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Individual benefits revisited: The impact of Intra-European mobility on determining public support for the EU

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Abstract

Researchers have repeatedly found a link between individually benefitting from the European Union (EU) and supporting the EU. However, instead of measuring directly to what extent citizens benefit from European integration, most studies rely on proxy variables, assuming that educated and affluent individuals are more likely to benefit from the integration process. This article proposes to overcome the shortcomings of using proxy variables by measuring the extent to which individuals have benefitted from European integration directly. To this end, a scale is constructed that measures to what extent people have benefitted from the open borders and the open labor market within the EU since this is assumed to be the most tangible advantage the EU offers to its citizens. The results of a multilevel linear regression analysis suggest that benefitting from the right of free movement is indeed related to having a better image of the EU. Furthermore, this effect appears to be weaker in countries that benefit from fiscal redistribution in the EU. Direct benefits therefore become less important if citizens benefit indirectly by living in countries that are net recipients of the EU budget. European policy-making should therefore take into account to what extent citizens from different countries and societal segments are able to benefit from European integration.

1.0 Introduction

The European elections of 2019 have shown that Europe is becoming increasingly polarized over the question of which direction European integration should take. The winners seem to be those parties that have an unambiguous view on this topic, being it unconditional support for the European integration project or its rejection. The losers are centrist parties which try to cover different segments of society and which attempt to compromise calls for more and calls for less integration (DW, 2019). Throughout Europe, Eurosceptic parties gained influence, in some countries they became part of the government. Until a few decades ago, scholarly research suggested that European integration is based on a 'permissive consensus' (Gabel & Palmer, 1995, p. 3) of the public. The recent rise in Euroscepticism, which culminated in the successful 'Brexit' vote in 2016, illustrates that these times are long gone. The future of the European integration project is contested like never before. Considering these developments, it becomes increasingly important to gain a thorough understanding of the factors that shape support for the European unification project. Public support is vital for the continued existence of the European Union (EU). The lack of supranational means of law enforcement implies that the European political system depends on public compliance with and acceptance of EU law (Gabel, 1998, p. 333). Furthermore, the Brexit vote has shown that persistent low levels of EU support can result in countries leaving the European Union.

There is a substantial body of literature that has tried to explain variance in public support for the EU. The examined factors range from the cognitive abilities necessary to comprehend European integration (Janssen, 1991) to party cues (Hooghe & Marks, 2005) or having a European identity (Carey, 2002). One of the most frequently used approaches is the so-called utilitarian approach which discusses the impact of personal benefits on EU support, whether by benefitting directly from certain EU policies or indirectly by being a citizen of a country that benefits from European integration (Hobolt & de Vries, 2016, p. 420). Most of the publications that consider individual-level benefits have not attempted to develop directly measurable conceptualizations of 'benefitting from the EU'. Instead, they have based their argument on proxy measures, assuming that citizens who are well-educated, affluent and in favor of market economy should be expected to benefit from European integration (Garry & Tilley, 2009; Christin, 2005; Tucker, Pacek & Berinsky, 2002; Cichowski, 2000; Gabel & Palmer, 1995; Anderson & Reichert, 1995; Inglehart, Rabier & Reif ,1987). This paper aims to fill this gap in the literature by conceptualizing 'individually benefitting from the European Union' as benefitting from the possibility to move and travel across borders within the EU and to choose

the place of residence without restrictions. This is based on the recognition that the freedom of movement establishes the most tangible benefit that citizens enjoy from the European Union. It will be tested if individuals who have benefitted to a higher degree from the right of free movement within the EU are more supportive of the EU than individuals who have benefitted less.

Furthermore, this paper aims to investigate if the effect of *individual EU benefits* is consistent across member states or if there are country-level factors that are capable of explaining variations in effect size. In particular, the paper will examine if living in a country that benefits from European fiscal transfers or living in Eastern Europe reduces the focus on individual benefits when assessing the European Union. This is based on the assumption that individual-level benefits become less crucial if citizens benefit indirectly from advantages that their home states enjoy from being a member of the EU, such as receiving more money from the EU budget than is contributed to the EU budget. Furthermore, several researchers have highlighted the idiosyncratic circumstances under which the Eastern European states have joined the European Union (Garry & Tilley, 2009; Tucker, Pacek & Berinsky, 2002). It will be tested if the transformations in terms of economic system, human rights and geopolitical affiliation lead to individual benefits becoming less important for Eastern European citizens than for individuals living in Western Europe.

These questions will be answered using data from the Eurobarometer wave 89.1 which was collected in March 2018. In order to take the hierarchical structure of the data (individuals being nested in member states) and the proposed cross-level interaction effects appropriately into account without violating statistical assumptions, multilevel modelling will be used. The paper will start with a brief presentation of the different approaches that exist within the literature that discusses determinants of public support for the European Union. The utilitarian approach will be discussed more thoroughly and the conceptual gaps in the literature will be highlighted. Subsequently, the reasons will be presented why individuals in Eastern Europe and individuals living in countries that benefit from EU fiscal transfers would display less fixation on individual benefits since their home countries already benefit from EU membership. The next chapter discusses the use of multilevel modelling as a method, the operationalization of all variables, the sample, the treatment of missing data and the utilized centering method which is of particular importance in multilevel models. Next, the descriptive results will be presented followed by the results of six specified multilevel models. In the following chapter, the

implications and limitations of the results will be discussed. In particular, it will be debated if the results support the claim that the proposed conceptualization of EU benefits establishes a valid alternative to the use of proxy variables. The paper concludes with some remarks about the practical implications of the findings and how stakeholders should consider adjusting their policies.

2. Theoretical considerations

2.1 Review of the EU public support literature

This section will establish a brief but broad overview of the existing publications that examine determinants of public support for the European Union. After conducting a grand-scale literature review of the topics of Euroscepticism and support for European integration, Hobolt and De Vries (2016) identified four main approaches that investigate explanatory factors: identity, utilitarianism, cue-taking and benchmarking. It should be emphasized that researchers were able to find significant relationships in all of the aforementioned explanatory approaches. This shows that support for the EU and Euroscepticism are complex concepts and that there is no 'high road' approach able to explain all existing heterogeneity among European citizens' support, or lack of support, for the European Union. In fact, scholars have also found many predictors that cannot be clustered in the previously mentioned main approaches. Among others, postmaterialist value orientations (Inglehart, Rabier & Reif, 1987), high degrees of cognitive mobilization (Janssen, 1991), transnational interactions (Kuhn, 2011), a longer duration of membership in the EU (Inglehart, 2008) and even the personality traits of openness and extraversion (Nielsen, 2016) act as predictors of higher support levels for the European Union. Since this paper intends to contribute to the utilitarian literature (specifically to the part that considers the effect of individual gains and benefits), this approach will be covered in more detail, while the other three main approaches will be summarized briefly.

Identity approaches consider how citizens' national identity and factors related to inter-group relations affect attitudes towards the European Union. For example, individuals with a very strong sense for their national identity are less likely to be in favor of the EU (Carey, 2002). Likewise, individuals who feel threatened by minorities and immigrants are less likely to support the European integration (De Vreese & Boomgaarden, 2005). While studies have consistently shown that there is a strong connection between supporting European integration and having a pronounced European identity (Hobolt & Wratil, 2015, p. 240), it has also been

questioned if a European identity really leads to higher displayed support or if the effect goes the other way around and stronger support for the EU leads gradually to a stronger European identity (Hobolt & De Vries, 2016, p. 421).

Cue-taking approaches refer to citizens' tendency to base their opinion about European integration on media discourses or views of political parties. While the representation of the EU in the media seems to have a very modest influence on the public opinion about the EU (De Vreese &Boomgaarden, 2006), there is clear evidence that individuals who support pro-European parties also tend to hold pro-European attitudes (Hellström, 2008).

Approaches that consider the effect of benchmarking evaluate to what extent views on the European Union are shaped by comparisons that citizens make between their home state and the EU. The results of such studies are somewhat mixed. Sanchez-Cuenca (2000) finds that individuals who are less satisfied with the performance of their national systems show more support for European integration. Rohrschneider (2000) finds that individuals who are satisfied with the way democracy works in their home country show less support for the EU since they regard it to an extent as undemocratic.

In 1998, Gabel analyzed how all individual-level theories that had been covered by researchers up to that moment compare with each other. The analyzed approaches included the afore mentioned factors of cognitive mobilization, political values (only focusing on materialism and post-materialism), utilitarian concerns, class partisanship and support for the national government, the last two being two different variants of cue-taking. Gabel concludes that the utilitarian approach consistently dominates other theories in terms of their substantial significance. It was the only approach that turned out to be of high statistical and substantial relevance throughout all studied regions (old and new member states) and all examined points in time (Gabel, 1998, p. 350). It has also been shown that after the Euro crisis, utilitarian concerns have become increasingly important while identity heuristics have declined in influence (Hobolt & Wratil, 2015). However, a more recent meta study, which analyzed how different determinants of EU support compared with each other, identified positive attitudes towards multiculturalism, which belong to the identity approach, as strongest individual-level predictor (Ejrnæs & Jensen, 2019). This result contradicts previous findings which suggested that the utilitarian approach is the one with most explanatory power. It illustrates that all approaches can have differing predictive power depending on their operationalization and the

circumstances of application and that researchers should be careful when declaring an approach, the most important one.

2.2 The linkage between individual benefits and EU support

Studying the link between individually benefitting from the EU and showing higher degrees of support for the EU was especially popular during the early periods of studying Euroscepticism in the 1990`s. Inglehart, Rabier and Reif (1987) were potentially the first authors that studied the relationship between individual socioeconomic characteristics and varying degrees of support for European integration. Their findings suggest that individuals with higher income, higher education and higher status occupations are more favorable to European unification. However, the effect is not explained with a utilitarian line of argument but attributed to an implicit (dis)satisfaction with existing sociopolitical institutions. Those who are well off are simply assumed to be more satisfied with the status quo than those who are experiencing hardship (Inglehart, Rabier & Reif, 1987, p. 143). The authors also consider that certain occupational groups have benefitted more than others, referring to disproportionate EU support from farmers in some European countries (Inglehart Rabier & Reif, 1987, p. 147).

Inglehart, Rabier and Reif's explanation for cross-sectional variation in support is not considered to be convincing by Gabel and Palmer (1995, p. 4), who bring forward their own theoretical approach. Individuals with higher educational levels are expected to be more supportive of unification since their professional skills are more marketable and more adaptable to changes within their industry. The open labor market in the EU that allows citizens to accept jobs in every EU member state is regarded positively among higher educated citizens who appreciate new job opportunities and negatively among citizens with lower education who fear unemployment due to increased competition (Gabel & Palmer, 1995, p. 7). Individuals with a higher income are expected to be more supportive since they favor low inflation rates (a consequence of the European Monetary System), less public sector spending (a consequence of fiscal constraints) and a more open financial market (Gabel & Palmer, 1995, p. 7). The findings confirm the hypothesized relationship between education, income and support for integration and the authors conclude that European citizens should not be expected to support integration only because it seems to be beneficial for their home country as a whole (Gabel & Palmer, 1995, p. 13).

Using a similar line of argument, Anderson and Reichert also find a connection between high socioeconomic status and support for integration. Higher support levels among well-educated citizens are explained with 'advantages in the workplace', higher degrees of mobility and flexibility and therefore being more likely to 'succeed in an integrated advanced market economy and a more tightly integrated European marketplace' (Anderson & Reichert, 1995, p. 234). This argumentation has since been repeated by several authors. Caplanova, Orviska and Hudson (2004) expect citizens with higher education in Eastern Europe to do better in a free market economy and therefore to be more supportive of joining the European Union.

What all of these studies have in common is that they do not measure to what extent individuals have benefitted from European integration directly and therefore do not establish a direct link between benefitting from and supporting European integration. Instead, most scholars use socioeconomic variables (most often educational level and income) as proxy variables for 'self-interest' (Caplanova, Orviska & Hudson, 2004, p. 274), or 'economic benefits at the individual level' (Anderson & Reichert, 1995, p. 234). Other publications, especially those covering the pre- and post-accession periods in the former communist states of Eastern Europe, use subjective perceptions of the economy as proxy variables for being among the 'winners' of European integration (Garry & Tilley, 2009; Christin, 2005; Tucker, Pacek & Berinsky, 2002; Cichowski, 2000). McLaren (2007) bases her analysis on the subjective evaluation of whether European integration has resulted in more advantages or disadvantages for survey respondents. While this measure seems to be more straight-forward in measuring EU benefits than using proxy variables, it also assumes that citizens know what EU benefits are and how they have benefitted from them. Given the complex nature of EU benefits (see below), subjective evaluations might not be the best option to assess the effect of having benefitted from the EU on supporting the EU. Anderson and Reichert justify their use of proxy variables with the 'absence of survey questions asking individuals directly about benefits they have derived from the integration process' (Anderson & Reichert, 1995, p. 234). This problem is well-known to all researchers, especially those relying on survey data. Gathering data through (cross-national) surveys is a very expensive procedure, which is why most researcher have to rely on datasets that haven been collected by affluent third parties. This implies that scholars are limited in their endeavors by the questions that have been included surveys.

In recent years, the amount of literature about the link between individually benefitting from the EU and supporting the EU seems to have declined. The reason why scholars seem to have

lost interest in this relationship could be based on the feeling that everything has been said that there is to say. In their literature review regarding this topic, Hobolt and De Vries conclude that the link between higher degrees of education and income on the one side and stronger support for European integration on the other side has consistently been corroborated (Hobolt & De Vries, 2016, p. 420). However, the direct link between benefitting from the EU and displaying support for the EU is still widely unexplored. One reason could be the previously mentioned lack of adequate survey items (Anderson & Reichert, 1995) but the definition of this complicated and multifaceted concept also poses difficulties.

2.3 Defining 'EU benefits'

How exactly should 'benefitting from European integration' be conceptualized? European integration has transformed the living reality for Europeans primarily in three ways. First, European integration has caused a shift of competencies in terms of policymaking from national governments to supranational governing bodies (Schmidt, 2016). Second, the European Union has established a single internal market and dismantled any barriers that impeded the free movement of people, goods, services and capital (European Commission, n.d.-a). Some members of the EU have even increased their level of economic integration by adopting the Euro as their common currency. Third, since the establishment of the EU and its predecessors in 1951 there has been no war on the territory of the European Union, which could partially be seen as a consequence of the integration process since it has aligned the interests of European member states and established a peaceful mechanism for settling conflicts (European Commission, n.d.-a). This achievement has been acknowledged through the awarding of the Nobel Peace Prize in 2012 for 'transform[ing] most of Europe from a continent of war to a continent of peace' (Nobel Media AB, 2012).

The diversity of these integration consequences illustrates the difficulties that arise when one attempts to narrow down how 'benefitting from European integration' could be conceptualized. The absence of war on the territory of the European Union is without doubt a circumstance that benefits virtually every EU citizen, which renders it useless as an explanatory concept for measuring EU benefits since it is unclear if and how variance between citizens can be measured. Some researchers from the early period of the EU support literature have examined if older individuals, who have experienced World War II and its aftermath, display stronger support for European integration, because they appreciate its peace-stipulating impact, but found no big

differences between cohorts (Janssen, 1991; Inglehart, Rabier & Reif, 1987). Other scholars found a positive relationship between the number of casualties that a country suffered in World War 2 and the displayed support for European integration of its citizens (Gabel & Palmer, 1995, p. 12). This shows that the fact that the EU has contributed to peace in Europe has at least been considered to be a predictor for European support. However, it can be assumed that this circumstance has only limited influence since it developed gradually and people tend to take it for granted (Inglehart, Rabier & Reif, 1987, p. 150), making it difficult for individuals to draw a connection between peace on EU territory and European integration.

Understanding the impact that European policy-making has on our lives might be considered similarly difficult. Some observers have estimated that around 40% of valid laws in European member states originated directly or indirectly from the European level (Töller, 2008, p. 17). For example, many workers' rights were established by the EU – a fact many European citizens are not aware of. It has been argued that this is a consequence of politicians allocating successes to national politics and failures to the EU (Hoffmann, 2019). Given the diversity of European policies, it seems unfeasible to try and identify individuals that benefited from European policy-making in general and individuals that did not. This in combination with the fact that the majority of citizens do not seem to be aware of many legislative proposals of the EU makes it impossible to assess the predicting influence of benefitting from EU legislations in general.

However, this changes when the focus is put on the establishment of a single market and the abolishment of barriers to movement and trade. The four economic freedoms of people, goods, services and capital are considered by some to be the very essence of the EU (Münchau, 2017). Having less barriers within Europe has certainly boosted the economy due to easier possibilities to export goods and offer services in foreign states. Citizens who are directly involved in European trade, for example as business owners, benefit from the better market opportunities that the single market offers, which is in line with findings that being self-employed increases the displayed support for EU membership (Caplanova, Orviska & Hudson, 2004). While a thriving single market also might benefit regular people by providing jobs and cheaper goods and services, it is not clear to what extent citizens are able to draw a link between finding a job and European integration.

The possibility to travel, live, study and work in every European member state without needing any form of visa, however, constitutes a direct and relatable advantage for EU citizens. In an

evaluation of all Eurobarometer versions since 2002, the 'Freedom to travel, study, and work anywhere in the EU' was consistently the most often mentioned answer when individuals where asked, what the EU means to them personally (Nancy, 2016, p. 19).[1] In a different study, 94 percent of surveyed adolescents mentioned the freedom to travel, study and work anywhere in Europe when asked about things that they associate with the European Union (Albert, 2007, p. 74). In comparison, 82 percent named peace and only 47 percent economic prosperity. This illustrates that at least for young people, the EU is primarily perceived through its feature of granting full freedom of movement to its citizens. The freedom of citizens to move wherever they like has caused spillover effects in several policy domains. For example, the introduction of the European Health Insurance Card (EHIC) and the abolishment of telephone roaming fees ensure that European citizens are not disadvantaged when abroad. While peace and a shift of competencies from the national level to the European level have only an abstract impact on the lives of citizens, being able to study in other member states via Erasmus, to work without a work visa and to travel from Finland to Portugal without needing to show a passport are the most direct and noticeable benefits that the EU has to offer to its citizens. It is therefore proposed to focus on the ability to make use of the movement rights and related policies when trying to conceptionalize 'benefitting from the EU' in order to examine its effect on public support for the EU. It is therefore hypothesized that:

H1: *Individuals who have benefitted to a larger degree from EU mobility rights display higher levels of support for the European Union.*

This understanding of individual EU benefits is partially in line with that of scholars that used education and income as proxy variables. Anderson and Reichert assume that individuals with a higher socioeconomic status are better able to benefit from European integration and the open borders since they 'tend to be more mobile and can be more flexibly employed' (Anderson & Reichert, 1995, p. 234). Gabel and Palmer think that better educated individuals display more EU support because they 'are better prepared to apply their skills in diverse, international settings' (Gabel & Palmer, 1995, p. 7).

It seems plausible to assume that citizens, who are able to take part in the European unification project by making use of open borders and international job and study offers, display higher support for the EU than citizens who are not able or not interested in doing so. When analyzing

[1] Other frequently mentioned associations included the 'Euro', 'peace', 'bureaucracy' and 'waste of money'.

this relationship, it should also be considered if this relationship is equally present in all member states or if it depends on country-specific characteristics. In the next chapters, reasons are provided why individuals living in countries that benefit financially from fiscal redistribution programs and individuals living in post-communist countries might be less focused on their individual gains when forming their attitudes towards the EU.

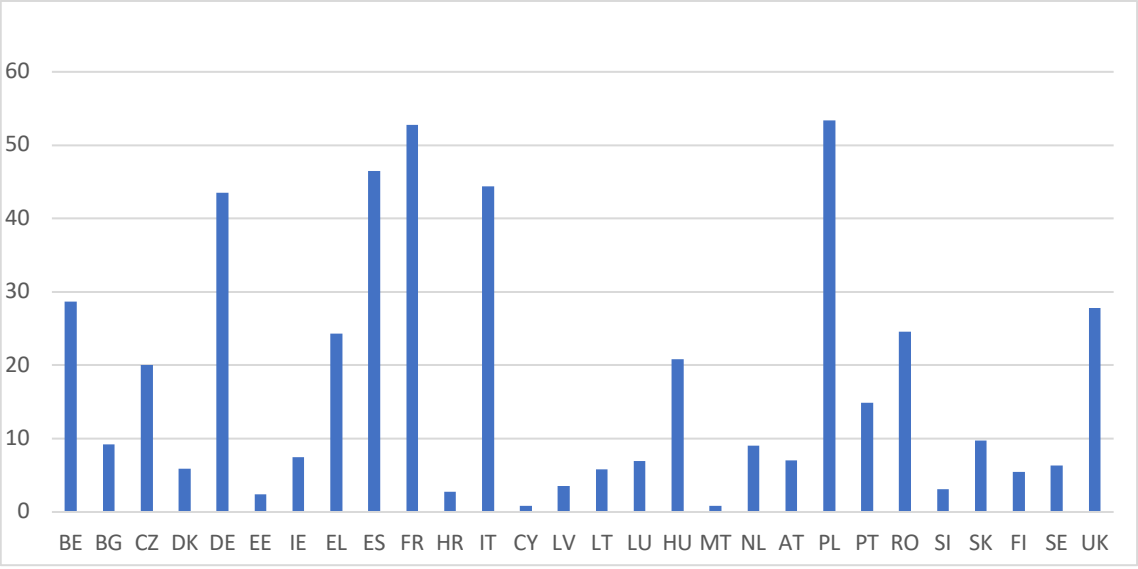
2.4 Moderation effects

2.4.1 The impact of European funds

The main mechanisms of fiscal redistribution in the European Union are the so-called European Structural and Investment Funds (ESIF) which consist of the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund. According to the European Commission, the purpose of these funds is to 'invest in job creation and a sustainable and healthy European economy and environment' (European Commission, 2019b).

In the period 2014-2017, €488 billion was spent by the EU in the 28 member states (European Commission, n.d.-b). Figure 1 illustrates the amount of money that was spent in each member state. It shows that the invested money per country ranges from less than one billion to more than 50 billion in a four-year timeframe.

Figure 1. EU expenditures by country 2014-2017 in billion €



Several scholars have examined the impact that EU investments in member states have on public attitudes towards the EU. However, the results are inconsistent. The concept is generally operationalized as contributions to the EU minus received funding from the EU as a percentage of Gross National Income. While some scholars found evidence for fiscal transfers being a significant predictor of public support (Anderson & Reichert, 1995; Hooghe & Marks, 2005; Chalmers & Dellmuth, 2015) others found no relationship at all (Ejrnæs & Jensen, 2019; Eichenberg & Dalton, 1993). Similarly, Kuhn and Stoeckl (2014) find no support that fiscal transfers increase support for European economic governance. The underlying reason for this inconsistency is possibly related to different conceptualizations of EU support, different control variables and different operationalizations. Including a range of variables on the country level that potentially correlate with fiscal transfer variables could decrease the effect size of transfers and render the effect insignificant. The most likely reason for these inconsistent findings, however, are the differing operationalizations of fiscal transfer balances which will be discussed comprehensively in the methodology section.

While the ESI Funds are officially designed for fostering investments and cohesion in economically weaker regions, some authors have questioned if these are the only motives for fiscal redistribution. Dellmuth (2011) provides evidence that the allocation of structural funds to a region is partially a function of that region's ability to lobby the European Commission effectively. Carruba's (1997) findings suggest that fiscal transfers are purposefully used by the Commission for overcoming constraints on integration by *buying* support in regions that display overall lower support for the EU. The Commission seems indeed to be very aware of the bargaining power of ESI Funds in terms of acquiring support. For instance, the Commission's Facebook pages that exist in every member state using the respective language regularly publish posts highlighting the amount of money that the country receives from transfers.[2]

It seems plausible that individuals assess their country's membership in the EU and therefore the European integration project in general more positive if they have the feeling that their country benefits from this membership and the allocation of funds to a country can without doubt be regarded as a benefit, especially for less developed European member states for which the ESIF investments amount to substantial shares of their total national investment. However,

[2] Examples for this can for example be found on the Commission's web presences in Romania (https://www.facebook.com/reprezentanta.comisiei.europene.in.romania/photos/a.479195092030/10156229145497031/?type=3&theater) and in Poland (https://www.facebook.com/komisjaeuropejska/photos/a.401092523365/10152739840088366/?type=3&theater).

all scientific studies regarding this topic are based on the premise that individuals are actually aware of being a citizen from a net donor or net recipient state. Using financial transfers as a variable in public opinion research would become nonsensical if most citizens did not know about ESIF investments in their country. This gap is filled by a recent publication by Fomina and Radu (2017) who conducted a qualitative study in Poland and Romania. When asked about the most tangible benefit that EU membership provides for their countries, every single participant of the focus groups named EU funding as the most tangible and visible benefit (Fomina & Radu, 2017). This is a clear indicator that, at least in less developed countries in Eastern Europe, citizens are indeed aware of funding that flows from the EU budget into their countries.

It is unclear how European fiscal transfers influence the effect of individual benefits on EU support. Individuals who live in countries that are net recipients of European funding might be less focused on how they benefit individually from European integration since they already benefit indirectly through infrastructure projects, employment initiatives, educational programs and other investment models. For citizens from countries, however, that are net donors to the European Union it might be more important to benefit individually in order to assess the EU positively since they would otherwise not benefit at all. It is therefore hypothesized that:

H2: *The impact of benefitting from EU mobility rights on displaying support for the EU is weaker for individuals in member states that benefit from European fiscal transfers.*

2.4.2 The case of Eastern Europe

Considering the variety of economical, geographical and historical backgrounds of the 28 current EU member states, it is obvious that European integration has affected these countries to varying degrees. In this regard, many researchers have emphasized that attention should be paid to the unique conditions that Eastern European countries faced before, during and after their accession to the European Union (Garry & Tilley, 2009; Christin, 2005; Caplanova, Orviska & Hudson, 2004; Tucker, Pacek & Berinsky, 2002; Cichowski, 2000).

The Eastern European countries in the European Union mainly consist of the so-called ‘EU8’ (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia) which joined the European Union in 2004. This group of Eastern European states was expanded after

the accession of Bulgaria and Romania in 2007 and of Croatia in 2013. All 11 Eastern European states[3] witnessed radical transformations after the breakdown of the former Eastern bloc and Yugoslavia in the early 1990`s. These transformations comprised the shift from command economy to market economy, from communist authoritarianism to liberal democracy[4] and from an orientation towards Russia to becoming a part of NATO and the Western community. The analysis of these economic and political conversions is crucial for understanding how European integration is perceived differently in Western and in Eastern Europe.

Tucker, Pacek and Berinsky (2002), who studied attitudes towards EU membership in post-communist countries before their actual accession, found that public support for the EU is particularly strong among citizens who favor free market economy and who emerged from the transition period as economic 'winners'. Becoming a member of the EU should in this regard be understood as a guarantee that the reforms that had taken place since the demise of communism would not be reversed (Tucker, Pacek & Berinsky, 2002, p. 557). Another study that was conducted in five Eastern European accession states found that the individual predictors of income and occupational status, which were of high relevance in similar studies in current member states, turned out to be nearly irrelevant for explaining EU support in states in Eastern Europe. The strongest predictors, however, were attitudes towards democracy and free-market economy (Cichowski, 2000).

While these studies give interesting insights into the public opinion of post-communist member states prior to their accession, it can be questioned to what extent these findings are still of relevance in 2019. However, more recent publications also find that the EU can serve as an economic and political role model, specifically for countries in Eastern Europe and countries in which bad governance practices are the norm. Toader and Radu (2019) find that individuals in Romania report much higher trust levels for the European Union than for any other Romanian political actor which is interpreted as individuals, who are dissatisfied with ineffective policies or political institutions, seeing the EU as a role model (Toader & Radu, 2019, p. 194). Ejrnæs and Jensen (2019) show that citizens who distrust their national political establishments in countries with low perceived corruption display lower support for the EU while citizens who distrust the establishment in countries with high corruption display higher support for the EU.

[3] Eastern European states are in this paper equated with post-communist countries who used to be part of the Eastern bloc.

These findings indicate that individuals who live in member states with less accountability measures and less efficient governance institutions still regard the EU as a political model and EU membership as an opportunity to improve the political conditions in post-communist countries.

These findings suggest that the importance of European integration might be of a different nature in Eastern Europe which potentially alters the impact of other determinants of EU support. The idea that certain effects might work differently in Eastern Europe is not entirely new. For instance, Garry and Tilley (2009) find that positive retrospective economic evaluations predict EU support stronger in the East than they do in the West. While the EU can be equated in Western Europe with political and economic integration, in Eastern Europe the EU is also equated with an insurance that the process towards market economy, democracy and human rights is not reversed. In countries with particularly high corruption levels and badly functioning bureaucracies, the EU seems to be perceived as step towards good governance practices. Similar to the effect of countries benefitting from European funds, it seems plausible that citizens in Eastern Europe are less focused on their individual gains because their countries benefit differently from being EU members and citizens are more aware of the alternatives to free markets and democracy. This assumption is in line with the finding of Cichowski (2000) that education and occupational status have no significant impact on support for the EU in Eastern Europe, although they serve as very reliable predictors in the rest of Europe. It is therefore hypothesized that:

H3: The *impact of benefitting from EU mobility rights on displaying support for the EU is weaker for individuals living in Eastern Europe than for individuals living in Western Europe.*

3.0 Methodology

3.1 Multilevel modelling

This paper applies multilevel modelling in order to assess the impact that benefitting from the EU has on displaying support for the EU and how this effect is influenced by country level characteristics. Multilevel models are appropriate estimate techniques when the data at hand is ordered in a hierarchical structure, which means that the data points on the lowest level are nested within contextual groups. Using ordinary least squares regression for multilevel data may lead to unreliable results and a higher likelihood of type I errors (Steenbergen & Jones, 2002, p. 219). Furthermore, including group-level variables into the model makes the

application of multilevel modelling inevitable, since studying the effect of group variables in multivariate models would violate the assumption that errors are independent (Steenbergen & Jones, 2002, p. 220). Since this paper uses survey data from participants that are clustered within the 28 European member states and also analyzes cross-level interactions between variables on the individual and on the country level, multilevel modelling is the appropriate choice of method.

It has been questioned to what extent multilevel models provide accurate estimates if the number of groups on the second level is rather small. Multilevel analysis has mainly been developed within educational research (Stegmueller, 2013, p. 748) where scholars usually analyze students which are nested in hundreds of schools. Studies that analyzed the effect of using low numbers of countries as group variables suggest that multilevel linear models require at least 25 countries in order to provide reliable estimates (Bryan & Jenkins, 2016). Using less countries increases the likelihood of concluding that country effects exist when, in fact, they do not. The nature of studying country effects within European member states implies that scholars are bound to the current number of member states. Consequentially, many publications which examined time periods before the enlargement of 2004 or which focus only on certain parts of the EU violate the requirement of using a sufficient number of countries. For example, Chalmers and Dellmuth (2015) base their analysis on only 16 countries while Ejrnæs and Jensen (2019) and Hooghe and Marks (2005) use only 15. While estimates of individual variables are quite resistant against low numbers of countries, estimates of group variables are more vulnerable. After analyzing 756,000 generated datasets, Stegmueller (2013) concludes that using around 20 countries leads to confidence intervals for country variables that are around 5% too short. This means that statistical software reports p-values of 0.05 while the actual p-value would be around 0.10. Although this paper uses a number of clusters that is just above the considered minimum number (28 countries), the danger of overestimated significance values for country variables should be taken seriously. Significant effect sizes of country variables will therefore be treated with caution.

3.2 Dataset and missing values

The country variable for fiscal transfers is based on a dataset from the European Commission (European Commission, n.d.-b). All other variables are based on the Eurobarometer wave EB 89.1, for which data was collected in March 2018. The version was chosen because it is the

newest version that includes the items that are being used in order to assess to what extent respondents have benefitted from European integration. This survey instrument has only been included a few times and was last included in the Eurobarometer in 2014 in EB 81.4. The survey was conducted in all 28 European member states as well as in Turkey, (North) Macedonia, Montenegro, Serbia and Albania and compiles a total of 33,130 participants. Only respondents from the 28 EU member states were considered which reduced the potential sample size to 27,988. The number of individuals that were surveyed in each country ranges from 501 in Malta to 1,509 in Germany. All participants that have missing values on at least one of the utilized variables were deleted from the sample. After using listwise deletion, 22,270 respondents remained which corresponds to 79.6 percent of the original sample in the 28 EU member states. The group-level sample sizes in the final version of the sample range from 363 in Luxembourg to 1,231 in Germany.

3.3 Operationalization of variables.

3.3.1 Operationalization of support for EU

In the existing literature, public support for the EU has most often been operationalized with two Eurobarometer items, one asking if EU membership of the home country is generally a good thing or a bad thing and the other asking if European integration has gone too far or not far enough (Vasilopoulou, 2017, p. 25). However, neither of these items is included in the Eurobarometer anymore and therefore cannot be used for studying more recent developments. Instead, an item will be used that asks whether respondents hold generally positive or negative attitudes towards the EU. The exact wording of the question is: 'In general, does the EU conjure up for you a very positive, fairly positive, neutral, fairly negative or very negative image?' The item has been used by several researchers who aimed to examine general feelings towards the EU (Kiess et al., 2017; McEvoy, 2016; Gomez, 2015; Vassallo, 2012) and according to Hix (2018, p. 7) it is the current question most closely related to the EU membership item in the Eurobarometer that was suspended in 2012. McEvoy emphasizes that the image item 'taps into both utilitarian and affective meanings to the EU' (McEvoy, 2016, p. 1166). Previous studies on different conceptualizations of EU support have also shown that general support and utilitarian support seem to fall into the same support dimension (Boomgarden et al., 2011, p. 250). The *EU image* item therefore seems to be a suitable choice for studying the impact of utilitarian benefits on EU support. The item was reverse coded so that high values are related with positive attitudes which allows for a more intuitive interpretation of regression results.

3.3.2 Individual EU Benefits Variable

As has been discussed above, in this paper 'benefitting from the EU' is conceptualized as benefitting from EU mobility rights. This is based on the assumption that the most tangible benefits that European integration provides to EU citizens are the right to choose freely the place of residence within the EU, the opportunity to travel in all EU countries without the need of a Visa and supportive EU policies that make stays in other EU countries more convenient and feasible. The main independent variable of interest *EU benefits* is therefore constructed by merging eight items that ask if respondents have benefitted from several mobility-related EU achievements. The exact wording of the items is:

'For each of the following achievements of the EU, could you tell me whether you have benefited from it or not:

- No/less border controls when travelling abroad
- Improved consumer rights when buying products or services in another EU country
- Cheaper calls when using a mobile phone in another EU country
- Receiving medical assistance in another EU country
- Strengthened rights of air transport passengers in the EU
- Working in another EU country
- Living in another EU country
- Studying in another EU country'

Respondents were able to answer each question with 'Has benefitted', 'Has not benefitted' or with 'Don't know'. The resulting scale ranges from 0 for respondents who answered all the items with "Has not benefitted" to 8 for respondents who reported to have benefitted from every of the eight items. Since most of the items are related to spending time outside of the home country, it can be assumed that the items are closely related to each other. For instance, we can expect individuals, who reported to have worked in another EU country to be more likely to have benefitted from medical assistance or better phone rates in another EU countries than individuals who have never worked in another member state. In order to investigate to what extent the eight items are part of the same underlying factor, a confirmatory factor analysis

(CFA) was conducted.[5] The results suggest that indeed all eight items are part of only one underlying factor which has an Eigenvalue of 3.87. The interitem correlations range from 0.55 to 0.79. The Crohnbach's Alpha of the eight items is 0.88. This value is far above 0.7 which is considered to be the minimum value for scale reliability coefficients to be acceptable (Tay & Jebb, 2017). Values between 0.8 and 0.9 are considered to be "very good" (DeVellis, 2003, p. 96). Removing the item with the lowest interitem correlation (having benefitted from less border controls) did not increase the Crohnbach's Alpha. Therefore, it was decided not to exclude any of the items from the scale. The results suggest high internal consistency between the items which allows for them to be merged into one scale that measures to what extent respondents have benefitted from EU movement rights.

3.3.3 Control variables on the individual level

In addition, the model includes several control variables that have been shown to be related to EU support and are potentially related to individual EU benefits in order to avoid wrong estimates due to confounding effects. Socioeconomic variables are controlled for by including measures for education, social class and the financial situation of the household. In the Eurobarometer, education is measured as the age when the respondent stopped fulltime education. For respondents that reported that they were still in education when the survey was conducted, the education value was substituted by their age. While more than 90 percent of the values lie between 14 and 26, there are also participants who reported values higher than 50 and lower than 10. It can be questioned to what extent the inclusion of these values into the sample fosters the endeavor to create an educational scale that resembles the educational levels of all survey participants in a meaningful way. Treating a person who attended some sort of full-time training at the age of 50 as 'twice as educated' than a person who graduated from university at the age of 25 does not seem plausible. Furthermore, very high values would have a strong influence on the scale and on regression estimates. In order to mitigate the effect of these extreme values, the variable was recoded into a scale ranging from zero to 13, zero resembling participants who were younger than 14 and 13 resembling participants who were older than 25 when they stopped fulltime education. This procedure matches the operationalization of Chalmers and Dellmuth (2015) who computed a scale ranging from 0-9. 14 and 25 were chosen as cut-off points because the cumulative amount of values drops

[5] The factor analysis was conducted using all respondents that did not have missing values on any of the items. All individuals that answered at least one of the items with "Don't know" were dropped. A robustness check suggested that the results only change marginally when all respondents with missing values are being included into the scale.

substantially for lower and higher ages and because the values roughly resemble plausible values for completing full-time education.

As discussed above, many studies have shown that individuals who are financially better off also tend to display higher support for the EU. Since the utilized Eurobarometer version does not include a measure for income, a variable was chosen that asks how often respondents had difficulties to pay their bills at the end of the month. The three possible response categories were 'almost never/never', 'from time to time' and 'most of the time. Two dummy variables for 'from time to time' and 'most of the time' were integrated into the model, with 'almost never/never' being the reference category. In order to control for socio-economic effects that are not covered by the variables for education and financial situation, a measure for social class was also included. The question asks participants to locate themselves on a scale from 0-4, 0 being the 'working class of society' and 4 being the 'highest class of society'.

Identity-related concepts are among the most often studied predictors for EU support (Hobolt & De Vries, 2016). It is plausible to assume that individuals with more pro-European identities do spend more time in other European member states or that spending more time in other European member states fosters European identity. Due to the likely connection between European identity and the *individual EU benefits* scale, the model includes a dummy variable that takes the value 0 for respondents with a purely national identity and 1 for respondents who reported to have at least partially a European identity. This item was called the 'gold standard' (Hobolt & Wratil, 2015) of measuring European identity and has been utilized by many researchers. Since only one percent of the sample reported to have a purely European identity, this category was merged with having partially a European and partially a national identity. The model also includes the common control variables age and gender. The gender dummy takes the value 0 for women and 1 for men.

The last control variable measures the knowledge that survey participants possess about the European Union. Different levels of understandings of the EU might for example influence the impact of EU budgetary balance on EU support since citizens with low knowledge might be less aware of the extent to which their country pays money into or receives money from the EU budget. The Eurobarometer 89.1 assesses knowledge about the EU with three questions asking if the Euro area consists currently of 19 member states (true), if the members of the European parliament are directly elected by EU citizens (true) and if Switzerland is a member of the EU

(false). Respondents could answer these questions whether with 'true', 'false' or 'don't know'. The scale is constructed by coding all incorrect answers and those who responded 'don't know' as 0 and all correct answers as 1. Scores for each question were then added together for every participant and the resulting scale ranges from 0 (no correct answers) to 3 (three correct answers).

3.3.4 Interaction effects between individual-level variables and country variables

The hypothesized cross-level interactions between benefitting from the EU and country characteristics are tested by including two variables for Eastern European countries and for EU budgetary balance as a percentage of the Gross National Income (GNI). The Eastern Europe dummy takes the value 1 for every post-communist country in the EU (namely the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Bulgaria, Romania and Croatia) and zero for all other EU member states. The variable for EU budgetary balance is based on data from the European Commission which calculates how much every country has contributed to the EU budget and how much it has received from various funds for every year (European Commission, n.d.-b). The variable is computed by subtracting the contributions from each country to the EU budget from EU expenditures that have been made within this country and dividing the resulting value by the GNI. Figure 2 displays the resulting values for the years 2014-2017 by country. While the overall direction of budgetary balance (whether countries are net receivers or net donors) seems to be stable, it becomes apparent that there is a high degree of fluctuation between individual years.

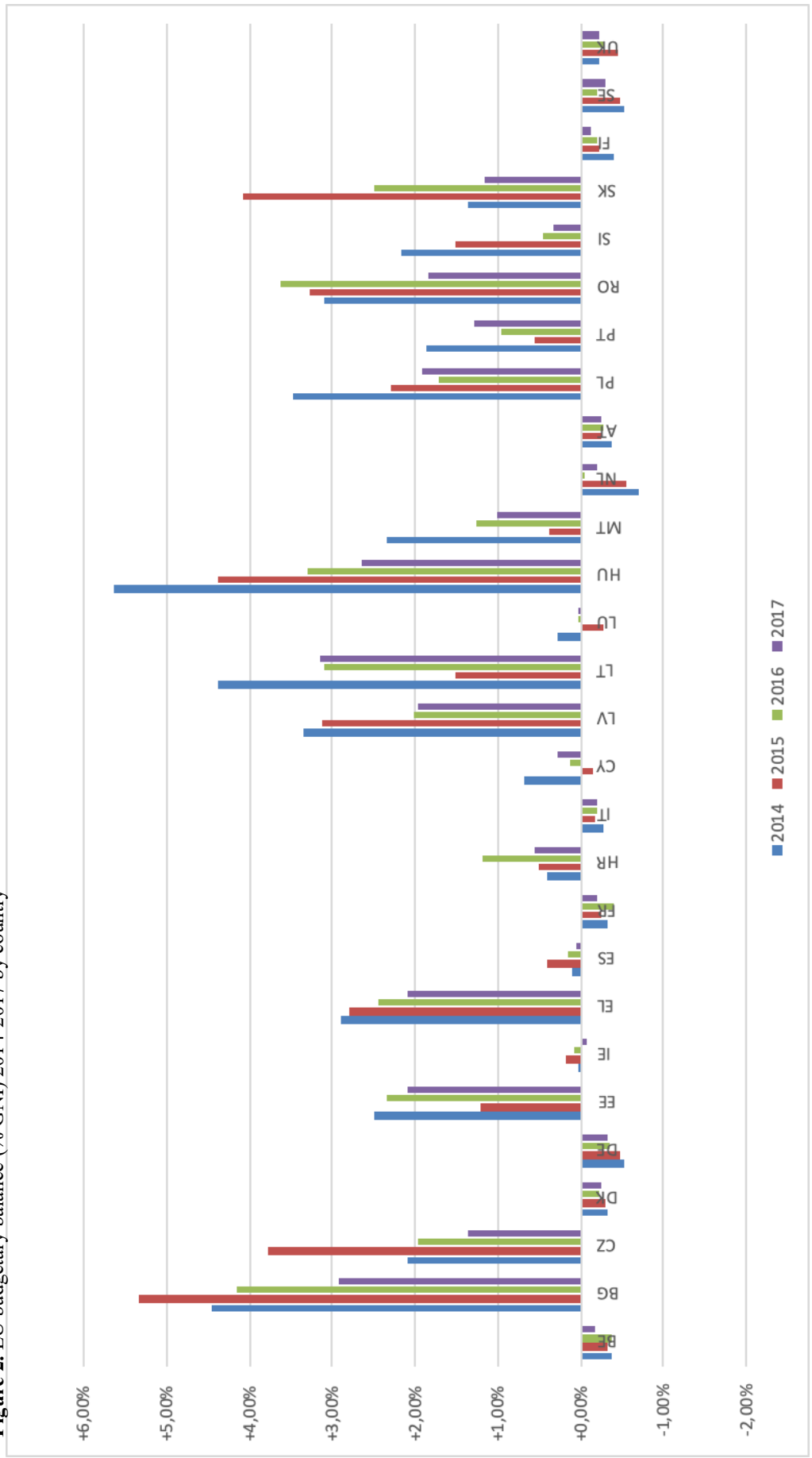


Figure 2. EU budgetary balance (% GNI) 2014-2017 by country

As discussed earlier, scholars have received mixed findings when analyzing the effect of budgetary balance on EU support with some scholars finding strong positive relationships (Chalmers & Dellmuth, 2015; Hooghe & Marks, 2005; Anderson & Reichert, 1995) and others finding no relationship at all (Ejrnæs & Jensen, 2019; Kuhn & Stoeckl, 2014; Eichenberg & Dalton, 1993). A closer examination of these papers reveals inconsistent and poorly described operationalizations. Neither Kuhn and Stoeckl (2014) nor Eichenberg and Dalton (1993) specify the years for which they retrieved data on fiscal transfers. Ejrnaes and Jensen (2019) and Anderson and Reichert (1995) are also unspecific when describing their operationalization approach but since both papers use time-series data, budgetary balances are probably calculated for each year that is investigated. This would be based on the assumption that citizens adapt their support for the EU immediately if the budgetary balance changes from one year to another, which seems highly implausible. While research has shown that citizens are at least to some extent aware of the transfers their country receives (Fomina & Radu, 2017) it is unlikely that they are aware of annual fluctuations and that those fluctuations would make citizens change their support levels for the EU on an annual basis. More plausible seems to be the assumption that citizens have a general feeling for their country being a high or low net donor or a high or low net receiver. Consequentially, Hooghe and Marks (2005) and Chalmers and Dellmuth (2015) use aggregate data by calculating the mean scores of EU budgetary balance as percentage of GNI for the time periods 1995-2000 and 2007-2013 respectively. In order to reduce the impact of short-term fluctuations, this paper follows this procedure by calculating a mean score for each country for the years 2014-2017. 2014 was chosen as earliest year since it marks the beginning of the current budgetary period (lasting from 2014 to 2020) and 2017 as end year since it was the last year before the Eurobarometer version in question was conducted in March 2018.

Both country-level variables are added into the model as first-order variables and as interaction terms with the variable that measures to what extent respondents have benefitted individually from European integration. Although there have been no hypotheses regarding main effects of being from Eastern Europe or a net receiver country, including interaction terms into the equation requires the inclusion of the main terms as well. Not including the main terms can lead to misspecifications and lead to type I error due to omitted variable bias (Balli & Sørensen, 2013). The Eurobarometer provides separate data for Great Britain and Northern Ireland and

for East and West Germany. Since there is no data for budgetary balance on the sub-state level, the data was merged in order to resemble the United Kingdom and unified Germany.

3.4 Centering

In regular OLS regression, the technique of centering variables is being used in order to obtain interpretable intercepts. The intercept displays the value of the dependent variable if all independent variables have the value 0. The intercept is therefore often not interpretable since many scales, such as age, do not have meaningful zeros. Centering all independent variables results in the intercept taking the value of the dependent variable if all independent variables are at their mean. Effect sizes and significance values are not affected by centering. While centering is therefore only a tool in order to ease the interpretation in OLS regression, its importance is paramount in multilevel modeling. Hierarchical data forces the researcher to decide if variables should be centered at the grand mean (the mean of the whole sample) or at the group mean (the mean of the cluster that the record belongs to), both of which can result in substantially differing outcomes. Enders and Tofighi (2007) argue that the choice of centering method should be purely based on the substantive question of interest. If the main focus lies on individual-level variables or cross-level interactions, group-mean centering should be used. If the main interest is the effects of group-level variables or interaction effects between two group-level variables, centering at the grand-mean is the appropriate choice (Enders & Tofighi, 2007, p. 136). Centering at the group mean excludes all between-cluster variation from the estimate and therefore contributes to pure, unbiased effect sizes of individual-level variables (Enders & Tofighi, 2007, p. 128). The same is true for cross-level interactions which require individual-level variables to be centered at the group mean in order to remove the impact of between-cluster variation of this variable on the predictor (Enders & Tofighi, 2007, p. 133). Centering at the grand mean can potentially result in significant cross-level interaction effects, although this effect does not exist in the population (Hofmann & Gavin, 1998). Since all three hypotheses are either related to the effect of individual-level variables (H1) or cross-level interactions (H2 and H3), all individual-level predictors were centered at their group-mean for the multilevel analysis. Descriptive statistics are based on uncentered variables in order to enable informative comparisons between countries.

4. Results

4.1 Descriptive Statistics

The following chapter summarizes the properties of the utilized variables and how they change across countries. Table 1 displays the mean, standard deviation, range and proportion of missing values of all variables of interest.

Table 1. Descriptive Statistics of all Variables of Interest

Variables	Mean	SD	Min	Max	Missings values
EU image	2.24	0.92	0	4	1.5%
Individual EU benefits	2.74	2.65	0	8	12.4%
Education	6.14	3.59	0	13	1.5%
Social class	1.37	0.99	0	4	3.8%
Sometimes problems paying bills	0.27	0.44	0	1	1.8%
Often/always problems paying bills	0.09	0.29	0	1	1.8%
Financial situation of household	1.78	0.73	0	3	2.1%
European identity	0.63	0.48	0	1	1.8%
Knowledge about EU	1.78	0.88	0	3	0%
Age	51.7	17.9	15	99	0%
Male	0.46	0.50	0	1	0%
East	0.40	0.49	0	1	0%
EU budgetary balance	1.07	1.47	-0.41	4.21	0%
N	22,270				

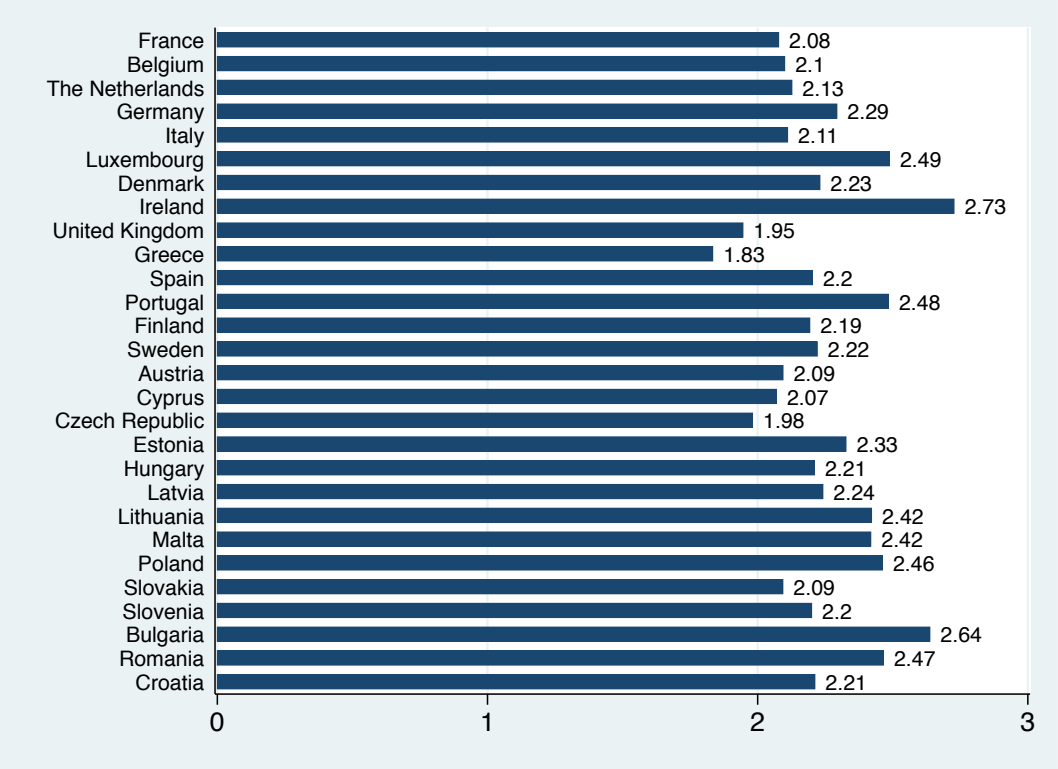
Source: Standard Eurobarometer 89.1, own calculations

EU image having a mean of 2.24 suggests that the European citizens have on average a slightly positive attitude towards the EU. The computed count variable *individual EU benefits* has a mean of 2.74 on a scale ranging from 0 to 8. This value is substantially below the natural center of the scale (4) and therefore indicates that many survey participants only benefit to a limited extent from European integration. 27 percent of participants indicated that they sometimes have problems paying bills and 9 percent indicated that they often/always have problems paying bills. This implies that 64 percent report no existential financial problems. 37 percent of the sample reported that they have a purely national identity, while 63 percent have at least a partially European identity. 40 percent of respondents were sampled in post-communist countries in Eastern Europe and 60 percent in Western Europe. The proportions of missing values for each variable were included in order to be able to assess the impact that the application of list-wise deletion might have on the results. As can be seen, most variables have around two percent missing values except for the variables *individual EU benefits* (12.4

percent) and *social class* (3.8 percent), which could be caused by some individuals not being familiar with the concept of social classes or not being willing to allocate themselves to one. The very high proportion of missing values of the *individual EU benefits* variable is the result of the accumulation of missing values of all items that were included into the count variable. Overall, the proportions of missing values are on a moderate level and there is no tendency visible that respondents refused to answer certain questions on a large-scale which would potentially lead to regression results being affected by non-response bias.

Since this paper takes into account the effect of the multi-level data structure that results from cross-national surveying in Europe, attention should be paid to how respondents score on the variables in different countries. Figure 3.1 displays the mean of EU image across countries.[6]

Figure 3.1. Mean of *EU image* across countries

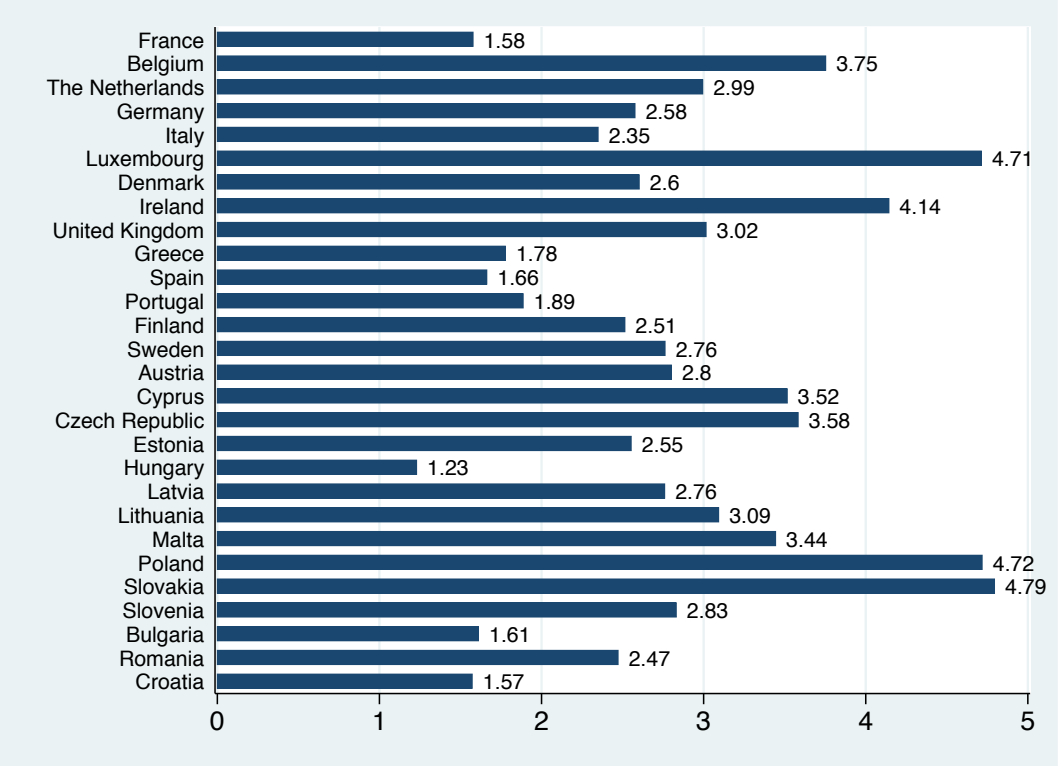


The countries with the lowest average support for the EU are Greece (1.83) and the United Kingdom (1.95). The highest levels can be observed in Ireland (2.73) and Bulgaria (2.64). Overall, it can be noted that the differences between countries seem to be rather small which suggests a rather small proportion of variance being explained on the country level. Figure 3.2

[6] Note that the EU image scale ranges from zero to 4 and the EU benefits scale ranges from zero to 8, although this is not displayed in the figures. The scale was shortened in order to obtain a better illustration of differences between countries.

shows the mean of the *individual EU Benefits* variable in all European member states. It becomes apparent on the first glance that differences between countries are larger than those of the *EU image* variable. The highest means can be found in Slovakia (4.79), Poland (4.72) and Luxembourg (4.71) while the lowest mean can be found in Hungary (1.23).

Figure 3.2. Mean of *individual EU benefits* across countries

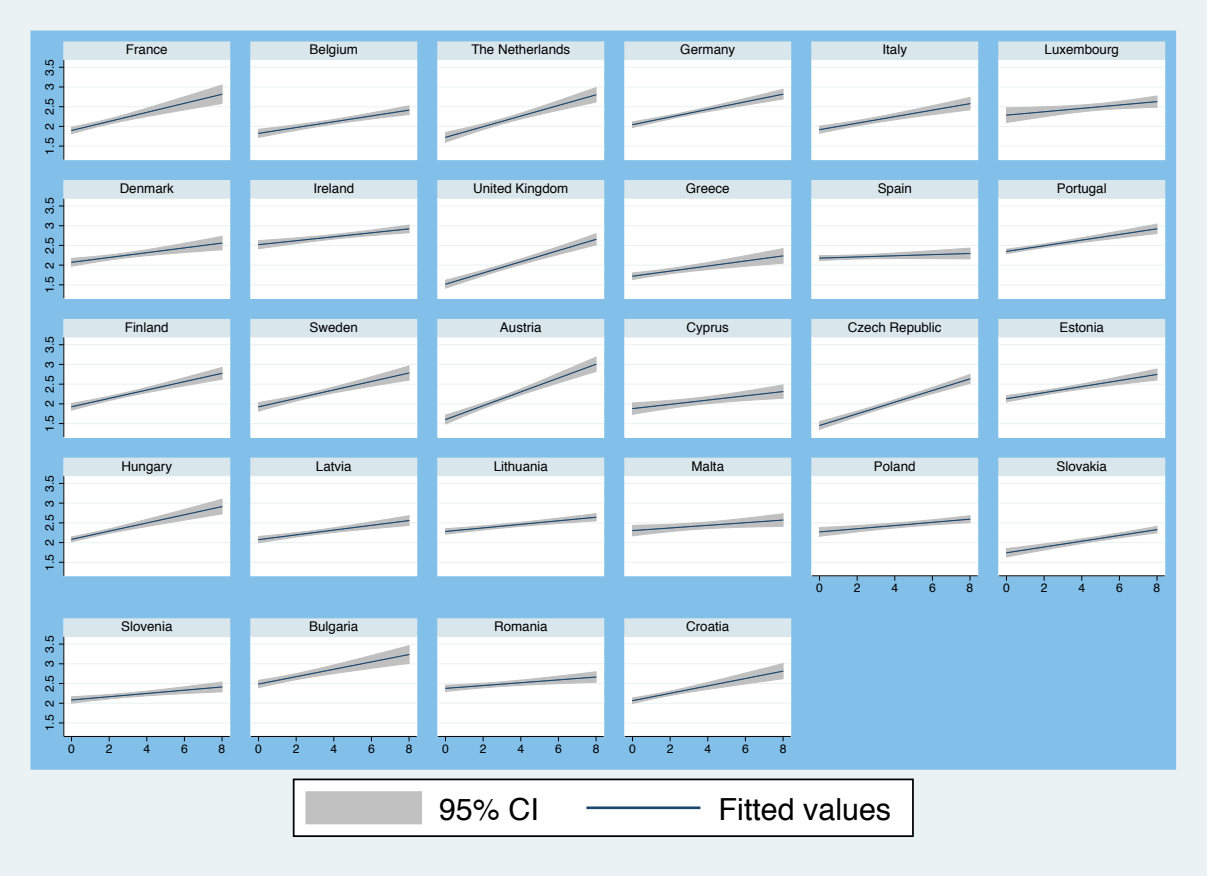


Before continuing with the multilevel analysis, it can help to have a look at visualizations of the connections between *individual EU benefits* and *EU image* since graphs are often easier to interpret than regression outputs. In order to obtain a preliminary understanding of the effect and how it varies across different EU member states, Figure 4 displays the regression lines of the bivariate relationship between *individual EU benefits* and *EU image* with 95% confidence intervals by country.[7] The graph therefore illustrates the relationship without controlling for other variables. There is a positive relationship between *individual EU benefits* and *EU image* in basically every EU member state, however, the regression line is steeper in some countries than in other countries. The relationship is particularly strong in the Netherlands, the United Kingdom, Austria and the Czech Republic. In Spain, Poland, Slovenia and Romania, the slope of the line looks rather flat which implies a weak or insignificant relationship. There is a slight

[7] The scatter plots of each country were not included since both variables only offer 32 combinations and in most countries all combinations were present at least once. The scatter plots therefore did not provide any additional information and were excluded in order to highlight the informative parts of the graph.

tendency for the lines to be steeper in Western European net donor states and less steep in post-communist net receiver states, which is in line with the hypothesized moderating effect of country variables. The multilevel regression analysis will show if this effect actually exists and if it is statistically significant.

Figure 4. Fitted values of *individual EU benefits* and *EU image* by country



4.2 Results of regression models

The analysis is performed with Stata/MP 14.1 using the *mixed* command. The standard procedure of running multilevel regression is to develop a series of models which become increasingly complex by adding predictors, random slopes and interaction effects (Scott, Shrout & Weinberg, 2013). The first step is to create an empty model (the so-called null model) which only includes the intercept of the dependent variable and allows it to vary across groups. The null model allows for the calculation of the Intraclass Correlation Coefficient (ICC) which is a measure for the proportion of variance that is being explained on the group level.

A subgoal of this paper is to examine to what extent the chosen operationalization of 'benefitting from the EU' is an effective way to measure the concept directly without being forced to refer to the widely used proxy variables education and financial situation. Having a

more direct measurement would always contribute to ensuring that obtained correlations can be attributed to the proposed causal link and not to other mechanisms. Model 1 will therefore only include all individual-level control variables, which is an unconventional way to start the multilevel analysis. In Model 2, the main variable of interest *individual EU benefits* will be added to the list of covariates which allows us to assess how the coefficients of other variables change through this extension. Model 3 will also include the main effects of the country level variables. No hypotheses regarding main effects of country variables have been formulated and since analyzing main effects of country variables requires a different centering procedure, all country main effects should be interpreted with caution. However, including country level main effects in a separate model is the standard procedure of building up increasingly complex models and will therefore followed here as well. Models 4-6 will cover the question of whether the slope of *individual EU benefits* is the same across all countries and if potential variations can be explained by the hypothesized cross-level interactions effects. Model 4 will include all individual-level and country-level variables while allowing the slope of *individual EU benefits* to vary across groups. If this procedure leads to a significantly better model fit than the previous model, we can conclude that analyzing interactions that might explain slope variations is worthwhile. Model 4 can therefore be seen as a numerical analysis of the effect that has been eyeballed at Figure 4. In Model 5, the interaction effect between *individual EU benefits* and being from an Eastern European country will be included. Finally, Model 6 will also include the interaction term between *EU budgetary balance* and *individual EU benefits*.

Table 2. Empty multilevel model

	Model 0	
	Coef.	SE
Constant	2.245***	0.039
Constant (country)	0.0404885	
Residual	0.8049178	
AIC	58475.78	
BIC	58499.81	
ICC	0.048	
Log Likelihood	-29234.889	

* p<.05; ** p<.01; *** p<.001; two-tailed test
Source: Eurobarometer Version 89.1, March 2018
Individual N=22,270, country N=28

Table 2 displays the results of the null model. The ICC of the dependent variable *EU image* is 0.048 which indicates that around 5% of variance in *EU image* can be explained at the country level. This value appears rather small, yet this is not very surprising since Figure 3.1. showed

only limited differences in the means of *EU image* between countries. Most publications do not report ICCs which makes it difficult to find comparable results but Ejrnæs and Jensen (2019) report an ICC of 0.054 using a dependent variable that measures support for further European unification on a scale of 0-10. This suggests that variances explained on the country-level of around 5% are not unusual in literature on EU support.

Table 3 shows the results of models 1-3. Model 1 displays the coefficients and standard errors of all individual-level variables except for the *individual EU benefits* variable. The model allows the intercepts to vary across countries while fixing the slopes across countries. The interpretation of b-coefficients in multilevel models is identical with that of b-coefficients in standard multivariate regression. The significant coefficient of 0.009 for education in model 1 therefore suggests that individuals that score one point higher on the 0-13 education scale score on average 0.009 points higher on the EU image scale while keeping all other covariates in the model constant. As expected, individuals from higher social classes and individuals who consider their households to be in better financial situations display higher support for the EU. On the contrary, respondents who sometimes or often have problems paying their bills display significantly less support compared to those who reported to never have problems paying their bills. The effect of always having problems to pay bills is hereby much stronger than that of only sometimes having problems which demonstrates the ordinal character of this survey instrument. Citizens who reported that they identify at least partially as European score 0.47 points higher on the *EU image* scale than individuals with purely national identities. Citizens with a higher knowledge about the EU also display higher EU support. Lastly, older individuals and men have significantly worse attitudes towards the EU. Men score on average 0.05 points lower on the *image* scale and with every year increase in age individuals score 0.003 points lower. Except for the demographic control variables gender and age for which no assumptions had been formulated, the effects of all variables are in the expected direction in line with existing literature.

The table also includes the Akaike information criterion (AIC) and the Bayesian information criterion (BIC) which are both estimates of the relative fit of models. In opposite to the AIC, the BIC does privilege more parsimonious models and therefore 'punishes' the inclusion of new variables stronger if they do not explain variance. Individual AIC and BIC values cannot be interpreted since they depend on sample size and include arbitrary constants which can result in values as low as -600 or as high as 340,000 (Burnham & Anderson, 2004, p. 271). Both

estimates only develop a meaning in comparison with the estimates of other models, lower AIC and BIC values being associated with a better model fit. In order to ease the interpretation of these model fit measures, it has been suggested to report estimates denoted as Δ_i and defined as

$$\Delta_i = AIC_i - AIC_{min}$$

where AIC_{min} stands for the lowest of all AIC_i values which results in the best model having a Δ_i value of zero and all other models having positive Δ_i values (Burnham & Anderson, 2004, p. 271). However, it should also be noted that the main goal of this study is not to predict support for the EU as precisely as possible and therefore to maximize model fit but to assess the impact of the benefit variable and factors that influence its effect. AIC and BIC will therefore only be regarded as complementary findings.

Table 3. Multilevel linear regression models 1-3

	Model 1		Model 2		Model 3	
Variable	Coef.	SE	Coef.	SE	Coef.	SE
Individual-level control variables:						
Education	0.009***	0.002	0.006**	0.002	0.006**	0.002
Social class	0.020**	0.007	0.010	0.007	0.010	0.007
Financial situation of household	0.198***	0.010	0.188***	0.010	0.188***	0.010
Sometimes problems paying bills	-0.047**	0.014	-0.044**	0.014	-0.044**	0.014
Often/always problems paying bills	-0.193***	0.023	-0.185***	0.023	-0.185***	0.023
European identity	0.473***	0.012	0.440***	0.013	0.440***	0.013
Knowledge about EU	0.052***	0.007	0.045***	0.007	0.045***	0.007
Age	-0.003***	0.000	-0.002***	0.000	-0.002***	0.000
Male	-0.050***	0.011	-0.055***	0.011	-0.055***	0.011
Benefit variable:						
Individual EU benefits			0.037***	0.002	0.037***	0.002
Country-level variables:						
Eastern Europe					-0.000	0.126
EU budgetary balance					0.035	0.043
Constant	2.245***	0.039	2.245***	0.039	2.207***	0.048
Variance components:		Δ_i		Δ_i		Δ_i
Constant (country)	0.0406384		0.0406481		0.0380382	
Residual	0.6928311		0.6855921		0.6855921	
AIC	55158.5	406.4	54926.88	174.75	54929.07	176.94
BIC	55254.63	374.3	55031.03	150.7	55049.23	168.93
Log Likelihood	-27567.251		-27450.442		-27449.534	

* p<.05; ** p<.01; *** p<.001; two-tailed test

Source: Eurobarometer Version 89.1, March 2018

Individual N=22,270, country N=28

In Model 2, the *individual EU benefits* variable is added to the model. Benefitting from European integration is a highly significant predictor of having a positive image of the EU. Individuals that score one step higher on the 0-8 benefit scale score on average 0.037 points higher on the 0-4 *EU image* scale. Special attention should be paid to how the effects of *education* and *social class* change when the benefit variable is added. The effect of both variables decreases substantially and while the significance of *education* only drops to a lower level, the *social class* variable becomes insignificant. All other variables only change marginally. The fact that the effect sizes of *education* and *social class* decrease when the benefit variable is added suggests that the benefit variable potentially acts as a mediating variable, the possibility of which will be discussed below. The decrease in Δ_i in Model 2 compared to Model 1 suggests that model fit has improved and that most of the model fit improvement of all models compared to model with the best fit can be allocated to the inclusion of the *EU benefits* variable. A likelihood ratio (LR) test confirms that the improvement in model fit is also statistically significant. In Model 3, the country variables *Eastern Europe* and *EU budgetary balance* are added to the list of variables, neither of these variables have a significant effect on the attitude towards the European Union.

The results of the models 4-6 can be viewed in Table 4. This paper tests the hypotheses that the effect of benefitting from the EU is moderated by country-specific variables. The analysis of cross-level interactions only makes sense if the main effect of *EU benefits* does indeed vary across groups. Figure 4 has provided a first visual indication that this is the case. Model 4 includes the same variables as Model 3 but also allows the slope of the benefit variable to vary across groups. The coefficients of most variables are largely unaffected by this procedure. The effects of often or always having problems to pay the bills become a bit weaker, while the effect of benefitting from the EU becomes a bit stronger. The purpose of this model is to assess if adding a random slope for a certain variable increases the overall quality of the model. If the effect of *individual EU benefits* varies significantly across countries, it becomes plausible to try and explain this variation with country-specific interaction effects. Model 4 having a Δ_i of 0 indicates that this model has the best model fit of all analyzed model. Both the AIC and BIC decrease from Model 3 to Model 4 and a likelihood ratio test confirms again that the improvement in model fit is statistically significant.

Table 4. Multilevel linear regression models 4-6

	Model 4		Model 5		Model 6	
Variable	Coef.	SE	Coef.	SE	Coef.	SE
Individual-level control variables:						
Education	0.006**	0.002	0.006**	0.002	0.006**	0.002
Social class	0.011	0.007	0.010	0.007	0.011	0.007
Financial situation of household	0.187***	0.010	0.188***	0.010	0.187***	0.010
Sometimes problems paying bills	-0.045**	0.014	-0.047**	0.014	-0.046**	0.014
Often/always problems paying bills	-0.192***	0.023	-0.188***	0.023	-0.193***	0.023
European identity	0.442***	0.013	0.445***	0.013	0.443***	0.013
Knowledge about EU	0.045***	0.007	0.045***	0.007	0.045***	0.007
Age	-0.002***	0.000	-0.002***	0.000	-0.002***	0.000
Male	-0.055***	0.011	-0.054***	0.011	-0.055***	0.011
Benefit variable:						
Individual EU benefits	0.039***	0.007	0.040***	0.003	0.029***	0.005
Country-level variables:						
Eastern Europe	-0.000	0.126	0.032	0.147	- 0.025	0.162
EU budgetary balance	0.035	0.043	0.031	0.049	0.056	0.055
Crosslevel interactions:						
EE*benefit			-0.007	0.011	0.095*	0.041
EUBB*benefit					-0.066***	0.018
Constant	2.270**	0.048	2.208***	0.056	2.170***	0.063
Variance components:		Δ_i		Δ_i		Δ_i
Constant (country)	0.0380484		0.0510652		0.0622493	
Residual	0.6782174		0.6818768		0.6783882	
AIC	54752.13	0	54845.92	93.8	54798.31	46.18
BIC	54880.3	0	54982.1	101.8	54950.52	70.22
Log Likelihood	-27360.064		-27405.958		-27380.157	

* p<.05; ** p<.01; *** p<.001; two-tailed test

Source: Eurobarometer Version 89.1, March 2018

Individual N=22,270, country N=28

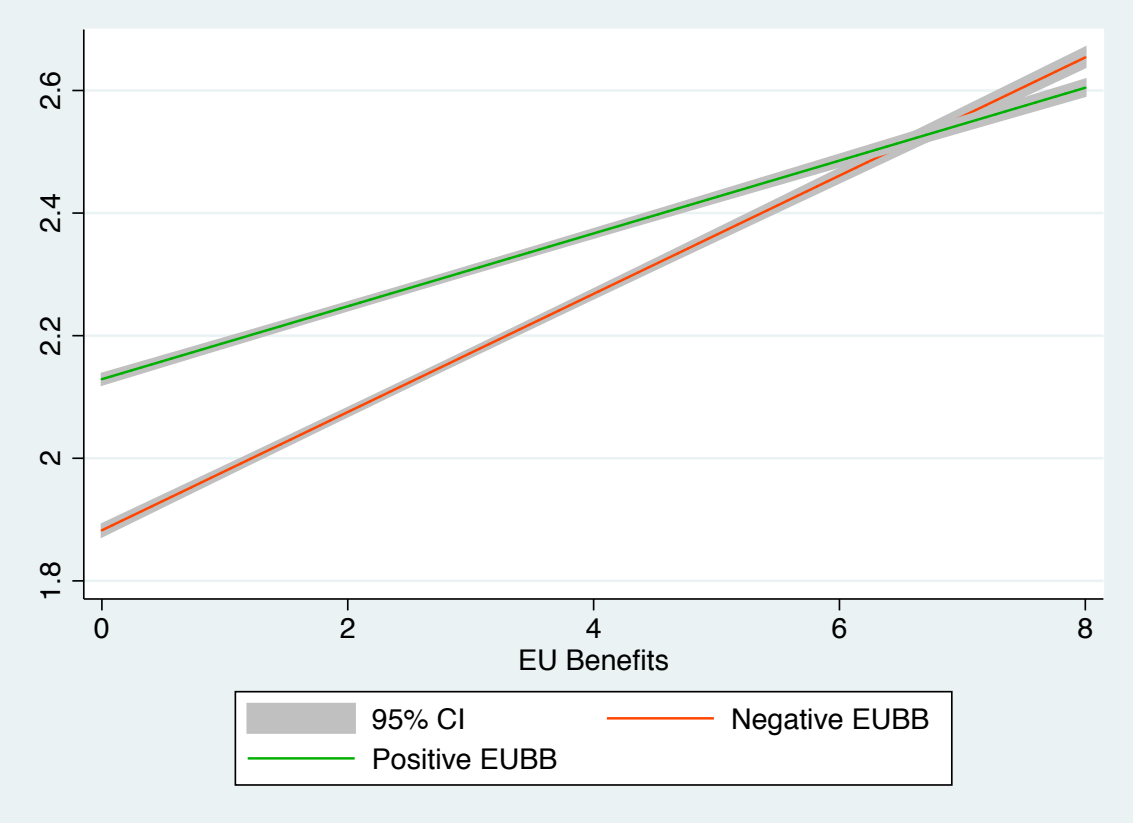
In Model 5, the interaction term between benefitting from the EU and being from an Eastern European country is added to the model. As can be seen in Table 4, the interaction term is statistically insignificant. This suggests at this point that the attitudes towards the EU of respondents in Eastern Europe are not shaped in a different way by benefitting from the EU than the attitudes of respondents in Western Europe. The model fit decreases substantially by adding this insignificant interaction term, since both AIC and BIC punish less parsimonious models if no additional variance is explained by newly added variables.

Adding the last interaction term, however, leads to a transformation of this result. When the interaction term between EU benefits and living in a country with a positive EU budgetary balance is added in Model 6, it shows that the newly added interaction term is negative and highly significant, which is in line with the formulated expectations. The interaction term between living in Eastern Europe and benefitting however, becomes positive and significant. The fact that the term only becomes significant, when the last interaction term is added to the model can likely be explained by the close relationship between these two variables. Eastern European countries are among the main beneficiaries of European fiscal transfers. If being from Eastern Europe increases the effect of *individual EU benefits* and being from a net beneficiary country decreases it, then these two effects might cancel each other out if only the interaction with Eastern Europe is added, which results in an insignificant coefficient. If the interaction term between benefitting and budgetary balance is added, however, the moderating effect of being from Eastern Europe is isolated and becomes significant.[8]

The interaction between *EU budgetary balance* and benefitting from the EU is illustrated in Figure 5 which shows how the effect of *individual EU benefits* on *EU image* differs between negative and positive values of *EU budgetary balance*. It can be observed that the red line, which resembles the fitted values for countries with a negative budgetary balance (net donor countries) is substantially steeper than the green line which shows the effect size in net recipient countries, which illustrates the effect being stronger in countries that pay more to the EU budget than they obtain from it. The graph might wrongly suggest, that the variable EU budgetary balance was added to the model as a dummy variable. Although the variable has a continuous structure, it was decided to illustrate the moderation effect in a graph comparing only positive and negative values since this form of visualization provides a straight-forward way of interpretation.

[8] Adding the interaction terms in the reverse order results in a similar effect. The interaction term with EU budgetary balance becomes much stronger once the interaction with Eastern Europe is added.

Figure 5. The effect of *individual EU benefits* on *EU image* for countries with positive and negative EU budgetary balance



In summary, the *individual EU benefits* scale, which was proposed as a new operationalization of measuring to what extent European citizens have benefitted from the EU showed to be a significant predictor in all of the analyzed models. Hypothesis 1 can therefore be corroborated. The effect of benefitting from the EU on having a positive image of the EU appears to be weaker in states that are net beneficiaries of EU structural funds. The interaction term is highly significant. This finding is in line with expectations which is why hypothesis 2 can also be corroborated. The interaction with Eastern Europe turned out to be insignificant if added to the model separately and significant if added together with the second interaction term, yet the moderating effect on *individual EU benefits* is positive, which is the opposite of what has been hypothesized. Hypothesis 3 has therefore to be rejected. The final model meets all statistical assumptions of regression modelling. Regression diagnostics are discussed in the appendix.

4.3 Additional analyses and robustness checks

The results have shown that the effect size of *individual EU benefits* on *EU image* varies significantly across EU member states and that this finding can partially be explained by some countries benefitting more from EU fiscal transfers than others which seems to render individual-level benefits less important. In order to better understand the upper and lower boundaries of the effect size of *individual EU benefits*, all individual-level variables were included in a multivariate regression model in Austria and Slovenia. Austria and Slovenia were chosen, because they seem to be the countries with the steepest and least steep slope in Figure 4. The effect size varies from 0.11, which is nearly three times as big as the average effect size of all countries, in Austria to -0.01, which is an insignificant result, in Slovenia.

As has been shown, the *individual EU benefits* scale is closely related to both the education and social class scales, which hints at either moderation or confounding effects being present (MacKinnon, Krull & Lockwood, 2000). A confounding variable influences both the independent and the dependent variable which causes a spurious relationship between the two. A mediating variable acts as a transmitter between the independent and the dependent variable. It does not seem plausible that benefitting from the EU would lead to higher educational levels (by dropping out of full-time education later) or to being part of a higher social class, which makes confounding effects improbable. It is more likely that *individual EU benefits* act as a mediating variable since citizens with higher educational levels and from a higher social class are more likely to have the means and possibilities to be mobile within Europe and that having the opportunity to be mobile within Europe improves the attitude towards the EU. In order to test this assumption, a Sobel Goodman Test was conducted which shows that 49% of the effect of social class on EU image and 30% of the effect of education on EU image are being mediated by the *individual EU benefits* variable.[9] While this means that the *individual EU benefits* variable can indeed be seen as a more direct predictor of EU support than using proxy variables, it also shows that parts of the effects of education and social class are not mediated which implies that effects are in place that are not related to having better opportunities of being mobile in Europe.

[9] The user-created Stata command ml_mediation, which takes the nested structure of the data into account, produces similar results with 49 percent of social class and 33 percent of education being mediated. Since the authors published a warning concerning the validity of the procedure (https://stats.idre.ucla.edu/stata/faq/how-can-i-perform-mediation-with-multilevel-data-method-1/), only the results of the verified sgmediation command are reported in the main text.

Stata 14 allows multilevel models to be analyzed using full maximum likelihood (ML) or restricted maximum likelihood (REML). While the latter approach produces slightly more conservative estimates, the former allows for inter-model comparison. Since examining how the model fit increases when certain variables are added constitutes an important component of multilevel modelling, ML was chosen as estimation technique. However, in order to examine the impact that the choice of estimation method has on the results, all models were also run with REML which produces only marginally different effects and leads to identical conclusions.

5. Discussion

5.1 Interpretation of findings

The results indicate a significant connection between the *individual EU benefits* variable and having a positive attitude towards the EU. While being significant, the effect size of around 0.04 is rather modest. It implies that citizens who benefitted from all eight EU mobility amenities score on average only around 0.45 points higher on the 0-4 EU support scale than citizens who did not benefit at all. However, it should be kept in mind that the effect size of *individual EU benefits* varies significantly across countries. An additionally conducted multivariate regression in two selected countries showed that the effect varies from being insignificant in some countries to be three times as strong as the average effect size in other countries. The rather weak average effect size of 0.04 is therefore also a result of the effect being hardly present in some of the member states. The overall rather small average effect should therefore not be considered negligible.

When comparing the effect sizes of all variables, it becomes apparent that *financial household situation*, *individual EU benefits* and *European identity* are the strongest predictors of having a positive image of the EU. Individuals from households with a very good financial household situation score around 0.75 points higher on the *EU image* scale than individuals who reported to be from a household with a very bad financial situation. Citizens with at least a partial European identity score around 0.44 points higher than citizens with a purely national identity. This shows that both utilitarian- and identity-related variables are of importance for the prediction of public support for the EU.

This paper also had the goal to propose the computed *individual EU benefits* scale as an alternative way to operationalize benefitting from the EU, considering that the concept has

mostly been studied using proxy variables related to education and affluence. The decrease in effect size of *social class* and *education* when the *individual EU benefits* variable is added to the model indicates a possible mediating role of *individual EU benefits*. A Sobel Goodmann test confirmed these assumptions. Respondents with higher education levels and from a higher social class seem to have a more positive image of the EU because they are better able to benefit from the open borders within the EU. This is in line with the assumption of several authors who explained the positive effects of education and socioeconomic variables with similar lines of arguments (Anderson & Reichert, 1995; Gabel & Palmer, 1995). However, it should also be noted that large parts of the effect of *education* are not mediated which indicates that other mechanisms are in place as well. Those effects could for example be related to more educated citizens having a better understanding of how the EU works which makes European integration less threatening (Janssen, 1991, p. 467).

The effect of *individual EU benefits* on *EU image* is weaker in countries that benefit more strongly from EU structural funds, which is in line with Hypothesis 2. It seems like living in a country that benefits from fiscal transfers within the EU reduces the importance of individual benefits when assessing the EU. However, the effect of *individual EU benefits* is significantly stronger in Eastern Europe, as long as all other variables are kept constant, which is contradictory to Hypothesis 3. The fact that the interaction effect is only significant when the interaction with *EU budgetary balance* is also part of the model, can be explained with countries in Eastern Europe having higher scores on *EU budgetary balance*. If only the moderating effect of *Eastern Europe* is examined, the negative effect of *EU budgetary balance* neutralizes the positive effect of *Eastern Europe* and the effect appears to be insignificant. Once the second interaction term is added, the effect size of the interaction with *Eastern Europe* is calculated while keeping the interaction with *EU budgetary balance* constant which enables the isolation of the interaction effect between individually benefitting and living in Eastern Europe. In other words, the effect of *individual EU benefits* is stronger in Eastern than in Western European countries which have the same value on *EU budgetary balance*.

It has to be discussed, why living in Eastern Europe seems to have a slightly positive effect on the effect size of *individual EU benefits*. The opposite effect was hypothesized considering the exceptional circumstances under which most Eastern European countries joined the EU. For them, joining the EU was an insurance that the road towards democracy, human rights and market economy would not be reversed. Yet it seems like these characteristics do not lead to

individual benefits becoming less important. It might be the unique conceptualization of EU benefits that makes the difference here. The *individual EU benefits* scale is based on the utilization of EU mobility rights and related programs. During the cold war, the eastern bloc was characterized by the restrictions of movement that were imposed on citizens. Leaving the states that were associated with the Soviet Union was reserved to those that were considered loyal to the regime and that were able to provide good reasons for their travel. Fomina and Radu (2017) report that nearly all of their focus group participants (who came from Poland and Romania) mentioned the right to travel freely as one of the main advantages of the EU and one participant is cited with the notion that it is impossible to imagine that their parents' generation was not allowed to travel in Europe (Fomina & Radu, 2017, p. 89). This could be a possible explanation why citizens from Eastern Europe consider the ability of free movement nowadays slightly more important than Western Europeans when the effect of EU fiscal transfers is kept constant. It should, however, be noted that this finding is practically of low importance. The negative moderating effect of EU budgetary balance is much stronger than the positive moderating effect of living in Eastern Europe, which suggests that living in Eastern Europe will decrease the effect of individual benefits as long as Eastern European countries are net receivers of EU fiscal transfers.

5.2 Limitations of research

While the findings of this paper seem to be overall very informative, there are reasons why they should be treated with caution. First, while the *individual EU benefits* scale is a significant and meaningful predictor of support for the EU, it is uncertain to what extent it forms a valid interval scale. The count variable is comprised from 8 items that ask if respondents have benefitted from different EU mobility rights. Each of these items are treated equally and a 'yes' as response leads to an additional point on the 0-8 EU benefits scale. Yet it can be questioned if the ability to attend university in another EU country should be considered an equally strong benefit than having visited a doctor in another EU country. It seems plausible that individuals who became temporary (or permanent) residents of another EU country should be considered to benefit stronger from European integration than those who benefit only by going on holidays or other short trips without the need to show a passport or to apply for a visa. An adjustment of the scale that takes such considerations into account is advisable for future research.

Second, it also can be questioned if the *individual EU benefits* scale constitutes an objective measure of the extent to which respondents have benefitted from the EU, since it relies on respondents being aware of having benefitted. As an example, every person who has crossed a border within the EU could be expected to have benefitted from less border controls. 44.2 percent of respondents denied having benefitted from less border controls in the Eurobarometer 89.1. In 2014, however, only 37 percent of EU citizens reported in Special Eurobarometer 414 that they had never been outside their own home country (Ferrari, 2018). This discrepancy shows that the value of the *individual EU benefits* scale depends partially on the awareness of respondents to what extent they have made use from the listed benefits.

This is linked to the third limitation which concerns the treatment of missing data through listwise deletion. Listwise deletion is unproblematic if values are missing completely at random (Allison, 2001, p. 6). However, it can for example be expected that citizens, who have not studied abroad are more likely to respond 'Don't know' when asked if they studied abroad since people who actually went abroad for studying should be more likely to be aware of that. The twenty percent of the sample that were deleted due to missing values could therefore potentially bias the regression results. More sophisticated methods of handling missing data, such as multiple imputation, could have alleviated these doubts.

6.0 Conclusion

The goal of this paper is threefold. First, this paper aims to contribute to the literature that discusses the link between individually benefitting from the EU and being supportive of the EU. To this end, a variable that aims to directly measure to what extent individuals have benefitted from European integration was computed. The variable showed to be a significant predictor of support for the EU, which is in line with previous research that found relationships between individually benefitting from European integration and displaying support for European integration.

Second, this paper attempts to understand if individual benefits are equally important across all EU member states or if certain country-level characteristics result in individual benefits becoming more or less important. The analysis shows that the effect of benefitting individually does indeed vary across EU member states which indicates that citizens in some countries are more focused on their individual gains when assessing the EU than citizens in other countries. In order to explain this finding, two interaction effects were formulated and tested. It was

hypothesized that respondents from countries that benefit from EU fiscal transfers would regard individual benefits as less important since their countries already benefit financially from EU membership. Furthermore, it was hypothesized that being from Eastern Europe would similarly reduce the effect size of individually benefitting from European integration. Eastern European countries joined the EU in the aftermath of the transitions after the collapse of the Eastern bloc and joining the EU was regarded as an insurance that the positive developments towards democracy and human rights would not be reversed. It was assumed that in light of these considerations, individual benefits would become less important. While the first claim can be corroborated, the second claim is not supported by the data. Added separately, the interaction term of individually benefitting from the EU and living in Eastern Europe is not significant. Only if added together with the interaction term of individually benefitting from the EU and living in a country that benefits from EU fiscal transfers, the effect of the interaction term becomes significant, yet in the opposite direction than what had been hypothesized. This is explained with Eastern European countries being net receiver states of EU fiscal transfers. If the moderating effect of fiscal transfers is negative and the effect of living in Eastern Europe is positive, these two effects might neutralize each other which leads to an insignificant coefficient. Only if both moderators are added into the model, the effects of each of them can be isolated. It has also been noted that the positive moderation effect of living in Eastern Europe is only of very limited real-life relevance since the negative moderation effect of EU budgetary balance is much stronger and would always overrule the Eastern Europe effect.

The third goal of this paper was to assess if the proposed procedure of measuring to what extent citizens have benefitted individually from EU integration produces a valid scale and offers a suitable alternative to using proxy variables such as education and income. As was shown, the *individual EU benefits* scale acts as a significant predictor for support for the EU and has a stronger impact than for example the *education* variable which has often been used as proxy variable in order to resemble the extent to which citizens benefit from European integration. Furthermore, it has been shown that the *individual EU benefits* scale mediates substantial parts of the *education* and the *social class* variables which suggests that the *individual EU benefits* scale is indeed a more direct measurement instrument in order to assess individually benefitting from European integration. However, it was also noted that the scale treats the usage of all assessed movement rights, such as becoming a resident in another EU country or having extended air transport passenger rights, equally, which decreases the accuracy of the scale since having the possibility to work in another EU country has a much more profound impact on the

life of citizen's than improved passenger rights when boarding an airplane. Future research should consider how the scale could be adjusted in order to increase accuracy.

The results show that the extent to which citizens are able to benefit individually from European integration has a significant impact on their image of the EU. This effect is weaker in countries that benefit financially from EU fiscal transfers. The findings suggest that support for the European unification project depends on most citizens being able to benefit from its achievements. It should be stressed that the extent to which individuals are able to benefit from European integration is not equal among citizens, which is also highlighted by the mediating role of *individual EU benefits* on the effect of *education* and *social class* on support for the EU. Going on holidays in other countries or changing country of residence costs money, which suggests that financially affluent citizens have better chances to benefit from the removal of movement restrictions within the EU. Citizens with higher education levels have likely better chances to find work in other European countries than citizens with lower education, since higher education makes their skill set more competitive and since working in other countries usually requires fluency in foreign languages which should be considered to be more widespread among well-educated citizens. Programs such as Erasmus have opened up to non-academic students (such as apprentices), yet the total number of university students who have participated in Erasmus is still more than three times higher than that of vocational students (European Commission, 2017). The 'generation Erasmus' that has been proclaimed by political scientist Stefan Wolff (Bennhold, 2005) is certainly not associated with the working-class youth but with university students.

If the European Union wants to ensure ongoing public support from all societal stratums for the European integration project, it must make sure that everybody is able to benefit from the achievements of European integration. As has been noted, 37 percent of EU citizens have never left their home country before (Ferrari, 2018). This is important, considering that most people consider the freedom to travel across Europe to be the most tangible benefit the EU has to offer to its citizens (Nancy, 2016, p. 19; Albert, 2007, p. 74). The current discussion around granting young EU citizens a free interrail ticket on their 18th birthday might constitute a first step towards making mobility in Europe less depending on the social background of citizens (Cuddy, 2019) and therefore enable more EU citizens to benefit from EU achievements.

The most severe illustration of Euroscepticism in recent years was without doubt the 'Brexit' referendum in the United Kingdom. It became clear in the aftermath that the 'leave' vote was especially strong in poorer regions that are predominantly inhabited by working class people (BBC, 2016). Education, income and social class were the strongest predictors for a person voting for 'leave' (Barr, 2016). It should be recognized that appeals to the greatness of retiring in Spain and studying in France are meaningless to EU citizens who have not the means to make use of the right of free movement in Europe. Taking this better into account would constitute one step towards the prevention of additional -exit votes in the future.

7.0 References

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8.0 Appendix

8.1 Discussion of regression diagnostics

In order to inspect potential issues with multicollinearity, the variance inflation factors (VIF) were calculated for each variable. Multicollinearity describes the problem of independent variables being highly correlated which can potentially result in inflated standard errors and therefore falsely rejected null hypotheses. The country variables *Eastern European country* and *EU budgetary balance* had the highest VIF scores of 2.62 each. This finding supports the interpretation that both interaction terms are stronger if they are both included into the model, since both variables are closely related yet have opposite effects on the effect of *EU benefits*. However, the VIF scores of 2.62 each are far below the threshold of 10 that would be considered concerning (Pevalin & Robson, 2009, p. 302) and it can therefore be concluded that no problem with multicollinearity is present.

Furthermore, it was tested if the assumption of normally distributed residuals is met which ensures that the effects of the independent variables are the same for the full range of the dependent variable. The Kernel density estimate illustrates that the residuals are fairly normally distributed, which does not require any further action. Lastly, it was tested if the model is homoscedastic, which means that the residuals are spread in a constant manner over the full range of the dependent variable. The residuals-vs-fitted plot (rvfplot) shows that the errors fluctuate randomly around 0 without an obvious trend which allows the conclusion that no heteroscedasticity is present. It should be noted, however, that the rvfplot is based on standard multivariate regression, since the 'mixed' command in Stata does not allow the ex-post creation of an rvfplot. The same applies for the augmented component-plus-residual (ACPR) plot which is an illustration of the linearity of a relationship. The ACPR plot of *EU benefits* and *EU image* displays a linear relationship. Since there are no plausible reasons why any of the control variables would have a nonlinear relationship with having a positive image of the EU, linearity was only checked for the main independent variable of interest.

Table 5. Variance inflation factors of all variables in the model

Variable	VIF	1/VIF
EU budgetary balance	2.62	0.38
Eastern Europe	2.62	0.38
Often/always problems paying bills	1.31	0.76
Financial situation of household	1.30	0.77
Social Class	1.29	0.77
Education	1.28	0.78
Sometimes problems paying bills	1.20	0.83
EU benefits	1.17	0.85
(Partial) European identity	1.15	0.87
Age	1.14	0.87
Knowledge about EU	1.07	0.94
Male	1.01	0.99

Figure 6. Kernel density estimate of Model 6

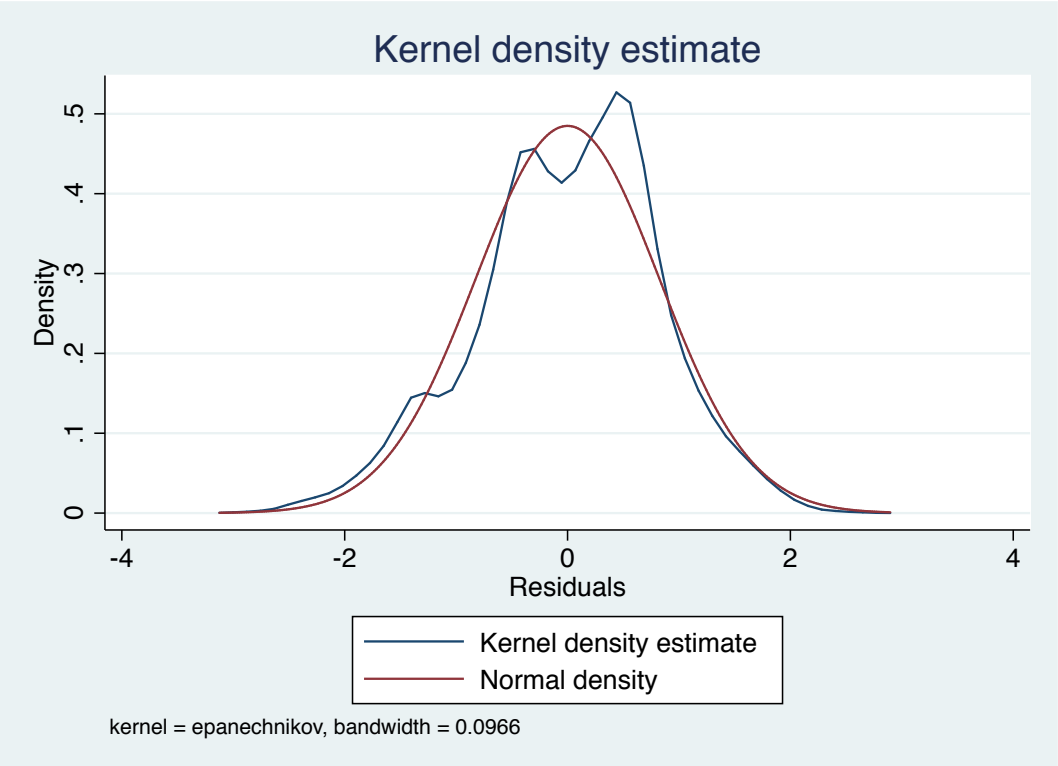

Figure 7. RVF-plot of full model using multivariate regression

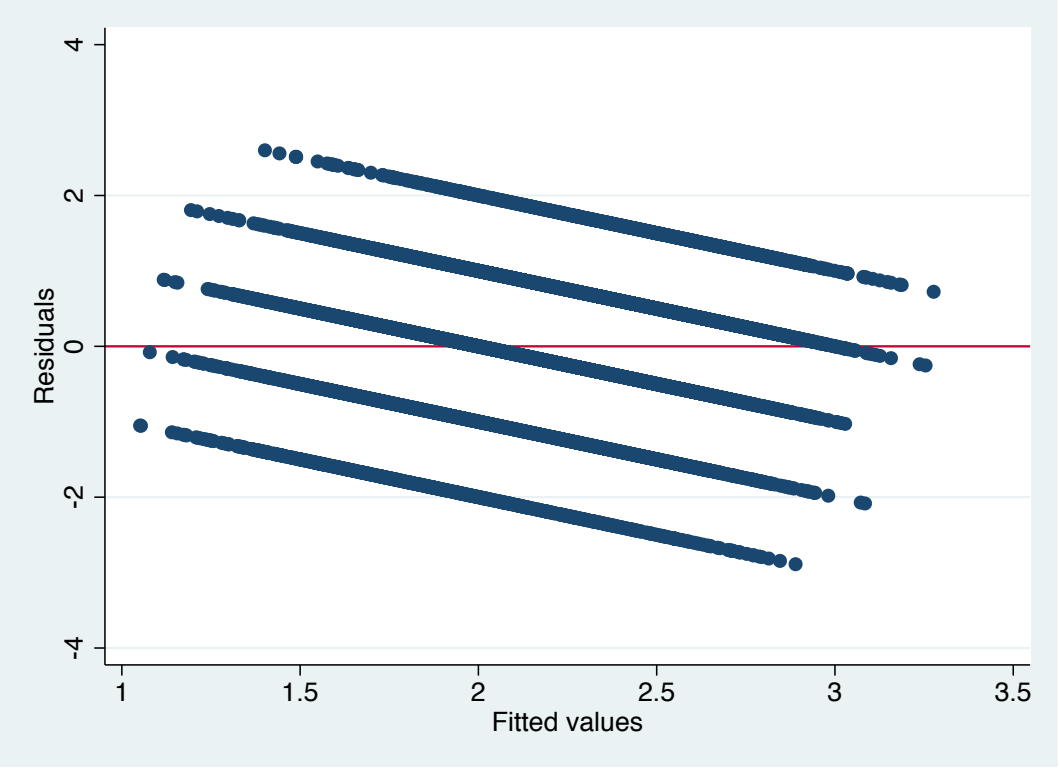

Figure 8. ACPR-plot of full model using multivariate regression