Measuring Civic Competence in Europe[1]

Bryony Hoskins, CRELL, Joint Research Center, European Commission, Bryony.hoskins@jrc.it
Ernesto Villalba, CRELL, Joint Research Center, European Commission, Ernesto.villalba@jrc.it
Daniel Van Nijlen, Centre for Educational Effectiveness and Evaluation, Katholieke Universiteit Leuven, Daniel.VanNijlen@ped.kuleuven.be
Carolyn Barber, University of Missouri-Kansas City, Barberce@umkc.edu

Abstract

Measuring Civic Competence in Europe is part of a process to establish and monitor the learning outcomes needed to facilitate the development of active citizens in Europe. This article is an exploration of how civic competence can be measured and the results of these measurements across Europe and internationally. It describes what civic competence is in terms of the attitudes, values, knowledge and skills required and how it can be calculated using existing data from international tests. The data and scales used are from the IEA 1999 international Civic Education study of 14-year-olds in school. It clearly highlights the limitations of the data coverage for civic competence and explains which aspects of civic competence are not available and the implication for measuring civic competence. Following this, the Civic Competence Composite Indicator (CCCI) is built using a framework comprised of 4 dimensions; Citizenship values, Social justice (both values and attitudes), Participatory attitudes and Cognitions about democratic institutions. Statistically the composite indicator was proved to be robust.

The results of the CCCI ranking do not show clear geographical patterns. There is some tendency for Southern-European countries to be in the upper part of the ranking with Cyprus and Greece doing particularly well in the overall CCCI. For the four dimensions the results across Europe show that in countries with long standing stable democracies, where there are high levels of adult participation, young people's attitudes towards participation and Citizenship values are low. The opposite is true for less stable and more recent democracies

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that can be found in south and east Europe: in these countries young people have greater Participatory attitudes and values. North and West Europe fared better in the results for cognition about democratic institutions and the values of Social justice. In this case it was Eastern European countries that had low scores. The lack of a history of democratic citizenship education and the experience of Communism are likely to be contributory factors.

Keywords: *Civic competences, Europe, Composite indicator, active citizenship, democracy*

Introduction

Within European education and social policy, the promotion of active citizenship has been considered to be one tool to enhance democracy and social cohesion. It has been a strand of the social cohesion element of the Lisbon strategy within the Education and Training Work Programme (European Commission 2001). The method used for monitoring progress made towards the Lisbon strategy in the field of education is through the use of indicators. In 2005 the research project on which this paper is based, Active Citizenship in a Learning Context, began in order to develop exploratory research on indicator development in the field of active citizenship.

The first major output from this research project was the development of a measurement of active citizenship in Europe: the Active Citizenship Composite Indicator ACCI (Hoskins et al. 2006) based on 63 indicators from existing data, predominantly European Social Survey data from 2002. A question raised from the production of this composite indicator was how did citizenship relate to learning and in particular what were the learning outcomes required for an individual to become an active citizen? This paper addresses this question, exploring the learning outcomes – referred to in this paper as civic competence – the knowledge, skills, attitudes and values needed to enable individuals to become an active citizen.

Competences are a combination of different phenomena, including dimensions that include the cognitive dimensions (knowledge and skills) and affective dimensions (attitudes and values). To have a high degree of civic competence one needs to have a high level on all these dimensions and, as such, the system of a composite indicator measuring different items and combining them together provides and an overview of this. It is of course necessary to also examine the levels of each different dimension and to understand in which dimensions countries are performing well and on which dimensions they need to do more work. It is also recognised that using composite indicators is a tool for monitoring progress and communicating a topic within policy, practice and civil society. It does not replace the in-depth and detailed research to understand and explain this phenomenon.

Civic competence has recently become the focus of European Union education policy where European Union Countries have agreed that this competence is one of the 8 key competences that are stated to be a necessity for economic success in Europe and greater social inclusion (Education Council 2006). The 2007 Council Conclusions on 'A Coherent framework of indicators and benchmarks' (Education Council 2007) identified that civic competence, the individual learning outcomes required for active citizenship, should become one of the 16 indicators used to measure progress on the education and training Lisbon Strategy. This paper addresses the question of how to measure civic competence using the IEA 1999 CivEd data, in light of the fact that the European Commission is funding part of the cost of European Countries to participate in the future IEA survey on this topic (International civic and citizenship education study 2009).

Basing the production of indicators on existing data has some limitations in terms of what can be measured. There is a gap between what we would like to be able to measure and what is available from existing data sources, and the outcome is that it can cause the exact operationalisation of the composite to differ from the intended measurement. This, to some extent, is the case for a civic competence composite indicator in which the selection of indicators is heavily based on the existing international data in this field, the IEA 1999 survey on civic education (CivEd 1999) that tests 14 years old in school. Thus, the civic competence indicator cannot measure civic competence in the generic sense or pertain to the adult population. It is only representative of students aged 14 in school in the 28 participating countries. The civic competence indicator measures the dimensions of civic competence that were considered of interest to this survey and not all dimensions of civic competence, as will be explained in detail later in this paper. In these circumstances, the research in this research should be considered to be exploratory.

Civic competence in the context of active citizenship

In order to understand the reason why we are researching civic competence, it is necessary to comprehend the working model of active citizenship in a learning context that describes the wider project on which this research is based. Overall levels of education have been associated with higher levels of participation (Putnam 2000), but Campbell (2007 p. 26) points out that despite this close association the connection between learning and participation remains a 'black box'. In the overall research project we are trying to identify what are the learning inputs and learning outcomes that are needed to facilitate active citizenship. This relationship is represented in the model below (Figure 1 based on an original model from NFER 2006 for this project). In this model civic competence is understood as the ability required for enabling individuals to become active citizens. Active citizenship has been defined as: 'Participation in civil society, community and/or political life, characterised by mutual respect and

non-violence and in accordance with human rights and democracy' (Hoskins, 2006). The model presents the ideal relationship between learning, civic competence and active citizenship where the learning develops certain civic competences that drive active citizenship. Civic competence is the third column along in this model and this competence is developed from the second column, i.e. the learning input that derives from varied types of learning (formal, non-formal or informal learning environments). The learning inputs refer to the definition of Education and Training for active citizenship from this project, which are the Learning opportunities (formal, non-formal and informal) that occurs at any stage of the life cycles that facilitate or encourage active citizenship (Hoskins 2006b). In an ideal world, as the model suggests, it could be expected that civic competences (column 3) would lead to an individual becoming an active citizen (column 4). However, researching this relationship is not the focus for this article.

[Take in Figure 1 about here]

The article is divided into 6 sections. Section 2 defines civic competence using European and international lists of the knowledge, skills, attitudes and values used to measure civic competence. Section 3 describes the data we will use to measure civic competence, which in this paper is the IEA CivEd 1999 data set, and how the data covers the different dimensions of civic competence. Section 4 describes the development of the framework and how the scales included in the civic competence framework were created and explains the methodology used to create the composite indicator, indicating the standardisation as well as the weighting procedure. The results of the composite indicator for civic competence and the four domains are presented in section 5. Section 6 draws the conclusions of this research.

What is civic competence?

A competence is a combination of knowledge, skills, attitudes and values which enable a person to perform real world tasks such as active citizenship. In order to understand what knowledge, skills, values, attitudes to include within the framework of civic competence it was necessary to establish what exactly civic competence is. Civic competence was defined in the European Council and European Parliament's (2006) Recommendation on Key Competences for Lifelong Learning. It highlights the importance of knowledge of the development of, and institutions that reflect, democracy, justice, equality, citizenship, and civil rights. It draws attention to the skills of communication, problem solving, critical and creative reflection, decision making, responsibility, respect for other values including awareness of diversity and the attitudes and values of solidarity, human rights, equality, and democracy (Education Council 2006).

The Council of Europe (CoE), who has focused in their work on the learning strategies for democratic citizenship -which clearly relates to the development of civic competence and active citizenship- have created a number of classifications of competences which are necessary for the individual outcomes from education for democratic citizenship. The first of CoE lists was produced by Veldhuis (1997), combining political, social cultural and economic dimensions, and then Audigiers (2000) who highlights cognitive competences in the legal system and a number of practical skills relating to participation in political contexts and multicultural communities. The first of these lists, by Veldhuis (1997), is similar to the (1998) European Commission text in the way that it includes the economic dimension and labour market. Veldhuis' (1997) list differs in its reference to cultural heritage and the introduction of the notion of the need for basic skills. The second list, prepared by Audigier (2000), brings in the new dimensions of procedural and legal competence, conflict resolution and the notion of 'capacity for action'. From the research on European education systems, Eurydice has noted that in general across Europe formal citizenship education is orientated to teaching "political literacy, critical thinking, the development of certain attitudes and values and active participation" (Eurydice, 2005).

Various national lists of civic competences have been drawn up in the UK and in the US, which include knowledge of their own national systems. In the UK the Crick report (1998), which was influential in the setting up of citizenship curriculum in schools in England, highlighted the learning outcomes that were necessary: key concepts, values and dispositions, skills and aptitudes, knowledge and understanding. It provides an extensive list of these attributes and highlights the ability for an individual to change their mind, and courage and commitment towards certain values. In the US the term dispositions is used. For example, the National Center for Learning and Citizenship at the Education Commission of the States highlights the dispositions regarding independence, responsibility and respectfulness towards others, as well as skills that are described as either thinking skills or participatory skills (Torney-Purta and Vermeer Lopez 2006 p.12).

OECD projects in this field have been developing individual indicators of civil and social engagement and analysed correlations with overall levels of education. The focus here has been on education as a whole as the driver for civil and social engagement. This would be the equivalent for us of examining civic competence and active citizenship as a single set of indicators together and then comparing this to levels of formal education. Using this approach, consultants for OECD (INES Network B) have created lists of learning outcomes that include both competences and practices together under the terminology of civic literacy defined as 'knowledge, values, attitudes and practices that individuals acquire over the course of their life to become citizens participating in democratic societies' (Baye &

Mainguet 2006). The aspects of a competence mentioned in the lists are knowledge, skills and values such as responsibility, trust in institutions and critical thinking (Baye & Mainguet 2006), and bureaucratic competence, civic skills such as running meetings, giving speeches and writing letters, and cognitive capacity (Campbell 2006).

From all these various lists of civic competence it can be said that this competence requires a very broad range of knowledge, skills, attitudes and values. Some of the lists contain actual participation, whilst other lists recognise behaviour as distinct phenomena. Trust is the most controversial concept to be covered in the lists, with those influenced by political science and social capital literature more likely to opt in for this aspect, and those influenced more by education literature preferring to emphasise a lack of trust in institutions to keep institutions accountable. Further distinctions between the lists were largely based on whether to take into account the economic sphere and basic skills like reading and writing. The remaining differences predominantly result from adding greater precision and detail to the different aspects of the competences. Overall the lists of civic competence are marked by their similarity and continuity rather than differences.

Veldhuis and Abs (2006) list developed for this project has been used as the reference framework for our model of civic competence. The list below is the final list that we have developed to meet our definition of civic competence. It is based on the refined list of Veldhuis and Abs (2006) but with our own refinements. This provided us with a good basis to start exploring the existing datasets.

[Insert Table 1 about here]

We decided not to use the concept of trust within our list of civic competence due to the complication with using trust as an indicator in Europe. Mascherini et al. (2007) found by analysing European Social Survey data, the levels of trust are high for people who participate in northern Europe. However, the opposite is true for most of Southern and Eastern Europe where low levels of trust are present amongst European individuals who engage (Mascherini et al. 2007). This could well relate to the length and stability of democracy in south and east Europe. For example, Torney-Purta, Richardson and Barber (2004), using the IEA 1999 CivEd international data, show that the levels of trust reflect the current political climate of that country and that in countries with less stable democracies, such as Bulgaria, Chile and Colombia, levels of trust were lower and the more civic knowledge you have in these countries, the less likely that you were to trust. Both Campbell (2006) and Torney-Purta, Richardson and Barber (2004) discuss that although democracy requires that its leaders are not given too much trust in order to maintain the checks and balances of their power, some level of trust in the system is necessary for cohesion and

stable democracy, and this is referred to as a 'threshold of trustworthiness'. However, this optimal level of trust has not been established (Campbell 2006) and it is therefore not obvious how an indicator based on a scale of trust can be implemented in practical terms. For example, is self-reported trust in institutions all of the time, better or worse than claiming never to trust institutions?

Data

In this paper, we will explore one data source, the IEA 1999 CivEd survey. The reason for this choice is that it is the only existing international data source collected from representative national samples that tests knowledge, skills and values, attitudes and intended behaviour relating to civic competence. The 1999 CivEd survey was administered in 28 countries. The aim of this study was to 'understand how young people are prepared to undertake their role as citizens' (Torney-Purta et al. 2001). It tested students at schools in grade 8 (with an average age above 13.5 years). The content domains of the study's framework were:

1. Democracy/citizenship,

2. National identity/international relations

3. Social cohesion and identity.

"Democracy/ citizenship" referred to the meaning of democracy and the role and practices of its institutions. "National identity/international relations" referred to national identity and loyalty and the implications of this for international relations. "Social cohesion and identity" referred to young people's attitudes towards discrimination and feelings towards their country. Within the three domains horizontal abilities were tested on their knowledge of the content, skills in interpretation, concepts, attitudes and actions. Knowledge and skills items were coded as correct or incorrect responses in the "civic knowledge test" whilst concepts, attitudes and actions were administered using a four point scale (e.g. not important, somewhat unimportant, somewhat important and very important). Other test items included questions that the IEA referred to as either confidence in the classroom participation or classroom climate.

CivEd developed scales

Our model builds on previous analysis of IEA CivEd data. In order to be useful, measurements need to be reliable and thus, it is crucial to be able to evaluate the reliability of measurements. Individual items always suffer from a certain measurement error, but when several items tap

the same construct, putting them together in a well-constructed scale will result in a more reliable measurement of the construct. This idea can be compared to using a crude balance to measure an object's weight. If it is only measured once (individual item), the result will have large errors, but weighing it several times (several items) and using the average of the different results (scale) will give a more reliable indication of the object's weight. Moreover, for a single item from a paper-and-pencil survey it is impossible to evaluate the reliability of the measurement. If several items are used, the internal consistency of the result can be evaluated using measures of reliability such as Cronbach's Alpha. The IEA found an acceptable reliability of the scales in each country. Finally, the individual items in the questionnaire are to be considered as a sample of the whole population of possible items to measure a construct.

IEA (Schultz and Sibberns, 2004) developed 11 scales within the domain of "concepts, attitudes and actions" and two additional scales ("Knowledge of content" and "Skills in interpretation of material with civic or political content"), that were aggregated into one as the "total civic knowledge". In addition to these 13 (+ 1) scales the technical report identified another seven scales that were not developed. Five of these seven scales were later developed by Husfeldt, Barber, & Torney-Purta (2006). In the same publication they identified and created three new scales with CIVED data related to expected political participation and internal political efficacy (see table below). In addition, we developed an extra scale referring to attitudes towards Democratic rights. We used these different scales in order to fulfil the data needs of our framework.

[Insert table 2 about here]

Development of a model for a composite indicator on Civic Competence

The next step was to compare the dimensions of civic competence to the data available in the CivEd survey. This will provide an indication of the extent to which CivEd covers the different dimension of civic competences. The different dimensions of civic competence involve aspects that are difficult to cover fully within conventional international surveys (using paper and pencil tests). Moreover, as is normal with large-scale international surveys, the exact details of all the items for knowledge and skills scales are not publicly available, so that they can be reused, and therefore it is not easy to determine if those items are fully covering the dimensions described.

The dimensions of civic competence are compared to the IEA scales mentioned above. If there was no satisfactory congruence between the dimensions and the scales, we explored if there was some correspondence with specific items measured in the survey. The result of the content analysis showed that knowledge and skills domains are mainly covered by different aspects of

the scales directed to assess "knowledge of the content" (KNOWL) and "skills in interpretation" (SKILS) (measured by IEA through the 'civic knowledge test'). The skills dimension focuses to a large extent on interpreting the media. The affective dimensions are covered by the scales on concepts, attitudes and actions of the student questionnaire.

Most dimensions of civic competence are only partially covered. Aspects related to civic knowledge of one's own country are not covered in the IEA study, for example national history and cultural heritage. However, knowledge of basic institutions of democracy and key elements of the political and legal system are relatively well covered.

The dimension of skills has the least coverage. Skills that require interaction, for example, civic skills, such as "to build coalitions, to cooperate", or "to resolve conflict peacefully", cannot be covered within international surveys because it would require observations to test these skills. The loss of these elements from the civic competence composite indicator is quite significant because of their clear importance to being able to become an active citizen. The skills that refer to "to be able to live and work in a multicultural environment" require other types of methodology and questions to those used in CivEd and highlight further the limitations of what can be measured as civic competence.

In the case of attitudes, values and intended behaviour we found 16 scales to be relevant to the dimensions of civic competence. These scales are: CTCON, CTSOC, DEM, TRUST, WOMRT, MINOR, CONFS, SCON, POLAT, VOTE, COMM, PROTE and EFFIC (see table 2). These scales identified partially cover many of the dimensions of the affective component in civic competence. Some dimensions are covered by several scales, as for example "respect for the human rights" is covered by DEM, WOMRT, MINOR and IMMIG. Other dimensions are poorly covered, for example, only one item (item B1 on section on Good citizenship) can be said to cover the dimension "acceptance of the rule of law". Also in the case of "strive for justice and equality and equal treatment of citizens" some items were found to be covering aspects of the dimension but no scale covered the whole of it.

Therefore, the operational measurement of civic competence that we attempt with the composite indicator does not contain all the dimensions identified within civic competence. However, it partially covers many of them in all the different domains of the cognitive and affective components. In terms of "knowledge", our composite indicator covers mainly knowledge of basic concepts of democracy and key elements of the political and legal system. "Skills" is the domain that is covered the least, since many of its dimensions require other types of methodology to be assessed and the skills covered in the tests were more cognitive than behavioural. The missing skills that are of particular importance for having civic competence, such as building coalitions, cooperating, resolving conflict peacefully and

communicating will reduce the operationalised measurement of civic competence. The affective component with the domains of values, attitudes and dispositions is covered in most of its dimensions but only partially.

Towards a measurement model

In order to develop a measurement model for a composite indicator we used factor analysis. Table 3 presents the loadings of the rotated solution. Each column shows the factor loadings for each of the scales on the components with eigenvalues greater than one. The eigenvalue reflects the amount of variance in the data that is captured by the component or the factor. The list of scales is organised according to the structure of our hypothetical measurement model. The table presents in bold the highest factor loadings for each scale and in italic other loadings that might be considered for interpretation (above 0.35). As can be seen from the factor loadings, the underlying structure of the data does not correspond fully with our hypothetical model. The domain of values is divided into two components, as was the case in our hypothetical model. Intended behaviour seems to emerge from the data also; however, the domain "attitudes" is somehow blurred.

[Insert Table 3 about here]

Methodology

The measurement model, emerging from the FA and the interpretation of the results is represented in figure 2. The measurement model for civic competence has four components: **Citizenship values** (*cval*), **Social justice** (*socj*), **Participatory attitudes** (*parta*) and **Cognition about democratic institutions** (*cogd*). *cval*, *socj* and *parta* are arguably mainly related to the affective side of civic competence, while the construct *cogd* is mainly related to the theoretical cognitive domain.

The reliability for each of the components is presented in Table 4. The reliability of the four constructs that emerged from the factor analysis is acceptable given the fact that only a limited number of scales are included in each construct. Table 4 shows two values of Cronbach's alpha, one calculated using data from all the countries in CivEd, and the other using only the European Union countries. The table shows that the four identified domains have acceptable reliability both at an international and European level. *cval* had a more acceptable reliability if TRUST was not considered (see Hoskins et al. 2008). For this reason, because of the theoretical and measurement arguments presented above, and because the results of the FA had comparable results but were more difficult to interpret when TRUST was included, we decided that the composite indicator should not be calculated using the scale TRUST.

The reliability of *cogd* increased slightly to 0.829 if the scale on democratic rights (DEM) was excluded. However, the reliability with DEM included was very satisfactory and the inclusion of DEM provides an innovative approach to the measurement of the cognitive aspects of civic competence. Making a trade-off between these two elements, it was decided to keep DEM in the subdomain *cogd*.

[Insert Table 4 about here]

In our model no extra layer in the structure dividing the measurement model into affective and cognitive component was created. A factor analysis on the four subdomains indicated that it was not possible to make a clear-cut distinction between the affective and cognitive subdomains. The FA showed e.g. that the subdomain Social Justice was linked to the subdomains on values and attitudes, but also had a clear link to the cognitions subdomain.

Creating a composite indicator for civic competence

Nardo et al. (2005) define a composite indicator as "a mathematical combination of individual indicators that represent different dimensions of a concept whose description is the objective of the analysis" (p. 7). In the current paper the concept of civic competence is summarised into one number that encompasses different dimensions. To create this composite indicator the methodological guidelines of Nardo et al. (2005) were followed.

In order to create the composite indicator for civic competence we used thirteen scales developed with CivEd data that encompass 46 Likert-type items from the student questionnaire on "student concepts, attitudes and actions" and 38 multiple-response items from the "civic knowledge test". We used seven scales developed by IEA (CTCON, CTSOC, WOMRT, CONFS, POLAT, KNOWL, SKILS). In addition we used five scales developed by CEDARS: two scales identified but not developed by IEA (MINOR, SCON), and three scales identified by CEDARS (EFFIC, COMM, VOTE). We also developed two extra scales, one identified by IEA (SCON) and one identified by the authors (DEM). All the scales have been created using Confirmatory Factor Analysis conducted within small groups of related items followed by IRT modelling.

Due to the different scaling procedures the scales had different units of measurement. To combine the scales in a composite it is necessary that the scores are comparable and an additional standardisation procedure was necessary. Different standardisation techniques are available (see e.g. Nardo et al., 2005). The basic standardisation technique that will be applied is the Min-Max approach. Using this method, all the indicators have been rescaled and the standardised values will lie between 0 and 1. In a later phase, in order to assess the robustness of the composite indicator, also the Z-score standardization will be applied as an alternative

method. For more details see Hoskins et al. (2008).

Once the data has been standardised it is possible to start the process of aggregation. The resulted score of an aggregation procedure is the linear weighted sum of the normalized domains, domains or scales. This means that the different scales have to be combined to create the different nodes of the structure and this combination is adjusted by the weights given to each of the scales. In the present case we used mainly an equal weighting scheme with a simple additive method. This means that, for example, the four included domains have the same weight for calculating the 'civic competence composite indicator'.

Figure 2 shows the summary structure of the civic competence composite indicator, together with a detailed listing of the items that are included in the scales. The ovals below the scales show the technique used to create each scale as well as the weighting structure to create the composites.

[Insert figure 2 about here]

To obtain the rankings for the countries presented in the next section of the article the individual scores are aggregated using the sample weights as indicated by the IEA technical report. In this way it is possible to obtain unbiased estimates of the country scores for the composite indicator.

Because the quality of a ranking system depends on the soundness of its assumptions, good practice requires evaluating confidence in the system and assessing the uncertainties associated with its development process. To ensure the validity of the messages conveyed by this composite indicator, it is important that the sensitivity of the country rankings to the structure and aggregation approach be adequately studied. Using sensitivity analysis, we can study how variations in rankings derive from different sources of variation in the assumptions. The sensitivity analysis was undertaken with respect to the following sources of uncertainty: the structure of and the standardization technique. For more details on the robustness analysis see Hoskins et al. (2008).

Results

The presentation of the results will focus on the civic competence composite indicator and the four domains that have been identified within this framework: **Citizenship values**, **Social justice** (V/A), **Participatory attitudes** and **Cognitions about democratic institutions**.

Country rankings

[Insert figure 3 and table 5 about here]

For the overall Civic Competence Composite Indicator there is a mixed pattern of results with no strong regional trends. There is some tendency for Southern-European countries to be in the upper part of the ranking with Cyprus and Greece doing particularly well in the overall CCCI and in the domains of **Citizenship values, Participatory attitudes and cognition about democratic institutions**, but a Northern-European country like Norway can also be found in top part of the overall CCCI ranking along with some former communist countries such as Poland, Slovakia and Romania. Other Northern-European countries, such as Denmark and Finland, are found in the lower middle part of the CCCI rankings together with some other former communist countries such as Lithuania, Slovenia and Hungary. Two Baltic States close the CCCI rankings, together with Belgium (FR) (see figure 3).

Greece and Cyprus, who out perform the rest of Europe and the rest of the world in the overall composite and in almost all the dimensions, have a number of commonalities, such as a common cultural heritage from the classical period when democracy was first introduced in Greece, recent instability and transition (back) to democracy. For Greece this was in 1974, and Cyprus became an independent country (from the UK) in 1960 but experienced a military coop between 1967-1974. Both countries continue to have military tensions with Turkey over the territory held by that country in northern Cyprus since their invasion in 1974. Both countries in 1999 had civics in the curriculum in primary and secondary education in schools and have in the past had tendencies towards patriotic education and to an extent, particularly in Cyprus, still focus on Greek national history and Greek Cypriot national identity (Makrinioti and Solomon 1999) and (Papanastasiou and Koutselini-Ioannidou 1999). However, it very difficult to say exactly why these two countries develop higher levels of civic competence in young people and further research is clearly needed to understand this.

The 4 dimensions

[Insert figure 4]

Concerning the four dimensions of the composite (**Cognition about democratic institutions**, **Participatory attitudes**, **Social justice** and **Citizenship values**) there were some regional results that deserve further exploration. Cyprus, Greece, Finland, Italy, Slovakia and Poland are high performing countries for the dimension of **Cognition about democratic institutions**; in contrast, the Baltic states of Lithuania and Latvia do not perform well in this domain (see figure 4). Southern and former Communist European countries; Cyprus, Portugal, Romania, Poland, and Slovakia, are high performing countries for the dimension of **Participatory attitudes** whereas most of the Northern European Countries that participated in the survey

(Denmark, Sweden and Finland), and most of the Western European countries that participated (Germany, England and Switzerland) close the rankings in this dimension, together with some of the former communist countries (Estonia, Lithuania, Czech Republic and Bulgaria) (see figure 4). Northern, Southern and Western European countries of Cyprus, Portugal, Norway and England are high performers on the dimension of **Social Justice** in contrast to the Russian Federation, Hungary, Bulgaria and Latvia, all former communist countries, who are low performers in this domain. Poland is the outlier by being both a former communist country and a high performer (see figure 4). The former communist countries of Romania and Lithuania are high performing countries on **Citizenship values** whereas Northern and Western Europe perform less well, with Denmark, England, Belgium (French speaking) and Finland closing the ranking for this dimension, with Estonia being the outlier who joins this group at the end of the table (see figure 4). One possible explanation for the tendency for lower performances of Northern and Western Europe is that these countries have longer and more stable democracies (mostly originating from 19th century or earlier). There is a higher level of participation in their adult populations than in their Southern and Eastern European neighbours (Hoskins et al. 2006) and (van Deth, Montro and Westholm 2007). Thus, young people from South Europe and East Europe, in countries who have experienced recent transition to democracies and less stability altogether, could value democracy and have a greater intention to participate in order to develop and maintain it in their country, whilst their northern and western counter parts do not place so much value on the democratic system that they have inherited. We have already described the example of Cyprus and Greece from Southern Europe as countries with recent transitions to democracy. Another example from Eastern Europe is Slovenia, one of the fastest paced transition countries to democracy and towards EU membership, which had its first democratic elections in 1990 and gained independence in 1991 after a short war. From 1991-2001 it faced further wars on its doorstep in the rest of the former Yugoslavia with migrants entering Slovenia from this conflict. In 1999 there were a number of political scandals involving the then prime minister and a number of public scandals, including in the police service. The hypothesis is that these unstable political external factors are giving young people a reason to value participation.

[Insert table 6, 7, 8 and 9 about here]

In the dimension of **Social justice** the results are different, with Northern, Southern and Western European countries such as Cyprus, Portugal, Norway and England performing well, in contrast to the Russian Federation, Hungary, Bulgaria and Latvia, all former communist countries, who are the low performers in this domain. Poland is the outlier by being both a former communist country and a high performer. These regional results are less strong for **Cognition about democratic institutions,** but still follow this slight trend with Northern,

Southern and Western European countries being found in the top half of the table, with the exception of Slovakia and Poland who are high performing countries for this dimension. In contrast, Eastern European countries tend to be located in the bottom half of the table with Romania, and the Baltic states of Estonia, Lithuania and Latvia giving low performances. The outlier in this case is Portugal who also does not perform well for **Cognition about democratic institutions**.

An explanation for these results is that for the Eastern European countries previous experiences of communism were affecting both the knowledge and values of equality in young people. As Buk-Berge (2006 p.534) highlights the change from communism to democracies provided a dramatic change in civic education, unprecedented in history, 'previously based on the aim of indoctrinating them into builders of communism, it had to be transformed into the education of citizens living in a democracy'. Reforms of the education system across Eastern Europe were taking place and citizenship education was being introduced, for example in Slovenia 'The White Paper on Education in Slovenia (1996)'.

Interestingly, gaining low results for cognition is not the case for all former communist countries, for example, Poland. Buk-Berge (2006) points out that this might be the case due to the fact that in Poland the notion of civil society and communitarian notions of democracy had been developed outside the education system within the resistance movements and the Catholic Church prior to the fall of communism. She also gives example of how the new civic curriculum introduced in Poland was very innovative and orientated towards every day life in a democracy, in particular focusing on civil society and the community. However, this investigation so far is simply exploratory in terms of providing theories for these results, and further research is needed to provide a more solid basis for these theories.

The similar country trends for **Social justice** and cognition and the trends for **Participatory attitudes** and **Citizenship values** can also be found from exploring the data on the individual level (see table 5). In the individual level data the highest correlations were found between **Participatory attitudes** and **Citizenship values**, supporting the theory that there is connection between these two phenomena. Importantly for education purposes there was a higher correlation also between **Social justice** and Cognition. **Citizenship values**, however, seemed relatively independent of cognition. In addition to the country level trends, there was also a link on the individual level between **Social justice** and **Participatory attitudes**. As **Social justice** correlates with all the dimensions it therefore seems to some extent an underlying principle for civic competence.

[Insert Table 10 about here]

Conclusions

Measuring Civic Competence in Europe is part of a process to establish and monitor the learning outcomes needed to facilitate the development of active citizens in Europe. The first step of this project was to measure active citizenship in Europe through the development of a composite indicator using information from the European Social Survey of adults supplemented by some additional information (see Hoskins et al. 2006). This article constitutes the second step of measuring the levels of civic competence through the development of a composite indicator, the CCCI. This composite indicator pertains to the individual outcomes of learning for active citizenship among 14-year-olds, which is referred to as civic competence and contains indicators on civic knowledge, skills, attitudes and values. This was hypothesised to be the driving force for value-based engagement of active citizenship. This article is the first time that civic competence has been measured as a holistic concept combining cognitive and affective dimensions together and, as such, the results are innovative, but they must also be considered exploratory in their nature and tentative in their interpretation.

In this article we have built a composite indicator on civic competence based on the theoretical framework of a competence i.e. the holistic understanding that certain cognitive functions, such as knowledge and skills, and affective functions, such as attitudes and values, are important components of individual learning outcomes, including the learning outcome of civic competence. We have further developed the framework by exploring the nature of civic competence, in particular by reflecting on different lists of attributes required and an ideal list was created. This ideal list we consider to be a basis for discussion on possible curriculum development, keeping in mind that school is not only learning opportunity to develop these competences. Next we explored the existing international data on civic competence which at the moment is only the IEA CivEd 1999 data. These data will be soon updated with the new IEA ICCS study 2009. Thus the framework has been developed in a manner in which it can be repeated over time to analyse trends.

Some data was available for all of the different components of a competence but there were some significant gaps. The biggest gaps were in the skills component in which many important dimensions were missing, such as “to build coalitions’, ‘to cooperate’, ‘to resolve conflict peacefully’ and ’to know how to vote’. It is not surprising that this data is not available from international tests because these skills would require observations or forms of tests very different from the conventional paper and pencil that currently exist in international tests. As a result we recognise that the final results of the composite indicator do not measure certain skills which are needed for civic competence. Additional to this it should be noted that the results of the composite reflect only the situation for 14 year old pupils and not for the general

population. With these caveats, we have found 84 indicators that were relevant to civic competence and covered the different components of knowledge, skills, attitudes, values and intended behaviour. Existing IEA scales were used to facilitate the building of the composite with the addition of scales developed by the CEDARS-project and by the current research team. The theoretical structure was empirically tested and this resulted in a revised model that distinguished four domains in civic competence: **Citizenship values**, **Social justice** (both values and attitudes), **Participatory attitudes** and **Cognition about democratic institutions**.

The composite indicator was built using the techniques described by Nardo et al. (2005) and equal weights were given for each dimension and sub-dimension. A multilevel regression analysis was completed on the scores to determine if the country differences were significant and robustness analysis was performed to test the solidity of the composite indicator. The composite indicator proved to be very robust.

In contrast to what is often observed in rankings such as the Active Citizenship Composite Indicator, the CCCI ranking presented in this article do not in general show clear geographical patterns, and where patterns do occur these do not follow typical European scoreboard results (e.g. Innovation, GDP and gender equality). There is some tendency for Southern-European countries to be in the upper part of the ranking, with Cyprus and Greece doing particularly well in the overall CCCI and in the domains of **Citizenship values**, **Participatory attitudes** and **Cognition about democratic institutions**. We suggested that this could be as a result of their ancient culture of democracy which has been taught in schools. Other Northern-European countries such as Denmark and Finland are found in the lower-middle part of the CCCI rankings together with some other former communist countries such as Lithuania, Slovenia and Hungary. Two Baltic States close the CCCI rankings together with Belgium (FR). For the four dimensions of civic competence the rankings produce more regional results.

For the dimensions of citizenship values and participatory attitudes Southern and Eastern European countries give the best performances. The explanation that we give is that due to the fact that there is greater instability in these countries and a more recent introduction of democracy that this provide the incentive for young people and a greater sense of purpose towards democracy in contrast to stable, active and long standing democratic countries like Sweden. Eastern Europe performed less well on social justice and cognition and this we hypothesise, for the case of social justice, is due to the previous experience of Communism which imposed the ideology of equality on the young people within their education system and now the young people reject these ideals. Second, and in the case of the low results for cognition, the reason given is that Communist education did not teach democratic education and back in 1999 the new education system was not yet ready for fully developing young people’s capabilities on knowledge and skills for democracy. Further and more in-depth

research is needed in order to give further explanation to these results.

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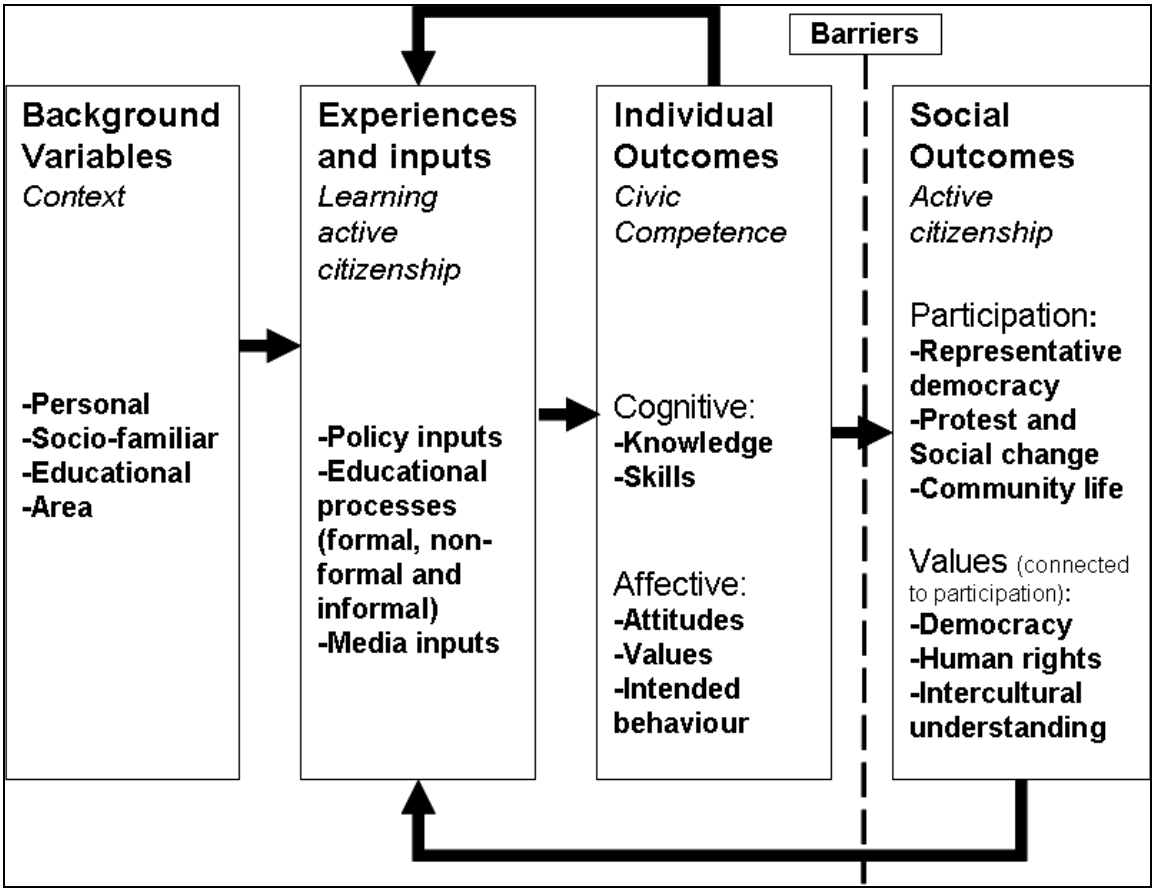


Figure 1: Working model of active citizenship

Table 1: Ideal list of civic competence

Knowledge:
• Key elements of the political and legal system (human rights, social rights and duties, Parliamentary government, the importance of voting) (local, national, European level)
• Basic institutions of democracy, political parties, election programmes and the proceedings of elections
• The role of the media in personal and social life
• Social relations in society
• The history and cultural heritage of own country; of predominance of certain norms and values
• Different cultures in the school and in the country
• Main events, trends and change agents of national, European and world history
• The function and work of voluntary groups
• Knowledge on current political issues
Skills:
• To be able to evaluate a position or decision, take a position and defend a position
• To distinguish a statement of fact from an opinion
• To resolve conflicts in a peaceful way
• To interpret the media messages (interests and value systems that are involved etc.) (critical analysis of the media)
• To be capable to critically examine information
• To possess communication skills (to be able to present in verbal and/or written manner your ideas)
• To be able to monitor and influence policies and decisions including through voting
• To use the media in an active way (not as consumer but as producer of media content)
• To build coalitions; to co-operate; to interact
• To be able to live and work in a multicultural environment
Attitudes:
• To feel responsible for your decisions and actions in particular in relationship to other citizens
• To feel confident to engage politically
• To trust in and have loyalty towards democratic principles and institutions
• To be open to difference, change of own opinion and compromise
Values:
• Acceptance of the rule of law
• A belief in social justice and the equality and equal treatment of citizens
• Respect for differences including gender and religious differences
• Negative towards prejudice, racism and discrimination
• Respect for human rights (freedom, diversity and equality)
• Respect for the dignity and freedom of every individual
• Tolerance towards difference
• A belief in the importance of democracy
• A belief in the need to preserve the environment
Intended behaviour:
• To be active in the political community
• To be active in the community
• To be active in civil society

Table 2: Scales developed with IEA CivEd dataset

Knowledge
- KNOWL – Knowledge of content

Skills
- SKILS – Skills in interpretation of material with civic or political content

Concepts: normative views about democracy …
- DEM$^{\Delta}$ – Democratic rights

… norms of good citizenship:
- CTCON – Conventional citizenship
- CTSOC – Social-movement-related citizenship

… responsibilities the government should have
- GOVSOC –Economy-related
- GOVEC – Society-related

Attitudes:

Trust towards institutions
- TRUST – Government-related institutions
- MEDIA*$^{+}$ - Trust in media

Towards Nation
- PROTC*$^{+}$ - Protective of one's nation
- PATRI – Positive attitude towards one nation

Toward women, minorities and anti-democratic groups
- WOMRT – Attitudes toward women's political and economic right
- MINOR*$^{+}$ – Attitude toward opportunities for minorities
- ADGR*$^{+}$ – Attitude toward political rights for anti-democratic groups

Toward immigration
- IMMIG – Attitudes toward immigrants' rights
- EFFIC^{+} – Internal political efficacy

Actions:

School participation
- CONFS - Confidence in value of participation at school
- SCON*$^{\Delta}$ – Self-confidence in one's own participation

Expected Participatory activity
- POLAT – Political activities
- PROTE*$^{+}$– Protest activities
- VOTE^{+} – Expectations associated with voting
- COMM^{+} – Expectations of community participation

Teaching styles:
- CCLIM – Open climate for classroom discussion
- LECTR* - Lecturing styles

*Scales identified but not developed by IEA

$^{+}$Scales identified and developed by CEDARS

$^{\Delta}$Scale identified and developed by Authors

Table 3: Rotated Component Matrix for civic competence scales

Dimensions	Scale	Labels	Component			
			1	2	3	4
Values	CONVENTIONAL CITIZENSHIP	CTCON	-0.02	0.02	0.26	**0.82**
	SOCIAL-MOVEMENT-RELATED CITIZENSHIP	CTSOC	0.07	0.25	0.03	**0.82**
	DEMOCRATIC RIGHTS	DEM	**0.69**	0.19	0.04	0.16
	ATTITUDES TOWARDS WOMENS POLITICAL AND ECONOMIC RIGHTS	WOMRT	0.32	**0.70**	-0.14	-0.04
	ATTITUDES TOWARDS MINORITIES	MINOR	0.14	**0.72**	0.01	0.12
Attitudes	CONFIDENCE IN PARTICIPATING AT SCHOOL	CONFS	0.11	**0.66**	0.13	0.18
	INTERNAL POLITICAL EFFICACY	EFFIC	0.15	-0.08	**0.75**	0.11
Intended behaviour	EXPECTATIONS OF COMMUNITY PARTICIPATION	COMM	-0.18	*0.45*	**0.46**	0.20
	POLITICAL ACTIVITIES	POLAT	-0.02	-0.03	**0.76**	0.08
	SELF-CONFIDENT PARTICIPATION	SCON	-0.01	*0.46*	**0.54**	0.03
	EXPECTATIONS ASSOCIATED WITH VOTING	VOTE	*0.40*	0.25	**0.41**	0.24
Knowledge	KNOWLEDGE OF CONTENT	KNOWL	**0.88**	0.07	0.05	-0.02
Skills	SKILLS IN INTERPRETATION OF MATERIAL WITH CIVIC OR POLITICAL CONETNT	SKILS	**0.85**	0.10	-0.01	-0.10

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 6 iterations.

Table 4: Cronbach's alpha of identified constructs in CivEd data

Domains	N. of scales	Cronbach's Alpha	
		(International sample, all countries)	(European Union countries)
Citizenship values (cval)	2	0.642	0.645
Social Justice (socj)	3	0.622	0.618
Participatory attitudes (parta)	5	0.652	0.638
Cognition about democratic institutions (cogd)	3	0.779	0.786

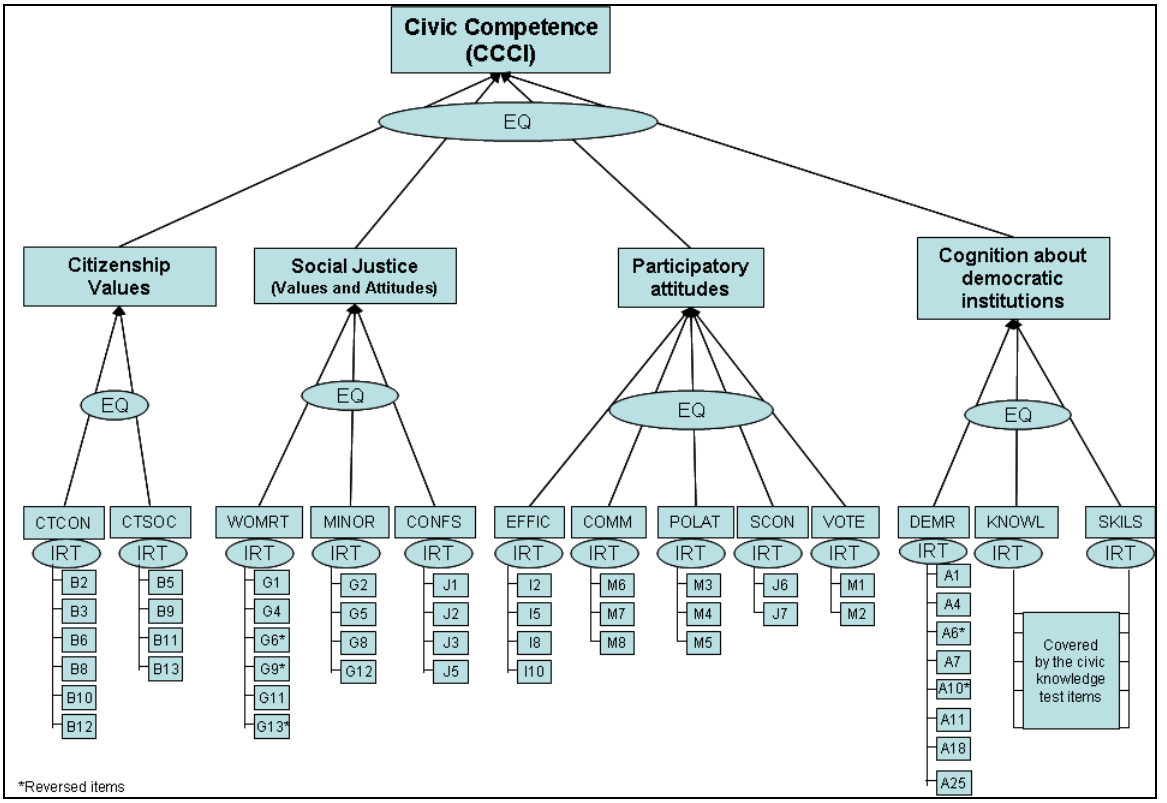


Figure 2: Structure and weighting scheme for the Civic Competence Composite Index

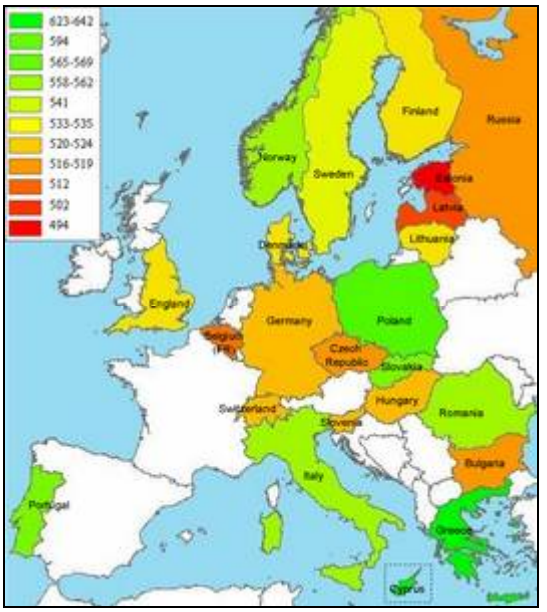


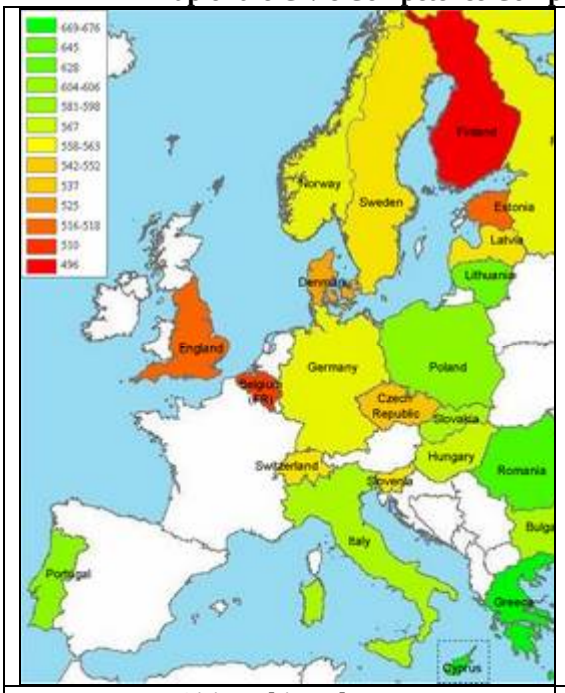
Figure 3: Civic Competence Composite Indicator in Europe (Data 1999/Age group 14)

Table 5: Statistical significance, pairwise comparison country scores, civic competence composite indicator (CCCI)

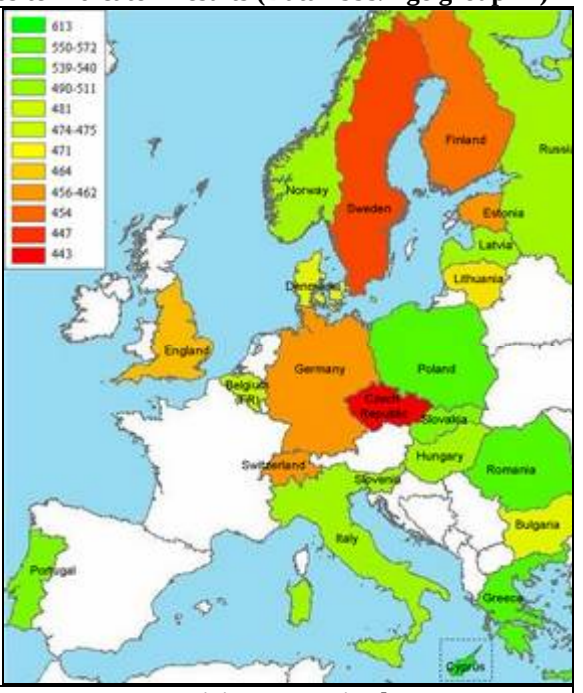
	Average	SD	CYP	GRC	USA	POL	COL	SVK	PRT	NOR	ITA	ROM	CHL	HKG	AUS	SWE	DNK	FIN	ENG	LTU	SVN	HUN	DEU	CHE	BGR	RUS	CZE	BFR	LVA	EST
CYP	642	102	-	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
GRC	623	112	●	-	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
USA	598	123	▼	▼	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
POL	594	107	▼	▼	●	-	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
COL	585	99	▼	▼	●	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
SVK	569	93	▼	▼	▼	▼	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
PRT	565	98	▼	▼	▼	▼	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
NOR	562	110	▼	▼	▼	▼	▼	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ITA	560	103	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ROM	558	98	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
CHL	557	100	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
HKG	550	105	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
AUS	547	107	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
SWE	541	110	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲
DNK	535	106	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	●	●	●	●	●	●	●	▲	▲	▲
FIN	533	100	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	●	●	●	●	▲	▲	▲
ENG	533	106	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	●	●	●	▲	▲	▲
LTU	533	92	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	●	●	●	▲	▲	▲
SVN	524	94	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	●	●	▲	▲
HUN	523	87	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	●	●	▲	▲
DEU	521	98	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●	●	●	●	▲
CHE	520	94	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	●	-	●	●	●	●	●	▲
BGR	519	109	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	●	-	●	●	●	●	▲
RUS	519	87	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	●	●	-	●	●	●	▲
CZE	516	95	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	●	●	●	-	●	●	▲
BFR	512	107	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●
LVA	502	87	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●
EST	494	86	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	-

▲ Scores significantly higher than comparison country
● No statistically significant difference
▼ Scores significantly lower than comparison country

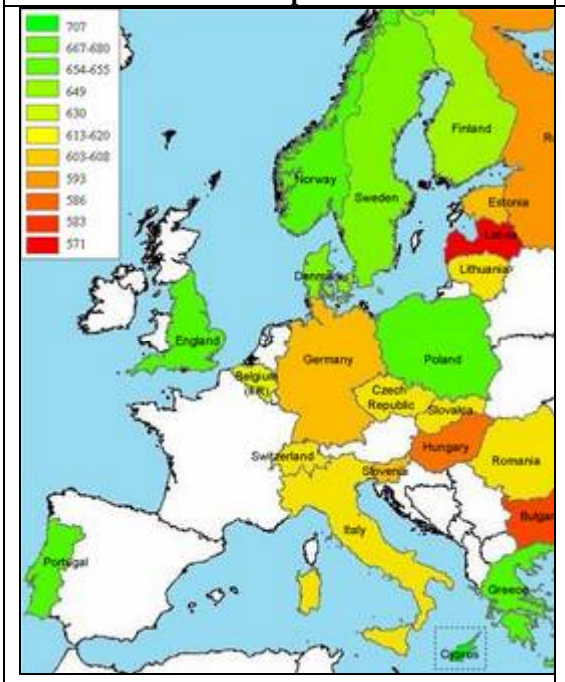
Map of the Civic Competence Composite Indicator Results (Data 1999/Age group 14)



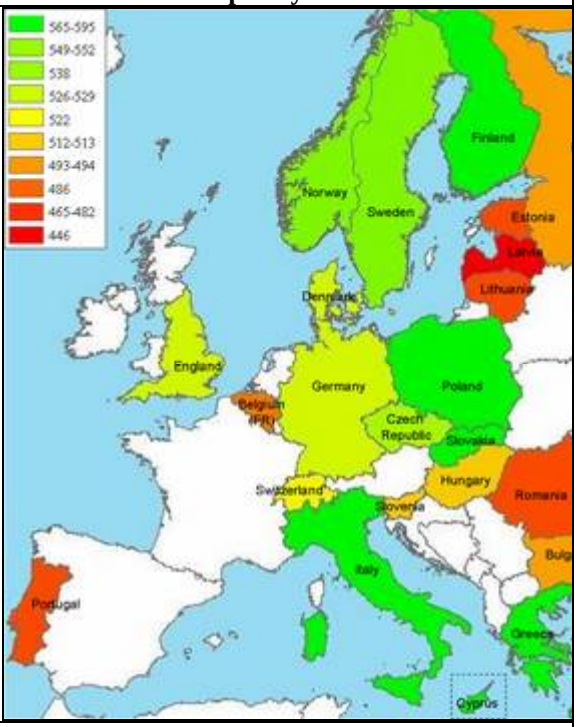
Citizenship values



Participatory attitudes



Social Justice (Attitudes towards Women & Minorities)



Cognition about democratic institutions

Figure 4: Map of the Civic Competence Composite Indicator Results (Data 1999/Age group 14)

Table 6: Statistical significance, pairwise comparison country scores, Citizenship values

	Average	SD	GRC	CYP	COL	ROM	LTU	CHL	POL	PRT	SVK	USA	ITA	BGR	HUN	NOR	RUS	DEU	HKG	LVA	CHE	SWE	SVN	CZE	DNK	AUS	ENG	EST	BFR	FIN
GRC	676	134	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
CYP	669	129	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
COL	663	133	●	●	-	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ROM	645	137	▼	●	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
LTU	628	139	▼	▼	▼	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
CHL	626	126	▼	▼	▼	●	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
POL	606	119	▼	▼	▼	▼	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
PRT	604	110	▼	▼	▼	▼	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
SVK	598	118	▼	▼	▼	▼	▼	▼	●	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
USA	597	156	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ITA	590	119	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
BGR	581	149	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
HUN	567	117	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	-	●	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲
NOR	563	117	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	-	●	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲
RUS	561	100	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲
DEU	558	110	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲
HKG	557	122	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲
LVA	552	106	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲
CHE	547	111	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲
SWE	546	126	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲
SVN	542	133	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	●	-	●	●	●	●	●	▲	▲
CZE	537	115	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	●	-	●	●	●	●	●	▲
DNK	525	106	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	▲
AUS	524	121	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	▲
ENG	518	107	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●
EST	516	104	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●
BFR	510	114	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●
FIN	496	105	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-

▲ Scores significantly higher than comparison country
● No statistically significant difference
▼ Scores significantly lower than comparison country

Table 7: Statistical significance, pairwise comparison country scores, Social justice

	Average	SD	CYP	PRT	COL	USA	NOR	ENG	POL	GRC	SWE	DNK	AUS	FIN	CHL	BFR	LTU	CZE	CHE	ITA	SVK	HKG	ROM	EST	SVN	DEU	RUS	HUN	BGR	LVA
CYP	707	144	-	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
PRT	680	140	▼	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
COL	678	142	▼	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
USA	678	169	▼	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
NOR	678	153	▼	●	●	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ENG	671	157	▼	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
POL	668	154	▼	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
GRC	667	149	▼	●	●	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
SWE	655	148	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
DNK	654	150	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
AUS	649	156	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
FIN	649	141	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
CHL	645	131	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
BFR	630	162	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲
LTU	620	128	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	-	●	●	●	●	●	●	●	●	●	▲	▲	▲	▲
CZE	617	126	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	-	●	●	●	●	●	●	●	●	▲	▲	▲	▲
CHE	616	142	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	●	●	●	●	▲	▲	▲	▲
ITA	616	132	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲
SVK	616	122	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲
HKG	615	144	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲
ROM	613	135	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●	●	▲	▲	▲
EST	608	117	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●	▲	▲	▲
SVN	604	132	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	●	-	●	●	●	●	▲
DEU	603	140	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	●	●	-	●	●	●	▲
RUS	593	116	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	▲
HUN	586	119	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●
BGR	583	154	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●
LVA	571	116	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	-

▲ Scores significantly higher than comparison country
● No statistically significant difference
▼ Scores significantly lower than comparison country

Table 8: Statistical significance, pairwise comparison country scores, Participatory attitudes

	Average	SD	CYP	COL	GRC	CHL	ROM	POL	PRT	USA	SVK	ITA	LVA	HKG	AUS	SVN	HUN	NOR	RUS	BFR	BGR	DNK	LTU	ENG	DEU	CHE	EST	FIN	SWE	CZE
CYP	613	130	-	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
COL	604	135	●	-	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
GRC	572	129	▼	▼	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
CHL	567	149	▼	▼	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ROM	558	133	▼	▼	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
POL	550	143	▼	▼	●	●	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
PRT	540	126	▼	▼	▼	▼	●	●	-	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
USA	539	159	▼	▼	▼	▼	●	●	●	-	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
SVK	539	126	▼	▼	▼	▼	●	●	●	●	-	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ITA	511	133	▼	▼	▼	▼	▼	▼	▼	▼	▼	-	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
LVA	503	141	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	-	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
HKG	501	146	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
AUS	499	152	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲
SVN	495	128	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲
HUN	493	126	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲
NOR	490	149	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲
RUS	490	133	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲
BFR	481	142	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●	●	●	●	●	▲	▲	▲
BGR	475	145	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	●	●	●	▲	▲
DNK	474	144	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●	●	●	●	▲	▲
LTU	471	137	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●	●	●	●	▲
ENG	464	154	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	●	●
DEU	462	140	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●
CHE	456	140	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●
EST	456	135	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●	●
FIN	454	136	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	●	-	●	●
SWE	447	152	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●
CZE	443	130	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-

▲ Scores significantly higher than comparison country
● No statistically significant difference
▼ Scores significantly lower than comparison country

Table 9: Statistical significance, pairwise comparison country scores, Cognitions about democratic institutions

	Average	SD	CYP	GRC	USA	FIN	POL	SVK	HKG	ITA	AUS	SWE	NOR	CZE	ENG	DNK	DEU	CHE	SVN	HUN	RUS	BGR	BFR	PRT	EST	ROM	LTU	LVA	COL	CHL
CYP	595	102	-	●	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
GRC	593	112	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
USA	587	123	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
FIN	587	100	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
POL	583	107	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
SVK	571	93	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
HKG	570	105	●	●	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ITA	565	103	●	●	●	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
AUS	553	107	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
SWE	552	110	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
NOR	549	110	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
CZE	538	95	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
ENG	529	106	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
DNK	528	106	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
DEU	526	98	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
CHE	522	94	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲
SVN	513	94	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	●	●	▲	▲	▲	▲	▲	▲	▲
HUN	512	87	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●	▲	▲	▲	▲	▲	▲	▲
RUS	494	87	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	●	●	●	▲	▲	▲
BGR	493	109	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	●	▲	▲	▲
BFR	486	107	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	●	▲	▲	▲
PRT	482	98	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●	●	▲	▲	▲
EST	469	86	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	-	●	●	●	▲	▲
ROM	468	98	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	-	●	●	▲	▲
LTU	465	92	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	●	●	●	-	●	●	●
LVA	446	87	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-	●	●
COL	437	99	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	-	●
CHL	437	100	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●	●	●	-

▲ Scores significantly higher than comparison country
● No statistically significant difference
▼ Scores significantly lower than comparison country

Table 10: Bivariate Pearson's correlations at the individual level between civic competence subdomains

	Citizenship values	Social Justice (V/A)	Participatory attitudes	Cognitions democratic inst.
Citizenship values	-			
Social Justice (V/A)	0.275** N= 26639	-		
Participatory attitudes	0.388** N= 23851	0.337** N= 26784	-	
Cognitions democratic inst.	0.077** N= 27237	0.343** N= 26563	0.185** N= 23801	-

** Correlation is significant at the .01-level