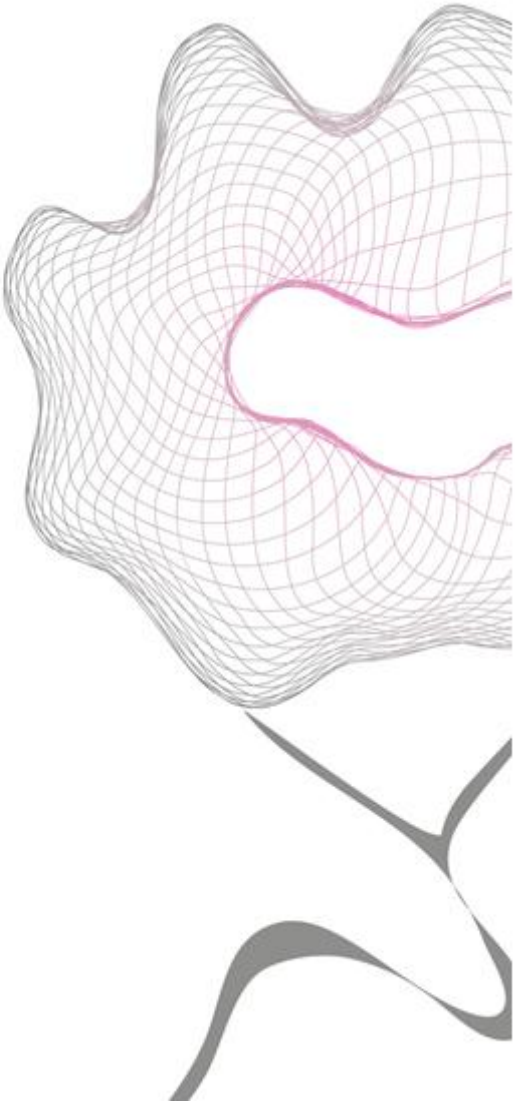

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Determining EU citizens' support for European integration

Master of Public Administration

Thesis

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Abstract

The European integration process is at the crossroads. Should the Member states intensify the efforts to unify or back off from further integrative steps? This paper seeks to contribute to this discourse in pointing out what determines citizens' support for the European integration, and ultimately legitimates the Union's governance regime. By using recent Eurobarometer data from November 2016, the support for European integrative policies is regressed on various individual-level factors that have been identified by previous authors to influence the public opinion towards European integration. The analysis shows that citizens may mutually benefit from European integration despite of different socio-economic backgrounds. Still, policy-makers must ensure that integrative efforts actually hold tangible utility for individual citizens. In addition, the analysis contributes to previous research in refining the empirical model that is used to depict the causal relationships between the respective variables.

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1. Introduction

Recent political developments in Western European democracies convey the impression that a new societal and political cleavage has emerged between a progressive, neoliberal, and cosmopolitan faction and a conservative, protectionist, and identitarian faction. One exemplary expression of this is the revival of nationalist parties in a variety of EU countries (Barber, 2016) led by conservative-populist leaders such as Marine Le Pen in France or Geert Wilders in the Netherlands. Their counterparts are usually strong supporters of the supra-nationalistic aspirations of the European Union. A fine illustration of this cleavage has been the French presidential election in Spring 2017, where nationalist party leader Marine Le Pen's hardest opponent turned out to be Emmanuel Macron, founder of the pro-European movement "En Marche". The polarization between the candidates elucidates that the traditional belief in the general desirability of European integration becomes challenged by a considerable number of EU citizens. Moreover, this phenomenon seems to take place in almost all Western democracies. After furious discussion about immigration to Europe, the Brexit referendum resulted in a formal exit of the United Kingdom from the European Union. Almost instantaneously the European public seemed to realize for the first time the severity of this cleavage. The Brexit has eventually been the first political event that disruptively demonstrated that the publicly alleged continuity of ever closer and one-directional integration of the European Union is anything but self-evident. Indeed, the discussion revolving around the future of the European Union has never been as ambiguous as today. The purpose of this study is to understand to what extent different factors determine citizens' support for European integration. Knowing about the striking individual-level determinants might strengthen European policy-makers knowledge on how to deal with this new cleavage and the challenges that it produces. It is acknowledged that the relationship between regime support and its determinants has already been analyzed in detail as depicted by the rich literature on this topic. However, there has been no recent and comprehensive test of this relationship in the European context. The European governance context is unusual, insofar as it considerably impacts European citizens' individual lives while they primarily adhere to the national political system and have yet limited possibilities to hold EU governance accountable. This could result in a completely different evaluation of the system itself. Last but not least, understanding what determines citizens' support for integration is crucial for the success or failure of the European unification project. The current challenges

faced by the European Union make the study of public support for European integration particularly interesting.

In order to seek out the right response on how to address the integration of the European Union in the face of these challenges to the legitimacy of the European Union, it is necessary to understand which factors constitute individual attitudes towards the European Union. The following chapter introduces some of the most prominent theories on citizens' support for the European Union and the European integration process as a way of consolidating the latter. A fundamental assumption of this paper is that the European integration, although in the first place resembling a continuous process and not the status quo of a political system, can theoretically be approached as if it was a political system, because ultimately the process suggests characteristics of a political system to be established in the future. Importantly, it is no far-fetched regime ideal but a continuation of the European Union that is well conceivable. This is the fine distinction between support for the European Union and support for European integration. The latter is support for a hypothetical regime, not yet in place but essentially drawing support from the same sources as any existing political system. Note also that political support is not equivalent to legitimacy. Legitimacy entails a normative notion about the legality and justifiability of a power relationship and how it is achieved and preserved (Beetham, 1991). In contrast, political support is a rather objective evaluation of public satisfaction with a given system of power. In doing so, theories of political support have either built upon individual-level measures or aggregate-level measures supposed to reflect satisfaction with a system. There is evidence that aggregate indicators, such as macroeconomic data, are very vague predictors of support for a political system (Norris, 2012; Gabel & Palmer, 1995). That is why it is particularly important to look at individual-level indicators. At the same time the literature suggests that there is a huge variety of small but influential factors, which makes a concise analysis extremely challenging.

An important distinction between different theories on political support relates to the question where citizens' satisfaction with the political system originates. In that regard, a common differentiation is made between input-, throughput- and output-theories, or, in similar terms, demand-side, intermediary and supply-side theories. The latter terminology seems to better describe the formation of political support as a more dynamic process, almost like in a market in which the system demands, interacts with, or supplies the factors that will ultimately satisfy the citizens with the political system. Demand-side theorists have focused on individual characteristics, such as values or social capital to generate political support (Inglehart, 1977b; Inglehart, Rabier & Reif, 1991; Putnam, 1994; Putnam, 2000). Supply-side

theorists, meanwhile, assume that citizens assess the outcomes generated by the political system, usually against standards of democracy or welfare (Gabel & Palmer, 1995; Gabel, 1998; Anderson & Guillory, 1997; Criado & Herreros, 2007; Aarts & Thomasson, 2008). Intermediary theories then focus on the factors that influence citizens' perception of the political system, such as media coverage for instance. A very basic difference between the supply-side and the demand-side theories is the understanding of citizens' rationality. The supply-side for instance assumes that citizens are capable of making rational assessments about the utility of the governance process or immediate outcomes of the political system. In contrast, the demand-side argues that the formation of public opinion is more subtle as it depends on the subconscious correspondence of system values with personal, inherent values. On the grounds of the vast variety of explanations and influential factors the following question is at the heart of this research paper:

Which individual-level factors determine if citizen's grant or withdraw their support for further integration of the European Union?

1.1 Theory

A corner stone for the study of public support for European integration and eventually the most influential demand-side account has been modernization theory. A prominent example of this is the theory of post-materialism developed by Ronald Inglehart (1977b). He promoted the idea that support for integration is dependent on different kinds of political values. In doing so, he differentiates between materialistic values, that derived from economic and physical needs, and post-materialistic values, such as autonomy and self-expression, that have its origin in people's pursuit of self-actualization. Arguing that the EU pursues a cosmopolitan international order, the authors hypothesize that people with post-materialistic values should be more supportive of the 'idealistic' European project of overcoming the nation state than people holding materialistic values do. Generally, this theory has gained lots of attention in the literature on European integration, but evidence for its the view's appropriateness is mixed (Gabel, 1998b). Later, Inglehart, Rabier and Reif (1991) hypothesized that citizens' attitude towards European integration is adopted from the political party that they adhere to individually (class partisanship). This relationship could be spurious

though, because the affiliation to any party itself is the result of the possession of a specific set of values or else, such as certain socio-economic factors (Gabel, 1998b) for instance.

Inglehart also put forth the important idea of cognitive mobilization (1970). Building upon a psychological study on social mobilization by Karl W. Deutsch (1966), Inglehart tried to predict the consequences that the fundamental societal changes of his time, that is the large social mobilization of society expressed in a sharp rise in education and increasing access to means of mass communication, would mean for mass political participation. He theorizes that at the core of social mobilization lies the "increasingly wide dissemination of the skills necessary to cope with an extensive political community" (Inglehart, 1977b: p. 297), a process which he calls *cognitive mobilization*. According to Inglehart, an individual's state of cognitive mobility is best expressed by his level of education and the access to mass communication in terms of possession of media devices and remoteness of living (Inglehart, 1977b). But more importantly, he supposes that cognitive mobilization is a two-step process. After acquiring the cognitive capacity to understand and interpret complex political messages of the political community, an individual must ultimately internalize the values of this community to express its support for it. This is the important rationality that underlies demand-side cultural choice theories of system support.

Other demand-side theories stress the importance of social capital (Putnam, 1994; 2000). The basic conviction is that the vital functioning of a political system depends on a strong civic society.

A stark contrast to the demand-side theories are the supply-side theories which assume a more rational evaluation of the political regime. One stream of literature, focusing on process performance in particular, emphasizes the role of citizens' satisfaction with the political process in a given polity. Although not in the context of the European Union, a number of scholars has investigated this rationality (Anderson & Guillory, 1997; Criado & Herreros, 2007; Aarts & Thomasson, 2008). Anderson and Guillory (1997) found that satisfaction with democracy is influenced by institutional characteristics of the system the respective citizens live in, specifically, if they live in a consensual or in a majoritarian democracy. Aarts and Thomasson (2008) come to a similar conclusion in their comparative study of proportional and majoritarian electoral systems. Their interpretation is that representation is more important in satisfying the public with democratic rule than accountability. Predominantly, these studies focus on the role of democratic institutions. Institutional analysis is insofar related to process performance, as institutions ultimately determine the rules of the game. The model by Criado and Herreros (2007) however follows a

different, hybrid approach in explaining public regime support. In their study, the authors take into account factors related to both process performance and policy performance. On the one hand side, they use the type of democracy as an institutional, aggregate-level explanatory variable for citizens' support for government and trust in parliament. On the other hand side, they observe citizens' evaluation of their personal economic situation and the educational system that is two socio-demographic, individual-level measures. These variables relate to the second stream of literature: the policy performance perspective, which is discussed in more detail in the next paragraph. Criado and Herreros' study demonstrates, that the different streams of theory are not mutually exclusive, but rather complement each other. In order to estimate how the strive for deeper integration could be perceived at this critical moment in the history of the European Union, it must hence also be investigated which of the theoretical explanations is most decisive in the unique governance context of the European Union.

With regard to that, this paper is primarily concerned with the theoretical claims by Matthew J. Gabel and Harvey D. Palmer. The utilitarian policy appraisal theory they have developed is a typical supply-side theory of political support. In contrast to the process performance theories, it stresses the importance of assessing policy outcomes. Gabel starts off with the claim that the support for European integration is dependent on citizens' utilitarian appraisal of welfare gains that are produced by the prevailing political system (Gabel, 1998). This appraisal is formed by a number of factors reflecting citizens' gains or losses in overall welfare, such as income, education and residence (Gabel & Palmer, 1995). They combined their findings into the Policy Appraisal Model of support for European integration. A core assumption of the model is that if citizens evaluate the performance of the Union's political actors and institutions positively, they would support the process of European integration.

Gabel and Palmer's Policy Appraisal Model is based upon the Eastonian model of public support. The Eastonian model describes two levels of citizens' support, that is specific and diffuse support. The former expresses the satisfaction with specific outputs and performance of a regime, whereas the latter reflects the diffuse attitude or meaning that is attached to an existing regime (Easton, 1965). The Policy Appraisal Model now presumes that those two dimensions occur in a similar manner in the context of support for public policy. Here, they are labelled the utilitarian and the affective dimension of public support. Again, the utilitarian support dimension expresses the evaluation of the overall performance of political authorities and institutions and affective support describes a general, rather diffuse attachment or sympathy to those governing bodies. Affective support would therewith be more stable and continuous than utilitarian support, because in contrast to the latter it resembles a long-term

evaluation (Gabel, 1998a). Gabel concludes that "[t]ranslated into the context of European integration, the Eastonian model posits that citizens' support for integration derives from their allegiances to supranational governance and their evaluations of the perceived benefits and performance of that governance." (1998a, p. 18). He demonstrates that both dimensions are positively related to the support for EU integration, which means that, irrespective of their nature, favourable regime evaluations will enhance support for integration. Gabel also noted that only about one-fifth of the EU public has strong affective allegiances to the EU, and that there is little variance over time regarding the share of affective supporters. This implies that utilitarian considerations are more decisive if policy makers want to enhance the legitimacy of the EU. This has led Gabel to investigate together with Palmer which factors determine the variance in utilitarian evaluations of integration.

The basic assumption underlying Gabel and Palmers argumentation is that the "EC membership is equivalent to an economic programme that deregulates the labour and financial markets and places a priority on monetary and fiscal policies that are anti-inflationary" (Gabel & Palmer, 1995: p. 7). This means that membership in the European Community would result in certain socioeconomic differences on the individual level. The assumption led Gabel and Palmer to pose three hypotheses reflecting the factors that shape citizens' utilitarian evaluation of the European Union's performance. First, they claim that human capital, reflected in occupation and education, positively affects the evaluation of the European Union. They call this the "human capital" hypothesis. Their second claim - the capitalist hypothesis as they name it - states that higher income levels lead to higher support for European integration. And thirdly, they find that living in border regions alters the support for European integration due to increased opportunities for cross-border economic interaction; according to the proximity hypothesis. The proximity hypothesis assumes that border residents are only slightly more supportive than non-border residents. The importance of border proximity for economic interaction could be contested though as new means of communication and logistics may weaken the significance of border proximity for transnational trade. Instead, the distinction between urban and rural populations could be more striking, as rural areas in contrast to big cities and despite of funding from EU development funds are often seen as the losers of internationalization. Szczerbiak (2001), for instance, has found that Polish people from rural areas tend to oppose EU integration. Furthermore, it is assumed that income levels are correlated with support for European integration (capitalist hypothesis). Gabel and Palmer (1995) find EC policies to be generally in favour of open financial markets and little public spending. Consequently, citizens with

high income would benefit from the free movement of capital while low income citizens would suffer from the cutback of the welfare state. And lastly, they argue that higher levels of education and occupational skills allow people to take advantage of the internationalized work setting that is created by the European integration process ("human capital" hypothesis). The deregulation of labour and financial markets is assumed to favour professionals and entrepreneurs, whereas it exerts greater pressure on low-skilled workers.

Together, these factors shape the dimension of support for European integration which is most decisive according to Gabel, namely the utilitarian evaluation of regime performance. The assessment of citizens' personal welfare as reflected in their socio-economic status shows the strong focus on the supply side of political support in this theory. Finally, Gabel (1998b) has compared some of the individual-level theories that have previously been presented. He claims that "the utilitarian theory has by far the greatest consistent impact on the support for integration" (1998b: p. 350). In view of his claims, the following assumptions will be tested:

(1) *Among the theoretical dimensions of political regime support, utilitarian policy evaluations are the strongest predictor for citizens' support for European integration.*

(2) *The better a citizen's financial situation, the more utile the European governance outcomes are to him/her, and the more he/she supports further integrative efforts.*

(3) *The larger a citizen's human capital, the more utile the European governance outcomes are to him/her, and the more he/she supports further integrative efforts.*

(4) *The denser a citizen's residential community is populated, the more utile European governance outcomes are to him/her, and the more he/she supports further integrative efforts.*

1.2 Analytical framework

A review of the literature on European integration suggests that public support for European integration is mediated by general political support for the European governance regime. Political support however is a multi-dimensional concept and scholars have put frequently changing emphasis on demand-side or supply-side aspects of political support. In 2011, Pippa Norris has contributed an important piece of research to the contemporary literature on political regime support. In her book "The Democratic Deficit", Norris (2011) discusses the flaws of previous attempts to conceptualize political support and develops a framework that bundles a variety of theoretical explanations into one consistent model which serves to obtain a comprehensive understanding of public support for any political regime. Although the framework has primarily been developed for analyzing national level regimes, it is well applicable to the European context and holds some significant advantages compared to the conceptualization by Gabel. Just like Gabel, Norris builds upon the model of public support by David Easton and its differentiation between a specific and a diffuse dimension of support. Different from Easton and Gabel, she does not conceptualize political support within two clearly separate dimensions but integrates all aspects into a single continuous scale (Figure 1). The model encompasses five different layers of political support that range on a continuum from most specific to most diffuse support. Interestingly, Norris conceptualizes specific support as being nested within diffuse support. Norris also speaks of affective and evaluative aspects of citizens' assessment of a given regime, finding expression in either specific or diffuse support. This terminology and the embeddedness of specific/evaluative support within diffuse/affective support is also found in the Policy Appraisal Model by Gabel, where utilitarian regime evaluations are seen as the essence of a larger affective support dimension (Gabel, 1998). But although Norris (2011) has regarded the Eastonian model an important foundation of her conception, she strongly felt the need to refine the model to make it applicable in modern governance contexts. Consequently, she applies a definition of specific and diffuse support that is more nuanced than the Eastonian framework. Affective support is still viewed as the abstract sympathy for the political system, foremost by means of identification (Norris, 2011), but specific support is far more differentiated now than in the conceptualization of Gabel for instance. Its conceptualization goes beyond the satisfaction with democratic performance and policy outcomes, and adds to it publics' confidence in

regime institutions and approval of incumbent office-holders as even more powerful expressions of specific support, just like suggested by process performance theories.

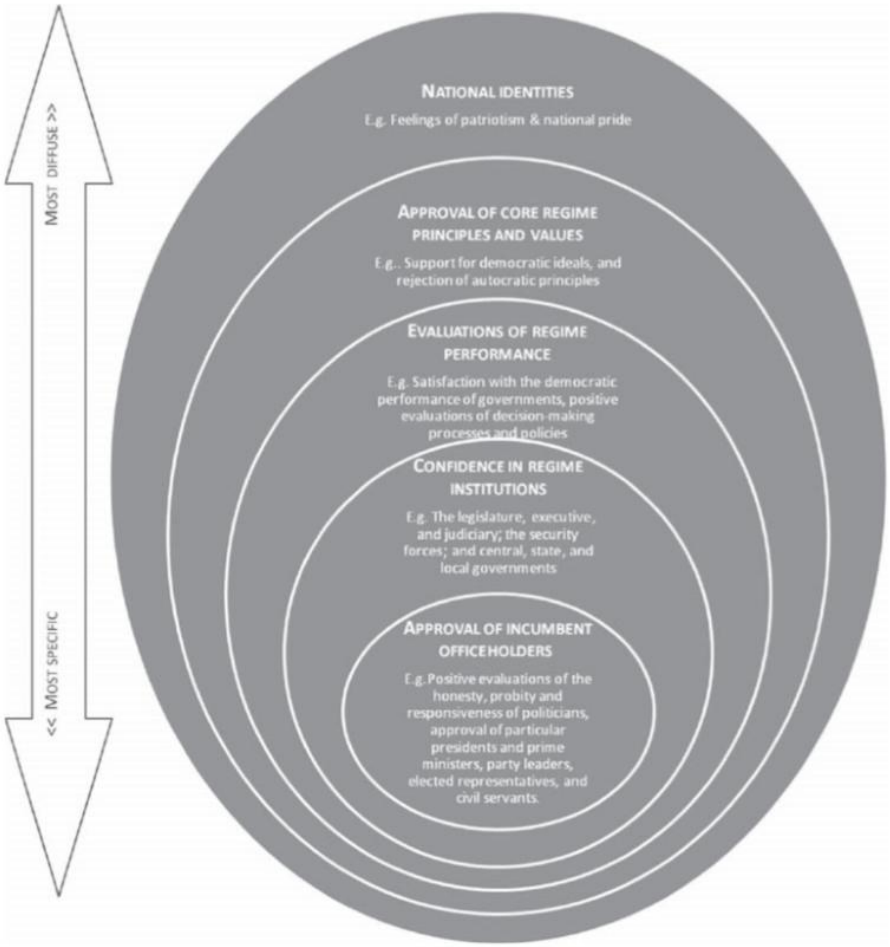

Figure 1. *The five dimensions of political support as conceptualized by Norris (2011).*

Looking at Figure 1, it becomes evident that the support continuum is able to integrate all kinds of theoretical approaches, be it supply-side or demand-side theories. That is because it does not confine itself to a single consistent rationality that drives people's regime assessment. It rather acknowledges that people may form their support on the basis of diffuse, emotional evaluations as well as on the basis of very specific, rational evaluations. Thus it combines arguments from supply-side theorists as well as demand-side theorists.

The conceptual strength of this model becomes evident, if we compare it to previous adaptations of the Eastonian model. I would like to specifically address Gabel here and the way he applied his Policy Appraisal model to the European context. Gabel (1998a) uses five items to measure two constructs, namely affective and utilitarian evaluations as derived from the Eastonian model. Affective evaluations, as Gabel argues, are captured by the variables *European identity* and *Solidarity*[1], whereas utilitarian evaluations are reflected by *National benefit* and *General evaluation of EU membership* (Gabel, 1998a). The fifth measure, attitude towards *European unification*, is said to load on both dimension. This demonstrates, that Gable himself acknowledged that the two dimensions are not strictly independent from another. If his operationalization is compared to the operationalization suggested by Norris, one can find some similarities but also some striking differences. Norris' concept agrees with Gabel's operationalization insofar as *European identity* and *Solidarity* are seen as good measures of the most diffuse form of political support. But the measures of utilitarian evaluations applied by a Gabel and defined as "*evaluations of the perceived benefits and performance of (...) governance*" (1998a: p. 18) would correspond at best with the third layer of Norris concept, which embraces the satisfaction with democratic performance in terms of decision-making processes but also policy outcomes[2]. Thus, Gabel's evaluative construct would merely range in the middle of the support continuum proposed by Norris. In Norris' framework we see that a large variety of theories has been taken into consideration, so that the most specific level of support is derived from process performance of individual office-holders.

The utilitarian policy appraisal theory by Matthew Gabel claims that the evaluation of governance performance in utilitarian terms is mediating the impact of individual-level explanations such as human capital, financial situation and residence on support for further regime integration. This assumed relationship is modelled in the path diagram in Figure 1.The rich literature on political regime support suggests that Gabel has used a very narrow concept of political support. Having a more comprehensive framework for measuring political regime support at hand, the mediating effect of political regime support can be tested more precisely. To do so, the dependent variable will be regressed on the independent variables to measure

[1] Solidarity expresses the willingness to make personal sacrifices in order to help another EU country experiencing economic difficulties.

[2] The utilitarian support dimension is constructed from two Eurobarometer questions on membership and national benefit: *Evaluation of membership*: Generally speaking, do you think that (your country's) membership of the European Union is... a good thing (1); neither good nor bad (2); a bad thing (3); *National benefit*: Taking everything into consideration, would you say that (your country) has on balance benefited or not from being a member of the EC [common market]? Benefited (1); don't know (1.5), not benefited (2).

the direct effect between them. Afterwards, the mediator will be introduced in order to see if a mediation effect is present. If so, the strength of the indirect and the total effect are calculated. The mediating variable's construct validity shall be confirmed by means of a principal component analysis prior to the regression analysis.

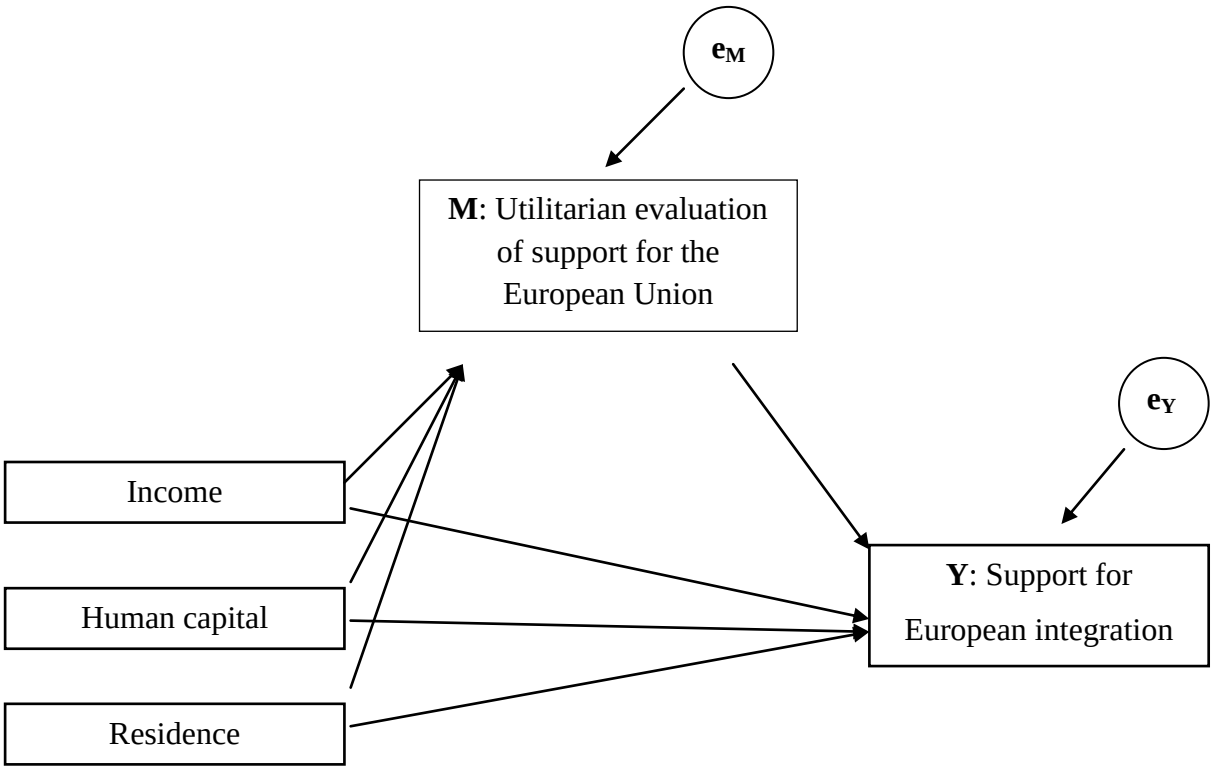

Figure 2. *Path diagram of the individual-level factors' effects on support for European integration as mediated by the utilitarian evaluation of support for the European Union.*

2. Methods

2.1 Research design

The research question at the heart of this analysis is empirical and explanatory. The temporal precedence of one variable over another for the relationship that is studied cannot be controlled for. In other words, the hypothesized explanatory variables by manipulation cannot be induced so that this study, by definition, is not experimental. However, we can gather empirical evidence on large scale to prove the presence and strength of theoretically expected associations through passive observation. Consequently, a largely pre-structured quantitative correlation analysis can be conducted. The unit of analysis are European citizens, the setting is the European Union. The research is designed as a cross-sectional study using latest Eurobarometer data from November 2016.

To reduce omitted variable bias, I will control for the age of participants. Age could account for some general perceptual differences. Different birth cohorts value differently due to their distinct history and socialization with a specific political environment. Despite or even because knowing different political settings, old and young generations could have different attitudes towards the European Union as such and towards the strive for deeper integration.

2.2 Data

All data that is used in the analysis to be performed is retrieved from the Standard Eurobarometer (EB) Survey 86.2. The primary data of the survey can be retrieved from the GESIS Data Archive[3]. The data is obviously quantitative in nature. All measures are perceptual, but for any of the variables it is almost impossible to have some purely objective but accurate measure. The data was collected via face-to-face interview or, in countries where this technique was available, via Computer Assisted Personal Interviews (CAPI). The samples have been selected by probability sampling. To analyse the presumed relationships between the variables, the Ordinary Least Squares method of Multiple Linear Regression analysis will be applied. In doing so, it will be tested if the necessary conditions for linear regression

[2] Weblink to the GESIS Data archive: http://www.gesis.org/eurobarometer-data-service/home/. The data is made available on user request.

analysis, that is linearity, independence of errors, homoscedasticity and normality, are fulfilled. All analytical computations will be performed with the Analytical Program SPSS Statistics 23 developed by the IBM Corporation.

2.3 Operationalization

Dependent variable. From all Eurobarometer items available, six items qualified as sound measures of European integration efforts. These items are listed in Table 8 of the Appendix. Their construct validity was tested running a Multiple Correspondence Analysis, which is more adequate than ordinary PCA here considering the categorical property of the constituting binary items. The correlation matrix of transformed variables revealed that the „single currency" item does correlate sufficiently with any of the other items ($r < 0,3$), so it was decided to exclude the item from the scale. The Component Matrix in Table 1 shows that items load on a single one component meeting the Kaiser-criterion (1974). A high Kaiser-Meyer-Olkin (KMO) measure of 0.813 indicates "meritorious" sampling adequacy (Kaiser, 1974). Regression factor scores of the one-component solution are used to produce a standardized measure for the aggregate support for European integration. Consequently, average support is zero ($n = 19273$, $SD = 1$). Internal consistency for this construct is very good (Cronbach's $\alpha = 0.752$). Items are highly correlated and the removal of any of them would not improve internal consistency of the scale.

Table 1

Component Matrix[a]

	Component
	1
EU integration: Common foreign policy	0,728
EU integration: Common defence policy	0,742
EU integration: Common migration policy	0,683
EU integration: Common energy policy	0,754
EU integration: Digital single market	0,653

Extraction Method: Principal Component Analysis.

a. 1 component extracted.

*Mediating variable***.** The operationalization of political regime support implies the adaption of the 2016 Eurobarometer Survey questions to the analytical framework by Norris. In her book, Pippa Norris suggests how the five dimensions of political support could be operationalized (Norris, 2011: 44, 257f). Her suggestions provide a solid guideline to match the framework's dimensions with meaningful questions from the Eurobarometer survey. The construct validity of the final concept will be tested by means of a Principal Component Analysis and establish the ground for analysing the dimension's correlation with the dependent variable.

According to Norris (2011), the most diffuse support can be measured through feelings of national (or in this case European) pride. Such feelings are reflected in cultural achievements, a shared identity, or the willingness to fight for the regime. The EB 86.2 provides a question on European citizenship[4], which can be regarded a proxy for the sense of a common identity. In addition to this, it entails a question on the attachment to the European Union[5]. Attachment to the Union is not necessarily equivalent to a feeling of pride, but still it measures a diffuse loyalty to the Union. In any case, it should be able to reflect support on the more diffuse end of the Norrisian regime support continuum. Concerning support for regime values and principles, Norris suggests to measure the support to democracy, or adversely, the rejection of autocracy, respect for human rights, the balance of state powers, or respect for the rule of law. None of these measures is included in the EB 86.2. Eventually, the previously mentioned, rather broad measure "attachment to the European Union" compensates for this lack of more concrete measures for this dimension. With regard to the middle dimension "evaluations of regime performance", Norris suggests to focus on approval of democratic outcomes and the satisfaction with specific policies. Here, two questions on the approval of market liberalization and four questions on the satisfaction with the active and passive right for free movement have been chosen to represent general utilitarian performance evaluations. Turning towards the more specific end of the support continuum, Norris increasingly focuses on support for process performance as expressed by the two dimensions confidence in regime institutions and approval of incumbent office-holders. Both dimensions are best measured by asking for citizens' trust in EU institutions and officials respectively. Unfortunately, there were no questions on the trust level towards individual incumbent officeholders. However, it is questionable whether the average European citizen is familiar with even the most

[4] EB 86.2, Qa9: To what extent do you feel you are citizen of the European Union?

[5] EB 86.2, QD1a: How attached do you feel to the European Union?

prominent EU officials. Finally, one item addresses the citizens' general satisfaction with how democracy works in the European Union. This item seems to relate to evaluations of process performance as well, although it is not exclusively inferred from one single dimension of the framework by Norris. Table 9 of the Appendix lists all survey questions that deemed appropriate to operationalize the continuum developed by Norris.

In order to test the loading of these items on different factors, a Principal Component Analysis has been conducted. All requirements of Principal Components Analysis have been met. The Correlation Matrix in SPSS revealed that each variable has at least one corresponding variables for which the correlation coefficient is greater than 0,3, which suggests that there is sufficient interrelation to build a scale. A visual inspection of the relationships in a scatterplot has confirmed linearity. Although the variables do not possess continuous scale level, the ordinal Likert scaling is deemed suitable to perform PCA. As items are ordinally scaled, there is no need to check for outliers or influential cases. The overall Kaiser-Meyer-Olkin (KMO) measure is 0.864, indicating "meritorious" sampling adequacy according to Kaiser (1974). Bartlett's Test of Sphericity was statistically significant ($p < .001$), indicating that the data was likely factorizable.

The PCA identified three components among the items that had Eigenvalues higher than one, which would prove their meaningfulness according to the Kaiser criterion (1960). A fourth component though would still add 7,13% to the total explained variance. Forcing the PCA to extract four factors instead of three, based on the default Eigenvalue larger than one criterion, has simplified the structure of final solution as shown in the Pattern Matrix in Table 2. The solution is simply structured, insofar as each item has only one component that loads strongly on it. The simple structure visualizes the classification of items into different components.

Table 2

Pattern Matrix for PCA with Oblimin Rotation of a Four Component Solution[a]

	Component			
	1	2	3	4
Appraisal of personal right to live abroad		,871		
Appraisal of personal right to work abroad		,857		
Appraisal of other's right to live in my country		,899		
Appraisal of other's right to work in my country		,902		
Trust in EP	,898			
Trust in EC	,924			
Trust in ECB	,905			
Satisfaction with in democracy in EU	,467			
Attachment to the European Union				-,907
Feel to be EU citizen				-,879
EU creates conditions for more jobs			,842	
EU makes doing business easier			,892	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 8 iterations.

The PCA demonstrated that the variables that have been identified for measuring the support for the European Union can be distributed across four factors. These factors match with the different explanations found in the literature. Accordingly, the first factor, satisfaction with EU policy outcomes, the second factor, satisfaction with EU process performance, and the fourth factor, approval of market liberalization, reflect relatively specific regime support. The third component clearly reflects the diffuse affective support for the European Union.

For standardization of the scales, regression factor scores will be used setting the mean score to 0 and the standard deviation to 1. Regression factor scores are preferred over other computations of factors scores (Bartlett scores or Rubin-Anderson scores), because they take into account the correlation between oblique factors (DiStefano, Zhu, Mindrila, 2009). As shown in Table 3, components are strongly inter-correlated. The somewhat lower correlation of the second components is caused by the "satisfaction with democracy" item, which has a weaker loading on its parent component. The correlation of the components with the

dependent variable support for European integration shall be subject to a prior analysis investigating the meaningfulness of separate dimensions of political support for building support for European integration. Table 5 at the end of this section provides the descriptive statistics for the distinct components.

Table 3

Component Correlation Matrix

Component	1	2	3	4
1	1,000	0,258	0,463	-0,476
2	0,258	1,000	0,275	-0,337
3	0,463	0,275	1,000	-0,454
4	-0,476	-0,337	-0,454	1,000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

*Explanatory variables***.** Building upon the Policy Appraisal Theory, three determinants of utilitarian policy evaluation have been identified, that is human capital, income and residence. To operationalize human capital, Gabel uses education and occupation as proxy measures. Thus, effectively four explanatory variables are encompassed by the analytical model. As will explained below, dummy variables have been computed for the distinct values of each variable. The frequency by which respective values occur is listed in Table 10.

The first variable in the herein conducted analysis is *education*. It is measured as years of education completed. Originally, this variable has been grouped into four categories. These range from "no full-time education" over "up to 15 years" over "between 16 and 19 years" to "20 years and more" of education. This categorization should approximately reflect a differentiation between primary, secondary and tertiary education. The different educational systems across Europe make a finer categorization rather difficult. For the following analysis, this variable has been split into dummy variables for each category using the third category (16 to 19 years) as a baseline for comparison.

The second variable in the model is *occupation*. Citizens' professions can be categorized according to the extent to which they derive higher utility from European integration. Table 4 shows which professions have been assigned to which category of occupations. Again, categories have been transformed into separate dummy variables. Just as Gabel did, white collar workers are used as the reference category.

The third variable, *income*, is measured as the participants evaluation of the financial situation in his or her household. Cleary, this does not depict the actual income, but the argumentation underlying the hypothesis does not change. The variable name "income" is copied from Gabel's research to maintain comparability. Contingent answers for the state of household's financial situation range from "very bad" over "rather bad" over "rather good" to "very good". Again, each category is transformed into a separate dummy variable. Financial situations perceived as "rather bad" are the reference category for comparison.

The fourth variable, *residence*, gives credit to Gabel's proximity hypothesis. As mentioned previously, cross-border residence could be less important nowadays than the differentiation between rural and urban communities. For that reason, residence is measured by the type of community the participant is living in. Contingent residential areas are rural areas, small to middle-size towns and large towns. Again, these categories are transformed into dummy variables. Here, rural areas shall be the reference category.

Table 4

Categorization of respondents' occupations

Category	Professions within category
Self-employed	Farmers, fishermen, professional, owners of a shop, craftsmen, business proprietors, etc.
Managers	Employed professionals (e.g. employed doctor or scientist), general management, middle management
White collar workers	Employed position at desk, employed position travelling
Manual workers	Employed position service job, supervisor, skilled manual worker, unskilled manual worker
Unemployed	Unemployed
Retired	Retired
Students	Students

*Control variables***.** Perceptual differences could exist between generations due to the incrementally integrating nature of the European Union. Therefore it is necessary to account for the age of the participants. In order to do so, the regression analysis will be run for four birth cohorts separately. The youngest cohort includes all participants born after 1980. The second-youngest cohort includes those born between 1965 and 1980. A third cohort includes

all participants born between 1946 and 1965. And finally, the last cohort includes every participant who was born before 1946. For the analysis, the selected cohorts have been transformed into separate dummy variables. The oldest cohort (born before 1946) is used as baseline for comparison.

It will not be controlled for nationality, because nationality is expected to influence *affective* evaluations of the European Union. Since it is the objective to test the claim that *utilitarian* evaluations are the most decisive, and consequently search for determinants of utilitarian evaluations, nationality as predictor of differences in affective evaluation can be neglected.

Table 5

Descriptive Statistics

	N	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
Satisfaction with democracy	19273	-1,43	1,41	0,00	1,00	-0,04	-1,77
EU Policy appraisal	19273	-2,90	0,69	0,00	1,00	-1,51	1,13
Affective evaluation	19273	-2,73	2,02	0,00	1,00	-0,44	0,07
Market liberalization approval	19273	-2,00	2,45	0,00	1,00	0,37	-0,45
Support for European integration	27705	-2,23	2,96	0,00	1,00	0,02	1,17

3. Results

To analyse the relationship as depicted in Figure 2, four separate regressions need to be discussed. First, the dependent variable has been regressed on the independent dummy variables (Model 1, Table 6). Second, the dimensions of political support have been regressed on income, human capital, residence and age (Model 1 to 4,

Table **7**). Third, the dependent variable has been regressed on the four dimensions of political support for the European Union, whose utilitarian dimensions are allegedly mediating the individual-level independent variables (Model 2, Table 6). Finally, the dependent variable has been regressed on the independent dummy variables again, after the mediating dimension of political support had been added to the model in order to measure the

total direct effect between independent variables and the dependent variable (Model 3, Table 6). For all models, SPSS reported constants or missing correlations for the "students" category, although there has clearly been variance on the explanatory and the dependent variable. For a reason yet unknown, SPSS automatically removed this variable from all analyses.

The first model in Table 6 was used to test if income, human capital and residence significantly predict participant's support for European integration. Almost all assumption of multiple regression have been met. There was linearity and homoscedasticity as assessed by visual inspection of a scatterplot of studentized residuals against standardized predicted values (Appendix, Figure 5). Checking partial linearity is redundant for categorical predictors. Residuals were correlated as assessed by a Durbin-Watson statistic of 1,000. The high interdependence of errors probably stems from the transformation of ordinal scales into separate binary variables. Moreover, the positive correlation of errors in this cross-sectional study design could indicate that additional explanatory variables are missing in this model. Adding the mediator variable to the model produced a more reliable model with more independent residuals as is described later. There was no evidence of multicollinearity as demonstrated by tolerance values greater than 0.1. There were no studentized deleted residuals greater than three times the standard deviation, no leverage values greater than 0.2, and no values for Cook's distance above 1. The assumption of normality was met as assessed by a visual inspection of the histogram of studentized residuals and the normal probability plot in Figure 3 and 4 of the Appendix.

The results of the regression indicated that all variables taken together explained 2,1 percent of the variance on the dependent variable (R^2 = .021, F(16, 25297) = 33.781, p < .001). Unstandardized regression coefficients and standard errors can be found in Table 6. Compared to those perceiving their financial situation as "rather bad", those who perceive their financial situation as "rather good" are more inclined to support further integration (B = .128, p < .005), whereas those who perceive it as even worse ("very bad") are less inclined to support EU integration (B = -.276, p < .005). So far, except for the presumably wealthiest respondents, theoretical expectations have been met. Therewith, the capitalist hypothesis can partly be confirmed.

As regards human capital, the variables education and occupation need to be looked at. In comparison to those who have completed their education between ages 16 and 19, those who have completed education before age 15 are more supportive of European integration efforts (B = .087, p < .005). Those who have completed their education at age 20 or older (n =

10409) are presumably slightly more supportive than the reference category, too (B = .035, p < .05). The most supportive compared to the averagely educated are those who have no full-time education at all (B = .266, p < .005). The descriptive statistics for this variable in Table 10 show that this category encompasses only 313 individuals. Here, the small sample size threatens to distort the inferential statistics. Moreover, the large deviance from the comparison groups damage the credibility of this statistic.

Looking at participants' professions, none of the groups of occupations differ statistically significantly from the baseline "white collar" group. The self-employed, that is farmers, fishermen, shop-owners, business-proprietors, craftsmen and the like, are closest to the .05 significance level. The regression coefficient suggest that this category is less supportive of European integration efforts than the white collar workers (B = -.049, p = .065). In the end, the effects of occupational groups are all statistically insignificant as shown in Table 6. Generally, there is no empirical evidence that larger human capital, as expressed in educational levels and types of occupation, fosters the support for European integration.

Finally, living in denser populated areas has been hypothesized to positively affect the attitude towards European integration. Neither residing in a medium-size town nor in a large town was statistically significantly different from living in a rural area with respect to its influence on support for European integration.

Because people from different birth cohorts attach different meanings to the European Union due to their individual history, it has been controlled for participants' age. It appears that there is a statistically significant relationship between the participants' age and the support for further integration of the Union. Compared to the oldest generation (born before 1946, n = 5326), those born between 1946 and 1964 are less in favour of more integration (B = -.150, p < .005). Even less in favour are the respondents born 1965 and 1980 (B = -.194, p < .005). The youngest generation (born after 1980) differs similarly from the reference generation than the previous generation (B = -.193, p < .005).

The second model in Table 6 shows to what extent different dimensions of political support for the European Union, namely "satisfaction with the democratic process", "appraisal of EU policy", "affective evaluations" and "approval of market liberalization", predict support for European integration. All assumptions of multiple regression have been met. There was linearity and homoscedasticity as assessed by visual inspection of a scatterplot of studentized residuals against standardized predicted values (Appendix, Figure 8). There was independence of errors as assessed by a Durbin-Watson statistic of 1.972. There was no evidence of multicollinearity as demonstrated by tolerance values greater than 0.1. There were

no studentized deleted residuals greater than three times the standard deviation, no leverage values greater than 0.2, and no values for Cook's distance above 1. The assumption of normality was met as assessed by a visual inspection of the histogram of studentized residuals and the normal probability plot in Figure 6 and 7 of the Appendix.

The results of the regression indicated that those variables explain 23 percent of the variance on the dependent variable (R^2 = .230, F(4,19098) = 1428.231, p < .001). All of the variables were statistically significantly related to the dependent variable. Unstandardized regression coefficients and standard errors can be found in Table 6. The comparatively largest variance on the dependent variable is caused by the "EU policy appraisal" variable (β = .252, p < .005). Less influential are "affective evaluations" (β = .138, p < .005) and "satisfaction with the democratic process" (β = .107, p < .005). In contrast to the other predictors, the "approval of market liberalization" variable is negatively related to support for European integration. This is in line with the negative correlations with other support dimensions that have been reported in Table 3. The results from this regression model supports the first hypothesis claiming that (utilitarian) appraisal of EU policy is the most decisive aspect of citizens' attitude towards European integration.

Model 2 in

Table 7 lists the results for the regression of the mediator variable "appraisal of EU policy" on the independent variables income, education, occupation, residence and age. There was linearity and homoscedasticity as assessed by visual inspection of a scatterplot of studentized residuals against standardized predicted values (Appendix, Figure 12). Residuals were likely to be auto-correlated as assessed by a Durbin-Watson statistic of .116. This poses a serious problem to interpretability of the model. There was no evidence of multicollinearity as demonstrated by tolerance values greater than 0.1. There were no studentized deleted residuals greater than three times the standard deviation, no leverage values greater than 0.2, and no values for Cook's distance above 1. The assumption of normality could not decisively be confirmed through visual inspection of the histogram of studentized residuals or the normal probability plot. However, skewness and kurtosis statistics for the dependent variable were within a range of ±2, which is acceptable according to Gravetter and Wallnau (2014).

The results show that the independent variables explain 5,4 percent of the variance on the "appraisal of EU policy" variable (R^2 = .054, F(16,17668) = 63.317, p < .001). As regards the assessment of the personal financial situation, those perceiving it as "very good" were comparatively more appraising of EU policy than the reference group (B = .214, p < .005). Those who assessed their situation as "rather good" were even more appraising than the "very

good" group (B = .283, p < .005). Those who perceive their financial situation as "very bad" do not appraise EU policy as much as better situated groups (B =-.152, p < .005). All income groups exert a statistically significant effect on the dependent variable.

The education categories suggest that better educated citizens (20 years of education or more) appraise EU policy more than the average educated reference group (B = .256, p < .005), whereas the less educated (up to 15 years) are also less appraising (B = -.060, p < .005). The effect for those with no education at all is not statistically significant (B = -.147, p = .1), although the regression coefficient suggests a negative relationship. As regards occupation, three groups are statistically significantly related to the dependent variable: The "manager" group is more in appraise of EU policy than the "white collar" reference group (B = .138, p < .005), so are the "self-employed" (B = .120, p < .005). Surprisingly, the "manual workers" are more appraising than the "white collar workers" as well (B = .051, p < .05), so are the "unemployed" (B = .078, p < .05) and the "retired"(B = .052, p < .05).

Both "residence" variables are far from being statistically significantly related to "EU policy appraisal". The various birth cohorts, too, are not statistically significantly related to the dependent variable. It is an uncontested condition for "EU policy appraisal" to mediate the effects of independent variables that these variables are statistically significantly predicting the mediator variable (Baron & Kenny, 1986). Hence, "residence" and "age" cannot be mediated by "EU policy appraisal". Thus, in view of the first regression model in Table 6, "residence" is neither directly nor indirectly related to the support for European integration. The residence hypothesis, stating that the density of the resident community predicts support for European integration, is refused. "EU policy appraisal" could still mediate the effects of income, education and some occupational groups. To check that, changes between the direct effect (Model 1, Table 6) and the total direct effect (Model 3, Table 6) have to be investigated.

In Model 3 of Table 6 the "appraisal of EU policy" variable is added to the first model in an attempt to detect mediating effects that are caused by this utility-oriented evaluation of political support. The assumptions of multiple regression analysis have been met. There was linearity and homoscedasticity as assessed by visual inspection of a scatterplot of studentized residuals against standardized predicted values (Appendix, Figure 11). There was independence of errors as assessed by a Durbin-Watson statistic of 1.966. This score is a clear improvement to the statistic that was calculated for the first model in Table 6. There was no evidence of multicollinearity as demonstrated by tolerance values greater than 0.1. There were no studentized deleted residuals greater than three times the standard deviation, no leverage

values greater than 0.2, and no values for Cook's distance above 1. The assumption of normality was met as assessed by a visual inspection of the histogram of studentized residuals and the normal probability plot in Figure 9 and 10 of the Appendix.

The results indicate that the sum of all independent variables in the third model explains 14,7 percent of the variance on the dependent variable (R^2 = .147, F(17,17679) = 110.744, p < .001). If the unstandardized regression coefficient becomes zero, the respective variables is fully mediated by "EU policy appraisal". Alternatively, a substantial drop of the coefficient could imply partial mediation. Also, previously robust relationships may become statistically insignificant in presence of the mediator. Table 6 shows that people perceiving their financial situation as "very good" are now in favour of integration; the relationship has turned statistically insignificant though (B = .030, p = .175). For the "rather good" category the difference to the reference group remains stable (B = .124, p < .005). For the "very bad" category (B = -.197, p < .005), the regression coefficient changes by .079. If "EU policy appraisal" mediates the effect of income, the difference to the reference category should decrease. This is the case for the "very good" and the "very bad" category. Generally, there is some evidence for a mediation of the income variable.

Stark changes can be observed for the education variable. The unstandardized regression coefficient for low education has dropped substantially from .087 to -.007; no education drops from .296 to -.214. Given that the low education group was statistically significantly predicting "EU policy appraisal" too, almost full mediation could be the case. The "no full-time education" group was not a significant predictor of the mediator, thus a mediation effect is excluded. For the high education group, the issue is similar to some occupational groups which were significant predictors of "EU policy appraisal", but not of "support for EU integration" directly.

As regards the occupation groups, the unstandardized regression coefficient for self-employed drops by .024 and for unemployed by .039. This creates a mixed picture: Could mediation for these occupational groups be the case? According to the causal step approach by Baron and Kenny (1986), mediation is not possible if a statistical significant direct effect between the independent variables and the dependent variable is absent.

Table **7** shows that the "self-employed" and the "unemployed" category is at least statistically significantly predicting the mediator. Recently, this view has become contested. Neither the direct effect nor the total direct effect necessarily have to be different from zero to exclude the chance for mediation (Hayes, 2013; Bollen, 1989). Hence, the modern approach would not exclude a mediation by "EU policy appraisal", whereas Baron and Kenny would

refuse the mediation hypothesis. More elaborated analytical methods are needed for further clarification.

As mentioned earlier, the impact of the residence variable on the dependent variable has not been substantial in the first place. Observed changes are relatively little so that the modelling of any mediating effect, if present at all, can be neglected.

The change in the effect of age is striking. The unstandardized regression coefficient of the birth cohort between 1946 and 1964 drops considerably by .125; the effect is no longer statistically significant (B = -.025, p = .201). For the cohort between 1965 and 1980 it drops by .125 and the effect is still statistically significant (B = -.069, p < .005). For the cohort born after 1980 the coefficient drops by .101, while the effect remains statistically significant (B = -.092, p < .005). If we adhere to the modern approach, the results suggest that "appraisal of EU policy" partially mediates the effect of different age cohorts on support for EU integration. Again, conclusions can only be drawn after more elaborated statistical analysis, for instance by applying the PROCESS analytical tool developed by Matthew Hayes. Unfortunately, this tool allows to look at only one predictor at a time, making it unsuitable for the analysis of the present model.

The total direct effect of the distinct independent variables on the dependent variable considering the mediation effect is the sum of the coefficients for the direct effect of the independent variables on the dependent variables (for the model incorporating the mediator variable; Table 6), and the mediator's coefficient for the direct effect of the mediator variable on the dependent variable. Assuming that a mediation effect is present, the dependent variable could be predicted applying the following equation:[6]

$$Y = B + c'X_1 + c'X_2 + c'X_3 + c'X_4 + [...] + bM + e_y$$

[6] In line with typical modelling techniques, the direct effect from X to M is labelled "a", from M to Y "b", from X to Y "c", and the total direct effect from X to Y under mediation of M "c'"

Table 6

Results of regression analyses [a]

	Model 1			Model 2			Model 3		
	B	Std. Error	Sig	B	Std. Error	Sig	B	Std. Error	Sig
Intercept	,022	,030	,451	-,201**	,005	,000	-,215**	,030	,000
Income=Very good	-,036	,023	,115				,030	,022	,175
Income=Rather good	,128**	,015	,000				,124**	,015	,000
Income=Rather bad *(reference. category)*									
Income=Very bad	-,276**	,026	,000				-,197**	,026	,000
Age education completed=Up to 15	,087**	,018	,000				-,007	,019	,711
Age education completed=16-19 *(reference. category)*									
Age education completed =20+	,035*	,014	,013				,030*	,014	,029
Age education completed =No full-time education	,296**	,063	,000				-,214**	,076	,005
Occupation=Self-employed	-,049	,027	,065				-,025	,025	,315
Occupation =Managers	-,039	,023	,098				-,038	,022	,088
Occupation=White collar workers *(reference. category)*									
Occupation =Manual workers	,012	,020	,541				-,001	,019	,939
Occupation =Unemployed	,044	,027	,108				,005	,027	,849
Occupation =Retired	,000	,022	,994				-,008	,022	,694
Residence=Rural area *(reference. category)*									
Residence=Small/middle town	,004	,014	,775				-,012	,014	,387
Residence=Large town	,017	,016	,284				,017	,016	,278
Generation before 1946 *(reference. category)*									
Generation 1946-1964	-,150**	,019	,000				-,025	,020	,201
Generation 1965-1980	-,194**	,024	,000				-,069**	,025	,005
Generation after 1980	-,193**	,027	,000				-,092**	,027	,001
Satisfaction with the democratic process				,090**	,006	,000			
Appraisal of EU Policy				,212**	,006	,000	,299**	,006	,000
Affective evaluation				,116**	,006	,000			
Approval of market liberalization				-,136**	,007	,000			
R square		.210			.230			.147	
n		25314			19103			17697	

** effect is statistically significant at p < 0,005

* effect is statistically significant at p < 0,05

a. dependent variable: Support for European integration

Table 7

Results of regressing the four-component solution of political support on income, education, occupation, residence and age

	Model 1[a]			Model 2[b]			Model 3[c]			Model 4[d]		
	B	Std. Error	Sig	B	Std. Error	Sig	B	Std. Error	Sig	B	Std. Error	Sig
Intercept	-,244	,037	,000	-,309	,037	,000	-,260	,037	,000	,364	,037	,000
Income=Very good	,440**	,027	,000	,214**	,027	,000	,432**	,027	,000	-,453**	,027	,000
Income=Rather good	,355**	,018	,000	,283**	,018	,000	,303**	,018	,000	-,388**	,018	,000
Income=Rather bad *(ref. categ.)*												
Income=Very bad	-,293**	,032	,000	-,152**	,031	,000	-,323**	,032	,000	,326**	,032	,000
Age education completed=Up to 15	-,150**	,023	,000	-,060*	,022	,008	-,148**	,023	,000	,113**	,023	,000
Age education completed=16-19 *(ref. categ.)*												
Age education completed =20+	,109**	,017	,000	,256**	,017	,000	,048**	,017	,004	-,174**	,017	,000
Age education completed =No full-time education	-,101	,091	,268	-,147	,090	,100	-,291**	,091	,001	,326**	,090	,000
Occupation=Self-employed	-,033	,031	,276	,120**	,030	,000	,020	,031	,508	,026	,030	,396
Occupation =Managers	,157**	,027	,000	,138**	,027	,000	,147**	,027	,000	-,090**	,027	,001
Occupation=White collar workers *(ref. categ.)*												
Occupation =Manual workers	-,038	,023	,103	,051*	,023	,029	,062*	,024	,009	,020	,023	,396
Occupation =Unemployed	-,098**	,033	,003	,078*	,032	,015	-,110**	,033	,001	,064*	,032	,048
Occupation =Retired	-,028	,026	,296	,052*	,026	,048	,042	,027	,111	-,005	,026	,844
Residence=Rural area *(ref. categ.)*												
Residence=Small/middle town	,006*	,017	,717	,013	,017	,440	-,011	,017	,534	-,013	,017	,435
Residence=Large town	,071*	,019	,000	,019	,019	,325	,073**	,019	,000	-,084**	,019	,000
Generation before 1946 *(ref. categ.)*												
Generation 1946-1964	-,059*	,024	,015	-,026	,024	,286	-,056*	,024	,021	-,003	,024	,908
Generation 1965-1980	-,058*	,030	,052	-,025	,030	,408	-,001	,030	,979	-,009	,030	,774
Generation after 1980	-,026*	,033	,427	,013	,032	,690	,077*	,033	,020	-,065*	,032	,047
R square		.075			.054			.064			.085	
n		17812			17685			17807			17812	

** effect is statistically significant at p < 0,005

* effect is statistically significant at p < 0,05

a. dependent variable: Satisfaction with democratic process

b. dependent variable: Appraisal of EU policy

c. dependent variable: Affective evaluations

d. dependent variable: Approval of market liberalization

4. Discussion

In pursuit of the objective of this paper, that is to determine which factors influence citizens' support for European integration, the four hypotheses stated at the end of Section 1.1 will be discussed. With regards to the first hypothesis, the analysis has shown that utilitarian appraisal of EU policy is comparatively the best predictor for citizens' support for European integration. This confirms the theory by Matthew Gabel who has firstly emphasized the importance of utilitarian evaluations in the context of European governance. Inter alia, this stresses the meaning of the supply-side theories of political support in general. In his research, Gabel applies the Eastonian model of political support to the context of European integration and finds a correlation between utilitarian regime evaluations and support for European integration. In a separate analysis, he regresses utilitarian evaluations on different individual-level factors. He then draws the conclusion that those factors must impact citizens' support for European integration. In contrast to Gabel, this research keeps support for European integration as the dependent variable and integrates utilitarian evaluations as a mediator into a *single* regression model. In addition to that, a more distinct conceptualization of the mediator variable has been applied building upon the theoretical model of political support developed by Pippa Norris. One important remark that has to be made is that "appraisal of EU policy" could have been operationalized too narrowly. In fact, the appraisal of one single policy is measured, that is the *free movement of persons policy* which enables citizens to live and work anywhere in the European Union. Gabel meanwhile relied upon a very broad measure asking for the evaluation of membership. It is questionable whether membership is then only evaluated in utilitarian terms. The key objective should rather be to measure the appraisal of the utility derived from specific policies that can only be achieved by EU legislation. Alternatively, the variable could have been operationalized as the appraisal of having EU policy integrate the telecommunication market preventing users from paying mobile roaming charges outside of their domestic country, too. This as well could serve as a very specific example for a policy that is clearly delivering utility. Arguably, using a combination of different policies would have compensated for the deviant characteristics of single policies, but that was not feasible due to the lack of adequate items in the Eurobarometer survey. The differences that arise from the conceptualization of the dependent variable here and in Gabel's work will be discussed below. Interesting about the four-component solution of political support used in this analysis has been that the component "approval of market liberalization" has been negatively correlated to the remaining components of political support, which

contradicts Norris' assumption of a continuous scale. It remains puzzling why the constituting items are not positively correlated to at least the utilitarian dimensions of political support. The theoretical robustness of the choice of indicators ultimately points towards an error in constructing the variable itself.

Concerning the second hypothesis, it has been found that the perception of the personal financial situation influences EU policy evaluations as well as the choice for further integration, although the relationship is not perfectly consistent across groups of participants. Gabel found that low income citizens are appraising EU membership less than low-mid income citizens, whereas high-mid and high income citizens are more appraising of it. The results from this analysis suggest that wealthy people, except for the most wealthiest, find EU policy, in this case free movement, more utile that poorer citizens. So the findings of this analysis is largely in line with Gabel's findings despite of the different conceptualization of political support evaluations. It is not entirely clear why the hypothesis does not hold for the wealthiest group of participants. But discussing the arguments of the capitalist hypothesis reveals the weakness of herein used, perhaps too narrow, measure of EU policy. Free movement of capital, representative for utility-bearing EU legislation, should be particularly utile to wealthy citizens. However, it does not necessarily require them to be in favour of free movement of persons, too. Taking the free movement policy as the single measure of the extent to which the utility of EU policy making is appraised is not sufficient. On the other hand side, it would be desirable to specify Gabel's conceptualization. An improved appraisal of EU policy variable would include policies that facilitate financial transactions for instance. Moreover, Gabel does not use an integrated model to prove the mediation effect he assumes to exist. The integrated Model 3 in Table 5 suggests that an indirect effect on support for European integration is only reasonable for the poorest group of citizens. For this group, income is partially mediated by the utilitarian evaluation of European free movement policy.

Concerning the third hypothesis, the argument has been that education and occupation are integral parts of an individual's human capital and that an integrated Union would be more utile to those citizens that have a large human capital as the European unification opens new opportunities for them to live up to their potential. In contrast, citizens with low human capital might simply be subject to higher competition from qualified foreign work force. The finding that high educated people are more and low educated are less in favour of free movement policy than the average educated is thus in line with the theoretical argumentation. There is evidence that the effect on support for European integration is mediated by these utilitarian policy evaluations.

For the different occupational groups, the free movement policy might create job opportunities as well as pressure on domestic labour markets. The finding that researchers, doctors, managers, middle managers and the like ("managers" category) are more in favour of EU free movement policy than white collar worker is in line with the human capital hypothesis. Farmers, fishermen, craftsmen and business proprietors are also more in appraisal of the free movement. This group is particularly interesting, because it may face big opportunities as well as big pressures as a consequence of the European unification. The fact that some of these occupations, for instance farmers and fishermen, are organized in very strong European lobby associations and thus benefit from strong representation on the global marketplace may counterbalance their fear of intra-EU competition.

Interesting is also that the free movement policy is appraised by manual workers, the retired and the unemployed to a larger extent than white collar workers. This contradicts Gabel findings, who found lower appraisal for these groups of citizens. Eventually, to the unemployed and low-skilled the free movement is a chance to move into countries where perspectives are better. In that sense, the policy could not only be appraised by high-skilled people to most effectively allocate individual resources but also by low-skilled people as a chance to escape domestic labour competition. Against previous expectation, country differences might actually affect utilitarian evaluations. Member states appeal migration to themselves differently due to the state of their economy. Furthermore, the reputation of a migrating worker's qualification is often dependent on the domestic educational system.

Again, the different conceptualization of utilitarian evaluations should be kept in mind when making direct comparisons between Gabel's findings and this analysis. But especially in the case of occupation, the conceptualization of utilitarian evaluations as the appraisal of free movement is thought to be more conclusive. Finally, the attitude of different occupational groups towards further European integration remains foggy, because neither a direct effect nor a indirect effect could firmly be attested. Again this shows that the approach by Gabel is problematic as he assumed that all of the independent variables would inevitably be mediated by utilitarian evaluations. This analysis however demonstrates that such inferences cannot be statistically confirmed.

Finally, the fourth hypothesis touched upon the issue of citizens' residence. The original proximity hypothesis by Gable, which assumed a relationship between residential border proximity and support for European integration, could not be tested due to lacking data. Alternatively, an influence stemming from the density of resident communities has been hypothesized. However, this study holds no evidence that citizens residing in cities are more

supportive of European integration than middle town or rural area residents nor that the effect is mediated by support for EU free movement policy. For this hypothesis, no meaningful comparison to Gabel's research can or should be made, because his argumentation emphasized the importance of border-proximity, not density of the resident community.

Furthermore, it was discussed that citizens may value the European Union differently due to their age. Indeed, differences between generations were found to exist. One explanations for these differences may be that older generations are more familiar with a nationalistic and protectionist world order and that this is precisely the reason why they would value the European Union and promote continued integration more than younger generations. On the other hand side, old generations could be rooted in precisely these nationalistic identities they have been socialized with and thus, not growing up in a political environment that was economically and politically this much globalized, they are less in favour of the cosmopolitan European unification project. The results reveal a trend for younger generations to express ever lower support for further integration. Hence, the findings do not support the argument that growing up in a more internationalized world order is fostering a cosmopolitan attitude. Instead, the reasoning of being familiar and deterred by the former nationalistic world order is more convincing. At this point, intensified research is needed to make valid statements about the causal relationship between age and support for the European Union or European integration.

With regard to the initial research question it can be concluded that participants' financial situation, education and age are linked to individual support towards European integration, although difficulties have been encountered in detecting consistent trend among the categories of respective variables. The results revealed which occupations are linked to utilitarian evaluations, but there is no consistency with previous theoretical expectations. It renders difficult to define which occupation can be expected to hold which level of human capital. The ways by which citizens can derive utility from European integration with respect to their profession are contextual and largely a matter of subjective assessment.

4.1 Contributions and limitations

This research confirmed that differences in income and human capital are relevant in explaining political support for the European Union and the integration process as such. The results of this study do not support the assumption that people with little human capital do not approve the European integration process. Still, policy makers must ensure that different levels of human capital do not result in greater financial inequality, else the support for the European unification will erode. In contrast to Gabel, the mediation effect of utilitarian policy appraisal is assessed in a single regression model, not separately. This paper contributes to existing knowledge insofar as its results are grounded on better defined concepts than previously used.

Very importantly, this analysis presented a considerable step forward in modelling the complexity of political support in the European context. And still, the herein used model, although it has been an improvement to the framework used by Gabel, is far from perfect. In the end, the implementation of the analytical framework suggested by Pippa Norris was imperfect as well due to missing or limited measures for the various dimensions of political support. A tailored survey could include items that focus specifically on the utility of different policy achievements.

Moreover, the continuity of the dimensions of political support makes their quantification difficult. Eventually, a qualitative or mixed-methods research design could give more attention to the fine aspects that create different shades of political support. Generally, the empirical model for the total direct effect of the chosen individual predictors is not very strong. In a sense, the model depicting the total direct effect in consideration of the mediator variable is prone to omitted variable bias. As it is already known from the second model in Table 6, there are multiple dimensions of political support for the European Union all related to the support for further integration and each based upon some, yet unidentified, individual-level factors. The present analysis only gave credit to those factors that would influence utilitarian regime evaluations. But affective evaluations, too, are rooted in some underlying individual-level factors which deserve increased attention. One of which might be the national identity of respondents, which most certainly accounts for some perceptual differences. These differences would theoretically relate to the affective dimensions of political support and are therefore neglected in this analysis, although their theoretical impact is acknowledged and the strength of the overall model is weakened.

In terms of internal validity, the cross-sectional study design cannot rule out the threat of reversed causation. The causal direction is established on theoretical basis and it is rather difficult to check for its correctness. Statistical inference validity is less problematic, because the observed sample was relatively large. The transparent report of the conceptualization and operationalization of variables in Part 2 (Methods) of this paper shall serve to assess the construct validity of the herein used models.

4.2 Ethics

Using data made publicly available by the European Commission, it is relied upon the European Commission and all responsible bodies of research that the data retrieved from survey's participants is kept anonymous and confidential. As regards this study, the author has been granted the consent of the GESIS research institute to use the Eurobarometer data for the purpose of writing this Master thesis.

5. Conclusion

In the research paper that this analysis reflects upon the author, Matthew J. Gabel, argues that "European integration […] constrains national governments in pursuing [redistributive] policies and thus increases returns on capital investment relative to wages […] EU citizens possessing greater human and financial capital evaluate integration more positively than citizens poorer in these capital resources" (Gabel, 1998a: 55). The herein conducted quantitative-empirical research confirms that wealthier citizens are more in favour of European integration. These results suggest that citizens with larger financial capital, except for the most wealthiest, expect more utility in European policy-making which then strengthens their approval of deepening this European governance regime. The role of human capital creates a mixed picture. More education seems to leads to more higher utility evaluations and to a more favourable attitude towards European integration. As regards human capital linked to occupation, individuals of different occupations can benefit with no clear pattern detectable. Controlling for participants age revealed that younger birth cohorts

are generally less supportive of European integration than the oldest birth cohort born before 1946.

It is reasonable that as long as different individuals from different socio-economic backgrounds have mutual benefits from the European Union they will presumably support further integration. This appears to be especially the case for the labour market where low- or mid-income occupations can derive utility from unification with respect to their human capital, while perhaps less with respect to their financial situation. European policy-makers should be careful in drafting policies that do not establish all-encompassing economic benefits but create disadvantages for specific groups of European society. This especially concerns financial inequality. Instruments like the largely debated European financial transaction tax for instance could regulate the exclusive capitalist benefits of European legislation for wealthy citizens by strengthening re-distributive policy in the European Union. As this research shows this could also alter the legitimacy for further integration. Another way to strengthen support for integration would be to facilitate the access to education. Given that affective evaluations are relevant too, the ERASMUS programme resembles a tool for strengthening intercultural exchange and ultimately reducing nationalistic affections.

At the same time, there appears to be a trend that younger citizens are less in favour of integration, although this does not mean that they oppose it in general. This paper concludes with the plea to not take political support as a narrow construct, but to appreciate its complexity. Some patterns of support across individual-level factors have been identified here. A better understanding is needed of how and why exactly people derive utility from specific EU policies. Moreover, future research shall extend the search for individual-level determinants of support for European integration to additional aspects that are not exclusively and necessarily related to utilitarian evaluations of European governance to complete the whole picture.

6. References

Anderson, C.J., Guillory, C.A. (1997). Political institutions and satisfaction with democracy. *American Political Science Review*, 91(1): 66–81.

Aarts, K., Thomassen, J. (2008). Satisfaction with democracy: Do institutions matter? *Electoral Studies*, 27(1): 5–18.

Baron, R. M., Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.

Beetham, D. (1991). *The legitimation of power (Issues in political theory; Issues in political theory)*. Basingstoke: Macmillan.

Bollen, K.A., (1989). *Structural Equations with Latent Variables*. Wiley.

Criado, H., & Herreros, F. (2007). Political support: Taking into account the institutional context. *Comparative Political Studies*, 40(12), 1511-1532.

Deutsch, K.W. (1966). *Nationalism and social communication: An inquiry into the foundations of nationality***,** Vol. 34: MIT press.

DiStefano, C., Zhu, M. & Mindrila, D. (2009). Understanding and using factor scores: Considerations for the applied researcher. *Practical Assessment, Research & Evaluation*, 14(20), 1-11.

Easton, D. (1965). *A framework for political analysis*, Vol. 25: Prentice-Hall Englewood Cliffs, NJ.

Gabel, M., & Palmer, H. D. (1995). Understanding variation in public support for European integration. *European Journal of Political Research*, 27(1), 3-19.

Gabel, M.J. (1998a). Interests and integration : market liberalization, public opinion, and European Union. Ann Arbor: University of Michigan Press.

Gabel, M.J. (1998b). Public Support for European Integration: An Empirical Test of Five Theories. *The Journal of Politics*, 60(2), 333-354. doi: doi:10.2307/2647912**.**

Gravetter, F., Wallnau, L. (2014). *Essentials of statistics for the behavioral sciences*, Vol. 8: Belmont, CA: Wadsworth.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychology Measurement*, 20, 141-151.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 32-36.

Inglehart, R. (1970). Cognitive Mobilization and European Identity. *Comparative Politics*, 3(1), 45-70. doi: 10.2307/421501

Inglehart, R. (1977a). Long Term Trends in Mass Support for European Unification. *Government and Opposition,* 12(2), 150-177. doi: 10.1111/j.1477-7053.1977.tb00529.x

Inglehart, R. (1977b). *The silent revolution : changing values and political styles among Western publics*. Princeton, New Jersey: Princeton University Press.

Norris, P. (2011). *Democratic deficit: Critical citizens revisited*: Cambridge University Press.

Putnam, Robert D. (1994). Making Democracy Work. Princeton, NJ: Princeton University Press.

Putnam, R. D. (2000). Bowling alone: America's declining social capital. *Culture and politics*, 223-234. Palgrave Macmillan US.

Szczerbiak, A. (2001). Polish Public Opinion: Explaining Declining Support for EU Membership. *JCMS: Journal of Common Market Studies*, 39(1), 105-122. doi: 10.1111/1468-5965.00278**.**

Appendix

Table 8
Items selected as potential constituents of the dependent variable's scale.

Variable	Survey item	Survey question	Survey Response
Support for European integration	qa17_1	A European economic and monetary Union with one single currency, the euro.	1 = "For" 2 = "Against" 3 = "DK"
	qa17_2	A common foreign policy of the 28 Member States of the EU	1 = "For" 2 = "Against" 3 = "DK"
	qa17_4	A common defense and security policy among the EU Member States	1 = "For" 2 = "Against" 3 = "DK"
	qa17_6	A common European policy on migration	1 = "For" 2 = "Against" 3 = "DK"
	qa17_7	A common energy policy among EU Member states	1 = "For" 2 = "Against" 3 = "DK"
	qa17_8	A digital single market within the EU	1 = "For" 2 = "Against" 3 = "DK"

Table 9
Items constituting the dimensions of the political support continuum.

Variable	Survey item	Survey question	Survey Response
Affective evaluations	qd1a_3	How attached do you feel to the European Union?	1 = "Very attached" 2 = "Fairly attached" 3 = "Not very attached" 4 = "Not at all attached" 5 = "DK" 9 = "Inap. (CY-TCC in isocntry)
	qd2_1	To what extent do you feel you are citizen of the EU?	1 = "Yes, definitely" 2 = "Yes, to some extent" 3 = "No, not really" 4 = "No, definitely not" 5 = "DK" 9 = "Inap. (not 1 in eu28)
Approval of market liberalization	qa13_1	The EU is creating more jobs in Europe.	1 = "Totally agree" 2 = "Tend to agree" 3 = "Tend to disagree" 4 = "Totally disagree" 5 = "DK

	qa13_2	The EU makes doing business easier in Europe.	9 = "Inap. (not 1 in eu28)" 1 = "Totally agree" 2 = "Tend to agree" 3 = "Tend to disagree" 4 = "Totally disagree" 5 = "DK
Appraisal of EU policy	qb6_1	Appraisal of personal right to live abroad	9 = "Inap. (not 1 in eu28)" 1 = "A good thing" 2 = "A bad thing" 3 = "Neither a good nor a bad thing" 4 = "DK"
	qb6_2	Appraisal of personal right to work abroad	9 = "Inap. (not 1 in eu28)" 1 = "A good thing" 2 = "A bad thing" 3 = "Neither a good nor a bad thing" 4 = "DK"
	qb6_3	Appraisal of other's right to live in my country	9 = "Inap. (not 1 in eu28)" 1 = "A good thing" 2 = "A bad thing" 3 = "Neither a good nor a bad thing" 4 = "DK"
	qb6_4	Appraisal of other's right to live in my country	9 = "Inap. (not 1 in eu28)" 1 = "A good thing" 2 = "A bad thing" 3 = "Neither a good nor a bad thing" 4 = "DK"
Satisfaction with the democratic process	qa15_1	Do you tend to trust or tend not to trust the European Parliament?	9 = "Inap. (not 1 in eu28)" 1 = "Tend to trust" 2 = "Tend not to trust" 3 = "DK"
	qa15_2	Do you tend to trust or tend not to trust the European Commission?	1 = "Tend to trust" 2 = "Tend not to trust" 3 = "DK"
	qa15_3	Do you tend to trust or tend not to trust the European Central Bank?	1 = "Tend to trust" 2 = "Tend not to trust" 3 = "DK"
	qa18b	On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the way democracy works in the European Union?	1 = "Very satisfied" 2 = "Fairly satisfied" 3 = "Not very satisfied" 4 = "Not at all satisfied" 5 = "DK" 9 = "Inap. (not 1 in eu28)

Table 10

Frequencies for the independent variables.

			Frequency	Percent	Valid Percent	Cum. Percent
Income = Very good	Valid	,00	29136	88,6	89,9	89,9
		1,00	3260	9,9	10,1	100,0
		Total	32396	98,5	100,0	
	Missing		500	1,5		
	Total		32896	100,0		
Income = Rather good	Valid	,00	14460	44,0	44,6	44,6
		1,00	17936	54,5	55,4	100,0
		Total	32396	98,5	100,0	
	Missing		500	1,5		
			32896	100,0		
Income = Rather bad	Valid	,00	24202	73,6	74,7	74,7
		1,00	8194	24,9	25,3	100,0
		Total	32396	98,5	100,0	
	Missing		500	1,5		
			32896	100,0		
Income = Very bad	Valid	,00	30002	91,2	92,6	92,6
		1,00	2394	7,3	7,4	100,0
		Total	32396	98,5	100,0	
	Missing		500	1,5		
			32896	100,0		
Education =Up to 15 years	Valid	,00	24736	75,2	83,4	83,4
		1,00	4921	15,0	16,6	100,0
		Total	29657	90,2	100,0	
	Missing		3239	9,8		
	Total		32896	100,0		
Education = 16 to 19 years	Valid	,00	15643	47,6	52,7	52,7
		1,00	14014	42,6	47,3	100,0
		Total	29657	90,2	100,0	
	Missing		3239	9,8		
	Total		32896	100,0		
Education =More than 20 years	Valid	,00	19248	58,5	64,9	64,9
		1,00	10409	31,6	35,1	100,0
		Total	29657	90,2	100,0	
	Missing		3239	9,8		
	Total		32896	100,0		
Education = No full-time education	Valid	,00	29344	89,2	98,9	98,9
		1,00	313	1,0	1,1	100,0
		Total	29657	90,2	100,0	

	Missing		3239	9,8		
	Total		32896	100,0		
Occupation = Self-employed	Valid	,00	30351	92,3	92,3	92,3
		1,00	2545	7,7	7,7	100,0
		Total	32896	100,0	100,0	
Occupation =Managers	Valid	,00	29397	89,4	89,4	89,4
		1,00	3499	10,6	10,6	100,0
		Total	32896	100,0	100,0	
Occupation =White collar workers	Valid	,00	29041	88,3	88,3	88,3
		1,00	3855	11,7	11,7	100,0
		Total	32896	100,0	100,0	
Occupation =Manual workers	Valid	,00	26423	80,3	80,3	80,3
		1,00	6473	19,7	19,7	100,0
		Total	32896	100,0	100,0	
Occupation =Unemployed	Valid	,00	30248	92,0	92,0	92,0
		1,00	2648	8,0	8,0	100,0
		Total	32896	100,0	100,0	
Occupation =Retired	Valid	,00	23073	70,1	70,1	70,1
		1,00	9823	29,9	29,9	100,0
		Total	32896	100,0	100,0	
Occupation =Students	Valid	,00	30529	92,8	92,8	92,8
		1,00	2367	7,2	7,2	100,0
		Total	32896	100,0	100,0	
Residence =Rural area	Valid	,00	22800	69,3	69,3	69,3
		1,00	10077	30,6	30,7	100,0
		Total	32877	99,9	100,0	
	Missing		19	,1		
	Total		32896	100,0		
Residence =Small/middle town	Valid	,00	19741	60,0	60,0	60,0
		1,00	13136	39,9	40,0	100,0
		Total	32877	99,9	100,0	
	Missing		19	,1		
	Total		32896	100,0		
Residence =Large town	Valid	,00	23213	70,6	70,6	70,6
		1,00	9664	29,4	29,4	100,0
		Total	32877	99,9	100,0	
	Missing		19	,1		
	Total		32896	100,0		
Generation before 1946	Valid	Not mentioned	27570	83,8	83,8	83,8
		Mentioned	5326	16,2	16,2	100,0
		Total	32896	100,0	100,0	

Generation 1946-1964	Valid	Not mentioned	22330	67,9	67,9	67,9
		Mentioned	10566	32,1	32,1	100,0
		Total	32896	100,0	100,0	
Generation before 1965-1980	Valid	Not mentioned	24097	73,3	73,3	73,3
		Mentioned	8799	26,7	26,7	100,0
		Total	32896	100,0	100,0	
Generation after 1980	Valid	Not mentioned	24691	75,1	75,1	75,1
		Mentioned	8205	24,9	24,9	100,0
		Total	32896	100,0	100,0	

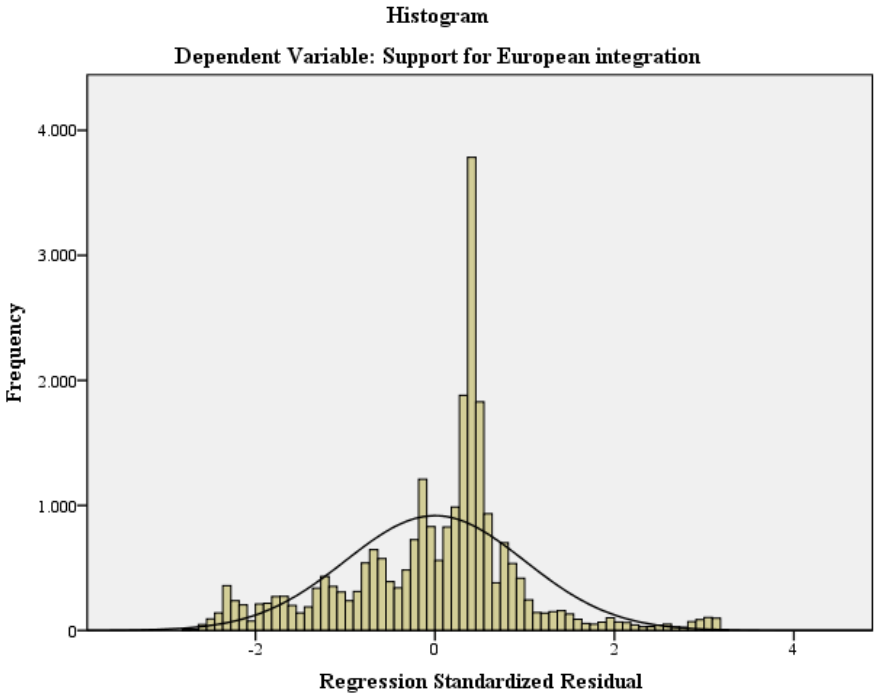

Figure 3. *Histogram of the regressed Standardized Residual for Model 1 in Table 6.*

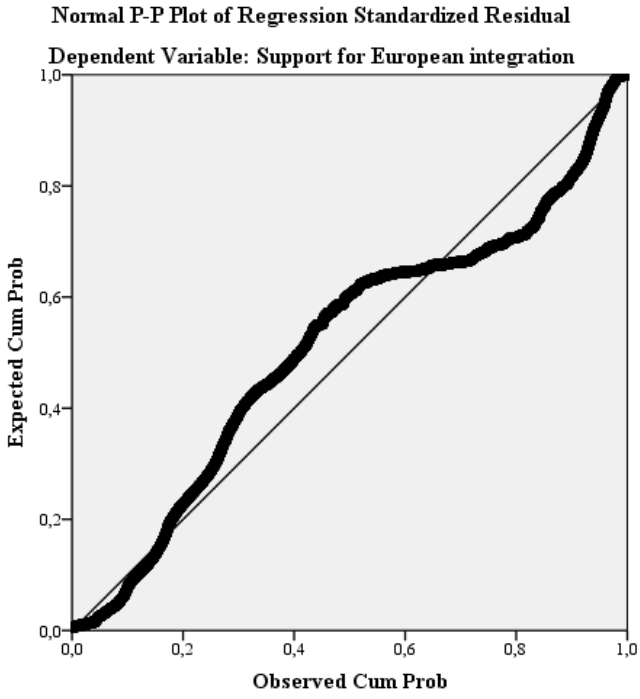

Figure 4. *Normal probability plot for Model 1 in Table 6.*

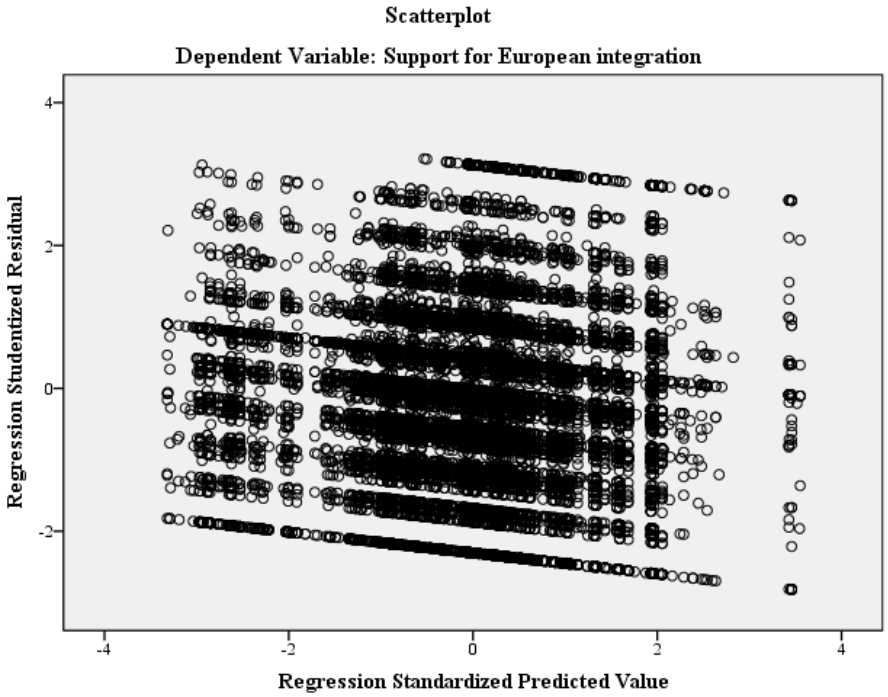

Figure 54. *Scatterplot of the studentized residuals versus standardized predicted values for Model 1 in Table 6.*

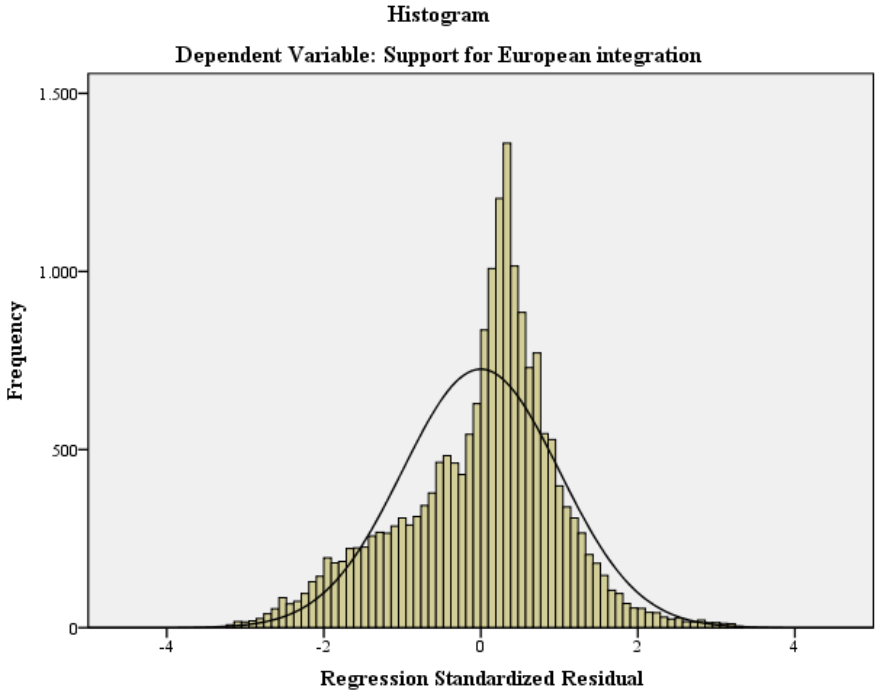

Figure 6. *Histogram of the regressed Standardized Residual for Model 2 in Table 6.*

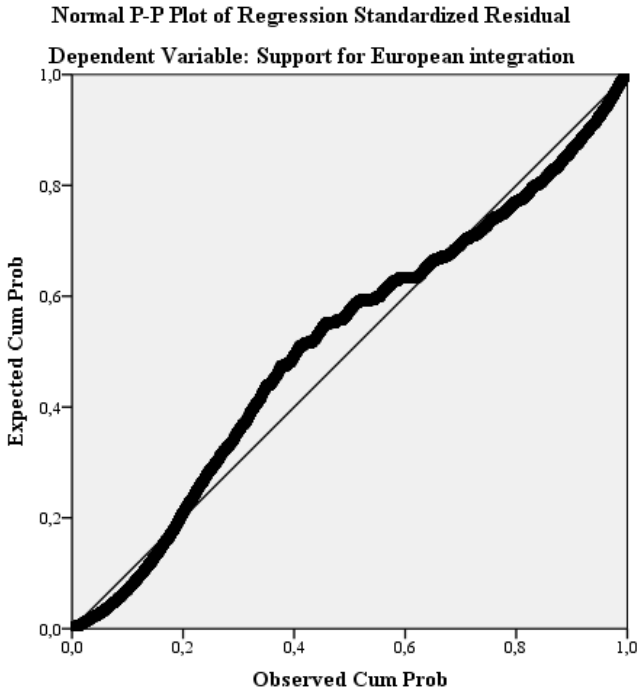

Figure 7. *Normal probability plot for Model 2 in Table 6.*

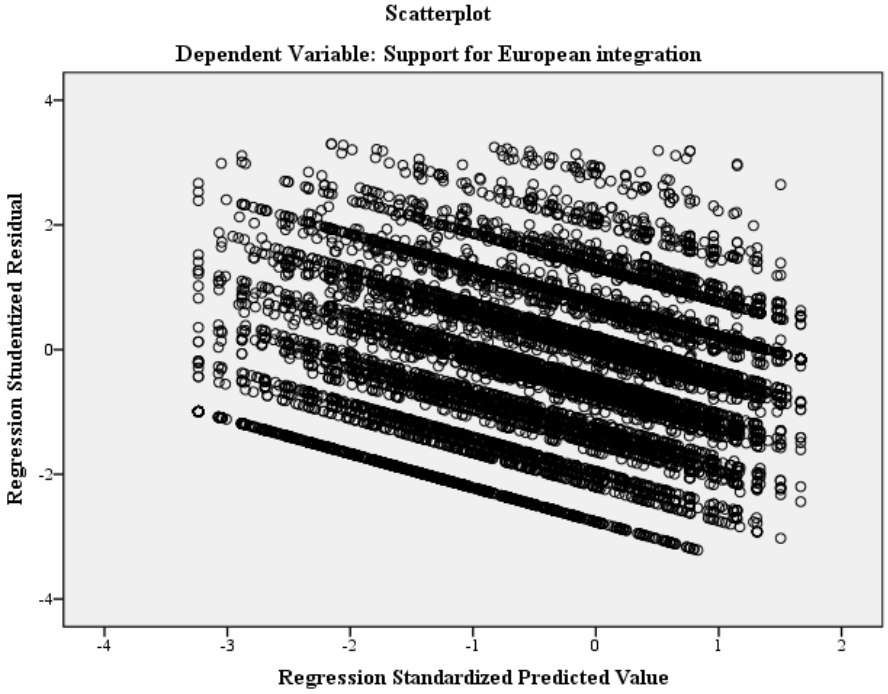

Figure 8. *Scatterplot of the studentized residuals versus standardized predicted values for Model 2 in Table 6.*

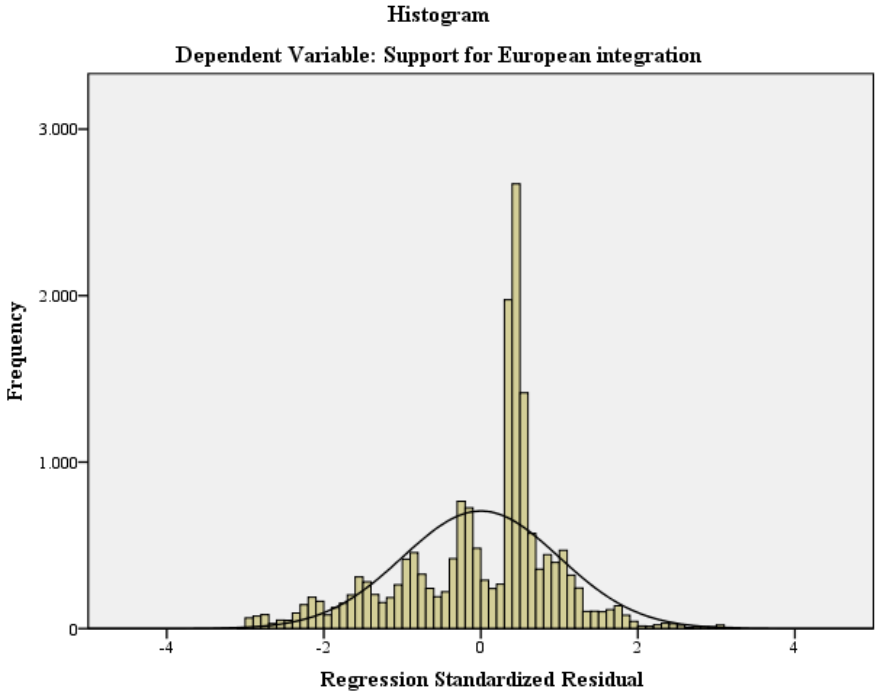

Figure 9. *Histogram of the regressed Standardized Residual for Model3 in Table 6.*

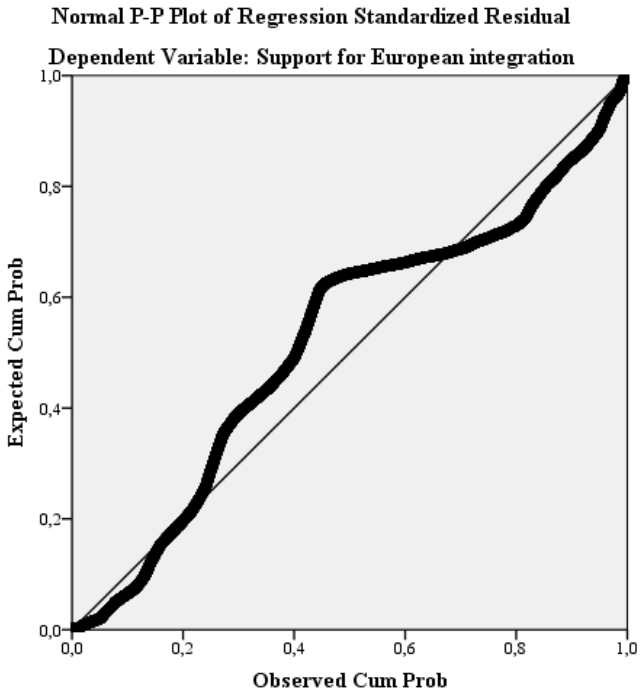

Figure 10. *Normal probability plot for Model 3 in Table 6.*

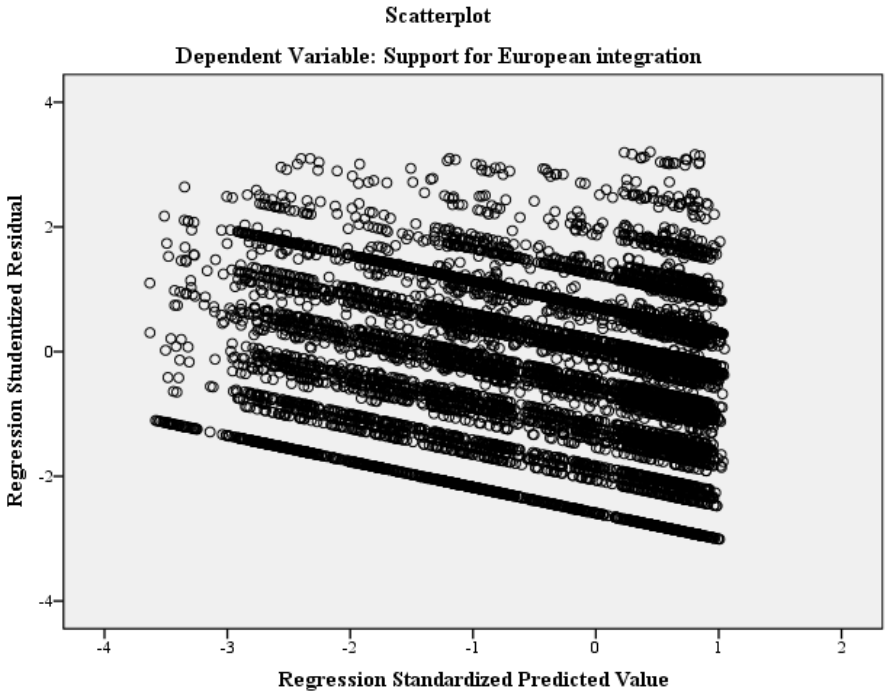

Figure 11. *Scatterplot of the studentized residuals versus standardized predicted values for Model 3 in Table 6.*

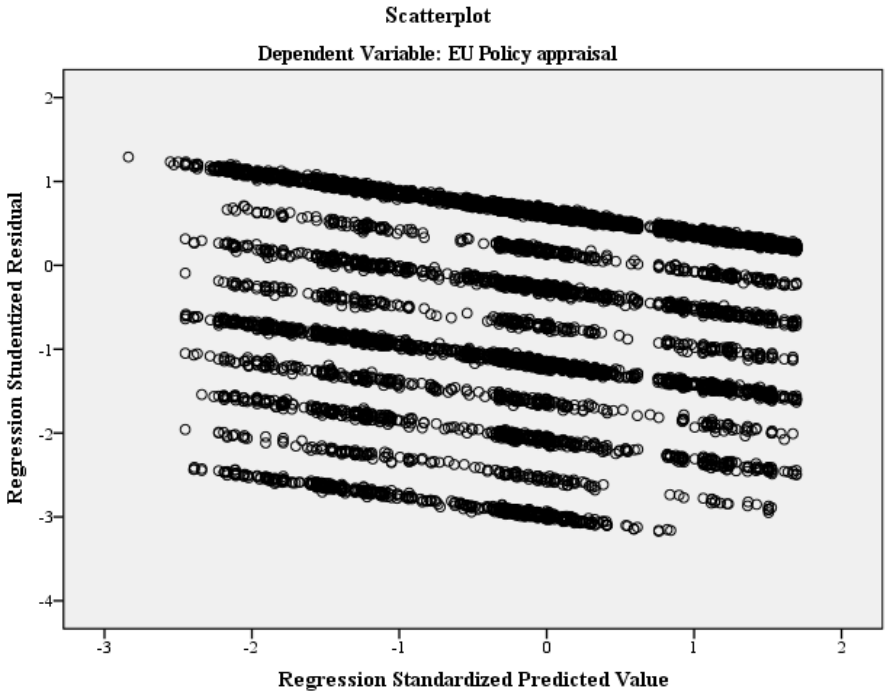

Figure 12. *Scatterplot of the studentized residuals versus standardized predicted values for Model 2 in* Table 6.