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Euroscepticism and education: A longitudinal study of twelve EU member states, 1973–2010

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Abstract

This study examines the relationship between educational attainment and euroscepticism from 1973 to 2010. Existing research has shown that, driven by utilitarian considerations, political cues and questions of collective identity, education and euroscepticism are negatively related. However, as the process of European unification has progressed, all three factors have become more salient, so we expect an increasing effect of education on euroscepticism over time. Using 81 waves of the Eurobarometer survey in 12 EU member states, our results show that the impact of education on euroscepticism has indeed increased, particularly after the signing of the Maastricht Treaty.

Keywords: Education; euroscepticism; Maastricht; Public opinion. , ,

1. Introduction

It is a well-established fact that the lower educated are more sceptical of European integration than their higher educated counterparts. This negative relationship between education and euroscepticism has generally been explained by socio-economic, socio-cultural and political factors (see Hooghe and Marks 2005; Loveless and Rohrschneider 2008; Lubbers and Jaspers 2011). The central question of our study is whether the relationship between euroscepticism and education has grown stronger over time in Western Europe.

There are good reasons to expect this to be the case. First, education in general has become more important as a determinant of one's position in society, as knowledge-based post-industrial economies demand skills for which employees have to be well-educated (Koehn and Rosenau 2002,2003, Bonoli 2006). Second, the European Union itself has transformed from a mere intergovernmental regime with primarily economic and market-related competencies into a supranational regime with increased political competencies, with ripple effects for citizens' daily lives. As will be explained below, this development directly ties into the salience of the economic, cultural, and political factors that underlie the relationship between education and euroscepticism.

Yet little research exists on the trends in the relationship between education and attitudes towards European integration. On the one hand, a study of the Netherlands by Lubbers and Jaspers (2011) provides detailed information about the different predictors of euroscepticism, but on the other hand it has a time frame limited to the post-Maastricht period and focuses on a single country. Lubbers and Scheepers (2010) also study the difference in euroscepticism between education groups over time, but they focus on 'political' as opposed to 'instrumental' euroscepticism and thereby also limit their timeframe to a much shorter period (1994-2004). Our study is the first to systematically analyse the development of this 'educational gap' in euroscepticism over a period spanning almost four decades in 12 member states of the European Union.

This study contributes to two strands of research. Various scholars have argued that a new political cleavage has developed in Western European countries, which finds its origin in a structural conflict between the winners and losers of globalization (e.g., Enyedi and Deegan-Krause, 2010; Kriesi et al. 2008, 2012; Stubager, 2008, 2010). Globalization has triggered economic competition as a consequence of open markets and has also increased cultural competition due to immigration from outside Europe. The effects of these developments vary across society. For some people – the well-educated and qualified 'winners of globalization' – this provides more opportunities. According to Kriesi and colleagues (2008:5), they hold the

‘convertible resources’ that are necessary to successfully operate in a globalized society. The ‘losers of globalization’ possess fewer skills and either see their jobs displaced to India or China, or are challenged by the increased competition of workers from the new EU member states (Gabel 1998a). Kriesi et al. (2008) argue that these ‘losers’ are increasingly likely to call for protectionist measures to shield national economies from worldwide competition and therefore will oppose further European integration as well as further immigration into their country. Our findings resonate with this argument insofar as we show divergence of education groups in terms of Euro-sceptic attitudes.

Second, this study contributes to the vivid debate on the predictors of individual attitudes towards European integration. Much of the early research on public opinion towards European unification focuses on economic utilitarian considerations (e.g., Gabel, 1998a,b; Gabel and Whitten, 1997; Anderson 1998; Inglehart, 1970; Rohrschneider, 2002; Eichenberg and Dalton, 1993). Yet, more recently, the focus has shifted to feelings of cultural or national attachments as determinants of attitudes towards European integration (e.g., McLaren, 2002; Carey, 2002; Bruter 2003; Christin and Trechsel, 2002; Hooghe and Marks, 2004) and to the role of domestic players, in particular political parties and the media (Ray 2003; Steenbergen et al. 2007; De Vreese 2007).

We analyse the effect of education on euro-scepticism using individual-level survey data from 813,199 respondents, obtained by pooling 81 waves of the Eurobarometer survey across 12 countries. The results confirm the theoretical prediction that the educational gap in euro-scepticism widens, particularly after the signing of the Maastricht treaty.

2. Education and euroscepticism

2.1. The static effect

Why are some citizens more opposed to European integration than others? In reviewing what was already a vast literature at the time, Hooghe and Marks (2005) distinguish between utilitarian calculations, political cues and questions of collective identity as explanations of euroscepticism (see also Loveless and Rohrschneider 2008 and Lubbers and Jaspers 2011). These are also the three mechanisms through which education exerts its influence on euroscepticism.

First, euroscepticism can be the result of economic calculations. Utilitarian cost-benefit considerations are based on the observation that “EU membership is not necessarily a positive sum game where everyone wins; instead it frequently involves both winners and losers” (Anderson and Reichert 1996: 233). In a seminal study on the perceived costs and benefits of EU membership, Gabel and Palmer (1995: 7) put forth their so-called ‘human capital’ hypothesis that is “based on the premise that certain individual skills are more valuable and transferable in an advanced industrial economy.” In short, a high educational outcome prepares for competition in an integrated market economy (Gabel and Palmer 1995). Consequently, well-educated citizens are expected to be more optimistic about their employment opportunities in this environment than the less educated.

In a similar vein, according to Kriesi et al. (2008: 5), the strongest determinant of whether one is at the winning or losing side of this cleavage is mobility (see also Baumann 1998). Those with ‘convertible resources’ can easily benefit from more open borders, whereas those without such resources are captured within national borders and therefore cannot benefit from globalization. In fact, Koehn and Rosenau (2002) argue that in order to benefit from globalization, people need to dispose of ‘transnational competences’. These include cognitive, emotional, creative, behavioural and functional skills enabling individuals to remain flexible and to successfully interact in an internationalized environment. These skills are predominantly transmitted in formal education (Rosenau 2003). In line with this argument, Kuhn (2011) has shown that cross-border networks and mobility are strong predictors of EU support, and that these are concentrated among a highly-educated elite.

Second, domestic elites impact attitudes towards European integration, most notably supply-side actors such as political parties (Ray 2003; Hooghe and Marks 2005; Steenbergen et al. 2007; De Vries and Edwards 2009) and media (De Vreese and Boomgaarden 2005; De Vreese 2007;

Maier and Rittberger 2008). Ray (2003: 990) argues that ‘the position taken by a political party on the issue of European integration can act as a cue for supporters of that party’. De Vries and Edwards (2009) show that the presence of political parties at both extremes of the left-right spectrum boosts euroscepticism. Prior research has shown that the lower educated are more likely to support fringe parties, such as left- and rightwing populist parties, extreme right parties, and communist parties (see for example Ivarsflaten and Stubager 2011 on the link between voting for rightwing populist parties and education). Since these fringe parties tend to be eurosceptic, their messages are likely to spur euroscepticism among the lower educated in particular. Moreover, Hobolt (2009) has shown that referendum voters who are more politically aware make their vote choice independently rather than relying on cues. Considering that political awareness tends to increase with education, it is to be expected that highly educated individuals are less likely to rely on increasingly eurosceptic party cues.

The second domestic supply-side actor of importance is the news media. It has become commonplace to state that citizens draw on information from the mass media, at least in part, to form political opinions. In the case of European integration, the framing of EU news coverage has proven especially consequential (Norris 2000; De Vreese and Boomgaarden 2005; Schuck and De Vreese 2006). When the tone of news coverage is negative or when news is framed in terms of risks or conflict, public support for European integration drops. However, these media effects do not have a uniform impact on mass attitudes. Rather, those with lower levels of political sophistication turn out to be most susceptible to news that frames the EU in terms of risk (Schuck and De Vreese 2006).

Third, issues of collective identity shape eurosceptical attitudes. Some Europeans perceive European integration as a threat to their national identity, both in cultural terms as well as with respect to national sovereignty. McLaren (2002: 564) argues that ‘attitudes towards the European Union tend to be based in great part on a general hostility towards other cultures’. This argument is based on the contention that individuals approach European integration in terms of its ‘undermining the integrity of the nation-state’ (McLaren 2002: 554), rather than in terms of economic cost-benefit calculations. In a similar vein, Hobolt et al. state that ‘a lack of tolerance towards other religions is likely to shape not only diffuse scepticism but also reservations about specific integration policies, such as enlargement of the Union with Turkey’ (2011: 373). The impact of nationalist and culturally intolerant attitudes, broadly defined and measured, on euroscepticism has received wide empirical support (Carey 2002, Hooghe and Marks 2005; Lubbers and Scheepers 2007; Hobolt et al. 2011; Lubbers and Jaspers 2011). Again, we can indirectly link education to euroscepticism via cultural attitudes. In a wide variety of national

contexts and time periods, education has been repeatedly shown to be a powerful predictor of ethnic exclusionism and nationalism (e.g. Hjerm 2001; Coenders and Scheepers 2003; McLaren 2003; Schneider 2008; Margalit 2012). To understand this link, it is necessary to consider the functions of education in today's societies. Not only does it improve students' human capital by strengthening their skills, it also exposes them to a certain set of ideas and values. Education can foster cosmopolitan and tolerant worldviews by increasing students' knowledge of other cultures (Hainmueller and Hiscox 2006). Inglehart (1970) argued that education leads to 'cognitive mobilization', meaning that through their education individuals acquire the ability to cope with such abstract and extensive political communities as the EU. According to Inglehart (1970), this ability is key to endorsing European integration. This is even more the case as national and European education policies increasingly emphasise a cosmopolitan, post-national model of society (Schissler and Soysal 2005, Keating 2009).

All in all, based on a plethora of existing studies, euroscepticism and education are linked via economic, political, and identity-related mechanisms.

H1: There is a negative relationship between levels of education and euroscepticism.

Almost all existing studies on euroscepticism and education clearly point to a negative relationship between educational attainment and euroscepticism (but see Brinegar and Jolly 2005), so we should not be surprised to find strong support for Hypothesis 1. Still, whether the relationship proves to be universal across the twelve EU member states that we include in this study remains to be seen.

2.2. The dynamic effect

While the static effect of educational attainment on euroscepticism is rather well established, the explicit purpose of this study is to assess whether the gap in euroscepticism between educational groups has increased, decreased or remained stable over time. We expect education to play an increasingly important role in structuring attitudes towards European integration. This expectation is a direct corollary of the abovementioned explanations of euroscepticism, as these economic, political and cultural factors have become ever more salient over the years. If education is related to euroscepticism through these channels, and if these become more important over time, it should logically follow that the effect of education on euroscepticism also increases over time (cf. Lubbers and Jaspers 2011).

Until the late 1980s, most citizens understood European cooperation as a matter of belonging to the realm of international relations, relatively detached from their daily lives. European integration was generally perceived as an elite project, aimed at increased collaboration between independent states. Over the past few decades, however, it has become clear to most citizens that the EU has evolved into much more than that. The Treaty of Maastricht in particular has made it explicit that the European Community (EC) would be transformed into a European Union (EU) with political power and ambitions. The transformation from a mere intergovernmental regime with primarily economic and market-related competencies into a supranational regime with increased political competencies meant that individual countries had to transfer sovereignty to the European level (Fuchs and Klingemann, 2002; Marks & Steenbergen, 2004; Van der Brug and Van der Eijk 2007; Hooghe & Marks, 2009). As a consequence of continued European integration at the economic and at the political level, there is also increased public contestation over further European unification (de Vreese, 2003; de Vreese et al. 2006; de Vries, 2007, de Vries & Edwards, 2009; Hobolt, 2009; Hooghe and Marks, 2009; Kriesi et al., 2008; Steenbergen et al., 2007; van der Eijk & Franklin, 2004). In short, as Hooghe and Marks (2009) put it, the issue of European integration has become politicized (see also de Wilde and Zürn 2012). This transformation is likely to have consequences for all three mechanisms that produce the expected relationship between education and euroscepticism.

First, European market integration meant that national markets for goods, labour, service and capital have been increasingly harmonized and that national barriers have been removed. As we argued above, the opening of markets provides opportunities for the higher educated and risks for the lower educated in Western Europe. As this process continues, the lower educated are likely to feel increasingly threatened and will become increasingly eurosceptical, while the higher educated are expected to exhibit greater support for EU membership with the passing of time, as they benefit mostly from increased European integration.

Second, we established above that domestic actors, in particular political parties and the news media, shape EU attitudes. Parties on the extreme left and right are especially influential in triggering euroscepticism (De Vries and Edwards 2009). Of these, populist rightwing parties in particular have become ever more popular from the late 1970s onwards (Golder 2003; Norris 2005). While these parties' anti-immigration profile has received widespread attention, they are also known for their opposition to European integration (Hakhverdian and Koop 2007). Euroscepticism has become particularly prevalent among these parties after the Maastricht treaty was signed. Radical right-wing parties then capitalized on the fact that European integration threatened the sovereignty of member states (e.g., Mudde 2007). Given the surge in popularity of

these parties, their impact on euroscepticism, particularly among the lowest educated, should be increasing as well. In a similar vein, news coverage of EU topics has changed in recent decades. Research shows that the visibility of the EU in news media coverage has been on the rise since 1990 (e.g., Koopmans and Statham, 2010). While Norris (2000) finds that television and newspapers exhibit a consistently negative anti-Europe bias, De Vreese (2003) is more reserved by concluding that news coverage is generally neutral. However, EU actors are evaluated in negative terms. This has consequences for the education gap in euroscepticism. If the volume of news on European matters has increased and if, when evaluated, the EU is put in a negative light, one can assume that there is more negative news coverage on the EU nowadays than in the past. Given the propensity of negative news frames to impact the lower educated in particular (Schuck and De Vreese 2006), the increase in euroscepticism should be largest among precisely this group.

Third, identity-based processes of euroscepticism have undergone significant changes as well. Economic integration was accompanied by an ever deeper political union between the member states. The empowerment of core European institutions such as the Commission and the European Parliament, the pillar structure of the post-Maastricht European Union, the introduction of the Euro and the latest round of modifications as laid out in the Constitutional Treaty, have all weakened national sovereignty of the participating countries. We can expect political integration to further fuel nationalistic attitudes, especially among the lowest educated, leading to stronger increases in euroscepticism among these lower strata as compared to the highest educated (Lubbers and Scheepers 2007). The widening and deepening of the European Union has not only left some Europeans concerned about their national sovereignty, but has also triggered fears of a loss of national traditions and cultural integrity. The EU's policies of harmonization impact various aspects of daily life (and thus threaten some pillars of regional or national identity). Moreover, immigration from the new member states and from outside Europe galvanized euroscepticism and xenophobia among the mass public and in particular among the least educated. All in all, the channels through which education impacts euroscepticism have all gained in importance over the time-span considered in this study (from the early 1970s onwards).

H2: The impact of education on euroscepticism becomes stronger over time.

A final point of importance regarding the effect of education on euroscepticism concerns the changing character of the European Union. The transformation of the European Union has not been gradual by any means. Even though a large number of treaties have gradually transferred more national sovereignty to the European level, the real turning point came with the signing of

the Treaty of Maastricht in 1992 (Fuchs 2011). First, the Maastricht treaty strongly intensified economic integration by establishing Economic and Monetary Integration (EMU), which instituted the European Central Bank and formalized steps towards a common European currency. Second, Maastricht took political integration a great step further, shifting attention “from creating a market to regulating it” (Marks 2004: 258). EU competencies were extended to non-economic policy areas (including foreign and defence policy), qualified majority voting in the European Council was extended beyond single-market policies, and the European Commission and Parliament were empowered. The European Community was renamed into European Union, and citizens of the Union were granted official EU citizenship supplementary to their national citizenship. As such, Maastricht marked a transformation of the EU from an intergovernmental project to a multi-level polity, with its own currency, citizenship rights, and with supranational authority over an increasing number of policy areas.

The literature on euroscepticism shows a ‘post-Maastricht blues’: After the treaty of Maastricht, euroscepticism soared in most member states (Laffan 1996; Eichenberg and Dalton 2007, Hooghe and Marks 2009). However, this increase ought to be most pronounced among the least educated. Even though each new treaty included deeper integration of European markets, Maastricht went further than these past treaties had hitherto accomplished, most notably by fully institutionalizing EMU, including the ‘convergence criteria, as well as a schedule and a provision for the establishment of the European Central Bank. It also introduced community policies in other economically relevant areas such as consumer protection and industrial policy.

Socio-cultural (national) sentiments and political considerations are also expected to be amplified in the wake of Maastricht as the EU moved ‘from issues of instrumental problem-solving to fundamental questions about its nature as a part-formed polity’ (Laffan 1996: 82). As Dalton and Eichenberg (2007: 141) write, ‘the Treaty of Maastricht evoked citizen concerns about the proper bounds of the integration process’. The intrusion of the EU went further than abolishing cherished symbols such as national currencies; it also alerted citizens to the possibility that European regulations could one day interfere with ‘national (budgetary) policies for maintaining and distributing standards of living and policies that cultivate the national culture and identity’ (Dalton and Eichenberg 2007: 142).

H3: The increasing impact of education on euroscepticism is particularly pronounced after the signing of the Treaty of Maastricht.



3. Data and Methods

3.1. Dataset

To assess how differences in euroscepticism between educational levels have evolved over time, we require a longitudinal dataset that covers a large time span and includes consistent measures of euroscepticism and level of education. A dataset that satisfies these demands is the cumulative Mannheim Eurobarometer trendfile 1970-2002 (Schmitt and Scholz 2005), which we merged with the more recent Eurobarometer (EB) waves until 2010. Restricting the dataset to the waves including an identical item on euroscepticism leaves us with 81 Eurobarometer waves conducted from 1973 to 2010.¹ This time span of 37 years and 70 time points – the Eurobarometer surveys are carried out biannually – covers a significantly larger period than previous studies. Of all participating countries, 12 member states have a sufficiently long time series to allow studying structural change in educational impact: France, Belgium, the Netherlands, Germany², Italy, Luxembourg, Denmark, Ireland, Great Britain, Greece, Spain, and Portugal. The measured time span is shorter for Greece, Spain and Portugal, as the Eurobarometer only included them shortly before their entry into the EC.³

3.2. Variables

We measure euroscepticism using respondents' opinion on their country's membership in the European Union. Lubbers and Scheepers (2005) label this type of euroscepticism 'instrumental euroscepticism' and distinguish it from 'political euroscepticism', which refers to whether or not policy competencies should be transferred to the supranational level. The original Eurobarometer item has three answer categories ('good', 'bad' and 'neither good nor bad').⁴ We combine the neutral and negative answer options in order to obtain a more equally distributed dependent

¹ The only year for which we have no observations is 1974, when the EB did not include a measure of euroscepticism.

² From autumn 1990 onwards, surveys were also conducted in former East Germany.

³ From autumn 1990 onwards, surveys were also conducted in former East Germany.

³ Greece became a member of the EEC in 1981, Portugal and Spain in 1986. All three countries were included in the EB a year before their entry. We also conducted our analyses without these countries, but the results remain the same (see the online appendix).

⁴ The question on EU-membership is formulated as follows: 'Generally speaking, do you think that (your country's) membership of the European Union is...?' with the answer options 'good', 'neither good nor bad' and 'bad'.

variable.⁵ On the resulting dichotomous variable, a score of 0 represents a positive attitude towards EU-membership, whereas a score of 1 represents negative and neutral attitudes.⁶

Since the Eurobarometer data are collected twice a year, we measure time in semesters, counting the first semester of 1973 as $t = 0$. Education is measured by asking respondents at what age they finished full-time education. We recoded this variable into three categories: 15 or younger, 16 to 19, and 20 or older.⁷ This roughly corresponds to the age when pupils move from compulsory education to secondary school, and from there to higher education. We are aware of the potential issues with the cross-national and cross-time equivalence of this measure. We therefore run all models with a standardized version of the education variable as a robustness check.⁸ These analyses largely replicate the results of the main models. All analyses control for age (in years) and gender. Since we aim to capture not only the direct, unmediated effect of education, but also its possible indirect effects, we do not include any control variables that might mediate the effect of education on euro-scepticism.

3.3. Method

The data have a cross-nested structure, as individuals are nested in both countries and time points. To account for the clustering of the data across time, we run a two-level random intercept model nesting individual respondents in Eurobarometer waves. Due to the low number of countries ($N = 12$), we cannot apply this strategy to account for clustering of the data at the country level. To account for variation on the national level we base our main analysis on a pooled model with fixed effects for countries. This removes cross-national variation and enables us to capture the general European trend.

⁵ The frequency distribution of opinions on EU-membership differs greatly across countries. In the Netherlands and Luxembourg, only 6% of the respondents express a negative opinion, whereas in both countries 79% are positive about EU-membership. In contrast, 31% of all British respondents are negative on EU-membership and only 40% are positive.

⁶ To assess whether this dichotomization influences our results, we estimated all analyses with an alternative dichotomization of positive and neutral versus negative responses. The results are largely the same.

⁷ Respondents who reported that they are still in education are classified on the basis of their age. Those of 20 years and older are assigned to the 20+ category, whereas respondents younger than 20 and still in education are excluded from the analyses. For this latter group, we cannot use their years in education as a proxy for educational level, as we do not know at what age they will eventually stop studying.

⁸ The standardized education measure is a semi-interval variable based on the original education variable included in the EB trendfile, which divides respondents' age when finishing education into 9 categories ranging from 14- to 22+. We standardized this variable on the basis of its mean and standard deviation across countries and time in order to obtain a relative measure of educational level (see the online appendix).

Since we expect the effect of education on euroscepticism to vary over time, we include a random slope for education. To assess the development of the education gap over time, we add a cross-level interaction between education and time. If the educational gap widens over time, we should find an interaction effect between education and time that has the same sign as the main effect of education, which represents the effect of education at $t = 0$. Finally, we also add a three-way interaction between education, time, and a dummy for the post-Maastricht period to test whether the widening of the education gap is especially strong after the Maastricht Treaty was signed.

3.4. Results

Before moving on to the regression results, Figure 1 presents levels of euroscepticism across education groups for all countries pooled together from 1973 onwards. We note that euroscepticism reached a first peak around 1980, which Eichenberg and Dalton (2007) explain by the economic repercussions created by the OPEC oil shocks in 1974 and 1981. They further argue that macroeconomic performance caused a decrease in euroscepticism up to 1990. Figure 1 also shows that educational attainment has the expected impact on euroscepticism such that the lowest education groups are the most eurosceptic, the highest educated the least eurosceptic, with the middle category falling somewhere in between these extremes.⁹ Second, as the dashed trend lines show, euroscepticism increases for all education groups during our time frame, but the largest increase is among the lowest educated. The gap in euroscepticism between education groups has thus widened over the past 40 years. Finally, in line with hypothesis 3, there exists a clear pre- and post-Maastricht difference in the dynamics of euroscepticism. That is to say, after the signing of the Maastricht Treaty we note a surge in euroscepticism as well as a pronounced widening of the gap between education groups. The gap seems to widen especially in the 2000s, after introduction of the euro.¹⁰ All in all, these rough visual inspections by and large support hypotheses 1, 2, and 3.

⁹ These differences in euroscepticism between education groups are statistically significant throughout the timeframe. We have decided not to add confidence intervals to this Figure for clarity of presentation.

¹⁰ However, the number of observations since the 2000s is too small to estimate separate trends for the 1990s and 2000s. So, we cannot test whether the trends in the 1990s are significantly different from the trends in the 2000s.

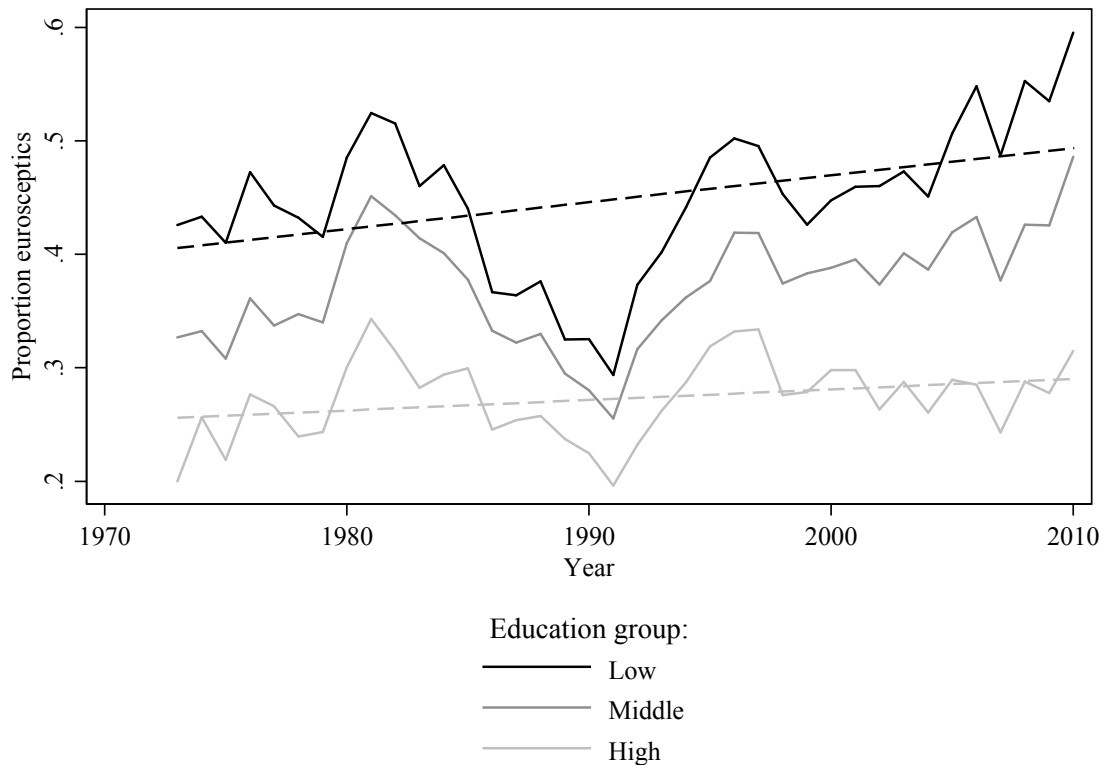
Figure 1: Trends in euro-scepticism across education groups (1973–2010, pooled analysis)

Table 1 displays the results of the pooled multilevel analysis with country-fixed effects. The results from Figure 1 are largely replicated. Model 1 offers the formal tests of Hypotheses 1 and 2. We find considerable differences in euro-scepticism between educational groups at the start of the time series ($t = 0$). The lower educated exhibit significantly higher levels of euro-scepticism compared to the other educational groups. The main effect of time on euro-scepticism is not statistically significant, so for all our countries combined, the higher educated have thus become neither more nor less euro-sceptical. The interaction between education and time is positive and significant, confirming the general trend towards more euro-scepticism among the lower and middle educated. In combination with the negative and significant main effects of education, these results show that the general European trend is towards a deepening of the educational divide in euro-scepticism. These educational effects are substantial in terms of size as the difference in the predicted probability of being euro-sceptic rises from 0.28 for the higher educated to 0.48 for the lower educated (at $t = 0$). Moreover, while this figure remains stable for the higher educated, the predicted probability of being euro-sceptic for the lower educated is 0.56 in 2010. In sum, education has always been an important stratifier of European attitudes and has increased in importance over the years. Nowadays, the difference in euro-scepticism between education groups is larger than it has even been, at least for the covered time period (1973–2010).

Table 1: Pooled analysis of education and euroscepticism in 12 EU member states

	Model 1	Model 2
Constant	-.612* (.056)	-.500* (.084)
Age	-.002* (.000)	-.002* (.000)
Male	-.235* (.005)	-.236* (.005)
Education (ref = High)		
Low	.546* (.040)	.881* (.036)
Middle	.268* (.026)	.478* (.029)
Time	.001 (.001)	-.006 (.004)
Lower educated × Time	.007* (.001)	-.009* (.001)
Middle educated × Time	.006* (.001)	-.004* (.001)
Post-Maastricht		-.009 (.189)
Maastricht × Time		.006 (.005)
Maastricht × Lower educated		-.834* (.074)
Maastricht × Middle educated		-.507* (.052)

Maastricht × Lower educated × Time		.026* (.002)
Maastricht × Middle educated × Time		.016* (.001)
Variance (time)	.050* (.008)	.048* (.008)
Variance (lower educated)	.022* (.004)	.004* (.001)
Variance (middle educated)	.007* (.002)	.001 (.001)
N (individuals)	813199	813199
N (EB)	81	81

Note: Dependent variable: EU-membership good (0) or bad/indifferent (1). Country-fixed effects not displayed. Standard errors are within parentheses. * $p < 0.05$.

We also repeated these analyses for each country separately (see the online appendix). Across the whole time span of this study the relationship between euro-scepticism and education is negative in almost all countries in our sample and thus provides further corroboration for Hypothesis 1 (also see Figures A1 and A2). Greece forms the only exception as the highest educated turn out to be slightly more euro-sceptic than the other two education groups in the early 1980s. However, as time passes, this relationship switches sign so that in the 1990s and 2000s Greece follows a similar pattern as the other member states. Furthermore, the difference in euro-scepticism between higher and lower educated Europeans increases in 11 of the 12 member states. Only Luxembourg diverges from this pattern, as the effect of education on euro-scepticism remains stable over the covered timespan.

The second column of Table 1 displays the model for the post-Maastricht era in particular. In line with Hypothesis 3, the effect of education on euro-scepticism is especially pronounced from 1992 onwards. The three-way interaction between education, time, and the Maastricht-dummy indicates that the education gap widens significantly in the wake of the Maastricht Treaty.

However, in this model the interactions between time and education are negative. This means that before Maastricht the educational gap actually *decreased*, and that this was particularly due to the least educated becoming *less* eurosceptical. Hypothesis 2 therefore seems to receive little support in the period before Maastricht. Given the difficulty of directly interpreting higher order interaction effects, Figure 2 displays the predicted probabilities of being eurosceptic for the various education groups.

Figure 2: Predicted probability of being eurosceptic across education groups

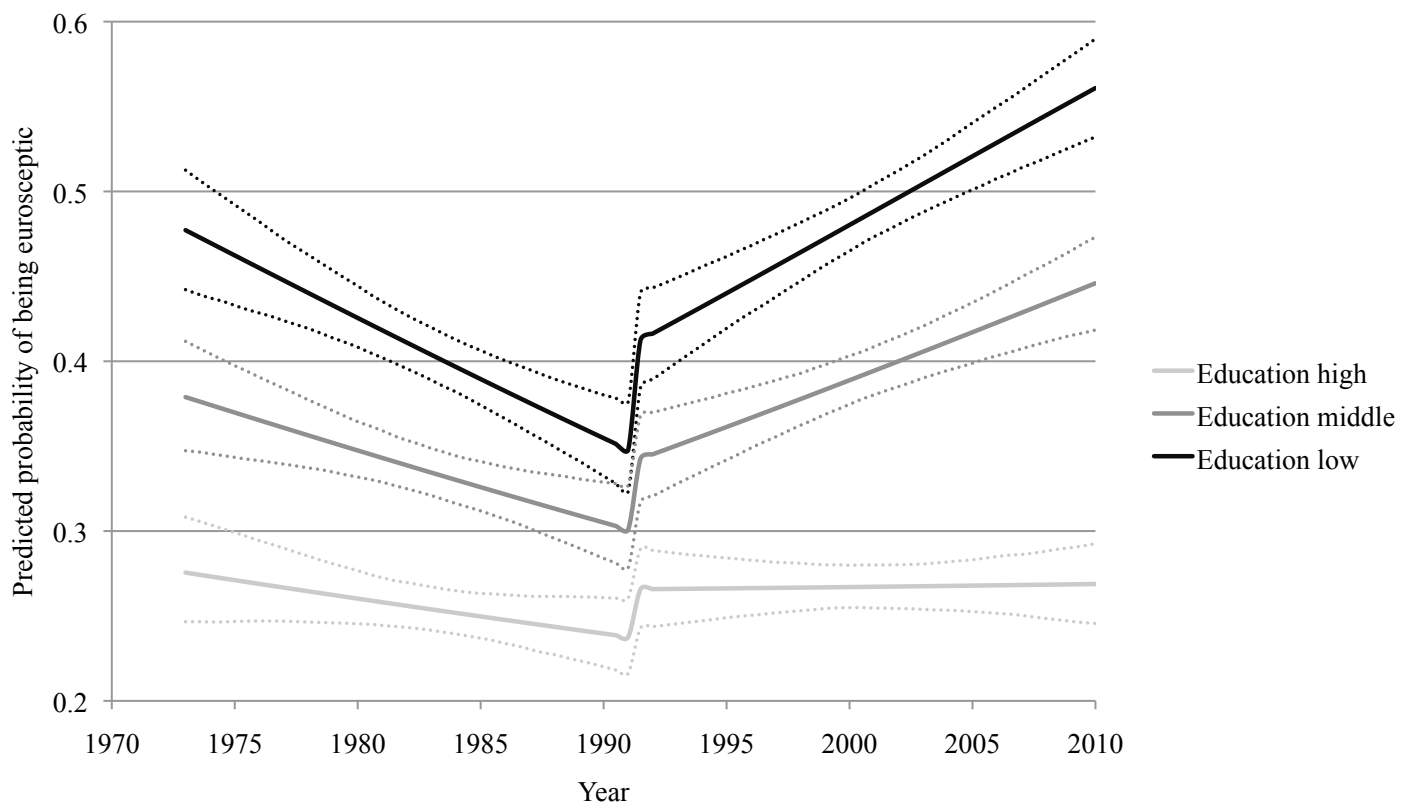


Figure 2 shows that there are no significant changes in euroscepticism among the group with the highest levels of education, neither before, nor after Maastricht. Among the group with intermediate levels of education, euroscepticism decreases before Maastricht, but not significantly. However, it increases significantly after the signing of the Maastricht treaty. Among the lowest educated, we see the same pattern. The change is even more pronounced and statistically significant before and after Maastricht. Again, this ‘Maastricht-effect’ is substantially important. While nowadays the lower educated are more than twice as likely to exhibit eurosceptic attitudes than the higher educated (predicted probabilities of 0.56 versus 0.27 respectively), this difference was much smaller directly prior to Maastricht and even in its immediate wake. The trend of a

widening educational gap is indeed confirmed, but only after the signing of the Maastricht treaty and in particular due to changes in attitudes among the lower and middle educated.

These analyses thus present evidence in support of educational attainment as an increasingly important stratifier of euro-sceptic attitudes and further point to diverging preferences towards European integration among education groups, in particular in the post-Maastricht period. Still, it remains less clear whether utilitarian or cultural and political processes underlie this widening education gap. Data availability prohibits a direct test of which theoretical approach has the most merit (but see Lubbers and Jaspers 2011 on euro-scepticism in the Netherlands), but some tentative remarks can still be made. In most countries we see a rise in euro-scepticism among the lowest educated, which is more or less implied by all three theoretical perspectives. However, there is clearly important heterogeneity across countries regarding the development of euro-scepticism among the highest educated. One could argue that if socio-economic considerations were the main determinants of attitudes towards European unification, we would expect the ‘winners of globalization’ to become increasingly euro-philic. After all, they would increasingly benefit from the possibilities of increased market integration. Yet, Spain is the only country where the education gap widens as a result of more euro-scepticism among the low educated *and* less euro-scepticism among the highly educated. At the same time, we see rising euro-scepticism among the highest educated in France, Belgium, the Netherlands, and Italy, which runs counter to a pure utilitarian approach. Perhaps the better educated might also be more aware of potential economic downsides of the EU, such as an increased bureaucratic burden, over-regulation, or even corruption, as a result of which they could also become more euro-sceptic. Socio-economic considerations could therefore ‘push’ and ‘pull’ attitudes towards the EU of the higher educated in both directions. Cultural and political determinants of euro-scepticism also yield mixed predictions regarding the pattern of divergence. Some of the better educated might welcome further European unification on cosmopolitan grounds. Yet, on similar grounds they might be highly critical of the EU’s restrictive policies towards immigrants from outside the EU, epitomized in the criticism of ‘fortress Europe’. Moreover, highly educated people might be more aware and critical of the democratic deficit of the EU and have thus more reasons to oppose political integration. Unfortunately our research design does not allow us to firmly adjudicate between utilitarian and politico-cultural perspectives on euro-scepticism. Still, the observation that the country-level trends in euro-scepticism are much more uniform for the lower educated than the higher educated is an important one and deserves further attention.

Conclusion

The aim of this study was to analyse the changing impact of education on euroscepticism. While the negative relationship between education and euroscepticism is based on questions of collective identity, political cueing and utilitarian considerations, we argue that all three of these well-established explanations for euroscepticism have become more salient over time, thus suggesting a widening educational gap in eurosceptic attitudes. We analysed a longitudinal dataset including data drawn from the Mannheim Eurobarometer trend file 1970-2002 (Schmitt and Scholz 2005) and recent Eurobarometer surveys until 2010 for 12 EU member states. Our analyses clearly point to a negative effect of education on euroscepticism. People with low or medium levels of educational attainment were found to be significantly more eurosceptical than highly educated Europeans. The findings also provide support for the hypothesis that the effect of education becomes stronger over time. Both in the pooled analysis and in the majority of the single-country analyses, we found a significant interaction between time and education. The findings of this study further show that there was only a rising impact of education on euroscepticism after the Treaty of the European Union was signed in Maastricht in 1992. In fact, before 1992, euroscepticism decreases particularly among the least educated.

Several leading scholars approach 'Maastricht' as a turning point in the process of European unification (Eichenberg & Dalton 2007; Hooghe and Marks 2009; Fuchs 2011). Maastricht marked the transformation of the EU from an economic collaboration between sovereign states to a multi-level polity with supranational authority over an increasing number of policy areas, with citizenship rights and with its own currency. If a widening education gap was mainly driven by the lowest educated fearing the economic consequences of market integration, we would not have found *decreasing* euroscepticism among the least educated *before* Maastricht. This, coupled with strongly increasing euroscepticism after Maastricht, makes it plausible that non-economic considerations play an important role in explaining the divergence.

We should note, however, as a major caveat, that we were unable to *directly* test the mechanisms behind the widening education gap. Given our goal of examining the relationship between education and euroscepticism over a long time span in as many countries as possible, we had to sacrifice depth that would otherwise enable us to directly expose which factors are particularly consequential for a widening education gap. Lubbers and Jaspers (2011) for example

show that in the Netherlands perceived ethnic threat was the main driving force behind the strong rise in euro-scepticism among the least educated.

Overall, the results of our study add to a growing literature showing that education is becoming an increasingly important factor in structuring certain political attitudes (e.g., Van de Werfhorst and De Graaf 2004; Stubager 2008, 2010). Our findings resonate with broader trends in post-industrial societies of education as an increasingly important determinant of one's social positions and status. The lower educated become a more and more specific category in EU countries due to educational expansion, which might further contribute to this development. However, we stress that a widening gap was only observed after Maastricht, while changes in the role of education in post-industrial societies and in the sheer number of low educated citizens originated much earlier.

Moreover, while existing research points to a growing effect of education on *attitudes*, the difference in political and civic participation between higher and lower educated has been shown to be remarkably stable in the last few decades (Stolle and Hooghe 2011; Hakhverdian et al. 2012). This might indicate that the education gap with regard to political participation has different dynamics than the education gap in actual policy preferences. That is to say, the fact that education groups increasingly diverge in their views on European integration does not imply a widening gap in other arenas as well. So far, diverging attitudes do not coincide with diverging behaviour, although of course this might change in the future. In fact, in this study we argue that populist parties act as one of the polarizing agents in the realm of euro-scepticism. Still, others have argued that these very same parties might also act as egalitarian agents as they mobilize large groups of mostly lower educated voters into the political arena (Bovens and Wille 2011; Hakhverdian et al. 2012).

Finally, while previous studies referred to national arenas, this study has shown that education is a stratifying factor also with respect to EU-related issues. There are good reasons to believe that at least in European politics, the education gap in euro-scepticism is here to stay. After all, European integration is often framed as a process initiated by and for elites, leaving behind weaker parts of society (Haller 2008), as expressed in the criticism of 'neo-liberal Europe' (Hay and Rosamond 2002). In light of these considerations, it seems likely that efforts at developing a social dimension of European integration might be an effective tool to diminish euro-sceptic attitudes among the low educated. However, since the results of our analyses indicate a substantial cultural and political component to euro-scepticism, the expectation that a more 'social Europe' could close the education gap seems unrealistic.

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8. Online Appendix

Table A1: Country overview

Countries	N	Years
France	75,345	1973, 1975-2010
Belgium	71,703	1973, 1975-2010
Netherlands	74,792	1973, 1975-2010
Germany	110,598	1973, 1975-2010
Italy	73,306	1973, 1975-2010
Luxembourg	31,565	1973, 1975-2010
Denmark	73,680	1973, 1975-2010
Ireland	69,849	1973, 1975-2010
Great Britain	73,648	1973, 1975-2010
Greece	60,895	1980-2010
Spain	49,473	1985-2010
Portugal	48,345	1985-2010
Total	813,199	1973, 1975-2010

Note: The German sample includes only West Germany until the second half of 1990.



Table A2: Education and euroscepticism in 12 EU member states (1973–2010)

Country	N	Education (ref: high)		Time	Education × Time	
		Low	Middle		Low × Time	Middle × Time
France	75345	1.108* (.056)	.586* (.048)	.014* (.002)	.003* (.001)	.005* (.001)
Belgium	71703	.749* (.060)	.507* (.053)	.007* (.002)	.005* (.001)	.004* (.001)
Netherlands	74792	.782* (.066)	.237* (.062)	.009* (.002)	.003* (.001)	.005* (.001)
Germany	110598	.434* (.069)	.195* (.057)	.003 (.002)	.009* (.001)	.009* (.001)
Italy	73306	.327* (.057)	.023 (.065)	.015* (.002)	.009* (.001)	.005* (.001)
Luxembourg	31565	.722* (.109)	.433* (.103)	.003 (.002)	.002 (.002)	.002 (.002)
Denmark	73680	.152* (.058)	-.096* (.050)	-.017* (.002)	.011* (.001)	.009* (.001)
Ireland	69849	.944* (.088)	.502* (.077)	-.019* (.002)	.005* (.002)	.003 (.002)
Great Britain	73648	1.239* (.065)	.579* (.064)	.004* (.002)	.002* (.001)	.007* (.001)
Greece	60895	-.168* (.053)	-.200* (.050)	-.008* (.004)	.017* (.002)	.010* (.001)
Spain	49473	.156* (.064)	.061 (.060)	-.008* (.004)	.018* (.002)	.008* (.002)
Portugal	48345	.146* (.077)	0.040 (.089)	.003 (.004)	.021* (.003)	.011* (.003)

Note: Dependent variable: EU-membership good (0) or bad/indifferent (1). All analyses control for age and gender. Standard errors are within parentheses. * $p < 0.05$. For GR, $t = 0$ in 1980, for SP and PT, $t = 0$ in 1985. For all other countries, $t = 0$ in 1973.

Table A3: Pooled analysis of education and euroscepticism in 12 EU member states (with education standardized within country and time)

	Model 1	Model 2
Constant	-.200* (.056)	.234* (.065)
Age	-.003* (.000)	-.003* (.000)
Male	-.234* (.005)	-.235* (.005)
Education	-.213* (.012)	-.285* (.018)
Time	.003* (.001)	-.018* (.002)
Education × Time	-.003* (.000)	.001 (.001)
Post-Maastricht		-.678* (.103)
Maastricht × Time		.026* (.003)
Maastricht × Education		.171* (.037)
Maastricht × Education × Time		-.005* (.001)
Variance (time)	.178* (.009)	.160* (.008)
Variance (education)	.017* (.001)	.016* (.001)
N (individuals)	800865	800865
N (EB)	81	81

Note: Dependent variable: EU-membership good (0) or bad/indifferent (1). Country-fixed effects not displayed. Standard errors are within parentheses. * $p < 0.05$. Education is measured from low to high. The negative coefficient for Maastricht x Education x time thus means that after Maastricht, the upward trend in euroscepticism is least pronounced for the highly educated (which is in line with the results presented in the paper).



Table A4: Pooled analysis of education and euroscepticism in 9 EU member states

	Model 1	Model 2
Constant	-.666* (.055)	-.514* (.079)
Age	-.002* (.000)	-.002* (.000)
Male	-.232* (.005)	-.232* (.005)
Education (ref = High)		
Low	.627* (.035)	.880* (.031)
Middle	.322* (.027)	.498* (.032)
Time	.002* (.001)	-.008* (.003)
Lower educated × Time	.008* (.001)	-.004* (.001)
Middle educated × Time	.006* (.001)	-.002* (.001)
Post-Maastricht		-.022 (.178)
Maastricht × Time		.008* (.004)
Maastricht × Lower educated		-.808* (.064)
Maastricht × Middle educated		-.476* (.060)
Maastricht × Lower educated × Time		.022* (.002)
Maastricht × Middle educated × Time		.014* (.002)
Variance (time)	.047* (.008)	.042* (.007)
Variance (lower educated)	.015*	.001

	(.003)	(.001)
Variance (middle educated)	.008* (.002)	.001 (.001)
N (individuals)	654486	654486
N (EB)	81	81

Note: Dependent variable: EU-membership good (0) or bad/indifferent (1). Country-fixed effects not displayed. Standard errors are within parentheses. * $p < 0.05$. Excluding Spain, Portugal, Greece.



Figure A1: Trends in euro-scepticism across education groups for the Founding Members (1973-2010)

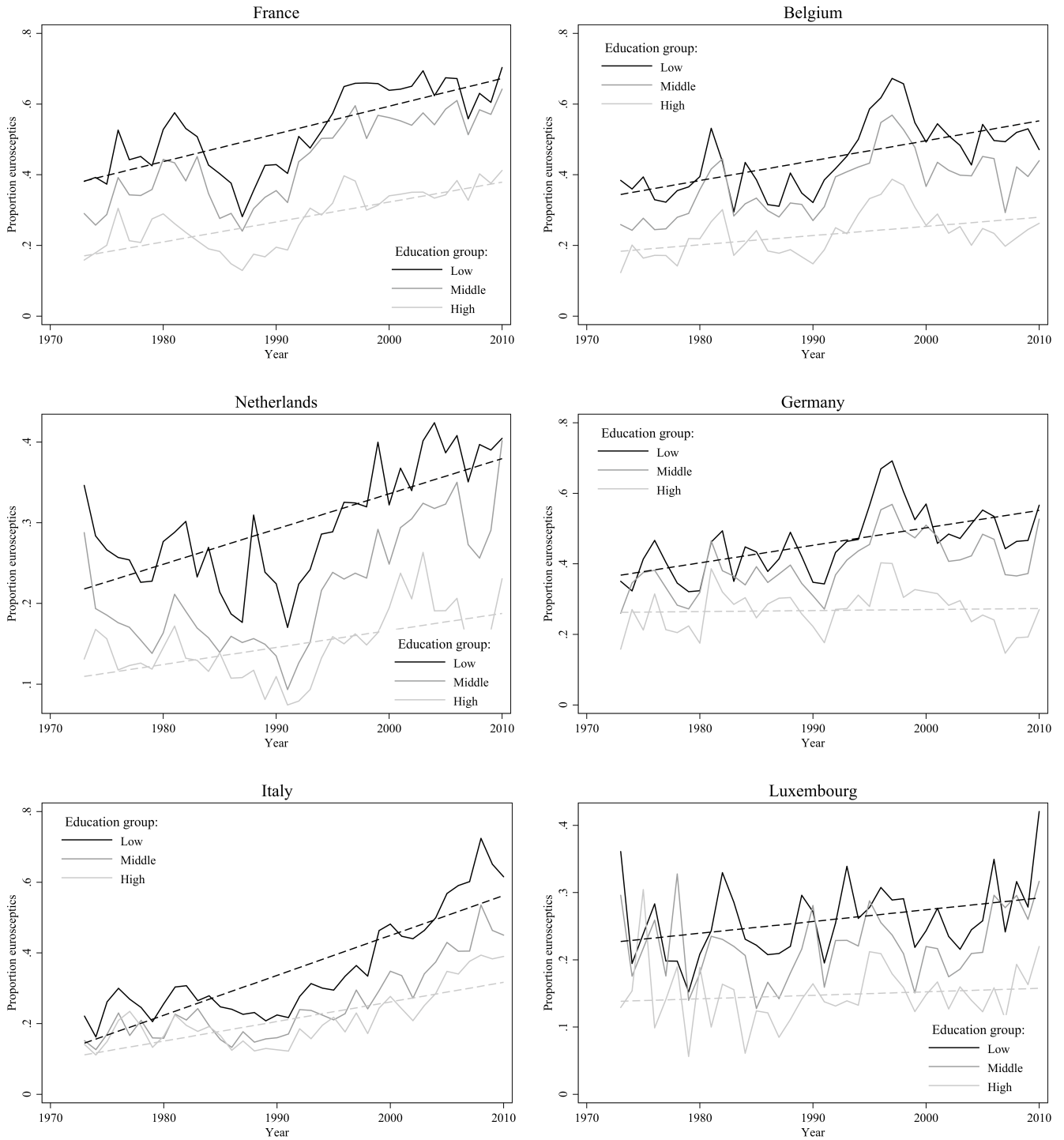
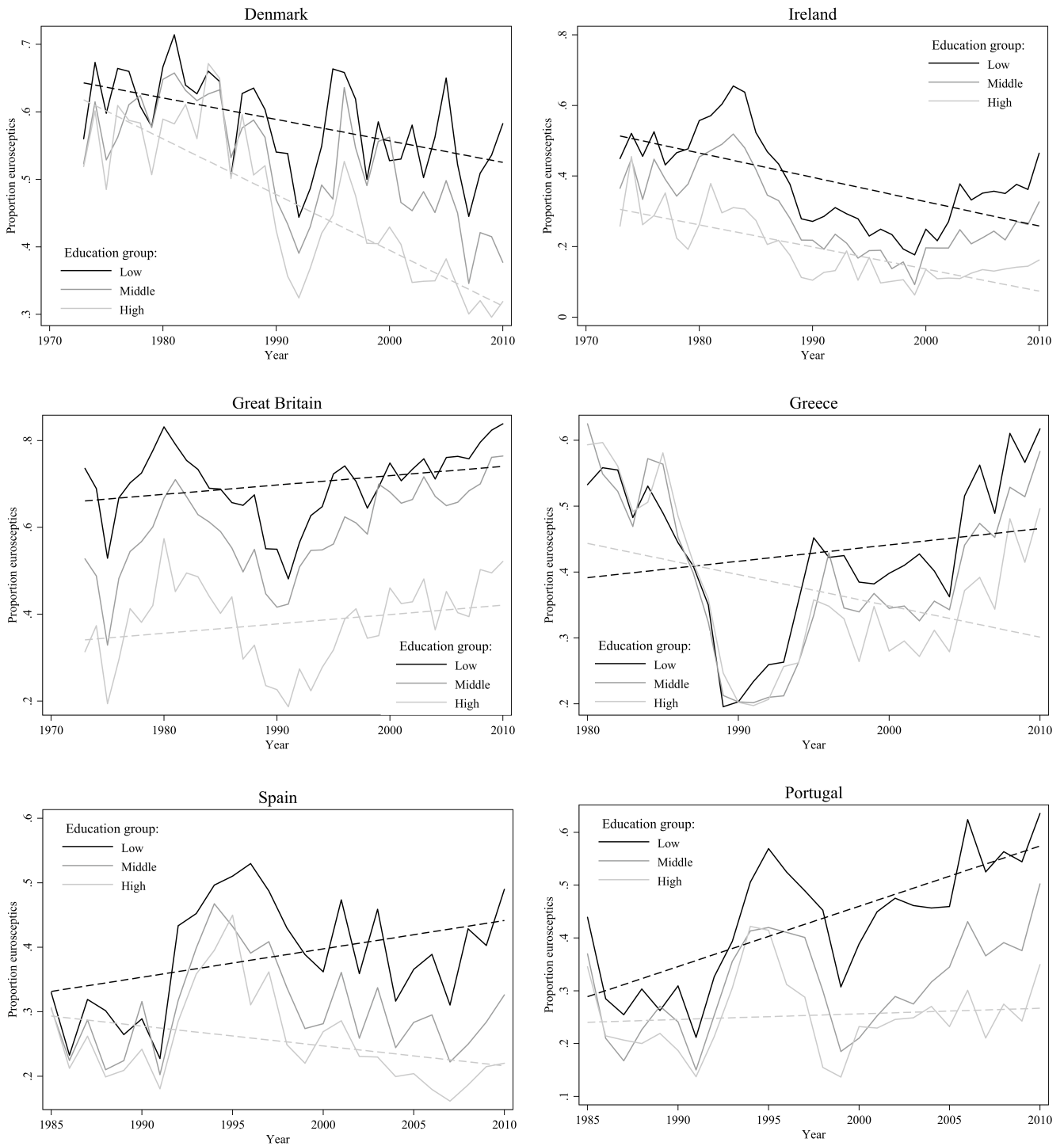


Figure A2: Trends in euroscepticism across education groups for the First and Mediterranean enlargements (1973–2010)





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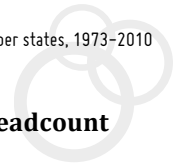
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Information on the GINI project

Aims

The core objective of GINI is to deliver important new answers to questions of great interest to European societies: What are the social, cultural and political impacts that increasing inequalities in income, wealth and education may have? For the answers, GINI combines an interdisciplinary analysis that draws on economics, sociology, political science and health studies, with improved methodologies, uniform measurement, wide country coverage, a clear policy dimension and broad dissemination.

Methodologically, GINI aims to:

- exploit differences between and within 29 countries in inequality levels and trends for understanding the impacts and teasing out implications for policy and institutions,
- elaborate on the effects of both individual distributional positions and aggregate inequalities, and
- allow for feedback from impacts to inequality in a two-way causality approach.

The project operates in a framework of policy-oriented debate and international comparisons across all EU countries (except Cyprus and Malta), the USA, Japan, Canada and Australia.

Inequality Impacts and Analysis

Social impacts of inequality include educational access and achievement, individual employment opportunities and labour market behaviour, household joblessness, living standards and deprivation, family and household formation/breakdown, housing and intergenerational social mobility, individual health and life expectancy, and social cohesion versus polarisation. Underlying long-term trends, the economic cycle and the current financial and economic crisis will be incorporated. Politico-cultural impacts investigated are: Do increasing income/educational inequalities widen cultural and political 'distances', alienating people from politics, globalisation and European integration? Do they affect individuals' participation and general social trust? Is acceptance of inequality and policies of redistribution affected by inequality itself? What effects do political systems (coalitions/winner-takes-all) have? Finally, it focuses on costs and benefits of policies limiting income inequality and its efficiency for mitigating other inequalities (health, housing, education and opportunity), and addresses the question what contributions policy making itself may have made to the growth of inequalities.

Support and Activities

The project receives EU research support to the amount of Euro 2.7 million. The work will result in four main reports and a final report, some 70 discussion papers and 29 country reports. The start of the project is 1 February 2010 for a three-year period. Detailed information can be found on the website.

www.gini-research.org





GINI GROWING INEQUALITIES' IMPACTS

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