandsetableringar*. Stockholm: Almqvist & Wiksell.
- Javidian, M., Dorfman, P.W., de Luque, M. & House, R.J. 2006. In the eye of the beholder: Cross cultural lessons in leadership from project GLOBE. *Academy of Management Perspectives*, 20(1): 67–90.
- Johanson, J. & Vahlne, J-E.. 1977. The Internationalisation Process of the Firm - A Model of Knowledge Development and Increasing Market Commitment. *Journal of International Business Studies*, 8(1), 23-32.
- Kogut, B., & Singh, H. 1988. The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, 19(3), 411-432.
- Linder, S.B. 1961. *An Essay on Trade and Transformation*. Almqvist & Wiksell, Uppsala.
- Melitz, J. 2007. North, south and distance in the gravity model. *European Economic Review*, 51(4), 971-991.
- Oyserman, D., Coon, H. M., & Kemmelmeier, M. 2002. Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analysis. *Psychological Bulletin*, 128, 3–7.

- Plümper, T., & Troeger, V.E. 2007. Efficient estimation of time-invariant and rarely changing variables in finite sample panel analyses with unit fixed effects. *Political Analysis*, 15(2), 124-139.
- Plümper, T., & Troeger, V.E. 2011. Fixed-Effects Vector Decomposition: Properties, Reliability, and Instruments. *Political Analysis*, 19(2): 147-164 doi:10.1093/pan/mpr008.
- Shenkar, O. 2001. Cultural distance revisited: Toward a more rigorous conceptualization and measurement of cultural differences. *Journal of International Business Studies*, 32(3), 519-535.
- Smith, P.B. 2006. When elephants fight, the grass gets trampled: the GLOBE and Hofstede projects. *Journal of International Business Studies*, 37(6), 915-921.
- Spierdijk, L., & Vellekoop, M.H. 2006. Geography, culture, and religion: Explaining the bias in Eurovision Song Contest voting. Memorandum No. 1794, Department of Applied Mathematics, University of Twente.
- Taavo, S. 2008. *Demand-Based Determinants of Trade: The Role of Country Preferences*. Master thesis, Stockholm School of Economics.
- Tinbergen, J. 1962. *Shaping the World Economy: Suggestions for an International Economic Policy*. New York: The Twentieth Century Fund.

Table 1: Trade and preferences. OLS models. (Dependent variable: log of total trade), 1975-2008.

	1. OLS	2. OLS	3. OLS	4. OLS	5. OLS	6. OLS	7. OLS	8. FE
<i>ln</i> (YY) (<i>Economic mass</i>)	0.8633 (0.0050)***	0.8628 (0.0049)***	0.8649 (0.0050)***	0.8617 (0.0049)***	0.8176 (0.0058)***	0.8177 (0.0058)***	0.8177 (0.0059)***	1.2507 (0.0489)***
<i>ln</i> (D) (<i>Distance</i>)	-1.1167 (0.0154)***	-1.1427 (0.0148)***	-1.1431 (0.0149)***	-1.1117 (0.0153)***	-1.0444 (0.0150)***	-1.0441 (0.0150)***	-1.0436 (0.0152)***	--
CD (<i>Cultural distance</i>)	-0.0534 (0.0064)***	--	--	-0.0366 (0.0065)***	-0.0567 (0.0064)***	-0.0568 (0.0064)***	-0.0569 (0.0065)***	--
PCIGAP (<i>Income differences</i>)	--	-0.0416 (0.0032)***	--	-0.0378 (0.0033)***	-0.0004 (0.0050)	-0.0004 (0.0050)	-1.3e-05 (0.0051)	0.0620 (0.0179)***
ESC (<i>Country preferences</i>)	--	--	0.0474 (0.0082)***	0.0424 (0.0082)***	0.0443 (0.0071)***	0.0442 (0.0071)***	0.0446 (0.0072)***	0.0077 (0.0041)*
Intra EU dummy	0.1207 (0.0204)***	0.0439 (0.0205)**	0.1034 (0.0202)***	0.0685 (0.0208)***	0.1103 (0.0209)***	0.1104 (0.0210)***	0.1102 (0.0214)***	0.1227 (0.0197)***
Intra East dummy	0.2446 (0.0952)***	0.1165 (0.0948)	0.1982 (0.0953)**	0.1482 (0.0948)	0.1130 (0.0907)	0.1173 (0.0909)	0.1201 (0.0921)	--
MTR 5 year	--	--	--	--	yes	--	--	--
MTR 3 year	--	--	--	--	--	yes	--	--
MTR 1 year	--	--	--	--	--	--	yes	--
Period dummies	yes	Yes						
R ²	0.95	0.95	0.95	0.95	0.97	0.97	0.97	0.89
Obs.	9 453	9 453	9 453	9 453	9 453	9 453	9 453	9 453

Standard errors within parentheses (.). ***, **, * Indicates significance at the 1, 5, and 10 percent level respectively. MTR1, MTR3 and MTR5 is defined as time varying (one, three and five year periods, respectively) country dummies.

**Table 2. Selection and Fixed Effect Variance Decomposition models.
(Dependent variable: log of total trade), 1975-2008.**

	1. FEVD	2a.Heckman selection ^(A)	2b.Heckman Target eq.	3. HMR ^(B)	4.Heckman FEVD
<i>ln</i> (YY) (Economic mass)	0.8735 (0.0032)***	-0.7167 (0.0123)***	0.8212 (0.0217)***	0.8608 (0.0136)***	0.8500 (0.0050)***
<i>ln</i> (D) (Distance)	-1.1205 (0.0082)***	-0.4437 (0.0650)***	-1.0417 (0.0215)***	-1.0091 (0.0186)***	-1.1463 (0.0088)***
CD (Cultural distance)	-0.0395 (0.0035)***	0.0308 (0.0600)	-0.0574 (0.0064)***	-0.0532 (0.0073)***	-0.0228 (0.0036)***
PCIGAP (Income differences)	0.0047 (0.0027)*	0.3522 (0.0566)***	-0.0020 (0.0078)	0.0040 (0.0074)	-0.0335 (0.0033)***
ESCe (Country preferences)	0.0404 (0.0038)***	-0.0617 (0.0348)***	0.0450 (0.0072)***	0.0393 (0.0081)***	0.0359 (0.0040)***
Intra EU dummy	0.1196 (0.0114)***	0.6835 (0.0995)***	0.1105 (0.0245)***	0.1143 (0.0283)***	0.1499 (0.0124)***
Intra East dummy	0.7367 (0.0496)***	-1.5214 (0.5601)***	0.1287 (0.0975)	-0.0840 (0.1244)	-0.0184 (0.0616)
Export ratio	--	2339 (3223)	--	--	--
Eta	1 (0.007)***	--	--	--	1 (0.007)***
Period dum.	yes	yes	yes	yes	yes
MTR3	yes	yes	yes	yes	yes
Mills ratio			-0.1975 (0.4386)	5.3767 (9.6525)	-0.0471 (0.0523)
R ²	0.99	--	--	0.90	0.98
Obs.	9 453	10 208	9 453	9 453	7 291

Standard errors within parentheses (.). ***, **, * Indicates significance at the 1, 5, and 10 percent level respectively.

In FEVD models, distance, East-East trade, joint economic mass, CD, ESC and PCIGAP are included in the set of time invariant/slowly changing variables in the second step of the FEVD estimation. Eta is the fixed effect variance decomposition vector. MTR3 is defined as time varying (three year period) country dummies. ^(A) Heckman p-val independent equations = 0.00.

^(B) Following Helpman *et al.* (2008) we include higher order terms of z (z, z^2, z^3) (not shown) to control for heterogeneity, z is defined as $\hat{z} = \Phi^{-1}(\hat{p}) + \hat{n}$, p is the predicted probability and n is Mills ratio.

Table 3. Before and after televoting (Dependent variable: log of total trade).

	1a. Heckman Before televoting 1975-1997		1b. Heckman After televoting 1998-2006		2. OLS ^(A) Before and after televoting incumbents only		3. FEVD ^(A) Before and after televoting incumbents only	
	Target	Selection	Target	Selection	1975-1997	1998-2006	1975-1997	1998-2006
<i>ln</i> (YY) (Economic mass)	0.7732 (0.0083)***	-0.8951 (0.0448)***	0.8359 (0.0094)***	-0.2821 (0.0741)***	0.7648 (0.0087)***	0.8518 (0.0124)***	0.8204 (0.0044)***	0.9328 (0.0054)***
<i>ln</i> (D) (Distance)	-1.0422 (0.0182)***	-0.1621 (0.0823)**	-1.0964 (0.0276)***	-2.5662 (0.4041)***	-0.9548 (0.0210)***	-0.7537 (0.0342)***	-1.1129 (0.0102)***	-0.8899 (0.0148)***
CD (Cultural distance))	-0.0396 (0.0077)***	-0.0153 (0.0402)	-0.0826 (0.0114)***	-0.4955 (0.1009)***	0.0004 (0.0096)	-0.0428 (0.0166)***	0.0897 (0.0049)***	0.0004 (0.0072)
PCIGAP (Income differences)	0.0351 (0.0078)***	0.2094 (0.0485)***	-0.0135 (0.0069)**	0.5216 (0.1099)***	0.0039 (0.0126)	-0.1328 (0.0199)***	-0.1502 (0.0065)***	-0.1382 (0.0085)***
ESC (Country preferences)	0.0205 (0.0084)**	-0.0274 (0.0302)	0.0871 (0.0130)***	-0.0299 (0.1016)	0.0240 (0.0096)**	0.0875 (0.0156)***	0.0224 (0.0048)***	0.0882 (0.0067)***
Intra EU dummy	0.1884 (0.0256)***	0.6270 (0.1248)***	-0.0101 (0.0368)	9.5529 (3.8e10 ⁶)***	0.2128 (0.0302)***	0.0944 (0.0453)**	0.2227 (0.0152)***	-0.1912 (0.0198)***
Intra East dummy	-0.1264 (0.1461)	-1.1147 (0.4046)***	0.1724 (0.1169)	-1.3117 (0.5615)**	--	--	--	--
Export Ratio		10254 (3205)***		640.3 (3766)	--	--	--	--
Eta	--	--	--	--	--	--	1(0.008)***	1(0.012)***
Period dum.	yes	yes	yes	yes	yes	yes	yes	Yes
MTR3	yes	yes	yes	yes	yes	yes	yes	Yes
Mills Ratio	0.5073 (0.0606)***		0.0618 (0.0891)		--	--	--	--
Rho	0.7469 (0.0827)***		0.0900 (0.1296)		--	--	--	--
R ²	--	--	--	--	0.90	0.98	0.98	0.996
Obs.	6502	7172	2951	3036	4710	1 567	4 710	1 567

Standard errors within parentheses (.). ***, **, * Indicates significance at the 1, 5, and 10 percent level respectively. MTR3 is defined as time varying (three year periods) country dummies. In the FEVD model, distance, East-East trade dummy, joint economic mass, CD, ESC and PCIGAP are included in the set of time invariant/slowly changing variables. Eta is the fixed effect variance decomposition vector. ^(A) With incumbents only, there are no observations with zero observations for the period with televoting, making the model collapse to a non-selection model. For the pre-televoting period with incumbents only included, there are only few zero trade observations. Hence, estimating this model with a Heckman approach yields almost identical results as OLS estimation, available on request.

Table 4. Extensions. (Dependent variable: log of total trade), 1975-2008.

	1. Heckman Psychic distance PD ^(A)		2. Heckman Cultural distance CD ^(B)		3. Heckman Non-raw materials		4. Heckman Raw material	
	Target	Selection	Target	Selection	Target	Selection	Target	Selection
<i>ln</i> (YY) (Economic mass)	0.8617 (0.0387)***	-3.9581 (0.7969)***	0.8601 (0.0167)***	-2.5487 (0.1778)***	0.8136 (0.0073)***	-0.7102 (0.0344)***	0.8613 (0.0164)***	-0.3271 (0.0254)***
<i>ln</i> (D) (Distance)	-1.1670 (0.0978)***	2.7615 (0.9867)***	-1.2575 (0.0177)***	-0.5441 (0.1608)***	-1.0002 (0.0169)***	-0.4361 (0.0777)***	-1.1648 (0.0280)***	-0.2996 (0.3671)***
CD (Cultural distance)	-0.0099 (0.0045)**	-0.1931 (0.0549)***	-0.1303 (0.0091)***	-0.2072 (0.0844)**	-0.0323 (0.0071)***	0.0426 (0.0312)	-0.0982 (0.0157)***	0.0356 (0.0943)
PCIGAP (Income differences)	-0.0504 (0.0324)	0.9127 (0.1658)	-0.0125 (0.0073)*	0.7110 (0.0729)***	0.0279 (0.0057)***	0.3774 (0.0419)***	-0.0935 (0.0587)	0.1687 (0.0195)***
ESC (Country preferences)	0.0401 (0.0089)***	-0.0696 (0.0668)	0.0297 (0.0076)***	-0.1196 (0.0460)***	0.0515 (0.0078)***	-0.0648 (0.0283)**	0.0443 (0.0144)***	-0.0333 (0.0406)
Intra EU dummy	-0.2116 (0.0974)**	4.1294 (1.4650)***	-0.1327 (0.0281)***	3.5565 (0.2816)***	0.1601 (0.0233)***	0.6710 (0.1049)***	0.0288 (0.0246)	0.2322 (0.2522)
Intra East dummy	--	--	--	--	0.3671 (0.1012)***	-1.5522 (0.3349)***	0.0960 (0.2479)	-1.1510 (1.2081)
Export Ratio	--	12463 (na)	--	1269.6 (6305.4)	--	-1.5522 (0.3349)***	--	4330 (na)
Period dum.	yes	yes	yes	yes	yes	Yes	yes	Yes
MTR3	yes	yes	yes	yes	yes	Yes	yes	Yes
Rho			-0.4694 (0.2527)***		-0.5320 (0.1017)***		-0.2740 (4.4724)	
Mills ratio			-0.2013 (0.1103)*		-0.4010 (0.0788)***		-0.2223 (3.6652)	
Obs.	3 421	3 874	3 421	3 874	9 451	10 208	9 297	10 208

Standard errors within parentheses (.). ***, **, * Indicates significance at the 1, 5, and 10 percent level respectively.

^(A) CD is replaced with psychic distance (*PD*) suggested by Håkanson and Ambos (2010). Compared to *CD*, the coverage of *PD* is smaller and concentrated to Western European countries.

^(B) Estimation using *CD*, estimated on the same sample as estimation 1. using *PD*.

APPENDIX

Table A1. Summary Statistics

Variable	Mean	Be. / within stdv.
<i>ln</i> (distance)	7.28	--
<i>ln</i> (tot trade) ^(a)	14.30	1.0
<i>ln</i> (YY)	51.80	4.7
ESC	0.06	0.4
PCIGAP	1.86	11
CD	1.81	--
PD	29.1	--
Intra EU dummy	0.31	1.2
Intra East dummy	0.01	--
Export ratio	0.05	0.8

Note: Total trade is divided into 31% raw materials and 69% other products.
Based on estimation sample.

Table A2. Correlation matrix

	1.	2.	3.	4.	5.	6.	7.	8.
1. <i>ln</i> (Tot. trade)	1							
2. <i>ln</i> (YY)	.55	1						
3. <i>ln</i> (Distance)	-.26	-.24	1					
4. ESC	0.04	.02	-.09	1				
5. CD	-.09	-.07	.26	.10	1			
6. PCIGAP	-.01	-.13	.13	-.02	.18	1		
7. intra EU15 dummy	0.33	.40	-.28	-.01	.04	-.22	1	
8. Intra East dummy	-.01	-.17	-.05	.01	.04	-.03	-.06	1
9. Export ratio	0.65	-.03	.00	.01	-.00	.16	.07	.11

Note: Correlations based on estimation sample. Correlation Hofstede and Håkansson cultural index is 0.45.

Table A3. Regional division of trade, 2005

Intra EU15 trade	69%
Intra Non-EU15 (East country) trade	29%
EU15-East country trade	2%

Note: Correlations based on estimation sample.

Table A4. Distance and regional division of given Eurovision Song Contest score.

Regions and ESC-score	Distance to vote receiver and given ESC score	
EU15 average from all countries	2.6	Dist < 500 km 3.7
EU15 from EU15	2.8	Dist < 1000 km (percentile 25) 3.1
Non-EU15 average from all countries	1.9	Dist > 2300 km (percentile 75) 2.2
Non-EU15 from non-EU15	2.0	

Note: Calculations based on regression estimation sample

Table A5. Extensions. (Dependent variable: log of total trade), 1975-2008.

	1. Heckman FEVD ^(A) Target eq. Cultural Distance	2. Heckman FEVD ^(B) Target eq. Psychic distance.	3.Heckman FEVD ^(C) Target eq. raw mtrl.	4.Heckman FEVD ^(D) Target eq. non-raw mtrl.
<i>ln</i> (YY) (Economic mass)	0.8106 (0.0077)***	0.8256 (0.0068)***	0.7005 (0.0070)***	0.8487 (0.0056)***
<i>ln</i> (D) (Distance)	-1.2876 (0.0169)***	-1.3089 (0.0113)***	-1.4051 (0.0126)***	-1.0342 (0.0099)***
CD (Cultural distance)	-0.0100 (0.0008)***	-0.1182 (0.0055)***	-0.2449 (0.0051)***	-0.0100 (0.0041)***
PCIGAP (Income differences)	-0.0242 (0.0059)***	-0.0286 (0.0059)***	0.2004 (0.0058)***	-0.0233 (0.0038)***
ESC (Country preferences)	0.0460 (0.0049)***	0.0343 (0.0049)***	0.0416 (0.0055)***	0.0433 (0.0046)***
Intra EU dummy	0.2286 (0.0166)***	0.2287 (0.0167)***	0.0179 (0.0167)	0.1558 (0.0141)***
Intra East dummy	--	--	3.0165 (0.0944)***	0.2111 (0.0708)***
Eta	1 (0.013)***	1(0.013)***	1(0.008)***	1 0.007)***
Period dum.	Yes	Yes	yes	yes
MTR3	Yes	Yes	yes	yes
Rho				
Mills ratio	-0.0146 (0.0288)	-0.0146 (0.0272)	-0.2684 (0.1063)***	-0.2663 (0.0592)***
R ²	0.98	0.98	0.96	0.97
Obs.	2 390	2 390	7 543	7 289

Standard errors within parentheses (.). ***, **, * Indicates significance at the 1, 5, and 10 percent level respectively. MTR3 is defined as time varying (three year periods) country dummies. Eta is the fixed effect variance decomposition vector. MTR3 is defined as time varying (three year periods) country dummies. In the FEVD model, distance, East-East trade dummy, joint economic mass, CD, ESC and PCIGAP are included in the set of time invariant/slowly changing variables. Eta is the fixed effect variance decomposition vector.

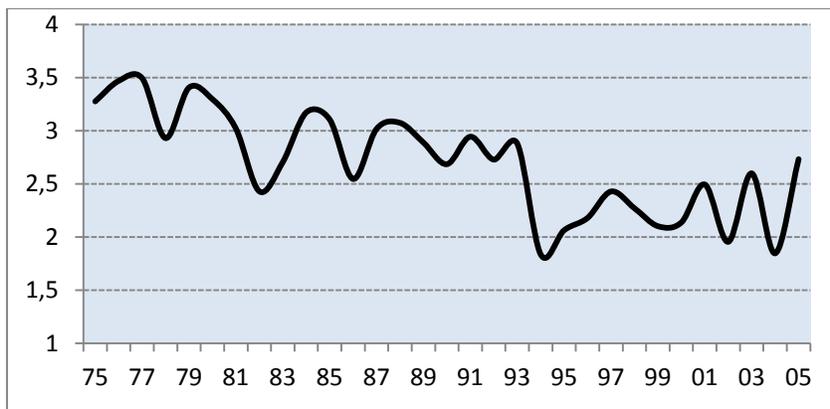
^(A) CD is replaced with psychic distance (*PD*) suggested by Håkanson and Ambos (2010).

^(B) Estimation using *CD*, estimated on the same sample as estimation 1.using *PD*.

^(C) Estimation on trade in raw materials.

^(D) Estimation on trade in other products (differentiated goods).

Fig A1. Average EU15 ESC-score 1975-2005



Note: Calculation based on regression estimation sample.

Table A6. Eastern European Countries

Albania	Czech Rep	Russian Federation
Armenia	Estonia	Serbia, Serbia & Montenegro
Belarus	Georgia	Slovakia
Bosnia Herzegovina	Lithuania	Slovenia
Bulgaria	Rep Moldova	Ukraine
Croatia	Poland	Macedonia
	Romania	Hungary