JRC Scientific and Technical Reports

The 2011 Civic Competence Composite Indicator (CCCI-2)

Measuring Young People's Civic Competence across Europe based on the IEA International Citizenship and Civic Education study.

Bryony Hoskins, Cynthia M.H. Villalba and Michaela Saisana

EUR 25182 EN - 2012

JRC EUROPEAN COMMISSION

ipsc Institute for the Protection and Security of the Citizen

The mission of the JRC-IPSC is to provide research results and to support EU policy-makers in their effort towards global security and towards protection of European citizens from accidents, deliberate attacks, fraud and illegal actions against EU policies.

European Commission
Joint Research Centre
Institute for the Protection and Security of the Citizen

Contact information
Name: Bryony Hoskins
Address: School of Education, University of Southampton, UK
E-mail: B.Hoskins@soton.ac.uk Tel.: 0044 023 8059 2623

Name: Cynthia M.H. Villalba
Address: The Educational Research and Evaluation Group (ERE), Foundation for Research and Technology, Crete. E-mail: Villalbacynthiam@gmail.com

Name: Michaela Saisana
Address: Unit of Econometrics and Applied Statistics, Institute for the Protection and Security of the Citizen, Ispra. E-mail: Michaela.saisana@jrc.ec.europa.eu.

http://ipsc.jrc.ec.europa.eu/
http://www.jrc.ec.europa.eu/

JRC 68398

EUR 25182 EN
ISBN 978-92-79-22800-1 (PDF)
ISBN 978-92-79-22799-8 (print)
ISSN 1831-9424 (online)
ISSN 1018-5593 (print)
doi:10.2788/67938

Luxembourg: Publications Office of the European Union, 2012

Printed in Italy

Abstract

Education is a key policy area for achieving democracy-related goals. In this respect the European Commission have developed indicators to monitor the levels of active citizenship across Europe (Hoskins et al 2006 and Hoskins and Mascherini 2009) and levels of civic competence across Europe (Hoskins et al 2008). The 2020 Education and Training policy agenda (ET 2020) continues to identify Active Citizenship as one of the four major policy goals and continues to support national governments in developing key competences, including civic competences, of its citizens. Active Citizenship was a priority of the 2011 Hungarian Presidency, and Education Ministers were invited to debate this issue at a March 2011 meeting. An outcome of this meeting was the ministers' support of the Centre for Research on Education and Lifelong Learning's (CRELL) development of a new composite indicator on civic competence. The Commission, represented by Commissioner Vassiliou, called for a 'coherent and comprehensive strategy which covers all aspects of citizenship education in a lifelong learning perspective'.

Based on these needs, CRELL has created a new composite indicator on civic competence, the Civic Competence Composite Indicator 2 (CCCI-2). It comprises four dimensions: 'Participatory Attitudes', 'Citizenship Values', 'Social Justice Values', and 'Knowledge and Skills for Democracy'. The data was obtained from young people between 13 and 14 years old as part of the IEA International Citizenship and Civic Education Study 2009 conducted in 38 countries.

The findings of this new indicator show that wealth and democratic stability in a country do not guarantee democratically engaged youth. In addition, young people's positive attitudes towards participation and their citizenship values are often enhanced in relatively poorer countries with recent breaks in democracy. We might perceive that this will be beneficial for the future of democracies in these countries, however, the limited evidence available does not point towards the fact that these youthful aspirations actually make it into engaged adult citizens.

Western democracies appear to be fostering a non-participatory culture in their youth. However, social justice attitudes and knowledge and skills for democracy, appear to be more prevalent in these wealthier and democratically more stable countries. These trends are consistent with the results of the original CRELL indicator research, using data from 10 years ago, which suggests a consistency of civic cultures amongst the younger generations.

The findings also suggest that measuring the wealth of a nation only through its GDP does not capture the health of the future of democracy. The more wealthy countries need to do more to enhance and maintain the citizenship norms and participatory attitudes of their young people. In contrast, it is social justice that remains the issue for the newer democracies in Europe.

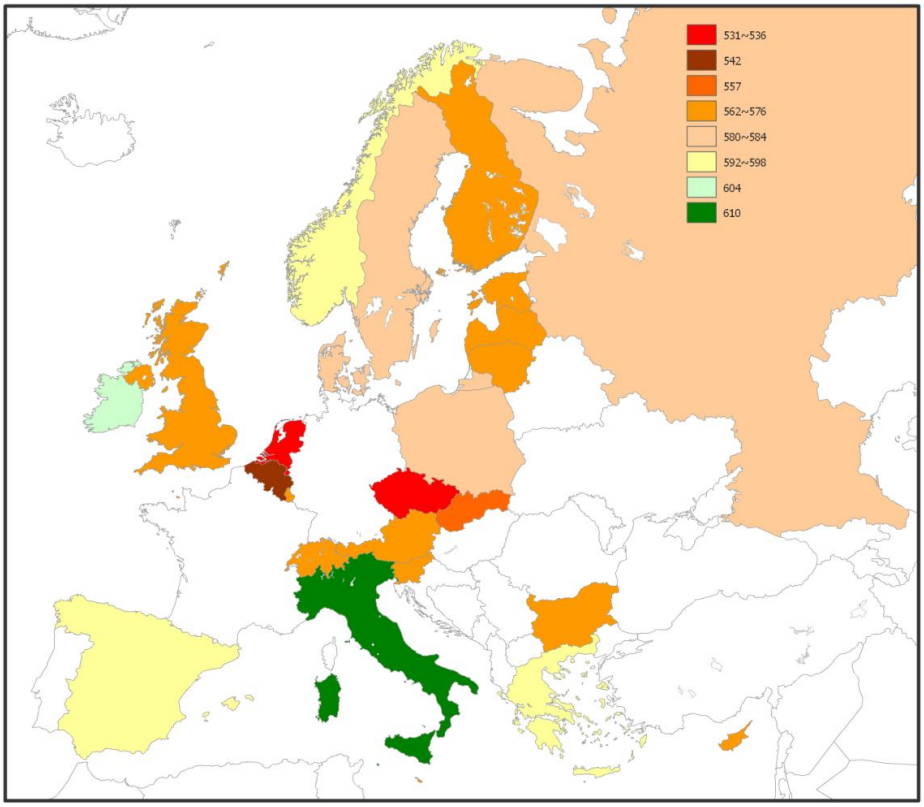


Fig. 1. Civic Competence Composite Indicator in Europe (Data 2009/Age group 14). [The colour green indicates the highest levels of civic competence whilst red indicates the lowest levels of civic competence. Countries with no colour did not participate in the study.]

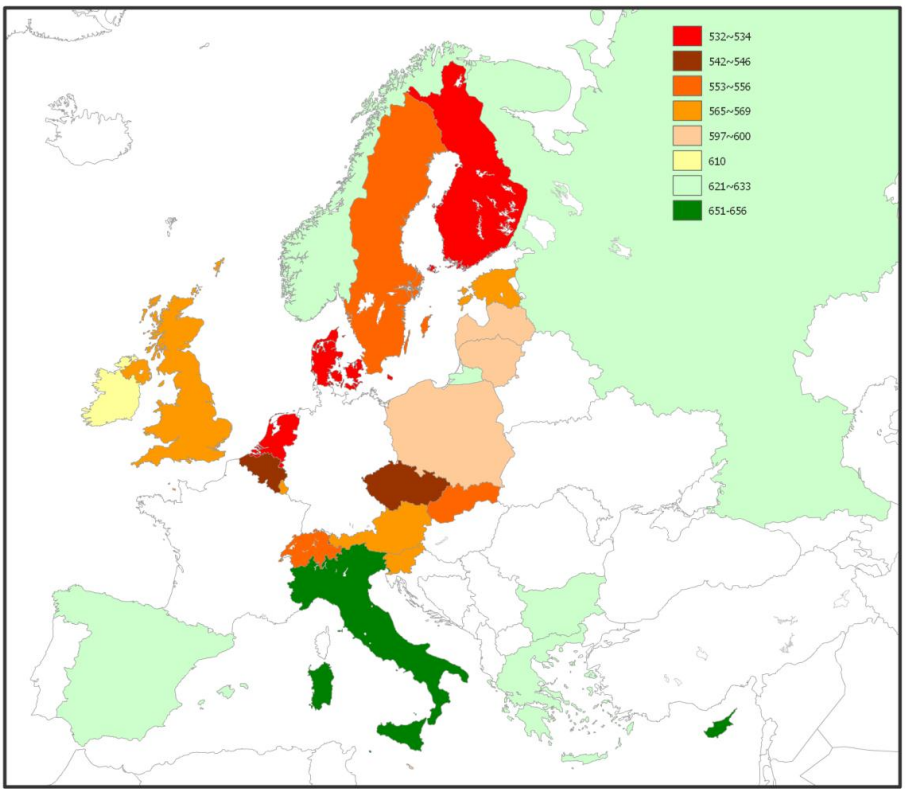


Fig.2 Citizenship Values in Europe (Data 2009/Age group 14)

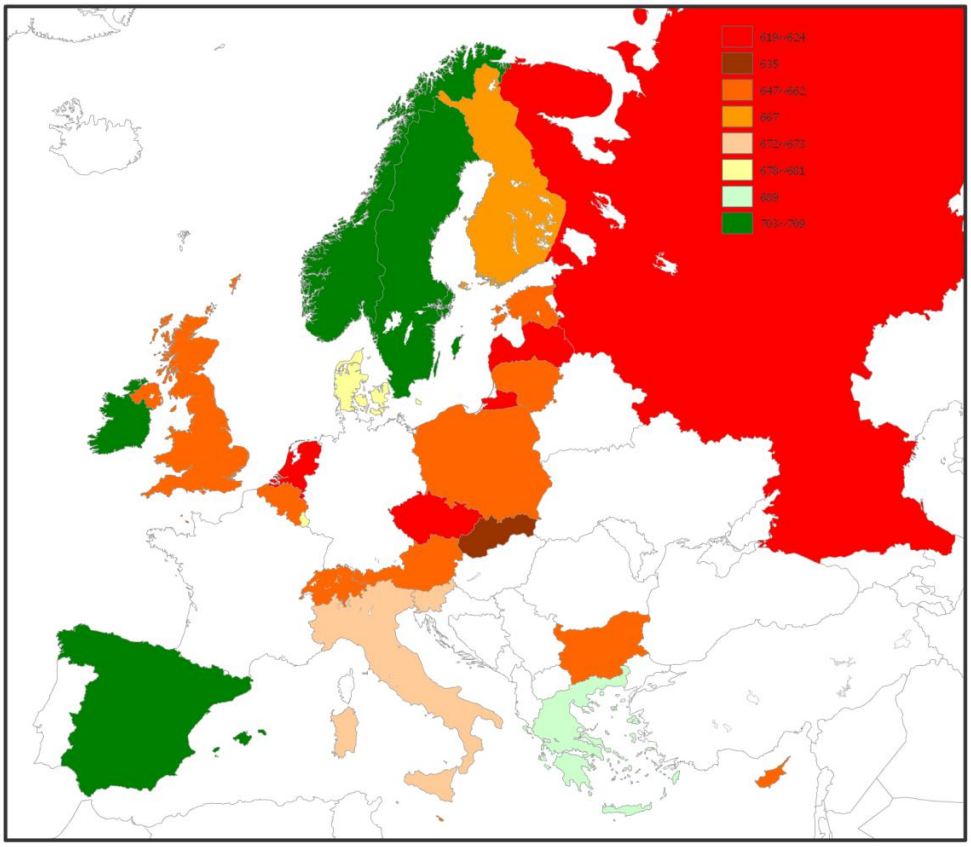


Fig. 3 Social Justice in Europe (Data 2009/Age group 14)

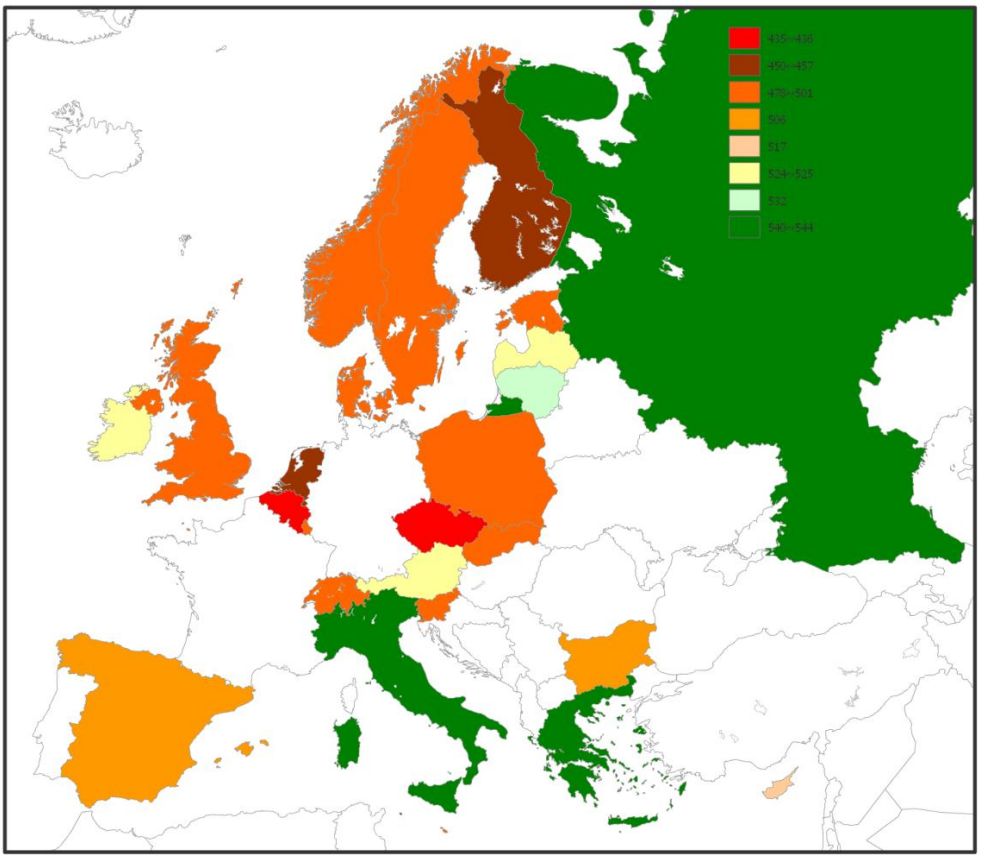


Fig. 4 Participatory Attitudes in Europe (Data 2009/Age group 14)

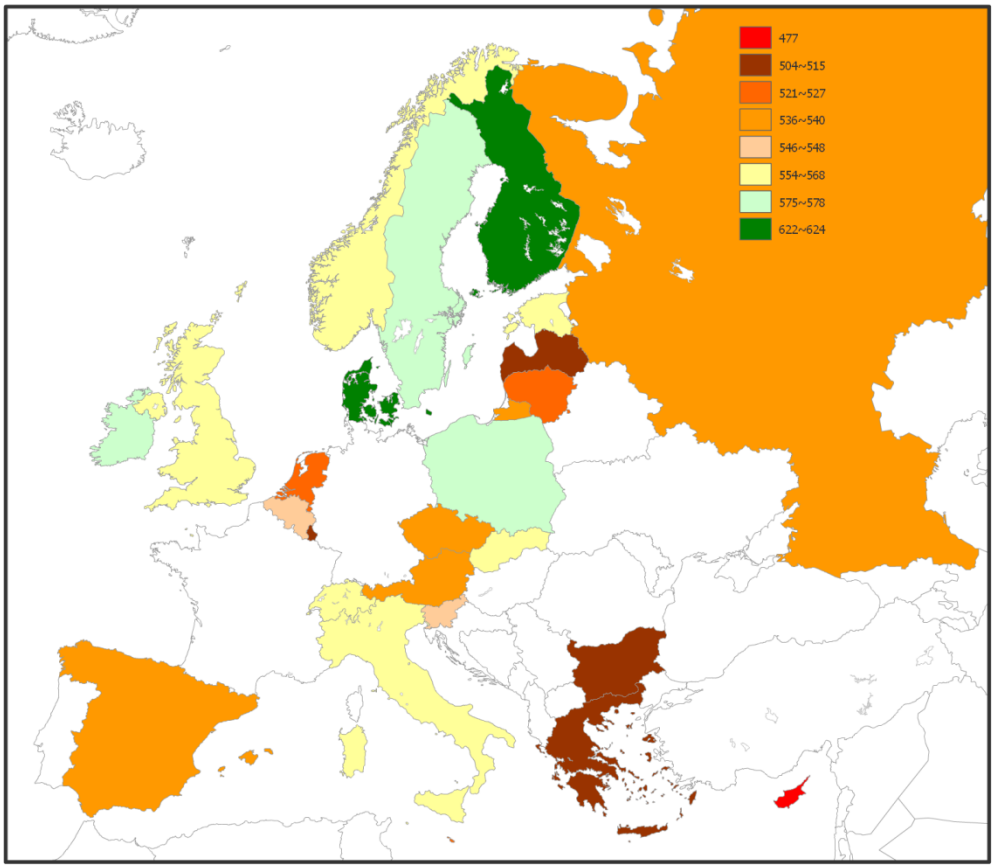


Fig 5. Knowledge and Skills for Democracy (Data 2009/Age group 14)

Acknowledgements

We are grateful for the assistance of Dr. Daniel Van Nijlen (Katholieke Universiteit Leuven, Belgium, Centre for Educational Effectiveness and Evaluation, Faculty of Psychology and Educational Sciences) for providing statistical support in the testing of the initial framework.

We are also greatly appreciative of the editorial assistance provided by Susan Nadeau Bustamonte during the final stages of writing the report.

In addition, we would like to acknowledge the comments and additions provided by the Council of Europe, Eurydice and various members of the Expert Group on Indicators on Education and Active Citizenship. We would also like to thank the experts who gave feedback on the preliminary results of the CCCI-2 from the keynote presentation delivered at the International Civic Education Symposium on Building Democratic Citizenship in Europe through Civic Engagement Hanover, Germany April 2011.

Table of Contents

Part 1 The Civic Competence Composite Indicator – 2 (CCCI-2)

1.Introduction

1.1 Why do European citizens need civic competence?

Civic competences of European citizens are a necessity for the survival of democracy at the European, national and local levels. In this regard, the academic literature on both theory and empirical research has highlighted the fact that legal rights and institutions alone are rarely sufficient for a democracy to flourish (Honohan 2002), and that the quality of democratic governance relies on the civic virtues and engagement of their citizens (Putnam 2000, 1993, Almond and Verba 1963, De Tocqueville 1863). Vibrant democracies require active citizens - both inside and outside the political system - to monitor the process and to be willing and able to act to create or resist change (Crick 2003). Active citizens outside the representative political system within civil society in the form of non-governmental organisations play an important role in assuring government accountability. They are able through their structures to mobilise people to create petitions, to campaign and to protest in order to create change based upon social justice aims. These activities are promoted by those who support participatory democracy (Barber 2003). In addition, representative democracy plays an important role in maintaining the democratic process. Actions such as voting, standing as candidates for elections and contacting members of parliament are equally necessary to maintain the democratic system and to keep in place laws that are just.

The term 'Active Citizenship' combines participatory and representative elements and has been defined as follows: '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). This definition highlights an important element of active citizenship, that it is not participation per se but participation based on a certain set of principles based on democratic values and human rights. Active people who do not hold democratic values or do not respect human rights can actually be harmful to the democratic institutions and to different social groups. The quality of performance of active citizenship is also based on the knowledge and skills of the individual who may or may not be able to influence a decision. The qualities of a competent active citizen are referred to as 'civic competence,' and this will be the focus for discussion within this chapter.

There has been concern amongst Western democracies that Active Citizenship is in decline (Putnam 2000). This reduced level of engagement poses a risk to democracy. Those who do not participate are mostly the younger citizens, and they are described as not ready to perform the duties necessary for democracy to thrive, as

compared with earlier generations. The difference in levels of engagement between the younger and older generations has been exacerbated by the reduction of numbers of young people and the decline in opportunities and access for young people in terms of employment, education, health and secure retirement (Willetts 2010). The conflict for resources between generations has been emphasised with the economic crises and the realisation in much of Europe that previous amounts spent on the public sector are no longer affordable. If the state cannot afford to pay, the weight of responsibilities that fall on individuals and civil society may become greater. As with all cases of scarce resources, the potential for conflict, in this case intergenerational conflict, has become more likely (Willetts 2010). Within this context, the younger generations need to become more politically savvy so as to not lose out on some of the benefits the older generations have had. In addition, the voices of younger people would be more productive within a political dialogue rather than suffering from alienation and discontent, which can lead to a lack of social cohesion expressed in violent protest. Thus we can argue that for a variety of reasons, as stated above, there is a need to establish the civic competences required for active citizenship in order to be able to facilitate the learning of this competence.

In the domain of active citizenship and the use of information and communication technology (ICT), young people have had the upper-hand. When young people are motivated to be active citizens, their use of social media can be mobilised to great effect bringing large numbers of youth to demonstrate on the streets. Examples of this can be seen in the Middle East democratic uprisings where young people have been active in the calls for democracy, and also in England when young people have protested the increase in university tuition fees. In Greece, social media is being used in the same way among university students voicing their concerns about the future of public universities in the country. Civic competence then for the older generations requires the learning of social media literacy skills.

1.2 European policy context

European Union countries agreed that 'civic competence', which encompasses the knowledge, skills, values and attitudes needed to be an active citizen, is one of the eight key competences required from education and training for 'personal fulfilment, active citizenship, social cohesion and employability in a knowledge society' (European Parliament and Council 2006, p.12). This text is a normative position agreed by all member states both through the Education Council (representatives from national ministries) and European parliament (directly elected representatives). This definition of civic competence focuses, in the context of Europe, on knowledge and respect for human rights and democracy and knowledge of historical and current affairs. In addition, there is an emphasis on diversity and understanding of ethnic and religious differences. The actions highlighted are critical thinking and effective, willing and constructive participation in decision making at all levels, as well as voting.

The Education and Training (ET 2020) policy agenda continues to identify Active Citizenship as one of the four major policy goals and continues to support national

governments in developing the key competences of its citizens. Active Citizenship was a priority of the Hungarian Presidency 2011, and Education Ministers were invited to debate this issue at a March 2011 meeting. At this meeting, the Commission, represented by Ms Vassiliou, called for a 'coherent and comprehensive strategy which covers all aspects of citizenship education in a lifelong learning perspective'. She highlighted the need for CRELL researchers to develop a composite indicator to support the member states in teaching civic competences.

Civic competence relates to the priorities and needs regarding a number of EC initiatives within the Lisbon Treaty including the fact that fundamental rights are now enshrined into European Union primary law. This has involved the introduction within the European Commission of the new portfolio for justice, citizenship and fundamental human rights which, in turn, incorporates the implementation of the Charter of Fundamental Human Rights.

The Lisbon Treaty introduced new democratic principles that require civic competences, for example, the citizen initiatives that give civil society (1 million citizens across countries in Europe) the possibility to invite the Commission to make a proposal for a law. In addition, the treaty requires greater involvement in European decision making through the national parliaments, and that gives citizens the possibility to be more involved. Both of these aspects of the treaty require citizens to be actively engaged in European civil society and have the knowledge and skills to make informed decisions.

The learning of civic competence is at the heart of many of the EU programmes including the Programme Europe for Citizens (2007-2013) and Youth in Action programme that promote the learning of civic engagement. Other initiatives are the 2011 Year for Volunteering and the 2013 European Year of Citizens for Europe, which has been established to promote participation in the 2014 European elections.

In order to monitor progress made in the field of citizenship education, indicators have been requested to be developed in the areas of active citizenship (Council (Education) 2005) and civic competences (Council (Education) 2007). Measurement of civic competence among school-going youth living in Europe constitutes a method for assessing learning and socialisation outcomes stemming from student experiences at school, home and within civil society. Ideally, evidence on the levels of civic competence at the national level should serve as an indicator of student levels of knowledge, skills, values and attitudes required for their future citizenship participation as adults. In addition, measuring levels of civic competence may increase understanding as to the role played by the educational systems and wider socialisation settings in promoting democracy in Europe.

Important developments have also taken place in recent years in the framework of the Council of Europe, in particular with respect to the adoption of the Council of Europe Charter on education for democratic citizenship and human rights education by the 47 member states of this organisation. This legal text builds on 13 years of

intergovernmental cooperation, and provides a common framework for action in this field (www.coe.int/edc).

CRELL research and indicators on civic competence

CRELL has played a central role in the development of indicators on civic competence. The first initiative which was developed in cooperation with the Council of Europe was the Active Citizenship for Democracy project 2005-2008. This project included the setting up of a research network on active citizenship that comprised 20 researchers from different disciplines (sociology, education and political science) from across Europe. The network met four times between 2005 and 2008. In addition, DG Education and Culture set up a group of representatives from member states to involve the country representatives in the development process. The indicators were developed through an iterative process between CRELL researchers and the networks. A two-stage approach was developed; a pragmatic use of existing data first, to develop indicators from data that already existed and second, to support the development of future data in order to be able to produce better indicators in the long term.

In terms of learning active citizenship, both lifelong learning (from cradle to grave) and life-wide learning (learning in different social contexts, not just in school) were considered important features of learning active citizenship. Education and training for active citizenship was defined as, 'Learning opportunities (formal, non-formal and informal) that occur at any stage of the life cycle that facilitate or encourage active citizenship' (Hoskins 2006). A list of the knowledge, skills, attitudes and values for active citizenship were defined (Hoskins 2008) and used within the European Commission progress report (2008). A theoretical model of the process of learning active citizenship was developed. This theoretical model (figure 6) presents the ideal relationships, taking into account the background variables between learning inputs, civic competence and active citizenship. The theory is that, through learning experiences such as formal education, civic competence (civic knowledge, skills, attitudes and values) is developed, and this enables people to become active citizens.

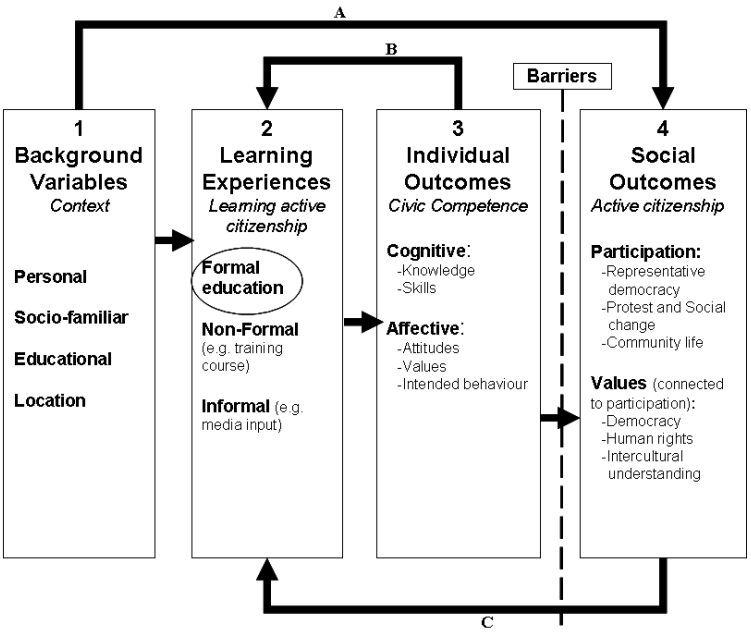


Fig. 6 Working model of Active Citizenship (Hoskins, 2006)

1.3 The Active Citizenship Composite Indicator

The first indicator produced was an index to measure active citizenship among adults. The Active Citizenship Composite Indicator (ACCI) (Hoskins et al 2006 and Hoskins and Mascherini 2009) is a measure of value-based engagement of adults in political life, civil society and community life combined with measures of individuals' democratic values in the areas of human rights, intercultural understanding and citizenship values. It uses 61 indicators from the 2002 European Social Survey data, which is a household survey sampling about 2000 persons in each participating European country every two years. The measurement model comprised four dimensions: 'Protest and Social Change', 'Community Life', 'Representative Democracy' and 'Democratic Values'.

The results of this first composite indicator showed that active citizenship rates were the highest in Northern Europe, followed by Western Europe. Southern and Eastern Europe gained much lower results reflecting a two-speed Europe[1]. However, it should be recognised that although this indicator is broad in terms of many forms of voluntary, political and non-governmental forms of participation, it is limited predominantly to those activities which are formally organised, and different results may occur if data were available for more informal actions. The Active Citizenship Composite Indicator was used in the European Commission progress report (2007) on the Lisbon objectives in education and training.

1.4 The Civic Competence Composite Indicator

In a second exercise, the research team defined and measured civic competence. A competence refers to a complex combination of knowledge, skills, values, attitudes and desire which lead to effective, embodied human action in the world (Hoskins and Deakin Crick 2008). In the case of civic competence, the qualities needed to become an active citizen are measured. Civic competence has been defined in the European Commission Framework of Key Competences[2]. The measurement model (based on this definition and the network ideal list of the qualities needed for active citizenship) for the Civic Competence Composite Indicator (CCCI) (Hoskins et al 2008) was based on a framework composed of four dimensions: Citizenship Values (for example indicators on the topic of understanding the importance of volunteering, voting and protesting); Social Justice Values (predominantly indicators on attitudes towards women's and minority rights); Participatory Attitudes (for example, indicators on the interest in participating and ability to influence actions in the

[1] This indicator was used in European Commission staff working paper 2007 on Progress towards the Lisbon goals in the education and training field.

[2] Agreed by the Education Council Dec 2006

community and political life); and Cognitions about Democratic Institutions (knowledge and skills such as interpreting political campaign messages).

The data used was from a 1999 international study on citizenship (IEA CIVED) of 14 year olds that tested their knowledge and skills on democracy and asked them questions about their attitudes and values towards engagement. It should be recognised that not all qualities of civic competence were available from this dataset including skills such as lobbying and communication, which would be measured better through observations. However, this study has the most comprehensive coverage of the qualities we were looking for, along with also having good country coverage. Please read Hoskins et al (2008) for details of the coverage of the different aspects of civic competence and on how the composite indicator was constructed including weighting and sensitivity analysis.

In contrast to the Active Citizenship Composite Indicator, the Civic Competence Composite Indicator (CCCI) presents a mixed pattern of results with no strong regional trends. There was 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 the top portion 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 (French).

The Four Dimensions

The regional trends can be found, however, in the four dimensions that comprise the Civic Competence Composite Indicator. Cyprus, Greece, Finland, Italy, Slovakia and Poland are high-performing countries in the dimension of Cognition About Democratic Institutions; in contrast, the Baltic states of Lithuania and Latvia do not perform well in this domain (Appendix 1). The Southern and former communist European countries of Cyprus, Portugal, Romania, Poland, and Slovakia, are high-performing countries in the dimension of Participatory Attitudes, whereas most of the Northern European Countries that took part 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 other former communist countries (Estonia, Lithuania, Czech Republic and Bulgaria). The 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, being both a former communist country and a high performer. 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) and Finland closing the ranking for this

dimension, and Estonia being the outlier who joins this group at the end of the table. This composite indicator was used within the European Commission progress report on Lisbon objectives in education and training in 2008.

This report forms the latest initiative from CRELL to develop a new composite indicator on civic competence.

2.Theories of civic competence

This chapter explores the major theoretical models of civic competence; The Liberal model, the Civic Republican model and the Critical Citizenship model. The European Civic Competence model is developed by drawing from these existing models and creating an inventory. This inventory provides the conceptual framework for this study.

Establishing civic competence is contested for a number of reasons, not least that it is comparatively different among countries and 'dynamic' and 'evolving' across time (Torney Purta 2003 p.71). The commonality is that schools have been the central site for describing and teaching these competences (Gutman 1987 and Green 1990). In non-democratic regimes such as within the former communist countries in Eastern Europe, a different type of competence was taught, aimed towards teaching citizens to become the building blocks of communism (Buk-Berge 2006). Within authoritarian regimes and some democracies, a nationalistic citizenship education agenda has been present to ensure that citizens play a patriotic role in maintaining the nation state. Within Western democracies, there have been three theoretical approaches or models that have underpinned the description of competences and values required for active citizenship: liberal model, civic republican model and critical model.

2.1 Liberal Model

The liberal model of citizenship is typically considered the least demanding. In its original meaning, liberal democracy is typically considered 'thin' democracy. This means that citizens' involvement in public life is minimal, and is primarily enacted through the vote (Carpini and Keeter 1989). However, even this political activity is not an obligation and, in elections, the choice is often made by a small number of 'reasonably minded' parties. The government within a purely liberal democracy would have a mandate generally limited to the protection of rights and property.

In such an environment, citizens are encouraged, but not obliged, to vote. And, education for civic competence is focused on creating autonomous citizens and on enhancing individuals' basic level of political knowledge and skills (Carpini and Keeter 1989). One of the greatest concerns of liberal thinkers towards allowing universal suffrage has been their concern over the lack of capacity for citizens to understand decisions for either public or even self-interest, which is why citizenship education based on this philosophy has focused on knowledge and skills. In addition, more recent liberal thinking has been concerned about the uneven spread of knowledge and skills of democracy across the society, citing that this severely reduces the capability of democracy as decisions are rarely based on what is in the best interest of the majority (Carpini and Keeter 1989).

Civic competence within the liberal model posits that, if the state is kept to a minimum, civil society will flourish. However, liberal ideals from the notion of the atomized individuals have been reinterpreted in recent years. Recent liberal thinkers have criticized the earlier liberal notions of citizenship as focusing only on the relationship between the individual and the state, and emphasised how such notions miss out on how humans interrelate with each other in groups built on the foundations of trust. Hence, the liberal model has in recent years been influenced by Putnam's theories of social capital. Within the UK, for example, the recent debates regarding the 'Big Society' can be understood as an outcome of such reinterpretations. From the perspective of the 'Big Society', citizens participate in associations, not only out of a feeling of obligation, but also out of a feeling of pleasure from enjoying forming relationships and building a sense of emotional attachment or belonging to a group (Norman 2010).

The implications of the liberal approach for civic competence have been to reflect on the knowledge, skills and dispositions towards engagement. In this sense there has been an emphasis on more 'objective' knowledge (Halstead 1996 p.27) and engagement rather than an explicit teaching of values. The only values explicitly stated are conformity to the procedural rules of liberal democracy, equality before the law, and more recently, an emphasis on trust. The values that might be implicitly taught through such an approach are individualism and individual human rights.

2.2 Civic Republican Model

Within Western democracies, the development of the concept of civic competence is sometimes also derived from civic republican traditions (Crick 2003). This approach places higher demands on the citizen in terms of the maintenance of the democratic processes and institutions that in turn assure greater freedoms (Lovett 2010). From this perspective, citizens become the actors of positive laws for social change and the instruments to prevent corruption (Lovett 2010). Based on Greek and Roman philosophical thought, civic republicanism has emphasized the need for citizens to act politically within the public sphere, and to be actively engaged within a political community as equal and free citizens. Thus the notion of civic responsibility developed from this view. Compared to the liberal tradition, this approach places more of an obligation and value on political engagement and involvement in political decision making.

The civic republican approach emphasises the need for citizens to learn civic competences, including emphasising the values of public spiritedness, solidarity, and the responsibility to act for the common good (Honohan 2002 p.147), often referred to as 'civic virtues'. Honohan (2002) asserts that, without civic virtues, too much self-interest can lead to corruption. Putnam's (1993) early work on defining the competences necessary for the civic community in Italy also borrows from civic republicanism traditions. Putnam cites Banfield's example of a poverty stricken village called Montegrano in which he attributes the village's economic situation to the fact that the villagers were unable to work together for a common purpose, and were unable to transcend their own family interests (Putnam 1993, p.91). Putnam

uses the example to highlight the need for citizens to work towards the common good. We argue that for our model of civic competence, we should aim for civic virtues but that in reality, for many, we may only achieve awareness and consideration of others, or as Honohan (2002) discusses, at least a long-term but self-interested view, such as consideration for the environment.

Thus in contrast to the liberal model, within the civic republican model, values are explicit and at the core. These values are public spiritedness, solidarity, the responsibility to act for the common good and a belief in the importance of political engagement. These values can be contrasted with the implicit values of individualism, human rights and self-interest that are arguably behind the liberal model. However, the conception of the value of the common good has been critiqued, and these debates will be visited within the following model on critical citizenship.

2.3 The Critical Model

Critical citizenship has been a 'catch all' title for various new theories that try to frame the competences needed for active citizenship in different terms (Abowitz and Harnish 2006), for example, by focusing on critiquing and improving society through social and political action based on the ideas of empowerment and social justice as expressed by Paulo Freire, among others (Johnson and Morris 2010). These models focus on a more dynamic view on democracy that is grounded in critical and engaged citizens, and they include an explicit values agenda aimed at improving social justice (Westheimer and Kahne 2003) and reducing inequalities, particularly power relationships (Mouffe 2005). The critical models are predominately and explicitly based on values of equality and are critical of the current status quo. They are based on theoretical debates in academic literature but have yet to have an extensive influence on the description of competences or civic education in schools (Abowitz and Harnish 2006).

These critical forms of citizenship oppose the civic republican notions of citizenship in two ways:

First, the concept of the common good is said to promote nationalistic values and has been used by leaders during difficult circumstances such as war to promote loyalty whilst compromising human rights (Abowitz and Harnish 2006). Due to the historic use of the term, there have been applications of the common good that have supported war; however, the common good does not have to be applied in a nationalistic manner. Equally, the opposite side of the spectrum is self-interest, which can also be considered to be harmful. As was stated within the previous section on civic republicanism, by the common good we are referring to the individual's ability to see beyond his or her own self-interest and to reflect on the impact of decisions on other people. This type of common good does not refer to boundaries whether at the local, national or international level.

The second major critique of civic republicanism is that the notion of citizenship has historically privileged the dominant group, usually white males, and has neglected the rights or freedom of other groups (Honohan 2002 and Abowitz and Harnish 2006). The Crick Report (1998), which developed a concept for citizenship education to be introduced in England, has been critiqued for failing to recognise that representative politics is still dominated by white men, and that there is a social justice issue in terms of creating change toward greater equality (Arnot 2003). Thus any conception of active citizenship would also need to be critical, in that it would need to critique existing unjust conditions, and include the need for greater representation and engagement of women, lower social classes, and minority and immigrant groups, within decision making and representative politics. Thus any description of civic competence would also need to include qualities that demonstrate the need for greater representation and engagement of these groups within decision making and representative politics.

2.4 European Civic Competence model

From the above discussions of liberal, civic republican, and critical citizenship models, we argue that there is a set of qualities that can be argued that young people in Europe need. A plethora of inventories of the qualities needed for active citizenship have been described (Hoskins 2008; Council and European Parliament 2006; Abs and Veldhuis 2006; Torney Purta 2003; Audigier 2000; Crick 1998; Veldhuis 1997). However, these inventories have been less explicitly tied to theory. Below we will describe the inventory that we will use for the civic competence composite indicator based from the theory of citizenship models.

First, borrowing from liberal traditions but with a more explicit focus, there is a need to include the qualities of valuing equal rights for participation. Second, and borrowing from civic republican tradition, the qualities of solidarity, awareness of others and public spiritedness should be included within the list. This is clearly not referring to a nationalistic concept of the common good but to a concern for others. Third, from the civic republican perspective, there is a need to include the understanding of responsibility of engagement. This also contains the liberal notion of respect for democratic procedures. Fourth, and from a slightly different angle, again borrowing from civic republican tradition, is the extent that individuals expect, are interested in and feel able to participate. Fifth, from the critical model, there is a need for the values of social justice and equality for all social groups. Sixth, there is a cognitive dimension that includes the higher level of knowledge, skills from the civic republican model and the emphasis on critical thinking from the critical model that facilitate active involvement in decision making.

In addition to the qualities outlined above which have been based upon theory, empirical research provides evidence on the knowledge, skills, values and attitudes that have been shown to benefit active citizenship. An example of this relates to self-efficacy/the belief that you can make a difference, which has been shown to be an important element in facilitating engagement (Haste, 2004; Veugelers, 2011). There are other aspects that will need to be built upon in terms of the specific needs of a

society. These include new skills, such as learning ICT, that are crucial today for the physical mobilisation of people and for informing citizens en masse about political actions. These could also refer to the economic dimension of citizenship.

This chapter and this inventory of civic competence, outlined in the next section, are based upon theory and form a conceptual framework for civic competence. Later we will see how this proposed inventory is drawn upon in the measurement model for the old and new composite indicators on civic competence.

2.5 European Civic Competence Inventory

Values and attitudes

- Fundamental rights
    - Human rights
    - Equality, in particular including the need for equal political participation for women, minorities and migrants
- Civic virtues
    - Awareness of others, solidarity, and public spiritedness including a concern for the environment
- Responsibilities
    - Notion of the good citizen in terms of participatory obligations
    - Respect for democratic procedures
- Participatory attitudes
    - An interest and desire given to engagement in all forms of decision making at all levels, including representative democracy and civil society

Knowledge and skills for democracy

- Knowledge of democratic processes, and historic and current socio-political situation
- Critical thinking
- Skills for involvement in decision making including use of new social media

We have operationalised these theoretical dimensions through IRT scales or 'derived variables' created with individual student data collected in the two international studies carried out by the IEA mentioned earlier, namely the Citizenship, International Civic and Citizenship Education Study (ICCS 2009) and Civic Education (CIVED 1999). The IRT scales are presented in table 1 below and discussed in more detail in Chapter 5.

Theory/European Civic Competence Inventory	Coverage by ICCS data	CCCI-2 (ICCS)	CCCI (CIVED)

• Fundamental rights
  ○ Human rights
  ○ Equality in particular including the need for equal political participation for women, minorities and migrants
	Satisfactory	• Attitudes towards gender equality
		• Attitudes towards equal rights for all ethnic/racial groups
		• Attitudes towards equal rights for immigrants
			• Attitudes towards gender equality
			• Attitudes towards equal rights for all ethnic/racial groups

• Civic virtues ○ Awareness of others, solidarity and public spiritedness including a concern for the environment	Partially	• Valuing student participation	• Confidence in school participation

• Responsibilities
  ○ Notion of the good citizen in terms of participatory obligations
  ○ Respect for democratic procedures
	Satisfactory	• Importance of conventional citizenship
		• Importance of social movement-related citizenship
		• Democratic values
			• Importance of conventional citizenship
			• Importance of social movemen- related citizenship
			• Democratic values

• Participatory Attitudes ○ An interest and desire given to engagement in all forms of decision making at all levels including representative democracy and civil society	Satisfactory	• Expected adult participation in political activities • Expected adult electoral participation • Expected legal protest • Expected informal political participation • Interest in political and social issues	• Internal political efficacy • Expectations of community participation • Political activities • Self-confident participation • Expectations associated

		• Sense of internal political efficacy • Students' citizenship self-efficacy • Perception of the value of participation at school	with voting

• Cognitive dimension
  ○ Knowledge of democratic processes, historic and current socio-political situation
  ○ Critical thinking
  ○ Skills for involvement in decision making including use of new social media
	Partially	• Knowledge and skills test	Knowledge and skills test

Table 1. Dimensions of civic competence

3.The Drivers of Civic Competence

The major drivers of civic competence are the learning of values and norms of a particular civic culture, current political and economic circumstances and the history of the country. This chapter explains these drivers. The 'communities of learning' can be divided into home, peer groups, school, civil society, virtual communities (Hoskins 2011). Education at schools, however, has tended to be the main focus for research in the field of civic competence.

3.1 Education

Education can influence the levels of civic competence in a number of ways: through the curriculum subject of citizenship education, the methods used to teach the subject, the methods utilized across the whole school, the school ethos and the teaching of basic learning-to-learn skills, which enable citizens to continue to inform themselves.

Education measured by years (versus education level achieved) has been identified time and again within quantitative research (Lipset 1959; Putnam 2000, Hoskins et al, 2008a, OECD 2010) to increase the levels of civic engagement. Nevertheless, recent research on European countries (Borgonovi et al, 2010) produced more complex results. Borgonovi et al (2010) showed that education improved the level of competence in voting by improving the likelihood that people will acquire information about candidates beforehand, but did not increase the likelihood to vote.

Citizenship education, although taught as a separate subject in most European countries, has a mixed picture in terms of success in having positive associations with civic competences. One of the most in-depth and up-to-date research projects on citizenship education is from the Citizenship Education Longitudinal Study (CELS) (2001-2010) in England. So far, the CELS researchers have not found a positive association between citizenship education (whether organised through cross-curricular lessons or within specific individual lessons) and participatory intentions (Benton 2008). Research based on the IEA CIVED data for Finland, Germany, Poland, Italy and England likewise did not find a positive association between the hours taken of social science subjects including citizenship education and the levels of citizenship knowledge and skills or participatory attitudes (Hoskins 2011). Niemi and Junn (1998), however, found that civics courses in the United States did help develop civic knowledge and skills, a finding supported by evaluation research on citizenship education programmes in Poland (Kazimierz Slomczynski and Goldie Shabad 1998), in Bosnia (Suzanne Soule 2003) and in post-apartheid South Africa (Steven Finkel and Howard Ernst 2005).

In comparison to the curricular subject, methods of teaching and school ethos have consistently shown to positively influence civic competence. The CELS study results highlighted the importance of a democratic ethos of schools for enhancing an individual's self-efficacy and

willingness to participate (Benton 2008). They further found active teaching methods in the classroom to be much appreciated by the students and to have positive learning effects. An open classroom climate has consistently been shown to be positively associated with higher levels of civic competence (Carol Hahn 1998, Hoskins et al 2011 and Torney-Purta 2002), and school councils have also been shown to have positive effects.

The learning of civic competences takes place in a much broader environment than the school, and parents, friends, the media and civil society all play an important role. The family has consistently been cited as the source for the learning of civic competence. From early childhood onwards, political socialisation, including identification and transmission of values, has been considered an important element in the development of civic competences. Deliberating with parents on politics and social affairs has been found to be a strong predictor of political interest, political participation and community participation (Lauglo and Oia 2008, Kahne and Sporte 2008, Delli Carpini and Keeter 1996). Moreover, levels of parental political participation and parental educational attainment were found by Verba, Schlozman and Brady (1995) to be important drivers of young people's learning of active citizenship.

3.2 Economic factors

Another factor that has been found to influence citizenship values and behaviour is economic development. There are a number of different positions on how wealth influences civic competence, predominantly based on the world values survey. First, the economic development argument suggests that people who have had a secure and affluent childhood will tend to develop self-expression values (i.e., values emphasising self-fulfilment, freedom, autonomy, gender equality, tolerance and participation in protest activities like petitions and ethical consumption), which overlap with the above-defined conception of civic competence associated with democracies. By contrast, people who have grown up under conditions of scarcity and insecurity will tend to develop survival values (i.e., values stressing economic and physical security), which underpin citizen identities particularly in authoritarian states (Inglehart and Welzel 2005). These results are contested by Charles and Stephens (2009) who suggest that individual economic prosperity decreases political engagement. On the other hand, economic prosperity may have the dual effect of developing self-expression values and greater individualism while reducing solidarity and formal political engagement.

A second and more complex argument suggests that in countries with high levels of education but low economic prospects, young people have a higher level of motivation and engagement in protest and high intensive political activities (Campante and Chor 2011). In addition to this, if the economic conditions worsen for the highly educated groups, then the likelihood for protests increases. This research has been conducted in light of the Arab uprisings; however, the implications of these findings for European democracies in the context of the economic crises would be worth considering.

3.3 Political history

The political history of a country plays an important role in the development of civic competence, and the factors that are important include the length of time and stability of democracy in the particular country (Almond and Verba 1963). In contrast to research on the adult population (van Deth, Montro and Westholm 2007), the longer periods of democracy had a negative association with youth Participatory Attitudes and Citizenship Values for the first composite indicator (Hoskins 2008). Thus, young people from countries that had experienced recent transitions to democracy and therefore less political stability valued democracy more highly. It was therefore argued that the greater intention to participate was due to the fragility of the democratic institutions. In this case it would be the instability of political external factors and recent memories of a lack of democracy that generate the values associated with civic competences within the youth age group (see Torney-Purta et al. 2008).

Another factor from a country's history is the extent to which ethnic or civic understandings of citizenship are prevalent. Where ethnic understandings of citizenship include citizenship by decent, there tend to be lower levels of tolerance towards rights for minorities (Kohn 2008 and Brubaker 1996). Ethnic notions of citizenship are typically associated with Germany and Eastern Europe. However, in the context of debates on immigration across Europe, even in countries like France with a strong tradition of civic conceptions of citizenship, this concept is now contested with cultural and ethnic notions of citizenship.

We will return to some of these arguments later in this report, when the results of the composite indicator are presented in Chapter 7. At this point we will provide some interpretation based on these theories.

4.The International Civics and Citizenship Education Study (ICCS)

This chapter presents the two IEA studies (ICCS 2009 and CIVED 1999) that provided the datasets upon which the first and second composite indicators on youth civic competence were based. In both cases, selected individual level data on civic and civic education student outcomes were used as indicators of civic competence in the two composite frameworks. The first section below begins with a general overview of ICCS before revisiting the 1999 CIVED study, followed by a more detailed presentation of the ICCS study in comparison to CIVED, which provides the background for a discussion of the two composite indicator measurement frameworks in Chapter 5.

4.1 General overview - ICCS

The International Civics and Citizenship Education Study (ICCS) (http://www.iea.nl/iccs_2009.html) was created by the well known organization, the International Association for the Evaluation of Educational Achievement (IEA). IEA is a non-profit international scientific society licensed in Belgium for the purpose of pedagogical research worldwide (http://www.iea.nl/legal_status.html), with its headquarters in the Netherlands. In 1960, the first cross-country, large-scale assessment study was carried out, including only 12 countries. IEA is now conducting several other large-scale international achievement studies such as TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study), and the number of countries participating in the IEA studies has increased considerably.

ICCS, the most recent of three similar studies in the area of civics and citizenship, builds on the previous IEA studies on civic and citizenship education among school pupils. The latest study, for which the main data was collected in 2009, is broad in its focus and has benefitted from the experience gained from past IEA studies. The dataset itself was released to the public only in 2011, and the ICCS Technical Report has yet to be published, and other studies that IEA researchers are conducting are still in progress. Several reports and other publications had already been published prior to the release of the dataset, including international and European reports, which are referred to in the next section where the study is discussed in more detail.

More than 10 years have passed since data was collected for the previous IEA civics education study, the Civic Education Survey (CIVED), carried out in 1999. The first IEA study in the series was conducted between 1970 and 1971, the results of which were published in several reports including Torney, Oppenheim and Farnen (1975). The two subsequent studies evolved in the context of world socio-political changes as well as methodological and other developments that have aimed to improve measurement tools and concepts. According to Schulz, Fraillon, Ainley,

Losito and Kerr (2008), the reasoning behind the collection of new data and the updating of empirical evidence rests in the "changing environment for civic and citizenship education since the 1980s with respect to the scale and complexity of the challenges facing democracy and citizenship" (p.9).

Due to the importance of CIVED as a foundation for ICCS, as well as a basis for the first composite indicator on youth civic competence (CCCI) constructed in 2008 (Hoskins, Villalba, Van Nijlen and Barber), it is worth revisiting this survey before proceeding to ICCS.

4.2 Civic Education Survey (CIVED) (IEA 1999)

CIVED (http://www.terpconnect.umd.edu/~jtpurta/) was designed to "strengthen the empirical foundations of civic education by providing up-to-date information about the civic knowledge, attitudes, and actions of 14-year-olds" (Schulz, Fraillon, Ainley, Losito and Kerr2008, p.7). Within this design, three civic-related content domains were in focus:

- democracy/citizenship;
- national identity/international relations; and
- social cohesion/diversity.

A set of core international domains consisting of topics and concepts that experts in the different countries believed 14-year-old students should understand, guided the development of the survey. According to the CIVED Technical Report (Schulz, W. and H. Sibberns 2004,p. 8), these were:

Domain I: Democracy
What does democracy mean and what are its associated institutions and practices?

The three sub-domains were:
A. Democracy and its defining characteristics
B. Institutions and practices in democracy
C. Citizenship—rights and duties.

Domain II: National Identity, Regional and International Relationships
How can the sense of national identity or national loyalty among young people be described and how does it relate to their orientation to other countries and to regional and international organizations?

The two sub-domains were:
A. National identity
B. International/regional relations.

Domain III: Social Cohesion and Diversity

What do issues of social cohesion and diversity mean to young people and how do they view discrimination?

Three other issues were considered as important: the media, economics, and local problems (including the environment).

In terms of applying content to the test and survey items, these domains were intersected by item types assessing:

(Cognitive test with correct answers)
• *knowledge of content*; and
• *skills in interpretation* of material with civic or political content (including short text passages and cartoons).

(Survey items without correct answers)
• students' understanding of *concepts* such as democracy and citizenship;
• students' *attitudes* (e.g., feelings of trust in the government); and
• students' current and expected participatory *actions* relating to politics.

The study was carried out in two phases, with several publications. The first featured a detailed series of national case studies from the 24 participating countries (Torney-Purta, Schwille, and Amadeo, 1999). Two international reports contained results on the standard population of 14-year-olds (approximately 90,000) in 28 participating countries (Torney-Purta, Lehmann,Oswald, and Schulz, 2001), and from the 16 countries that surveyed an optional population of 16- to 18-year-olds (Amadeo, Torney-Purta, Lehmann, Husfeldt, and Nikolova, 2002). Data on this second population was not included in either of the CRELL composite indicators on civic competence discussed in this report.

In addition, questionnaire data were collected from approximately 9,000 teachers and 4,000 school principals.

The 1999 CIVED survey was administered in 28 countries, 22 of which are European countries[3] and 20 of which are now European Union (EU) countries. The remaining six non-European countries in the study were USA, Australia, Hong Kong, the Russian Federation, Chile and Colombia. As with ICCS, the aim of this study was to 'understand how young people are prepared to undertake their role as citizens' (Torney-Purta, 2001). It tested students at schools in grade 8 (with an average age above 13.5 years). The sampling strategy was identical to that

[3] Belgium (French), Bulgaria, Cyprus, Czech Republic, Denmark, England, Estonia, Finland, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Sweden, Switzerland

of TIMSS for the same year. The sample was based on an *international desired population* of 14-year-olds (p.42).

Similar to ICCS, the CIVED researchers also collected and analyzed a range of background and context data, including:

- Information on the home background of the tested students;
- Aspects of civic-related teaching and learning as perceived by students, teachers, and school principals; and
- Characteristics of sampled schools and teachers of civic-related subjects.

More information on CIVED can also be found in B. Hoskins, E. Villalba, D. Van Nijlen and C. Barber (2008) as well as the Technical Report produced by W. Schulz and H. Sibberns in Schulz and Sibberns (Eds.) (2004).

4.3 ICCS

This section focuses on ICCS, though still in the context of certain changes made in regard to the CIVED study, which is the point of departure for ICCS. At the time of writing the present report, however, the IEA ICCS Technical Report was not yet published, although draft chapters were made available to CRELL researchers (referred to below as 'information obtained from IEA'). The lack of the complete Technical Report implies that certain details on the ICCS dataset and the analytical results may not be accounted for.

ICCS Data Collection and Assessment Framework

Several publications already released outline the study design, data collection procedures, and other methodological aspects of ICCS (Schulz, Fraillon, Ainley, Losito, and Kerr, 2008; Schulz, Ainley, Fraillon, Kerr and Losito, 2010; Brese, Jung, Mirazchiyski, Schulz and Zuehlke, 2011), in some cases comparing these to CIVED and its methodology. Some of the key aspects of ICCS that are relevant to the present report are summarised in this section.

Thirty-eight countries participated in ICCS, 10 more than in CIVED. Among these 38 were five from Asia (in CIVED only Hong Kong participated), one from Oceania, 26 from Europe (four more than in CIVED), and six from Latin America (compared to only Chile and Colombia in CIVED). The main survey data collection took place in the 38 participating countries between October 2008 and June 2009.

Compared to CIVED, ICCS is much larger in respect to participating countries and individuals, making it the largest international study of its kind ever conducted. Data was collected from over 140,000 Grade 8 students, 62,000 teachers, and 5,300 school principals, from 38 countries.

The ICCS student population also comprised students in Grade 8 (pupils approximately 14 years of age, although some are above and below this age), provided that the average age of students

in this grade was 13.5 years or above. If the average age of students in Grade 8 was below 13.5 years, Grade 9 became the target population. One classroom in the target grade per school was selected in most countries, and IEA recommended a sample of around 150 schools per country, though there were some exceptions, which are discussed below.

In keeping with the CIVED data collected albeit with some additions, a range of background and context data was ascertained and analyzed, including: details on home background and personal characteristics, aspects of civic-related teaching and learning as perceived by students, teachers, and school principals, characteristics of sampled schools and teachers of civic-related subjects, as well as country context information, which was new.

Several data collection instruments were administered in each participating country, two of which were new to the IEA civics studies, and two of which were used to collect data used in the construction of the CCCI-2:

• An international cognitive student test consisting of 80 items measuring civic and citizenship knowledge, analysis, and reasoning. The assessment items were assigned to seven booklets (each of which contained three of a total of seven item-clusters) according to a balanced, rotated design. Each student completed one of the 45-minute booklets. (Used in the CCCI-2)
• A student questionnaire consisting of items measuring student background variables and students' perceptions and behaviours. (Used in the CCCI-2)
• A regional student instrument, administered after the international student assessment in those countries participating in the regional module. This tool included specific cognitive and questionnaire-type items. (New)
• A teacher questionnaire, administered to selected teachers in the target grade and school. Information was collected on teacher background variables and teachers' perceptions related to the context of civic and citizenship education.
• A school questionnaire, administered to principals of selected schools, on relevant school context characteristics and school-level variables.
• An online national contexts survey, completed by national experts, elicited information on the country context for civic and citizenship education. This includes details on the structure of the education systems, the status of civic and citizenship education in the national curriculum, and recent developments. (New)

The international cognitive test is not available to researchers, but some information has been made public. IEA reported on 79 of the 80 test items used in their analyses. 'Items were typically presented as units in which some brief contextual stimulus (an image or some text) was followed by items relating to the common context. On average, there were 1.4 items per unit. Seventy-three items were multiple choice and six items were constructed-response. The latter required students to provide responses of between one and four sentences in length' (Ainley, Fraillon, Kerr and Losito, 2010: 59).

Research questions and broader assessment framework

Like the previous IEA civics studies, ICCS was guided by certain research questions. In broad terms, six questions focused on the degree to which students are ready and able to undertake their roles as citizens. This included contextual factors that explain variations in civic knowledge and engagement.

The six questions were as follows:

1. What variations exist between countries, and within countries, in student achievement in conceptual understandings and competencies in civics and citizenship?
2. What changes in civic knowledge and engagement have occurred since the last international assessment in 1999?
3. What is the extent of interest and disposition to engage in public and political life among adolescents and which factors within or across countries are related to it?
4. What are adolescents' perceptions of the impact of recent threats to civil society and of responses to these threats on the future development of that society?
5. What aspects of schools and education systems are related to achievement in and attitudes to civics and citizenship, including:
   (a) general approach to civic and citizenship education, curriculum, and/or program content structure and delivery?
   (b) teaching practices, such as those that encourage higher-order thinking and analysis in relation to civics and citizenship?
   (c) aspects of school organization, including opportunities to contribute to conflict resolution, participate in governance processes, and be involved in decision-making?
6. What aspects of students' personal and social background, such as gender, socioeconomic background, and language background, are related to student achievement in and attitudes toward civic and citizenship education?

As explained by Schulz, Ainley, Fraillon, Kerr, and Losito (2010, p.26), the assessment framework consisted of two parts:

• The civics and citizenship framework: this outlined the outcome measures addressed through the cognitive test and the student perceptions questionnaire (relevant to the CCCI-2);

• The contextual framework: this mapped the context factors expected to influence outcomes and explain their variation.

In addition, the framework was organized around three dimensions (all relevant to the CCCI-2):

• A *content dimension* specifying the subject matter to be assessed within civics and citizenship;

• An *affective-behavioural dimension* describing the types of student perceptions and activities measured; and

• A *cognitive dimension* describing the processes to be assessed.

The ICCS "assessment framework" with the concepts underlying the survey and test design is detailed in Schulz, Fraillon, Ainley, Losito and Kerr (2008), and the features relevant to our purposes (student test and student perceptions questionnaire contents) are summarised in Table 2 below. The table also illustrates which of the two relevant student instruments (cognitive test or international student questionnaire) were administered and pertain to the respective *content* (transversal), *cognitive* and *affective-behavioural domains*. This three-part division represents the design of the framework for the test and survey development in a different way compared to CIVED, although the CCCI already incorporated a cognitive versus affective-behavioural structure.

As mentioned above, data from the regional student instrument, teacher and school instruments were not used in constructing the CCCI-2, and thus these instruments are not included in the table. In the case of both composites, only *outcomes measures* are in focus, instead of the contextual factors that might influence these variables and explain their variation, such as student background and school characteristics. Both the cognitive test and the international student questionnaire measure *student outcomes*.

Table 2: ICCS Design matrix, assessment framework.

	Content Domains			
	Civil society and systems	*Civic principles*	*Civic participation*	*Civic identities*
Cognitive Domains				
Knowing	test	test	test	test
Analyzing and reasoning	test	test	test	test
Affective-Behavioural Domains				
Value Beliefs	Student questionnaire	Student questionnaire	Student questionnaire	Student questionnaire
Attitudes	Student questionnaire	Student questionnaire	Student questionnaire	Student questionnaire
Behavioural intentions			Student questionnaire	
Behaviours			Student questionnaire	

Adapted from: Schulz, Fraillon, Ainley, Losito, Kerr (2008), ICCS Assessment Framework (IEA)

The *international cognitive student test* consisted of items measuring students' civic knowledge and ability to analyze and reason, which differs somewhat from the CIVED test, which in place of the latter, measured skills in interpreting material with civic or political content. In contrast, the structures of the two cognitive domains in ICCS are defined in terms of "the cognitive processes that comprise them" (Schulz, Fraillon, Ainley, Losito and Kerr, 2008, p. 15).

As can be understood from the table above, both of the ICCS cognitive aspects covered the four content domains:

- civic society and systems;
- civic principles;
- civic participation; and
- civic identities.

As for the affective-behavioural aspects of civic and citizenship education *value beliefs*, *attitudes*, *behavioural intentions*[4] and *behaviours*, which also covered the constructs in the four content domains where appropriate, these were measured using the student questionnaire. In the case of the CCCI and the CCCI-2, items on student behaviours, versus *expected future behaviours* (or "intentions" according to IEA), were not used for several reasons. First, actual reported frequency of student democratic behaviours in the IEA studies is normally very low (as is confirmed in ICCS). Secondly, whether or not students participate in volunteer activity or school government, for example, may reflect the limitations or possibilities afforded to them in the school, community or family contexts, rather than their own desire or propensity to engage.

Overall, according to IEA, the ICCS assessment framework is intended to maintain a strong connection to the constructs used in CIVED and the underlying conceptual model is therefore said to be reflected in the ICCS assessment framework (ibid., pp.12-13). However, in terms of measurement issues in the cognitive domain, there are only some CIVED cognitive trend items (limited to Civil Society and Systems content area) in a smaller sample of countries. In addition, in terms of changes in constructs and their measurement, only some items remain from the affective scales used in CIVED. This will be discussed later in the context of changes in the indicators or scales used in the CCCI and the CCCI-2 and how civic competence was measured using the two different composites.

Other information on ICCS methodology and design

The ICCS civic knowledge test featured more items than the previous test used in CIVED, with the present containing 79 items compared to only 38 items in 1999. This means that the ICCS assessment has more than doubled in respect to number of items. In addition, as pointed out above, the framework for the domains assessed also differs and the scope is broader than in CIVED.

[4] These refer to what may be expected of individual student behaviour in the future according to their own perceptions (e.g., future voting behavior, participation in social-movement activities, etc.)

Schulz, Fraillon, Ainley, Losito and Kerr (2008:48) explain that compared to CIVED, ICCS uses a 'rotated design' for test administration, enabling the inclusion of more test material and therefore greater coverage of the intended framework in the same testing time. Furthermore, 'this procedure also enables a sufficient number of score points to be generated to provide the basis for comprehensive descriptions of the scale. Rotating the clusters throughout the booklets ensures that the different tests are linked and can be scaled using IRT (item response theory) methods (Hambleton, Swaminathan, and Rogers, 1991)' (ibid.).

In addition to the broadening of the test framework and domain and the changes in country participation and student samples, attesting to the challenges in comparing CIVED and ICCS results, the forthcoming ICCS Technical Report is expected to contain more detailed information on differences in the test item analyses. This includes a discussion on test item difficulty ranges, as there is evidence to support that in ICCS, test items covered lower-than-average student abilities/knowledge levels compared to higher achievement levels (information provided by IEA to CRELL researchers, February 2011).

Finally, according to further information provided to CRELL by IEA, multi-dimensional item response models were used to assess the dimensionality of items. Two possible item dimensions were explored by IEA analysts: Classifying test items by (1) content dimensions (Civic Society and Systems versus others) or by (2) cognitive dimensions (Knowing versus Reasoning and Analyzing). There was in fact a high similarity between item sub-groups. Given these results, no subscales for civic knowledge were included in the report. This was not the case for CIVED as two subscales were added to the final dataset – one on 'knowledge' and the other corresponding to 'skills' – and these comprised two of the indicators in the CCCI cognitive domain.

Like CIVED, all participating countries were expected to define their own *national desired populations* according to the IEA guidelines. Schools were then selected from a nationally defined population. Some countries excluded remote regions or segments of their educational system in order to limit coverage according to national restrictions. For example, schools were excluded if their curriculum differed from the mainstream system. Non-native language schools or students (in respect to language of the test) were also excluded. In the same way, there are several other types of *excluded populations* of students and schools that were not considered (those students and schools in remote areas or schools for the severely handicapped, etc). According to IEA, for both CIVED and ICCS, it was recommended that fewer than 5% of the national desired population could be excluded from the study. The sample of schools is therefore intended to represent the mainstream student populations and education systems.

IEA recommended that a minimum of 150 schools per country should be selected in order to achieve the appropriate level of precision, the same criteria recommended for CIVED. This guideline was not always followed and according to the ICCS User Handbook (2011), the following countries either had fewer than 50 schools or did not otherwise meet required sampling criteria: Hong Kong SAR, Liechtenstein, Luxembourg, and the Netherlands.

As in CIVED, one intact classroom per school was sampled in most countries, although in ICCS two classrooms in each school were sampled in Cyprus and Malta as they were small countries. In a few other countries, more than one classroom in each school was sampled as well.

In terms of the few trend items included in the student instruments, intending to increase the links between CIVED and ICCS, of the 21 out of 38 countries that participated in both surveys, the Russian Federation, Hong Kong SAR, Cyprus and Denmark did not include linking items due to differences in sampling ages and population, etc. Finally, United Kingdom (England) and Sweden tested at different times of the year compared to the testing dates for CIVED.

These details need to be taken into account when interpreting the results of the civic competence composite indicator.

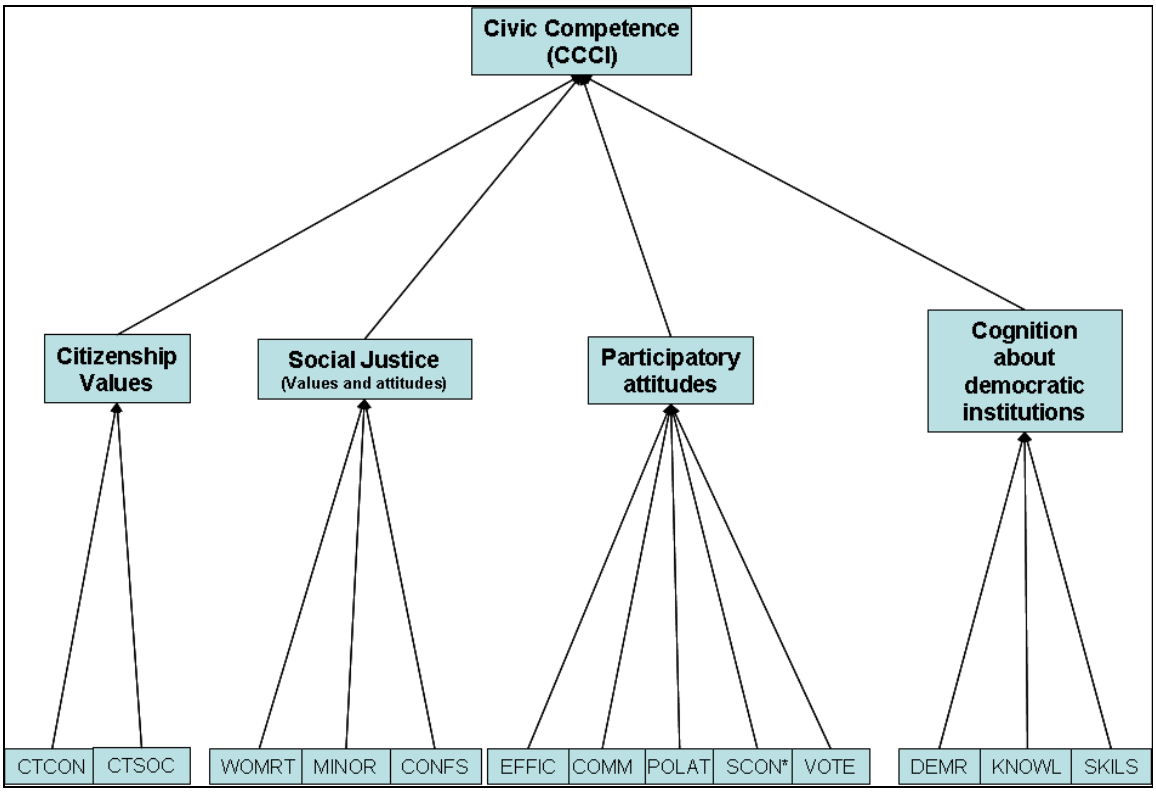
5.Constructing the framework for the composite indicator

This chapter first presents the framework for the CCCI based on CIVED 1999 data, followed by a detailed presentation and summary of the new civic composite indicator framework, the CCCI-2 based on ICCS 2009. IRT (Item Response Theory) scales used in the two composite indicators to measure students' civic competence are compared, and the newly added IEA scales are presented and discussed. For information on the theoretical framework or the 'European Inventory of Civic Competence', which lays the foundation for development of the composite indicator frameworks and constructs to be measured, the reader is directed to Chapter 1, Table 1.

5.1 Previous model: The CCCI framework constructed with CIVED (1999) student data

In their report, B. Hoskins, E. Villalba, D. Van Nijlen and C. Barber (2008) explain that for measurement purposes, the CCCI framework (see figure 7 below) was to represent the bi-partite division of civic competence into *affective* and *cognitive* dimensions, with three conceptual domains covering the former aspect and one - labeled 'Cognition about Democratic Institutions' - corresponding to the cognitive dimension. In reality, these constructs and the knowledge, social values, attitudes and expected behaviours they represent are overlapping. Like all knowledge assessed on achievement tests, 'civic knowledge' itself is embedded with certain values.

Figure 7: The CCCI framework developed by CRELL (Hoskins, E. Villalba, Van Nijlen and Barber, 2008)



As shown above, the three affective domains are represented by the constructs 'Citizenship Values', 'Social Justice', and 'Participatory Attitudes'. The cognitive aspects of civic competence are contained in the domain 'Cognition about Democratic Institutions'. The next level of the framework was finally populated by 13 'scales' constructed using IRT modeling, as explained in the CRELL report.

As explained in Brese, Jung, Mirazchiyski, Schulz, and Zuehlke (2011), responses to the individual items on the questionnaire (for both CIVED and ICCS) were combined to create a derived variable (i.e., 'scale') that provided a more comprehensive view of the intended construct than the single individual variables could. Such scales are special types of 'derived variables' that assign a score value to students on the basis of their responses to the component variables. Scales were normally calculated as 'IRT WLE scores with a mean of 50 and a standard deviation of 10 for equally weighted countries' (p.20). For example, the CCCI affective scale *Attitudes toward women's political and economic rights* (WOMRT) used the responses to six student questionnaire items to measure individual perceptions or attitudes toward 'woman's rights'. Taken together, responses to these six items form one scale or indicator/variable, which is more comprehensive and reliable than measuring 'woman's rights' using only one response. In technical terms, the scale is also created in order to calculate an ability estimate for each student. This is explained in the CIVED Technical Report (Schulz and Sibberns 2004).

Details on the scale contents are presented later in the section that discusses the old and new measurement frameworks for the CCCI and the CCCI-2. IRT modeling is briefly discussed in the methodological chapter in relation to the building of the composite indicator.

Thirteen CIVED scales

The 13 scales from CIVED data that were used in the CCCI encompassed 46 Likert-type items from the student questionnaire on 'Student concepts, attitudes and actions' and 38 multiple-response items from the CIVED test of civic knowledge.

Seven of these scales had been developed by IEA (CTCON, CTSOC, WOMRT, CONFS, POLAT, KNOWL, SKILS). Five scales were developed by CEDARS (Civic Education Data and Researcher Services, University of Maryland under Professor Judith Torney-Purta); of these five, two scales (MINOR, SCON) were identified but not developed by IEA, and three scales (EFFIC, COMM, VOTE) were also identified by CEDARS. Two additional scales were developed by the report authors; one scale had been identified by IEA (SCON) and one by the report authors (DEM)[5]. Nevertheless, all of the scales were constructed using the same basic methodology, which is explained in the original CRELL report.

As explained above, the 13 scales used to measure 'civic competence' are comprised of data collected from the student questionnaire and 38 multiple choice items from the civic knowledge test. In this way, the definition of civic competence is necessarily delimited to the available data, as the meaning of civic competence is more comprehensive than is represented within the CIVED dataset. These scales are shown below in table 3. As will become apparent later, several of these have been adapted for ICCS as the questionnaire items are either the same or have been modified but still indicate the same general constructs.

Table 3: **CCCI Scales**

Domain/ Scale	
Citizenship Values	
CTCON	Importance of conventional citizenship
CTSOC	Importance of social-related citizenship
Social Justice	
WOMRT	Attitudes toward women's political and economic rights
MINOR*	Attitudes toward opportunities for minorities
CONFS	Confidence in participation at school
Participatory Attitudes	
EFFIC*	Internal political efficacy
COMM*	Expectations of community participation
POLAT	Political activities
SCON*	Self-confident participation at school

*Non-IEA developed scales.

VOTE*	Expectations associated with voting
Cognition about Democratic Institutions	
KNOWL	Civic content knowledge
SKILS	Skills in interpreting political communication
DEM*	Democratic rights

*Non-IEA developed scales (CCCI). All other scales were developed by IEA.

As can be seen from both figure 7 as well as table 3, there are 10 'affective' scales and 3 'cognitive' ones. The first group of scales populate the three domains 'Citizenship Values', 'Social Justice', and 'Participatory Attitudes', which here are introduced in this order. Brief comments are included below on the theoretical and empirical reasoning behind the scale groupings in order to highlight the complex processes involved in creating such a framework.

The Four Domains – a brief overview

Citizenship Values. The two scales in this group (CTCON and CTSOC) are related to being a 'good citizen', containing items on important aspects of democracy and citizenship. Both survey questions ask students to rank the extent to which they agree/disagree with a list of items beginning with 'An adult is a good citizen who…".

Social Justice. This area is populated by three scales: WOMRT, MINOR and CONFS. These scales refer to values and attitudes relating to the importance of equality and equal opportunities, as well as feeling responsible for one's actions towards other citizens. WOMRT and MINOR are slightly more general than CONFS, which specifically refers to school activities.

Participatory Attitudes. This group of scales is mainly related to *expected* participation. Most of the scales refer to certain participatory attitudes in different contexts: community (COMM), political (POLAT, VOTE) or school (SCON), as well as to interest in participating in political or school discussions (EFFIC and SCON).

According to empirical tests presented in the report, COMM and SCON are also related to scales in the 'Social Justice' domain, which may indicate that to some extent these types of participatory attitudes (in school and in the community) are associated with certain social justice-related values. However, it was decided to keep these scales within the participatory domain for empirical and theoretical reasons, as they pertain to predispositions to participate.

Also noteworthy was the case of VOTE. This scale, measuring expectation to vote in future, was empirically related to the level of understanding of democratic institutions as well as the other affective domains. In this way, the empirical tests implied that the intention to vote was somehow spread along the whole spectrum of civic competence as measured in the CCCI framework.

Cognition about Democratic Institutions.

This domain is populated by *Knowledge of content* (KNOWL) and *Skills in interpretation of political communication* (SKILS), and a third scale measuring the level of understanding of *what*

is good for democracy (DEM). Concerning the first two, IEA developed two sub-scales using the civic knowledge test results, and each of these corresponds to the two domain scales KNOWL and SKILS, accordingly.

DEM was developed by CRELL and, as explained above, refers to students' knowledge of democracy through the question 'What is good and bad for democracy?' and thus it was assigned to the cognitive domain. Students had to rate a list of items according to what is 'very good' to 'very bad for democracy'. From the 25 items, only the 16 items that could be related to a normative framework for civic competence were selected and used in a factor analysis to discover underlying constructs, leaving only eight items in the DEM scale. The inclusion of DEM constituted an innovative approach to the measurement of the cognitive aspects of civic competence.

Using the CCCI scales, dimensions and domains as a point of departure, the next section will describe the new civic competence indicator framework created using the ICCS dataset from 2009.

5.2 The CCCI-2 Framework

The second Civic Competence Composite Indicator (CCCI-2) constitutes a new CRELL product and a development from the first indicator of its kind, the CCCI (Hoskins, Villalba, Van Nijlen and Barber, 2008), which was briefly outlined in the previous section. As already discussed above, the CCCI-2 was constructed from the newest IEA civics dataset, the International Civics and Citizenship Study (ICCS) from 2009. There have been changes in the CRELL indicator framework in order to improve the measurement of school pupils' 'civic competence' or as a result of changes in the questionnaire items or IRT scales created by IEA in the new ICCS dataset. In this section we investigate these differences in detail.

The overall strategy followed in developing the CCCI-2 was to operationalise the same theoretical foundations and concepts defining civic competence as used in the CCCI, and to select the same or similar scales used previously, but also to adapt the new measures where needed. This way the knowledge and experience gained and applied during construction of the first indicator could be used to build the new civic composite indicator. The adapted theoretical model for the CCCI-2 was already presented in Chapter 2 (table 1); this sets the particular theories and concepts pertaining to a 'European civic competence inventory' alongside the corresponding indicators/data available in CIVED and ICCS. Data coverage is also evaluated, as stated earlier, since the definition of civic competence is necessarily more comprehensive than can be measured in the available datasets.

As will be shown below, the CCCI-2 contains 15 scales in all (see figure 8), and, in contrast to the same domain in the CCCI, only one of these represents the cognitive dimension of civic competence. The overall conceptual structure in respect to the four domains or pillars featured

in the CCCI is maintained: there are still three domains that represent the *affective* dimension of civic competence, and one that refers to *cognitive* aspects.

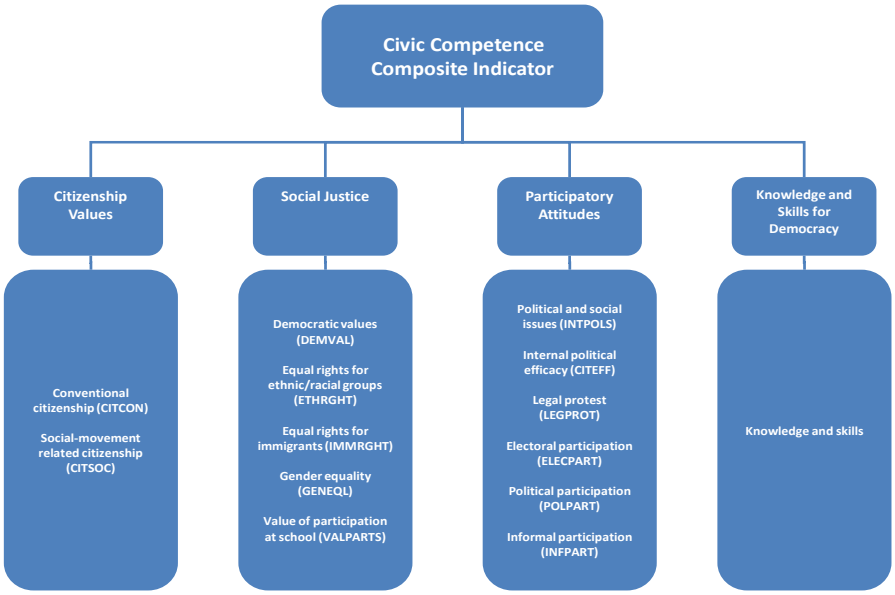


Fig. 8: Civic Competence Composite Indicator-2 Framework (2011)

Compared to the CCCI framework and scales derived from CIVED data, the CCCI-2 framework and its contents can be distinguished in several ways, stemming from the fact that the latter has been adapted to the new ICCS 2009 dataset and scales developed by IEA. In respect to the number of indicators/scales in the framework, as shown in Figure 8, the first domain 'Citizenship Values' remains with two scales (CITCON and CITSOC), but the 'Social Justice' and 'Participatory Attitudes' domains have five and seven measures, respectively, instead of three and five in the CCCI.

5.3 Locating the CCCI constructs and scales in the ICCS 2009 dataset

Overview

In contrast to the CCCI, which contained both IEA-developed and non-IEA IRT scales, the IRT scales used to construct the framework for the CCCI-2 are all constructed by IEA. We selected the ICCS scales that most closely resembled the previous ones and that measure the necessary constructs, but we also added new scales if the old scales were no longer available or appropriate, or if the conceptualization and measurement of civic competence could be enhanced through new items.

Other than specific references to IEA reports where applicable, the information on the ICCS (version here) and CIVED datasets that follows is the result of content analysis conducted by the authors of this report for the purpose of constructing the new CCCI-2 framework. There are

several categories of ICCS scales that were selected for measurement of the same four conceptual domains featured in the CCCI. Accordingly, these similarities and differences in respect to the new framework/indicator scales are those that:

(i) mostly closely resemble the original CCCI scale contents and constructs indicated, with or without a change in the label of the construct being measured (8) (CITCON, CITSOC, GENEQL, ETHRGHT*, VALPARTS, INPOLEF*, POLPART, ELECPART*);

(ii) are entirely new scales in the ICCS dataset (LEGPROT, INFPART, INTPOLS, CITEFF) or to the CCCI-2 (IMMRGHT), or have been moved to a new domain (DEM*/DEMVAL) but are also a modified version of the original scale.

(Non-IEA developed IRT scales in the CCCI are marked with an asterisk (*))

The only cognitive scale or indicator representing the corresponding dimension 'Cognition about Democratic Institutions' is here referred to as 'Knowledge and Skills'. In CIVED, for empirical reasons, there were two IEA scales available for measuring this domain (*Knowledge of content* 'KNOWL' and *Skills in interpretation of political communication* 'SKILS'). In ICCS, there is only one score covering both civic knowledge and ability to analyze and reason.

It should be kept in mind that some scales (*) in the first category above were not developed by IEA in the CIVED dataset even if some were identified by IEA, as explained earlier. Nevertheless, these scales that were included in the CCCI were also modified or updated and added to the ICCS dataset, and some of them have now been enhanced with new items and included in the CCCI-2.

In terms of the second category (ii), some scales in the CCCI and in the CIVED dataset were broken apart and added to the newly formed scales and given new titles corresponding to their respective constructs. Another scale that appears in the CCCI-2 was not used in the CCCI but appeared in the CIVED dataset (IMMRGHT), and the other modified scale was moved to a new domain (DEM/DEMVAL). Again, as explained earlier in connection with the modified scales, some of the scales in the CCCI-2 were not developed by IEA in CIVED, such as DEM, which was created by CRELL, but have now been constructed by IEA in ICCS and added to the CCCI-2 (i.e., DEMVAL), as also explained above.

The above categorization only refers to those scales finally used in the CCCI-2 in the context of the CCCI and cannot be seen as a comprehensive comparison of the old (CIVED) and new (ICCS) IEA civics datasets that were used to construct the two indicators. Important differences between the studies and datasets, that may or may not influence the comparability of the two indicators, are only briefly discussed in this chapter as well as Chapter 4.

One overall technical change worth mentioning is the removal of the "don't know" option from the response categories, the implications of which are not clear. The forthcoming ICCS

Technical Report should shed light on the rationale behind this and the possible impact upon the data as compared with the CIVED dataset.

Like CIVED, ICCS used the student questionnaire items to measure constructs relevant in the field of civic and citizenship education, as discussed above. In most cases, sets of Likert-type items with four categories (e.g., 'strongly agree,' 'agree,' 'disagree,' and 'strongly disagree') were used to collect information from the students, but at times two-point or two-point rating scales were chosen (e.g.,'Yes' and 'No'). The items were then recoded accordingly so that the higher scale scores corresponded to more positive attitudes or higher frequencies.

5.4 The CCCI-2 IRT scales

Following the above logic regarding scale types, the next sections introduce the relevant indicators according to the above groupings (i.e., modified versus new IRT scales). The first section presents the CCCI scales again, but specifically in relation to the adapted scales in the CCCI-2 and any major or minor modifications or omissions, where applicable.

After this, the new CCCI-2 scales are introduced and discussed in a separate section in order to highlight major differences in respect to the dataset and the new composite indicator. The full scale item/contents for the modified scales are included in this section in order to show the explicit links with previous CCCI scales, but the relevant ICCS questionnaire items for the new CCCI-2 IRT scales are included in the Appendix.

The Affective Dimension – Modified Scales in the CCCI and CCCI-2

Table 4 lists the 10 original affective scales in the CCCI alongside the eight new versions located in the ICCS dataset, with notes on the two scales that IEA did not construct in ICCS. Instead the scale items were integrated into other new scales and added to the dataset.

As introduced earlier in the section and clarified in the table, the following eight scales most closely resemble the original CCCI scale contents and constructs indicated, with or without a change in the label of the construct being measured: CITCON, CITSOC, GENEQL, ETHRGHT*, VALPARTS, INPOLEF*, POLPART, ELECPART*.

Table 4: CCCI scales and CCCI2 available equivalents, *affective* dimension

CCCI		**CCCI-2 Equivalents**	
Citizenship Values			
CTCON	Importance of conventional citizenship	CITCON	Importance of conventional citizenship
CTSOC	Importance of social-related citizenship	CITSOC	Importance of social-related citizenship
Social Justice			
WOMRT	Attitudes toward women's political and economic rights	GENEQL	Attitudes towards gender equality

MINOR*	Attitudes toward opportunities for minorities	ETHRGHT	Attitudes toward equal rights for all ethnic/racial groups
CONFS	Confidence in participation at school	VALPARTS	Perception of the value of participation at school
Participatory Attitudes			
EFFIC*	Internal political efficacy	INPOLEF	Sense of internal political efficacy
COMM*	Expectations of community participation	Scale not used. One item not available in ICCS (collecting money) and others in INFPART (volunteering) and LEGPROT (collecting signatures)	
POLAT	Expected political activities	POLPART	Expected adult participation in political activities
SCON*	Self-confident participation at school	Scale not used. School-related items in VALPARTS but not equivalent to SCON as items (own confidence and interest in discussing school problems) not available in ICCS.	
VOTE*	Expectations associated with voting	ELECPART	Expected adult electoral participation

*Non-IEA developed scales (CCCI). All CCCI-2 scales were created by IEA.

Modified Scales by Domain

Citizenship Values:
This CCCI-2 domain is the easiest to compare with that of the CCCI. First, the two ICCS scales measure the same things as the CIVED scales – importance of conventional citizenship and social-related citizenship. Second, they use the same items from the questionnaire.

The only significant change in the two sets of scales reflecting citizenship behaviours/values in the CCCI and CCCI-2, CTCON/CITCON (conventional citizenship) and CTSOC/CITSOC (social movement-related citizenship), respectively, is in the main wording of the questions in the two survey instruments:

> CCCI questions (CTCON and CTSOC): An adult is a good citizen who….
>
> CCCI-2 questions (CITCON and CITSOC): How important are the following behaviours for being a good adult citizen?

The old question asks students to decide on what a good adult citizen is, whereas the new question asks them to rank how important specific behaviours are. The wording of the question has been altered for grammatical reasons.

Social Justice: There are three modified scales in the CCCI-2. All have been given new labels and, accordingly, this may signal a change in the constructs they aim to measure. The items contained therein are very similar. For the first two sets, the scale titles have been rephrased and now both include the term 'equality'.

WOMRT/GENEQL: The first set is shown in table 5 below. The main difference is that the CIVED scale aims to measure attitudes towards women's political and economic rights whereas the ICCS scale construct refers to 'gender equality' more generally. Nevertheless, the ICCS scale (GENEQL) is very close to the CIVED one (WOMRT).

Table 5: WOMRT and GENEQL[6] – Attitudes toward women's political and economic rights and gender equality

WOMRT **Attitudes toward women's political and economic rights**	**GENEQL** **Attitudes towards gender equality**
How much do you agree or disagree with the following statements?	*How much do you agree or disagree with the following statements?*
Women should run for public office [a seat in the legislature] and take part in the government just as men do.	Men and women should have equal opportunities to take part in government
Women should have the same rights as men in every way.	Men and women should have the same rights in every way
Women should stay out of politics	Women should stay out of politics
When jobs are scarce, men [should] have more right to a job than women.	When there are not many jobs available, men should have more right to a job than women
Men and women should get equal pay when they are in the same jobs [occupations].	Men and women should get equal pay when they are doing the same jobs
Men are better qualified to be political leaders than women	Men are better qualified to be political leaders than women

MINOR*/ETHRGHT: The only major difference in the new scale (ETHRGHT) other than its title is the addition of the item '<Members of all ethnic/racial groups> should have the same rights and responsibilities'. Even though the scale items are almost identical, the CCCI scale MINOR was not developed by IEA, but ETHRGHT was.

Table 6: MINOR and ETHRGHT – Attitudes toward opportunities for minorities and equal rights for all ethnic/racial groups

MINOR* **Attitudes toward opportunities for minorities**	**ETHRGHT** **Attitudes toward equal rights for all ethnic/racial groups**
How much do you agree or disagree with the following statements?	*How much do you agree or disagree with the following statements?*

[6] In all of the comparison tables that follow, the CCCI/CIVED scale is listed in the left column and the new CCCI-2/ICCS scale is on the right side.

All ethnic [racial or national] groups should have equal chances to get a good education in this country.	All <ethnic/racial groups> should have an equal chance to get a good education in <country of test>
All ethnic [racial or national] groups should have equal chances to get good jobs in this country.	All <ethnic/racial groups> should have an equal chance to get good jobs in <country of test>
Schools should teach students to respect members of all ethnic [racial or national] groups.	Schools should teach students to respect members of all <ethnic/racial groups>
Members of all ethnic [racial or national] groups should be encouraged to run in elections for political office	<Members of all ethnic/racial groups> should be encouraged to run in elections for political office <Members of all ethnic/racial groups> should have the same rights and responsibilities

CONFS/VALPARTS: There has been a slight shift in the next modified scale, both in what it indicates and in individual items. CONFS measured own 'confidence in participation at school' whereas VALPARTS refers to the perception of the 'value of participation at school' in general terms. The first group of items specify one's own school whereas the second refers to all schools. In this way CONFS/VALPARTS are the least similar among the three ICCS-modified scales, and the new scale is clearly an improvement over the previous. An additional item on 'school parliament' was added to the ICCS scale.

Table 7: CONFS and VALPARTS – *Confidence in participation at school* and *Perception of the value of participation at school*

CONFS **Confidence in participation at school**	**VALPARTS** **Perception of the value of participation at school**
Please read each statement and select the box in the column which corresponds to the way you feel about the statement.	*How much do you agree or disagree with the following statements about student participation at school?*
Electing student representatives to suggest changes in how the school is run [how to solve school problems] makes schools better.	Student participation in how schools are run can make schools better
Lots of positive changes happen in this school when students work together.	Lots of positive changes can happen in schools when students work together
Organizing groups of students to state their opinions could help solve problems in this school.	Organising groups of students to express their opinions could help solve problems in schools
Students acting together [in groups] can have more influence on what happens in this school than students acting alone [by themselves].	Students can have more influence on what happens in schools if they act together rather than alone

	All schools should have a <school parliament>

Participatory Attitudes: Finally, out of the 15 scales in the CCCI-2 framework, this domain contains three modified scales that have been re-labeled but in this case only slightly: EFFIC/INPOLEF, POLAT/POLPART, and VOTE/ELECPART (see tables below).

The overall dimension/domain has been restructured and reduced in terms of number of scales. These changes will be discussed in more detail in the subsequent section dealing with new scales and the reconstruction of some domains.

EFFIC/INPOLEF: Concerning the three newly modified scales -- INPOLEF, POLPART and ELECPART -- the first has undergone the most change. A total of six items in INPOLEF measured 'internal political efficacy', compared to only four in EFFIC, although the majority of the new scale items are similar to the previous ones. This CCCI scale was, however, not identified nor developed by IEA, but by CEDARS (see Husfeldt, Barber and Torney-Purta 2006 for details). The single item 'Interest in politics', which appeared in the original CEDARS scale EFFIC, was assigned by ICCS/IEA analysts to the scale INTPOLS, which is dedicated to the theme of 'interest in politics'. INTPOLS is discussed later under the section on new scales/constructs measured. Other changes shown below include the addition of a new item asking students if they think they will be able to participate in politics as an adult.

Table 8: EFFIC* and INPOLEF – *Internal political efficacy* and *sense of internal efficacy*

EFFIC* **Internal** political efficacy	**INPOLEF** **Sense of internal political efficacy**
Please read each statement and select the box in the column which corresponds to the way you feel about the statement.	*How much do you agree or disagree with the following statements about you and politics?*
I know more about politics than most people my age	
When political issues or problems are being discussed, I usually have something to say	I know more about politics than most people my age
I am able to understand most political issues easily	When political issues or problems are being discussed, I usually have something to say
I am interested in politics	I am able to understand most political issues easily
	I have political opinions worth listening to
	As an adult I will be able to take part in politics

	I have a good understanding of the political issues facing this country

POLAT/POLPART: This second modified scale in the domain, POLPART, has undergone few changes other than asking students in the main question what they 'think' they will do versus what they 'expect' they will do concerning future political behaviour. The ICCS questionnaire item is thus clearer than the former. The POLAT-CIVED item asking students if they expect to write letters to newspapers as a form of political activity has been removed from this scale and a similar item has been added by IEA to a new CCCI-2 scale on informal political participation (INFPART). An item on joining a trade union has been added to POLPART as shown in table 9.

Table 9: POLAT and POLPART – *Political activities* and *Expected adult participation in political activities*

POLAT **Expected adult participation in political activities**	**POLPART** **Expected adult participation in political activities**
When you are an adult, what do you expect that you will do? Join a political party Write letters to a newspaper about social or political concerns Be a candidate for a local or city office	*When you are an adult, what do you think you will do?* Join a political party Join a trade union Stand as a candidate in <local elections> Help a candidate or party during an election campaign

VOTE/ELECPART: Finally, ELECPART, the last modified scale (although IEA did not identify nor develop it in CIVED) in this domain has maintained the two former items in the CEDARS-developed scale on voting behaviour. A third item on whether students think they will vote in local elections was added by IEA. In this way the ICCS scale is very similar to VOTE.

Table (10): *Expectations associated with voting* and *Expected adult electoral participation*

VOTE* **Expectations associated with voting**	**ELECPART** **Expected adult electoral participation**

When you are an adult, what do you expect you will do?	*When you are an adult, what do you think you will do?*
Vote in national elections Get information about candidates before voting in an election	Vote in <national elections> Get information about candidates before voting in an election Vote in <local elections> (note: out of order as found on sample student questionnaire)

The next section will present the new scales in the CCCI-2 as compared to the previous in the CCCI. In some cases, CCCI scales that have been broken apart and their items now appear in new scales. There are entirely new scales in ICCS dataset (LEGPROT, INFPART, INTPOLS, CITEFF) or the CCCI-2 (IMMRGHT), and others have been moved to a new domain (DEM*/DEMVAL).

5.5 New scales in the CCCI-2 framework

In this section, both the *affective* and the *cognitive* dimensions are discussed in the context of 'new' scales in the CCCI-2. Detailed wording of the *affective* scale items are found in the Appendix.

The Affective Dimension: 'Citizenship values', 'Social Justice' and 'Participatory Attitudes'

In the section above on modified and re-used scales, the two 'Citizenship Values' scales (CTCON and CTSOC) that appeared in the CCCI as well as the CCCI-2 were discussed. It was concluded that no new scales were added to this domain and that there were no major changes affecting the measurement of perceptions toward conventional and social-movement citizenship activities. As such, this first domain is not discussed in this section. This leaves only the two other 'affective' domains where new scales were added.

Social Justice: The following two new scales were added to the domain pertaining to social justice, which includes the general concept of 'rights and responsibilities', in a democracy:

IMMRGHT: This scale, which was available in a slightly different form in the CIVED survey, was added to the CCCI-2 due to its growing importance in EU and Member State policy, and its relevance for aspects of democracy. Earlier in the report in the context of the European Inventory on Civic Competence, we touched upon the important issue of fundamental and human rights involving equal and appropriate political participation for traditionally underrepresented groups, which include migrants/immigrants, women and minorities. In this way, positive attitudes towards rights and responsibilities related to these groups are a relevant indicator of civic competence today. One challenge we face in selecting suitable indicators in this area, however, relates to definitions, given the ambiguities surrounding the meaning of the terms 'migrant' and 'immigrant' in respect to legal status, generational issues (first/second generations), and overlaps with the concept of 'minority'. Nevertheless, even if the IEA

immigrant scale is not ideal and may raise some questions, it is incorporated into the CCCI-2 as part of an attempt to update the composite indicator.

As will be shown later, this domain contains both a scale on attitudes toward minorities and one on attitudes toward immigrants, and the two were found to be correlated in statistical tests. Therefore, both are assigned a half weight each in the computation stage (see Chapter 6), so their influence in the domain is shared.

IMMRGHT: **Attitudes toward equal rights for immigrants**
How much do you agree or disagree with the following statements? <Immigrants> should have the opportunity to continue speaking their own language <Immigrant> children should have the same opportunities for education that other children in the country have <Immigrants> who live in a country for several years should have the opportunity to vote in elections <Immigrants> should have the opportunity to continue their own customs and lifestyle <Immigrants> should have all the same rights that everyone else in the country has ("Strongly agree"…"Strongly disagree")

DEMVAL: Question 20 of the student questionnaire in CIVED ('What is good and bad for democracy?'), which was used by CRELL to construct DEM and measure 'student knowledge of democracy', has been rephrased in the new ICCS student questionnaire. The new question reads: 'There are different views about what a society should be like. We are interested in your views on this. How much do you agree or disagree with the following statements?'

In ICCS, IEA created a new scale from this question, labelled DEMVAL (student orientations to democratic value beliefs), using five items that were also featured in the CRELL-constructed DEM question in the CCCI. These items are compared in table 11 below.

According to the ICCS international report (2010), the country results of the IEA CIVED survey of 1999, contrary to expectations, did not reveal any clear overall patterns relative to the students' ratings of 'what is good and bad for democracy'. On the other hand, according to the authors, the responses to Question 20 did result in a factor relating to the 'rule of law' model of democracy that was consistent across countries (referring to Torney-Purta, Lehmann, Oswald, and Schulz 2001). Nevertheless, no scale was created by IEA using these items. The report further notes that Husfeldt and Nikolova (2003) found evidence that 'upper-secondary students hold more differentiated conceptualizations of democracy than do 14-year-old students', although data on the older age cohort was not used in the CCCI. In contrast, in ICCS, the items pertaining to the DEMVAL scale show that nearly all 13- to 14-year-old students endorsed most

of the statements pertaining to democratic values, and there is little variation among countries (p.88). The forthcoming Technical Report will address this issue as well.

Table 11: Comparison of CCCI/DEM and CCCI-2/DEMVAL

CCCI/DEM	**CCCI-2/DEMVAL**
When everyone has the right to express their opinions freely, that is	Everyone should always have the right to express their opinions freely
When people demand their political and social rights, that is	All people should have their social and political rights respected
When people who are critical of the government are forbidden from speaking at public meetings, that is	People should always be free to criticise the government publicly
When citizens have the right to elect political leaders freely, that is	All citizens should have the right to elect their leaders freely
When people peacefully protest against a law they believe is unjust, that is	People should be able to protest if they believe a law is unfair
Items in DEM not used in DEMVAL: When many different organisations [associations] are available [exist] for people who wish to belong to them, that is When newspapers are free of all government [state, political] control, that is When one company owns all the newspapers, that is	

Five of the eight items that were used in DEM in the CCCI were modified and now form the new five-item DEMVAL scale. The items in the CCCI/DEM presented in Table 11 are not listed in the order they appeared on the questionnaire but are arranged as such in order to show the correspondence between the five CCCI-2/DEMVAL items.

Finally, in light of the changed question wording, we assigned DEMVAL to the *affective* dimension of the CCCI-2 framework in the domain 'Social Justice' since it prompts students to envision their ideal society and whether or not they endorse democratic values instead of deciding what is good and bad for democracy.

Participatory Attitudes: Returning to the 'Participatory Attitudes' domain, as illustrated earlier in Table 4, two CCCI scales were not available, three scales remained but have been given new names, and four new ICCS scales were added (listed in Table 12 below), resulting in a well-populated domain with seven scales. Some of the four new scales (LEGPROT, INFPART, INTPOLS and CITEFF) contain items which were also included in the previous CCCI scales/framework[7] but in different scales.

Table 12: New Scales added to the CCCI-2 Domains 'Social Justice' and 'Participatory Attitudes'

Social Justice	
IMMRGHT	Equal rights for immigrants
DEMVAL	Student orientations to democratic value beliefs
Participatory Attitudes	
LEGPROT	Expected legal protest
INFPART	Expected informal political participation
INTPOLS	Interest in political and social issues
CITEFF	Students' citizenship self-efficacy

Since the following CCCI-2 'Participatory Attitudes' scales are newly formed with no previous CIVED or CCCI scale equivalents, they are briefly sketched below with reference to the relevant ICCS student questionnaire items (here URL) and a short description of the scale. Also noted is whether any scale item was found in the CCCI.

LEGPROT (expected legal protest): First six items on Question 21. CCCI scales COMM (expectations of community participation) and POLAT (expected political activities) included different types of legal protest activities students might see themselves doing in future. In the new IEA scales, these items are included together with other similar 'protest' items in LEGPROT and the new POLPART scale, which replaced POLAT and no longer includes protest-type items.

INFPART (expected informal political participation): Four of five items from Question 33. This time IEA isolates 'informal' expected participation in activities such as talking about political and social issues, writing to the newspaper, contributing to online discussions and joining an organization with a cause. Although this is a new scale in the ICCS dataset, one item (writing letters to the newspaper) was featured in POLAT (expected political participation) in the CCCI, which is now restructured and called POLPART (see above in relation to modified scales).

INTPOLS (interest in political and social issues): Five of seven items from Question 22. This scale on student interest in political issues in the local community, political and social issues in their own country, politics in other countries and international politics was added to the CCCI-2

[7] Item wording for the new scales in these two *affective* domains 'Social Justice' and 'Participatory Attitudes' are found in Appendix Z.

framework. EFFIC (internal political efficacy), in the previous framework, was the only scale to contain a related item on student 'interest in politics', but this item is now integrated into INTPOLS.

CITEFF (citizenship self-efficacy): All items of Question 30. The CCCI included items in the CEDARS-developed EFFIC scale on students' own sense of internal political efficacy in respect to explicitly formal political items, which is now included in the equivalent scale INPOLEF (see Table 8 above). INPOLEF relates to knowledge and understanding of politics, ability to discuss politics, and interest. In comparison, in the CCCI-2, CITEFF includes seven items related to the ability to perform a list of more general tasks in and out of school including: discussing a newspaper article, arguing a point of view or writing a letter to a newspaper on a current issue, standing as a candidate in a school election, organizing a group of students to achieve change and speaking in front of the class.

These newly formed affective scales are joined by a restructured cognitive dimension/domain of civic competence, which is explained in the next section.

The Modified Cognitive Dimension – 'Cognition about Democratic Institutions' / 'Knowledge and Skills for Democracy'

The cognitive dimension or the final domain in the measurement framework "Cognition about Democratic Institutions" has been altered compared to this domain in the CCCI, as there is now only *one* scale or indicator pertaining to *Knowledge and skills*, derived by IEA from the ICCS achievement test score. For this reason this domain is discussed in relation to new scales in the CCCI-2.

The CCCI used a total of *three* scales in this domain; two of which were comprised of knowledge and skills accordingly (KNOWL and SKILS), joined by a third scale, 'DEM', which was identified and constructed by CRELL. This third scale was subsequently developed in ICCS by IEA, and assigned by the present authors to the 'Social Justice' domain due to changes in the wording of the item question, which was explained earlier.

In CIVED, IEA analysts decided to report on two sub-scales in addition to the combined civic knowledge scale since there were latent correlations between the two sub-scales, but the results showed they were highly similar but not identical (Schulz and Sibberns 2004, p.73).

The ICCS assessment framework, the new test instrument itself and the resulting scales from the cognitive test results, imply changes in the interpretation of this dimension. As explained in the first section of the chapter, the cognitive assessment frame has changed from *content knowledge* and *skills in interpreting material with civil and political content*, to *content knowledge* and *analysis and reasoning*, corresponding to the cognitive processes therein. It is plausible, however, that the different labels cover similar constructs. Nevertheless, only one resulting scale was added to the ICCS dataset, as there was no empirical reason to report on any subsets this time.

The Rasch model (Rasch 1960) was used to derive the cognitive scale from the 79 test items. The final reporting scale was set to a metric that had a mean of 500 (the ICCS average score) and a standard deviation of 100 for the equally weighted national samples. Details on scaling procedures will be discussed in the ICCS technical report (Schulz, Ainley, and Fraillon, forthcoming) (Schulz, Ainley, Fraillon and Losito 2010, p.60).

5.6 Summary of changes from the CCCI to the CCCI-2

The second Civic Competence Composite Indicator (CCCI-2) framework (see figure 8 above) constitutes a new CRELL product and a development from the first indicator of its kind, the CCCI (Hoskins, Villalba, Van Nijlen and Barber 2008). Both of these frameworks were outlined in this chapter. As discussed above, the CCCI-2 was constructed from the newest IEA civics dataset, the International Civics and Citizenship Study (ICCS) from 2009. There have been changes in the CRELL indicator framework in order to improve the measurement of pupils' 'civic competence' or as a result of changes in the questionnaire items or IRT scales created by IEA in the new ICCS dataset. In this section we investigated these differences in detail.

In conclusion, compared to the CCCI framework and scales derived from CIVED data, the CCCI-2 framework and its contents can be distinguished in several ways, as illustrated above. The same four conceptual domains featured in the CCCI were also used to structure the framework as before but the new framework contains 15 affective scales and only one cognitive indicator measured by the average achievement score on the ICCS civic knowledge test. The first domain, 'Citizenship Values', remains with two scales (CITCON, CITSOC) that appeared in the CCCI, but the 'Social Justice' and 'Participatory Attitudes' domains have five and seven indicators, respectively, instead of three and five in the CCCI.

There are two basic categories of ICCS scales that were selected to measure the same four conceptual domains featured in the CCCI. Accordingly, there are eight scales that most closely resemble the original CCCI scale contents and constructs indicated, with or without a change in the label (CITCON, CITSOC, GENEQL, ETHRGHT*, VALPARTS, INPOLEF*, POLPART, ELECPART*). There are also six other scales that, in their current form, are either entirely new scales in ICCS dataset (LEGPROT, INFPART, INTPOLS, CITEFF) or to the CCCI-2 (IMMRGHT), or have been moved to a new domain (DEM*/DEMVAL). (Note: non-IEA scales are marked with an asterisk)

The only remaining cognitive scale or indicator representing the corresponding dimension 'Cognition about Democratic Institutions' is *Knowledge and skills*. We are now calling this dimension 'Knowledge and Skills for Democracy'. Again, the above categorisation refers only to those scales finally used in the CCCI-2 in the context of the CCCI and cannot be seen as a comprehensive comparison of the old (CIVED) and new (ICCS) IEA civics datasets that were used to construct the two indicators. Important differences between the studies and datasets, that

may or may not influence the comparability of the two indicators, are briefly discussed in the previous section. As already reiterated, the forthcoming ICCS Technical Report should provide more insight on these technical issues.

The newly restructured framework for measuring civic competence is thus similar to the previous one but in no way identical. In the next chapter, the methodology for building the new composite indicator will be presented.

6. Methodology for building the composite indicator and technical information on results

6.1 Conceptual Framework

In the present chapter we outline the methodological steps followed for the development of the second Civic Competence Composite Indicator (CCCI-2), constructed in 2011. As already detailed in the previous chapter, the CCCI-2 is an evolving project, which builds upon previous work on the CCCI, released in 2008, while incorporating the latest research on the conceptualisation, relevance and measurement of civic competence.

The conceptual (and measurement) framework of the new CCCI-2, described in the previous chapter, relies on four dimensions: 'Citizenship Values', 'Social Justice', 'Participatory Attitudes', and 'Knowledge and Skills for Democracy' (cognition). Altogether, 15 scales populate these four dimensions. The CCCI-2 was built following the methodological guidelines of the OECD (2008) Handbook.

The first steps in creating a composite indicator relate to the definition of the conceptual/theoretical framework, the justification of the added value of the index and the selection of suitable indicators. All these steps were detailed in previous chapters.

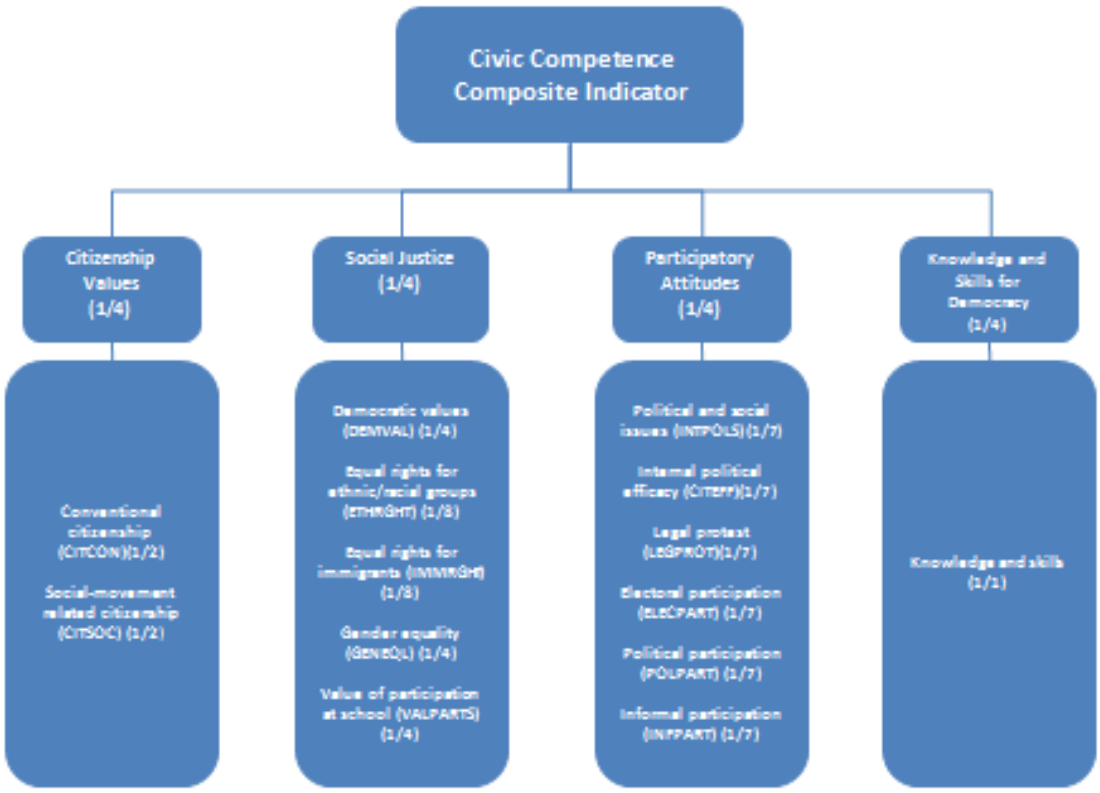


Figure 9 shows the conceptual framework for the 2011 Civic Competence Composite Indicator (CCCI-2), which was constructed based upon relevant theories, discussion with various experts in the field and the knowledge and experience of the 2008 Civic Competence Composite Indicator (CCCI) (see Chapters 1 and 2).

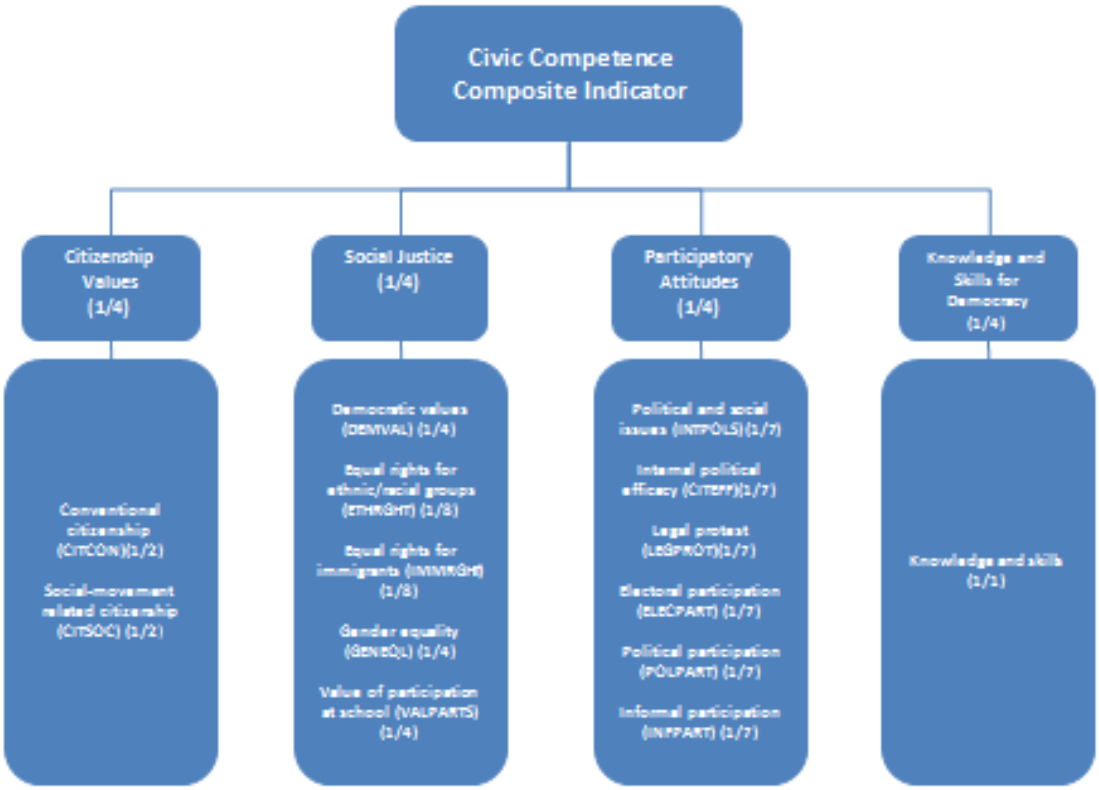


Figure 9: Framework of the Civic Competence Composite Indicator 2011, with weights

Next, we will study the extent to which the conceptual framework receives statistical support from the data selected. We remind the reader that the 15 indicators that populate the framework are based on the responses of 140,650 students aged 14 (approximately) in 38 countries (2009 IEA ICCS survey). The weights that were assigned to each indicator are reported in brackets in figure 9. In brief, all indicators receive equal weight within a dimension, with the exception of equal rights for ethnic/racial groups and equal rights for immigrants that together count as one indicator.

The assessment of the conceptual and statistical coherence of the framework is undertaken by first applying principal component analysis (PCA) in the dataset in order to analyse the "statistical" grouping of indicators. An important choice in PCA is the number of principal components that should be used to describe the data. The eigenvalue of a principal component is often used as the basis for this selection. The eigenvalue reflects the amount of variance in the data that is captured by the component. The total sum of the eigenvalues will equal the number of variables included in the analysis. Two technical criteria for the selection of the number of principal components are the use of the scree plot (Cattell, 1966) and the Kaiser

criterion (1960). The former plots the eigenvalues of the components and gives an indication of the number of components to select using the 'elbow' in this plot. The latter criterion retains all the components with an eigenvalue greater than 1. This means that it only extracts components that capture at least as much variance as the equivalent of one of the original variables. Both criteria will not always suggest the same number of components. In practice, as a consequence, an important additional criterion is the interpretability of the results.

PCA will initially calculate component loadings for all variables, which are the correlations between the variable and the component. This initial result will often be hard to interpret. However, components can be visualised as dimensions that can be rotated freely, resulting in mathematically equivalent solutions. Every rotated solution captures exactly as much of the variance in the data as the initial solution (Kim and Mueller 1978). By rotating, it is possible to make the output more understandable and facilitate the interpretation of components. One looks for a so-called 'simple structure' (Thurstone 1935) which implies that the indicators have high loadings on as few components as possible and at the same time components have many high and many low loadings.

One can distinguish an orthogonal way of rotating as well as oblique rotation. An *orthogonal rotation* retains independent, uncorrelated factors. An *oblique rotation* allows the components to correlate. Interpretation of an oblique solution is often more difficult since distinction between the components becomes less clear. In the current analysis, an orthogonal rotation strategy with Kaiser Normalisation will be applied.

Table 13 presents the component loadings on each dimension. The numbers in bold reflect the highest component loading of an indicator, and the numbers in italic were considered high enough to be taken into consideration when interpreting the results.

Table 13. Statistical grouping of indicators into dimensions of civic competence

Civic Competence dimension	*Civic competence indicator*	**Principal Component**			
		1	**2**	**3**	**4**
Citizenship values	Conventional citizenship	.303	.124	**.760**	-.137
	Social-movement related citizenship	.120	.372	**.700**	-.009
Social justice	Democratic values	.007	*.489*	.271	.388
	Equal Rights for all ethnic/racial groups	.136	**.759**	.158	.179
	Equal rights for immigrants	.102	**.816**	.060	.020
	Gender Equality	-.043	*.440*	-.096	**.642**
	Value of participation at school	.169	*.444*	.402	.185
Participatory attitudes	Political and social issues	**.568**	-.088	.500	.077
	Internal political efficacy	**.653**	-.104	.385	.166
	Legal protest	**.714**	.277	-.018	.017
	Electoral participation	**.553**	.105	.283	.355
	Political Participation	**.751**	.017	.073	-.240
	Informal participation	**.806**	.100	.135	-.119
	Self-efficacy	**.678**	.152	.187	.065
Cognition about democratic institutions	Knowledge and skills	-.022	.069	-.026	**.885**

Note: Principal component loadings obtained after orthogonal rotation with Kaiser normalisation

PCA results confirm the conceptual framework for measuring civic competence, which we also refer to as the measurement framework. The first component captures 'Participatory Attitudes' (all 7 indicators). The second summarises 'Social Justice' (all 5 indicators). The third component comprises the two indicators on 'Citizenship Values'. Finally the fourth component describes mostly 'Knowledge and Skills for Democracy'. Gender equality co-varies between the cognition dimension and the 'Social Justice' dimension. For theoretical reasons, we believe that it is more meaningful to place gender equality within the Social Justice dimension rather than within Cognition as it forms a belief scale on issues of equality rather than a cognitive quality. The reliabilities (internal consistencies among the indicators measured by the Cronbach's alpha coefficient) of the four dimensions of civic competence are also adequate, varying from 0.67 (Citizenship Values) to 0.84 (Participatory Attitudes); the reliabilities for the CCCI-2 are higher compared to those for the original CCCI (see Table 14).

Table 14. Reliabilities of the four dimensions of civic competence

Civic Dimension	Civic Competence Composite Indicator (2008) (based on the 1999 CIVED)		Civic Competence Composite Indicator 2 (2011) (based on the 2009 ICCS)	
	N. of indicators	Cronbach's Alpha	N. of indicators	Cronbach's Alpha
Citizenship values	2	0.642	2	0.670
Social Justice	3	0.622	5	0.728
Participatory Attitudes	5	0.652	7	0.841
Knowledge and Skills for Democracy	3	0.779	1	-

Besides the confirmation on the conceptual grouping of indicators into four dimensions, PCA results offer a further suggestion that stems from a consideration of the component loadings. The loadings of the indicators within 'Citizenship Values' and 'Participatory Attitudes' are of the same magnitude, which suggests that building the respective dimension as a simple average of the underlying indicators is statistically justified. On the contrary, the 'Social Justice' dimension is mostly determined by equal rights for all ethnic/racial groups and equal rights for immigrants (notice the almost double loading of those two indicators compared to the loadings of the other three indicators). In order to arrive at a balanced dimension on 'Social Justice' where all five indicators have similar contributions, the two indicators on equal rights should count as a single indicator. This also confirms the expert opinion that the equal rights indicators are very similar in nature and hence should be combined.

All things considered and based on the full dataset of more than 140,000 students in 38 countries, PCA has thus far

a) confirmed the conceptual grouping of indicators into four dimensions of civic competence;
b) provided statistical justification for the use of a simple arithmetic average to combine the indicators within a dimension; and
c) suggested that the two indicators related to equal rights in the 'Social Justice' dimension count as one indicator.

6.2 Country-specific frameworks

The conceptual framework for measuring civic competence was developed having the full ensemble of countries in mind and not a single country or Member State grouping. Although the theoretical basis for the conceptual/measurement framework stems from the 'European Civic Competence Inventory' outlined in the beginning of this report, given it is a product of a Commission research centre, civic competence itself is a relevant concept applicable to many world societies. In fact, this conceptual framework received statistical confirmation from the complete dataset of over 140,000 surveyed students.

It is nevertheless worthwhile to study how the 15 indicators selected to capture different aspects of civic competence are statistically grouped using the students of a given country. In this section, we therefore study these country-specific frameworks for the EU Member States plus Norway, Liechtenstein and Switzerland (24 countries analysed).

Table 15 offers a colour-coded presentation of the original framework and the country-specific frameworks. The 'Citizenship Values' dimension, made of two indicators – *Conventional citizenship* and *Social-movement related citizenship* – is confirmed in 12 countries. In the remaining countries, the two indicators of 'Citizenship Values' are either grouped with other indicators (e.g. in Malta and Spain) or split in different dimensions (e.g. in Liechtenstein and Greece). The 'Participatory Attitudes' dimension, made of seven indicators, is confirmed in 14 countries. The most difficult dimensions to find are 'Social Justice' (confirmed as such only in Flemish Belgium and Switzerland) and the cognitive dimension (captured by the *Knowledge and skills* indicator only in Belgium, the Netherlands and Liechtenstein).

One can also identify some pairs/groups of countries for which PCA suggests that they may have the same grouping of indicators, these are:

- Sweden, Poland and Lithuania;
- Spain and Malta;
- Ireland, Austria, Cyprus and Bulgaria; and
- Finland and Denmark.

Hence PCA results suggest that there are in total 17 different 'frameworks' in Europe. Interestingly, none of those country-specific frameworks is identical to the overall framework of the CCCI-2. Nevertheless, given that this latter framework is the one which received statistical

support based on all the individuals studied, we opted to keep this one as representative of the ensemble of countries included in the analysis.

Later on, we calculate country rankings using the country-specific frameworks to assess the impact on the results of this assumption regarding the conceptual framework.

Table 15. Conceptual framework and country-specific frameworks for civic competence

			Country-specific frameworks																								
			1			2		3					4		5	6	7	8	9	10	11	12	13	14	15	16	17
Civic Competence dimension	*Civic competence indicator*	*Original*	Sweden	Poland	Lithuania	Spain	Malta	Ireland	Austria	Cyprus	Bulgaria	Finland	Denmark	Belgium	Switzerland	Slovenia	Slovakia	Norway	Netherlands	Luxembourg	Lichtenstein	Latvia	Italy	Greece	Estonia	Czech Republic
Citizenship values	Conventional citizenship																										
	Social-movement related citizenship																										
Social justice	Democratic values																										
	Equal Rights for all ethnic/racial groups																										
	Equal rights for immigrants																										
	Gender Equality																										
	Value of participation at school																										
Participatory attitudes	Political and social issues																										
	Internal political efficacy																										
	Legal protest																										
	Electoral participation																										
	Political Participation																										
	Informal participation																										
	Self-efficacy																										
Cognition	Knowledge and skills																										

Note: Color-codes indicate that the indicators belong to the same principal component

6.3 Constructing the scales

For information about the IEA-constructed IRT (Item Response Theory) scales selected as indicators in each dimension see Chapter 5 and the forthcoming IEA ICCS Technical Report expected in 2011 (visit the IEA/ICCS official website for updates at www.iea.nl). The latter report will contain all of the technical information on variables added to the dataset and how IRT modelling was utilised.

6.4 Normalising the scales

The 15 indicators populating the latest civic competence framework are all expressed in different units of measurement. Hence, scores in one indicator are not comparable with scores in the other indicators. To render the 15 scales comparable, different normalisation techniques can be used (see OECD 2008). The most common approach is the Min-Max, which was used in the previous version of the CCCI and will also be used here. The normalised score for an indicator and an individual is given by

$$I_{icj} = \frac{x_{icj} - min_{cj}(x_{icj})}{max_{cj}(x_{icj}) - min_{cj}(x_{icj})}$$

.

Using this method, all 15 indicators are rescaled, and the normalised values for all individuals range between 0 (worst score) and 1 (best score).

Later on, in order to assess the robustness of the composite indicator, the Z-score standardisation will also be applied as an alternative method.

6.5 Weighting and aggregation

As in the past release, the CCCI-2 is built using a simple arithmetic average across the indicators within each of the four dimensions, and then a simple arithmetic average across the four dimensions. These aggregations are carried out at the individual level (ranging between N=357 in Luxembourg and N=6576 in Mexico). The CCCI score Y_c for a given country *c* is the average CCCI score across the country's individuals,

$$\overline{Y_c} = \frac{1}{N}\sum_{j=1}^{N} Y_{cj}$$

and the corresponding standard deviation is

$$SD_c = \sqrt{\frac{\sum_{j=1}^{N}(\overline{Y_c} - Y_{cj})^2}{N-1}}$$

The CCCI score for an individual is given by the simple average of the scores obtained in each of the four dimensions, that is

$$Y_{cj} = \frac{1}{4}\sum_{i=1}^{4} D_{icj}$$

The dimension score for an individual is the weighted average of the normalised scales underlying a given dimension, namely

$$D_{cj} = \sum_{i=1}^{k} w_i \times I_{icj}$$

where $\sum_{i=1}^{k} w_i = 1$. All normalised indicators receive equal weights within a given dimension (example: conventional citizenship and social-movement related citizenship receive ½ weight in the dimension 'Citizenship Values'). The only exception is the *Equal rights for all ethnic/racial groups* and *Equal rights for immigrants* which receive 1/8 weight each, when the other indicators in the 'Social Justice' dimension receive 1/4. The reason for this is to ensure a balance between different values, in this case gender equality and tolerance. Put in another

way, we did not want to give a greater value to tolerance than to gender equality simply because we have more scales available on this topic.

Later, the impact on the results of the aggregation formula will be assessed.

6.6 Interrelations between the CCCI-2 and the four dimensions

Table 15 presents the Pearson correlation coefficients between the four dimensions of civic competence and with the overall index at the individual level for all 38 countries included in the survey.

The strongest association was observed between 'Citizenship Values' and 'Participatory Attitudes' with a correlation of 0.49. The scores for 'Social Justice' show a clear link with both the 'Participatory Attitudes' and the cognitive dimension ('Knowledge and Skills for Democracy'). However, there is no clear pattern between cognition on one hand and either 'Citizenship Values' or 'Participatory Attitudes' on the other.

Overall, these low correlations suggest that the four dimensions capture distinct aspects of civic competence with practically little or no overlap of information between them.

The 2011 Civic Competence Composite Indicator is strongly associated to 'Citizenship Values', 'Social Justice' and 'Participatory Attitudes' (with correlation close to 0.70 or higher), but only moderately to the cognitive dimension, 'Knowledge and Skills for Democracy' (0.48). Had another aggregation formula been used (such as geometric averaging, see next section), the association between 'Knowledge and Skills for Democracy' and the CCCI-2 would still be moderate.

Table 16: Bivariate Pearson's correlations at the individual level between civic competence and the four dimensions

	Citizenship Values	Social Justice	Participatory Attitudes	Knowledge and Skills
Citizenship Values	-	.368***	.486***	-.005
Social Justice		-	.260***	.395***
Participatory Attitudes			-	.023
Knowledge and Skills for Democracy				-
Civic Competence Indicator	.724***	.750***	.694***	.484***

*** Correlation is significant at the .01-level

7. Results

In this chapter we first propose the expected results according to theory. Next we give the actual results, taking into account significant difference tests (these tests are explained in detail in Part 2 Chapter 1). Finally, we propose various theoretical explanations for the results.

7.1 Expected rankings

The drivers of civic competence were discussed in Chapter 3. In this section we will examine the implications of these theories for expected rankings.

Stable democracy

Democratic stability, a measure comprising the number of years of continuous democracy, is an indicator of increasing stability of democratic governance and of democracy becoming a norm. If it should have beneficial impact then the country groupings would be as follows:

(1) The first country grouping would consist of countries that have had a stable and continuous experience of democracy over the past 65 years or more (e.g., Sweden, Norway, Denmark, Finland, Belgium, Netherlands, Switzerland, and United Kingdom (England));
(2) The second group would consist of countries (e.g., Greece, Cyprus, and Spain) that experienced breaks in democracy and have undergone fascism, dictatorship, and/or occupation and then only recently (within the past 65 years) have undergone transition back to democracy, as well as countries (e.g. Italy) that have experienced fascism and transitions to democracy after the Second World War;
(3) Eastern European countries would be found in the third group. These countries have experienced communist regimes and have had a very recent transition to liberal democracy.

The alternative hypothesis is the reverse, that continuous years of democracy breeds apathy. Thus, young people from countries that have experienced recent transitions to democracies and less stability could value democracy more and have a greater motivation and intention to participate due to the fragility of the democratic institutions. In this case it would be the instability of political external factors and recent memories of a lack of democracy that generate the values associated with civic competences within the youth age group (see Torney-Purta et al. 2008). For this proposition to be correct, we would expect to see the reverse country groupings.

This alternative hypothesis was found to be pertinent in describing the results from the first composite indicator for the dimensions of Participatory Attitudes and Citizenship Values. Our expectation is that we would find similar results this time too.

Economic wealth

Wealth has been suggested to positively influence democratic values. If we divide countries according to their GDP per capita from 2009 then the country grouping would be similar to years of continuous democracy. Nordic, Anglo-Saxon countries, Ireland and the mid-European countries of Switzerland, Netherlands and Belgium (Flemish) have higher rates of GDP per capita. Low GDP can be found within most Eastern European countries and Russia suggesting a similar pattern to years of democracy. The Southern European countries of Spain, Italy, Greece and Cyprus along with one Eastern European country, Slovenia, have mid-range GDP per capita. Slovenia is the only country which is a former communist country with a recent transition to democracy and is in the second group of countries. Thus we would expect Slovenia to do slightly better than other countries that have a recent transition to democracy if wealth had a positive influence on aspects of civic competence.

Education

The vast majority of European countries have some form of compulsory citizenship education at grade 8 and one could expect that this would have a positive influence on civic competence. According to the information collected from the national coordinator for the IEA study (Kerr 2010), then just two European countries would be less likely to be doing well. Only the Czech Republic and Slovakia do not have citizenship education as a discrete subject (or integrated with other subjects) in the curriculum in grade 8 (Kerr 2010). In addition, in the Czech Republic there was no focus on developing positive attitudes towards participation anywhere in the curriculum (which is different from all other European countries in this study) (Kerr 2010). In Slovakia, the national coordinator for the study reported that citizenship education has no priority (Kerr 2010 p.33). If student participation in school were important for civic competence, then countries including Estonia, Lichtenstein, Slovak Republic and Switzerland would rank low according to the European report on the ICCS survey (Kerr 2010). The information from the IEA report has been contested in the forthcoming Eurydice Citizenship study that suggests that both Czech Republic and Slovakia have citizenship education and that in Czech Republic this is part of the subject 'Man and Society' and in Slovakia it is in the subject called 'Citizenship science'. According to Eurydice, Luxembourg is the only country from Europe which does not have citizenship education at grade 8. The differences between the two reports are likely to be due to different concepts of citizenship education. Nevertheless, if one of Czech Republic, Slovakia or Luxembourg is found to be doing less well than other European countries, further analysis of their citizenship education would seem to be the next step.

Civic vs ethnic cultural citizenship

Ethnic cultural understandings of citizenship are associated with greater intolerance than civic notions of citizenship. Typically Eastern European countries are associated with ethnic notions of citizenship. However, more recently ethnic cultural understandings of citizenship have become more wide spread across Europe with heightened immigration and economic difficulties. Countries such as the Netherlands and Belgium are currently using more of a cultural discourse towards citizenship than before. From the countries participating in the ICCS, it is now much harder to provide a concrete ranking of how you would expect countries to

perform. Even a country like Norway, which is normally considered a very tolerant country based on civic notions of citizenship, recently experienced a mass murder by an individual with far right-wing political views, who claimed he was attempting to 'protect' Norwegian ethnic culture.

7.2 Country rankings

The focus for the descriptions of rankings is based on European countries only (Europe from geographical perspective and not only European Union countries). The rankings are based on the differences by effect size between countries – the explanation for effect sizes are in Part 2 of this report. Maps illustrating the results for each dimension can be found in figure 1-5.

Civic competence

The initial results show that there are only three groups of countries that are different according to their effect sizes for the overall composite. Italy and Ireland are the only countries from Europe that score in the highest ranked group. The next group of counties is from Norway to Slovakia, where there are no effect size differences. Belgium (Flemish), the Czech Republic and the Netherlands score significantly less and their effect size is significantly lower on the overall rankings than all the other countries in the study.

It is hard to establish a clear pattern regarding country performances. At the bottom of the table, it is quite expected to find the Czech Republic considering its recent transition to democracy, low GDP per capita and limited focus in the education system on enhancing participatory attitudes. However, the youngsters from the central European countries of Belgium (Flemish) and the Netherlands also achieve significantly lower scores. Both these countries have long-standing democracies and participatory citizenship education and are quite wealthy, so it is difficult to conclude why these countries score so low. However, in Belgium, cultural understandings of difference have arisen with debates on separatism between the Flemish and French communities, resulting in a lack of a formalised central government for a number of years. In the Netherlands, the country has also has seen a rise in cultural nationalistic concepts of citizenship, and anti-immigration is widely discussed in political debates.

Citizenship Values

For 'Citizenship Values' the results are topped by the Southern European countries of Italy and Cyprus whose youngsters give the most positive responses towards citizenship values (figure 11). However, these countries are not significantly different than the following European countries of Greece, Norway, Bulgaria, Russia, Spain, Ireland, Poland, Bulgaria, Lithuania and Latvia. The next group of countries comprises England, Luxembourg, Austria, Slovenia, Estonia, Sweden, Slovakia, Czech Republic and Belgium (Flemish). Finland, Denmark and the Netherlands form a group at the bottom of the table with the youngsters giving significantly less positive results towards citizenship values. For Finland, it was the low-scoring attitudes toward conventional participation which led to these results, whilst for Denmark it was low-scoring attitudes on social movement-related citizenship. Denmark was one of very few

countries where conventional citizenship was higher than social movement-related citizenship. In the Netherlands, the youngsters scored low on both dimensions.

Caution must be taken in any direct comparisons from the last composite indicator due to the changes which have taken place (see chapters 4 and 5); however, for the countries that participated in both studies, it is interesting to note the high correlation of .7 between the 'Citizenship Values' dimension for this indicator and the previous composite indicator dimension of citizenship values. In this context, we should keep in mind that this dimension has had the least amount of changes for all of the dimensions of the composite indicator (see chapter 4). We can note that Cyprus and Greece also gave more positive responses on these two scales 10 years ago in the IEA CIVED study, and youngsters in the Nordic countries of Denmark and Finland also gave the lowest scores in the previous study. This suggests a consistency within the civic culture of these countries. Italian youngsters were in the top half of the previous ranking but could be argued to have become more positive towards citizenship in the last 10 years with an increasingly positive attitude towards participation.

The hypothesis that best fits the data is that in countries which had reasonably recent transitions to democracy and which are less stable, younger people place greater emphasis on citizenship values, with high performances from Southern and Eastern European countries and low performances from the more stable Finland, Denmark and the Netherlands. However, Norway is clearly an exception to this theory as it scored in the group of highest-performing countries in Europe.

Participatory Attitudes

For 'Participatory Attitudes' (figure 13), the results are similar to those of 'Citizenship Values'. The top European countries include Italy, Greece, Russia, Lithuania, Latvia, Ireland, Austria and Cyprus, all with similar performances. Next follows a large number of countries from Bulgaria to Slovakia, which includes three of the Nordic countries, England, Luxembourg and some eastern European countries. The lower end of the ranking is occupied by Finland, the Netherlands, Czech Republic and Belgium (Flemish) with no statistically significant differences in their performance.

Finland is below the international mean for each indicator in this dimension except *Intended legal protest* and *Intended electoral participation*, which are on the international mean. The Netherlands is below the international mean for all indicators except *Intended political participation*, where it scores the mean. Belgium (Flemish) scores below the international mean for each individual scale included in this indicator. The Czech Republic is below the international mean for each indicator with the exception of *Intended legal protest*. All four countries gained notably low scores for the *Internal political efficacy* scale.

As explained in Chapter 4, the 'Participatory Attitudes' dimension of the composite has changed quite considerably from the original composite indicator in terms of the actual items used, but we believe that it measures a similar construct. Italy and Greece scored well on this dimension in the previous study, and Finland and the Czech Republic also gave the worst scores 10 years

ago. Youngsters in Cyprus provided less positive scores than 10 years ago, and this could be a result of either the changes to the indicators used or a reduction in positive attitudes towards participation.

The theory which best fits these results is that countries that are less stable and have more recent transitions to democracy enhance the civic culture of positive attitudes towards participation in youth. This is suggested by good performances from Southern and Eastern European countries of Italy, Greece, Russia, Lithuania, Latvia and Cyprus, and the lowest country grouping consisting of the long-standing democracies of Finland, Netherlands and Belgium (Flemish). Obviously the Czech Republic results for this dimension do not fit within this hypothesis, but as we have already stated, there is a no curriculum time spent on encouraging engagement, and this could be influencing these results. There are also better-than-expected results for Austria for this dimension. Austria has a strong civic culture where many occupations are related to positions in political parties, which could influence the intention to participate.

Social Justice

The results for the 'Social Justice' dimension are quite different than those of the dimensions of 'Participatory Attitudes' and 'Citizenship Values'. The European countries who gain the highest performances are Spain, Norway, Sweden and Ireland. These countries are followed by a fairly large group from Greece to Slovakia, which includes most of the European countries. Four European countries close the ranking: Czech Republic, the Netherlands, Russia and Latvia. Spain, Norway and Ireland score above the international mean for each scale in this dimension but not for *Equal rights for ethnic groups* where they score on the mean. Sweden also scores on the mean for *Equal rights for ethnic groups* and *Democratic values*. In contrast, the Czech Republic is below the mean for each scale in this dimension. The Netherlands is also below the international mean for each scale in the dimension with the exception of *Gender equality*. Latvia is below the international mean for all scales except for *Democratic values*. The Netherlands, Latvia and Malta give the lowest scores for *Equal rights for immigrants*. Russia is below the international mean for all scales but *Equal rights for immigrants* and the *Value of participation at school*. Russia scores the lowest for *Gender equality*.

There have been considerable changes to the 'Social Justice' dimension of the composite indicator but there is a positive correlation of 0.6 with this dimension to the previous index from 1999. Last time the Nordic countries of Norway, Sweden, Denmark and Finland also came in the top half of the ranking for this dimension. Russia and Latvia are again the bottom two countries.

The length of democracy or wealth seems to have a positive influence on 'Social Justice' for the Nordic countries or perhaps it is their specific social democratic governments. Recent and more unstable democracies are found more at the lower end of the table, including Czech Republic, Russia and Latvia. However, the Netherlands is a clear exception to the rule which, as posited earlier, could perhaps be related to a current political trend towards a more nationalistic and ethnic cultural agenda which is apparent in this country.

Cognitive Dimension

The fourth dimension on 'Knowledge and Skills for Democracy' (see figure 14), is headed by Denmark and Finland with similar scores. Several small groups of countries follow, from Ireland to Bulgaria. Cyprus is the lowest-scoring European country and is significantly lower than the other European countries who participated.

In contrast to the other three dimensions, Europe tops the ranking for the cognitive civic competence scores with the youngsters from the Nordic countries of Finland and Denmark performing the best in the civics achievement assessment. Ireland, Sweden and Poland form the next group of countries. In general, it is Southern and Eastern European countries and Luxembourg that perform less well. Youth in Cyprus performed significantly lower than youth in other European countries in this dimension, and Greece is also below the international mean. This is in stark contrast to the cognitive results from 1999 where both Greece and Cyprus were near the top of the cognitive rankings. The Nordic countries, in contrast, performed well in both assessments.

At a country level there is a significant and reasonably high correlation (0.84) between the cognitive scores for countries who participated in the IEA ICCS study and in the OECD PISA test results. Although this relationship is not known for individual students, the high correlation at the country level may well be partly due to the similarity in the cognitive processes tested, for example, the capacity to analyse, reason, reflect and evaluate on a written text. In addition, those students with a greater ability to read are more likely to have learnt knowledge on citizenship through reading (Hoskins 2011).

8.Conclusions and implications for policy

An important aspect to note is that each dimension of the composite indicator measures different aspects of civic competence and, as was explained in Chapter 6, these elements are quite independent from each other. For example, there is no correlation on the individual level between 'Knowledge and Skills for Democracy' and 'Participatory Attitudes' or 'Citizenship Values'. The following metaphor helps to explain the need to measure the distinct dimensions: a drink of tea comprises several components -- a cup, a saucer, a teaspoon, hot water and a teabag. Each of these components is a necessary yet independent entity, and they are brought together to make a specific drink. Civic competence is the same; it is comprised of distinct components (Participatory Attitudes, Citizenship Values, Social Justice Values and Knowledge and Skills for Democracy) that are independent of each other, but each aspect is needed to be a fully competent active citizen. In addition, how a specific component can be enhanced and encouraged may be different for each dimension. This helps to explain why the results for the dimensions are different.

The results show that in those countries with less stable democracies and less wealth the youth have the motivation for future engagement and higher levels on citizenship values. These

findings are similar to the first civic competence composite indicator (Hoskins et al 2008). The lower levels of intended engagement and low self-efficacy of Nordic youth compared to youth in Southern and Eastern Europe is supported by a recent study by Amna and Zetterberg (2010), which describes the difference of youth engagement as 'turning the European map upside down' (p.45) compared to adult participation rates. However, they also find that by the age of 17-25, the enthusiasm of the youth from Southern and Eastern Europe has gone and that by this age the interest, voting and protesting more reflects the adult patterns of engagement. The reasons for the differing processes of transitions in the different regions are suggested to be that young people in the Nordic countries have greater opportunities for political engagement as they become older than their Southern or Eastern European counterparts. The youngsters in Nordic countries are asked to engage in a wide range of public activities in the formative period of their late teens and this encourages the more reluctant youngsters to get involved. Thus a policy implication from this research would be to suggest that in countries where youngsters perform well on 'Participatory Attitudes' and 'Citizenship Values', it is also necessary to ensure that there are the possibilities made available for these enthusiastic youngsters from 15 years upwards to actually start to be engaged in decision making, thus ensuring their democratic transition from enthusiastic youth to an engaged adult citizen.

At the other end of the table for 'Civic Values' and 'Participatory Attitudes', youngsters from Finland and the Netherlands are placed in the bottom group of countries for both of these dimensions. Belgium (Flemish), Denmark and the Czech Republic came in the bottom group in just one. Citizenship policy and practice in these five countries would profit from focusing on facilitating the learning of participatory attitudes and citizenship values. This of course does not mean that we advocate instability of democracy, but that it may well be worth investigating further the factors behind the success of Norwegian students who have strong citizenship values and do not come from a recent democracy. In the Czech Republic, adding a participatory dimension to the school curriculum, which many other European countries have, may well help in increasing participatory attitudes.

For the dimension of 'Social Justice', a different picture emerges with the more stable and wealthier democracies performing better than in the previous two dimensions. The Nordic youngsters overall scored much higher on this dimension and the newer democracies from Eastern Europe posted lower scores. However, Spain, a country which is also a relatively recent democracy, performed particularly well on this dimension. In contrast, the stable and wealthy country of the Netherlands came together with the new democracies of Eastern Europe at the bottom of the table. Policies and practices in the Netherlands, Czech Republic, Latvia and Russia would benefit from focusing on enhancing the qualities of social justice, including for the first three countries focusing on enhancing tolerant attitudes towards immigrants, and for Russia focusing more on enhancing attitudes towards gender equality.

In a similar way to the 'Social Justice' dimension, the Nordic countries with long-standing democracies are the better performers in the 'Knowledge and Skills for Democracy' dimension. Cyprus is the country which has significantly the lowest score. Policy and practice on citizenship in Cyprus would benefit from focusing on improving democratic knowledge and skills.

PART 2. Additional methodological considerations

1.Uncertainty and sensitivity analysis

Every aggregate measure or ranking system involves subjective judgments in the selection of indicators, the choice of aggregation model, and the weights applied to the indicators. 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. These analyses can help to gauge the robustness of the composite indicator results, to increase their transparency, to identify the countries that improve or deteriorate under certain assumptions, and to help frame the debate around its use.

Alternative frameworks

Let us for a moment consider that all differences between country scores on the CCCI-2 are significant, hence a precise rank can be assigned to each country given the assumption on which framework on civic competence we adopt. We will discuss the significance of those differences in more detail in the next section.

Table 16 aids in conveying the impact on the CCCI-2 ranking of the country-specific frameworks. Countries such as Spain, Greece and Bulgaria improve their overall position when their own country-specific framework is applied to all countries, whilst countries such as Italy, Ireland and Norway lose positions when their own framework is applied to all countries. Countries such as Austria, Switzerland and Slovakia remain unaffected. Most countries lose positions in the ranking when their own country-specific framework is used in comparison to the CCCI-2.

Table 17. Uncertainty and Sensitivity Analysis results: Impact of country-specific frameworks on civic competence

					Rankings using country-specific frameworks															
	Min-Max Ranking	*Range of ranks across the country-specific frameworks*	*A country's own framework applied to all other countries*	*Median across all 24 frameworks*	*SWE/ POL/ LTU*	*ES/ MLT*	*IRL/A UT/C YP/B GR*	*FIN/D NK*	*BFL*	*CHE*	*SVN*	*SVK*	*NOR*	*NLD*	*LUX*	*LIE*	*LVA*	*ITA*	*GRC*	*EST*	*CZE*
Guatemala	1	[1, 7]	-	1	1	1	1	1	7	1	1	1	1	4	1	1	1	1	1	1	1
Colombia	2	[2, 4]	-	2	4	4	2	2	4	2	2	2	2	3	2	2	2	2	2	2	2
Taiwan	3	[1, 13]	-	6	13	2	6	5	1	10	6	6	6	1	4	4	4	6	7	7	10
Chile	4	[2, 8]	-	3	8	3	3	3	3	7	3	3	3	2	3	3	3	3	5	3	5
Italy	5	[5, 12]	11	8	9	12	10	8	5	6	7	8	8	6	12	5	8	11	8	8	8
Ireland	6	[2, 13]	13	10	11	7	13	9	2	11	9	7	11	5	8	7	7	9	10	10	11
Paraguay	7	[4, 13]	-	5	6	5	4	4	13	4	4	4	4	9	5	6	5	5	4	5	4
Korea	8	[9, 19]	-	16	19	15	16	16	10	15	15	17	15	13	17	9	15	18	19	16	18
Norway	9	[7, 17]	12	12	17	9	12	10	8	12	11	12	12	7	9	14	12	13	14	14	14
Thailand	10	[3, 27]	-	9	3	17	8	13	27	5	10	13	10	21	14	8	16	8	9	9	6
Mexico	11	[6, 17]	-	7	7	6	7	7	17	8	8	9	7	14	7	11	9	7	6	6	7
Hong Kong	12	[8, 17]	-	15	14	11	15	15	9	16	16	15	17	8	13	16	13	15	15	15	15
Spain	13	[10, 15]	10	13	15	10	14	11	12	14	13	11	14	10	10	12	10	14	13	13	13
Dominican Republic	14	[2, 29]	-	5	2	8	5	6	29	3	5	5	5	19	6	13	6	4	3	4	3
Greece	15	[9, 16]	11	11	10	14	11	12	16	13	12	10	9	15	11	10	11	12	11	11	12
Indonesia	16	[5, 31]	-	13	5	22	9	14	31	9	14	14	13	31	16	15	18	10	12	12	9
Poland	17	[15, 25]	21	21	21	21	21	20	15	20	18	21	18	17	20	19	22	22	25	20	22
Denmark	18	[6, 28]	23	25	28	18	28	23	6	25	24	18	24	12	25	24	17	26	22	25	25
Russia	19	[12, 32]	-	22	12	32	22	26	25	17	20	23	22	30	24	18	27	20	23	19	16
Sweden	20	[11, 29]	29	17	29	13	17	17	11	21	19	16	20	11	15	20	14	16	16	18	21
Lithuania	21	[16, 25]	16	18	16	20	18	19	24	18	21	19	21	25	18	22	20	17	17	17	17
Cyprus	22	[16, 34]	20	20	18	29	20	18	34	19	17	24	16	33	23	21	30	23	21	22	19
Bulgaria	23	[17, 33]	19	21	20	26	19	21	33	23	22	30	19	32	22	17	26	21	26	21	23
New Zealand	24	[16, 26]	-	23	25	16	23	22	18	26	25	22	25	16	19	26	21	19	20	24	24
Malta	25	[23, 31]	31	26	24	31	26	24	28	24	23	27	23	28	28	23	31	28	29	27	26
Finland	26	[14, 35]	33	34	35	30	35	33	14	33	33	32	34	18	33	29	33	35	34	34	34
Austria	27	[18, 27]	27	24	22	24	27	27	22	22	27	20	26	24	27	25	19	26	18	23	20
England	28	[20, 31]	-	29	26	27	30	29	20	30	28	26	29	23	31	30	25	31	27	29	30
Liechtenstein	29	[19, 32]	32	30	31	25	31	30	19	29	31	25	32	20	29	32	24	29	28	28	28
Slovenia	30	[21, 33]	26	27	33	23	25	28	21	28	26	28	27	22	26	27	28	25	30	30	31
Estonia	31	[26, 34]	32	30	27	33	29	32	26	34	30	33	31	29	30	28	32	30	33	32	33
Switzerland	32	[23, 34]	32	32	32	28	32	31	23	32	34	31	33	26	32	34	29	32	31	31	32
Latvia	33	[23, 35]	34	33	23	35	33	34	35	27	32	34	30	35	34	31	34	33	32	33	27
Luxembourg	34	[19, 35]	21	26	30	19	24	25	30	31	29	29	28	27	21	35	23	24	24	26	29
Slovakia	35	[32, 35]	35	34	34	34	34	35	32	35	35	35	35	34	35	33	35	34	35	35	35
Belgium (FL)	36	[36, 37]	36	36	36	36	36	36	36	36	36	36	36	36	36	37	36	36	36	36	36
Czech Republic	37	[36, 38]	38	37	37	37	37	37	37	38	37	38	37	37	37	36	37	37	38	37	38
Netherlands	38	[37, 38]	38	38	38	38	38	38	38	37	38	37	38	38	38	38	38	38	37	38	37

Alternative scenarios

In order to assess the robustness of the ranking based on the proposed CCCI-2, the rankings based on alternative assumptions on the inclusion of individuals, normalisation method, or aggregation rule are compared. To ensure the validity of the messages conveyed by the CCCI-2, it is important that the impact of these modelling choices is adequately studied in order to show that the overall index does not depend heavily upon those choices but is more dependent on the data used.

The assumptions tested here are the following:

1. *Normalisation method*: The CCCI-2 is built using a min-max normalisation method for the 15 indicators of civic competence. We test the impact of using a standardisation method, instead, in which the indicators are standardized by subtracting the indicator mean and dividing by the indicator standard deviation across all individuals:

Z-score = ([score] - [average across individuals])/ SD across individuals

This approach converts all indicators to a common scale with an average of zero and standard deviation of one. The same set of individuals as in the CCCI-2 is used.

2. *Aggregation rule*: A statistical justification on the use of the arithmetic average within a dimension was offered in previous sections. However, given that the four dimensions of civic competence appear to be quite distinct from one another, an arithmetic averaging of the four dimensions may well be criticised for being fully compensatory, which implies that a very low performance on the cognitive tests, for example, can be compensated for by very high scores on the other dimensions of values or attitudes. In anticipation of this potential criticism, instead of using the arithmetic average across the four dimensions to calculate the CCCI, we employ the geometric average:

$$Index = (D_1 \cdot D_2 \cdot D_3 \cdot D_4)^{1/4}$$

The expression above embodies imperfect compensability across the four dimensions of civic competence. It could thus address to a great extent criticisms of the linear aggregation formula, namely that it allows for perfect compensability across dimensions. Some compensability is inherent in the definition of any index that increases with the value of its components.

3. *Individuals considered*: The CCCI-2 was developed using only individuals per country with full record, namely with all 15 values for the selected indicators. For the vast majority of the countries, this choice led to the consideration of at least 95% of the individuals surveyed. However, for few countries – Colombia, Paraguay, Norway, Mexico, Dominican Republic and Cyprus -- this choice resulted in the exclusion of 16 to 37 % of the individuals surveyed because of lack of data on some of the indicators. We tested here the impact on the results of including individuals with at least 10 indicator values. Missing values were estimated using the hot-deck imputation method and considering the 50 nearest neighbours across the entire population with full records.

Table 17 summarises the impact of alternative scenarios with regard to civic competence. Again, let us assume that all differences between country scores are significant and that a precise rank can be assigned to each country. Overall, the ranking is not sensitive to any of the choices made regarding the inclusion or exclusion of individuals without complete record, the normalisation or the aggregation formula. In most cases, the ranking remains unchanged or there is a shift of only one or two positions. Notable shifts are found for Cyprus, Malta and Estonia, whose scores are very close to other countries' in the original ranking (more details on this are offered in the next section). This outcome produces a high degree of confidence that the CCCI-2 provides a solid framework for assessing relative performance between the countries in a robust way.

Table 18. Uncertainty and Sensitivity Analysis results: Impact of modeling choices on civic competence

		Shifts in rank compared to the CCCI			% of individuals included		
	CCCI Ranking	*z-scores*	*Geometric Average*	*Missing data estimation*	*(15/15 values)*	*(>=10/15 values)*	*Difference*
Guatemala	1	-4	-2	0	87%	96%	9%
Colombia	2	-1	1	-1	84%	95%	11%
Taiwan	3	1	-1	1	99%	100%	1%
Chile	4	0	-1	0	95%	99%	4%
Italy	5	4	3	0	94%	99%	5%
Ireland	6	-1	0	0	92%	98%	5%
Paraguay	7	-4	0	-2	73%	87%	14%
Korea	8	2	0	1	99%	100%	1%
Norway	9	1	-2	-1	85%	96%	10%
Thailand	10	0	1	2	96%	100%	3%
Mexico	11	-1	1	-1	86%	96%	10%
Hong Kong	12	3	0	1	95%	97%	2%
Spain	13	0	0	0	94%	98%	4%
Dominican Republic	14	-5	-3	-2	63%	81%	18%
Greece	15	0	1	1	91%	97%	7%
Indonesia	16	-2	1	1	91%	97%	7%
Poland	17	1	-1	0	97%	100%	2%
Denmark	18	4	-1	0	90%	96%	6%
Russia	19	2	3	0	97%	99%	2%
Sweden	20	-2	-1	0	94%	98%	4%
Lithuania	21	1	1	0	97%	100%	3%
Cyprus	22	-11	-9	0	84%	94%	11%
Bulgaria	23	-1	1	0	89%	96%	7%
New Zealand	24	-1	0	0	91%	97%	6%
Malta	25	-7	0	0	93%	97%	5%
Finland	26	5	-3	0	93%	99%	6%
Austria	27	-2	4	0	94%	99%	5%
England	28	1	0	0	93%	98%	5%
Liechtenstein	29	1	2	0	93%	99%	6%
Slovenia	30	0	-2	0	95%	99%	4%
Estonia	31	8	5	0	96%	99%	3%
Switzerland	32	6	-1	0	93%	99%	6%
Latvia	33	2	3	0	96%	99%	3%
Luxembourg	34	-1	-1	0	92%	98%	6%
Slovakia	35	1	1	0	98%	100%	2%
Belgium (FL)	36	0	0	0	98%	100%	2%
Czech Republic	37	0	0	0	97%	99%	3%
Netherlands	38	0	0	0	93%	97%	4%

Columns “CCCI ranking”, “z-scores” and “Geometric average” are based on individuals with full records (15/15 values). Column “Missing data estimation” is based on individuals with at least 10/15 values available.

2. Interpreting the rankings: statistical significance and effect size

The rankings presented in the previous chapter on sensitivity analysis do not take into account whether or not the difference between two countries' scores is statistically significant, nor do they provide much substantial information on the actual impact of the difference. The results presented in Chapter 7 take these issues into account, but the methods were not explained. These two issues will be addressed here.

To interpret the difference between two country scores, two complementary approaches can be used. The most commonly used is statistical significance testing. Statistical significance is influenced by two parameters: the absolute size of the difference between two groups and the sample size. With very big sample sizes, as in the present case with roughly 3,000 to 5,000 individuals surveyed per country, even small differences in country scores can turn out to be statistically significant. As a consequence, the interpretation of statistical significance might lack a clear link to the practical impact of the observed difference. Clearly there is a considerable value to testing the statistical significance. This way one avoids drawing conclusions based on differences that may be only caused by sampling variance, and that may be attributed to accident. However, information on the statistical significance should be complemented with information on the actual impact of the difference, and this is referred to as the *effect size*. The effect size can be referred to as the practical rather than statistical significance of a difference. Effect size is a simple way to quantify the difference between two countries without confounding the interpretation with the sample size, as is the case in the statistical significance.

In a first step, the statistical significance of the difference between countries was checked. Significance is tested at the p-value .05. This implies that if a difference is said to be significant, one can be 95% sure that it should not be attributed to random sampling variance. These results are presented as plots; for each country a confidence interval around its average score is calculated. By checking the overlap of the confidence intervals, one can evaluate statistical significance[8]. If the intervals overlap, the difference is not significant, but if there is no overlap between the intervals, the average country scores do differ significantly. Figures 10 to 15 show for each country a confidence interval around the average score for the overall Civic Competence Composite Indicator 2011 and its four dimensions.

In a second step, the effect size between all pairs of countries has been estimated. There is a wide array of formulas used to measure effect size. For consistency and comparability with the

[8] In the significance testing, the clustering of the data has been taken into account in the calculation of the standard errors and the confidence intervals (Snijders and Bosker 1999; Goldstein and Healy 1995; Hochberg and Tamhane 1987).

previous release of the CCCI, we will use *Cohen's d* formula (Cohen 1988; Hartung et al. 2008; Hedges 1981) for two groups with unequal sample sizes and unequal standard deviations:

$$effect\ size = \frac{(M_1 - M_2)}{\sqrt{\frac{(N_1 - 1)SD_1^2 + (N_1 - 1)SD_1^2}{N_1 + N_2 - 2}}}$$

M_1 and M_2 refer to the country averages, N_1 and N_2 are the sample sizes in the countries, SD_1 and SD_2 are the observed standard deviations in these countries. The denominator in the equation above is a so-called 'pooled' estimate of the standard deviation for both countries. Essentially this estimate is an average of both standard deviations[9]. Country 1 is the highest ranked country in the comparison.

An effect size of 0.8 implies that the score of the average student in country 1 is 0.8 standard deviations above the score of the average student country 2. For a normal distribution, this means that the score of the average student in country 1 exceeds the score of 79% of the students in country 2 (79 percentile of the distribution). The effect size can also be interpreted in terms of the percept of non-overlap of the distributions of the two countries; an effect size of 0.8 indicates a non-overlap of 47.4% in the two distributions.

Table 19 indicates for each country pairwise comparison whether or not the score difference in the CCCI-2 or any of its four dimensions is significant. Cohen (1988) hesitantly defined effect sizes as '*small*, threshold =0.2', '*medium*, threshold = 0.5', and '*large*, threshold = 0.8'[10]. These effect sizes correspond respectively to an average score of the higher country that exceeds 58%, 69% and 79% of the scores of the lower ranked country in the comparison. Effect sizes smaller than 0.2 suggest that there may be no difference in the average country scores given the large overlap in the two distributions.

2.1 Civic competence

On the overall result for civic competence (see figure 10) no distinct groups can be identified, except for at the lower end of the ranking, and when pairwise comparisons are made. For example, one can confidently state that Guatemala, Colombia, Chinese Taipei, Chile, Italy, Ireland and Paraguay, at the top of the ranking, do not show a significant difference among them and have small effect sizes of less than 0.17. As a consequence, one cannot state that Guatemala with an average score of 616 points is any better than Paraguay with average score of 603 points. In fact, the distributions of each pair of those countries have a large overlap (87%). A large number of countries, from Korea to Slovakia, follows, where it is not easy to identify clear groupings of countries, unless considering the pairwise comparisons. The ranking

[9] Note that this 'pooled' estimate does not equal the standard deviation of the 'pooled' data set, i.e. the data set including the values of both countries. If both countries have a low standard deviation but show a big difference in average score, the latter estimate will be much bigger than the true pooled estimate of the standard deviation.

[10] Cohen (1988) stated that 'there is a certain risk inherent in offering conventional operational definitions for those terms for use in power analysis in as diverse a field of inquiry as behavioral science' (p.25).

is closed by a group of three countries, whose performance is statistically equivalent: Belgium (Flemish), Czech Republic and the Netherlands. The largest effect size of 1.09 arises when Guatemala and the Netherlands are compared. This indicates that the average respondent in Guatemala receives a higher score on civic competence than 86% of the respondents in the Netherlands. Yet, there is an overlap of 41% in the two distributions that should not be ignored. This implies that some respondents in the Netherlands still get a higher score than some in Guatemala.

The results make clear that the differences in civic competence within the European countries are often, based on significance analysis, not significant between specific European countries. Moreover, significant differences should still be carefully interpreted given that there might be a substantial overlap in the resulting distributions for the countries. If this is so, as reflected in the effect size, this means that a large group of the respondents in the lower ranked country still score higher in civic competence than the average respondent in the higher ranked country. This is a very important piece of information to be taken into account in the interpretation of observed differences.

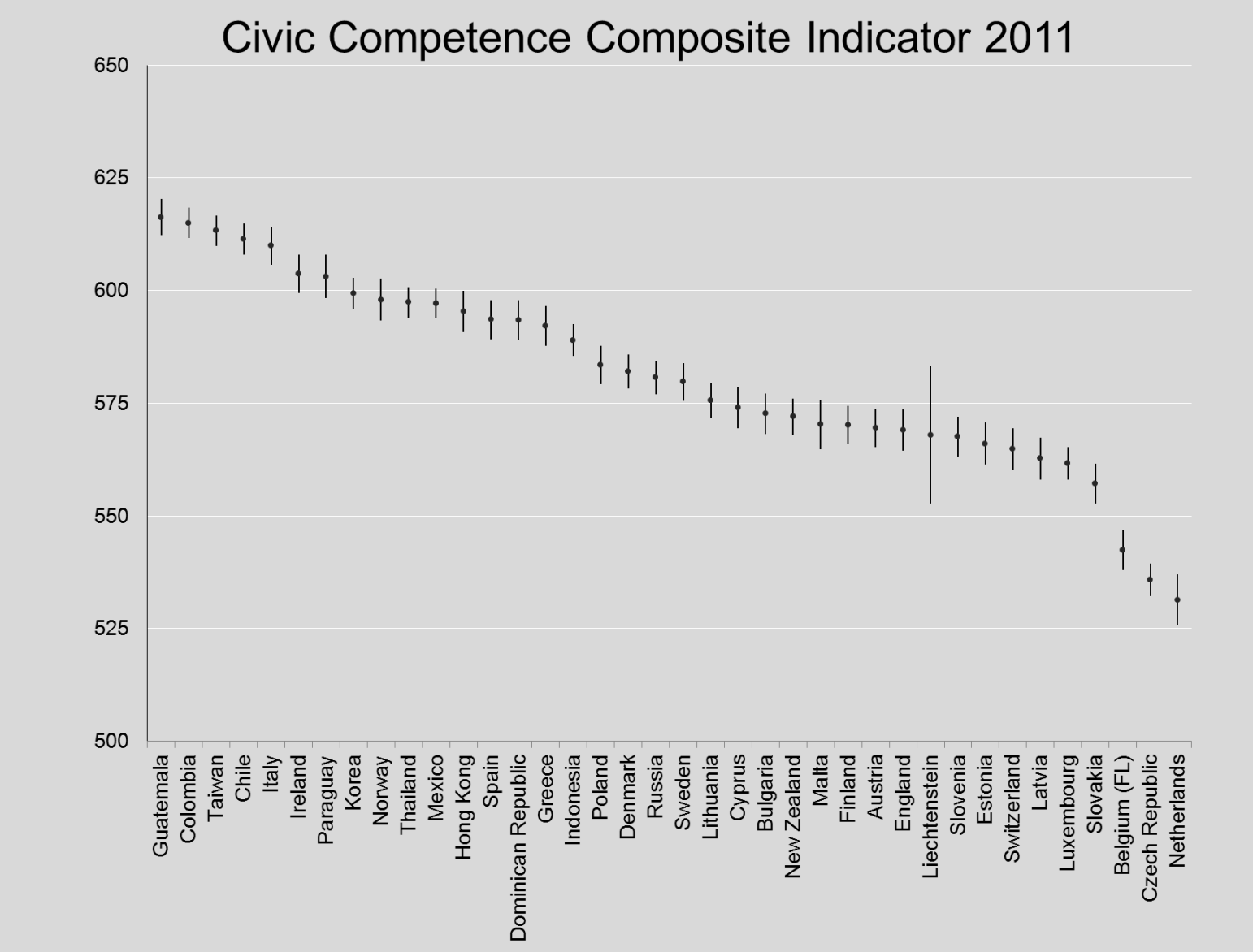


Figure 10. Civic Competence: Pairwise comparison of average country scores (with confidence intervals)

Table 19. Civic competence: effect sizes of pairwise country comparisons

Score	SD		Guatemala	Colombia	Taiwan	Chile	Italy	Ireland	Paraguay	Korea	Norway	Thailand	Mexico	Hong Kong	Spain	Dominican Re	Greece	Indonesia	Poland	Denmark	Russia	Sweden	Lithuania	Cyprus	Bulgaria	New Zealand	Malta	Finland	Austria	England	Liechtenstein	Slovenia	Estonia	Switzerland	Latvia	Luxembourg	Slovakia	Belgium (FL)	Czech Republ	Netherlands
616	75	Guatemala	0.00	0.02	0.03	0.06	0.08	0.15	0.17	0.20	0.22	0.26	0.23	0.25	0.28	0.29	0.28	0.38	0.40	0.42	0.46	0.42	0.53	0.46	0.53	0.50	0.57	0.57	0.56	0.55	0.64	0.60	0.65	0.67	0.70	0.66	0.76	0.97	0.98	1.09
615	80	Colombia	-0.02	0.00	0.02	0.04	0.06	0.13	0.15	0.18	0.20	0.23	0.21	0.23	0.26	0.26	0.27	0.34	0.38	0.39	0.43	0.40	0.50	0.45	0.51	0.48	0.54	0.54	0.54	0.53	0.59	0.57	0.61	0.63	0.65	0.64	0.72	0.91	0.95	1.03
613	95	Taiwan	-0.03	-0.02	0.00	0.02	0.04	0.10	0.11	0.15	0.16	0.19	0.18	0.19	0.21	0.22	0.22	0.29	0.32	0.34	0.37	0.35	0.43	0.39	0.44	0.43	0.46	0.47	0.47	0.46	0.48	0.49	0.52	0.54	0.56	0.56	0.62	0.79	0.85	0.89
611	91	Chile	-0.06	-0.04	-0.02	0.00	0.02	0.08	0.09	0.13	0.14	0.17	0.16	0.17	0.20	0.20	0.21	0.27	0.31	0.33	0.36	0.33	0.42	0.38	0.43	0.41	0.45	0.46	0.46	0.45	0.48	0.49	0.52	0.53	0.56	0.55	0.62	0.80	0.84	0.89
610	86	Italy	-0.08	-0.06	-0.04	-0.02	0.00	0.07	0.08	0.12	0.13	0.16	0.15	0.16	0.19	0.19	0.19	0.27	0.30	0.32	0.35	0.32	0.42	0.37	0.42	0.40	0.45	0.46	0.45	0.44	0.49	0.48	0.52	0.54	0.57	0.55	0.63	0.82	0.85	0.92
604	98	Ireland	-0.15	-0.13	-0.10	-0.08	-0.07	0.00	0.01	0.05	0.06	0.08	0.07	0.09	0.11	0.11	0.12	0.18	0.22	0.24	0.26	0.24	0.32	0.29	0.33	0.32	0.35	0.36	0.36	0.35	0.37	0.39	0.42	0.43	0.46	0.46	0.51	0.69	0.74	0.78
603	84	Paraguay	-0.17	-0.15	-0.11	-0.09	-0.08	-0.01	0.00	0.04	0.06	0.07	0.07	0.09	0.11	0.11	0.12	0.19	0.22	0.24	0.27	0.25	0.34	0.30	0.35	0.33	0.38	0.38	0.38	0.37	0.42	0.41	0.45	0.47	0.49	0.48	0.55	0.75	0.78	0.85
599	92	Korea	-0.20	-0.18	-0.15	-0.13	-0.12	-0.05	-0.04	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.08	0.13	0.17	0.19	0.22	0.21	0.28	0.26	0.29	0.29	0.32	0.32	0.33	0.32	0.35	0.35	0.38	0.39	0.42	0.42	0.48	0.65	0.71	0.76
598	96	Norway	-0.22	-0.20	-0.16	-0.14	-0.13	-0.06	-0.06	-0.01	0.00	0.01	0.01	0.03	0.05	0.05	0.06	0.11	0.16	0.18	0.20	0.19	0.26	0.23	0.27	0.26	0.30	0.30	0.30	0.30	0.32	0.33	0.36	0.38	0.40	0.40	0.46	0.64	0.68	0.73
597	72	Thailand	-0.26	-0.23	-0.19	-0.17	-0.16	-0.08	-0.07	-0.02	-0.01	0.00	0.00	0.03	0.05	0.05	0.06	0.12	0.18	0.19	0.22	0.21	0.29	0.27	0.31	0.30	0.35	0.35	0.35	0.34	0.41	0.38	0.42	0.43	0.46	0.45	0.53	0.74	0.77	0.87
597	87	Mexico	-0.23	-0.21	-0.18	-0.16	-0.15	-0.07	-0.07	-0.03	-0.01	0.00	0.00	0.02	0.04	0.04	0.05	0.10	0.16	0.17	0.20	0.19	0.26	0.24	0.28	0.27	0.31	0.31	0.31	0.31	0.34	0.34	0.37	0.38	0.41	0.41	0.47	0.65	0.70	0.76
595	93	Hong Kong	-0.25	-0.23	-0.19	-0.17	-0.16	-0.09	-0.09	-0.04	-0.03	-0.03	-0.02	0.00	0.02	0.02	0.03	0.08	0.13	0.15	0.17	0.16	0.23	0.21	0.25	0.24	0.27	0.28	0.28	0.28	0.30	0.31	0.34	0.35	0.38	0.38	0.44	0.62	0.67	0.72
594	90	Spain	-0.28	-0.26	-0.21	-0.20	-0.19	-0.11	-0.11	-0.06	-0.05	-0.05	-0.04	-0.02	0.00	0.00	0.01	0.06	0.11	0.13	0.15	0.15	0.21	0.20	0.23	0.23	0.26	0.26	0.26	0.26	0.29	0.29	0.32	0.34	0.36	0.36	0.42	0.60	0.65	0.71
593	84	Dominican Republic	-0.29	-0.26	-0.22	-0.20	-0.19	-0.11	-0.11	-0.07	-0.05	-0.05	-0.04	-0.02	0.00	0.00	0.01	0.06	0.11	0.13	0.16	0.15	0.22	0.20	0.24	0.23	0.27	0.27	0.27	0.27	0.31	0.30	0.33	0.35	0.37	0.37	0.44	0.63	0.67	0.74
592	96	Greece	-0.28	-0.27	-0.22	-0.21	-0.19	-0.12	-0.12	-0.08	-0.06	-0.06	-0.05	-0.03	-0.01	-0.01	0.00	0.04	0.09	0.11	0.13	0.13	0.19	0.18	0.21	0.21	0.23	0.24	0.24	0.24	0.26	0.27	0.29	0.31	0.33	0.34	0.39	0.57	0.62	0.67
589	70	Indonesia	-0.38	-0.34	-0.29	-0.27	-0.27	-0.18	-0.19	-0.13	-0.11	-0.12	-0.10	-0.08	-0.06	-0.06	-0.04	0.00	0.07	0.09	0.11	0.11	0.18	0.17	0.21	0.20	0.24	0.24	0.24	0.24	0.30	0.28	0.31	0.33	0.36	0.34	0.43	0.63	0.67	0.77
584	89	Poland	-0.40	-0.38	-0.32	-0.31	-0.30	-0.22	-0.22	-0.17	-0.16	-0.18	-0.16	-0.13	-0.11	-0.11	-0.09	-0.07	0.00	0.02	0.03	0.04	0.10	0.10	0.12	0.12	0.15	0.15	0.15	0.16	0.18	0.18	0.21	0.22	0.25	0.25	0.31	0.49	0.54	0.60
582	88	Denmark	-0.42	-0.39	-0.34	-0.33	-0.32	-0.24	-0.24	-0.19	-0.18	-0.19	-0.17	-0.15	-0.13	-0.13	-0.11	-0.09	-0.02	0.00	0.02	0.02	0.08	0.08	0.11	0.11	0.13	0.14	0.14	0.14	0.16	0.16	0.19	0.20	0.23	0.23	0.29	0.47	0.53	0.58
581	80	Russia	-0.46	-0.43	-0.37	-0.36	-0.35	-0.26	-0.27	-0.22	-0.20	-0.22	-0.20	-0.17	-0.15	-0.16	-0.13	-0.11	-0.03	-0.02	0.00	0.01	0.06	0.07	0.10	0.10	0.12	0.13	0.13	0.13	0.16	0.16	0.18	0.20	0.22	0.23	0.29	0.48	0.53	0.61
580	99	Sweden	-0.42	-0.40	-0.35	-0.33	-0.32	-0.24	-0.25	-0.21	-0.19	-0.21	-0.19	-0.16	-0.15	-0.15	-0.13	-0.11	-0.04	-0.02	-0.01	0.00	0.05	0.06	0.08	0.08	0.10	0.10	0.11	0.11	0.12	0.13	0.15	0.16	0.19	0.20	0.25	0.42	0.47	0.51
576	78	Lithuania	-0.53	-0.50	-0.43	-0.42	-0.42	-0.32	-0.34	-0.28	-0.26	-0.29	-0.26	-0.23	-0.21	-0.22	-0.19	-0.18	-0.10	-0.08	-0.06	-0.05	0.00	0.02	0.03	0.04	0.06	0.07	0.07	0.08	0.10	0.10	0.12	0.14	0.16	0.17	0.23	0.42	0.48	0.55
574	109	Cyprus	-0.46	-0.45	-0.39	-0.38	-0.37	-0.29	-0.30	-0.26	-0.23	-0.27	-0.24	-0.21	-0.20	-0.20	-0.18	-0.17	-0.10	-0.08	-0.07	-0.06	-0.02	0.00	0.01	0.02	0.04	0.04	0.05	0.05	0.06	0.07	0.08	0.10	0.12	0.13	0.18	0.34	0.40	0.43
573	89	Bulgaria	-0.53	-0.51	-0.44	-0.43	-0.42	-0.33	-0.35	-0.29	-0.27	-0.31	-0.28	-0.25	-0.23	-0.24	-0.21	-0.21	-0.12	-0.11	-0.10	-0.08	-0.03	-0.01	0.00	0.01	0.03	0.03	0.03	0.04	0.05	0.06	0.08	0.09	0.12	0.12	0.18	0.36	0.42	0.47
572	100	New Zealand	-0.50	-0.48	-0.43	-0.41	-0.40	-0.32	-0.33	-0.29	-0.26	-0.30	-0.27	-0.24	-0.23	-0.23	-0.21	-0.20	-0.12	-0.11	-0.10	-0.08	-0.04	-0.02	-0.01	0.00	0.02	0.02	0.03	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.16	0.33	0.39	0.43
570	91	Malta	-0.57	-0.54	-0.46	-0.45	-0.45	-0.35	-0.38	-0.32	-0.30	-0.35	-0.31	-0.27	-0.26	-0.27	-0.23	-0.24	-0.15	-0.13	-0.12	-0.10	-0.06	-0.04	-0.03	-0.02	0.00	0.00	0.01	0.01	0.03	0.03	0.05	0.06	0.09	0.10	0.15	0.33	0.39	0.44
570	87	Finland	-0.57	-0.54	-0.47	-0.46	-0.46	-0.36	-0.38	-0.32	-0.30	-0.35	-0.31	-0.28	-0.26	-0.27	-0.24	-0.24	-0.15	-0.14	-0.13	-0.10	-0.07	-0.04	-0.03	-0.02	0.00	0.00	0.01	0.01	0.03	0.03	0.05	0.06	0.09	0.10	0.15	0.33	0.39	0.45
570	92	Austria	-0.56	-0.54	-0.47	-0.46	-0.45	-0.36	-0.38	-0.33	-0.30	-0.35	-0.31	-0.28	-0.26	-0.27	-0.24	-0.24	-0.15	-0.14	-0.13	-0.11	-0.07	-0.05	-0.03	-0.03	-0.01	-0.01	0.00	0.01	0.02	0.02	0.04	0.05	0.08	0.09	0.14	0.32	0.38	0.43
569	99	England	-0.55	-0.53	-0.46	-0.45	-0.44	-0.35	-0.37	-0.32	-0.30	-0.34	-0.31	-0.28	-0.26	-0.27	-0.24	-0.24	-0.16	-0.14	-0.13	-0.11	-0.08	-0.05	-0.04	-0.03	-0.01	-0.01	-0.01	0.00	0.01	0.02	0.03	0.05	0.07	0.08	0.13	0.30	0.36	0.40
568	76	Liechtenstein	-0.64	-0.59	-0.48	-0.48	-0.49	-0.37	-0.42	-0.35	-0.32	-0.41	-0.34	-0.30	-0.29	-0.31	-0.26	-0.30	-0.18	-0.16	-0.16	-0.12	-0.10	-0.06	-0.05	-0.04	-0.03	-0.03	-0.02	-0.01	0.00	0.00	0.02	0.04	0.07	0.07	0.13	0.33	0.37	0.44
568	88	Slovenia	-0.60	-0.57	-0.49	-0.49	-0.48	-0.39	-0.41	-0.35	-0.33	-0.38	-0.34	-0.31	-0.29	-0.30	-0.27	-0.28	-0.18	-0.16	-0.16	-0.13	-0.10	-0.07	-0.06	-0.05	-0.03	-0.03	-0.02	-0.02	0.00	0.00	0.02	0.03	0.06	0.07	0.12	0.30	0.36	0.42
566	80	Estonia	-0.65	-0.61	-0.52	-0.52	-0.52	-0.42	-0.45	-0.38	-0.36	-0.42	-0.37	-0.34	-0.32	-0.33	-0.29	-0.31	-0.21	-0.19	-0.18	-0.15	-0.12	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04	-0.03	-0.02	-0.02	0.00	0.02	0.04	0.05	0.11	0.30	0.36	0.42
565	80	Switzerland	-0.67	-0.63	-0.54	-0.53	-0.54	-0.43	-0.47	-0.39	-0.38	-0.43	-0.38	-0.35	-0.34	-0.35	-0.31	-0.33	-0.22	-0.20	-0.20	-0.16	-0.14	-0.10	-0.09	-0.08	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.02	0.00	0.03	0.04	0.09	0.28	0.34	0.41
563	79	Latvia	-0.70	-0.65	-0.56	-0.56	-0.57	-0.46	-0.49	-0.42	-0.40	-0.46	-0.41	-0.38	-0.36	-0.37	-0.33	-0.36	-0.25	-0.23	-0.22	-0.19	-0.16	-0.12	-0.12	-0.10	-0.09	-0.09	-0.08	-0.07	-0.07	-0.06	-0.04	-0.03	0.00	0.01	0.07	0.26	0.32	0.38
562	88	Luxembourg	-0.66	-0.64	-0.56	-0.55	-0.55	-0.46	-0.48	-0.42	-0.40	-0.45	-0.41	-0.38	-0.36	-0.37	-0.34	-0.34	-0.25	-0.23	-0.23	-0.20	-0.17	-0.13	-0.12	-0.11	-0.10	-0.10	-0.09	-0.08	-0.07	-0.07	-0.05	-0.04	-0.01	0.00	0.05	0.23	0.29	0.35
557	82	Slovakia	-0.76	-0.72	-0.62	-0.62	-0.63	-0.51	-0.55	-0.48	-0.46	-0.53	-0.47	-0.44	-0.42	-0.44	-0.39	-0.43	-0.31	-0.29	-0.29	-0.25	-0.23	-0.18	-0.18	-0.16	-0.15	-0.15	-0.14	-0.13	-0.13	-0.12	-0.11	-0.09	-0.07	-0.05	0.00	0.18	0.25	0.31
542	78	Belgium (FL)	-0.97	-0.91	-0.79	-0.80	-0.82	-0.69	-0.75	-0.65	-0.64	-0.74	-0.65	-0.62	-0.60	-0.63	-0.57	-0.63	-0.49	-0.47	-0.48	-0.42	-0.42	-0.34	-0.36	-0.33	-0.33	-0.33	-0.32	-0.30	-0.33	-0.30	-0.30	-0.28	-0.26	-0.23	-0.18	0.00	0.08	0.14
536	87	Czech Republic	-0.98	-0.95	-0.85	-0.84	-0.85	-0.74	-0.78	-0.71	-0.68	-0.77	-0.70	-0.67	-0.65	-0.67	-0.62	-0.67	-0.54	-0.53	-0.53	-0.47	-0.48	-0.40	-0.42	-0.39	-0.39	-0.39	-0.38	-0.36	-0.37	-0.36	-0.36	-0.34	-0.32	-0.29	-0.25	-0.08	0.00	0.05
531	84	Netherlands	-1.09	-1.03	-0.89	-0.89	-0.92	-0.78	-0.85	-0.76	-0.73	-0.87	-0.76	-0.72	-0.71	-0.74	-0.67	-0.77	-0.60	-0.58	-0.61	-0.51	-0.55	-0.43	-0.47	-0.43	-0.44	-0.45	-0.43	-0.40	-0.44	-0.42	-0.42	-0.41	-0.38	-0.35	-0.31	-0.14	-0.05	0.00

Green: scores significantly higher than comparison country

White: No statistically significant difference

Red: scores significantly lower than comparison country

2.2 The Four Dimensions

With regard to the dimension on '**Citizenship Values'** (see Figure 11 and Table 20), the ranking is headed by Thailand, Guatemala, Indonesia, Dominican Republic, Colombia, Paraguay and Mexico. These seven countries do not show any significant differences among them, but all score significantly higher than the rest of the countries. A large number of countries follow, from Colombia to Latvia, where it is not easy to identify clear groupings, unless considering the pairwise comparisons. Next is a group of countries, from the United Kingdom to Belgium, which cannot be separated based on the significance tests. The ranking is closed by three countries, Finland, the Netherlands and Denmark, which do not show any substantial differences within the group but all score substantially lower than the other countries.

For the dimension of '**Social Justice'** (see Figure 12 and Table 21), Chile and Chinese Taipei clearly outperform all other countries. Next is a group of countries that do not show any significant differences, from Guatemala to Ireland. These countries are followed by a fairly large group, from Greece to Slovakia, which includes most of the European countries. Six countries, from Czech Republic to Thailand, close the ranking.

Dominican Republic is the leading country on '**Participatory Attitudes'** (see Figure 13 and Table 22). This country is followed by a small group, from Guatemala to Colombia, and Mexico and Paraguay follow that group. The next group includes Italy to Cyprus, countries with practically equivalent performance. Next is a large group of countries, from Hong Kong to Slovakia, in which it is not easy to identify clear groupings, unless considering the pairwise comparisons. The lower end of the ranking is occupied by Finland, the Netherlands, Czech Republic and Belgium (Flemish), with no statistically significant difference in their performance.

Finally, in the cognitive dimension, '**Knowledge and Skills for Democracy'** (see figure 14 and table 23), the ranking is headed by Denmark, Finland and Korea, which do not show any significant differences. Several small groups of countries follow from Chinese Taipei to Colombia. A distinct group of countries with equivalent performance is then formed by Mexico, Cyprus, Thailand and Paraguay. Guatemala and Indonesia, with equivalent performance, follow. Finally, Dominican Republic is clearly found at the end of the ranking. It is interesting to note that whilst Guatemala, Indonesia and Dominican Republic show top performance in at least two dimensions of civic competence, their performance on cognitions is the least among the countries included.

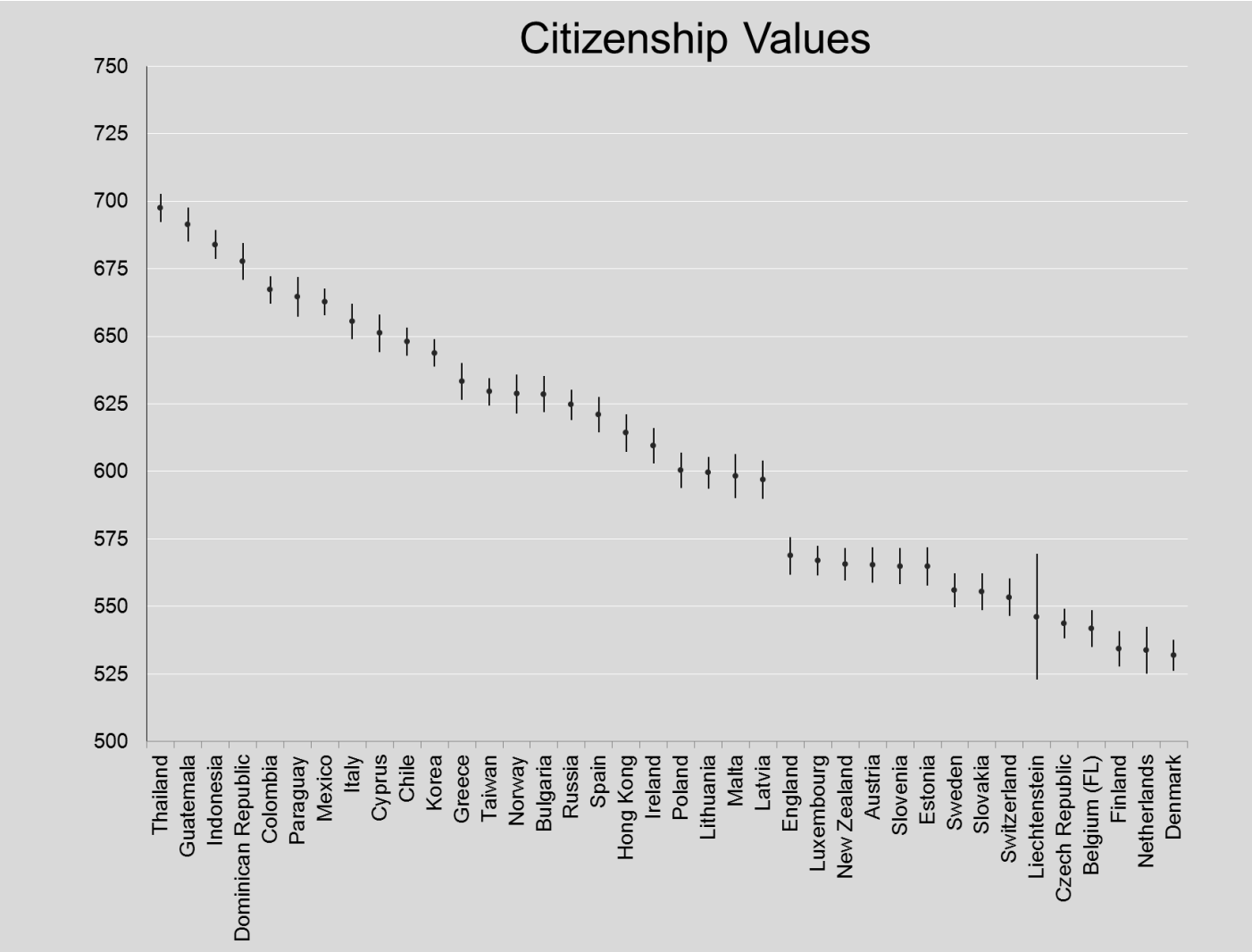


Figure 11. Citizenship values: Pairwise comparison of average country scores (with confidence intervals)

Table 20. Citizenship values: effect sizes

Score	SD		Thailand	Guatemala	Indonesia	Dominican Re	Colombia	Paraguay	Mexico	Italy	Cyprus	Chile	Korea	Greece	Taiwan	Norway	Bulgaria	Russia	Spain	Hong Kong	Ireland	Poland	Lithuania	Malta	Latvia	England	Luxembourg	New Zealand	Austria	Slovenia	Estonia	Sweden	Slovakia	Switzerland	Liechtenstein	Czech Republ	Belgium (FL)	Finland	Netherlands	Denmark
698	123	Thailand	0.00	0.05	0.11	0.15	0.25	0.26	0.26	0.34	0.32	0.38	0.40	0.50	0.51	0.53	0.54	0.58	0.59	0.65	0.68	0.77	0.79	0.79	0.82	1.01	1.00	1.01	1.02	1.03	1.10	1.07	1.17	1.16	1.24	1.22	1.25	1.33	1.33	1.39
691	122	Guatemala	-0.05	0.00	0.06	0.11	0.20	0.21	0.21	0.29	0.27	0.33	0.35	0.45	0.46	0.48	0.49	0.53	0.54	0.59	0.63	0.72	0.74	0.74	0.78	0.95	0.94	0.96	0.96	0.98	1.05	1.01	1.12	1.11	1.19	1.17	1.20	1.28	1.28	1.35
684	117	Indonesia	-0.11	-0.06	0.00	0.05	0.14	0.16	0.16	0.24	0.23	0.28	0.31	0.41	0.41	0.43	0.45	0.48	0.50	0.56	0.59	0.68	0.70	0.70	0.73	0.92	0.91	0.93	0.94	0.95	1.01	0.98	1.09	1.08	1.18	1.14	1.17	1.25	1.26	1.31
678	138	Dominican Republic	-0.15	-0.11	-0.05	0.00	0.08	0.10	0.10	0.17	0.17	0.22	0.24	0.32	0.34	0.35	0.36	0.40	0.41	0.46	0.49	0.57	0.60	0.58	0.62	0.79	0.80	0.80	0.81	0.82	0.88	0.85	0.94	0.93	0.96	1.01	1.02	1.10	1.08	1.16
667	123	Colombia	-0.25	-0.20	-0.14	-0.08	0.00	0.02	0.03	0.09	0.11	0.15	0.18	0.26	0.28	0.30	0.30	0.34	0.36	0.41	0.45	0.53	0.55	0.55	0.57	0.77	0.77	0.78	0.79	0.80	0.84	0.84	0.92	0.91	0.99	0.98	1.01	1.08	1.08	1.13
665	128	Paraguay	-0.26	-0.21	-0.16	-0.10	-0.02	0.00	0.01	0.07	0.09	0.12	0.15	0.24	0.25	0.26	0.27	0.31	0.33	0.38	0.41	0.49	0.52	0.51	0.54	0.72	0.72	0.73	0.74	0.75	0.81	0.78	0.88	0.87	0.93	0.94	0.96	1.04	1.03	1.11
663	147	Mexico	-0.26	-0.21	-0.16	-0.10	-0.03	-0.01	0.00	0.05	0.07	0.10	0.13	0.21	0.23	0.23	0.24	0.27	0.29	0.34	0.37	0.44	0.46	0.45	0.47	0.65	0.67	0.67	0.68	0.68	0.71	0.73	0.78	0.78	0.80	0.85	0.86	0.93	0.91	0.97
656	125	Italy	-0.34	-0.29	-0.24	-0.17	-0.09	-0.07	-0.05	0.00	0.03	0.06	0.09	0.17	0.19	0.20	0.21	0.24	0.26	0.31	0.35	0.43	0.45	0.45	0.47	0.66	0.66	0.67	0.68	0.69	0.74	0.73	0.82	0.81	0.88	0.88	0.90	0.98	0.97	1.03
651	176	Cyprus	-0.32	-0.27	-0.23	-0.17	-0.11	-0.09	-0.07	-0.03	0.00	0.02	0.05	0.11	0.14	0.14	0.14	0.18	0.19	0.23	0.27	0.33	0.35	0.33	0.36	0.52	0.55	0.55	0.55	0.55	0.58	0.59	0.64	0.64	0.62	0.72	0.72	0.78	0.75	0.84
648	137	Chile	-0.38	-0.33	-0.28	-0.22	-0.15	-0.12	-0.10	-0.06	-0.02	0.00	0.03	0.11	0.13	0.14	0.14	0.17	0.20	0.25	0.28	0.35	0.37	0.37	0.39	0.58	0.59	0.60	0.60	0.61	0.64	0.65	0.71	0.71	0.75	0.78	0.80	0.86	0.85	0.91
644	142	Korea	-0.40	-0.35	-0.31	-0.24	-0.18	-0.15	-0.13	-0.09	-0.05	-0.03	0.00	0.07	0.10	0.11	0.11	0.14	0.16	0.21	0.24	0.31	0.33	0.33	0.35	0.53	0.55	0.55	0.56	0.56	0.59	0.61	0.66	0.66	0.69	0.73	0.75	0.81	0.80	0.86
633	136	Greece	-0.50	-0.45	-0.41	-0.32	-0.26	-0.24	-0.21	-0.17	-0.11	-0.11	-0.07	0.00	0.03	0.03	0.04	0.07	0.09	0.14	0.17	0.25	0.26	0.26	0.28	0.47	0.48	0.49	0.49	0.50	0.54	0.55	0.61	0.61	0.65	0.68	0.70	0.77	0.75	0.82
629	144	Taiwan	-0.51	-0.46	-0.41	-0.34	-0.28	-0.25	-0.23	-0.19	-0.14	-0.13	-0.10	-0.03	0.00	0.01	0.01	0.03	0.06	0.11	0.14	0.21	0.22	0.22	0.24	0.43	0.44	0.45	0.45	0.46	0.48	0.51	0.55	0.55	0.58	0.62	0.64	0.70	0.69	0.74
629	144	Norway	-0.53	-0.48	-0.43	-0.35	-0.30	-0.26	-0.23	-0.20	-0.14	-0.14	-0.11	-0.03	-0.01	0.00	0.00	0.03	0.05	0.10	0.14	0.21	0.22	0.22	0.24	0.43	0.44	0.44	0.45	0.45	0.49	0.50	0.56	0.55	0.58	0.63	0.64	0.71	0.69	0.76
629	135	Bulgaria	-0.54	-0.49	-0.45	-0.36	-0.30	-0.27	-0.24	-0.21	-0.14	-0.14	-0.11	-0.04	-0.01	0.00	0.00	0.03	0.06	0.11	0.14	0.21	0.22	0.23	0.25	0.44	0.45	0.46	0.46	0.47	0.50	0.51	0.57	0.57	0.62	0.65	0.66	0.73	0.72	0.78
625	131	Russia	-0.58	-0.53	-0.48	-0.40	-0.34	-0.31	-0.27	-0.24	-0.18	-0.17	-0.14	-0.07	-0.03	-0.03	-0.03	0.00	0.03	0.08	0.11	0.18	0.20	0.20	0.22	0.42	0.43	0.44	0.44	0.45	0.48	0.50	0.55	0.55	0.60	0.62	0.64	0.71	0.70	0.75
621	139	Spain	-0.59	-0.54	-0.50	-0.41	-0.36	-0.33	-0.29	-0.26	-0.19	-0.20	-0.16	-0.09	-0.06	-0.05	-0.06	-0.03	0.00	0.05	0.08	0.15	0.16	0.17	0.18	0.38	0.39	0.40	0.40	0.41	0.43	0.46	0.50	0.51	0.55	0.58	0.59	0.66	0.65	0.71
614	139	Hong Kong	-0.65	-0.59	-0.56	-0.46	-0.41	-0.38	-0.34	-0.31	-0.23	-0.25	-0.21	-0.14	-0.11	-0.10	-0.11	-0.08	-0.05	0.00	0.03	0.10	0.11	0.12	0.13	0.33	0.34	0.35	0.35	0.36	0.38	0.41	0.45	0.46	0.50	0.53	0.54	0.61	0.60	0.66
610	138	Ireland	-0.68	-0.63	-0.59	-0.49	-0.45	-0.41	-0.37	-0.35	-0.27	-0.28	-0.24	-0.17	-0.14	-0.14	-0.14	-0.11	-0.08	-0.03	0.00	0.07	0.08	0.08	0.10	0.30	0.31	0.32	0.32	0.32	0.35	0.38	0.42	0.42	0.46	0.49	0.51	0.58	0.57	0.62
600	132	Poland	-0.77	-0.72	-0.68	-0.57	-0.53	-0.49	-0.44	-0.43	-0.33	-0.35	-0.31	-0.25	-0.21	-0.21	-0.21	-0.18	-0.15	-0.10	-0.07	0.00	0.01	0.02	0.03	0.24	0.25	0.25	0.26	0.26	0.28	0.32	0.36	0.36	0.42	0.43	0.45	0.52	0.51	0.56
599	125	Lithuania	-0.79	-0.74	-0.70	-0.60	-0.55	-0.52	-0.46	-0.45	-0.35	-0.37	-0.33	-0.26	-0.22	-0.22	-0.22	-0.20	-0.16	-0.11	-0.08	-0.01	0.00	0.01	0.02	0.24	0.24	0.26	0.26	0.26	0.28	0.32	0.36	0.37	0.43	0.44	0.46	0.53	0.53	0.56
598	133	Malta	-0.79	-0.74	-0.70	-0.58	-0.55	-0.51	-0.45	-0.45	-0.33	-0.37	-0.33	-0.26	-0.22	-0.22	-0.23	-0.20	-0.17	-0.12	-0.08	-0.02	-0.01	0.00	0.01	0.22	0.23	0.24	0.24	0.25	0.27	0.30	0.34	0.35	0.40	0.42	0.44	0.50	0.50	0.55
597	121	Latvia	-0.82	-0.78	-0.73	-0.62	-0.57	-0.54	-0.47	-0.47	-0.36	-0.39	-0.35	-0.28	-0.24	-0.24	-0.25	-0.22	-0.18	-0.13	-0.10	-0.03	-0.02	-0.01	0.00	0.22	0.23	0.24	0.24	0.25	0.27	0.30	0.34	0.35	0.42	0.42	0.44	0.51	0.51	0.55
569	138	England	-1.01	-0.95	-0.92	-0.79	-0.77	-0.72	-0.65	-0.66	-0.52	-0.58	-0.53	-0.47	-0.43	-0.43	-0.44	-0.42	-0.38	-0.33	-0.30	-0.24	-0.24	-0.22	-0.22	0.00	0.01	0.02	0.02	0.03	0.03	0.09	0.10	0.12	0.17	0.19	0.20	0.27	0.26	0.30
567	139	Luxembourg	-1.00	-0.94	-0.91	-0.80	-0.77	-0.72	-0.67	-0.66	-0.55	-0.59	-0.55	-0.48	-0.44	-0.44	-0.45	-0.43	-0.39	-0.34	-0.31	-0.25	-0.24	-0.23	-0.23	-0.01	0.00	0.01	0.01	0.02	0.02	0.08	0.09	0.10	0.15	0.17	0.19	0.25	0.25	0.27
566	140	New Zealand	-1.01	-0.96	-0.93	-0.80	-0.78	-0.73	-0.67	-0.67	-0.55	-0.60	-0.55	-0.49	-0.45	-0.44	-0.46	-0.44	-0.40	-0.35	-0.32	-0.25	-0.26	-0.24	-0.24	-0.02	-0.01	0.00	0.00	0.01	0.01	0.07	0.08	0.09	0.14	0.16	0.18	0.24	0.24	0.26
565	139	Austria	-1.02	-0.96	-0.94	-0.81	-0.79	-0.74	-0.68	-0.68	-0.55	-0.60	-0.56	-0.49	-0.45	-0.45	-0.46	-0.44	-0.40	-0.35	-0.32	-0.26	-0.26	-0.24	-0.24	-0.02	-0.01	0.00	0.00	0.00	0.00	0.07	0.08	0.09	0.14	0.16	0.18	0.24	0.23	0.26
565	137	Slovenia	-1.03	-0.98	-0.95	-0.82	-0.80	-0.75	-0.68	-0.69	-0.55	-0.61	-0.56	-0.50	-0.46	-0.45	-0.47	-0.45	-0.41	-0.36	-0.32	-0.26	-0.26	-0.25	-0.25	-0.03	-0.02	-0.01	0.00	0.00	0.00	0.06	0.07	0.09	0.14	0.16	0.17	0.24	0.23	0.26
565	118	Estonia	-1.10	-1.05	-1.01	-0.88	-0.84	-0.81	-0.71	-0.74	-0.58	-0.64	-0.59	-0.54	-0.48	-0.49	-0.50	-0.48	-0.43	-0.38	-0.35	-0.28	-0.28	-0.27	-0.27	-0.03	-0.02	-0.01	0.00	0.00	0.00	0.07	0.08	0.09	0.16	0.17	0.19	0.25	0.26	0.28
556	146	Sweden	-1.07	-1.01	-0.98	-0.85	-0.84	-0.78	-0.73	-0.73	-0.59	-0.65	-0.61	-0.55	-0.51	-0.50	-0.51	-0.50	-0.46	-0.41	-0.38	-0.32	-0.32	-0.30	-0.30	-0.09	-0.08	-0.07	-0.07	-0.06	-0.07	0.00	0.00	0.02	0.07	0.09	0.10	0.16	0.16	0.19
555	120	Slovakia	-1.17	-1.12	-1.09	-0.94	-0.92	-0.88	-0.78	-0.82	-0.64	-0.71	-0.66	-0.61	-0.55	-0.56	-0.57	-0.55	-0.50	-0.45	-0.42	-0.36	-0.36	-0.34	-0.34	-0.10	-0.09	-0.08	-0.08	-0.07	-0.08	0.00	0.00	0.02	0.08	0.09	0.11	0.17	0.18	0.20
553	127	Switzerland	-1.16	-1.11	-1.08	-0.93	-0.91	-0.87	-0.78	-0.81	-0.64	-0.71	-0.66	-0.61	-0.55	-0.55	-0.57	-0.55	-0.51	-0.46	-0.42	-0.36	-0.37	-0.35	-0.35	-0.12	-0.10	-0.09	-0.09	-0.09	-0.09	-0.02	-0.02	0.00	0.06	0.08	0.09	0.15	0.16	0.18
546	118	Liechtenstein	-1.24	-1.19	-1.18	-0.96	-0.99	-0.93	-0.80	-0.88	-0.62	-0.75	-0.69	-0.65	-0.58	-0.58	-0.62	-0.60	-0.55	-0.50	-0.46	-0.42	-0.43	-0.40	-0.42	-0.17	-0.15	-0.14	-0.14	-0.14	-0.16	-0.07	-0.08	-0.06	0.00	0.02	0.03	0.10	0.10	0.12
544	129	Czech Republic	-1.22	-1.17	-1.14	-1.01	-0.98	-0.94	-0.85	-0.88	-0.72	-0.78	-0.73	-0.68	-0.62	-0.63	-0.65	-0.62	-0.58	-0.53	-0.49	-0.43	-0.44	-0.42	-0.42	-0.19	-0.17	-0.16	-0.16	-0.16	-0.17	-0.09	-0.09	-0.08	-0.02	0.00	0.02	0.07	0.08	0.10
542	127	Belgium (FL)	-1.25	-1.20	-1.17	-1.02	-1.01	-0.96	-0.86	-0.90	-0.72	-0.80	-0.75	-0.70	-0.64	-0.64	-0.66	-0.64	-0.59	-0.54	-0.51	-0.45	-0.46	-0.44	-0.44	-0.20	-0.19	-0.18	-0.18	-0.17	-0.19	-0.10	-0.11	-0.09	-0.03	-0.02	0.00	0.06	0.06	0.08
534	123	Finland	-1.33	-1.28	-1.25	-1.10	-1.08	-1.04	-0.93	-0.98	-0.78	-0.86	-0.81	-0.77	-0.70	-0.71	-0.73	-0.71	-0.66	-0.61	-0.58	-0.52	-0.53	-0.50	-0.51	-0.27	-0.25	-0.24	-0.24	-0.24	-0.25	-0.16	-0.17	-0.15	-0.10	-0.07	-0.06	0.00	0.00	0.02
534	125	Netherlands	-1.33	-1.28	-1.26	-1.08	-1.08	-1.03	-0.91	-0.97	-0.75	-0.85	-0.80	-0.75	-0.69	-0.69	-0.72	-0.70	-0.65	-0.60	-0.57	-0.51	-0.53	-0.50	-0.51	-0.26	-0.25	-0.24	-0.23	-0.23	-0.26	-0.16	-0.18	-0.16	-0.10	-0.08	-0.06	0.00	0.00	0.02
532	115	Denmark	-1.39	-1.35	-1.31	-1.16	-1.13	-1.11	-0.97	-1.03	-0.84	-0.91	-0.86	-0.82	-0.74	-0.76	-0.78	-0.75	-0.71	-0.66	-0.62	-0.56	-0.56	-0.55	-0.55	-0.30	-0.27	-0.26	-0.26	-0.26	-0.28	-0.19	-0.20	-0.18	-0.12	-0.10	-0.08	-0.02	-0.02	0.00

Green: scores significantly higher than comparison country
White: No statistically significant difference
Red: scores significantly lower than comparison country

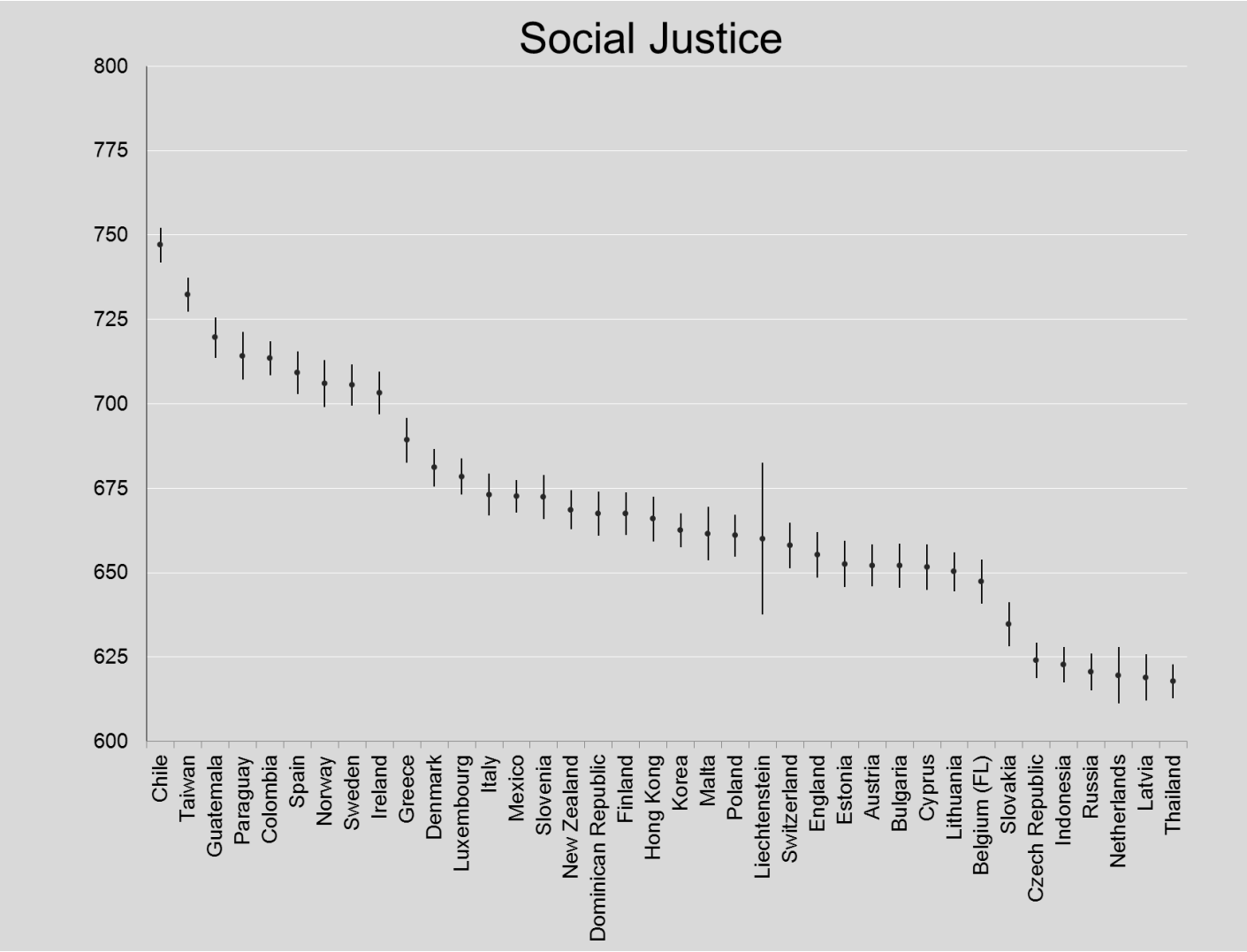


Figure 12. Social Justice: Pairwise comparison of average country scores (with confidence intervals)

Table 21. Social Justice: effect sizes

Score	SD		Chile	Taiwan	Guatemala	Paraguay	Colombia	Spain	Norway	Sweden	Ireland	Greece	Denmark	Luxembourg	Italy	Mexico	Slovenia	New Zealand	Dominican Re	Finland	Hong Kong	Korea	Malta	Poland	Liechtenstein	Switzerland	England	Estonia	Austria	Bulgaria	Cyprus	Lithuania	Belgium (FL)	Slovakia	Czech Republ	Indonesia	Russia	Netherlands	Latvia	Thailand
747	131	Chile	0.00	0.11	0.21	0.25	0.26	0.29	0.30	0.30	0.33	0.42	0.51	0.52	0.57	0.58	0.57	0.57	0.62	0.60	0.62	0.64	0.66	0.65	0.66	0.68	0.68	0.74	0.71	0.73	0.69	0.76	0.79	0.89	0.98	1.04	1.03	0.98	1.03	1.08
732	135	Taiwan	-0.11	0.00	0.10	0.14	0.14	0.17	0.19	0.19	0.21	0.31	0.39	0.41	0.45	0.46	0.45	0.46	0.49	0.48	0.50	0.52	0.53	0.53	0.53	0.56	0.56	0.62	0.59	0.60	0.57	0.63	0.66	0.76	0.85	0.90	0.89	0.85	0.89	0.94
720	127	Guatemala	-0.21	-0.10	0.00	0.04	0.05	0.08	0.10	0.10	0.12	0.22	0.30	0.32	0.37	0.37	0.36	0.38	0.41	0.40	0.42	0.43	0.46	0.45	0.47	0.48	0.48	0.54	0.51	0.53	0.49	0.56	0.59	0.69	0.78	0.84	0.84	0.79	0.84	0.88
714	127	Paraguay	-0.25	-0.14	-0.04	0.00	0.01	0.04	0.06	0.06	0.08	0.18	0.26	0.28	0.33	0.33	0.32	0.33	0.37	0.36	0.37	0.39	0.41	0.41	0.42	0.44	0.44	0.50	0.47	0.48	0.45	0.52	0.55	0.65	0.74	0.81	0.80	0.75	0.80	0.85
713	125	Colombia	-0.26	-0.14	-0.05	-0.01	0.00	0.03	0.06	0.06	0.08	0.18	0.26	0.28	0.32	0.33	0.32	0.34	0.37	0.36	0.37	0.39	0.41	0.41	0.43	0.44	0.45	0.50	0.47	0.49	0.46	0.51	0.54	0.65	0.73	0.78	0.78	0.75	0.79	0.82
709	131	Spain	-0.29	-0.17	-0.08	-0.04	-0.03	0.00	0.02	0.03	0.04	0.14	0.22	0.24	0.28	0.29	0.28	0.29	0.33	0.32	0.33	0.35	0.37	0.37	0.37	0.39	0.40	0.45	0.43	0.44	0.41	0.47	0.49	0.60	0.69	0.75	0.74	0.70	0.74	0.78
706	141	Norway	-0.30	-0.19	-0.10	-0.06	-0.06	-0.02	0.00	0.00	0.02	0.12	0.19	0.21	0.25	0.26	0.25	0.26	0.29	0.28	0.29	0.32	0.33	0.33	0.33	0.36	0.36	0.41	0.39	0.40	0.37	0.43	0.45	0.55	0.65	0.70	0.69	0.64	0.69	0.74
706	147	Sweden	-0.30	-0.19	-0.10	-0.06	-0.06	-0.03	0.00	0.00	0.02	0.11	0.18	0.20	0.24	0.25	0.24	0.25	0.28	0.27	0.28	0.31	0.31	0.32	0.31	0.34	0.35	0.39	0.38	0.38	0.36	0.41	0.43	0.53	0.62	0.67	0.66	0.62	0.66	0.71
703	138	Ireland	-0.33	-0.21	-0.12	-0.08	-0.08	-0.04	-0.02	-0.02	0.00	0.10	0.17	0.19	0.23	0.24	0.23	0.25	0.27	0.26	0.28	0.30	0.31	0.31	0.31	0.34	0.34	0.39	0.37	0.38	0.36	0.41	0.43	0.53	0.63	0.68	0.67	0.63	0.67	0.71
689	150	Greece	-0.42	-0.31	-0.22	-0.18	-0.18	-0.14	-0.12	-0.11	-0.10	0.00	0.06	0.08	0.12	0.12	0.12	0.14	0.16	0.15	0.17	0.19	0.20	0.20	0.20	0.22	0.23	0.27	0.26	0.27	0.25	0.29	0.31	0.41	0.50	0.54	0.54	0.50	0.53	0.58
681	130	Denmark	-0.51	-0.39	-0.30	-0.26	-0.26	-0.22	-0.19	-0.18	-0.17	-0.06	0.00	0.02	0.06	0.07	0.07	0.09	0.11	0.10	0.12	0.14	0.15	0.15	0.16	0.18	0.19	0.23	0.22	0.22	0.21	0.25	0.27	0.37	0.46	0.50	0.50	0.48	0.51	0.54
678	130	Luxembourg	-0.52	-0.41	-0.32	-0.28	-0.28	-0.24	-0.21	-0.20	-0.19	-0.08	-0.02	0.00	0.04	0.05	0.05	0.07	0.09	0.08	0.10	0.12	0.13	0.13	0.14	0.16	0.17	0.21	0.20	0.20	0.19	0.22	0.25	0.35	0.44	0.47	0.48	0.46	0.48	0.51
673	126	Italy	-0.57	-0.45	-0.37	-0.33	-0.32	-0.28	-0.25	-0.24	-0.23	-0.12	-0.06	-0.04	0.00	0.00	0.01	0.03	0.04	0.04	0.06	0.08	0.09	0.09	0.10	0.12	0.13	0.17	0.16	0.16	0.16	0.19	0.21	0.32	0.40	0.44	0.45	0.43	0.45	0.48
673	124	Mexico	-0.58	-0.46	-0.37	-0.33	-0.33	-0.29	-0.26	-0.25	-0.24	-0.12	-0.07	-0.05	0.00	0.00	0.00	0.03	0.04	0.04	0.05	0.08	0.09	0.09	0.10	0.12	0.13	0.16	0.16	0.16	0.16	0.18	0.21	0.31	0.40	0.43	0.44	0.43	0.45	0.47
672	133	Slovenia	-0.57	-0.45	-0.36	-0.32	-0.32	-0.28	-0.25	-0.24	-0.23	-0.12	-0.07	-0.05	-0.01	0.00	0.00	0.03	0.04	0.04	0.05	0.07	0.08	0.09	0.09	0.11	0.12	0.16	0.15	0.15	0.15	0.18	0.20	0.30	0.39	0.43	0.43	0.41	0.43	0.47
669	144	New Zealand	-0.57	-0.46	-0.38	-0.33	-0.34	-0.29	-0.26	-0.25	-0.25	-0.14	-0.09	-0.07	-0.03	-0.03	-0.03	0.00	0.01	0.01	0.02	0.04	0.05	0.06	0.06	0.08	0.09	0.12	0.12	0.12	0.12	0.14	0.16	0.26	0.34	0.37	0.38	0.36	0.38	0.41
667	125	Dominican Republic	-0.62	-0.49	-0.41	-0.37	-0.37	-0.33	-0.29	-0.28	-0.27	-0.16	-0.11	-0.09	-0.04	-0.04	-0.04	-0.01	0.00	0.00	0.01	0.04	0.05	0.05	0.06	0.07	0.09	0.12	0.12	0.12	0.11	0.14	0.17	0.27	0.36	0.40	0.40	0.38	0.41	0.44
667	134	Finland	-0.60	-0.48	-0.40	-0.36	-0.36	-0.32	-0.28	-0.27	-0.26	-0.15	-0.10	-0.08	-0.04	-0.04	-0.04	-0.01	0.00	0.00	0.01	0.04	0.04	0.05	0.05	0.07	0.09	0.12	0.11	0.12	0.11	0.13	0.16	0.26	0.35	0.38	0.39	0.37	0.39	0.42
666	132	Hong Kong	-0.62	-0.50	-0.42	-0.37	-0.37	-0.33	-0.29	-0.28	-0.28	-0.17	-0.12	-0.10	-0.06	-0.05	-0.05	-0.02	-0.01	-0.01	0.00	0.02	0.03	0.04	0.04	0.06	0.08	0.11	0.10	0.11	0.10	0.12	0.15	0.25	0.34	0.37	0.38	0.36	0.39	0.41
663	134	Korea	-0.64	-0.52	-0.43	-0.39	-0.39	-0.35	-0.32	-0.31	-0.30	-0.19	-0.14	-0.12	-0.08	-0.08	-0.07	-0.04	-0.04	-0.04	-0.02	0.00	0.01	0.01	0.02	0.03	0.05	0.08	0.08	0.08	0.08	0.10	0.12	0.22	0.30	0.33	0.34	0.33	0.34	0.37
662	128	Malta	-0.66	-0.53	-0.46	-0.41	-0.41	-0.37	-0.33	-0.31	-0.31	-0.20	-0.15	-0.13	-0.09	-0.09	-0.08	-0.05	-0.05	-0.04	-0.03	-0.01	0.00	0.00	0.01	0.03	0.05	0.07	0.07	0.07	0.07	0.09	0.12	0.22	0.31	0.35	0.35	0.33	0.36	0.39
661	132	Poland	-0.65	-0.53	-0.45	-0.41	-0.41	-0.37	-0.33	-0.32	-0.31	-0.20	-0.15	-0.13	-0.09	-0.09	-0.09	-0.06	-0.05	-0.05	-0.04	-0.01	0.00	0.00	0.01	0.02	0.04	0.07	0.07	0.07	0.07	0.09	0.11	0.21	0.30	0.33	0.33	0.32	0.34	0.37
660	137	Liechtenstein	-0.66	-0.53	-0.47	-0.42	-0.43	-0.37	-0.33	-0.31	-0.31	-0.20	-0.16	-0.14	-0.10	-0.10	-0.09	-0.06	-0.06	-0.05	-0.04	-0.02	-0.01	-0.01	0.00	0.02	0.03	0.06	0.06	0.06	0.06	0.08	0.11	0.21	0.30	0.35	0.35	0.32	0.36	0.39
658	129	Switzerland	-0.68	-0.56	-0.48	-0.44	-0.44	-0.39	-0.36	-0.34	-0.34	-0.22	-0.18	-0.16	-0.12	-0.12	-0.11	-0.08	-0.07	-0.07	-0.06	-0.03	-0.03	-0.02	-0.02	0.00	0.02	0.04	0.04	0.05	0.05	0.06	0.09	0.19	0.28	0.31	0.32	0.30	0.32	0.35
655	141	England	-0.68	-0.56	-0.48	-0.44	-0.45	-0.40	-0.36	-0.35	-0.34	-0.23	-0.19	-0.17	-0.13	-0.13	-0.12	-0.09	-0.09	-0.09	-0.08	-0.05	-0.05	-0.04	-0.03	-0.02	0.00	0.02	0.02	0.02	0.03	0.04	0.06	0.16	0.25	0.27	0.28	0.27	0.29	0.31
653	118	Estonia	-0.74	-0.62	-0.54	-0.50	-0.50	-0.45	-0.41	-0.39	-0.39	-0.27	-0.23	-0.21	-0.17	-0.16	-0.16	-0.12	-0.12	-0.12	-0.11	-0.08	-0.07	-0.07	-0.06	-0.04	-0.02	0.00	0.00	0.00	0.01	0.02	0.04	0.15	0.24	0.27	0.28	0.27	0.29	0.31
652	137	Austria	-0.71	-0.59	-0.51	-0.47	-0.47	-0.43	-0.39	-0.38	-0.37	-0.26	-0.22	-0.20	-0.16	-0.16	-0.15	-0.12	-0.12	-0.11	-0.10	-0.08	-0.07	-0.07	-0.06	-0.04	-0.02	0.00	0.00	0.00	0.01	0.01	0.04	0.14	0.22	0.25	0.26	0.25	0.26	0.29
652	131	Bulgaria	-0.73	-0.60	-0.53	-0.48	-0.49	-0.44	-0.40	-0.38	-0.38	-0.27	-0.22	-0.20	-0.16	-0.16	-0.15	-0.12	-0.12	-0.12	-0.11	-0.08	-0.07	-0.07	-0.06	-0.05	-0.02	0.00	0.00	0.00	0.00	0.01	0.04	0.14	0.23	0.25	0.26	0.25	0.27	0.29
652	151	Cyprus	-0.69	-0.57	-0.49	-0.45	-0.46	-0.41	-0.37	-0.36	-0.36	-0.25	-0.21	-0.19	-0.16	-0.16	-0.15	-0.12	-0.11	-0.11	-0.10	-0.08	-0.07	-0.07	-0.06	-0.05	-0.03	-0.01	0.00	0.00	0.00	0.01	0.03	0.13	0.21	0.23	0.24	0.23	0.25	0.27
650	121	Lithuania	-0.76	-0.63	-0.56	-0.52	-0.51	-0.47	-0.43	-0.41	-0.41	-0.29	-0.25	-0.22	-0.19	-0.18	-0.18	-0.14	-0.14	-0.13	-0.12	-0.10	-0.09	-0.09	-0.08	-0.06	-0.04	-0.02	-0.01	-0.01	-0.01	0.00	0.02	0.13	0.22	0.25	0.26	0.25	0.27	0.29
647	119	Belgium (FL)	-0.79	-0.66	-0.59	-0.55	-0.54	-0.49	-0.45	-0.43	-0.43	-0.31	-0.27	-0.25	-0.21	-0.21	-0.20	-0.16	-0.17	-0.16	-0.15	-0.12	-0.12	-0.11	-0.11	-0.09	-0.06	-0.04	-0.04	-0.04	-0.03	-0.02	0.00	0.11	0.20	0.22	0.23	0.23	0.25	0.26
635	117	Slovakia	-0.89	-0.76	-0.69	-0.65	-0.65	-0.60	-0.55	-0.53	-0.53	-0.41	-0.37	-0.35	-0.32	-0.31	-0.30	-0.26	-0.27	-0.26	-0.25	-0.22	-0.22	-0.21	-0.21	-0.19	-0.16	-0.15	-0.14	-0.14	-0.13	-0.13	-0.11	0.00	0.09	0.11	0.12	0.13	0.14	0.15
624	118	Czech Republic	-0.98	-0.85	-0.78	-0.74	-0.73	-0.69	-0.65	-0.62	-0.63	-0.50	-0.46	-0.44	-0.40	-0.40	-0.39	-0.34	-0.36	-0.35	-0.34	-0.30	-0.31	-0.30	-0.30	-0.28	-0.25	-0.24	-0.22	-0.23	-0.21	-0.22	-0.20	-0.09	0.00	0.01	0.03	0.04	0.04	0.06
623	105	Indonesia	-1.04	-0.90	-0.84	-0.81	-0.78	-0.75	-0.70	-0.67	-0.68	-0.54	-0.50	-0.47	-0.44	-0.43	-0.43	-0.37	-0.40	-0.38	-0.37	-0.33	-0.35	-0.33	-0.35	-0.31	-0.27	-0.27	-0.25	-0.25	-0.23	-0.25	-0.22	-0.11	-0.01	0.00	0.02	0.03	0.03	0.05
621	111	Russia	-1.03	-0.89	-0.84	-0.80	-0.78	-0.74	-0.69	-0.66	-0.67	-0.54	-0.50	-0.48	-0.45	-0.44	-0.43	-0.38	-0.40	-0.39	-0.38	-0.34	-0.35	-0.33	-0.35	-0.32	-0.28	-0.28	-0.26	-0.26	-0.24	-0.26	-0.23	-0.12	-0.03	-0.02	0.00	0.01	0.01	0.03
620	125	Netherlands	-0.98	-0.85	-0.79	-0.75	-0.75	-0.70	-0.64	-0.62	-0.63	-0.50	-0.48	-0.46	-0.43	-0.43	-0.41	-0.36	-0.38	-0.37	-0.36	-0.33	-0.33	-0.32	-0.32	-0.30	-0.27	-0.27	-0.25	-0.25	-0.23	-0.25	-0.23	-0.13	-0.04	-0.03	-0.01	0.00	0.00	0.02
619	111	Latvia	-1.03	-0.89	-0.84	-0.80	-0.79	-0.74	-0.69	-0.66	-0.67	-0.53	-0.51	-0.48	-0.45	-0.45	-0.43	-0.38	-0.41	-0.39	-0.39	-0.34	-0.36	-0.34	-0.36	-0.32	-0.29	-0.29	-0.26	-0.27	-0.25	-0.27	-0.25	-0.14	-0.04	-0.03	-0.01	0.00	0.00	0.01
618	107	Thailand	-1.08	-0.94	-0.88	-0.85	-0.82	-0.78	-0.74	-0.71	-0.71	-0.58	-0.54	-0.51	-0.48	-0.47	-0.47	-0.41	-0.44	-0.42	-0.41	-0.37	-0.39	-0.37	-0.39	-0.35	-0.31	-0.31	-0.29	-0.29	-0.27	-0.29	-0.26	-0.15	-0.06	-0.05	-0.03	-0.02	-0.01	0.00

Green: scores significantly higher than comparison country
White: No statistically significant difference
Red: scores significantly lower than comparison country

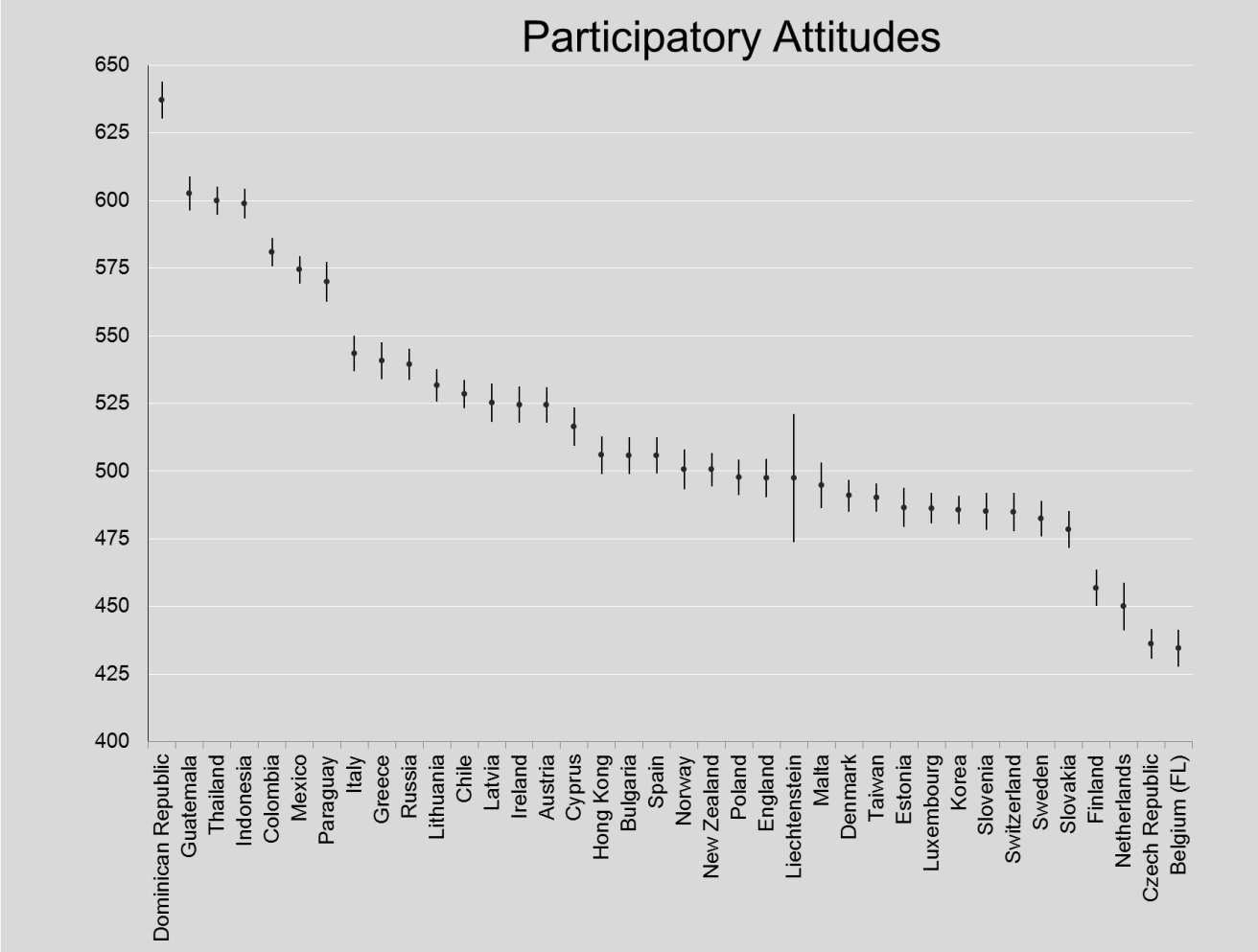


Figure 13. Participatory Attitudes: Pairwise comparison of average country scores (with confidence intervals)

Table 22 Participatory attitudes: effect sizes

Score	SD		Dominican Re	Guatemala	Thailand	Indonesia	Colombia	Mexico	Paraguay	Italy	Greece	Russia	Lithuania	Chile	Latvia	Ireland	Austria	Cyprus	Hong Kong	Bulgaria	Spain	Norway	New Zealand	Poland	England	Liechtenstein	Malta	Denmark	Taiwan	Estonia	Luxembourg	Korea	Slovenia	Switzerland	Sweden	Slovakia	Finland	Netherlands	Czech Republ	Belgium (FL)
637	149	Dominican Republic	0.00	0.25	0.31	0.31	0.40	0.44	0.47	0.68	0.69	0.71	0.80	0.70	0.83	0.76	0.79	0.77	0.91	0.91	0.91	0.93	0.92	0.99	0.94	0.95	0.95	1.04	1.03	1.12	1.04	1.13	1.06	1.09	1.05	1.13	1.30	1.32	1.41	1.43
603	127	Guatemala	-0.25	0.00	0.02	0.03	0.17	0.21	0.25	0.46	0.48	0.50	0.58	0.51	0.62	0.57	0.60	0.59	0.73	0.73	0.73	0.76	0.73	0.81	0.77	0.83	0.79	0.85	0.84	0.95	0.86	0.93	0.89	0.92	0.88	0.97	1.15	1.19	1.25	1.29
600	103	Thailand	-0.31	-0.02	0.00	0.01	0.16	0.21	0.26	0.50	0.52	0.53	0.62	0.54	0.68	0.62	0.65	0.65	0.80	0.80	0.79	0.83	0.80	0.89	0.84	0.98	0.89	0.92	0.90	1.05	0.93	1.00	0.98	1.01	0.96	1.07	1.27	1.35	1.36	1.44
599	102	Indonesia	-0.31	-0.03	-0.01	0.00	0.15	0.20	0.25	0.49	0.51	0.52	0.61	0.53	0.67	0.60	0.63	0.64	0.79	0.79	0.78	0.82	0.78	0.87	0.83	0.98	0.88	0.91	0.89	1.04	0.91	0.99	0.96	1.00	0.95	1.05	1.25	1.34	1.34	1.42
581	134	Colombia	-0.40	-0.17	-0.16	-0.15	0.00	0.05	0.08	0.28	0.30	0.31	0.39	0.36	0.43	0.40	0.42	0.44	0.55	0.55	0.55	0.58	0.57	0.62	0.60	0.63	0.62	0.67	0.67	0.74	0.69	0.73	0.70	0.72	0.71	0.77	0.94	0.98	1.06	1.09
574	139	Mexico	-0.44	-0.21	-0.21	-0.20	-0.05	0.00	0.03	0.23	0.25	0.26	0.33	0.31	0.37	0.35	0.36	0.39	0.49	0.49	0.49	0.52	0.51	0.56	0.54	0.56	0.56	0.61	0.61	0.66	0.63	0.67	0.64	0.66	0.65	0.70	0.87	0.91	1.00	1.02
570	133	Paraguay	-0.47	-0.25	-0.26	-0.25	-0.08	-0.03	0.00	0.20	0.22	0.24	0.31	0.28	0.35	0.32	0.34	0.36	0.47	0.47	0.47	0.50	0.49	0.54	0.51	0.55	0.54	0.59	0.59	0.67	0.60	0.66	0.62	0.65	0.62	0.70	0.87	0.91	0.98	1.02
544	127	Italy	-0.68	-0.46	-0.50	-0.49	-0.28	-0.23	-0.20	0.00	0.02	0.03	0.10	0.10	0.15	0.14	0.15	0.18	0.28	0.28	0.28	0.32	0.31	0.35	0.33	0.36	0.36	0.40	0.40	0.47	0.42	0.46	0.44	0.45	0.44	0.50	0.68	0.73	0.80	0.84
541	131	Greece	-0.69	-0.48	-0.52	-0.51	-0.30	-0.25	-0.22	-0.02	0.00	0.01	0.07	0.08	0.12	0.12	0.12	0.16	0.26	0.26	0.26	0.29	0.28	0.33	0.31	0.33	0.33	0.37	0.37	0.44	0.40	0.43	0.41	0.43	0.42	0.48	0.65	0.69	0.77	0.80
540	127	Russia	-0.71	-0.50	-0.53	-0.52	-0.31	-0.26	-0.24	-0.03	-0.01	0.00	0.07	0.08	0.11	0.11	0.12	0.16	0.25	0.26	0.25	0.29	0.28	0.32	0.31	0.33	0.33	0.37	0.37	0.43	0.39	0.43	0.41	0.42	0.42	0.47	0.65	0.70	0.78	0.81
532	118	Lithuania	-0.80	-0.58	-0.62	-0.61	-0.39	-0.33	-0.31	-0.10	-0.07	-0.07	0.00	0.02	0.05	0.05	0.06	0.11	0.20	0.20	0.20	0.24	0.23	0.27	0.26	0.29	0.28	0.32	0.32	0.38	0.34	0.38	0.36	0.38	0.37	0.43	0.61	0.67	0.74	0.78
528	157	Chile	-0.70	-0.51	-0.54	-0.53	-0.36	-0.31	-0.28	-0.10	-0.08	-0.08	-0.02	0.00	0.02	0.03	0.03	0.07	0.15	0.15	0.15	0.18	0.18	0.21	0.20	0.20	0.22	0.25	0.26	0.29	0.28	0.30	0.29	0.29	0.30	0.34	0.49	0.52	0.62	0.63
525	120	Latvia	-0.83	-0.62	-0.68	-0.67	-0.43	-0.37	-0.35	-0.15	-0.12	-0.11	-0.05	-0.02	0.00	0.01	0.01	0.06	0.15	0.15	0.15	0.19	0.18	0.22	0.21	0.23	0.23	0.27	0.27	0.33	0.29	0.32	0.31	0.32	0.32	0.37	0.55	0.61	0.68	0.71
525	148	Ireland	-0.76	-0.57	-0.62	-0.60	-0.40	-0.35	-0.32	-0.14	-0.12	-0.11	-0.05	-0.03	-0.01	0.00	0.00	0.05	0.13	0.13	0.13	0.16	0.16	0.19	0.18	0.19	0.20	0.24	0.24	0.28	0.27	0.29	0.27	0.28	0.29	0.33	0.49	0.53	0.62	0.64
524	136	Austria	-0.79	-0.60	-0.65	-0.63	-0.42	-0.36	-0.34	-0.15	-0.12	-0.12	-0.06	-0.03	-0.01	0.00	0.00	0.05	0.13	0.14	0.13	0.17	0.17	0.20	0.19	0.20	0.21	0.25	0.25	0.30	0.27	0.30	0.28	0.30	0.30	0.34	0.51	0.55	0.64	0.67
517	166	Cyprus	-0.77	-0.59	-0.65	-0.64	-0.44	-0.39	-0.36	-0.18	-0.16	-0.16	-0.11	-0.07	-0.06	-0.05	-0.05	0.00	0.07	0.07	0.07	0.10	0.10	0.13	0.12	0.12	0.14	0.17	0.18	0.21	0.20	0.22	0.21	0.21	0.22	0.26	0.41	0.44	0.54	0.55
506	141	Hong Kong	-0.91	-0.73	-0.80	-0.79	-0.55	-0.49	-0.47	-0.28	-0.26	-0.25	-0.20	-0.15	-0.15	-0.13	-0.13	-0.07	0.00	0.00	0.00	0.04	0.04	0.06	0.06	0.06	0.08	0.11	0.11	0.15	0.14	0.15	0.15	0.16	0.16	0.20	0.37	0.41	0.50	0.52
506	139	Bulgaria	-0.91	-0.73	-0.80	-0.79	-0.55	-0.49	-0.47	-0.28	-0.26	-0.26	-0.20	-0.15	-0.15	-0.13	-0.14	-0.07	0.00	0.00	0.00	0.04	0.04	0.06	0.06	0.06	0.08	0.11	0.11	0.15	0.14	0.15	0.15	0.16	0.16	0.20	0.37	0.41	0.50	0.52
506	140	Spain	-0.91	-0.73	-0.79	-0.78	-0.55	-0.49	-0.47	-0.28	-0.26	-0.25	-0.20	-0.15	-0.15	-0.13	-0.13	-0.07	0.00	0.00	0.00	0.04	0.04	0.06	0.06	0.06	0.08	0.11	0.11	0.15	0.14	0.15	0.15	0.15	0.16	0.20	0.37	0.41	0.50	0.52
501	145	Norway	-0.93	-0.76	-0.83	-0.82	-0.58	-0.52	-0.50	-0.32	-0.29	-0.29	-0.24	-0.18	-0.19	-0.16	-0.17	-0.10	-0.04	-0.04	-0.04	0.00	0.00	0.02	0.02	0.02	0.04	0.07	0.07	0.11	0.10	0.11	0.11	0.11	0.12	0.16	0.32	0.36	0.46	0.47
501	150	New Zealand	-0.92	-0.73	-0.80	-0.78	-0.57	-0.51	-0.49	-0.31	-0.28	-0.28	-0.23	-0.18	-0.18	-0.16	-0.17	-0.10	-0.04	-0.04	-0.04	0.00	0.00	0.02	0.02	0.02	0.04	0.07	0.07	0.10	0.10	0.11	0.11	0.11	0.12	0.16	0.31	0.35	0.45	0.46
498	133	Poland	-0.99	-0.81	-0.89	-0.87	-0.62	-0.56	-0.54	-0.35	-0.33	-0.32	-0.27	-0.21	-0.22	-0.19	-0.20	-0.13	-0.06	-0.06	-0.06	-0.02	-0.02	0.00	0.00	0.00	0.02	0.05	0.06	0.09	0.08	0.09	0.09	0.10	0.11	0.15	0.31	0.36	0.45	0.48
498	149	England	-0.94	-0.77	-0.84	-0.83	-0.60	-0.54	-0.51	-0.33	-0.31	-0.31	-0.26	-0.20	-0.21	-0.18	-0.19	-0.12	-0.06	-0.06	-0.06	-0.02	-0.02	0.00	0.00	0.00	0.02	0.05	0.05	0.08	0.08	0.09	0.09	0.09	0.10	0.14	0.29	0.33	0.43	0.45
497	124	Liechtenstein	-0.95	-0.83	-0.98	-0.98	-0.63	-0.56	-0.55	-0.36	-0.33	-0.33	-0.29	-0.20	-0.23	-0.19	-0.20	-0.12	-0.06	-0.06	-0.06	-0.02	-0.02	0.00	0.00	0.00	0.02	0.05	0.05	0.09	0.08	0.09	0.09	0.10	0.10	0.15	0.32	0.36	0.45	0.47
495	150	Malta	-0.95	-0.79	-0.89	-0.88	-0.62	-0.56	-0.54	-0.36	-0.33	-0.33	-0.28	-0.22	-0.23	-0.20	-0.21	-0.14	-0.08	-0.08	-0.08	-0.04	-0.04	-0.02	-0.02	-0.02	0.00	0.03	0.03	0.06	0.06	0.07	0.07	0.07	0.08	0.12	0.28	0.32	0.41	0.43
491	135	Denmark	-1.04	-0.85	-0.92	-0.91	-0.67	-0.61	-0.59	-0.40	-0.37	-0.37	-0.32	-0.25	-0.27	-0.24	-0.25	-0.17	-0.11	-0.11	-0.11	-0.07	-0.07	-0.05	-0.05	-0.05	-0.03	0.00	0.00	0.03	0.03	0.04	0.04	0.05	0.06	0.09	0.26	0.31	0.40	0.42
490	138	Taiwan	-1.03	-0.84	-0.90	-0.89	-0.67	-0.61	-0.59	-0.40	-0.37	-0.37	-0.32	-0.26	-0.27	-0.24	-0.25	-0.18	-0.11	-0.11	-0.11	-0.07	-0.07	-0.06	-0.05	-0.05	-0.03	0.00	0.00	0.03	0.03	0.03	0.04	0.04	0.06	0.09	0.25	0.30	0.39	0.41
487	116	Estonia	-1.12	-0.95	-1.05	-1.04	-0.74	-0.66	-0.67	-0.47	-0.44	-0.43	-0.38	-0.29	-0.33	-0.28	-0.30	-0.21	-0.15	-0.15	-0.15	-0.11	-0.10	-0.09	-0.08	-0.09	-0.06	-0.03	-0.03	0.00	0.00	0.01	0.01	0.01	0.03	0.07	0.24	0.30	0.39	0.41
486	142	Luxembourg	-1.04	-0.86	-0.93	-0.91	-0.69	-0.63	-0.60	-0.42	-0.40	-0.39	-0.34	-0.28	-0.29	-0.27	-0.27	-0.20	-0.14	-0.14	-0.14	-0.10	-0.10	-0.08	-0.08	-0.08	-0.06	-0.03	-0.03	0.00	0.00	0.00	0.01	0.01	0.03	0.06	0.22	0.26	0.36	0.37
486	125	Korea	-1.13	-0.93	-1.00	-0.99	-0.73	-0.67	-0.66	-0.46	-0.43	-0.43	-0.38	-0.30	-0.32	-0.29	-0.30	-0.22	-0.15	-0.15	-0.15	-0.11	-0.11	-0.09	-0.09	-0.09	-0.07	-0.04	-0.03	-0.01	0.00	0.00	0.00	0.01	0.02	0.06	0.23	0.28	0.38	0.40
485	139	Slovenia	-1.06	-0.89	-0.98	-0.96	-0.70	-0.64	-0.62	-0.44	-0.41	-0.41	-0.36	-0.29	-0.31	-0.27	-0.28	-0.21	-0.15	-0.15	-0.15	-0.11	-0.11	-0.09	-0.09	-0.09	-0.07	-0.04	-0.04	-0.01	-0.01	0.00	0.00	0.00	0.02	0.05	0.21	0.26	0.35	0.37
485	131	Switzerland	-1.09	-0.92	-1.01	-1.00	-0.72	-0.66	-0.65	-0.45	-0.43	-0.42	-0.38	-0.29	-0.32	-0.28	-0.30	-0.21	-0.16	-0.16	-0.15	-0.11	-0.11	-0.10	-0.09	-0.10	-0.07	-0.05	-0.04	-0.01	-0.01	-0.01	0.00	0.00	0.02	0.05	0.22	0.27	0.36	0.38
482	147	Sweden	-1.05	-0.88	-0.96	-0.95	-0.71	-0.65	-0.62	-0.44	-0.42	-0.42	-0.37	-0.30	-0.32	-0.29	-0.30	-0.22	-0.16	-0.16	-0.16	-0.12	-0.12	-0.11	-0.10	-0.10	-0.08	-0.06	-0.06	-0.03	-0.03	-0.02	-0.02	-0.02	0.00	0.03	0.19	0.23	0.33	0.34
478	130	Slovakia	-1.13	-0.97	-1.07	-1.05	-0.77	-0.70	-0.70	-0.50	-0.48	-0.47	-0.43	-0.34	-0.37	-0.33	-0.34	-0.26	-0.20	-0.20	-0.20	-0.16	-0.16	-0.15	-0.14	-0.15	-0.12	-0.09	-0.09	-0.07	-0.06	-0.06	-0.05	-0.05	-0.03	0.00	0.17	0.22	0.31	0.33
457	128	Finland	-1.30	-1.15	-1.27	-1.25	-0.94	-0.87	-0.87	-0.68	-0.65	-0.65	-0.61	-0.49	-0.55	-0.49	-0.51	-0.41	-0.37	-0.37	-0.37	-0.32	-0.31	-0.31	-0.29	-0.32	-0.28	-0.26	-0.25	-0.24	-0.22	-0.23	-0.21	-0.22	-0.19	-0.17	0.00	0.05	0.15	0.17
450	131	Netherlands	-1.32	-1.19	-1.35	-1.34	-0.98	-0.91	-0.91	-0.73	-0.69	-0.70	-0.67	-0.52	-0.61	-0.53	-0.55	-0.44	-0.41	-0.41	-0.41	-0.36	-0.35	-0.36	-0.33	-0.36	-0.32	-0.31	-0.30	-0.30	-0.26	-0.28	-0.26	-0.27	-0.23	-0.22	-0.05	0.00	0.10	0.12
436	138	Czech Republic	-1.41	-1.25	-1.36	-1.34	-1.06	-1.00	-0.98	-0.80	-0.77	-0.78	-0.74	-0.62	-0.68	-0.62	-0.64	-0.54	-0.50	-0.50	-0.50	-0.46	-0.45	-0.45	-0.43	-0.45	-0.41	-0.40	-0.39	-0.39	-0.36	-0.38	-0.35	-0.36	-0.33	-0.31	-0.15	-0.10	0.00	0.01
435	133	Belgium (FL)	-1.43	-1.29	-1.44	-1.42	-1.09	-1.02	-1.02	-0.84	-0.80	-0.81	-0.78	-0.63	-0.71	-0.64	-0.67	-0.55	-0.52	-0.52	-0.52	-0.47	-0.46	-0.48	-0.45	-0.47	-0.43	-0.42	-0.41	-0.41	-0.37	-0.40	-0.37	-0.38	-0.34	-0.33	-0.17	-0.12	-0.01	0.00

Green: scores significantly higher than comparison country
White: No statistically significant difference
Red: scores significantly lower than comparison country

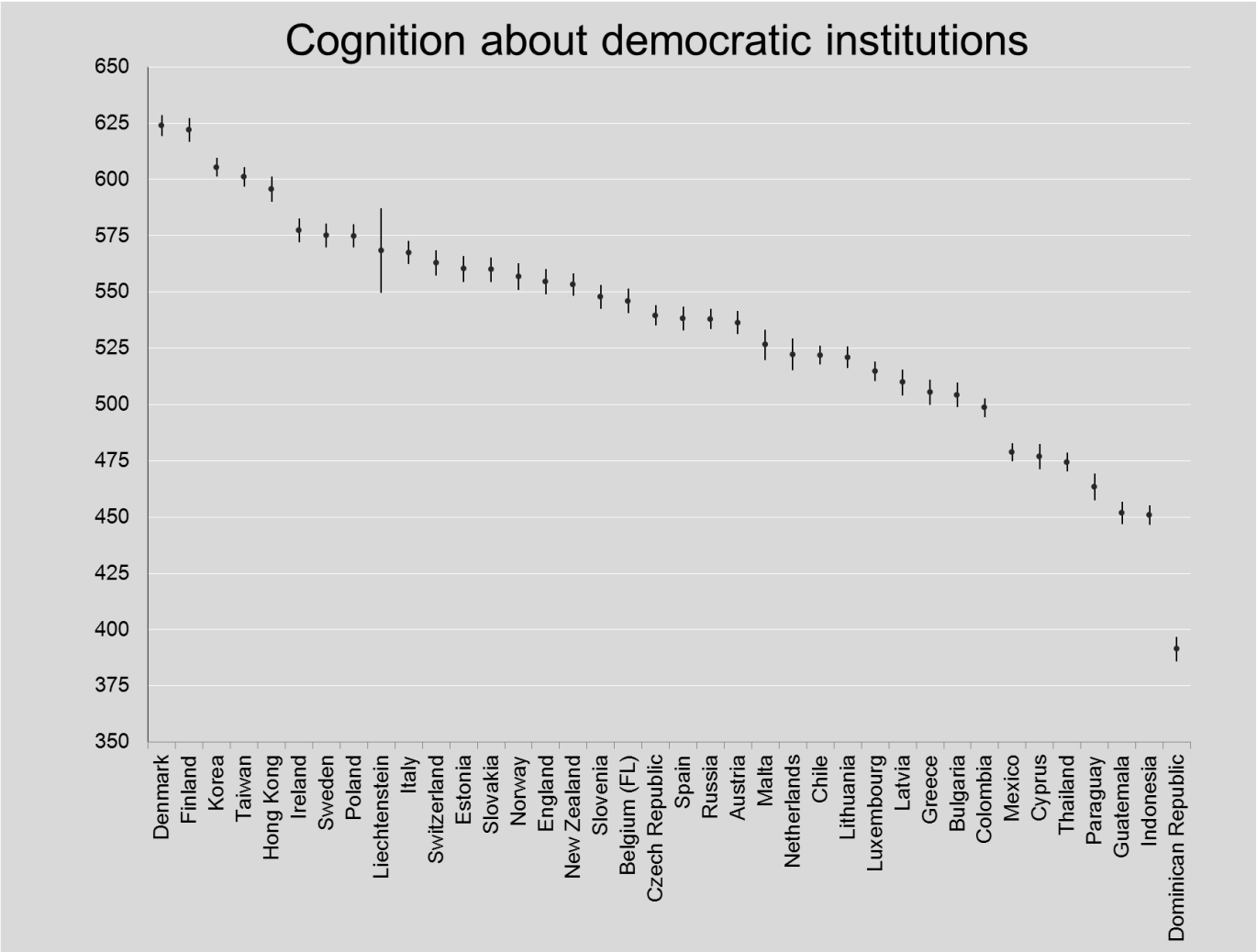


Figure 14 Cognitions: Pairwise comparison of average country scores (with confidence intervals)

Table 23. Cognitions about democratic institutions: effect sizes

Score	SD		Denmark	Finland	Korea	Taiwan	Hong Kong	Ireland	Sweden	Poland	Liechtenstein	Italy	Switzerland	Estonia	Slovakia	Norway	England	New Zealand	Slovenia	Belgium (FL)	Czech Republ	Spain	Russia	Austria	Malta	Netherlands	Chile	Lithuania	Luxembourg	Latvia	Greece	Bulgaria	Colombia	Mexico	Cyprus	Thailand	Paraguay	Guatemala	Indonesia	Dominican Re
624	118	Denmark	0.00	0.02	0.17	0.20	0.24	0.39	0.41	0.41	0.47	0.50	0.55	0.55	0.56	0.58	0.58	0.56	0.67	0.71	0.75	0.76	0.78	0.74	0.83	0.85	0.91	0.93	0.95	1.02	1.00	1.00	1.19	1.34	1.26	1.41	1.43	1.62	1.69	2.21
622	102	Finland	-0.02	0.00	0.17	0.19	0.24	0.40	0.42	0.43	0.52	0.53	0.59	0.59	0.60	0.61	0.60	0.58	0.72	0.76	0.79	0.81	0.82	0.78	0.90	0.91	0.95	1.00	1.00	1.11	1.06	1.05	1.27	1.42	1.35	1.52	1.57	1.78	1.85	2.47
605	98	Korea	-0.17	-0.17	0.00	0.04	0.09	0.26	0.28	0.29	0.38	0.37	0.43	0.44	0.45	0.47	0.47	0.46	0.57	0.61	0.65	0.67	0.67	0.65	0.77	0.79	0.81	0.85	0.87	0.97	0.95	0.94	1.11	1.28	1.24	1.36	1.44	1.62	1.67	2.31
601	115	Taiwan	-0.20	-0.19	-0.04	0.00	0.05	0.20	0.22	0.22	0.29	0.30	0.35	0.36	0.37	0.39	0.40	0.39	0.48	0.50	0.55	0.57	0.58	0.56	0.65	0.68	0.71	0.73	0.76	0.83	0.82	0.82	0.98	1.14	1.09	1.20	1.25	1.42	1.47	2.01
596	116	Hong Kong	-0.24	-0.24	-0.09	-0.05	0.00	0.15	0.17	0.18	0.24	0.25	0.30	0.31	0.32	0.34	0.34	0.34	0.43	0.46	0.51	0.52	0.53	0.50	0.60	0.62	0.67	0.69	0.71	0.79	0.77	0.76	0.95	1.10	1.03	1.18	1.21	1.40	1.47	2.03
578	121	Ireland	-0.39	-0.40	-0.26	-0.20	-0.15	0.00	0.02	0.02	0.08	0.09	0.13	0.15	0.15	0.18	0.19	0.19	0.26	0.28	0.34	0.35	0.36	0.34	0.43	0.45	0.49	0.51	0.54	0.60	0.60	0.60	0.75	0.91	0.85	0.98	1.01	1.19	1.25	1.78
575	120	Sweden	-0.41	-0.42	-0.28	-0.22	-0.17	-0.02	0.00	0.00	0.06	0.07	0.11	0.13	0.13	0.16	0.17	0.17	0.24	0.26	0.32	0.33	0.34	0.32	0.41	0.44	0.47	0.49	0.52	0.58	0.58	0.58	0.73	0.89	0.84	0.95	1.00	1.17	1.22	1.76
575	119	Poland	-0.41	-0.43	-0.29	-0.22	-0.18	-0.02	0.00	0.00	0.06	0.07	0.11	0.13	0.13	0.16	0.17	0.17	0.24	0.26	0.32	0.33	0.34	0.32	0.41	0.44	0.47	0.49	0.52	0.58	0.58	0.58	0.73	0.89	0.84	0.96	1.00	1.17	1.23	1.77
568	113	Liechtenstein	-0.47	-0.52	-0.38	-0.29	-0.24	-0.08	-0.06	-0.06	0.00	0.01	0.05	0.07	0.08	0.10	0.11	0.11	0.19	0.22	0.27	0.29	0.29	0.27	0.37	0.38	0.43	0.46	0.48	0.57	0.53	0.53	0.73	0.89	0.81	0.98	1.03	1.26	1.34	2.04
568	106	Italy	-0.50	-0.53	-0.37	-0.30	-0.25	-0.09	-0.07	-0.07	-0.01	0.00	0.04	0.07	0.07	0.10	0.11	0.12	0.19	0.21	0.26	0.28	0.28	0.28	0.38	0.40	0.43	0.45	0.48	0.56	0.55	0.55	0.70	0.87	0.83	0.94	1.00	1.18	1.23	1.83
563	97	Switzerland	-0.55	-0.59	-0.43	-0.35	-0.30	-0.13	-0.11	-0.11	-0.05	-0.04	0.00	0.03	0.03	0.06	0.08	0.08	0.15	0.17	0.23	0.25	0.25	0.24	0.35	0.38	0.40	0.42	0.45	0.54	0.53	0.53	0.68	0.85	0.82	0.93	1.01	1.19	1.24	1.90
560	110	Estonia	-0.55	-0.59	-0.44	-0.36	-0.31	-0.15	-0.13	-0.13	-0.07	-0.07	-0.03	0.00	0.00	0.03	0.05	0.06	0.12	0.14	0.19	0.21	0.21	0.21	0.30	0.33	0.35	0.38	0.41	0.48	0.48	0.48	0.62	0.79	0.75	0.86	0.92	1.10	1.15	1.74
560	107	Slovakia	-0.56	-0.60	-0.45	-0.37	-0.32	-0.15	-0.13	-0.13	-0.08	-0.07	-0.03	0.00	0.00	0.03	0.05	0.05	0.11	0.14	0.19	0.21	0.21	0.21	0.30	0.33	0.36	0.38	0.41	0.48	0.48	0.48	0.62	0.79	0.75	0.86	0.93	1.10	1.15	1.76
557	113	Norway	-0.58	-0.61	-0.47	-0.39	-0.34	-0.18	-0.16	-0.16	-0.10	-0.10	-0.06	-0.03	-0.03	0.00	0.02	0.03	0.08	0.10	0.16	0.17	0.18	0.18	0.27	0.30	0.32	0.34	0.38	0.44	0.44	0.44	0.58	0.75	0.70	0.81	0.87	1.04	1.10	1.68
554	124	England	-0.58	-0.60	-0.47	-0.40	-0.34	-0.19	-0.17	-0.17	-0.11	-0.11	-0.08	-0.05	-0.05	-0.02	0.00	0.01	0.06	0.08	0.13	0.14	0.15	0.15	0.23	0.26	0.29	0.30	0.34	0.39	0.40	0.41	0.53	0.70	0.65	0.76	0.80	0.97	1.02	1.56
553	133	New Zealand	-0.56	-0.58	-0.46	-0.39	-0.34	-0.19	-0.17	-0.17	-0.11	-0.12	-0.08	-0.06	-0.05	-0.03	-0.01	0.00	0.05	0.06	0.12	0.13	0.13	0.13	0.21	0.24	0.26	0.28	0.32	0.36	0.38	0.38	0.49	0.65	0.61	0.70	0.74	0.89	0.94	1.43
548	106	Slovenia	-0.67	-0.72	-0.57	-0.48	-0.43	-0.26	-0.24	-0.24	-0.19	-0.19	-0.15	-0.12	-0.11	-0.08	-0.06	-0.05	0.00	0.02	0.08	0.09	0.09	0.10	0.20	0.23	0.24	0.26	0.30	0.37	0.38	0.38	0.50	0.68	0.65	0.74	0.81	0.98	1.03	1.64
546	98	Belgium (FL)	-0.71	-0.76	-0.61	-0.50	-0.46	-0.28	-0.26	-0.26	-0.22	-0.21	-0.17	-0.14	-0.14	-0.10	-0.08	-0.06	-0.02	0.00	0.06	0.08	0.08	0.09	0.19	0.22	0.23	0.25	0.29	0.36	0.37	0.38	0.50	0.68	0.65	0.75	0.83	1.00	1.05	1.70
540	107	Czech Republic	-0.75	-0.79	-0.65	-0.55	-0.51	-0.34	-0.32	-0.32	-0.27	-0.26	-0.23	-0.19	-0.19	-0.16	-0.13	-0.12	-0.08	-0.06	0.00	0.01	0.02	0.03	0.12	0.16	0.16	0.18	0.23	0.28	0.31	0.31	0.41	0.59	0.57	0.65	0.73	0.88	0.92	1.51
538	104	Spain	-0.76	-0.81	-0.67	-0.57	-0.52	-0.35	-0.33	-0.33	-0.29	-0.28	-0.25	-0.21	-0.21	-0.17	-0.14	-0.13	-0.09	-0.08	-0.01	0.00	0.00	0.02	0.11	0.14	0.15	0.17	0.22	0.28	0.29	0.30	0.40	0.59	0.56	0.65	0.73	0.89	0.93	1.55
538	103	Russia	-0.78	-0.82	-0.67	-0.58	-0.53	-0.36	-0.34	-0.34	-0.29	-0.28	-0.25	-0.21	-0.21	-0.18	-0.15	-0.13	-0.09	-0.08	-0.02	0.00	0.00	0.01	0.11	0.14	0.15	0.17	0.22	0.28	0.30	0.30	0.40	0.58	0.57	0.65	0.73	0.89	0.92	1.54
536	118	Austria	-0.74	-0.78	-0.65	-0.56	-0.50	-0.34	-0.32	-0.32	-0.27	-0.28	-0.24	-0.21	-0.21	-0.18	-0.15	-0.13	-0.10	-0.09	-0.03	-0.02	-0.01	0.00	0.08	0.12	0.13	0.14	0.19	0.24	0.26	0.27	0.36	0.54	0.51	0.59	0.66	0.81	0.85	1.41
527	114	Malta	-0.83	-0.90	-0.77	-0.65	-0.60	-0.43	-0.41	-0.41	-0.37	-0.38	-0.35	-0.30	-0.30	-0.27	-0.23	-0.21	-0.20	-0.19	-0.12	-0.11	-0.11	-0.08	0.00	0.04	0.04	0.05	0.11	0.16	0.18	0.19	0.28	0.46	0.44	0.52	0.59	0.75	0.80	1.39
522	122	Netherlands	-0.85	-0.91	-0.79	-0.68	-0.62	-0.45	-0.44	-0.44	-0.38	-0.40	-0.38	-0.33	-0.33	-0.30	-0.26	-0.24	-0.23	-0.22	-0.16	-0.14	-0.14	-0.12	-0.04	0.00	0.00	0.01	0.07	0.11	0.14	0.15	0.23	0.41	0.39	0.47	0.53	0.69	0.73	1.31
522	107	Chile	-0.91	-0.95	-0.81	-0.71	-0.67	-0.49	-0.47	-0.47	-0.43	-0.43	-0.40	-0.35	-0.36	-0.32	-0.29	-0.26	-0.24	-0.23	-0.16	-0.15	-0.15	-0.13	-0.04	0.00	0.00	0.01	0.07	0.11	0.15	0.16	0.23	0.42	0.41	0.47	0.56	0.70	0.73	1.32
521	101	Lithuania	-0.93	-1.00	-0.85	-0.73	-0.69	-0.51	-0.49	-0.49	-0.46	-0.45	-0.42	-0.38	-0.38	-0.34	-0.30	-0.28	-0.26	-0.25	-0.18	-0.17	-0.17	-0.14	-0.05	-0.01	-0.01	0.00	0.06	0.11	0.14	0.15	0.23	0.42	0.41	0.48	0.57	0.72	0.75	1.38
515	111	Luxembourg	-0.95	-1.00	-0.87	-0.76	-0.71	-0.54	-0.52	-0.52	-0.48	-0.48	-0.45	-0.41	-0.41	-0.38	-0.34	-0.32	-0.30	-0.29	-0.23	-0.22	-0.22	-0.19	-0.11	-0.07	-0.07	-0.06	0.00	0.05	0.08	0.09	0.16	0.34	0.34	0.39	0.48	0.61	0.64	1.22
510	101	Latvia	-1.02	-1.11	-0.97	-0.83	-0.79	-0.60	-0.58	-0.58	-0.57	-0.56	-0.54	-0.48	-0.48	-0.44	-0.39	-0.36	-0.37	-0.36	-0.28	-0.28	-0.28	-0.24	-0.16	-0.11	-0.11	-0.11	-0.05	0.00	0.04	0.05	0.12	0.31	0.31	0.37	0.46	0.61	0.64	1.29
505	119	Greece	-1.00	-1.06	-0.95	-0.82	-0.77	-0.60	-0.58	-0.58	-0.53	-0.55	-0.53	-0.48	-0.48	-0.44	-0.40	-0.38	-0.38	-0.37	-0.31	-0.29	-0.30	-0.26	-0.18	-0.14	-0.15	-0.14	-0.08	-0.04	0.00	0.01	0.07	0.25	0.24	0.30	0.38	0.52	0.55	1.11
504	123	Bulgaria	-1.00	-1.05	-0.94	-0.82	-0.76	-0.60	-0.58	-0.58	-0.53	-0.55	-0.53	-0.48	-0.48	-0.44	-0.41	-0.38	-0.38	-0.38	-0.31	-0.30	-0.30	-0.27	-0.19	-0.15	-0.16	-0.15	-0.09	-0.05	-0.01	0.00	0.05	0.24	0.23	0.28	0.36	0.49	0.53	1.08
499	94	Colombia	-1.19	-1.27	-1.11	-0.98	-0.95	-0.75	-0.73	-0.73	-0.73	-0.70	-0.68	-0.62	-0.62	-0.58	-0.53	-0.49	-0.50	-0.50	-0.41	-0.40	-0.40	-0.36	-0.28	-0.23	-0.23	-0.23	-0.16	-0.12	-0.07	-0.05	0.00	0.20	0.21	0.26	0.36	0.51	0.53	1.18
479	100	Mexico	-1.34	-1.42	-1.28	-1.14	-1.10	-0.91	-0.89	-0.89	-0.89	-0.87	-0.85	-0.79	-0.79	-0.75	-0.70	-0.65	-0.68	-0.68	-0.59	-0.59	-0.58	-0.54	-0.46	-0.41	-0.42	-0.42	-0.34	-0.31	-0.25	-0.24	-0.20	0.00	0.02	0.04	0.15	0.28	0.30	0.92
477	114	Cyprus	-1.26	-1.35	-1.24	-1.09	-1.03	-0.85	-0.84	-0.84	-0.81	-0.83	-0.82	-0.75	-0.75	-0.70	-0.65	-0.61	-0.65	-0.65	-0.57	-0.56	-0.57	-0.51	-0.44	-0.39	-0.41	-0.41	-0.34	-0.31	-0.24	-0.23	-0.21	-0.02	0.00	0.02	0.13	0.25	0.27	0.86
474	95	Thailand	-1.41	-1.52	-1.36	-1.20	-1.18	-0.98	-0.95	-0.96	-0.98	-0.94	-0.93	-0.86	-0.86	-0.81	-0.76	-0.70	-0.74	-0.75	-0.65	-0.65	-0.65	-0.59	-0.52	-0.47	-0.47	-0.48	-0.39	-0.37	-0.30	-0.28	-0.26	-0.04	-0.02	0.00	0.11	0.24	0.26	0.91
464	101	Paraguay	-1.43	-1.57	-1.44	-1.25	-1.21	-1.01	-1.00	-1.00	-1.03	-1.00	-1.01	-0.92	-0.93	-0.87	-0.80	-0.74	-0.81	-0.83	-0.73	-0.73	-0.73	-0.66	-0.59	-0.53	-0.56	-0.57	-0.48	-0.46	-0.38	-0.36	-0.36	-0.15	-0.13	-0.11	0.00	0.12	0.14	0.79
452	90	Guatemala	-1.62	-1.78	-1.62	-1.42	-1.40	-1.19	-1.17	-1.17	-1.26	-1.18	-1.19	-1.10	-1.10	-1.04	-0.97	-0.89	-0.98	-1.00	-0.88	-0.89	-0.89	-0.81	-0.75	-0.69	-0.70	-0.72	-0.61	-0.61	-0.52	-0.49	-0.51	-0.28	-0.25	-0.24	-0.12	0.00	0.01	0.69
451	86	Indonesia	-1.69	-1.85	-1.67	-1.47	-1.47	-1.25	-1.22	-1.23	-1.34	-1.23	-1.24	-1.15	-1.15	-1.10	-1.02	-0.94	-1.03	-1.05	-0.92	-0.93	-0.92	-0.85	-0.80	-0.73	-0.73	-0.75	-0.64	-0.64	-0.55	-0.53	-0.53	-0.30	-0.27	-0.26	-0.14	-0.01	0.00	0.70
391	83	Dominican Republic	-2.21	-2.47	-2.31	-2.01	-2.03	-1.78	-1.76	-1.77	-2.04	-1.83	-1.90	-1.74	-1.76	-1.68	-1.56	-1.43	-1.64	-1.70	-1.51	-1.55	-1.54	-1.41	-1.39	-1.31	-1.32	-1.38	-1.22	-1.29	-1.11	-1.08	-1.18	-0.92	-0.86	-0.91	-0.79	-0.69	-0.70	0.00

Green: scores significantly higher than comparison country
White: No statistically significant difference
Red: scores significantly lower than comparison country

References

Abowitz, K. and Harnish, J. (2006) Contemporary Discourses of Citizenship. Review of Educational Research. Vol. 76, No. 4, pp. 653–690.

Abs, H.J.; Veldhuis, R. (2006). Indicators on Active Citizenship for Democracy – The social, cultural, and economic domain. Paper for the CRELL-Network on Active Citizenship for Democracy at the European Commission's Joint Research Centre. Ispra, Italy.

Almond, Gabriel, and Sydney Verba. 1963. *Civic Culture*. Princeton, NJ: Princeton University Press.

Amnå, E. and P. Zetterberg (2010). 'A Political Science Perspective on Socialization Research: Young Nordic Citizens in a Comparative Light'. In Sherrod, L. R., J. Torney-Purta and C.A. Flanagan (Eds.) Handbook of Research on Civic Engagement in Youth. Hoboken, NJ: Wiley, 43-66.

Audigier, F. (2000) Basic Concepts and Core Competencies for Education for Democratic Citizenship. Strasbourg: Council of Europe publishing.

Barber, B. (2003). Strong democracy: Participatory politics for a new age. California press: University of California.

Borgonovi, F., d'Hombres, B., and Hoskins, B. (2010) "Voter Turnout, Information Acquisition and Education: Evidence from 15 European Countries," *The B.E. Journal of Economic Analysis and Policy*: Vol. 10 : Iss. 1. DOI: 10.2202/1935-1682.2463

Brese, F., Jung, M. Mirazchiyski, P, Schulz, W, Zuehlke O., (2011). ICCS 2009 User Guide for the International Database. Amsterdam: IEA

Buk-Berge, Elisabeth. 2006. "Missed Opportunities: The IEA's Study of Civic Education and Civic Education in Post-Communist Countries." *Comparative Education* 42 (4): 533–48.

Education Council (2006) *Recommendation of the European Parliament and the Council of 18 December 2006 on key competencies for lifelong learning.* Brussels: Official Journal of the European Union, 30.12.2006

Cattell, R.B. (1966) Multivariate Behavioral Research and the Integrative Challenge. *Multivariate Behavioral Research,* 1, 4-23.

Cohen, J. (1969) *Statistical power analysis for the behavioral sciences.* NY: Academic Press.

Crick, B. (1998) *Education for citizenship and the teaching of democracy in schools: final report of the Advisory Group on Citizenship 22 September 1998* (London, Qualifications and Curriculum Authority).

Crick, B. (2003) The English Citizenship Order 1999: context, content and presuppositions, in: A. Lockyer, B. Crick and J. Annette (Eds) *Education for democratic citizenship* (Aldershot, Ashgate), 15–29.

Delli Carpini, M. and Keeter, S. (1996) *What Americans know about politics and why it matters* (New Haven, CT, Yale University).

Galston, W. (2001) Political knowledge, political engagement and civic education, *Annual Review of Political Science,* 4, 217–234.

Goldstein, H., and Healy, M.J.R. (1995) The graphical presentation of a collection of means. *Journal of the Royal Statistical Society*, Ser. A, 158, 175-177.

Hartung, J., Knapp G., Sinha B.K. (2008) *Statistical Meta-Analysis with Application*. Hoboken, New Jersey: Wiley.

Hedges, L.V. (1981) Distribution theory for Glass's estimator of effect size and related estimators. *Journal of Educational Statistics* **6** (2): 107–128.

Hochberg, Y., and Tamhane, A. C. (1987) *Multiple Comparison Procedures*, Wiley.

Hoskins, B. Barber, C. Van Nijlen, D. And Villalba, E. (2011) *Comparing Civic Competence among European Youth: Composite and Domain-Specific Indicators Using IEA Civic Education study data*. Comparative Education Review Vol. 55 ,1.
http://www.jstor.org/pss/10.1086/656620

Hoskins, B., Janmaat, J and Villalba, E. (2011) Learning Citizenship through Social Practice Outside and Inside School: Multilevel Analysis of the Learning of citizenship. *British Education Research Journal*
http://dx.doi.org/10.1080/01411926.2010.550271

Hoskins, B. and Deakin Crick, R. (2010) Learning to learn and civic competence to sides of the same coin? *European Journal of Education Research* Vol. 45, 1.

Hoskins, B. (2011) Research paper on "Exploring the relationship between the IEA International Citizenship and Civic Education Study (ICCS) 2009 and the OECD Programme for International Student Assessment (PISA) test 2009". (Strasbourg, Council of Europe.)

Hoskins, B. and Mascherini, M. (2009) Measuring Active Citizenship through the development of a Composite Indicator. *Social Indicator Research*, Vol. 90, 459-488. http://dx.doi.org/10.1007/s11205-008-9271-2.

Hoskins, B., Villalba, E., Van Nijlen, D., and Barber, C. (2008) *Measuring Civic Competence in Europe: A composite Indicator based on IEA Civic Education Study 1999 for 14 years old in School.* CRELL research paper, EUR 23210, Ispra: European Commission.

Hoskins, B. (2006). Draft framework on indicators for Active Citizenship. Ispra: CRELL.

Honohan, I. (2002) Civic Republicanism. London: Routledge.

Husfeldt, Barber and Torney-Purta, 2006

Johnson, L and Morris, P (2010) 'Towards a framework for critical citizenship education', Curriculum Journal, 21: 1, 77 — 96.

Kerr, D., Sturman, L., Schulz, and Burge (2010) ICCS 2009 European Report. Civic knowledge, attitudes, and engagement among lower-secondary students in 24 European countries. Amsterdam: IEA.

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

Kim, J.O., and Mueller, C.W. (1978) *Introduction to factor analysis: What it is and how to do it*. Thousand Oaks, CA: Sage Publications, Quantitative Applications in the Social Sciences Series, No. 13.

Lovett, Frank, "Republicanism", *The Stanford Encyclopedia of Philosophy (Summer 2010 Edition)*, Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/sum2010/entries/republicanism/>.

Norman, J. (2010) The big society: The anatomy of the new politics. Buckingham: The University of Buckingham Press.

OECD/EC JRC (2008) Handbook on Constructing Composite Indicators: Methodology and User Guide. Paris: OECD.

Putnam, R. D. 1993. Making Democracy Work Princeton, NJ: Princeton University Press

Putnam, R. (2000). Bowling alone: The collapse and revival of American community. New York: Simon and schuster.

Schulz, W Fraillon, J. Ainley, J. Losito, B. Kerr D. (2008) International Civic and Citizenship Education Study. Assessment framework. Amsterdam: IEA

Schulz, W. and H. Sibberns in Schulz and Sibberns (Eds.) (2004). *IEA Civic Education Study Technical Report* (IEA Amsterdam). Chapter 7: Scaling Procedures for Cognitive Items

Schulz, W., Ainley, J. Fraillon, J Kerr, D. Losito, B (2010) ICCS 2009 International Report. Civic knowledge, attitudes, and engagement among lower-secondary school students in 38 countries. Amsterdam: IEA

Snijders, T.A.B., Bosker, R.J. (1999) *Multilevel analysis: An introduction to basic and advanced multilevel modeling.* London: Sage.

Thurstone, L.L. (1935) *The Vectors Of Mind Multiple Factor Analysis For The Isolation Of PrimaryTraits.* Chicago: University of Chicago Press.

de Tocqueville, A. (1863) Democracy in America. Cambridge: Sever and Francis.
Turner, B. (1997) *Citizenship studies: a general theory*. Citizenship studies vol.1 no. 1 pp. 5-18.

Veugelers, W. (2007).Creating Critical-Democratic Citizenship Education: Empowering Humanity and Democracy in Dutch Education.*Compare, 37*(1), 105-119.

Veugelers, W. (Ed.) (2011).*Education and Humanism: Linking Autonomy and Humanity.* Rotterdam/Boston/Taipeh: SensePublishers.

Veugelers, W. (in press).The Moral and the Political in Global Citizenship Education.*Globalisation, Societies and Education.*

Veldhuis, R. (1997) Education for Democratic Citizenship: dimensions of citizenship, core competences, variables and international activities. Strasbourg, Council of Europe

Westheimer, J. and Kahne, J. (2004). What Kind of Citizen? The politics of Education of Democracy.*American Educational Research Journal, 41*(2), 237-269.

Appendix A: Item wording for the New Scales in the CCCI-2 *Affective* Domains "Social Justice" and "Participatory Attitudes"

Domain: Social Justice

IMMRGHT **Equal rights for immigrants**
How much do you agree or disagree with the following statements? Immigrants should have the opportunity to continue speaking their own language. Immigrant children should have the same opportunities for education that other children in the country have. Immigrants who live in a country for several years should have the opportunity to vote in elections. Immigrants should have the opportunity to continue their own customs and lifestyle. Immigrants should have all the same rights that everyone else in the country has. When there are not many jobs available, immigration should be restricted.

Domain: Participatory Attitudes

LEGPROT **Expected legal protest**
Would you take part in any of the following forms of protest in the future? Writing a letter to a newspaper Wearing a badge or t-shirt expressing your opinion Contacting an <elected representative> Taking part in a peaceful march or rally Collecting signatures for a petition Choosing not to buy certain products
INFPART **Students' expected future informal political participation**
Listed below are different actions that you as a young person could take during the next few years. What do you expect that you will do? Talk to others about your views on political and social issues Write to a newspaper about political and social issues Contribute to an online discussion forum about social and political issues Join an organisation for a political or social cause
INTPOLS **Interest in political and social issues**
How much are you interested in the following issues? Political issues within your <local community> Political issues in your country Social issues in your country Politics in other countries International politics
CITEFF **Students' citizenship self-efficacy**
How well do you think you would do the following activities? Discuss a newspaper article about a conflict between countries Argue your point of view about a controversial political or social issue Stand as a candidate in a <school election> Organise a group of students in order to achieve changes at school Follow a television debate about a controversial issue Write a letter to a newspaper giving your view on a current issue Speak in front of your class about a social or political issue

European Commission

EUR 25182 EN – Joint Research Centre – Institute for the Protection and Security of the Citizen
Title: The 2011 Civic Competence Composite Indicator (CCCI-2): Measuring Young People's Civic Competence across Europe based on the IEA International Citizenship and Civic Education study.
Author(s):
Bryony Hoskins, School of Education, University of Southampton, UK. B.Hoskins@soton.ac.uk
Cynthia M.H. Villalba, The Educational Research and Evaluation Group (ERE), Foundation for Research and Technology, Crete. Villalbacynthiam@gmail.com
Michaela Saisana, Unit of Econometrics and Applied Statistics, Institute for the Protection and Security of the Citizen, Ispra. Michaela.saisana@jrc.ec.europa.eu.
Luxembourg: Publications Office of the European Union
2012 – 97 pp. – 21 x 29.70 cm
EUR – Scientific and Technical Research series – ISSN 1831-9424 (online), ISSN 1018-5593 (print)

ISBN 978-92-79-22800-1 (PDF)
ISBN 978-92-79-22799-8 (print)

doi: 10.2788/67938

Abstract

Education is a key policy area for achieving democracy-related goals. In this respect the European Commission have developed indicators to monitor the levels of active citizenship across Europe (Hoskins et al 2006 and Hoskins and Mascherini 2009) and levels of civic competence across Europe (Hoskins et al 2008). The 2020 Education and Training policy agenda (ET 2020) continues to identify Active Citizenship as one of the four major policy goals and continues to support national governments in developing key competences, including civic competences, of its citizens. Active Citizenship was a priority of the 2011 Hungarian Presidency, and Education Ministers were invited to debate this issue at a March 2011 meeting. An outcome of this meeting was the ministers' support of the Centre for Research on Education and Lifelong Learning's (CRELL) development of a new composite indicator on civic competence. The Commission, represented by Commissioner Vassiliou, called for a 'coherent and comprehensive strategy which covers all aspects of citizenship education in a lifelong learning perspective'.

Based on these needs, CRELL has created a new composite indicator on civic competence, the Civic Competence Composite Indicator 2 (CCCI-2). It comprises four dimensions: 'Participatory Attitudes', 'Citizenship Values', 'Social Justice Values', and 'Knowledge and Skills for Democracy'. The data was obtained from young people between 13 and 14 years old as part of the IEA International Citizenship and Civic Education Study 2009 conducted in 38 countries.

The findings of this new indicator show that wealth and democratic stability in a country do not guarantee democratically engaged youth. In addition, young people's positive attitudes towards participation and their citizenship values are often enhanced in relatively poorer countries with recent breaks in democracy. We might perceive that this will be beneficial for the future of democracies in these countries, however, the limited evidence available does not point towards the fact that these youthful aspirations actually make it into engaged adult citizens.

Western democracies appear to be fostering a non-participatory culture in their youth. However, social justice attitudes and knowledge and skills for democracy, appear to be more prevalent in these wealthier and democratically more stable countries. These trends are consistent with the results of the original CRELL indicator research, using data from 10 years ago, which suggests a consistency of civic cultures amongst the younger generations.

The findings also suggest that measuring the wealth of a nation only through its GDP does not capture the health of the future of democracy. The more wealthy countries need to do more to enhance and maintain the citizenship norms and participatory attitudes of their young people. In contrast, it is social justice that remains the issue for the newer democracies in Europe.

How to obtain EU publications

Our priced publications are available from EU Bookshop (http://bookshop.europa.eu), where you can place an order with the sales agent of your choice.

The Publications Office has a worldwide network of sales agents. You can obtain their contact details by sending a fax to (352) 29 29-42758.

The mission of the JRC is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies. As a service of the European Commission, the JRC functions as a reference centre of science and technology for the Union. Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.

LB-NA-25182-EN-C