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IMPACT OF FINANCIAL CRISIS ON CITIZENS' SUPPORT FOR THE EU

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Abstract

Since the ratification of the Maastricht treaty, support for the EU is on the decline, with strong variation in the various member-states. For example, the percentage of people who tend to trust the EU has declined in Greece from 62.5% in 2007 to 18% in 2013, while in Denmark in the same period from 68.7% to 49%. This research investigates the variation of change of support for the EU measured with Trust in EU and Image of EU in 25 EU member-states on national-aggregate level during the recent financial crisis. It compares the correlational strengths of three different factors: perceived and real severity of crisis as well as checking for national cue. Drawing on Eurobarometer (EB) survey data from three different time spots and supplementing them with economic data from Eurostat, multiple bi-variate correlations are conducted.

The heavier the impact of the financial crisis on one country, the bigger the decrease of the percentage of people who tend to trust the EU or who have a positive image of the EU. For change of trust in EU, the strongest correlation was found for change of perceived personal economic situation, while for change in image of EU, the strongest correlation was found for increase of debt per GDP, both in the time period from 2010 to 2013. Change of trust in national government was only related to change in trust in EU and change of image of EU in the period from 2010-2013, with trust in EU being stronger, showing that national cues are not the best predictors. Thus variation of change on country level can be explained by the extent of the impact of the financial crisis. However, they are certainly not the only factors influencing support and thus a policy which aims at improving public attitudes has to take more into consideration than just hoping for economic growth.

Statement of Authorship

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Except where reference is made in the text of the thesis, this thesis does not contain material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or have been awarded another degree or diploma.

No other person's work has been used without due acknowledgement in the main text of the thesis. This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

Münster, July 9, 2014



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1 Introduction

After the signing of the Maastricht treaty, popular support for the EU, measured with net trust, has declined significantly (Eichenberg & Dalton, 2007, p. 129). This trend has continued also in the time period between 2007 and 2011 in most countries, with popular support in Greece decreasing by 49%, from 65%¹ in 2007 to 32% in 2011. It is notable that this drop in trust has not occurred in all the member-states to the same extent, but with quite big variance. For example in the same period support in Poland has only dropped by 17%, while support in Finland has even increased by 22% (Armingeon & Ceka, 2014, p. 93). It is not clear what exactly the factors for these changes are, and why they vary so greatly between the countries.

Hence, this research will try to analyze whether variation of change of support is stronger or weaker in countries hit differently by the crisis, by analyzing the most recent theory on citizen support. Even though this project is in fact explanatory, it is beyond its scope to establish a causal arrow, relying on previous literature basis.

Why has popular support for the EU changed differently during the financial crisis in the various EU member states?

Is there a variation of drop of support in relation to the severity of the crisis? Can a connection be established to a change in the real economy, or are perceptions of the economic situations better explanatory factors? Is it even related to the evaluations of the economic situation or do citizens just use national trust as a proxy?

First, the relevance is discussed. Then, the theoretical part starts with a broad overview of the research area and continues going into more detail to explain the relevant theories for this research, as well as mentioning expectations. Thereafter the methodology is explained, followed by the results, which are discussed and conclusions drawn. In the end, some limitations are mentioned.

2 Relevance

According to Claude (1966, p. 368f.), “formally declared” and “generally acknowledged” legitimacy is becoming a permanent feature of politics. Thus politicians and political systems not merely strive for power, but also for legitimization.

¹ Differences between the data stated here and this project's data are due to different EBs. While Armingeon and Ceka used EB 68.1, this project used EB 67.1 for Trust in EU.

In order to be able to exercise power, a political institution needs legitimacy, showing that power and legitimacy are two complementary factors. With greater legitimacy, the effectiveness of politics will increase as well. In western states, democracy has risen to the most relevant concept of legitimacy.

In most democratic nation states, voting is thus the most important form of legitimacy for the exercise of power by the government. Feeling and being represented is also related to a general trust in the institutions and mechanism of representation and governance (Loveless & Rohrschneider, 2011, p. 7). Since the EU is not a nation state, however, legitimacy and trust in its institutions becomes a special concern with the necessity to find alternative solutions.

Steffek (2003) points out, that there are more forms of legitimization than just those based on identity or democratic participation which are commonly used by nation states. He draws attention to the fact that international organizations (IOs) are considered to have lost legitimacy due to a democratic deficit. This also implies that in the past they did have this legitimacy. He finds answers in Weber's writing, namely the way of gaining legitimacy through use of "good justifications". Thus the IOs form legitimacy through "rational communication about means, ends and values" (Steffek, 2003, p. 250f). In this way they can explain and defend what they are doing, hoping that their ways of regulating politics will be willingly accepted and followed based on moral acceptance.

Yet, legitimacy of complex international organizations like the EU cannot be based only on power of reason and good arguments, but rather on a synthesis of different concepts of legitimization. The application of this becomes visible through the tendency of the EU to form a European identity (flag, anthem) and by strengthening and encouraging democratic participation (Steffek, 2003, p. 271).

Thus it is apparent that not only democratic participation, but also a general trust and belief in the EU and the way it is handling its ends and morals is needed.

Improving the role and strength of the European Parliament has been the focal approach so far. During the recent crisis, which is a potential threat to the euro-zone and European projects as a whole, communication and improvement of legitimacy and support becomes even more relevant since economic benefits may not be perceived as persuasive as before.

In addition, testing recent theories on support under this short-term economic shock of the crisis will add the growing body of research, hopefully furthering the scientific understanding, which may help to form policies in the member-states and on EU level that will support the EU in enduring this and potential future crises.

3 Sketching the research area

According to Hooghe and Marks (2005, p. 420), the theories of support for the EU can be divided into three categories: economic, identity, and cue theories. While the first built on “economic costs and benefits”, the second concentrates on psychology of group memberships, especially how “national identities” constrain EU support, while the last negates the opposition of the former two by using mediating cues of “elite communication and ideology”.

These three approaches also imply different ways of understanding the European project. While economic theories understand the EU mainly as a regime that “facilitates economic change,” identity theories perceive the EU as a “policy overarching established territorial communities.” Lastly, cue theory understands the EU as an “extension of domestic politics” (Hooghe & Marks, 2005, p. 420).

Ever since the European Project was not only seen as a project of the elites, but also as a project by and for all citizens of the Union, scholars and the public in general were interested in analyzing and understanding popular support for the EU or its antecessors. Eichenberg and Dalton (1993) with their Economic Voting model were the first to analyze whether citizens evaluate the performance of the European Community at all. They found higher levels of support for the EU in countries with a decreasing rate of inflation and with big inner-EU exports between 1973 and 1988. They further found lower explanatory strength for low unemployment rates and high economic growth.

Since the EU started mainly as an economic project, scholars started analyzing the topic by using economic models to explain variation of support. Anderson and Reichert (1995) developed a Economic Benefits model, which is an extension of the Economic Voting model mentioned above, still assuming that people evaluate the EU from a socio-tropic viewpoint, based on the benefits for their own country. Instead of looking at objective indicators, Anderson and Reichert (1995) used subjective views of citizens on economic developments, using Eurobarometer Data from 1982, 1986

and 1990. They found that people who think that their country is benefiting from the EU, through direct payments or indirect economic advantages, had higher levels of support.

Gabel (1998) changed with the Policy Appraisal model the methodological perspective of economic models to a remarkable extent. Instead of using collective socio-tropic evaluations, he used individual, utilitarian and egocentric motivations. Thus he argues that people who think of themselves as benefiting from the integration process have positive attitudes towards the EU. Gabel further extends his model to differentiate between individuals who have quite different ranges of possibilities to benefit from the EU. Arguing that opening the markets, including the labor market, leads to growing competition in this area, he finds that individuals with higher skills, with a higher level of human capital, have better chances to get work and receive higher wages, while lower skilled people have less chances, thus also influencing the views about the EU.

Gabel and Whitten (1997) formed the Economic Perceptions model which criticizes the use of objective factors like economic growth, unemployment rates and rate of inflation. They argue that these national indicators cannot show the varying situations in parts of a country while citizens at the same time are not able to understand real economic data correctly and form opinions based on it. Thus they focus on perceived economic situations, finding evidence that they explain attitudes towards the EU a lot better than macroeconomic factors.

However, not only economic models, but also cultural models were developed, like Inglehardt's and Rabier's (1978) Silent Revolution Model, which uses post-materialist values and cognitive mobilization as explanatory factors. They assume that social changes like a higher level of affluence, better education and social mobility, lead to a change from materialist values towards post-materialist values. People who hold post-materialist values are believed to belong to a younger generation which grew up without scarcities and thus cares for political participation and hedonistic life styles. Cognitive mobilization on the other hand describes people who have greater abilities to process and communicate political information. This ability, the authors argue, is necessary to understand the process of European integration and to form positive opinions about the EU.

National identities form the center of the second strand of theories. Using the concepts of citizenship and identity, they argue that an exclusive national identity, sometimes combined with hatred of foreign cultures, constrain the support for the EU. Krisie, Grande, Lachat, Dolezal, Bornschie, and Frey (2006) for example, find that citizens who identify strongly with their nation and also support exclusionary norms tend to see the European integration as a threat. However, later theories argue that national and European identities do not have to be contrary to each other, but can support each other. Bruter (2005) for example combines individual, local, regional, national and European identity into one model.

Hooghe and Marks (2004) compare economic explanations with identity explanations. They find that national identity can indeed explain some of the variation, especially when national elites and parties are polarized on the issue, leading to exclusive national identity being mobilized against European integration. Even though they find better explanatory strength for identity, in terms of deductive sophistication they admit that economic explanations are still far ahead.

In the family of cue theories, the national-proxies-model by Anderson (1998) is especially noteworthy. As one of the first to apply such a model the authors include national factors. Arguing that citizens are not well enough informed about politics at the EU level, he claims that they mainly use perceptions of the national politics to form opinions about the EU. As main proxies he identifies support of the national political system, support of the national government and identification with political parties. He finds in his analysis, that economic indicators are at least partially mediated by national political factors, and that citizens draw their opinions about the EU from basic political support at the national level.

Boomgaarden et al. (2011) argue, that due to the growing complexity of European policies the public attitudes toward the EU are also more and more diverse and complex. Thus they identify and analyze five dimensions of attitude towards the EU: affection, identity, performance, utilitarian, and strengthening.

This also rests on the understanding that EU policies can no longer rest on an assumed permissive consensus, but on the attitudes of the people, who can show their approval or disapproval in elections and referendums. In early literature EU support was used to capture this, but in recent studies, owing to the trend of

decreasing support, euroscepticism was used. Nevertheless, it still captures the same aspects, often just coding the same variables as the opposite. The authors find evidence in the Netherlands, that certain factors influence the five dimensions differently.

Spanje and Vreese (2011) consider that there are different aspects of attitudes towards the EU and that people may have positive attitudes towards one aspect, while at the same time holding negative attitudes towards another aspect. For their study of voting behavior they use the five dimensions from Boomgarden et al. (2011). They find that all five dimensions help to explain anti-EU voting, with strengthening integration and EU utility being the strongest.

Armingeon and Ceka (2014) have tried to explain the drop in support for the EU since the crisis and have found that loss in trust is mainly related to loss in trust in national government. Hartevelde, Meer and Vries (2013) analyze influences of three dimensions on diffuse support, using one dependent variable and EB 71.3 only, lacking dimensions and time aspect. They find that the logic of extrapolation (national proxy) is stronger than logic of rationality (performance) and identity (attachment).

Roth, Nowal-Lehmann and Otter (2011) find in their analysis about trust in national and European government and parliament, that during the crisis the explanatory strength of real data like rate of unemployment and debt over GDP is high.

4 Constructing the theoretical framework

Most of the above mentioned and other theories have looked at certain points in time only or analyzed the relationships on the individual level. Further, the current economic crisis is novel and as such needs to be taken into consideration. In order to answer the posed research question of this project, a specific theoretical framework needs to be constructed.

Since this project aims to analyze the impact of the financial crisis on citizens' support, it will be examined how the opinions of individuals have changed because of the recent crisis. However, this would imply analyzing individual-level panel-data, which is not available. So in order to be able to draw conclusions about the impact, only the changes of the national aggregates can be compared with each other. Forming such aggregates from individual level survey data is a "useful tool" for

attempting to understand social and political occurrences. Thus the units in this project are the member-states, even though the data is based on the individuals living in the countries (Jones & Norrander, 1996, p. 296f).

This way it can be analyzed what the impact of the crisis is on average public attitudes in one country compared to other member-states. Looking at the Eurobarometer data accordingly, allows to make comparisons and to take a closer look at the changes, without having to conduct a panel-study. However, many of the used indicators and relations between them are based on the individual level. While relations might be observed at the individual level, they might get mixed up on the aggregate-level.

Therefore this project contributes to the growing research in the area of public attitudes towards the EU by comparing variation of changes on a national , aggregated level by means of simple correlations of change variables. Even though it is not possible to go back and draw conclusions from these results to the individual level, it helps understanding the way citizens' opinions are influenced on average about the EU by sudden events like a financial crisis.

4.1 Conceptualizing support for the EU

According to Easton (1975) there can be different objects of support, and according to Gabel (1998) this support can be specific or diffuse, or in other words: utilitarian or affective (Lindberg & Scheingold, 1970). Specific support is defined by Caldeira and Gibson (1995, p. 357) as “a set of attitudes toward an institution based upon the fulfillment of expectations of policies or actions”. Utilitarian support is “grounded” on this understanding of specific support and is more clearly defined by Mahler, Taylor, and Wozniak (2000, p. 431) as a “product of a calculation of tangible benefits derived from integration”. Hence, utilitarian support is expected to be volatile: individuals support European integration as long as they think they are directly economically benefiting, withdrawing support as soon as they think they are not benefiting anymore (Mahler et al., 2000, p. 431).

Diffuse support is defined by Easton (1967, p. 273) as “a reservoir of favorable attitudes or good will toward an institution that helps [individuals] to accept or tolerate outputs to which they are opposed or the effects of which they see as damaging their wants” (in Mahler et al. 2000, p. 431). Thus affective support is based on “feelings of

generalized loyalty toward and sympathy for the idea of European integration, [...] which arises from a deep-seated sense of political identity” (Mahler et al., 2000, p. 431). Hence diffuse or affective support is expected to be stable.

This research builds partly on utilitarian support. This output-oriented approach takes changes of the performance of a political institution into consideration. Other than assuming that people have a general level of good will towards political institutions, it assumes that trust in a political institution is rather instable and depends on changing evaluations of what a citizen thinks about specific policies or a general beneficial tendency of a given political institution, such as the EU. Specific support can especially vary when critical changes to the functioning of the systems are observed, but traced back in the public opinion rather to the office holders in person than to the system as a whole (Easton, 1975, p. 437).

Despite movements and protests as a result of the crisis in some parts of the EU who are challenging the capitalist and democratic system, most people still think that reforms and replacements of office holders will repair the system. Therefore, this project argues that the financial crisis is not really shaking the foundations of the political and economical system of the EU, giving room for utilitarian considerations. According to Easton (1975), specific support is object oriented, that is, people have to beware of political elites making decisions, even if this is only of a generalized form, like 'the elite'. Thus they evaluate the performance of those elites.

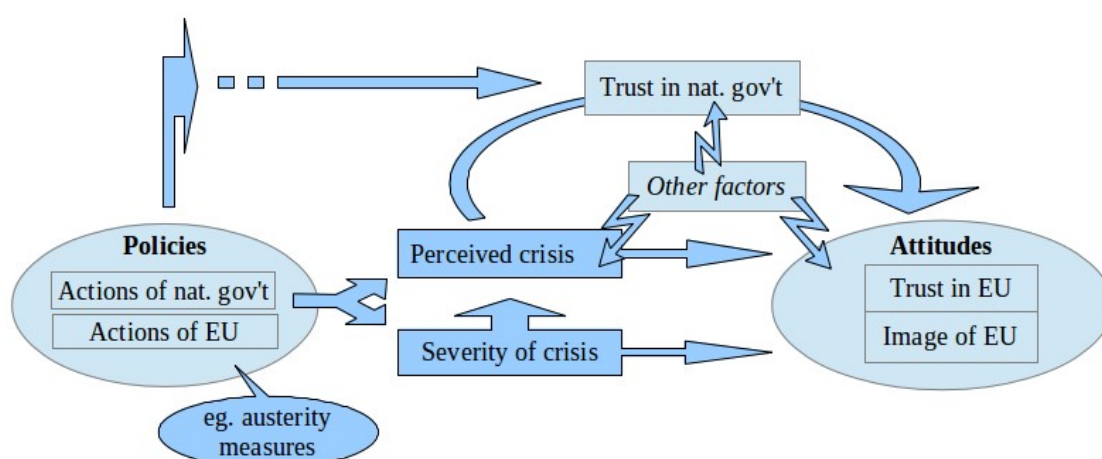


Illustration 1: Theoretical framework

In this project the crisis is seen as an out-put of the political elites which shows that

they are not performing well. Thus, the specific support should be on the decline. However, it is not clear whether citizens are able to trace it back to the EU or to the national governments, or just to the political elites in general. Thus, trust in the EU as well as trust in national governments can be seen as an indicator of this specific support. Both are potentially influenced by the perception of the economic crisis, be it directly, or rather by a cue on a national level.

As the crisis set out in 2007, politicians made high promises of solving the situation fast and helping their country to grow stronger. However, according to Armingeon and Ceka (2014, p.87), those promises could not be kept, leading to a drop in support. This drop, the authors argue, would be higher among the countries who have been hit hardest by the crisis, measured by the need for or introduction of IMF austerity measures, going along with a loss of national sovereignty. This shall be tested in this project.

However, Armingeon and Ceka (2014, p.85ff) argue, that even though the opinion formation is a complex process, with some of it linked to the performance of the EU and its policies, it mostly relies on the national level, since people make a complex world easier by using national cues. They are just replicating what they think about their national governments on other levels of political institutions. The relation, according to Armingeon and Ceka (2014, p.85) is not necessarily such that high national trust is leading to higher trust in the EU, but it might as well be negative. Also, in a crisis situation, citizens might get disillusioned with politics in general and tend to trust no level of government at all due to the heavy cuts and austerity measures.

It has to be mentioned, that trust in the EU has also been used to explain diffuse support in the past. For example, Armingeon and Ceka (2014, p. 88) rely on it. However, recent analysis has shown, that trust in the EU is not anymore as stable as it has been in the past, indicating that it is rather a short-term influenced concept. Also, most indicators which have been used in the past for utilitarian support are no longer available. Therefore this project uses trust in the EU as an indicator for specific support.

Image of the EU, however, is more of a diffuse or affective nature, taking into consideration the wording of the question in the Eurobarometer survey. This implies

looking on the input factors of the political system. While people may lose the trust in the political institutions and actors of the EU, they may still hold quite positive images of the EU as a common market, rights of free movement, a growing interconnectedness between individuals and businesses, the benefits of democracy, or rule of law.

Thus, if a citizen claims that s/he has a positive image of the EU, it implies a general, long-term affective rather than a purely temporal utilitarian attitude. Thus image of EU shows that a person believes that s/he can rely on the EU to act beneficial for her or himself and her or his fellow citizens. Taking this to the national level, the percentage who has a positive image of the EU has a storage of good will towards the EU which will not decrease even if the EU is not performing well at a given time, but will rather stay stable. But since the economic crisis intensifies since 2007, even this rather stable affective support may be shaken by economic downturn. As Armingeon and Ceka (2014, p. 85) put it, the financial crisis can be seen as a shock, a “sudden frustration of expectation”, for the diffuse support.

Therefore it may still be that perceived economic crisis will change significantly the percentage in countries of those who hold positive images of the EU. Additionally, it needs to be mentioned, that the use of Image of the EU as an indicator for diffuse support has not yet a broad theoretical traditions as a basis.

While the perceived economic crisis may have influence on all the factors, it has to be said that there might also be a direct effect of the real economic situation on the attitudes towards the EU. Also, it appears reasonable that there has to be some effect of the real economic crisis on people's perception of the crisis. Further it has to be noted that there are many other factors which are potentially influencing the perception of the crisis, the trust in the national government as well as the attitudes towards the EU, which will not be taken into consideration in this project.

4.2 Operationalization

In the following part of the thesis, the above theoretical concepts are operationalized.

4.2.1 Support for EU

Using net support², as for example Eichenberg & Dalton (2007, p. 133) are doing, is

² Subtracting the percentage of those who said the EU is a “bad thing” from those who chose “good

also a good idea and an indicator commonly used, however this question was dropped from the Eurobarometer in 2011. Thus it cannot be used in this project.

Following Loveless and Rohrschneider (2011, p. 7) evaluations of the EU can be captured by the evaluation of the performance of the EU and its institutions. They argue that support is necessary for polities to have legitimacy in the long run. Research has used many variables³ and questions to measure support, however usually tapping into the same concept. Measuring the trust in the EU in general is as good as most to analyze support and has been used by many researchers (Armingeon & Ceka, 2014; Hartevelde et al., 2013). Thus, this research will focus on trust in the EU.

Although it might be interesting to look at the image of EU variable as well, no study that has already used this variable as an indicator for support for the EU is available. It may thus be used here as a supplementary element.

4.2.2 Perception of crisis

Gabel & Whitten (1997) analyze in their study of EB data from 1984 to 1989 which factors better explain support for the EU: the subjective economy as perceived by the people or the real economy as written down in economic indicators. Their findings also imply, that attitudes toward the EU are mutable, and not fixed personal characteristics as others had claimed before. They find strong support that whenever the national and personal economic perceptions change, also the support for the EU is changing, with national perceptions being stronger and positively related. They also found that this change is happening regardless of how beneficial the EU policies are for its citizens.

For the economic perceptions, they used questions from the Eurobarometer which asked for a retrospective view. For the dependent variable, they used the “membership is a good thing” question combined with the view on “efforts made to unify Europe”.

They also used regional economic indicators, finding that regions with higher unemployment rates have higher levels of support, an argument also made by George (1992). This research will use three indicators for perceptions of the thing”.

3 See Loveless and Rohrschneider (2011, p. 7f) for a list of questions.

economic crisis: evaluation of the national and personal economic situation, and evaluation of the employment situation.

It can be expected that, firstly, support is related to economic factors. Secondly, among those factors, the perceived economic situation is a better explanation. Thus it is expected that change in perceptions of the economic situation correlate with change in EU support, with national evaluations being stronger. As of the direction of this change, looking at national economic views, it can be expected that the relationship is positive.

4.2.3 Severity of crisis

Most of the recent articles about EU support which used economic models found little support for the explanatory strength of real economic data, accepting mainly, that economic perceptions are the better indicators. But in times of crisis, some researchers started to contest this view of the majority.

For example, Roth et. al (2011) compare the EU-15 and EU-27 in the pre-crisis and crisis period, analyzing variation of the impact of crisis on citizen support for EU and national government. They build on literature which argues that people have confidence in their governments when the situation is going well, when the expected outcomes are delivered. As the dependent variable, they use the EB question on trust in institutions, calculating the net trust by subtracting the percentage of those who tend to trust from the percentage of those who tend not to trust the institutions, which they claim is the best measure.

They find that unemployment is strongly negatively related to trust in national parliament and government in both time periods, however for trust in EU only during the crisis and also weaker than to trust in national government. The authors further find, that inflation reduces trust in general in all time periods, but only if the economy is doing well. When the economic situation is poor, inflation seems to play no role. Also, an increase in debt over GDP decreases the level of trust. Lastly they found evidence for a rally-around-the national flag phenomena, with decrease of growth in GDP per capita related to stronger support for the national government.

This project will use two indicators for the severity of crisis: debt per GDP rate and the unemployment rate. It can be expected, that also in the time period studied in this

paper, an increasing debt per GDP rate and an increasing level of unemployment rate is positively related with a decreasing level of trust in the EU, reintroducing real economic data to the explanatory factors.

4.2.4 Logic of extrapolation

Hooghe and Marks (2005, p. 425) take up cue theory and show that Europeans and especially those who are not well informed about the EU and its policies, rely on cues that stem from their member states.

Harteveld et al. (2013) identify and test three logics of European support. According to the logic of rationality, trust stems from the evaluation of actual and/or perceived performance of the EU. According to the logic of identity, trust stems from the emotional attachment to the EU. According to the logic of extrapolation, support stems from trust in national government and is thus unrelated to the EU. They find that the logic of extrapolation is strongest among the three in EB 71.3 (2009), hardly differing from what cue theory is arguing. They use the trust in EU variable, arguing that this measure is robust in comparison to different operationalizations, namely evaluating the trust in specific EU institutions, thus tapping into diffuse support. They use a four indicator scale to measure trust in national institutions and thus the logic of extrapolation (p. 552). If what they argue is true, it also means that support for the EU is largely outside of the reach of EU policies.

Armingeon and Ceka (2014) investigated why the diffuse support measured with the trust in EU variable, has declined during the economic crisis. They conclude that this drop in support is mainly related to the drop in trust in the national government, which is related to national policies and developments in the national economy and hardly related to policies imposed by the EU on certain member states. This shows that in contrast to other scholars who argue that a growing European identity leads to separate evaluations of EU and national government, citizens still use national heuristics to evaluate the EU, also supporting cue theory.

This project will use trust in the national government as an indicator for the logic of extrapolation. It can be expected, that trust in national government is positively related to trust in the EU.

4.3 Note on causal arrow

This study does not aim at establishing the causal arrow, but relies on given findings and arguments in previous research. Thus even though the author speaks of dependent and explanatory variables, drawing them from previous research, results will only be able to tell about the relation, and not about causality and explanatory strength.

For example, Armingeon & Ceka (2014, p. 105) go into great detail about problems of causality between national support and EU support. There could be a third, intervening variable causing change in both, or the causal arrow could be reversed, with loss of trust in the EU preceding loss of trust in national government. But they find ways to combat these problems.

5 Methodology

5.1 Research design

In order to answer the posed research question, variation of change of support will be compared with variation of change of explanatory variables. Using 25 EU countries as units and picking three time spots, those three observations allow to look at two changes. Since the Eurobarometer is not a panel study, it is not possible to look at the changes in individual units, thus recommending a look at the national aggregates. Therefor the design is longitudinal and correlational. However, picking only three time spots can lead to inaccuracy, since only short-term changes in variables could happen. For example a sudden high in support due to a certain event that goes against the trend could infer with the results. Controls of sorts could be applied, but this goes beyond the scope of this paper.

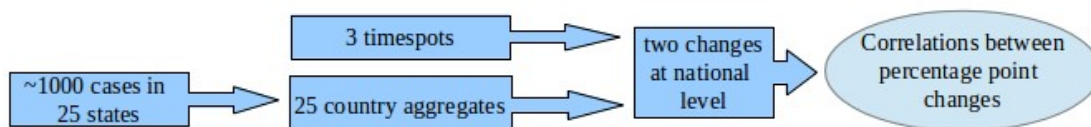


Illustration 2: Research Design

From the literature, relevant factors were identified and derived, relevant indicators selected, aggregated and combined in one dataset, together with data derived from

Eurostat. Bi-variate analysis will show which of the factors are explaining variation of change of support. As mentioned before, there are numerous possible factors influencing change in support, this research concentrates only on comparing three of the factors without claiming that they are the only or strongest ones.

5.2 Case selection

Analyzing public support for the EU on country aggregated level implies that the population is all the member states of the EU. But since this research wants to draw conclusions on the change since 2007, countries who joined later will not be included (Romania, Bulgaria, and Croatia). This leaves 25 member states. The time period is selected, because in 2007 the global financial crisis started, leading to a great recession and the European sovereign debt crisis which is still going on, so picking 2013 as an end date due to data limitations. In order to describe the change, this paper looks at three time spots: one in the beginning, one in the middle and one at the last spot possible, which cannot be called the end of the crisis, since it is still ongoing, becoming more and more the 'usual'. In order to compare this change to the strength of the financial crisis in each country, national aggregates are used for both EU support variables and the explanatory variables.

5.3 Indicators

For EU support, data derived from the standard Eurobarometer surveys was used. Aggregating the individual level data from the survey with a sample of 1000 people in almost all of the 25 countries gives aggregated data for the whole population on public support. Also, the EB surveys include questions that allow for operationalization of economic perceptions and national cue indicators. To assess the real economic situation, supplementary data from Eurostat was used.

First, two dependent variables are identified⁴:

1. Trust in EU
2. Image of EU (supplementary)

'Trust in the EU' is the most commonly used variable. 'Image of the EU' could be a more instable, but rather emotional indicator for support. It is interesting to compare those. Unfortunately, 'EU is a good thing' and 'country has benefited from EU', which have been used quite often in the past, are only included in the EB surveys until

⁴ Question wording can be found in the appendix.

2011, which prevents the author from using it.

Second, the explanatory variables to help explain the variation of change of support:

- **Perception of crisis (logic of rationality)**
 1. Perception of national economic situation
 2. Perception of personal economic situation
 3. Perception of employment situation in country
- **Severity of crisis (real data)**
 4. Debt over GDP
 5. Rate of unemployment
- **Logic of extrapolation (national cue)**
 6. Trust in national government

The indicators for the perceived severity of crisis were selected on the basis of the perception models and on the availability in the EB surveys.

Following Roth et al. (2011), only those economic indicators were selected for which the authors did find a relationship, others were excluded from this research, in order to test if what they found is robust a few years later still.

For the national cue, the only good indicator to choose is the trust in national government.

5.4 Data analysis

For the dependent variable trust in EU, data from EB 67.1 (2007), 73.4 (2010) and 79.3 (2013) was aggregated, using the percentage of those who answered with “tend to trust the EU”. The same was done for the Image of EU variable, taking the percentage of those who had a “very or fairly positive image of the EU”.

For the explanatory variables trust in national government (percentage of those who answered with tend to trust), perceived national, perceived personal economic situation and perceived employment situation (each percentage of those who answered with very or rather good), basically the same was done. However, the variable employment situation was not included in the EB 67.2, so the variable was taken from the EB 68.1, which was also conducted in the year 2007. Since the personal economic situation was not included in EB 68.1, and also there was a difference between the perceived national economic situation in EB 76.2 and 68.1, the mean of those two was calculated and was taken as the combined variable for 2007.

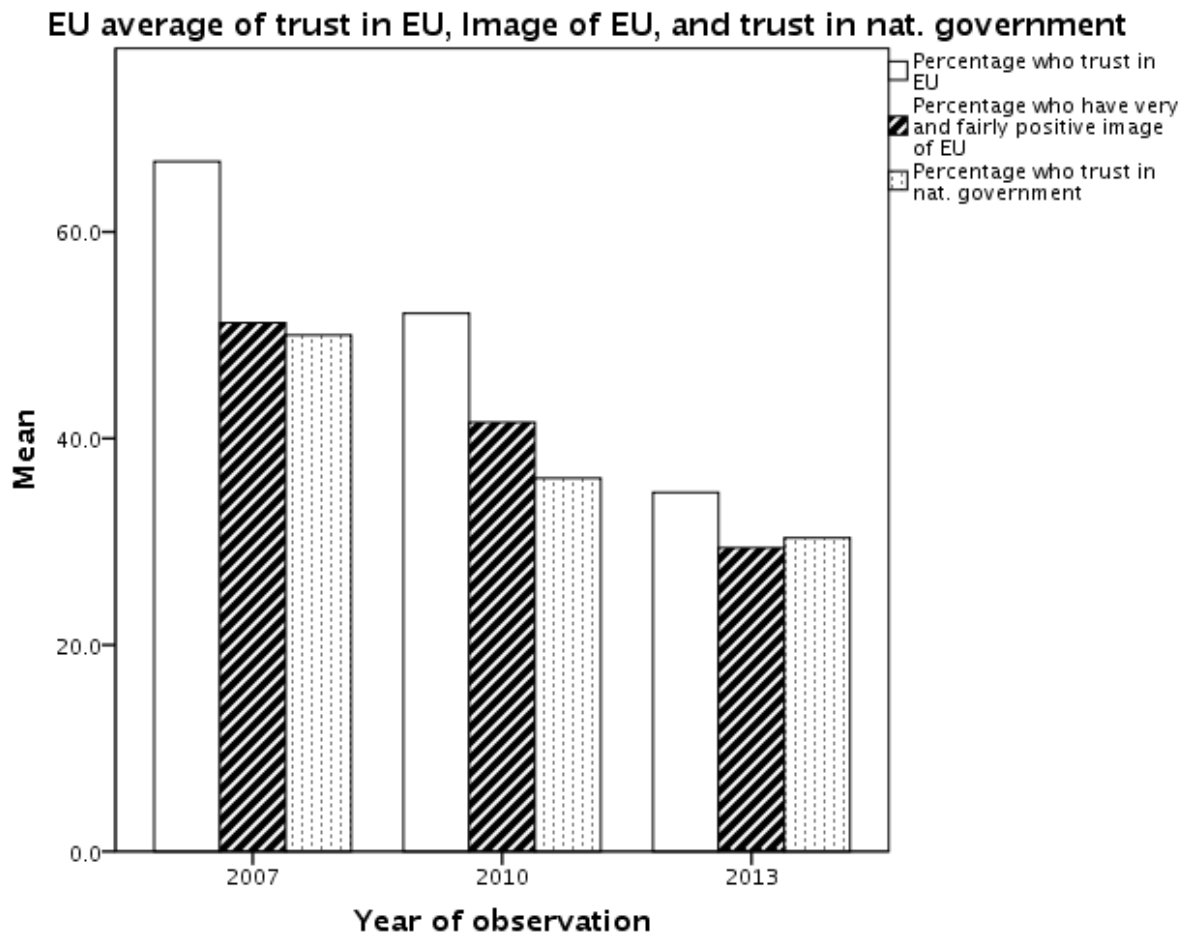
It was controlled, if calculating the mean is producing misleading results, taking the separate measurements. This was not the case.

Since this project is looking at the variation of changes, the data was merged into one dataset. Then, change variables were calculated, each subtracting the 2007 value from the 2010 value, and the 2010 value from the 2013 value, using the absolute changes in percentage points. Supplementary change variables were calculated based on the relative changes, however they were not used. See discussion on it in the limitations section and the correlation-table in the appendix.

The calculations will be based on the EU-25 countries. It is to be noted, that East and West Germany as well as United Kingdom and Northern Ireland are individual cases in the EB dataset. Therefore, weighted values were calculated for all variables, adding the two cases United Germany and United GB, in order to be able to compare it to real economic data, which is only available for whole countries.

Data on unemployment rates and debt per GDP were taken from the Eurostat database. Again, change variables were calculated. But since for both a higher value actually is understood as a negative situation, the change variables were calculated in the opposite, so that a negative number actually can be compared to a negative one of the EB data. Before running the correlations, all the variables were positively tested for normal distribution.

Graph 1:



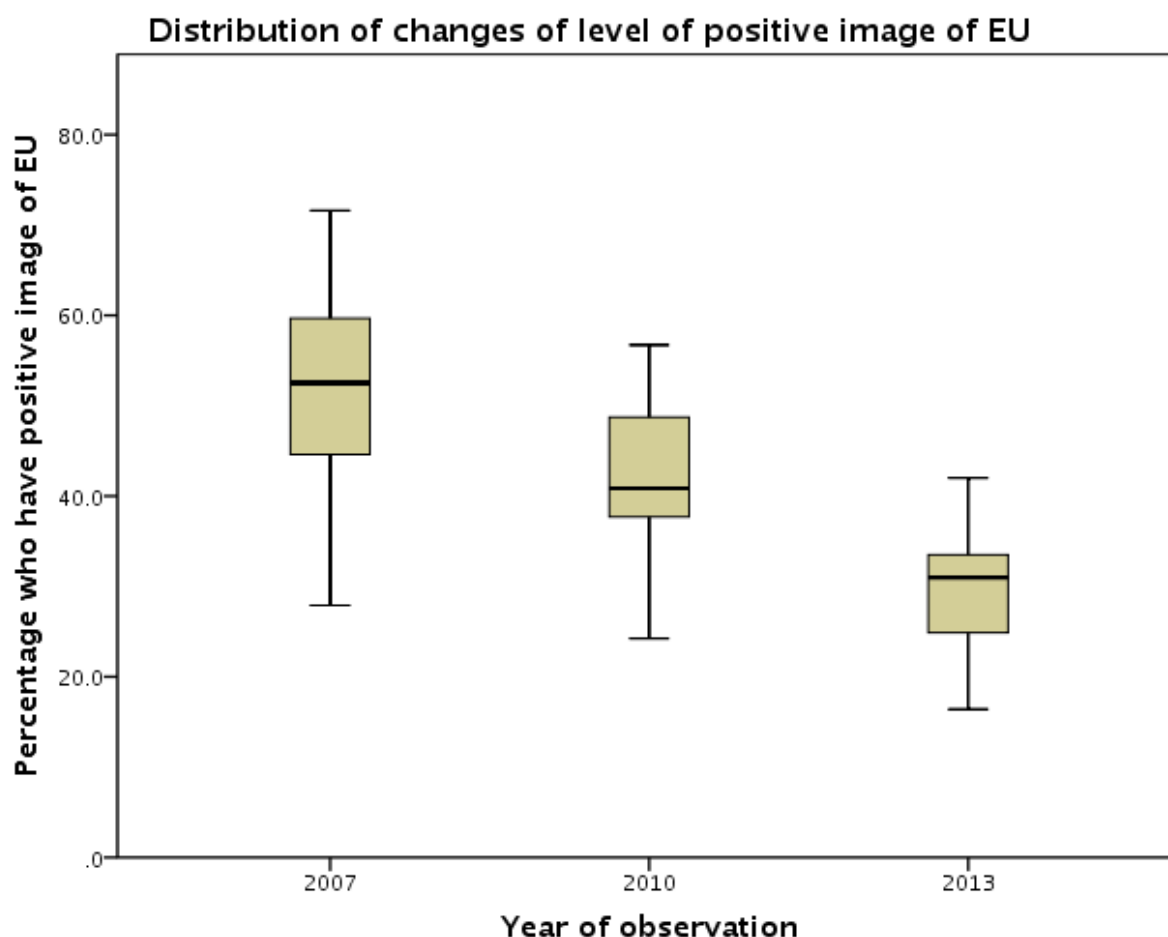
6 Setting the scene: decreasing support

It can be seen from the data, that the level of trust in the EU and the Image of the EU has decreased a lot during the period from 2007 until 2013. Looking at the EU-25 average, trust in the EU has decrease from 66.8% who tended to trust in 2007 to only 34.7% who tended to trust in 2013. The biggest change happened in Spain going down from 73.9% in 2007 to as little as 16.9% in 2013. There was not a single state in which the level of trust increased during this time period. Even in Malta, the country with one of the lowest changes, trust decreased from 71.7% to 51.4% in 2013.

More or less the same happened with the percentage of people who have a very or fairly positive image of the EU, but the effect was not as strong. It can also be seen that the levels are changing quite differently comparing the member states. The EU-25 average changed from 51.2% in 2007 over 41.6% in

2010 to 29.4% who had a very or fairly positive image of the EU in 2013. Even though there are small positive changes in some countries for one of the changes, the overall tendency is clearly decreasing. Graph 3 shows the big variation of

Graph 2:



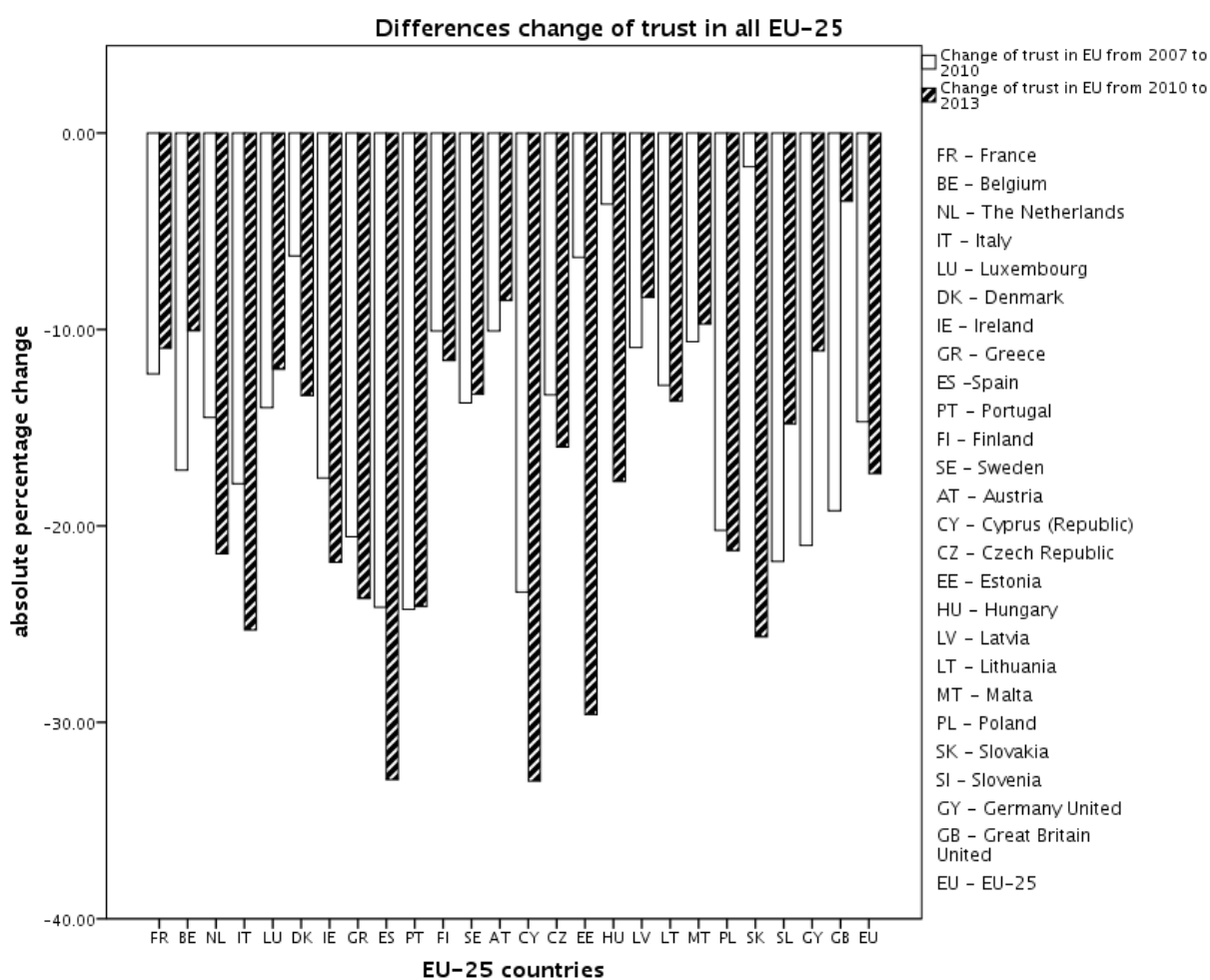
changes that were observed throughout the member states. It can be noted that in most countries, the changes were bigger in the period between 2010 and 2013. Looking at the explanatory variables, big changes can be observed as well. In the EU-25 average, those who perceived the national economic situation as very or rather good decreased from 57.8% in 2007 to 26.5% in 2010, recovering a little to 29.5% in 2013. In the same period, changes of perceived personal economic

situation are not as high with only 65.7% in 2007 to 62.2% in 2013.

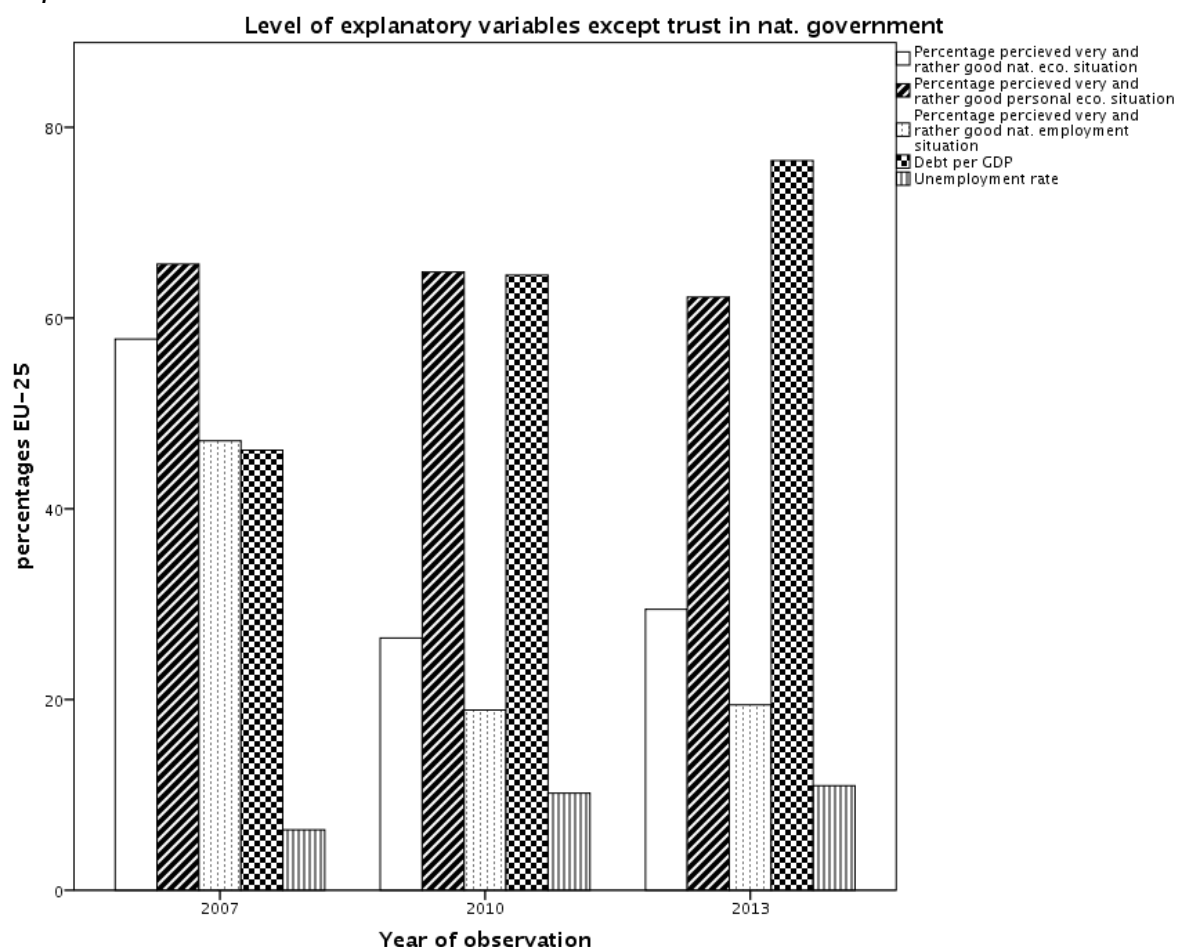
However, the perceived employment situation changed in the EU-25 average from 47.1% with a positive perception in 2007 to 18.9% in 2010, and recovering just very little to 19.5% in 2013. At the same time, the real unemployment rate increased from 6.3% in 2007 to 10.2% in 2010 and 11% in 2013, somehow mirroring the perceptions. The debt per GDP rate in the EU average rose from

46.1% in 2007 to 64.5% in 2010 and 76.5% in 2013. It has to be noted, that for all the explanatory variables, the changes differ considerably comparing the member states, so the means are not presenting a full picture.

Graph 3:



Graph 4:



7 Results

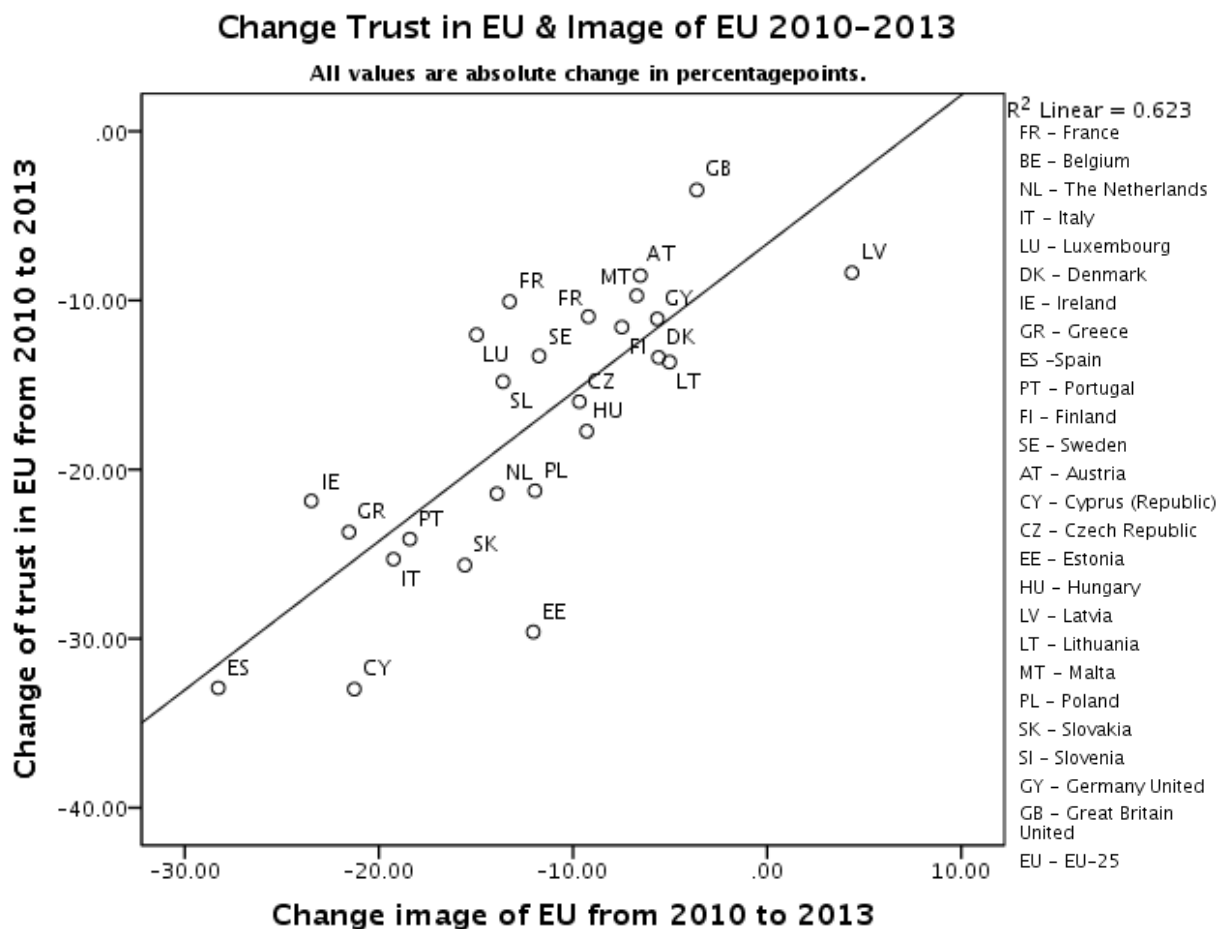
Multiple bi-variate analysis were conducted, correlating the changes in dependent variables with the changes in each one of the explanatory variables. Afterwards, the different correlational strengths were compared looking at Pearsons R. Scatter plots were drawn to illustrate the results.

7.1 Relation between Trust and Image

In the first period from 2007 to 2010, change in Image of EU ($M=-9.7$, $SD=5.4$) and Trust in EU ($M=-9.7$, $SD=5.4$) correlate at the .01 level ($r=.625$), indicating, that the two dependent variables are measuring a similar concept. Again, in the second period from 2010 to 2013 it has to be noted that change in Trust in EU ($M=-17.3$, $SD=8.1$) correlates with change of Image of EU ($M=-12.2$, $SD=7.3$) with .789 at the .01 level, even stronger than in the first change period.

Hence it can be contested if it is valid to use trust in the EU to measure utilitarian support while using image of EU to measure affective support. Although these results are giving some hints, it cannot clearly be said if it is wrong or right. Both seem to change similarly in this sudden shock of the crisis, a very special situation. Some additional research is needed to compare the two measurements in a 'normal' economic situation.

Graph 5:



7.2 Perception of crisis

According to economic perceptions theory on public attitudes towards the EU, it can be expected that the perceived economic situation is a good explanation for change in support for the EU. It is noteworthy, that the only indicator in the mean showing a positive change is the perceived national economic situation from 2010 to 2013, which also has a high standard deviation, while at the same time correlating with a loss in trust in the EU. Even though more countries have a positive change in perceived economic change, all countries still have a big loss of trust in the EU.

Image of EU

For the time period from 2007 to 2010, statistically significant correlations can be found for the change of the Image of EU ($M=-9.7$, $SD=5.4$), which correlates at the .05 level with change in perceived personal economy ($M=-0.8$, $SD=8.5$) with a Person's value of $r=.450$, a moderate correlation, while being the strongest correlation in the first period. Thus, countries with a higher decrease of the share of people who perceive the personal economic situation as good also have a higher decrease of the proportion of people who have a positive image of the EU.

In the second period, a correlation can be found between change in Image of EU ($M=-12.2$, $SD=7.3$) with change in perceived national economic situation ($r=.517$ at .01 level), and change in perceived personal economic situation ($r=.687$ at .01 level). So again, the bigger the decrease of the percentage of people who think of their own or national economic situation as very or rather good, the higher the drop of the portion of people in a country who have a positive image of the EU.

7.3 Severity of crisis

Trust in EU

According to the latest economic theories about public attitudes towards the EU, it can be expected that real data, especially debt per GDP and the unemployment rate help explain the loss of support for the EU. In the first period from 2007 to 2010, no correlation can be found. Thus it seems that change in Trust in EU is not related to the change in real economic data.

In the second period, correlations can be found for change in trust in EU ($M=-17.3$, $SD=8.1$) with change in debt per GDP rate ($M=-12.0$, $SD=14.6$) ($r=.608$ at .01 level) and change in unemployment rate ($M=-0.8$, $SD=4.8$) ($r=.428$ at .05 level). Thus in this period, real economic data can explain at least part of the loss of Trust in EU. Especially the debt per GDP rate shows, that the bigger the increase in debt, the higher also the loss of percentage of people in a country who trust in the EU. To a lesser degree the higher the increase of the unemployment rate, the bigger the decrease of the portion of people who trust in the EU.

Graph 7:

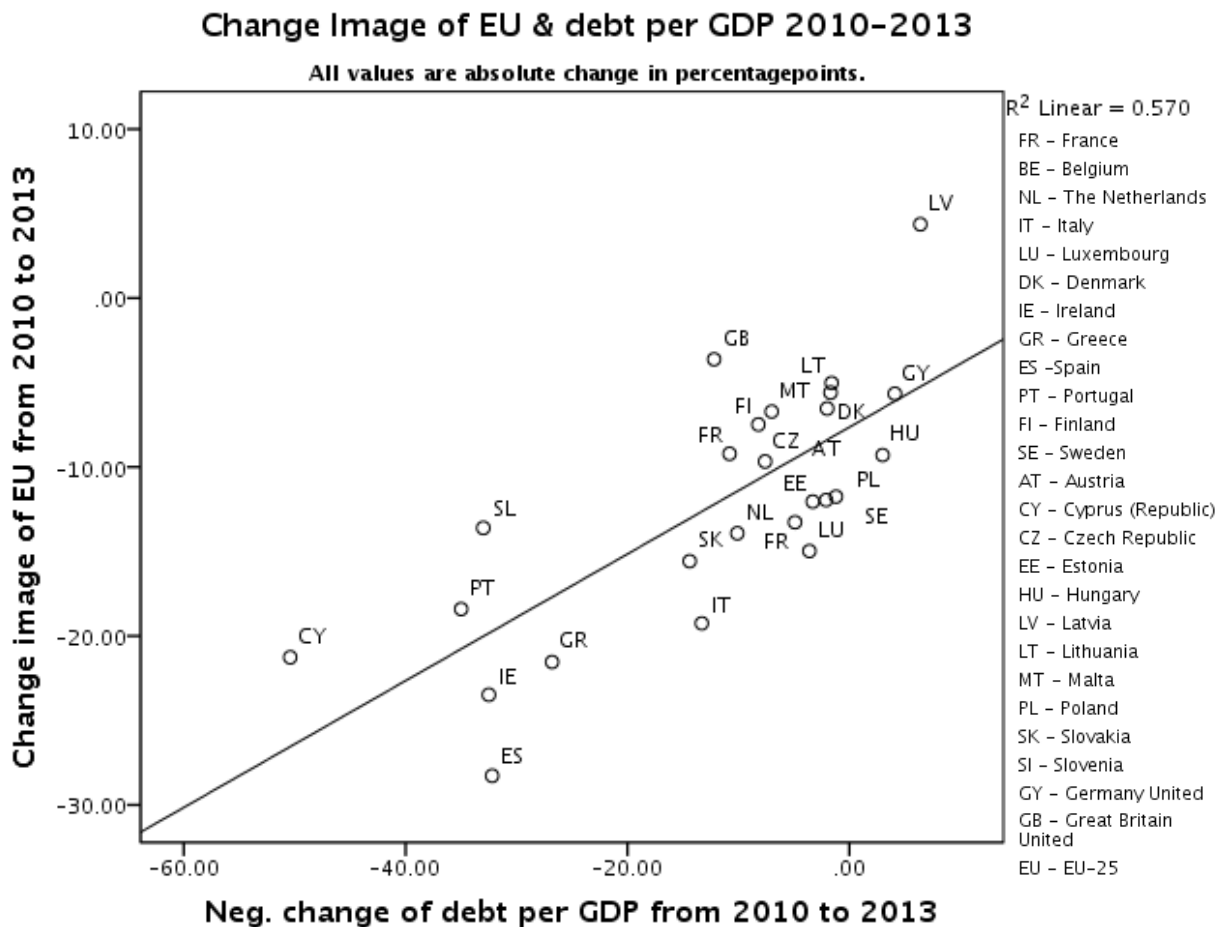


Image of EU

In the first period, Image of EU correlates at the .05 level with change of unemployment rate ($M=-3.8$, $SD=4.4$) with $r=.413$, a moderate correlation.

Thus, countries with a higher rise of unemployment rate also have a higher decrease of portion of people who have a positive image of the EU. Also it seems that the change of unemployment rate was not noticed by the people on average so much, because there is no correlation with change of perceived employment situation. When using the percentage changes, even though it is not thought to give good results, it can be mentioned that there is at least moderate correlation between change of perceived unemployment and change of image of the EU in both time periods.

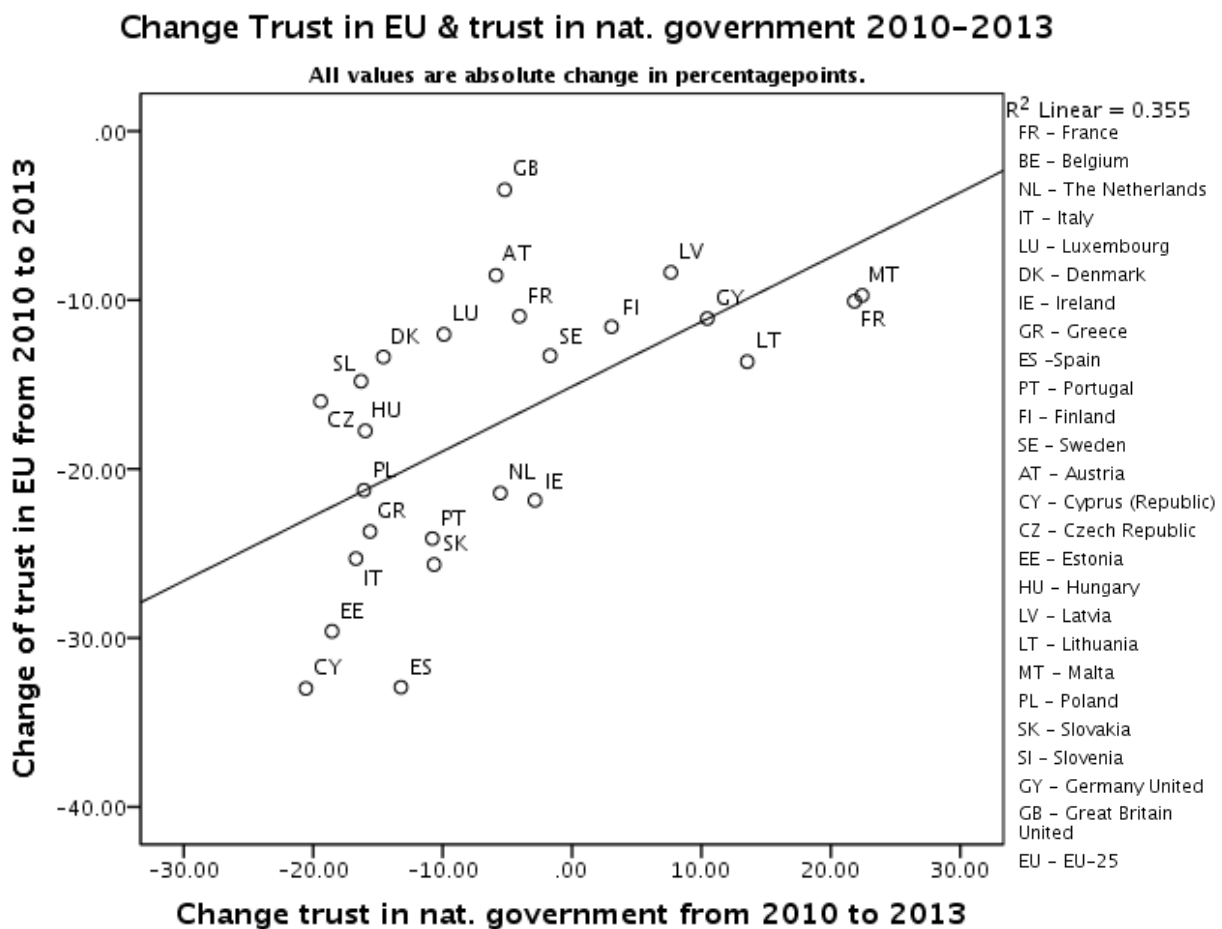
In the second period, the overall highest correlation can be found between change in image of EU ($M=-12.2$, $SD=7.3$) with change of debt per GDP ($r=.755$ at .01 level),

and change in unemployment rate ($r=.685$ at $.01$ level). These are both quite strong correlations. The higher the increase in debt per GDP in one's country, the bigger the decrease of percentage of people who have a positive image of the EU. Since this seems to be the strongest overall correlation, the expectation that real data does play a role again in the crisis turns out to be true, for both Trust in EU and to a bigger degree for Image of EU.

7.4 Logic of extrapolation

According to the logic of extrapolation, it could be expected, that trust in national government is highly related to trust in EU. However, in the first time period from 2007 to 2010, there seems to be no evidence for a relation between neither change of trust in the EU nor change in Image of EU to change in trust in national government.

Graph 8:



But in the second period from 2010 to 2013, change in trust in national government ($M=-5.8$, $SD=12.6$) correlates with both change of Trust in EU ($r=.449$ at $.05$ level),

and stronger with change of Image of EU ($r=.596$ at $.01$ level). An increase of the percentage of people who trust in the national government is related to a smaller loss of the portion of people who tend to trust in the EU, while the bigger the decrease of the proportion of people in one country who tend to trust in national government is related to a bigger decrease of the share of people who tend to trust in the EU. The same holds true for Image of EU, even to a bigger extend. In the second period, the expectation is fulfilled, at least partially with a medium correlational strength. However, it is also not the strongest correlation, contrary to what has been found in many other studies.

8 Conclusion

In order to explain the big variation of decrease of support for the EU in the recent years, this paper has analyzed the different strength of explanatory variables and their correlation with two variables on attitudes towards the EU: Trust in EU and Image of EU. As expected, the real economic data variables like debt per GDP rate and unemployment rate do play a role again in times of crisis. But overall the perceived economic situation, especially the perceived personal economic situations, explain the loss of trust in the EU and the more negative Image of the EU slightly better, taking both periods into consideration. The national-proxies-model seems to play only a minor role in the second period from 2010 to 2013, for both Image of EU and stronger for Trust in EU.

In five of seven cases, stronger correlations were found for the Image of EU variable with the explanatory variables. This was the case with perceived personal economic situation and the real economic factors. Only in the case of trust in national government and perceived national economic situation correlations were stronger for trust in the EU. In the former, this may be the case because the two variables are part of the same question asked, challenging the reliability of the correlation. But even though better correlations are found, it doesn't mean that the Image of EU variable is capturing the support for the EU better than trust in the EU.

No strong conclusions can be drawn on the validity of the measurements of the concepts of utilitarian and affective support. While image of EU seems stronger correlated with the economic changes, it is still unclear if it is just related to the economic crisis or a general correlation. Hence it is difficult to make strong claims

about measurement validity for both Trust in EU and image of EU. Additional comparisons should be made in further research on pre-crisis periods.

For Trust in EU in the first period, none of the explanatory variables correlate. However, in the second period, all but the perceived employment situation correlate, with change in perceived personal economic situation being the strongest variable.

For Image of the EU, overall more and stronger correlations were found. The strongest one in the first period was the change of perceived personal economic situation. In this period however, only the increase of unemployment rate played a role as well, however slightly less strong. All other variables didn't correlate.

In the second period from 2010 to 2013, the strongest correlation was found for the change of the debt per GDP rate, with a quite strong correlation. However, all the variables, apart from perceived employment situation, correlate, the weakest one being the trust in national government. So the higher the increase of the debt per GDP rate in one member state, the bigger the decline of the proportion of people who have a very or fairly positive image of the EU.

The fact that correlations were in general stronger between all factors and image of EU, creates doubt whether that indicator is really capturing the diffuse support towards the institutions. Or at least it indicates that it is not more stable, but rather more unstable than trust in the EU. However, it also just might be that the crisis is such an extra-ordinary event that not only utilitarian considerations, but also basic beliefs and attitudes towards an institution are shaken.

In general it can be said, that the heavier the impact of the financial crisis is on one country, the bigger the decrease of the portion of people who tend to trust the EU or who have a positive image of the EU, while trust in national government plays at most a minor role.

This country level analysis shows that people on member-state average do still evaluate the performance of the EU and base their opinions about and attitudes towards the EU on those evaluations. It cannot be said with certainty whether the economic perceptions are really stronger than the real economic situation, or the other way around. However, it seems that it takes a while for people on country average to digest economic changes. Even though there has been quite some impact of the financial crisis in the first time period studied, only two correlations can

be found with both support variables.

Real economic factors may play a bigger role again in time of crisis, since the media is talking quite a lot about the crisis, frequently using economic data in their publications. So those informations are more easily accessible to citizens than in usual times, when fewer people actually pay attention to those statistics. For future studies it is thus necessary to continue to use real economic data.

It is noteworthy that for none of the time periods for both Image of EU and Trust in EU, the perceived employment situation showed any correlation. This is surprising, since unemployment seems to be something that an individual can easily untangle by reading news or just observing her social surrounding. It seems that, since the real unemployment rate does show correlations, there is some loss of information between the unemployment statistics announced by media and the perception of the employment situation.

To conclude, it can be said that the big variation of change in support between the various member-states can be explained by the strength of the impact of the financial crisis, be it perceived or real, while change in trust in the national government seems to play at most a minor role.

So it seems that worsening economic situations actually lead to a more negative attitude towards the EU. Turning this around, if the economy is getting better again it may also lead to a more positive trend towards support for the EU. However, it cannot be said, that the economic factors are the only ones influencing public perceptions of the EU. Aspects like democratic legitimacy and many others may also have a big influence on support of the EU. So basing all hopes on an improvement of the economy is for sure not a good approach for policies which want to strengthen the support for the EU.

9 Limitations

This research has only looked at three possible factors having potential influence on attitudes towards the EU. There are, of course, many more factors than those used in this research. Since it was concentrating on the influence of the financial crisis, it does make sense to look at economic factors. But also democratic evaluations, attitudes towards immigration, the type of capitalism, and many more can influence

and probably do influence what people think of the EU. Some of those may even influence the variables used in this research, thus intervening with the results. It is necessary to keep in mind that this is more or less just a comparison of the factors used, not indicating that the used variables are the best to be potentially used.

As mentioned before, also the causal arrow between trust in national government and trust in EU can be contested. But since no big influence was found, and also because this goes beyond the scope of this paper, that issue may be resolved in future research.

Also, the time spots and thus the waves of the EB were selected arbitrarily. This may lead to inaccuracy concerning the results, since maybe just temporary changes are taken as general trends. However, the overall trends are so clear, that it probably does not make much of a difference which year is picked. Additionally, maturation may be a problem, since the change observed may be just because of the passage of time between the three observations.

Discussion on method of calculating change variables

In a supplementary step, in addition to the absolute changes, also the relative changes were calculated. Both of the methods have their advantages and disadvantages. Calculating the percentage changes implies, that a change from 100% support to 50% is treated the same as a change from 2% support to 1% support, both a change of 50%. When correlating these change variables, it turns out that most correlations are stronger. However, also some correlations disappear, while others are not existing when using the absolute change variables. Also, some correlations are weaker.

Using the absolute change variables also has its disadvantages, because a change from 100% support to 80% support is treated the same as a change from 40% to 20%. The method using absolute changes does not take the starting value into consideration, as well as historical tendencies that may have led to a certain level of for example trust. A small positive change in one country may already mean a lot in a country with historically low levels of trust.

But the relative change is especially problematic for changes with small numbers. Like a change from 1% support to 10% support registers as a 1000% increase. This becomes especially problematic, because a concluding negative change will have a

very different value in comparison to a positive change, treating increase and decrease very differently. When using absolute changes, a change from 10% to 1% and a change from 1% to 10% are treated the same.

Also, when looking at the distribution of the percentage change variables, it has to be noted, that there are some doubts about normal distribution. Even though there is no significant result when applying the NPAR tests, some of the variables come close to a significant result. Also, when using the Q-Q Plots, a pattern can be seen for some variables, hinting a not so normal distribution. This was not a concern when testing the absolute changes.

Therefore, the decision was made to use the absolute percentage point change variables.

10 Appendix

Appendix 1: Operationalization - Question wording

Dependent variables

1. Trust in EU
 - I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it. (Political parties, national government, national parliament, the EU) [tend to trust, tend not to trust, don't know]
2. Image of EU
 - In general, does the European Union conjure up for you a very positive, fairly positive, neutral, fairly negative or very negative image? (+ DK)

Explanatory Variables

Perception of crisis (logic of rationality)

1. Perception of personal economic situation
2. Perception of national economic situation
3. Perception of employment situation in country
 - How would you judge the current situation in each of the following? (national economy, EU economy, world economy, personal job situation, financial situation of your household, employment situation in OUR country) [very good, rather good, rather bad, very bad, DK]

Logic of extrapolation

1. Trust in national government.
 - See trust in EU question above

Appendix 2: Supplementary correlation of relative changes

Correlations of percentage changes ONE

	Change in trust in EU 2007-2010 in percent	Change in trust in EU 2007-2010 in percent	Change in trust in nat. government 2007-2010 in percent	Change perceived economic situation 2010 in percent	Change personal economic situation in EU 2007-2010 in percent	Change perceived unemployment 2007-2010 in percent	Change debt per GDP 2007-2010 in percent	Change unemployment rate 2007-2010 in percent
Change in trust in EU 2007-2010 in percent	1							
		Pearson Correlation						
		Sig. (2-tailed)						
		N						
Change Image of EU 2007-2010 in percent								
		Pearson Correlation						
		Sig. (2-tailed)						
		N						
Change trust in nat. government 2007-2010 in percent								
		Pearson Correlation						
		Sig. (2-tailed)						
		N						

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Correlations of percentage changes TWO

	Change in trust in EU 2010-2013 in percent	Change in trust in EU 2010-2013 in percent	Change in trust in nat. government 2010-2013 in percent	Change perceived economic situation 2013 in percent	Change personal economic situation in EU 2010-2013 in percent	Change perceived unemployment 2010-2013 in percent	Change debt per GDP 2010-2013 in percent	Change unemployment rate 2010-2013 in percent
Change in trust in EU 2010-2013 in percent	1							
		Pearson Correlation						
		Sig. (2-tailed)						
		N						
Change Image of EU 2010-2013 in percent								
		Pearson Correlation						
		Sig. (2-tailed)						
		N						
Change trust in nat. government 2010-2013 in percent								
		Pearson Correlation						
		Sig. (2-tailed)						
		N						

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

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12 SPSS-Syntax

* This is the syntax for "Impact of the financial crisis on citizens' support for the EU.

* Step ONE: Aggregating the data of relevant EB surveys.

* Step TWO: create a EU-25 case.

* Step THREE: restructure data.

* Step FOUR: run correlations.

* Step FIVE: drawing tables and graphs.

* Step SIX: supplementary: percentage change.

* @@@@. @@@@. @@@@. @@@@. @@@@.

* Step ONE: Aggregating the data of relevant EB surveys.

#####.

*** aggregate commands for 79.3 ***.

*** using country as break factor leads to having east and west germany as well as UK devided. can later be put together. *

```
AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_79.3.sav'
```

```
/BREAK=country
```

```
/v1_nationNR 'nation number' =MEDIAN(country)
```

```
/v2_eu25 'is EU 25'=MEAN(eu25)
```

```
/v3_79_3_survey=FIRST(survey)
```

```
/v4_79_3_trustEU_pcYes 'percentage who trust in EU' =PLT(qa12_4 2)
```

```
/v5_79_3_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(qa13 3)
```

```
/v6_79_3_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(qa12_2 2)
```

```
/v7_79_3_EcoSitNat_per_pcPos 'percentage percieved very and rather good nat eco' =PLT(qa3a_1 3)
```

```
/v8_79_3_EcoSitHouse_per_pcPos 'percentage percieved very and rather good house eco sit' =PLT(qa3a_5 3)
```

```
/v9_79_3_EmploymentNat_per_pcPos 'percentage percieved very and rahter good nat employ situation' =PLT(qa3a_6 3)
```

```
.*79.3 aggregating germany united*.
```

```
*79.3 activating weigh*.
```

```
WEIGHT BY w3.
```

```
AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_79.3-weighted-de.sav'
```

```
/BREAK=cntry_de
```

```
/v1_nationNR 'nation number' =MEDIAN(country)
```

```
/v2_eu25 'is EU 25'=MEAN(eu25)
```

```
/v4_79_3_trustEU_pcYes 'percentage who trust in EU' =PLT(qa12_4 2)
```

```
/v5_79_3_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(qa13 3)
```

```
/v6_79_3_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(qa12_2 2)
```

```
/v7_79_3_EcoSitNat_per_pcPos 'percentage percieved very and rather good nat eco' =PLT(qa3a_1 3)
```

```
/v8_79_3_EcoSitHouse_per_pcPos 'percentage percieved very and rather good house eco sit' =PLT(qa3a_5 3)
```

```
/v9_79_3_EmploymentNat_per_pcPos 'percentage percieved very and rahter good nat employ situation' =PLT(qa3a_6 3)
```

3)

WEIGHT OFF.

79.3 aggregating GB.

WEIGHT BY w4.

AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_79.3-weighted-gb.sav'

/BREAK=cntry_gb

/v1_nationNR 'nation number' =MEDIAN(country)

/v2_eu25 'is EU 25'=MEAN(eu25)

/v4_79_3_trustEU_pcYes 'percentage who trust in EU' =PLT(qa12_4 2)

/v5_79_3_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(qa13 3)

/v6_79_3_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(qa12_2 2)

/v7_79_3_EcoSitNat_per_pcPos 'percentage perceived very and rather good nat eco' =PLT(qa3a_1 3)

/v8_79_3_EcoSitHouse_per_pcPos 'percentage perceived very and rather good house eco sit' =PLT(qa3a_5 3)

/v9_79_3_EmploymentNat_per_pcPos 'percentage perceived very and rather good nat employ situation' =PLT(qa3a_6

3)

.WEIGHT OFF.

*79.3 add weighted Germany and GB as cases to file.

* 79.3 manually define new values for v6 variable.

ADD FILES /FILE=*

/FILE='DataSet14'

/RENAME (cntry_de=d0)

/DROP=d0.

EXECUTE.

ADD FILES /FILE=*

/FILE='DataSet15'

/RENAME (cntry_gb=d0)

/DROP=d0.

EXECUTE.

*#####.

*** aggregate commands for 73.4 ***.

AGGREGATE

/OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_73.4.sav'

/BREAK=v6

/v1_nationNR 'nation number' =MEDIAN(v6)

/v2_eu25 'is EU 25'=MEAN(v29)

/v3_73_4_survey=FIRST(v4)

/v4_73_4_trustEU_pcYes 'percentage who trust in EU' =PLT(v273 2)

/v5_73_4_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(v276 3)

/v6_73_4_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(v271 2)

/v7_73_4_EcoSitNat_per_pcPos 'percentage perceived very and rather good nat eco' =PLT(v96 3)

```

/v8_73_4_EcoSitHouse_per_pcPos 'percentage percieved very and rather good house eco sit' =PLT(v100 3)
/v9_73_4_EmploymentNat_per_pcPos 'percentage percieved very and rahter good nat employ situation' =PLT(v101 3)
.
*73.4 aggregating germany united*.
*73.4activating weigh*.
WEIGHT BY v12.
AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_73.4-weighted-de.sav'
/BREAK=v11
/v1_nationNR 'nation number' =MEDIAN(v6)
/v2_eu25 'is EU 25'=MEAN(v29)
/v4_73_4_trustEU_pcYes 'percentage who trust in EU' =PLT(v273 2)
/v5_73_4_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(v276 3)
/v6_73_4_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(v271 2)
/v7_73_4_EcoSitNat_per_pcPos 'percentage percieved very and rather good nat eco' =PLT(v96 3)
/v8_73_4_EcoSitHouse_per_pcPos 'percentage percieved very and rather good house eco sit' =PLT(v100 3)
/v9_73_4_EmploymentNat_per_pcPos 'percentage percieved very and rahter good nat employ situation' =PLT(v101 3)
WEIGHT OFF.

*73.4 aggregating GB*.
WEIGHT BY v10.
AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_73.4-weighted-gb.sav'
/BREAK=v9
/v1_nationNR 'nation number' =MEDIAN(v6)
/v2_eu25 'is EU 25'=MEAN(v29)
/v4_73_4_trustEU_pcYes 'percentage who trust in EU' =PLT(v273 2)
/v5_73_4_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(v276 3)
/v6_73_4_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(v271 2)
/v7_73_4_EcoSitNat_per_pcPos 'percentage percieved very and rather good nat eco' =PLT(v96 3)
/v8_73_4_EcoSitHouse_per_pcPos 'percentage percieved very and rather good house eco sit' =PLT(v100 3)
/v9_73_4_EmploymentNat_per_pcPos 'percentage percieved very and rahter good nat employ situation' =PLT(v101 3)
WEIGHT OFF.

*73.4 add weighted Germany and GB as cases to file.
* 73.4 manually define new values for v6 variable.
.
ADD FILES /FILE=*
/FILE='DataSet24'
/RENAME (v11=d0)
/DROP=d0.
EXECUTE.

ADD FILES /FILE=*
/FILE='DataSet25'
/RENAME (v9=d0)

```

/DROP=d0.
EXECUTE.

#####*.
*aggregate commands for 67.2 *.

```
AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_67.2.sav'
/BREAK=v6
/v1_nationNR 'nation number' =MEDIAN(v6)
/v2_eu25 'is EU 25'=MEAN(v31)
/v3_67_2_survey=FIRST(v4)
/v4_67_2_trustEU_pcYes 'percentage who trust in EU' =PLT(v164 2)
/v5_67_2_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(v129 3)
/v6_67_2_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(v162 2)
/v7_67_2_EcoSitNat_per_pcPos 'percentage percieved very and rather good nat eco' =PLT(v423 3)
/v8_67_2_EcoSitHouse_per_pcPos 'percentage percieved very and rather good house eco sit' =PLT(v425 3)
```

*employment is not included. therefore taking from eb 68.1 *.

67.2 aggregating germany united.

67.2 activating weigh.

WEIGHT BY v12.

```
AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_67.2-weigh.sav'
/BREAK=v11
/v1_nationNR 'nation number' =MEDIAN(v6)
/v2_eu25 'is EU 25'=MEAN(v31)
/v3_67_2_survey=FIRST(v4)
/v4_67_2_trustEU_pcYes 'percentage who trust in EU' =PLT(v164 2)
/v5_67_2_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(v129 3)
/v6_67_2_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(v162 2)
/v7_67_2_EcoSitNat_per_pcPos 'percentage percieved very and rather good nat eco' =PLT(v423 3)
/v8_67_2_EcoSitHouse_per_pcPos 'percentage percieved very and rather good house eco sit' =PLT(v425 3)
```

WEIGHT OFF.

67.2 aggregating GB.

WEIGHT BY v10.

```
AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_67.2-weigh-gb.sav'
/BREAK=v9
/v1_nationNR 'nation number' =MEDIAN(v6)
/v2_eu25 'is EU 25'=MEAN(v31)
/v4_67_2_trustEU_pcYes 'percentage who trust in EU' =PLT(v164 2)
/v5_67_2_imageEU_pcPos 'percentage who have very and fairly positive image' =PLT(v129 3)
/v6_67_2_trustNatGov_pcYes 'percentage who trust nat Gov' =PLT(v162 2)
/v7_67_2_EcoSitNat_per_pcPos 'percentage percieved very and rather good nat eco' =PLT(v423 3)
/v8_67_2_EcoSitHouse_per_pcPos 'percentage percieved very and rather good house eco sit' =PLT(v425 3).
```

WEIGHT OFF.

*67.2 add weighted Germany and GB as cases to 67.2 file.

* manually define new values for v6 variable.

*gb.

ADD FILES /FILE=*

/FILE='DataSet8'

/RENAME (v9=d0)

/DROP=d0.

EXECUTE.

*germany.

ADD FILES /FILE=*

/FILE='DataSet9'

/RENAME (v11=d0)

/DROP=d0.

EXECUTE.

#####*.

*aggregate commands for 68.1 *.

AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_68.1.sav'

/BREAK=v6

/v1_nationNR 'nation number' =MEDIAN(v6)

/v2_eu25 'is EU 25'=MEAN(v31)

/v7_68_1_EcoSitNat_per_pcPos 'percentage perceived very and rather good nat eco' =PLT(v88 3)

/v9_68_1_EmploymentNat_per_pcPos 'percentage perceived very and rather good nat employ situation' =PLT(v91 3).

68.1 aggregating germany united.

68.1 activating weigh.

WEIGHT BY v12.

AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_68.1-weigh.sav'

/BREAK=v11

/v1_nationNR 'nation number' =MEDIAN(v6)

/v2_eu25 'is EU 25'=MEAN(v31)

/v3_68_1_survey=FIRST(v4)

/v7_68_1_EcoSitNat_per_pcPos 'percentage perceived very and rather good nat eco' =PLT(v88 3)

/v9_68_1_EmploymentNat_per_pcPos 'percentage perceived very and rather good nat employ situation' =PLT(v91 3).

WEIGHT OFF.

68.1 aggregating GB.

WEIGHT BY v10.

AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_68.1-weigh-gb.sav'

/BREAK=v9

/v1_nationNR 'nation number' =MEDIAN(v6)

```

/v2_eu25 'is EU 25'=MEAN(v31)
/v3_68_1_survey=FIRST(v4)
/v7_68_1_EcoSitNat_per_pcPos 'percentage perceived very and rather good nat eco' =PLT(v88 3)
/v9_68_1_EmploymentNat_per_pcPos 'percentage perceived very and rather good nat employ situation' =PLT(v91 3).
WEIGHT OFF.

```

*68.1 add weighted Germany and GB as cases to 68.1 file.

* 68.1 manually define new values for v6 variable.

```

ADD FILES /FILE=*
/FILE='DataSet2'
/RENAME (v11=d0)
/DROP=d0.
EXECUTE.

```

```

ADD FILES /FILE=*
/FILE='DataSet4'
/RENAME (v9=d0)
/DROP=d0.
EXECUTE.

```

```

*#####*.
*#####*.
*merging EB 67.2 and 68.1 *.

```

*manually changing v1 to 100 and 101 for united germany and united gb in all files.

```

STAR JOIN
/SELECT t0.v6, t0.v2_eu25, t0.v4_67_2_trustEU_pcYes, t0.v5_67_2_imageEU_pcPos,
t0.v6_67_2_trustNatGov_pcYes, t0.v7_67_2_EcoSitNat_per_pcPos, t0.v8_67_2_EcoSitHouse_per_pcPos,
t1.v7_68_1_EcoSitNat_per_pcPos, t1.v9_68_1_EmploymentNat_per_pcPos
/FROM * AS t0
/JOIN 'DataSet12' AS t1
ON t0.v1_nationNR=t1.v1_nationNR
/OUTFILE FILE=*.

```

```

SAVE OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/agg_test_67.2AND68.1-weighted.sav'
/COMPRESSED.

```

*making average of v7 from 68.1 and 67.2 *.

```

COMPUTE v7_year2007_EcoSitNat_per_pcPOS=( v7_67_2_EcoSitNat_per_pcPos + v7_68_1_EcoSitNat_per_pcPos
) / 2.

```

```

VARIABLE LABELS v7_year2007_EcoSitNat_per_pcPOS 'per pc nat eco combined for year 2007'.
EXECUTE.

```

* MERGING eb67.2/68.1 WITH EB73.4 *.

*by hand without key-variable *no syntax recorded.

*merging eb67.1/68.2/73.4 with eb 79.3 *.

*by hand without key-variable *no syntax recorded.

* #####.

calculating percentage changes.

*trust in EU.

COMPUTE v4_changeONE=v4_73_4_trustEU_pcYes - v4_67_2_trustEU_pcYes.

VARIABLE LABELS v4_changeONE 'change of trust EU from 2007 to 2010'.

EXECUTE.

COMPUTE v4_changeTWO=v4_79_3_trustEU_pcYes - v4_73_4_trustEU_pcYes.

VARIABLE LABELS v4_changeTWO 'change of trust EU from 2010 to 2013'.

EXECUTE.

*image of EU.

COMPUTE v5_changeONE=v5_73_4_imageEU_pcPos - v5_67_2_imageEU_pcPos.

VARIABLE LABELS v5_changeONE 'change Image EU from 2007 to 2010'.

EXECUTE.

COMPUTE v5_changeTWO=v5_79_3_imageEU_pcPos - v5_73_4_imageEU_pcPos.

VARIABLE LABELS v5_changeTWO 'change Image EU from 2010 to 2013'.

EXECUTE.

* trust nat gov.

COMPUTE v6_changeONE=v6_73_4_trustNatGov_pcYes - v6_67_2_trustNatGov_pcYes.

VARIABLE LABELS v6_changeONE 'change trust nat gov from 2007 to 2010'.

EXECUTE.

COMPUTE v6_changeTWO=v6_79_3_trustNatGov_pcYes - v6_73_4_trustNatGov_pcYes.

VARIABLE LABELS v6_changeTWO 'change trust nat gov from 2010 to 2013'.

EXECUTE.

*situation nat eco.

COMPUTE v7_changeONE=v7_73_4_EcoSitNat_per_pcPos - v7_year2007_EcoSitNat_per_pcPOS.

VARIABLE LABELS v7_changeONE 'change sit nat eco from 2007 to 2010'.

EXECUTE.


```
COMPUTE v7_changeTWO=v7_79_3_EcoSitNat_per_pcPos - v7_73_4_EcoSitNat_per_pcPos.  
VARIABLE LABELS v7_changeTWO 'change sit nat eco from 2010 to 2013'.  
EXECUTE.
```

* additionally change variables for the 2007 dataset to compare.

```
COMPUTE v7_changeONE67.2=v7_73_4_EcoSitNat_per_pcPos - v7_67_2_EcoSitNat_per_pcPos.  
VARIABLE LABELS v7_changeONE67.2 'change of national economic situation comparing 2010 with '+  
'eb67.2'.  
EXECUTE.
```

```
COMPUTE v7_changeONE68.1=v7_73_4_EcoSitNat_per_pcPos - v7_68_1_EcoSitNat_per_pcPos.  
VARIABLE LABELS v7_changeONE68.1 'change of national economic situation comparing 2010 with '+  
'eb68.1'.  
EXECUTE.
```

*situation eco house/pers.

```
COMPUTE v8_changeONE=v8_73_4_EcoSitHouse_per_pcPos - v8_67_2_EcoSitHouse_per_pcPos.  
VARIABLE LABELS v8_changeONE 'change sit personal eco from 2007 to 2010'.  
EXECUTE.
```

```
COMPUTE v8_changeTWO=v8_79_3_EcoSitHouse_per_pcPos - v8_73_4_EcoSitHouse_per_pcPos.  
VARIABLE LABELS v8_changeTWO 'change sit personal eco from 2010 to 2013'.  
EXECUTE.
```

* situation nat unemployment.

```
COMPUTE v9_changeONE=v9_73_4_EmploymentNat_per_pcPos - v9_68_1_EmploymentNat_per_pcPos.  
VARIABLE LABELS v9_changeONE 'change sit nat unemployment from 2007 to 2010'.  
EXECUTE.
```

```
COMPUTE v9_changeTWO=v9_79_3_EmploymentNat_per_pcPos - v9_73_4_EmploymentNat_per_pcPos.  
VARIABLE LABELS v9_changeTWO 'change sit nat unemployment from 2010 to 2013'.  
EXECUTE.
```

*v3 was deleted manually, since unnessesary.

* variables were moved to group them manually.

*adding real economic data *.

*was done manually.

* calculating change vars for real eco indicators.

***** attention, var names changed.

DATASET ACTIVATE DataSet6.

COMPUTE v11_changeONE=v11_2010 - v11_2007.

VARIABLE LABELS v11_changeONE 'change debt over gdp 2007 to 2010'.

EXECUTE.

COMPUTE v11_changeTWO=v11_2013 - v11_2010.

VARIABLE LABELS v11_changeTWO 'change debt over gdp 2010 to 2013'.

EXECUTE.

COMPUTE v12_changeONE=v12_2010 - v12_2007.

VARIABLE LABELS v12_changeONE 'change unemployment rate 2007 to 2010'.

EXECUTE.

COMPUTE v12_changeTWO=v12_2013 - v12_2010.

VARIABLE LABELS v12_changeTWO 'change unemployment rate 2010 to 2013'.

EXECUTE.

* need to invert values.

*because higher unemployment rate is negative, and perception measured with situation positive.

*same with debt per gdp * higher rate indicated worse economy.

* calculating negative change.

COMPUTE v11_debtGDP_changeONE_neg=v11_debtGDP_2007 - v11_debtGDP_2010.

VARIABLE LABELS v11_debtGDP_changeONE_neg 'neg change debt per gdp from 2007 to 2010'.

EXECUTE.

COMPUTE v11_debtGDP_changeTWO_neg=v11_debtGDP_2010 - v11_debtGDP_2013.

VARIABLE LABELS v11_debtGDP_changeTWO_neg 'neg change debt per gdp from 2010 to 2013'.

EXECUTE.

COMPUTE v12_unemRate_changeONE_neg=v12_unemRate_2007 - v12_unemRate_2010.

VARIABLE LABELS v12_unemRate_changeONE_neg 'neg change unemployment rate 2007 to 2010'.

EXECUTE.

COMPUTE v12_unemRate_changeTWO_neg=v12_unemRate_2010 - v12_unemRate_2013.

VARIABLE LABELS v12_unemRate_changeTWO_neg 'neg change unemployment rate 2010 to 2013'.

EXECUTE.

* @@@@.

* Step TWO: create a EU-25 case.

AGGREGATE /OUTFILE='/home/martin/Documents/uni/Enschede1314/Bachelor/DATA/mean-test.sav'

/BREAK=v2_eu25 /v4_67_2_trustEU_pcYes_mean_1=MEAN(v4_67_2_trustEU_pcYes)

```

/v4_73_4_trustEU_pcYes_mean_1=MEAN(v4_73_4_trustEU_pcYes)
/v4_79_3_trustEU_pcYes_mean_1=MEAN(v4_79_3_trustEU_pcYes)
/v4_changeONE_mean_1=MEAN(v4_changeONE)
/v4_changeTWO_mean_1=MEAN(v4_changeTWO)
/v5_67_2_imageEU_pcPos_mean_1=MEAN(v5_67_2_imageEU_pcPos)
/v5_73_4_imageEU_pcPos_mean_1=MEAN(v5_73_4_imageEU_pcPos)
/v5_79_3_imageEU_pcPos_mean_1=MEAN(v5_79_3_imageEU_pcPos)
/v5_changeONE_mean_1=MEAN(v5_changeONE)
/v5_changeTWO_mean_1=MEAN(v5_changeTWO)
/v6_67_2_trustNatGov_pcYes_mean_1=MEAN(v6_67_2_trustNatGov_pcYes)
/v6_73_4_trustNatGov_pcYes_mean_1=MEAN(v6_73_4_trustNatGov_pcYes)
/v6_79_3_trustNatGov_pcYes_mean_1=MEAN(v6_79_3_trustNatGov_pcYes)
/v6_changeONE_mean_1=MEAN(v6_changeONE)
/v6_changeTWO_mean_1=MEAN(v6_changeTWO)
/v7_67_2_EcoSitNat_per_pcPos_mean_1=MEAN(v7_67_2_EcoSitNat_per_pcPos)
/v7_68_1_EcoSitNat_per_pcPos_mean_1=MEAN(v7_68_1_EcoSitNat_per_pcPos)
/v7_year2007_EcoSitNat_per_pcPOS_mean_1=MEAN(v7_year2007_EcoSitNat_per_pcPOS)
/v7_73_4_EcoSitNat_per_pcPos_mean_1=MEAN(v7_73_4_EcoSitNat_per_pcPos)
/v7_79_3_EcoSitNat_per_pcPos_mean_1=MEAN(v7_79_3_EcoSitNat_per_pcPos)
/v7_changeONE_mean_1=MEAN(v7_changeONE) /v7_changeONE67.2_mean_1=MEAN(v7_changeONE67.2)
/v7_changeONE68.1_mean_1=MEAN(v7_changeONE68.1)
/v7_changeTWO_mean_1=MEAN(v7_changeTWO)
/v8_67_2_EcoSitHouse_per_pcPos_mean_1=MEAN(v8_67_2_EcoSitHouse_per_pcPos)
/v8_73_4_EcoSitHouse_per_pcPos_mean_1=MEAN(v8_73_4_EcoSitHouse_per_pcPos)
/v8_79_3_EcoSitHouse_per_pcPos_mean_1=MEAN(v8_79_3_EcoSitHouse_per_pcPos)
/v8_changeONE_mean_1=MEAN(v8_changeONE)
/v8_changeTWO_mean_1=MEAN(v8_changeTWO)
/v9_68_1_EmploymentNat_per_pcPos_mean_1=MEAN(v9_68_1_EmploymentNat_per_pcPos)
/v9_73_4_EmploymentNat_per_pcPos_mean_1=MEAN(v9_73_4_EmploymentNat_per_pcPos)
/v9_79_3_EmploymentNat_per_pcPos_mean_1=MEAN(v9_79_3_EmploymentNat_per_pcPos)
/v9_changeONE_mean_1=MEAN(v9_changeONE)
/v9_changeTWO_mean_1=MEAN(v9_changeTWO) /v11_debtGDP_2007_mean_1=MEAN(v11_debtGDP_2007)
/v11_debtGDP_2010_mean_1=MEAN(v11_debtGDP_2010)
/v11_debtGDP_2013_mean_1=MEAN(v11_debtGDP_2013)
/v11_debtGDP_changeONE_mean_1=MEAN(v11_debtGDP_changeONE)
/v11_debtGDP_changeONE_neg_mean_1=MEAN(v11_debtGDP_changeONE_neg)
/v11_debtGDP_changeTWO_mean_1=MEAN(v11_debtGDP_changeTWO)
/v11_debtGDP_changeTWO_neg_mean_1=MEAN(v11_debtGDP_changeTWO_neg)
/v12_unemRate_2007_mean_1=MEAN(v12_unemRate_2007)
/v12_unemRate_2010_mean_1=MEAN(v12_unemRate_2010)
/v12_unemRate_2013_mean_1=MEAN(v12_unemRate_2013)
/v12_unemRate_changeONE_mean_1=MEAN(v12_unemRate_changeONE)
/v12_unemRate_changeONE_neg_mean_1=MEAN(v12_unemRate_changeONE_neg)
/v12_unemRate_changeTWO_mean_1=MEAN(v12_unemRate_changeTWO)
/v12_unemRate_changeTWO_neg_mean_1=MEAN(v12_unemRate_changeTWO_neg)

```


VARSTOCASES

```

/MAKE v4 FROM v4_67_2_trustEU_pcYes v4_73_4_trustEU_pcYes v4_79_3_trustEU_pcYes
/MAKE v5 FROM v5_67_2_imageEU_pcPos v5_73_4_imageEU_pcPos v5_79_3_imageEU_pcPos
/MAKE v6 FROM v6_67_2_trustNatGov_pcYes v6_73_4_trustNatGov_pcYes v6_79_3_trustNatGov_pcYes
/MAKE v7 FROM v7_year2007_EcoSitNat_per_pcPOS v7_73_4_EcoSitNat_per_pcPos
v7_79_3_EcoSitNat_per_pcPos
/MAKE v8 FROM v8_67_2_EcoSitHouse_per_pcPos v8_73_4_EcoSitHouse_per_pcPos
v8_79_3_EcoSitHouse_per_pcPos
/MAKE v9 FROM v9_68_1_EmploymentNat_per_pcPos v9_73_4_EmploymentNat_per_pcPos
v9_79_3_EmploymentNat_per_pcPos
/MAKE v11 FROM v11_debtGDP_2007 v11_debtGDP_2010 v11_debtGDP_2013
/MAKE v12 FROM v12_unemRate_2007 v12_unemRate_2010 v12_unemRate_2013
/INDEX=Index1(3)
/KEEP=v1_nationNR country v6_shortLabel v1_name v2_eu25 v4_changeONE v4_changeTWO v5_changeONE
v5_changeTWO v6_changeONE v6_changeTWO v7_67_2_EcoSitNat_per_pcPos v7_68_1_EcoSitNat_per_pcPos
v7_changeONE v7_changeONE67.2 v7_changeONE68.1 v7_changeTWO v8_changeONE v8_changeTWO
v9_changeONE
v9_changeTWO v11_debtGDP_changeONE v11_debtGDP_changeONE_neg v11_debtGDP_changeTWO
v11_debtGDP_changeTWO_neg v12_unemRate_changeONE v12_unemRate_changeONE_neg
v12_unemRate_changeTWO
v12_unemRate_changeTWO_neg filter_$ v13_bigNatEcoChangeONE v13_bigNatEcoChangeTWO
v13_bigDebtChangeONE v13_bigDebtChangeTWO v14_bigTrustChangeONE v14_bigTrustChangeTWO
v14_bigIMAGEChangeONE v14_bigIMAGEChangeTWO v4_bigTrustChangeONE v4_bigTrustChangeTWO
v5_bigIMAGEChangeONE v5_bigIMAGEChangeTWO v6_bigNatTrustChangeONE v6_bigNatTrustChangeTWO
v7_bigNatEcoChangeONE v7_bigNatEcoChangeTWO v8_bigChangeONE v8_bigChangeTWO v9_bigChangeONE
v9_bigChangeTWO v11_bigDebtChangeONE v11_bigDebtChangeTWO v12_bigUnemplRateONE
v12_bigUnemplRateTWO
v4_changeONE_perc v4_changeTWO_perc v5_changeONE_perc v5_changeTWO_perc v6_changeONE_perc
v6_changeTWO_perc v7_changeONE_perc v7_changeTWO_perc v8_changeONE_perc v8_changeTWO_perc
v9_changeONE_perc v9_changeTWO_perc v11_changeONE_perc v11_changeTWO_perc v12_changeONE_perc
v12_changeTWO_perc
/NULL=KEEP.

```

* @@@@.

* Step FOUR: run correlations.

* east west germany, gb and norther kicked out.

* test for normal distribution.

* Kolmogorov-Smirnov-Anpassungstest .

NPAR TESTS

```

/K-S(NORMAL)=v4_changeONE v4_changeTWO v5_changeONE v5_changeTWO v6_changeONE v6_changeTWO
v7_changeONE v7_changeONE67.2 v7_changeONE68.1 v7_changeTWO v8_changeONE v8_changeTWO
v9_changeONE

```

```
v9_changeTWO v11_debtGDP_changeONE_neg v11_debtGDP_changeTWO_neg v12_unemRate_changeONE_neg
v12_unemRate_changeTWO_neg
/MISSING ANALYSIS.
```

*Q-Q diagramme.

P PLOT

```
/VARIABLES=v4_changeONE v4_changeTWO v5_changeONE v5_changeTWO v7_changeONE v7_changeONE67.2
v7_changeONE68.1 v7_changeTWO v8_changeONE v8_changeTWO v9_changeONE v9_changeTWO
v11_debtGDP_changeONE_neg v11_debtGDP_changeTWO_neg v12_unemRate_changeONE_neg
v12_unemRate_changeTWO_neg
/NOLOG
/NOSTANDARDIZE
/TYPE=Q-Q
/FRACTION=BLOM
/TIES=MEAN
/DIST=NORMAL.
```

* --> all values have normal distribution

*correlations for change ONE.

CORRELATIONS

```
/VARIABLES=v4_changeONE v5_changeONE v6_changeONE v7_changeONE v7_changeONE67.2
v7_changeONE68.1
v8_changeONE v9_changeONE v11_debtGDP_changeONE_neg v12_unemRate_changeONE_neg
/PRINT=TWOTAIL NOSIG
/MISSING=PAIRWISE.
```

*correlations for change 2.

CORRELATIONS

```
/VARIABLES=v4_changeTWO v5_changeTWO v6_changeTWO v7_changeTWO v8_changeTWO v9_changeTWO
v11_debtGDP_changeTWO_neg v12_unemRate_changeTWO_neg
/PRINT=TWOTAIL NOSIG
/MISSING=PAIRWISE.
```

* @@@@.@@@.@@@.@@@.

* Step FIVE: drawing tables and graphs.

* descriptives.

*filter eu the eu-25 case.

USE ALL.

```
COMPUTE filter_$=(v2_eu25=1).
```

```
VARIABLE LABELS filter_$ 'v2_eu25=0 (FILTER)'.

```

```
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.  
FORMATS filter_$ (f1.0).  
FILTER BY filter_$.  
EXECUTE.
```

*trust EU.

```
SUMMARIZE
```

```
/TABLES=v4_67_2_trustEU_pcYes v4_73_4_trustEU_pcYes v4_changeONE v4_79_3_trustEU_pcYes  
v4_changeTWO BY v6  
/FORMAT=NOLIST NOTOTAL  
/TITLE='Trust in EU'  
/MISSING=VARIABLE  
/CELLS=MEAN.
```

*Image of EU.

```
SUMMARIZE
```

```
/TABLES=v5_67_2_imageEU_pcPos v5_73_4_imageEU_pcPos v5_changeONE v5_79_3_imageEU_pcPos  
v5_changeTWO BY v6  
/FORMAT=NOLIST NOTOTAL  
/TITLE='Positive image of EU'  
/MISSING=VARIABLE  
/CELLS=MEAN.
```

* trust nat. gov.

```
SUMMARIZE
```

```
/TABLES=v6_67_2_trustNatGov_pcYes v6_73_4_trustNatGov_pcYes v6_changeONE  
v6_79_3_trustNatGov_pcYes v6_changeTWO BY v6  
/FORMAT=NOLIST NOTOTAL  
/TITLE='Trust in national government'  
/MISSING=VARIABLE  
/CELLS=MEAN.
```

```
SUMMARIZE
```

```
/TABLES=v7_year2007_EcoSitNat_per_pcPOS v7_73_4_EcoSitNat_per_pcPos v7_changeONE  
v7_79_3_EcoSitNat_per_pcPos v7_changeTWO BY v6  
/FORMAT=NOLIST NOTOTAL  
/TITLE='Perceived nat. economic situation'  
/MISSING=VARIABLE  
/CELLS=MEAN.
```

*personal economic situation.

SUMMARIZE

```

/TABLES=v8_67_2_EcoSitHouse_per_pcPos v8_73_4_EcoSitHouse_per_pcPos v8_changeONE
  v8_79_3_EcoSitHouse_per_pcPos v8_changeTWO BY v6
/FORMAT=NOLIST NOTOTAL
/TITLE='Percentage perceived good personal economic situation'
/MISSING=VARIABLE
/CELLS=MEAN.

```

SUMMARIZE

```

/TABLES=v9_68_1_EmploymentNat_per_pcPos v9_73_4_EmploymentNat_per_pcPos v9_changeONE
  v9_79_3_EmploymentNat_per_pcPos v9_changeTWO BY v6
/FORMAT=NOLIST NOTOTAL
/TITLE='Perceived unemployment situation'
/MISSING=VARIABLE
/CELLS=MEAN.

```

SUMMARIZE

```

/TABLES=v11_debtGDP_2007 v11_debtGDP_2010 v11_debtGDP_changeONE_neg v11_debtGDP_2013
  v11_debtGDP_changeTWO_neg BY v6
/FORMAT=NOLIST NOTOTAL
/TITLE='Debt per GDP'
/MISSING=VARIABLE
/CELLS=MEAN.

```

SUMMARIZE

```

/TABLES=v12_unemRate_2007 v12_unemRate_2010 v12_unemRate_changeONE_neg v12_unemRate_2013
  v12_unemRate_changeTWO_neg BY v6
/FORMAT=NOLIST NOTOTAL
/TITLE='Unemployment rate'
/MISSING=VARIABLE
/CELLS=MEAN.

```

* graphs.

*make eu.25 average trust, image, nat. trust chart.

* Chart Builder.

GGRAPH

```

/GRAPHDATASET NAME="graphdataset" VARIABLES=Year MEAN(v4) MEAN(v5) MEAN(v6) MISSING=LISTWISE
  REPORTMISSING=NO TRANSFORM=VARSTOCASES(SUMMARY="#SUMMARY" INDEX="#INDEX")
/GRAPHSPEC SOURCE=INLINE.

```

BEGIN GPL

```

SOURCE: s=userSource(id("graphdataset"))
DATA: Year=col(source(s), name("Year"), unit.category())
DATA: SUMMARY=col(source(s), name("#SUMMARY"))
DATA: INDEX=col(source(s), name("#INDEX"), unit.category())

```



```

COORD: rect(dim(1,2), cluster(3,0))
GUIDE: axis(dim(3), label("Year of observation"))
GUIDE: axis(dim(2), label("Mean"))
GUIDE: legend(aesthetic(aesthetic.texture.pattern.interior), label(""))
GUIDE: text.title(label("EU average of trust in EU, Image of EU, and trust in nat. government"))
SCALE: cat(dim(3), include("1", "2", "3"))
SCALE: linear(dim(2), include(0))
SCALE: cat(aesthetic(aesthetic.texture.pattern.interior), include("0", "1", "2"))
SCALE: cat(dim(1), include("0", "1", "2"))
ELEMENT: interval(position(INDEX*SUMMARY*Year), texture.pattern.interior(INDEX),
  shape.interior(shape.square))
END GPL.

```

*make a grtaph showing the differences.

*first, select all countries but eu-25.

*AND only one of the change variables.

USE ALL.

COMPUTE filter_\$=(v2_eu25=1 AND Year=1).

VARIABLE LABELS filter_\$ 'v2_eu25=0 (FILTER)'.
 VALUE LABELS filter_\$ 0 'Not Selected' 1 'Selected'.

FORMATS filter_\$ (f1.0).

FILTER BY filter_\$.

EXECUTE.

*then, make a nice graph.

* Chart Builder.

GGRAPH

/GRAPHDATASET NAME="graphdataset" VARIABLES=Year v4 MISSING=LISTWISE REPORTMISSING=NO

/GRAPHSPEC SOURCE=INLINE.

BEGIN GPL

SOURCE: s=userSource(id("graphdataset"))

DATA: Year=col(source(s), name("Year"), unit.category())

DATA: v4=col(source(s), name("v4"))

DATA: id=col(source(s), name("\$CASENUM"), unit.category())

GUIDE: axis(dim(1), label("Year of observation"))

GUIDE: axis(dim(2), label("Percentage who trust in EU"))

SCALE: cat(dim(1), include("1", "2", "3"))

SCALE: linear(dim(2), include(0))

ELEMENT: schema(position(bin.quantile.letter(Year*v4)), label(id))

END GPL.

*same with image of eu.

* Chart Builder.

GGRAPH

```
/GRAPHDATASET NAME="graphdataset" VARIABLES=Year v5 MISSING=LISTWISE REPORTMISSING=NO
/GRAPHSPEC SOURCE=INLINE.
```

```
BEGIN GPL
```

```
SOURCE: s=userSource(id("graphdataset"))
DATA: Year=col(source(s), name("Year"), unit.category())
DATA: v5=col(source(s), name("v5"))
DATA: id=col(source(s), name("$CASENUM"), unit.category())
GUIDE: axis(dim(1), label("Year of observation"))
GUIDE: axis(dim(2), label("Percentage who have positive image of EU"))
GUIDE: text.title(label("Distribution of changes of level of positive image of EU"))
SCALE: cat(dim(1), include("1", "2", "3"))
SCALE: linear(dim(2), include(0))
ELEMENT: schema(position(bin.quantile.letter(Year*v5)), label(id))
```

```
END GPL.
```

*maybe something to show difference in changes.

*change trust one and two.

* Chart Builder.

```
GGRAPH
```

```
/GRAPHDATASET NAME="graphdataset" VARIABLES=v6_shortLabel MEAN(v4_changeONE)
  MEAN(v4_changeTWO)
MISSING=LISTWISE REPORTMISSING=NO
TRANSFORM=VARSTOCASES(SUMMARY="#SUMMARY" INDEX="#INDEX")
/GRAPHSPEC SOURCE=INLINE.
```

```
BEGIN GPL
```

```
PAGE: begin(scale(875px,700px)) SOURCE: s=userSource(id("graphdataset"))
DATA: v6_shortLabel=col(source(s), name("v6_shortLabel"), unit.category())
DATA: SUMMARY=col(source(s), name("#SUMMARY"))
DATA: INDEX=col(source(s), name("#INDEX"), unit.category())
COORD: rect(dim(1,2), cluster(3,0))
GUIDE: axis(dim(3), label("EU-25 countries"))
GUIDE: axis(dim(2), label("absolute percentage change"))
GUIDE: legend(aesthetic(aesthetic.texture.pattern.interior), label(""))
GUIDE: text.title(label("Differences change of trust in all EU-25"))
SCALE: cat(dim(3), include("1.00", "2.00", "3.00", "4.00", "5.00", "6.00", "7.00", "8.00"
, "9.00", "10.00", "11.00", "12.00", "13.00", "14.00", "15.00", "16.00", "17.00", "18.00"
, "19.00", "20.00", "21.00", "22.00", "23.00", "24.00", "25.00", "26.00"))
SCALE: linear(dim(2), include(0))
SCALE: cat(aesthetic(aesthetic.texture.pattern.interior), include("0", "1"))
SCALE: cat(dim(1), include("0", "1"))
ELEMENT: interval(position(INDEX*SUMMARY*v6_shortLabel), texture.pattern.interior(INDEX),
  shape.interior(shape.square))
PAGE: end()
END GPL.
```

*eu25 mean explanatory variables.

* Chart Builder.

GGRAPH

```

/GRAPHDATASET NAME="graphdataset" VARIABLES=Year MEAN(v7) MEAN(v8) MEAN(v9) MEAN(v11) MEAN(v12)
MISSING=LISTWISE REPORTMISSING=NO
TRANSFORM=VARSTOCASES(SUMMARY="#SUMMARY" INDEX="#INDEX")
/GRAPHSPEC SOURCE=INLINE.
BEGIN GPL
PAGE: begin(scale(875px,700px)) SOURCE: s=userSource(id("graphdataset"))
DATA: Year=col(source(s), name("Year"), unit.category())
DATA: SUMMARY=col(source(s), name("#SUMMARY"))
DATA: INDEX=col(source(s), name("#INDEX"), unit.category())
COORD: rect(dim(1,2), cluster(3,0))
GUIDE: axis(dim(3), label("Year of observation"))
GUIDE: axis(dim(2), label("percentages EU-25"))
GUIDE: text.title(label("Level of explanatory variables except trust in nat. government"))
GUIDE: legend(aesthetic(aesthetic.texture.pattern.interior), label(""))
SCALE: cat(dim(3), include("1", "2", "3"))
SCALE: linear(dim(2), include(0))
SCALE: cat(aesthetic(aesthetic.texture.pattern.interior), include("0", "1", "2", "3", "4"))
SCALE: cat(dim(1), include("0", "1", "2", "3", "4"))
ELEMENT: interval(position(INDEX*SUMMARY*Year), texture.pattern.interior(INDEX),
shape.interior(shape.square))
PAGE: end()
END GPL.

```

* scatter plots.

GRAPH

```

/SCATTERPLOT(BIVAR)=v8_bigChangeONE WITH v5_bigIMAGEChangeONE
/MISSING=LISTWISE.

```

2007 - 2010 scatter plot image and personal eco situation (r=.450.

GRAPH

```

/SCATTERPLOT(BIVAR)=v8_changeONE WITH v5_changeONE
/MISSING=LISTWISE.

```

GRAPH

```

/SCATTERPLOT(BIVAR)=v5_changeONE WITH v4_changeONE BY v6_shortLabel (NAME)
/MISSING=LISTWISE
/TITLE='Change Trust in EU & Image of EU 2007-2010'
/SUBTITLE='All values are absolute change in percentages.'.

```

GRAPH

```
/SCATTERPLOT(BIVAR)=v8_changeONE WITH v5_changeONE BY v6_shortLabel (NAME)  
/MISSING=LISTWISE  
/TITLE='Change Image of EU & personal economic situation 2007-2010'  
/SUBTITLE='All values are absolute change in percentages.'
```

GRAPH

```
/SCATTERPLOT(BIVAR)=v12_unemRate_changeONE_neg WITH v5_changeONE BY v6_shortLabel (NAME)  
/MISSING=LISTWISE  
/TITLE='Change Image of EU & unemployment rate 2007-2010'  
/SUBTITLE='All values are absolute change in percentages.'
```

GRAPH

```
/SCATTERPLOT(BIVAR)=v5_changeTWO WITH v4_changeTWO BY v6_shortLabel (NAME)  
/MISSING=LISTWISE  
/TITLE='Change Trust in EU & Image of EU 2010-2013'  
/SUBTITLE='All values are absolute change in percentages.'
```

GRAPH

```
/SCATTERPLOT(BIVAR)=v6_changeTWO WITH v4_changeTWO BY v6_shortLabel (NAME)  
/MISSING=LISTWISE  
/TITLE='Change Trust in EU & trust in nat. government 2010-2013'  
/SUBTITLE='All values are absolute change in percentages.'
```

GRAPH

```
/SCATTERPLOT(BIVAR)=v7_changeTWO WITH v4_changeTWO BY v6_shortLabel (NAME)  
/MISSING=LISTWISE  
/TITLE='Change Trust in EU & perceived nat. economic situation 2010-2013'  
/SUBTITLE='All values are absolute change in percentages.'
```

GRAPH

```
/SCATTERPLOT(BIVAR)=v8_changeTWO WITH v4_changeTWO BY v6_shortLabel (NAME)  
/MISSING=LISTWISE  
/TITLE='Change Trust in EU & personal economic situation 2010-2013'  
/SUBTITLE='All values are absolute change in percentages.'
```

GRAPH

```
/SCATTERPLOT(BIVAR)=v11_debtGDP_changeTWO_neg WITH v4_changeTWO BY v6_shortLabel (NAME)  
/MISSING=LISTWISE  
/TITLE='Change Trust in EU & debt per GDP 2010-2013'  
/SUBTITLE='All values are absolute change in percentages.'
```

GRAPH

```
/SCATTERPLOT(BIVAR)=v12_unemRate_changeTWO_neg WITH v4_changeTWO BY v6_shortLabel (NAME)
```

```

/MISSING=LISTWISE
/TITLE='Change Trust in EU & unemployment rate 2010-2013'
/SUBTITLE='All values are absolute change in percentages.'.

```

GRAPH

```

/SCATTERPLOT(BIVAR)=v6_changeTWO WITH v5_changeTWO BY v6_shortLabel (NAME)
/MISSING=LISTWISE
/TITLE='Change Image of EU & trust in nat. government 2010-2013'
/SUBTITLE='All values are absolute change in percentages.'.

```

GRAPH

```

/SCATTERPLOT(BIVAR)=v7_changeTWO WITH v5_changeTWO BY v6_shortLabel (NAME)
/MISSING=LISTWISE
/TITLE='Change Image of EU & perceived nat. economic situation 2010-2013'
/SUBTITLE='All values are absolute change in percentages.'.

```

GRAPH

```

/SCATTERPLOT(BIVAR)=v8_changeTWO WITH v5_changeTWO BY v6_shortLabel (NAME)
/MISSING=LISTWISE
/TITLE='Change Image of EU & perceived personal economic situation 2010-2013'
/SUBTITLE='All values are absolute change in percentages.'.

```

GRAPH /SCATTERPLOT(BIVAR)=v11_debtGDP_changeTWO_neg WITH v5_changeTWO BY v6_shortLabel (NAME)

```

/MISSING=LISTWISE
/TITLE='Change Image of EU & debt per GDP 2010-2013'
/SUBTITLE='All values are absolute change in percentages.'.

```

GRAPH /SCATTERPLOT(BIVAR)=v12_unemRate_changeTWO_neg WITH v5_changeTWO BY v6_shortLabel (NAME)

```

/MISSING=LISTWISE
/TITLE='Change Image of EU & unemployment rate 2010-2013'
/SUBTITLE='All values are absolute change in percentages.'.

```

* @@@@.

* Step SIX: supplementary percentage change.

*maybe need to calculate additional change vars, taking the percentage change.

* because small changes, when trust or image is already quite low..

* also has disadvantage. because when taking it, it means change from

* 2 to 1 a change of 50% the same as a change from 100 to 50, also change of 50%.

*trust change

```

COMPUTE v4_changeONE_perc=(100/v4_67_2_trustEU_pcYes) * v4_73_4_trustEU_pcYes.

```

```

VARIABLE LABELS v4_changeONE_perc 'Change in trust in EU in percent 2007-2010'.

```

```

EXECUTE.

```

```
COMPUTE v4_changeTWO_perc=(100/v4_73_4_trustEU_pcYes)*v4_79_3_trustEU_pcYes.  
VARIABLE LABELS v4_changeTWO_perc 'Change in trust in EU 2010-2013 in percent'.  
EXECUTE.
```

*image change.

```
COMPUTE v5_changeONE_perc=(100/v5_67_2_imageEU_pcPos)*v5_73_4_imageEU_pcPos.  
VARIABLE LABELS v5_changeONE_perc 'Change Image of EU 2007-2010 in percent'.  
EXECUTE.
```

```
COMPUTE v5_changeTWO_perc=(100/v5_73_4_imageEU_pcPos)*v5_79_3_imageEU_pcPos.  
VARIABLE LABELS v5_changeTWO_perc 'Change Image of EU 2010-2013 in percent'.  
EXECUTE.
```

*trust nat. government.

```
COMPUTE v6_changeONE_perc=(100/v6_67_2_trustNatGov_pcYes)*v6_73_4_trustNatGov_pcYes.  
VARIABLE LABELS v6_changeONE_perc 'Change trust in nat. government 2007-2010 in percent'.  
EXECUTE.
```

```
COMPUTE v6_changeTWO_perc=(100/v6_73_4_trustNatGov_pcYes)*v6_79_3_trustNatGov_pcYes.  
VARIABLE LABELS v6_changeTWO_perc 'Change trust in nat. government 2010-2013 in percent'.  
EXECUTE.
```

*nat eco situation.

```
COMPUTE v7_changeONE_perc=(100/v7_year2007_EcoSitNat_per_pcPOS)*v7_73_4_EcoSitNat_per_pcPos.  
VARIABLE LABELS v7_changeONE_perc 'Change perceived nat. economic situation 2007-2010 in percent'.  
EXECUTE.
```

```
COMPUTE v7_changeTWO_perc=(100/v7_73_4_EcoSitNat_per_pcPos)*v7_79_3_EcoSitNat_per_pcPos.  
VARIABLE LABELS v7_changeTWO_perc 'Change perceived nat. economic situation 2010-2013 in percent'.  
EXECUTE.
```

*personal economic change.

```
COMPUTE v8_changeONE_perc=(100/v8_67_2_EcoSitHouse_per_pcPos)*v8_73_4_EcoSitHouse_per_pcPos.  
VARIABLE LABELS v8_changeONE_perc 'Change personal economic situation in EU 2007-2010 in percent'.  
EXECUTE.
```

```
COMPUTE v8_changeTWO_perc=(100/v8_73_4_EcoSitHouse_per_pcPos)*v8_79_3_EcoSitHouse_per_pcPos.  
VARIABLE LABELS v8_changeTWO_perc 'Change personal economic situation in EU 2010-2013 in percent'.  
EXECUTE.
```

*perceived unemployment.

```
COMPUTE v9_changeONE_perc=(100/v9_68_1_EmploymentNat_per_pcPos)*v9_73_4_EmploymentNat_per_pcPos.  
VARIABLE LABELS v9_changeONE_perc 'Change perceived unemployment 2007-2010 in percent'.  
EXECUTE.
```

```
COMPUTE v9_changeTWO_perc=(100/v9_73_4_EmploymentNat_per_pcPos)*v9_79_3_EmploymentNat_per_pcPos.
VARIABLE LABELS v9_changeTWO_perc 'Change perceived unemployment 2010-2013 in percent'.
EXECUTE.
```

*debt per GDP.

```
COMPUTE v11_changeONE_perc=(100/v11_debtGDP_2007)*v11_debtGDP_2010.
VARIABLE LABELS v11_changeONE_perc 'Change debt per GDP 2007-2010 in percent'.
EXECUTE.
```

```
COMPUTE v11_changeTWO_perc=(100/v11_debtGDP_2010)*v11_debtGDP_2013.
VARIABLE LABELS v11_changeTWO_perc 'Change debt per GDP 2010-2013 in percent'.
EXECUTE.
```

*unemployment rate.

```
COMPUTE v12_changeONE_perc=(100/v12_unemRate_2007)*v12_unemRate_2010.
VARIABLE LABELS v12_changeONE_perc 'Change unemployment rate 2007-2010 in percent'.
EXECUTE.
```

```
COMPUTE v12_changeTWO_perc=(100/v12_unemRate_2010)*v12_unemRate_2013.
VARIABLE LABELS v12_changeTWO_perc 'Change unemployment rate 2010-2013 in percent'.
EXECUTE.
```

*check for normal distribution!.

PLOT

```
/VARIABLES=v4_changeONE_perc v4_changeTWO_perc v5_changeONE_perc v5_changeTWO_perc
v6_changeONE_perc v6_changeTWO_perc v7_changeONE_perc v7_changeTWO_perc v8_changeONE_perc
v8_changeTWO_perc v9_changeONE_perc v9_changeTWO_perc v11_changeONE_perc v11_changeTWO_perc
v12_changeONE_perc v12_changeTWO_perc
```

/NOLOG

/NOSTANDARDIZE

/TYPE=Q-Q

/FRACTION=BLOM

/TIES=MEAN

/DIST=NORMAL.

NPAR TESTS

```
/K-S(NORMAL)=v4_changeONE_perc v4_changeTWO_perc v5_changeONE_perc v5_changeTWO_perc
v6_changeONE_perc v6_changeTWO_perc v7_changeONE_perc v7_changeTWO_perc v8_changeONE_perc
v8_changeTWO_perc v9_changeONE_perc v9_changeTWO_perc v11_changeONE_perc v11_changeTWO_perc
v12_changeONE_perc v12_changeTWO_perc
```

/MISSING ANALYSIS.

*correlate the percentage changes.

CORRELATIONS

```
/VARIABLES=v4_changeONE_perc v5_changeONE_perc v6_changeONE_perc v7_changeONE_perc  
v8_changeONE_perc v9_changeONE_perc v11_changeONE_perc v12_changeONE_perc  
/PRINT=TWOTAIL NOSIG  
/MISSING=PAIRWISE.
```

CORRELATIONS

```
/VARIABLES=v4_changeTWO_perc v5_changeTWO_perc v6_changeTWO_perc v7_changeTWO_perc  
v8_changeTWO_perc v9_changeTWO_perc v11_changeTWO_perc v12_changeTWO_perc  
/PRINT=TWOTAIL NOSIG  
/MISSING=PAIRWISE.
```