

Perceptions of Inequalities

Technical Report on the Quantitative Data

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Introduction

From Autumn 2009 to Spring 2011, LLAKES researchers collected data among adolescents and young adults in five countries for a project on perceptions of inequalities. This project aimed to assess how youngsters experience, perceive and evaluate inequalities in different national contexts, and how these appraisals of inequalities are linked to both objective inequalities and civic attitudes relevant for social cohesion. Both qualitative and quantitative data were collected.

This technical report discusses the quantitative data only. It provides detailed information on the data collected, the data instruments (i.e. the questionnaires) and the scales constructed from items in the questionnaire. The discussion of the scales, to which most of the report is devoted, will present descriptive statistics and national averages across gender, ethnic and social groups, enabling the reader to get a basic insight into the civic attitudes and perceptions of inequalities of youngsters across the five countries.

The report starts with a section on the procedure and kind of data collected. The second section discusses the methodological procedure for developing the scales. The third section presents the descriptive statistics of the scales.

1. Data collection

The data were collected by means of a written questionnaire among school pupils and university students in five countries: United Kingdom, Denmark, Germany, France and Singapore. To enhance cross-national comparability, data were only collected in metropolitan areas: in and around Copenhagen (DK), in the greater London area (UK), in and around Marseille (FR), in and around Frankfurt (GER), and in the city-state of Singapore. In each area, three to six schools providing lower secondary education, up to three schools providing upper secondary education and one or two universities were selected. In each of the lower secondary schools three to six whole classrooms of Year Ten (comprised of 14- and 15-year olds) were surveyed. The aim was to collect data for 60 to 80 students in total for each school. The selection of lower secondary schools was motivated by a desire to provide maximum variation on school ethnic composition. Consequently in each area at least one school was selected with a clear majority of native students (i.e. majority white – except in Singapore, where only one lower secondary school was selected), one school with a mixed population (40-60% native or immigrant students), and one school where the majority of students were of immigrant background (majority immigrant). In Germany the selection of these schools was extended in order to also reflect cross-school differences in track (Hauptschule; Realschule and Gymnasium). In the upper secondary schools four to six whole classrooms of various years (with students aged 16 to 19) were surveyed up to a total of 100 students for each school. Among the upper secondary schools selected in each country at least one had a vocational and the other an academic profile. In the universities 40-60 students from various years were selected – except in Germany where more than 200 students were surveyed and in Singapore where no university students were surveyed (see table below for exact numbers).

LLAKES researchers relied as much as possible on tried and tested items from other surveys in the construction of the questionnaire. Only when appropriate items referring to

relevant theoretical concepts could not be found elsewhere, were original items developed. The questionnaire was piloted in two schools and was subsequently revised to remove terminology and questions that students could not understand. Four questionnaires were developed: one specific to each education level (lower secondary; upper secondary; university) and one questionnaire to be completed by all the students. The questionnaire was developed in English and then translated into the relevant languages. The questionnaires were delivered during school hours, but great care was taken to avoid any disruption to the core teaching process and normal school routine. Manuals were written on how to collect the data in schools. Most students took about 30 minutes to complete both questionnaires. The questionnaires can be ordered by emailing Germ Janmaat (g.janmaat@ioe.ac.uk) or Christine Han (c.han@ioe.ac.uk).

In addition to the questionnaire survey, focus groups were carried out among students in the lower secondary schools and interviews were conducted with students in the upper secondary schools and universities and with teachers. A separate report will discuss the collection and findings of this qualitative data.

Table 1. Characteristics of the sample

Metropolitan area and country	Education level	Frequency	Percent
London, United Kingdom	lower secondary	289	53.3
	upper secondary	216	39.9
	higher education	37	6.8
	Total	542	100.0
Copenhagen, Denmark	lower secondary	201	45.9
	upper secondary	189	43.2
	higher education	48	11.0
	Total	438	100.0
Frankfurt, Germany	lower secondary	350	38.8
	upper secondary	298	33.1
	higher education	253	28.1
	Total	901	100.0
Marseille, France	lower secondary	208	45.4
	upper secondary	197	43.0
	higher education	53	11.6
	Total	458	100.0
Singapore	lower secondary	85	42.5
	upper secondary	115	57.5
	Total	200	100.0

2. Developing the Scales

To make the data more manageable, and to reduce sampling error, we created a number of scales which address theoretical concepts that are discussed in the literature (e.g. civic participation, ethnic tolerance, trust). The scales each consist of a number of items from the questionnaire that broadly tap these concepts. We abided by the following procedure to develop scales that are internally consistent and cross-nationally equivalent:

- Step 1 Selecting items which broadly refer to the same theoretical concept
- Step 2 Performing an exploratory factor analysis with varimax rotation on these items;
- this analysis is performed on both the pooled data and on the data of each individual country
 - items with loadings of more than .45 are selected for further analysis
 - if items load on two or more dimensions with eigenvalues of more than 1, then several scales are developed.
- Step 3 Performing a reliability analysis on the selected items for either one or several scales;
- the analysis is performed on both the pooled data and on the data of each individual country
 - use is made of the “scale if item deleted” option to develop scales with the highest alpha reliabilities
 - scales with alpha reliabilities of more than .5 for both the pooled data and for the data of each individual country are selected and reported on
- Step 4 Creating three different measures for each selected scale:
1. The scale as factor score of the selected items from the reliability analysis. Scales based on factor scores represents clear constructs statistically but the items composing the scale do not contribute to it equally. These scales have a mean of zero and a standard deviation of 1.
 2. The scale as sum score of the selected items from the reliability analysis:
 - First, the answer categories of the selected items were added up
 - Second, the scale was transformed to a scale with a minimum of 0, a maximum of 10 and a mid-point of 5.

The resulting scale has the advantage of not only allowing for easy cross-national comparisons but also of assessing absolute aggregate scores. Both relative and absolute scores are relevant. For example, if France has the lowest score on ethnic tolerance of all five countries but still has a score of 8 on a scale of 0 to 10, then on balance it still is

a very tolerant country. Another advantage is that all items contribute equally to the scale. Summative scales have variable means and standard deviations.

3. The scale as standardized score of the summative scale. The advantage is that all items contribute equally to the scale. The scale has a mean of zero and a standard deviation of one.

For each scale we report the following details and statistics:

- The name of the scale
- The items composing it. These items are the product of the final selection from the reliability analysis.
- The interpretations of the results
- The results in tables; the descriptive statistics, mean scores and correlations are only reported for the summative ten point scale
 - Output of the factor analysis on the pooled data
 - Output of the reliability analysis on the pooled data and on the data of each individual country
 - Basic descriptive statistics
 - The mean score of each country
 - The mean scores of each country by
 - Type of education (LS, US, HE)
 - Gender
 - Country of birth
 - Correlations with 'number of books at home' as indicator of social background for each country.

3. The Scales: Descriptive Statistics

3.1. Racial tolerance

Name of scale: **Racial tolerance**

Items composing scale after factor and reliability analysis:

- "Mixed race marriage is ok"
- "I wouldn't mind if a family of a different race moved next door"
- "I wouldn't mind working with people from other races"

Answer categories: <disagree strongly> <disagree> <neither agree nor disagree>
<agree> <agree strongly>

3.1.1 Interpretations of results

The racial tolerance scale represents a construct with a high degree of internal consistency judging by the high loadings of the three items on the extracted component and by the high alpha value for the pooled data. The high alpha values for the individual countries mean that the scale is consistent across the five countries and can be assumed to measure the same concept across the board.

All youngsters appear to be much more tolerant than intolerant as their responses are closer to the maximum end of the scale than to the midpoint. The variation between the countries is relatively small: Germany has the lowest mean level of tolerance (7.90) and Denmark the highest (8.70). Yet, Germany and Singapore do have significantly lower scores than the other three countries.

Tolerance does not appear to be linearly related to level of education across the board. While in England, Denmark and Germany the respondents in higher education (HE) record the highest level of tolerance, in France upper secondary (US) students show the highest level. Moreover while in Germany, Denmark and France lower secondary students show the lowest tolerance levels, in England and Singapore it is US students who have the lowest scores.

In England and Germany the immigrant children are slightly more tolerant towards other racial groups than the native born. In Denmark, France and Singapore the native born students are more tolerant. Only in Singapore is this difference significant.

In all European countries girls appear to have significantly higher tolerance levels than boys. In Singapore girls are also more tolerant but the difference is not significant. The difference between girls and boys is largest in France.

Significant country differences also show up regarding the relation between social background and racial tolerance (see output tolerance by number of books in family home). While there is a strong positive relation in England, Germany and Denmark, social background does not appear to matter in France and Singapore.

3.1.2 Results in tables

Factor Analysis

Total Variance Explained

Comp onent	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.092	69.723	69.723	2.092	69.723	69.723
2	.618	20.612	90.335			
3	.290	9.665	100.000			

Extraction Method: Principal Component
Analysis.

Component Matrix^a

	Component
	1
recoded mixed race marriage is ok	.736
recoded other race neighbours	.879
recoded working with other races	.882

Extraction Method: Principal
Component Analysis.

a. 1 components extracted.

Reliability analysis

Reliability Statistics: pooled data

Cronbach's Alpha	N of Items
.781	3

**Reliability Statistics:
individual country**

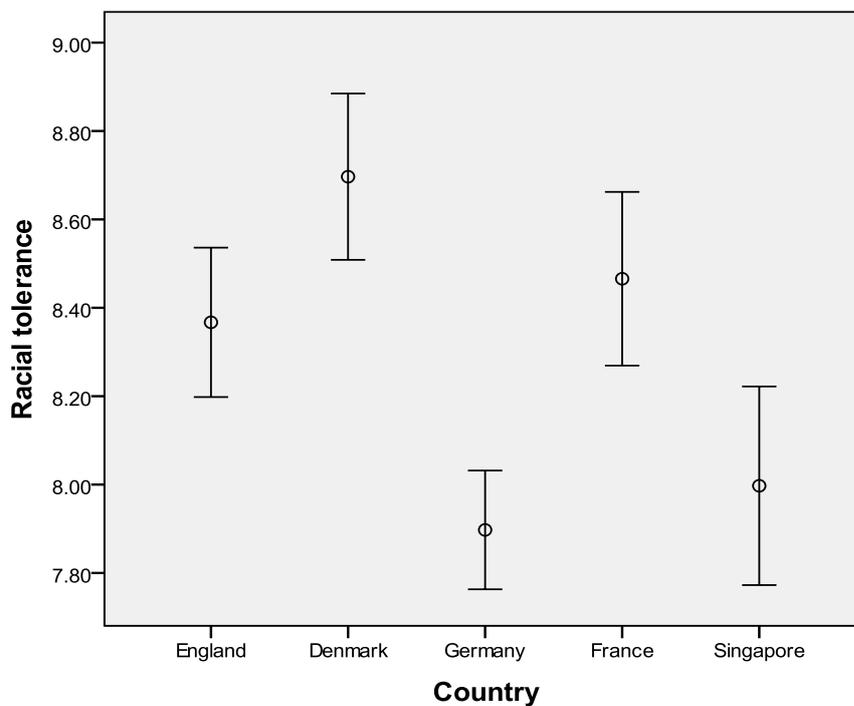
country of school	Cronbach's Alpha	N of Items
England	.815	3
Denmark	.808	3
Germany	.760	3
France	.775	3
Singapore	.704	3

Descriptive statistics, error plots and correlations

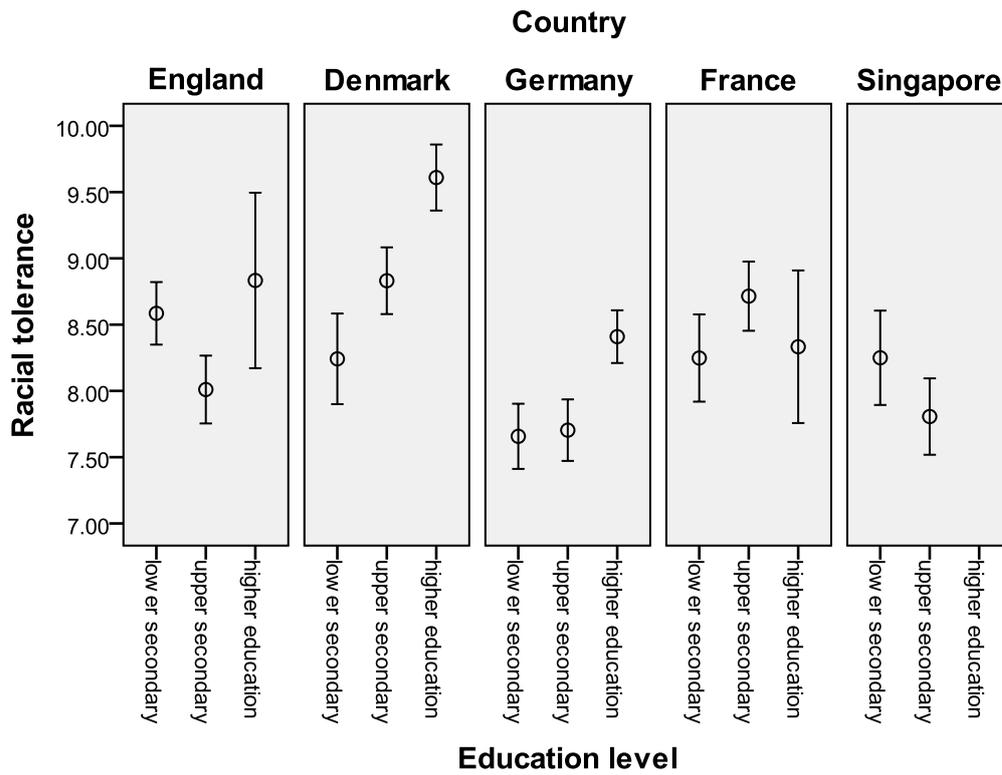
Descriptive statistics and missing values

	N	Minimum	Maximum	Mean	Std. Deviation
racial tolerance index	2295	.00	10.00	8.2353	1.94543
Valid N (listwise)	2295				
Missing values	244				

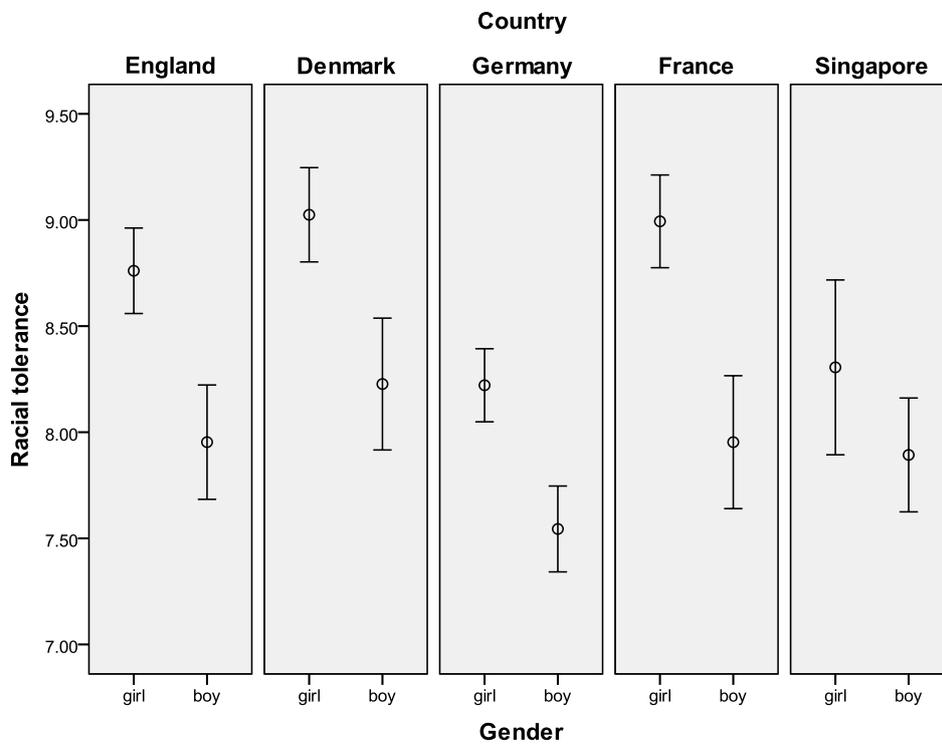
Racial tolerance: country means



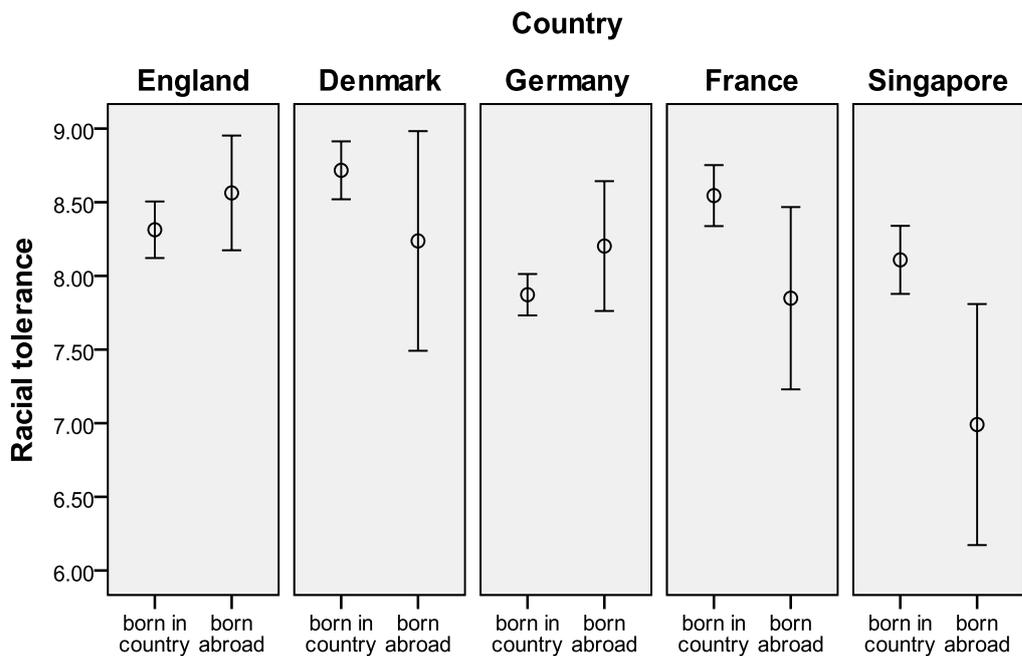
Racial tolerance: means by education level and country



Racial tolerance: means by gender and country



Racial tolerance: means by place of birth and country



Place of birth

Racial tolerance: correlations with social background

country of school			racial tolerance
England	number of books in family home	Pearson Correlation	.221**
		Sig. (1-tailed)	.000
		N	461
Denmark	number of books in family home	Pearson Correlation	.364**
		Sig. (1-tailed)	.000
		N	362
Germany	number of books in family home	Pearson Correlation	.102**
		Sig. (1-tailed)	.002
		N	834
France	number of books in family home	Pearson Correlation	.010
		Sig. (1-tailed)	.417
		N	428
Singapore	number of books in family home	Pearson Correlation	.079
		Sig. (1-tailed)	.143
		N	186

** . Correlation is significant at the 0.01 level (1-tailed).

3.2. Positive views on immigrants

Name of scale: **Positive views on immigrants**

Items composing scale after factor and reliability analysis

- "Immigrants are generally good for the UK's economy"
- "Immigrants make the UK more open to new ideas and cultures"
- "Immigrants take jobs away from people who were born in the UK"*
- "Immigrants increase crime rates"*

Answer categories: <disagree strongly> <disagree> <neither agree nor disagree>
<agree> <agree strongly>

* the answer categories of the last two items were reversed to ensure that the items were all correlated positively to one another.

3.2.1. Interpretations of results

The 'positive views on immigrants' scale shows a very acceptable level of internal cohesion as the four items composing it have loadings of .7 and more. The reliability analysis reveals that the scale has good alpha values in the European countries (.65 and higher) but not in Singapore (.48). Thus the scale does not represent a very coherent construct in the last-named country and the results for this country should therefore be interpreted with some caution.

Youngsters in the European countries appear to have only slightly more favourable than unfavourable views on immigrants (see the mean values which are only a little higher than the midpoint of the scale). With a mean value of 4.8 Singapore tilts slightly towards the unfavourable end of the scale. In sum, youngsters appear to have neither very positive nor very negative views on immigrants. Among the European countries, youngsters express the most positive views in France (6.4) while youngsters in England are most sceptical showing a score almost exactly on the midpoint of the scale. Differences between the countries are relatively large with Germany showing a significantly lower score than France and Denmark but a significantly higher score than England and Singapore.

As might be expected university students express the most positive views on immigrants everywhere. In England the difference with upper and lower secondary students is very large by comparison to the other European countries.

It further comes as no surprise that immigrant students are significantly more positive about immigrants than native students across the board. The former are likely to have identified with immigrants as the object stated in the survey questions. Once more we see that the difference is most pronounced in England: native students lag by as much as 2.3 points behind the immigrant students in their views on immigrants. In Singapore the difference is also relatively large (1.3). In both England and Singapore native born students on balance have more negative than positive views on immigrants.

Girls have significantly more favourable opinions on immigrants than boys in all five countries. Again it is in England that the gap is largest. In England and Singapore boys express slightly more unfavourable than favourable views on immigrants.

Remarkably, social background only appears to have a significant positive relation with favourable views on immigrants in England and Denmark. In Germany, France and Singapore it is unrelated to views on immigrants.

3.2.2. Results in tables

Factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.185	54.626	54.626	2.185	54.626	54.626
2	.778	19.461	74.087			
3	.535	13.387	87.474			
4	.501	12.526	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
recoded immigrants good for economy	.738
recoded immigrants make the country more open	.746
immigrants increase crime	.724
immigrants take jobs away	.749

Extraction Method: Principal Component Analysis.

Reliability analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.720	4

Reliability Statistics

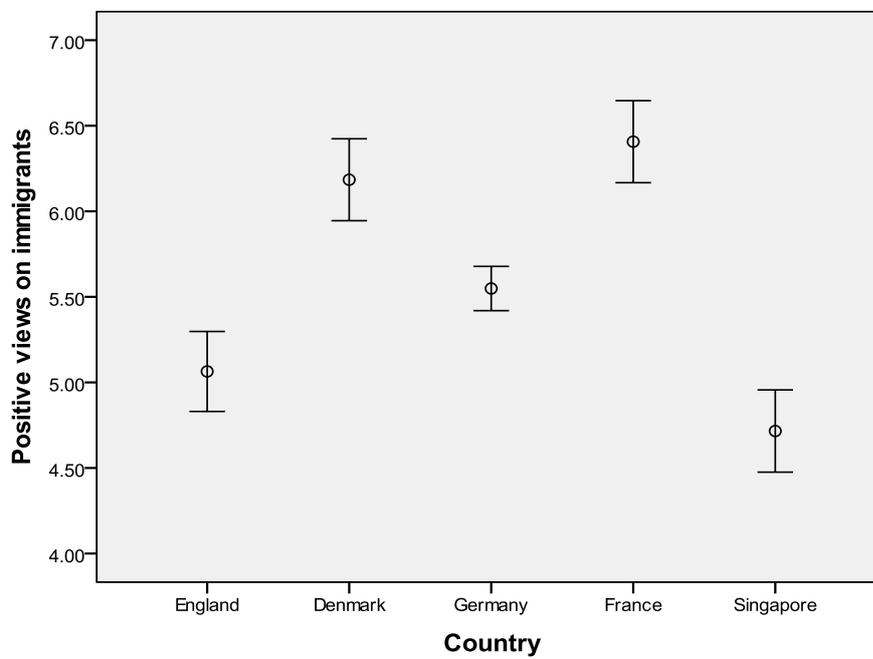
country of school	Cronbach's Alpha	N of Items
England	.785	4
Denmark	.754	4
Germany	.710	4
France	.653	4
Singapore	.479	4

Descriptive statistics, error plots and correlations

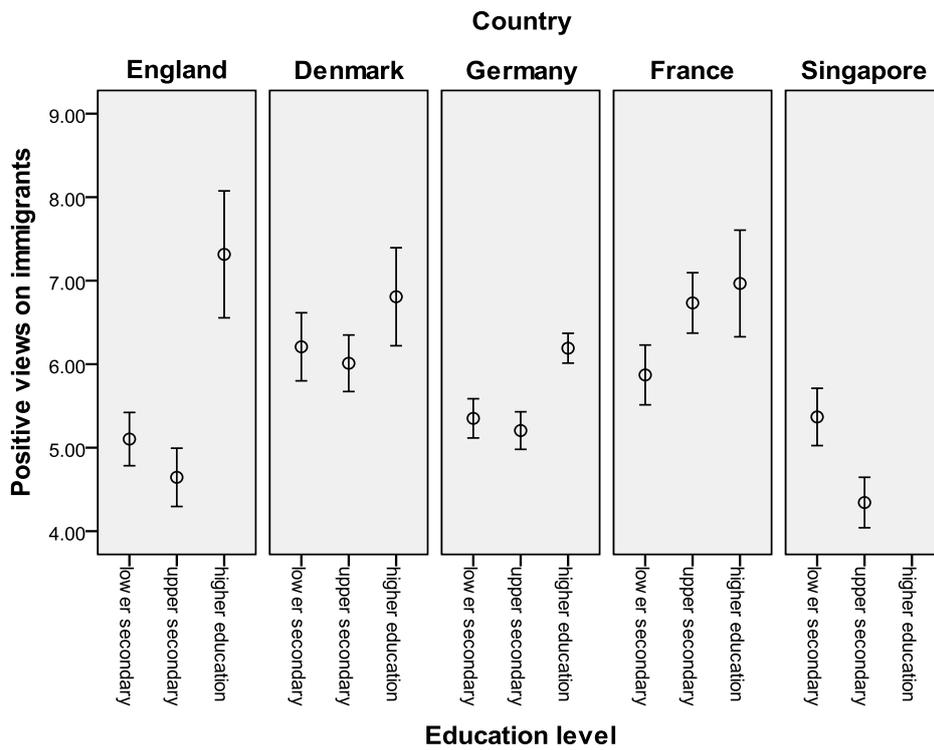
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
positive views on immigrants	1870	.00	10.00	5.6340	2.06317
Valid N (listwise)	1870				
Missing values	669				

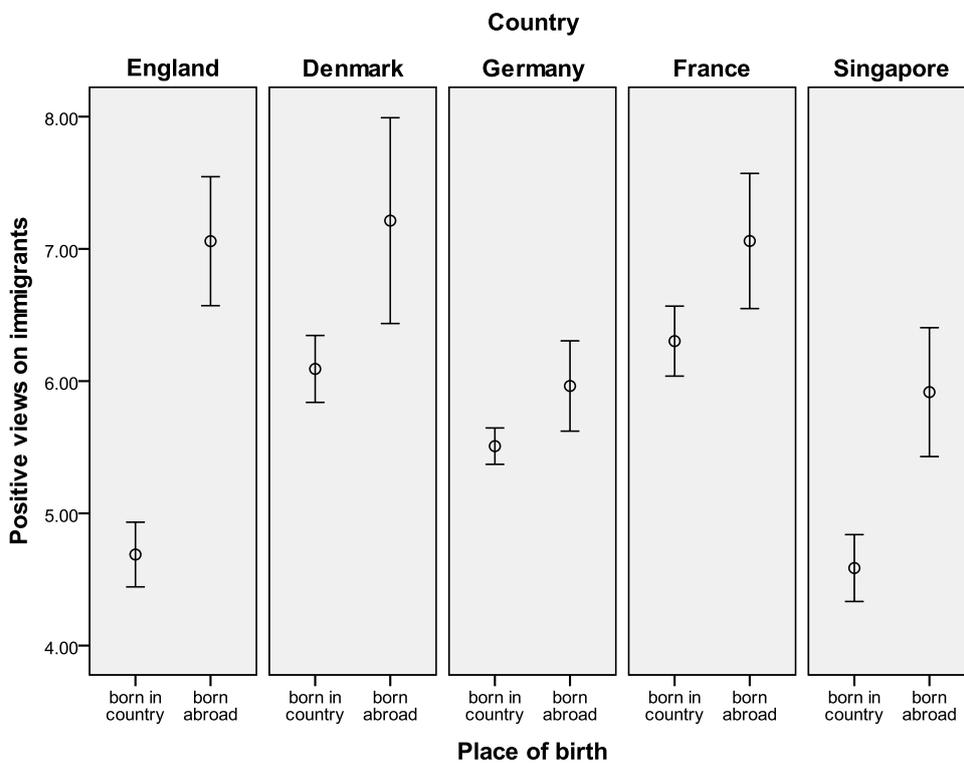
Positive views on immigrants: country means



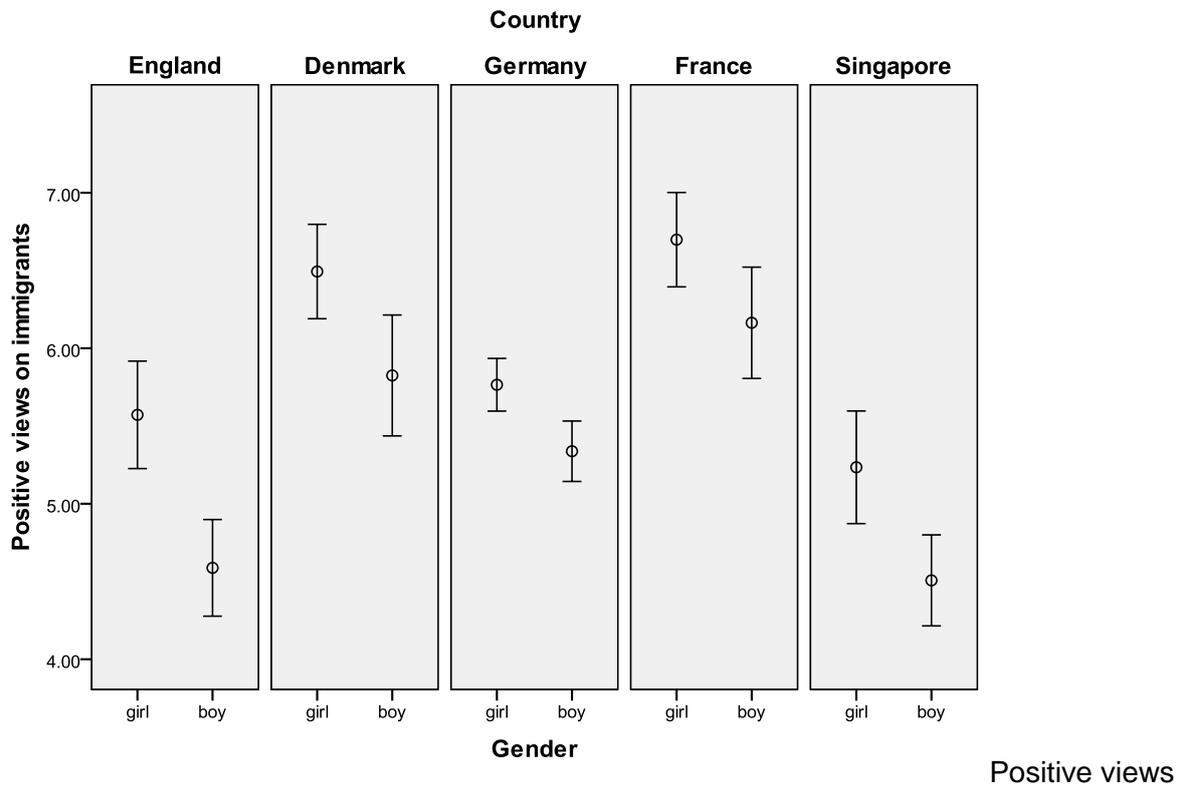
Positive views on immigrants: means by education level and country



Positive views on immigrants: means by place of birth and country



Positive views on immigrants: means by gender and country



on immigrants: correlations with social background

country of school			positive views on immigrants
England	number of books in family home	Pearson Correlation	.163**
		Sig. (1-tailed)	.001
		N	365
Denmark	number of books in family home	Pearson Correlation	.245**
		Sig. (1-tailed)	.000
		N	299
Germany	number of books in family home	Pearson Correlation	.048
		Sig. (1-tailed)	.099
		N	711
France	number of books in family home	Pearson Correlation	-.037
		Sig. (1-tailed)	.257
		N	319
Singapore	number of books in family home	Pearson Correlation	.099
		Sig. (1-tailed)	.112
		N	154

** . Correlation is significant at the 0.01 level (1-tailed).

3.3. Ethnic equality

Name of scale: **Ethnic equality**

Items composing scale after factor and reliability analysis:

- "All ethnic groups should have equal chances to get good jobs in this country"
- "All ethnic groups should have equal chances to get a good education in this country"
- "Members of all ethnic groups should be encouraged to run in elections for political office"

Answer categories: <disagree strongly> <disagree> <neither agree nor disagree>
<agree> <agree strongly>

3.3.1. Interpretations of results

The ethnic equality scale essentially captures the degree in which respondents consider people of different ethnic backgrounds to be fundamentally equal to themselves and deserving of the same rights and treatment. The scale has a very high internal consistency judging by the high factor loadings of the three items it is composed of. It also shows exceptionally high conceptual equivalence across the five states with alpha values of more than .8 everywhere.

On balance youngsters are strongly supportive of the idea of ethnic equality everywhere as the country means are all closer to the maximum end of the scale than to the midpoint. Differences between countries are small and insignificant. France has the highest score while England has the lowest.

University students appear to be significantly more supportive of ethnic equality than other students in England, Denmark and Germany. In these countries the upper secondary students show a slightly lower level of support than the lower secondary students but this difference is not significant. In France and Singapore education level does not make a significant difference.

In England and Germany native born youth is significantly less supportive of ethnic equality than immigrant youth. In the other countries there is no difference between the two groups. The long confidence interval bars in Denmark and Singapore for the immigrant groups reflect a small number of respondents. Because of this the large difference in means between the native born and immigrant group is not significant in Singapore.

In the four European states girls are significantly more supportive of ethnic equality than boys. In Singapore the girls are also more supportive but the difference is not significant. In England the gap between the two genders is largest.

Social background only influences support for ethnic equality in England and Denmark: the more privileged the background, the stronger the support for ethnic equality. In the other countries social background does not make a difference.

3.3.2. Results in tables and diagrams

Factor analysis

Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
dim 1	2.350	78.326	78.326	2.350	78.326	78.326
ensi 2	.463	15.418	93.744			
on0 3	.188	6.256	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
recoded equal employment opportunities to all ethnic groups	.916
recoded equal education opportunities to all ethnic groups	.917
recoded ethnic minorities should run in the election	.818

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Reliability analysis

Reliability Statistics

Cronbach's Alpha	N of Items
.855	3

Reliability Statistics

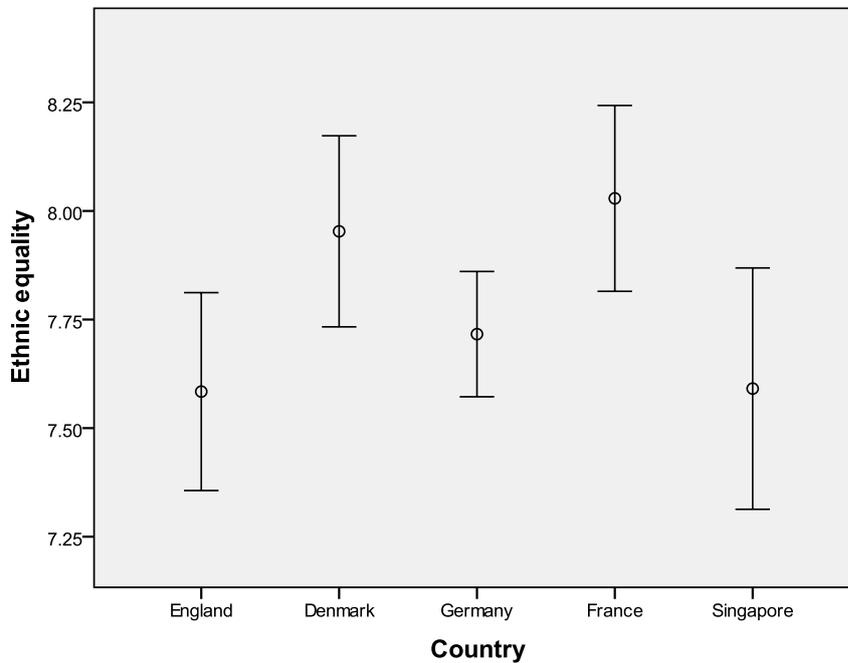
country of school	Cronbach's Alpha	N of Items
England	.900	3
Denmark	.805	3
Germany	.850	3
France	.849	3
Singapore	.872	3

Descriptive statistics, error plots and correlations

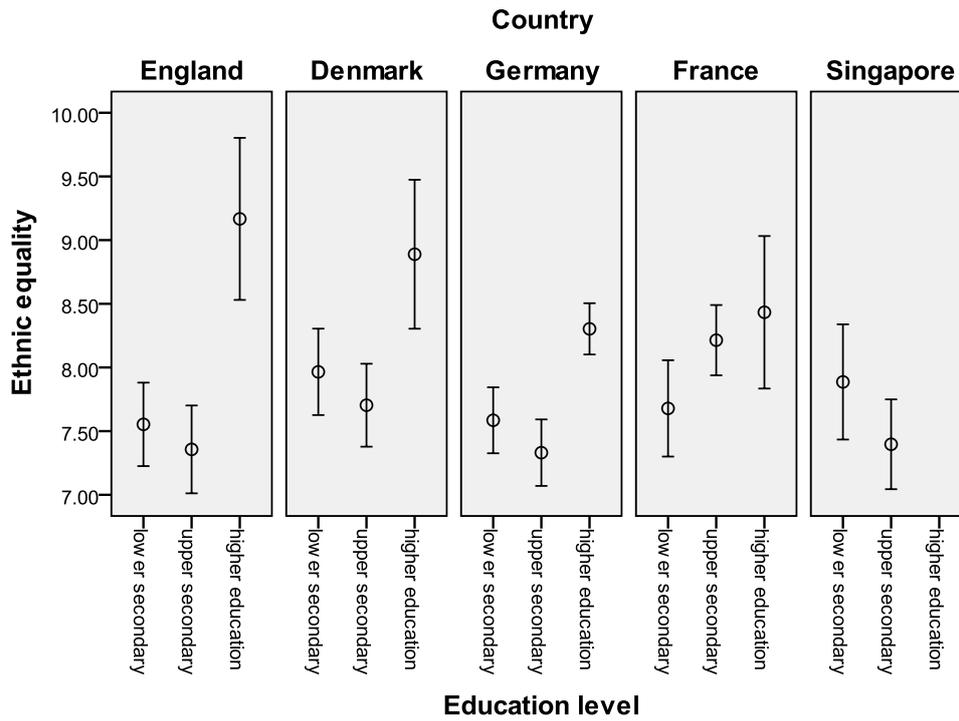
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Ethnic equality	2190	.00	10.00	7.7747	2.17298
Valid N (listwise)	2190				
Missing	341				

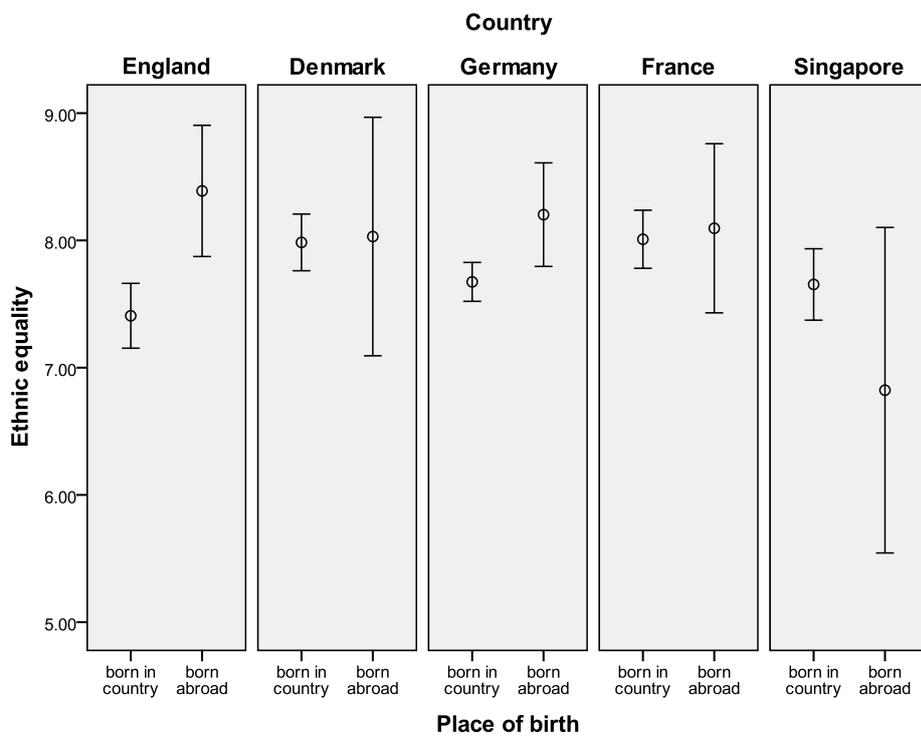
Ethnic equality: country means



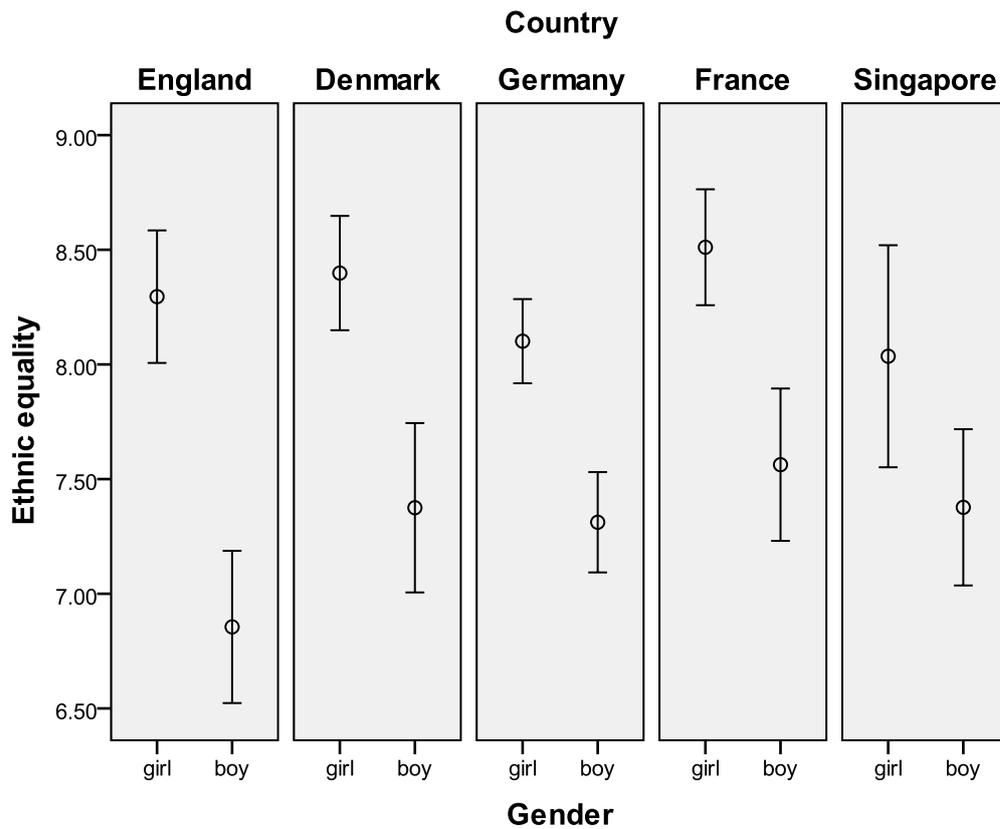
Ethnic equality: means by education level and country



Ethnic equality: means by place of birth and country



Ethnic equality: means by gender and country



Ethnic equality: correlations with social background

Correlations			Ethnic equality
Country			
England	number of books in family home	Pearson Correlation Sig. (1-tailed) N	.162** .000 428
Denmark	number of books in family home	Pearson Correlation Sig. (1-tailed) N	.274** .000 359
Germany	number of books in family home	Pearson Correlation Sig. (1-tailed) N	.044 .104 817
France	number of books in family home	Pearson Correlation Sig. (1-tailed) N	.052 .152 386
Singapore	number of books in family home	Pearson Correlation Sig. (1-tailed) N	.086 .130 174

** . Correlation is significant at the 0.01 level (1-tailed).

3.4. Authoritarianism

Name of scale: **Authoritarianism**

Items composing scale after factor and reliability analysis:

- "The death penalty is necessary for some crimes"
- "We should give lawbreakers stiffer sentences"
- "Young people don't have respect for traditional values"
- "Schools should teach children to obey authority (people in charge)"
- "If a man is suspected of planning a terrorist attack in [country], the policy should have the power to keep him in prison until they are satisfied he was not involved"

Answer categories: <disagree strongly> <disagree> <neither agree nor disagree> <agree> <agree strongly>

3.4.1. Interpretation of results

The scale combines items asking respondents to state their views on traditional values, respect for authority and sentences for criminal offenses. The higher the value, the stronger the support for traditional values, for respecting authority, and for harsher sentences. The scale was labelled 'Authoritarianism' as this term was deemed to best reflect the diversity of concepts that the scale includes. The scale shows a moderate internal consistency: the item loadings range from .52 to .79 and the alpha values for the individual countries vary between .54 (England) and .67 (Denmark) (see output factor and reliability analysis).

Interestingly, the mean values of the individual countries are all higher than five on the authoritarianism scale indicating that youngsters on balance lean towards authoritarian values across the board. The mean values are not far from the mid-point of the scale though. The variation between countries is considerable with Denmark showing the lowest mean score (5.4) and Singapore the highest (6.8). Intriguingly England's score (6.6) closely follows that of Singapore, which is remarkable in view of the liberal culture that is said to prevail in England. Authoritarianism levels in England and Singapore are significantly higher than those in Germany and France, while those in the latter in their turn are significantly higher than that of Denmark.

Authoritarianism does not appear to be clearly linked to level of education. One might perhaps expect that university students are less inclined to support authoritarian values than lower secondary students but this pattern can only be found in Denmark. In England, remarkably, the university students are much more supportive of authoritarian values than the students of upper and lower secondary. In Germany and France education level does not seem to be related to authoritarianism.

Authoritarianism and place of birth are related in contrasting ways across the five countries. While the immigrant students are slightly more supportive of authoritarian values in England, Germany and Denmark (in the latter the difference with native born students is very large), in France and Singapore it is the native born students who are slightly more supportive of such values. Yet, only in Denmark is the difference between native born and immigrants significant.

Neither is authoritarianism related to gender. In all countries except France the difference between boys and girls is minimal. In France girls appear to be slightly more supportive of authoritarian values than boys, but this difference is not significant.

As one might expect, social background is negatively related to authoritarianism across the board. However, while this relation is significant in England and Germany, and very much so in Denmark, it is not significant in France and Singapore.

3.4.2. Results in tables and diagrams

Factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.013	40.254	40.254	2.013	40.254	40.254
2	.933	18.660	58.914			
3	.836	16.721	75.635			
4	.715	14.309	89.944			
5	.503	10.056	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
recoded death penalty	.697
recoded stiffer sentences	.786
recoded youth have no respect for traditions	.517
recoded obedience to authorities	.544
recoded prison without proof	.588

Extraction Method: Principal Component Analysis.

- a. 1 component
- b. extracted.

Reliability analysis

Reliability Statistics:

pooled data

Cronbach's Alpha	N of Items
.617	5

Reliability Statistics:

individual country

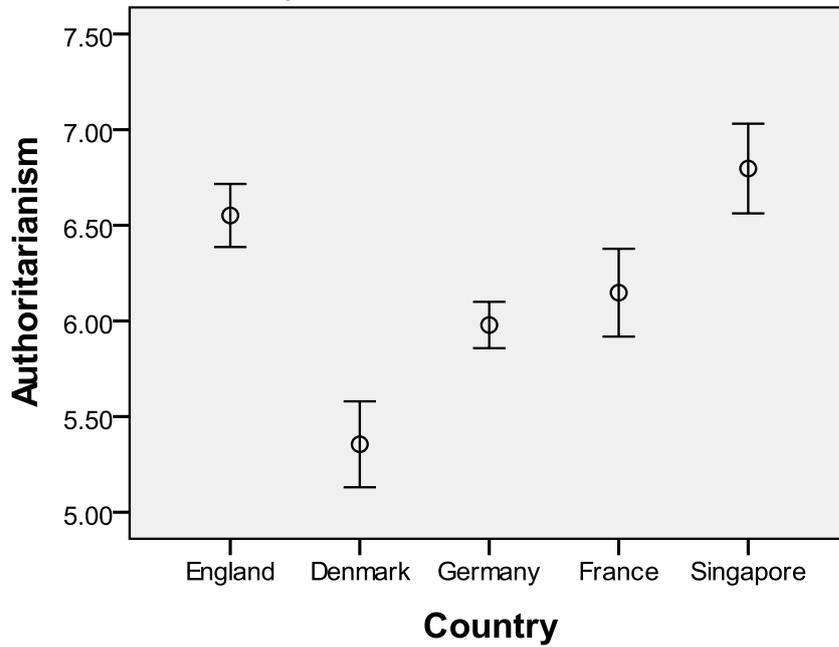
country of school	Cronbach's Alpha	N of Items
England	.537	5
Denmark	.665	5
Germany	.592	5
France	.640	5
Singapore	.576	5

Descriptive statistics, error plots and correlations

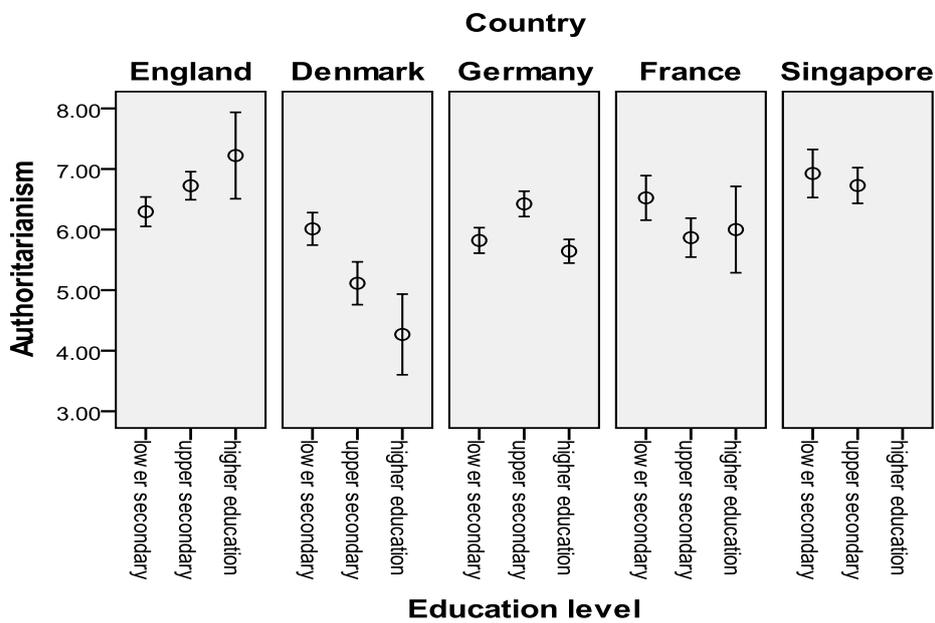
Descriptive statistics and missing values

	N	Minimum	Maximum	Mean	Std. Deviation
Authoritarianism	1908	.00	10.00	6.0875	1.83637
Valid N (listwise)	1908				
Missing values	631				

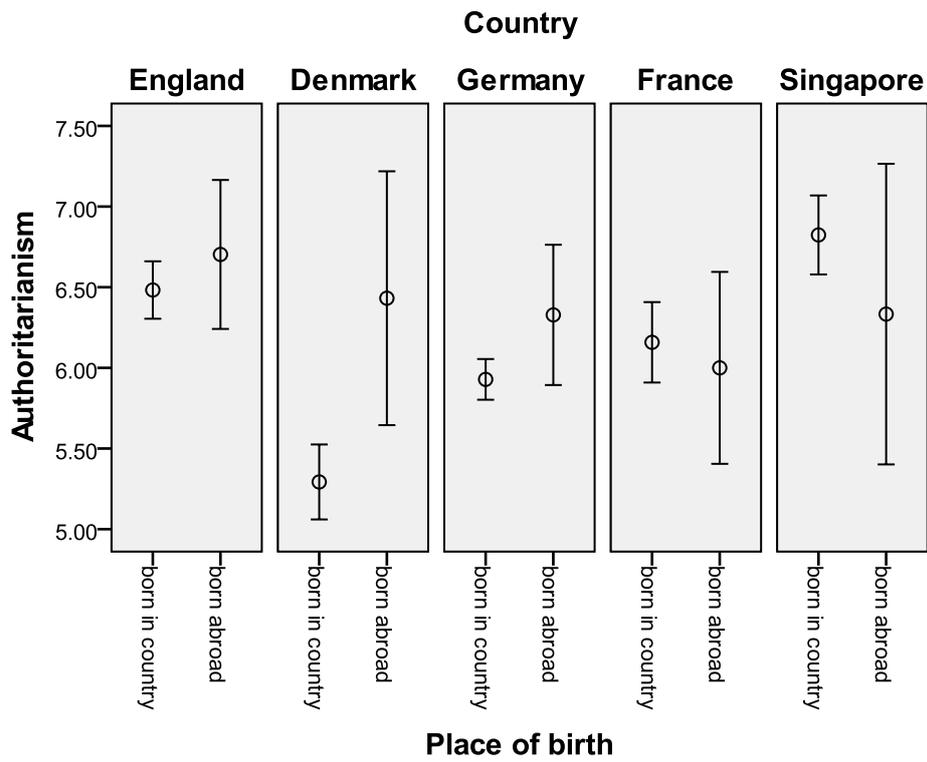
Authoritarianism: country means



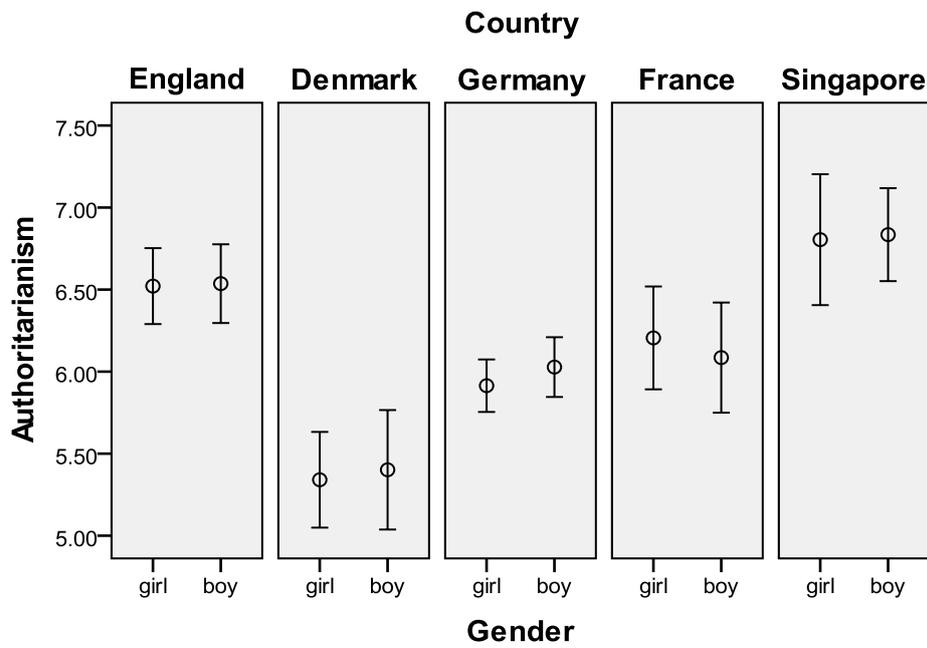
Authoritarianism: means by education level and country



Authoritarianism: means by place of birth and country



Authoritarianism: means by gender and country



Authoritarianism: correlations with social background

Country			Authoritarianism
England	number of books in family home	Pearson Correlation Sig. (1-tailed) N	-.119** .010 383
Denmark	number of books in family home	Pearson Correlation Sig. (1-tailed) N	-.349** .000 308
Germany	number of books in family home	Pearson Correlation Sig. (1-tailed) N	-.091** .008 720
France	number of books in family home	Pearson Correlation Sig. (1-tailed) N	-.092 .051 318
Singapore	number of books in family home	Pearson Correlation Sig. (1-tailed) N	-.073 .183 155

** . Correlation is significant at the 0.01 level (1-tailed).

3.5. Political interest

Name of scale: **Political interest**

Items composing scale after factor and reliability analysis:

- "In an average week, how much of your time watching television is spent on news and programmes about politics and current affairs?"
- "In an average week, how much of your time is spent reading newspapers about politics and current affairs?"

Answer categories: <no time at all> <up to 1 hour> <between 1 and 3 hours> <more than 3 hours>

- "How often do you have discussions of what is happening in politics and current affairs with your friend of similar age?"
- "How often do you have discussions of what is happening politics and current affairs with parents or other adult family members?"

Answer categories: <never> <rarely> <sometimes> <often>

3.5.1. Interpretations of results

As the items composing the scale ask about the time spent on reading, listening and talking about politics and current affairs, 'political interest' was deemed an appropriate label for the scale. The scale represents a very coherent construct, both overall and in each country, given the high factor loadings of the items and the high alpha reliabilities for both the pooled data and for the data of individual countries.

On balance youngsters spend rather little time engaging with politics as four of the five countries have mean scores below the mid-point of the scale. There are substantial between country differences. Youngsters in England are the least and those in Denmark are the most interested in politics. Youngsters in the other three countries fall in between these two extremes.

Level of education is clearly closely linked to political interest as university students spend significantly more time engaging with politics than lower secondary students in all European countries. Upper secondary students assume a middle position. Apart from educational attainment this may also reflect a life cycle effect as it is likely that youngsters at the age of 14/15 have other things on their mind than societal issues. University students were not sampled in Singapore.

Neither place of birth nor gender seems to influence political interest as there are no significant differences between immigrants and native born and between girls and boys in any of the countries. By contrast, social background is strongly influencing political interest as there are strong positive correlations of the number of books in the home with political interest in all countries except Singapore. Political interest therefore mainly appears to be driven by social factors, not ethnic and gender related ones.

3.5.2. Results in tables and diagrams

Factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.297	57.425	57.425	2.297	57.425	57.425
2	.685	17.124	74.549			
3	.599	14.984	89.534			
4	.419	10.466	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
frequency watch tv	.718
frequency read newspaper	.712
frequency discuss issues with friends	.811
frequency discuss issues with parents	.785

Extraction Method: Principal

Component Analysis.

a. 1 components extracted.

Reliability analysis

Reliability Statistics:

Pooled data

Cronbach's Alpha	N of Items
.752	4

Reliability Statistics:

Data for individual countries

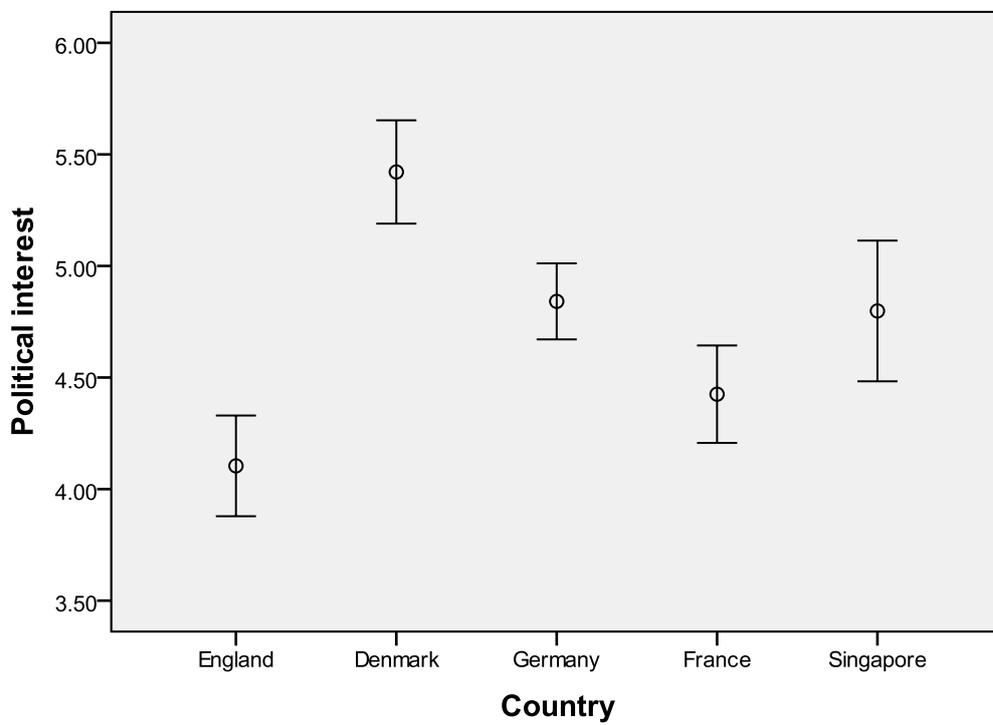
country of school	Cronbach's Alpha	N of Items
England	.778	4
Denmark	.760	4
Germany	.761	4
France	.719	4
Singapore	.623	4

Descriptive statistics, error plots and correlations

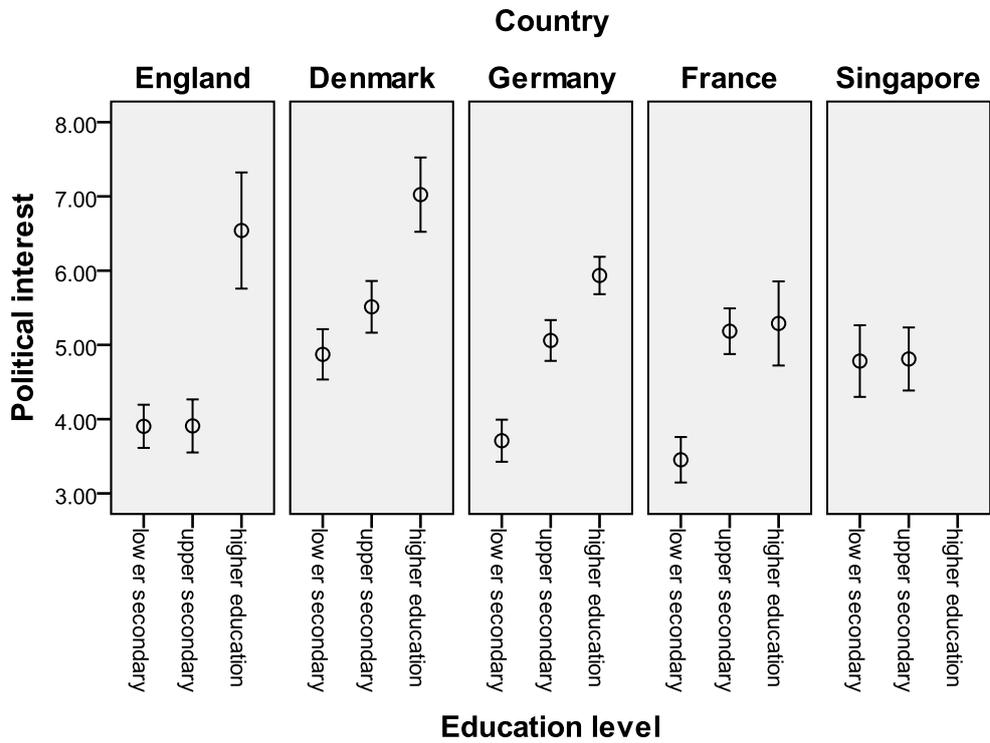
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
political interest	2099	.00	10.00	4.7034	2.33651
Valid N (listwise)	2099				
Missing values	340				

Political interest: country means



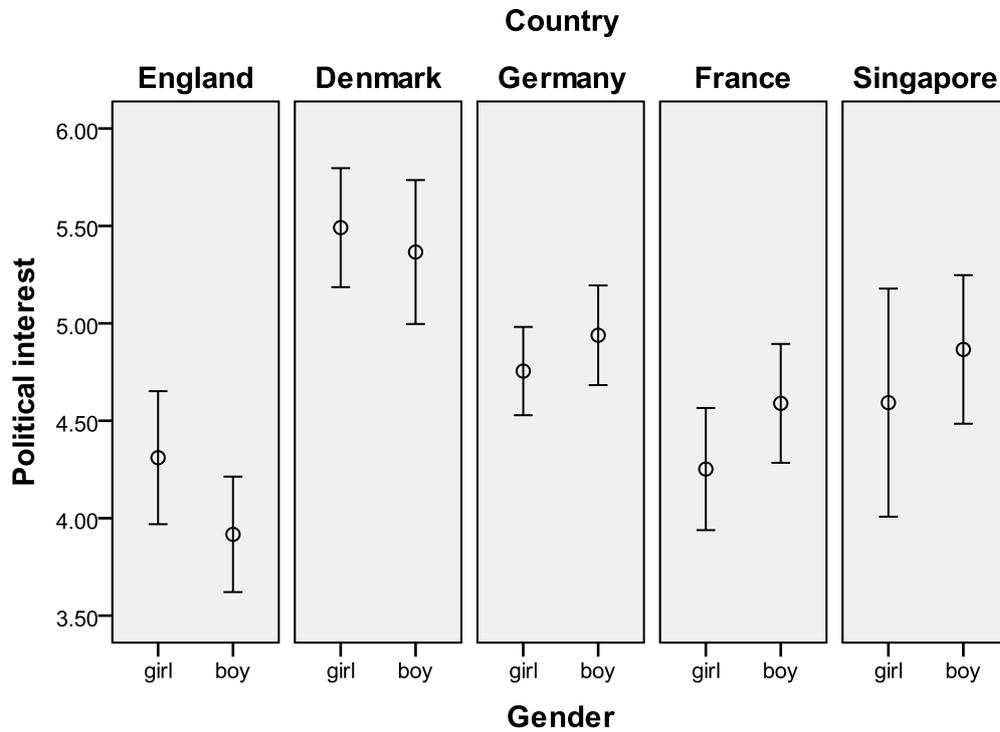
Political interest: means by education level and country



Political interest: means by place of birth and country



Political interest: means by gender and country



Political interest: correlations with social background

Country			political interest
England	number of books in family home	Pearson Correlation	.300**
		Sig. (1-tailed)	.000
		N	434
Denmark	number of books in family home	Pearson Correlation	.326**
		Sig. (1-tailed)	.000
		N	360
Germany	number of books in family home	Pearson Correlation	.241**
		Sig. (1-tailed)	.000
		N	724
France	number of books in family home	Pearson Correlation	.334**
		Sig. (1-tailed)	.000
		N	406
Singapore	number of books in family home	Pearson Correlation	.083
		Sig. (1-tailed)	.152
		N	157

** . Correlation is significant at the 0.01 level (1-tailed).

3.6. Unconventional participation

Name of scale: **Unconventional participation**

Items composing scale after factor and reliability analysis:

“During the last 12 months, have you done anything of the following?”

- “have you signed a petition? (either online or on paper)”
- “have you taken part in a public demonstration?”
- “have you boycotted certain products?”
- “have you deliberately bought products for political, ethical or environmental reasons?”

Answer categories: <no> <yes>

3.6.1. Interpretation of results

As the items composing the scale ask about alternative forms of participation to express one’s political views, the scale was labelled unconventional participation. The scale represents a construct with a moderate degree of internal consistency judging by the average loadings of the four items on the extracted component and by the modest alpha value for the pooled data. The alpha values for the individual countries vary between .53 for France and .67 for Germany, indicating that there is some reason for caution in assuming that the scale measures the same concept across the board.

As the activities measured by the scale are less common and quite demanding in terms of investment of time and money, it is not surprising to find all countries showing averages below the midpoint of the scale. This means that on average youngsters have taken part in less than two of the four activities measured by the scale over the last year. Nonetheless, there are significant cross-country differences. Unconventional participation is highest in Denmark (3.7) and lowest in Singapore (1.0), with Germany (2.8), France (2.6) and England (2.1) falling in between these two extremes. All the mean differences are significant except that between Germany and France.

Unconventional participation appears to be strongly related educational attainment in Germany, France and particularly so in Denmark. As expected, the relation is positive with university students showing the highest levels of participation, though the difference with upper secondary students is not significant in France. In England and Singapore there is no relation between unconventional participation and educational attainment.

Unconventional participation does not vary as much across gender and ethnic groups. There are only significant gender differences in England and Denmark with boys showing lower levels of participation. Differences across ethnic groups are not significant anywhere except in Germany where the native group shows a significantly higher level of participation.

Social background, by contrast, is strongly related to unconventional participation across the board. Only in Singapore there is no strong positive correlation between number of books at home (as indicator of social background) and unconventional participation. Thus, social factors appear to drive unconventional participation, not gender or ethnicity.

3.6.2. Results in tables and diagrams

Factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.879	46.963	46.963	1.879	46.963	46.963
2	.775	19.377	66.340			
3	.724	18.097	84.437			
4	.623	15.563	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
recoded signed a petition	.675
recoded participated in demonstration	.625
recoded boycotted products	.708
recoded deliberately bought products	.728

Extraction Method: Principal Component Analysis.

a. 1 component extracted.

Reliability analysis

Reliability Statistics

Cronbach's Alpha	N of Items
.621	4

Reliability Statistics

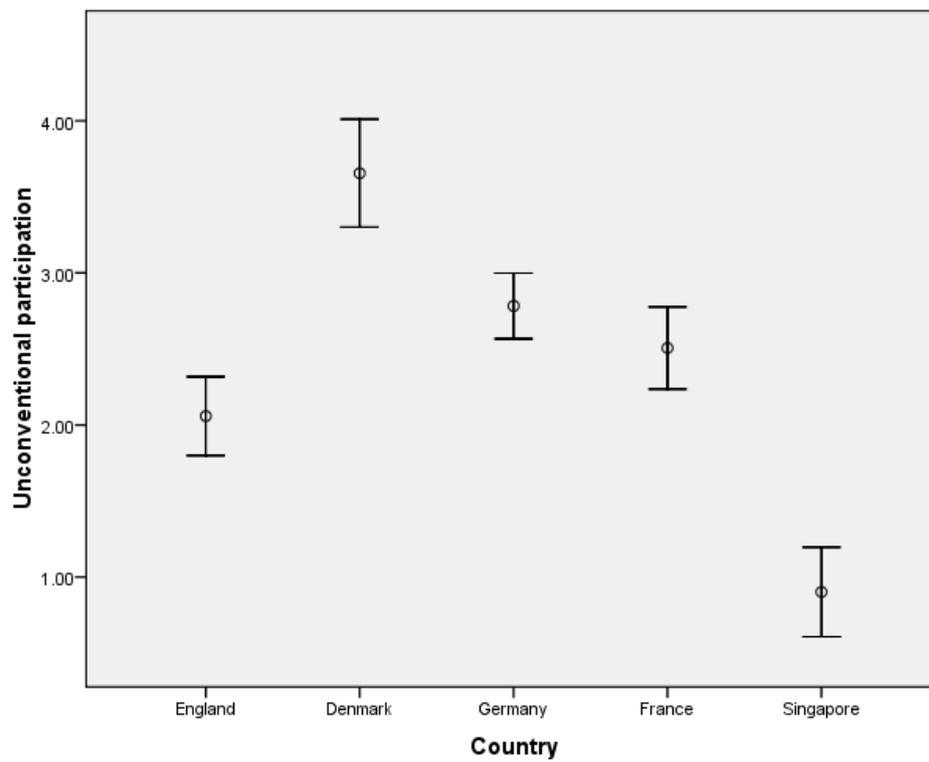
Country	Cronbach's Alpha	N of Items
England	.621	4
Denmark	.676	4
Germany	.593	4
France	.527	4
Singapore	.555	4

Descriptive statistics, error plots and correlations

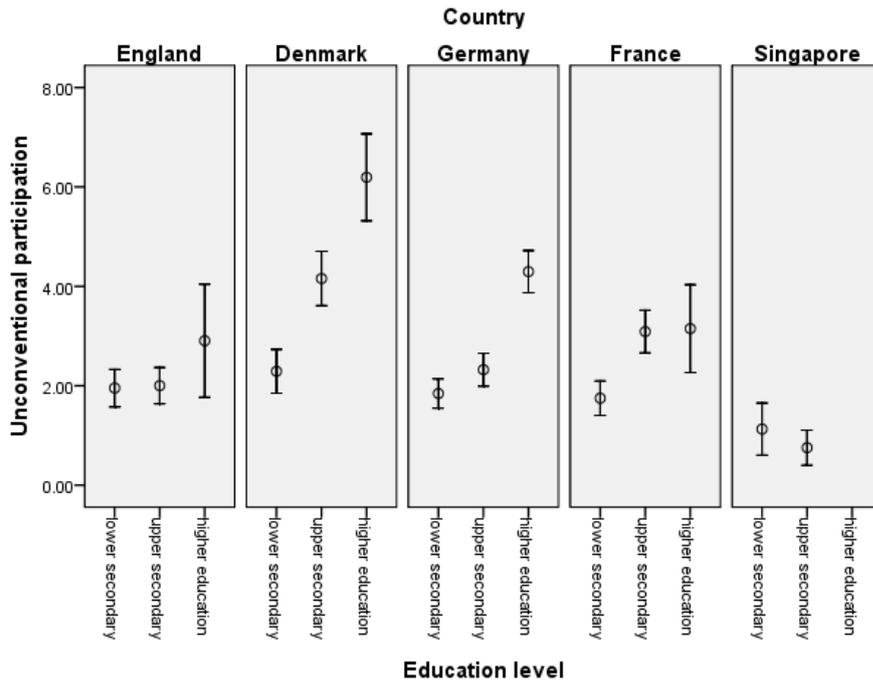
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
alternative politics sum index	2076	.00	10.00	2.5891	2.97447
Valid N (listwise)	2076				

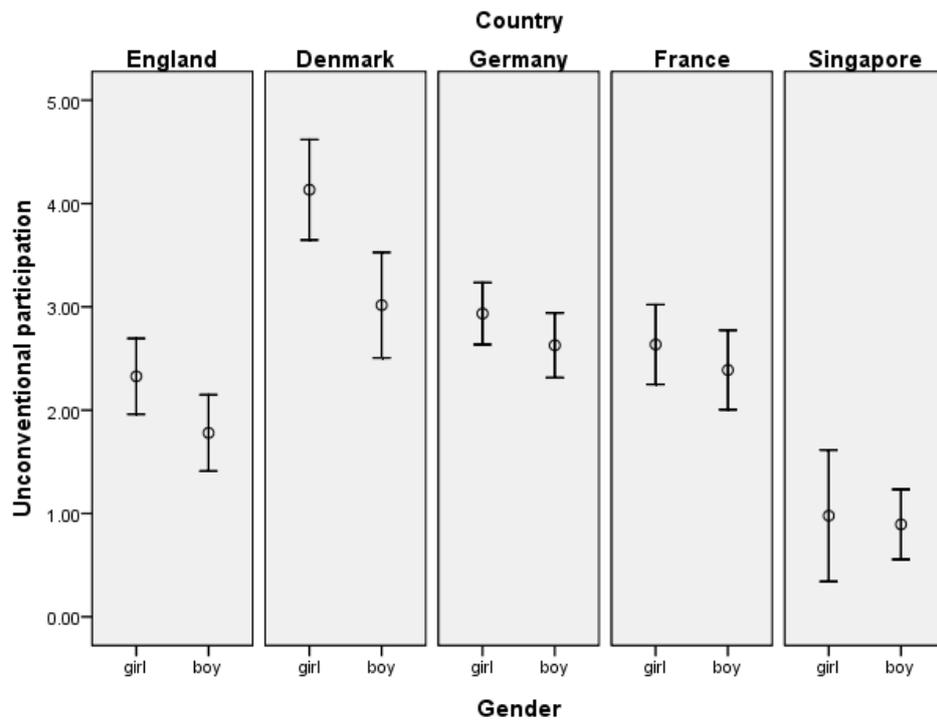
Unconventional participation: country means



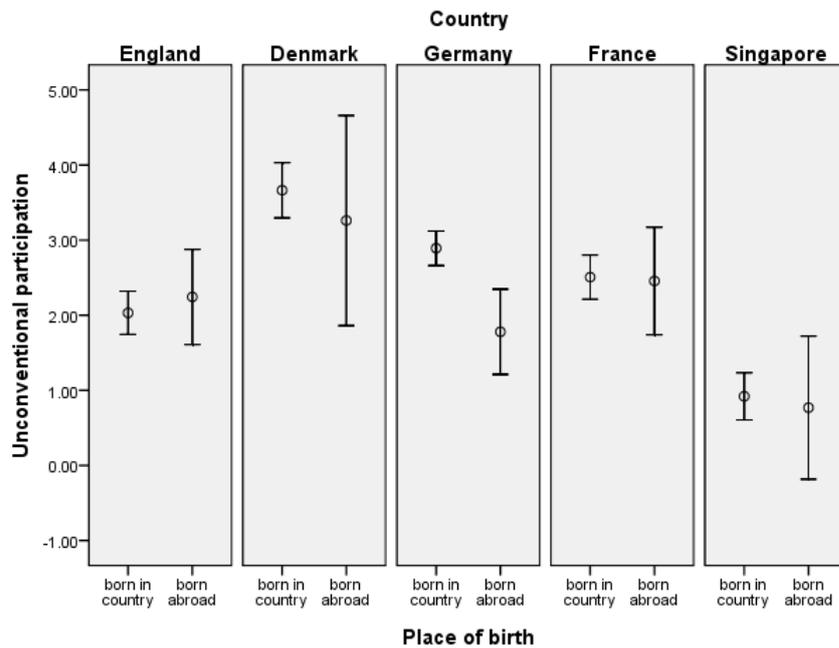
Unconventional participation: means by education level and country



Unconventional participation: means by gender and country



Unconventional participation: means by place of birth and country



Unconventional participation: correlations with social background

Country			Unconventional participation
England	number of books in family home	Pearson Correlation	.197**
		Sig. (1-tailed)	.000
		N	414
Denmark	number of books in family home	Pearson Correlation	.277**
		Sig. (1-tailed)	.000
		N	354
Germany	number of books in family home	Pearson Correlation	.191**
		Sig. (1-tailed)	.000
		N	722
France	number of books in family home	Pearson Correlation	.252**
		Sig. (1-tailed)	.000
		N	408
Singapore	number of books in family home	Pearson Correlation	.041
		Sig. (1-tailed)	.304
		N	158

** . Correlation is significant at the 0.01 level (1-tailed).

3.7. Belief in Gender Equality

Name of scale: **Belief in gender equality**

Items composing scale after factor and reliability analysis:

- 'Women should run for public office and take part in the government as men do.'
- 'Women should have the same rights as men in every way'
- *'Women should stay out of politics.'
- *'When jobs are scarce, 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]'
-

Answer categories: <disagree strongly> <disagree> <neither agree nor disagree>
<agree> <agree strongly>

* the answer categories were reversed to ensure that the items were all correlated positively to one another.

3.7.1 Interpretations of results

The scale on Belief in gender equality represents a construct with a high degree of internal consistency judging by the high loadings of the five items on the extracted component and by the high alpha value for the pooled data. The high alpha values for the individual countries mean that the scale is consistent across the five countries and can be assumed to measure the same concept across the board.

All youngsters appear to believe quite strongly in gender equality as their responses are closer to the maximum end of the scale than to the midpoint. However, in Singapore this support is significantly less than in European countries. The variation between France, Germany and Denmark is very small. England, however, has a significantly lower score than these three countries and Singapore in turn trails significantly behind England.

Belief in gender equality increases with education level in Denmark and Germany from lower school up to upper school and university. Whilst in Singapore and to a certain extent also in England, it decreases with education level between lower and upper school. In France belief in gender equality remains relatively stable across education levels.

Belief in Gender Equality is significantly higher by a considerable margin for girls in all countries studied compared to boys. In France the difference between boys and girls are the most extreme.

There are no statistically significant differences between migrant children compared to native youth in their belief in gender equality. In all countries except England levels are lower for the migrant children but the differences with the native group are not significant.

There is a positive and significant correlation between social background (measured by books at home) and Belief in gender equality for all countries considered. This is highest for Denmark and Singapore.

3.7.2 Results in tables and diagrams

Factor Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.151	63.021	63.021	3.151	63.021	63.021
2	.630	12.594	75.616			
3	.490	9.802	85.418			
4	.380	7.607	93.024			
5	.349	6.976	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
recoded female participation in election	.778
recoded gender quality female participation in politics	.839
access to employment when jobs are scarce	.810
recoded equal pay for men and women	.760
	.781

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Reliability analysis

**Reliability Statistics:
pooled data**

Cronbach's Alpha	N of Items
.849	5

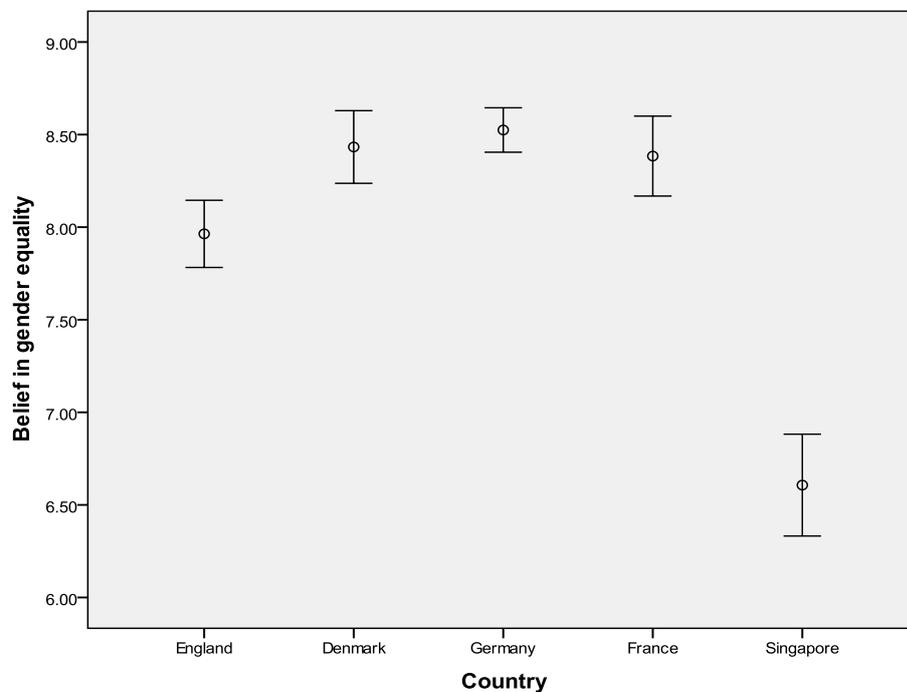
**Reliability Statistics:
individual country**

country of school	Cronbach's Alpha	N of Items
England	.828	5
Denmark	.818	5
Germany	.850	5
France	.876	5
Singapore	.742	5

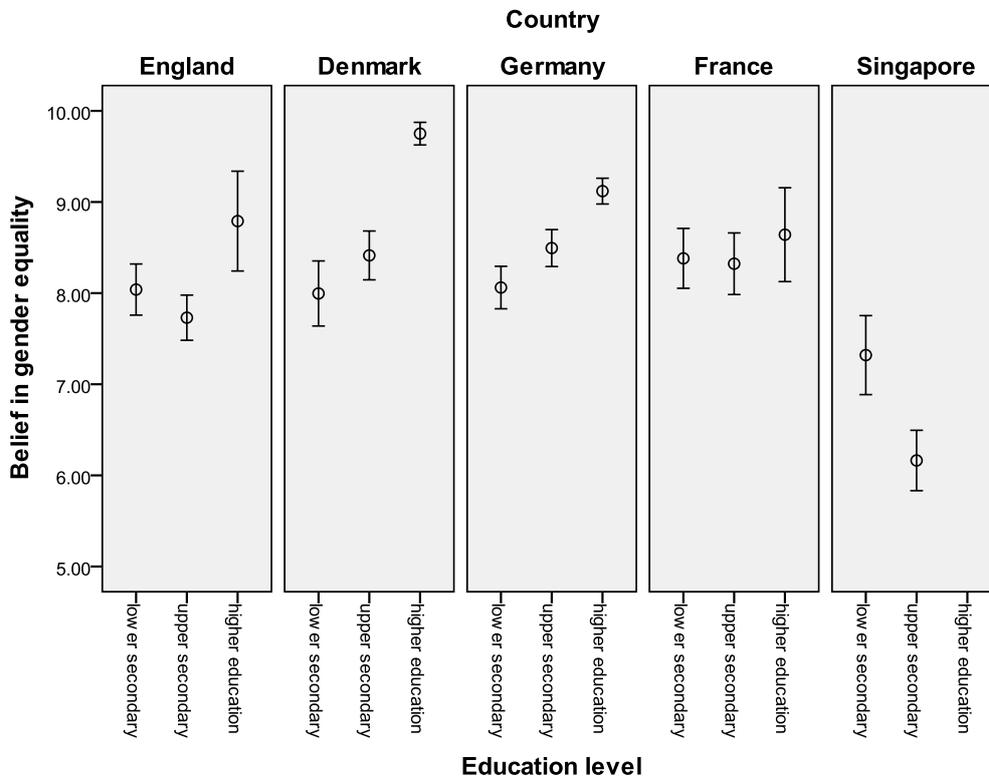
Descriptive statistics, error plots and correlations

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
belief in gender equality sum	2157	.00	10.00	8.2304	1.95882
Valid N (listwise)	2157				

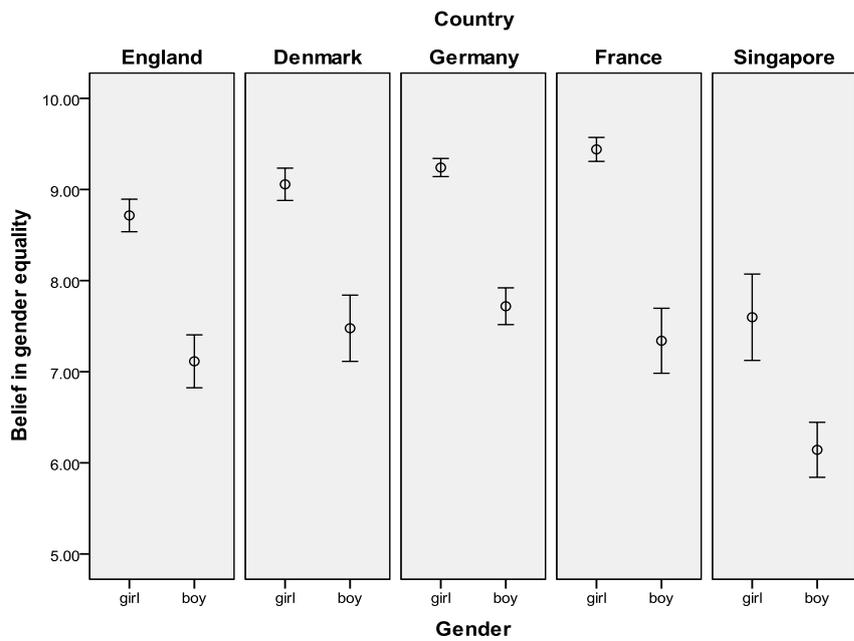
Belief in gender equality: country means



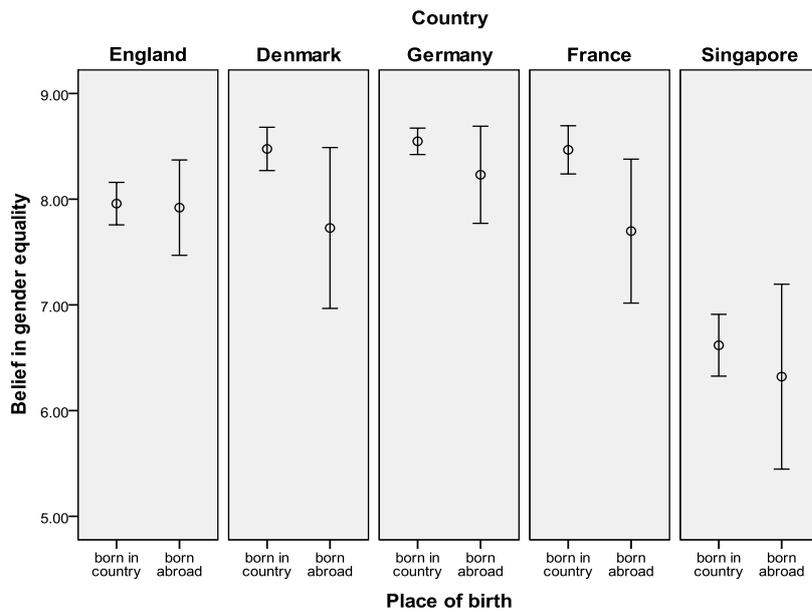
Belief in gender equality: means by education level and country



Belief in gender equality: means by gender and country



Belief in gender equality: means by place of birth and country



Belief in gender equality: correlations with social background

Country			belief in gender equality sum
England	number of books in family home	Pearson Correlation	.164**
		Sig. (2-tailed)	.001
		N	421
Denmark	number of books in family home	Pearson Correlation	.303**
		Sig. (2-tailed)	.000
		N	345
Germany	number of books in family home	Pearson Correlation	.147**
		Sig. (2-tailed)	.000
		N	798
France	number of books in family home	Pearson Correlation	.179**
		Sig. (2-tailed)	.000
		N	409
Singapore	number of books in family home	Pearson Correlation	.255**
		Sig. (2-tailed)	.001
		N	159

3.8. Future intention to vote

Name of scale: **Future intention to vote**

Items composing scale after factor and reliability analysis

When you are older, what do you expect that you will do?

- "Vote in national elections."
- "Get information about candidates before voting in an election."

Answer categories: <I will certainly not do this>, <I will probably not do this>, <I will probably do this>, <I will certainly do this>

3.8.1. Interpretations of results

This two item scale has a high reliability with high factor loadings for each item. The reliability analysis reveals that the scale has good alpha values in all the countries studied (higher than .7). Thus the scale represents a coherent construct across the countries.

Youngsters in the European countries appear to be more favourable towards future voting than not. The mean in Singapore is just slightly above the mid-point score suggesting a very slight tilt towards positive rather than negative intentions. This indicates that most youngsters in that country have neither very positive nor very negative views about voting. Denmark and France have the most positive views about future voting while youngsters in England and Germany are more sceptical. In Singapore the young people are the most sceptical.

In France and Germany there is a significant increase in intention to vote with an increase in education level. In England, Denmark and Singapore there are no significant differences. In England the intention actually decreases, however, this is not significant.

Only in Denmark are migrant students significantly less likely to vote than native students. By contrast In England they are more positive than native students but this difference is not significant. Girls are slightly more positive than boys about future voting in all countries but in none of the five countries is this difference significant.

Social background has a positive and significant relationship with intention to vote in all European countries. However, in Singapore it is completely unrelated to the intention to vote.

3.8.2. Results in tables

Factor analysis

Total Variance Explained							
Component		Initial Eigenvalues			Extraction Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
dimension 0	1	1.688	84.375	84.375	1.688	84.375	84.375
	2	.312	15.625	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix ^a	
	Component
	1
vote in national elections	.919
get candidate information before voting	.919

Extraction Method: Principal Component Analysis.

a. 1 component extracted.

Reliability analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.815	2

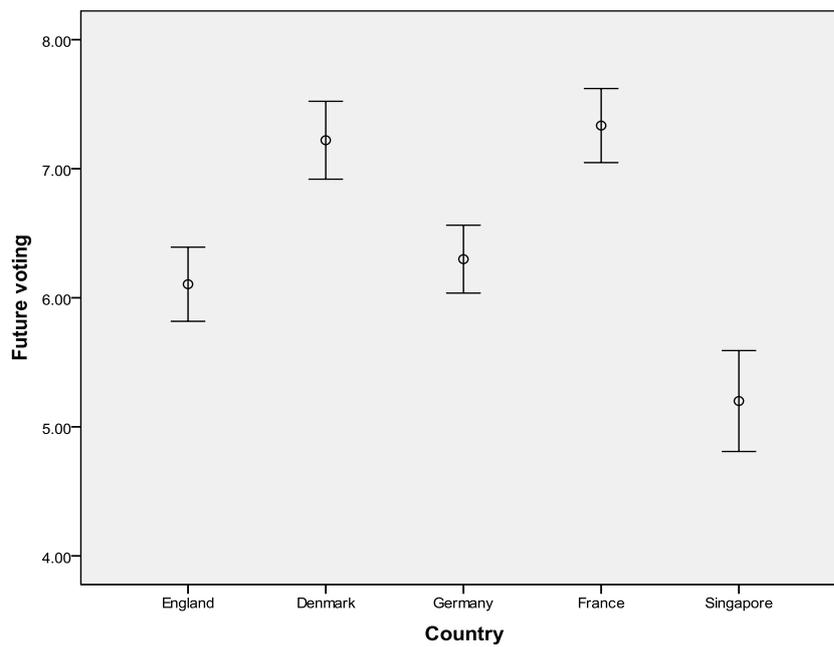
Reliability Statistics		
country of school	Cronbach's Alpha	N of Items
England	.836	2
Denmark	.791	2
Germany	.836	2
France	.776	2
Singapore	.799	2

Descriptive statistics, error plots and correlations

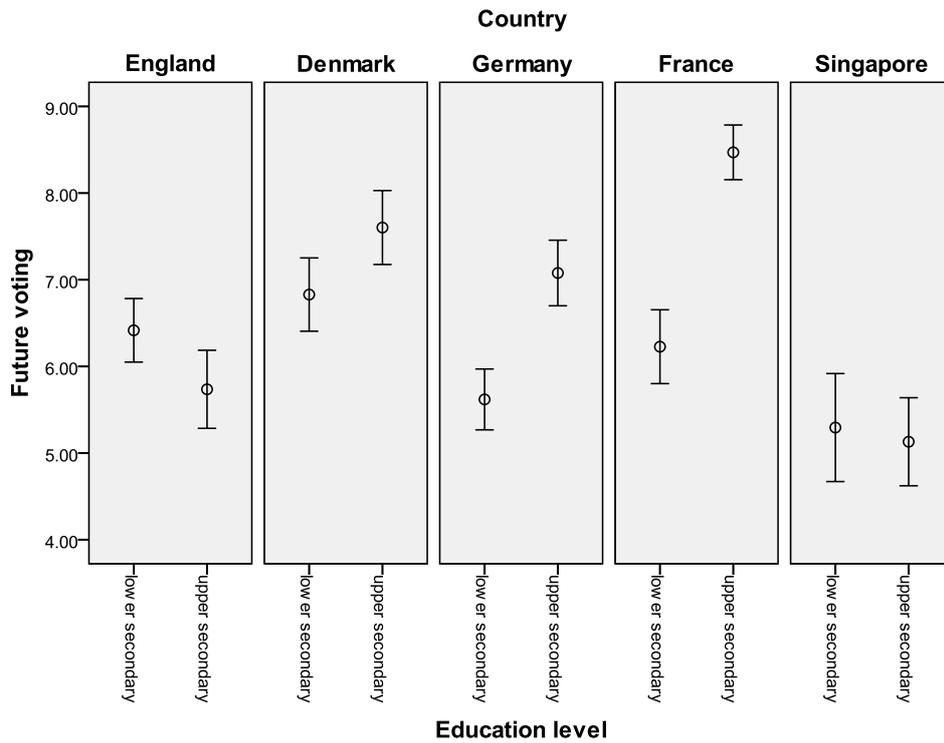
Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
future voting and information on candidates factor score	2044	-2.0590	1.1048	.0000000	1.0000000
Valid N (listwise)	2044				
Missing values	495				

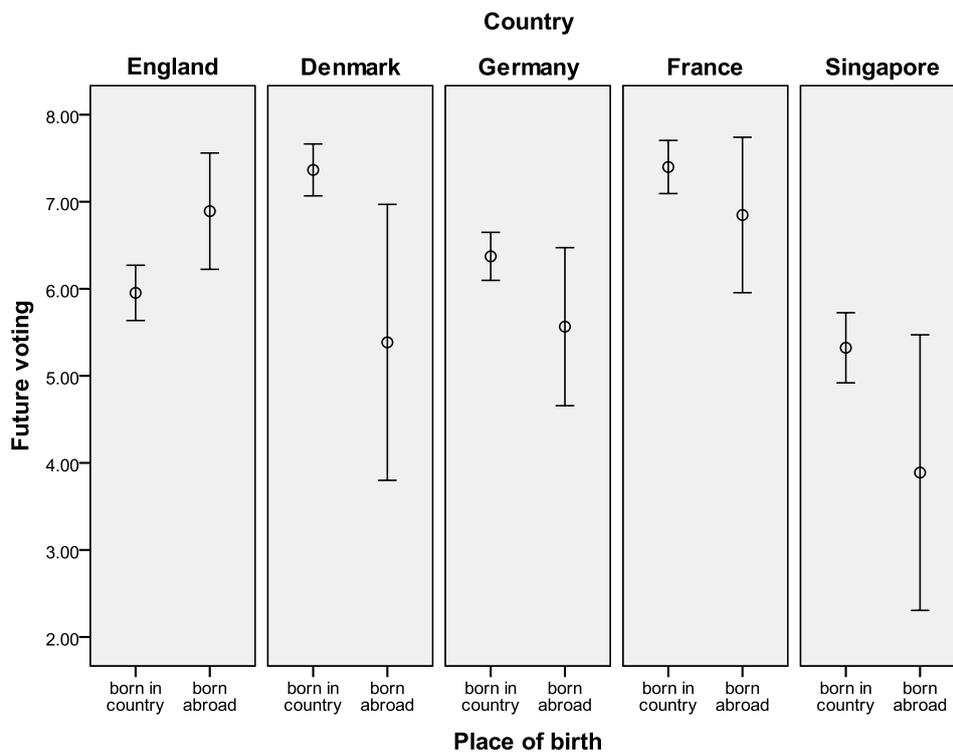
Future intention to vote: country means



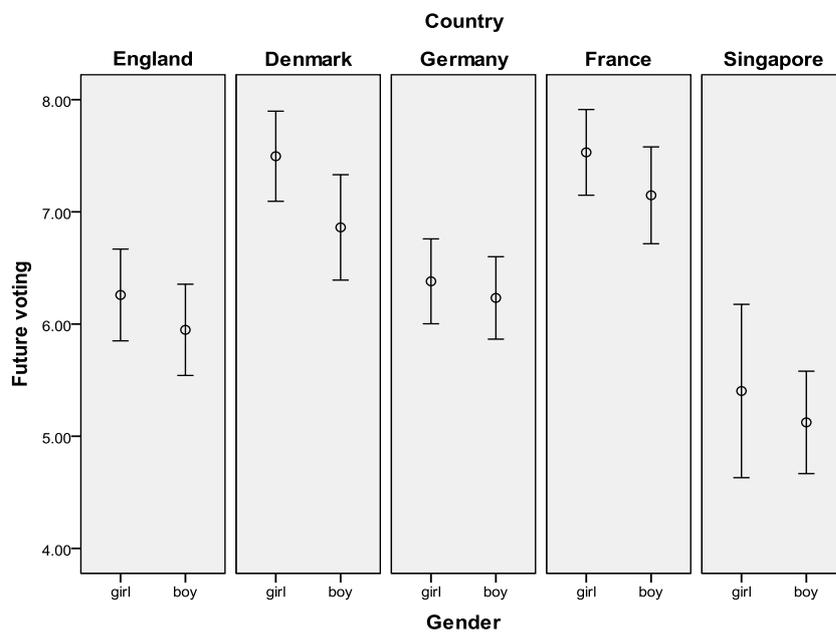
Future intention to vote: means by education level and country



Future intention to vote: means by place of birth and country



Future voting: means by gender and country



Future voting: correlations with social background

Correlations

Country			future voting sum index
England	number of books in family home	Pearson Correlation	.311**
		Sig. (1-tailed)	.000
		N	461
Denmark	number of books in family home	Pearson Correlation	.434**
		Sig. (1-tailed)	.000
		N	352
Germany	number of books in family home	Pearson Correlation	.271**
		Sig. (1-tailed)	.000
		N	616
France	number of books in family home	Pearson Correlation	.277**
		Sig. (1-tailed)	.000
		N	397
Singapore	number of books in family home	Pearson Correlation	.046
		Sig. (1-tailed)	.258
		N	200

** . Correlation is significant at the 0.01 (1-tailed).

3.9. Online participation

Name of scale: **online participation**

Items composing scale after factor and reliability analysis:

“During the last 12 months, have you done any of the following?”

- “forwarded an e-mail to a friend or relative about social or political problems?”
- “participated in an online discussion platform about social or political problems?”
- “worked on a website or webpage on which you state your opinions on social and political problems?”

Answer categories: <yes> <no> <don't know>

The “don't know” responses were recoded as missing.

3.3.1. Interpretations of results

The scale has only average alpha values indicating that it is not that robust in terms of internal consistency.

Overall levels of online participation are very low. In all countries the participation levels are on average less than 1 activity in the last 12 months. England and Denmark show the highest levels of participation. These levels are significantly higher than those of France and Germany. Singapore's mean is lower than that of England and Denmark but is not significantly different.

Levels of education do not have a significant effect on the levels of participation, although in England with the increase in levels of education there is an increase in the mean levels of participation. There are no significant differences for migrants compared to those who are born in the country. Neither are there significant gender differences, although in England girls participate more than boys and this is very close to being a significant result.

Social Background is significantly related to online participation in Denmark, Germany and France but not in Singapore.

3.3.2. Results in tables and diagrams

Factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
dim 1	1.675	55.845	55.845	1.675	55.845	55.845
ensi 2	.713	23.766	79.611			
on0 3	.612	20.389	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
Forwarded email	.716
participated in online discussion	.780
worked on a website	.744

Extraction Method: Principal Component Analysis.

a. 1 component extracted.

Reliability analysis

Reliability Statistics

Country	Cronbach's Alpha	N of Items
England	.576	3
Denmark	.591	3
Germany	.529	3
France	.628	3
Singapore	.656	3

Reliability Statistics

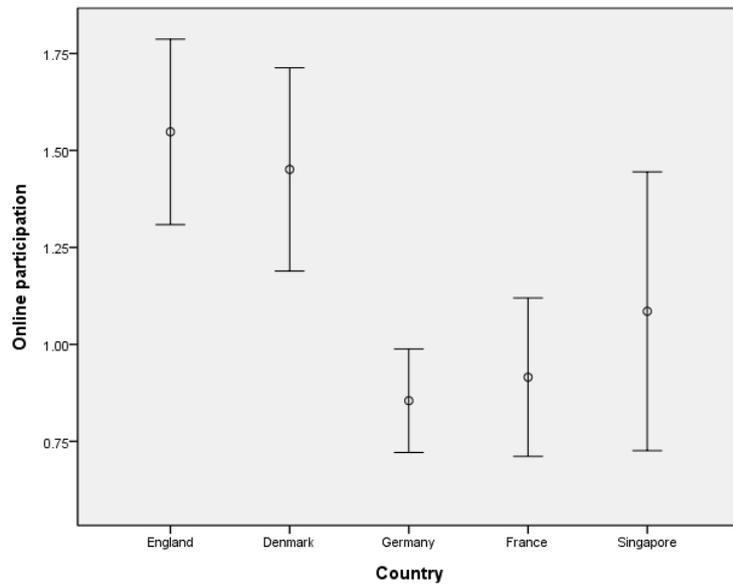
Cronbach's Alpha	N of Items
.585	3

Descriptive statistics, error plots and correlations

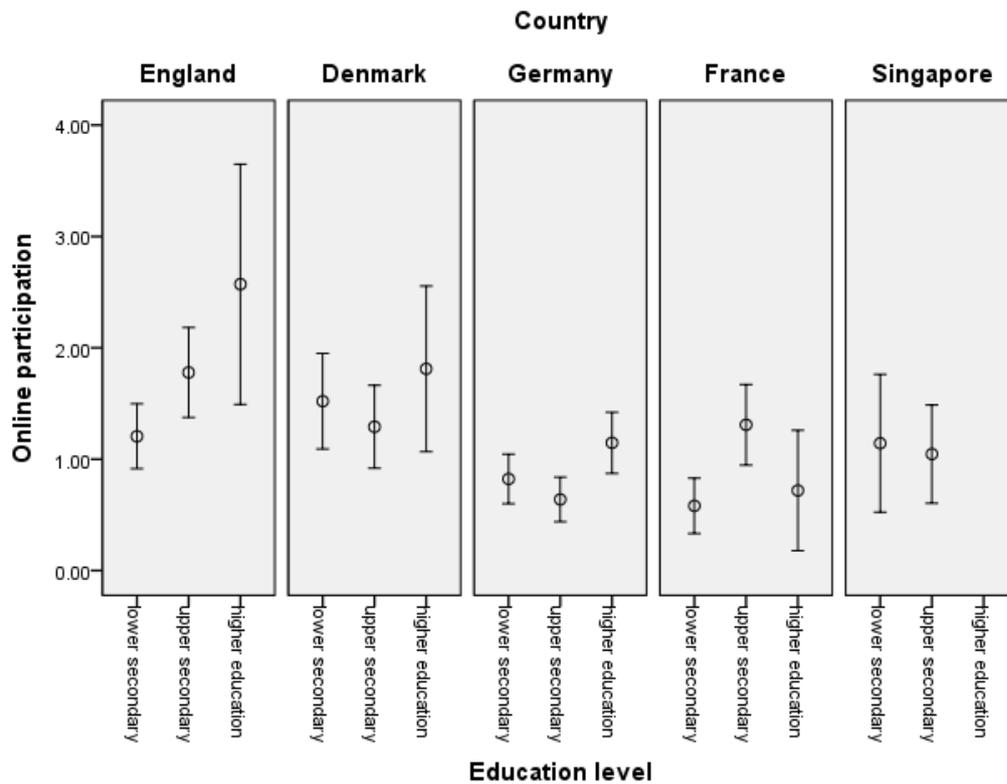
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Technological participation	2305	.00	10.00	1.1208	2.31202
Valid N (listwise)	2305				
Missing	234				

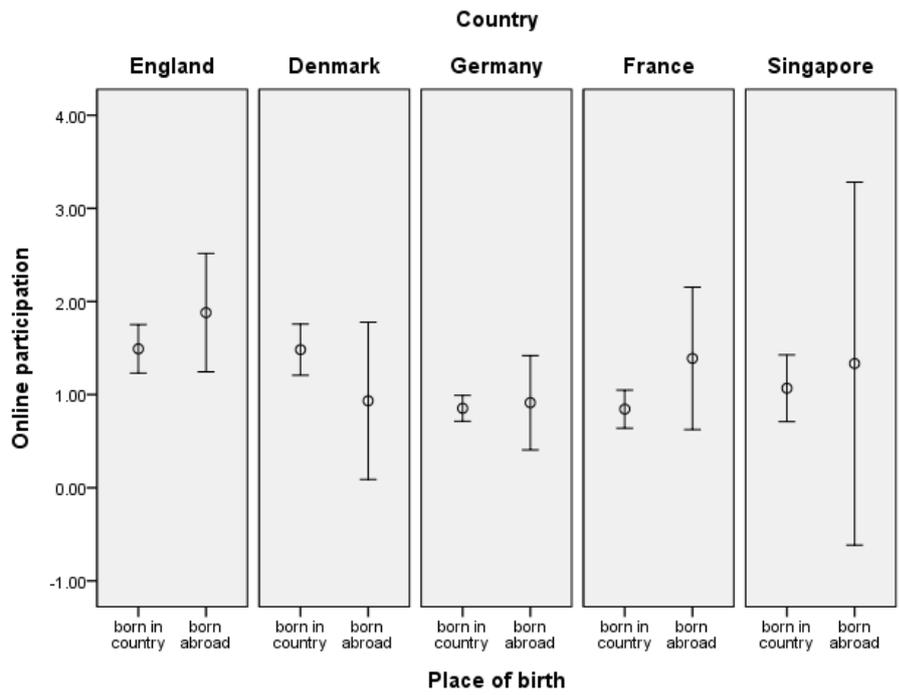
Online participation: country means



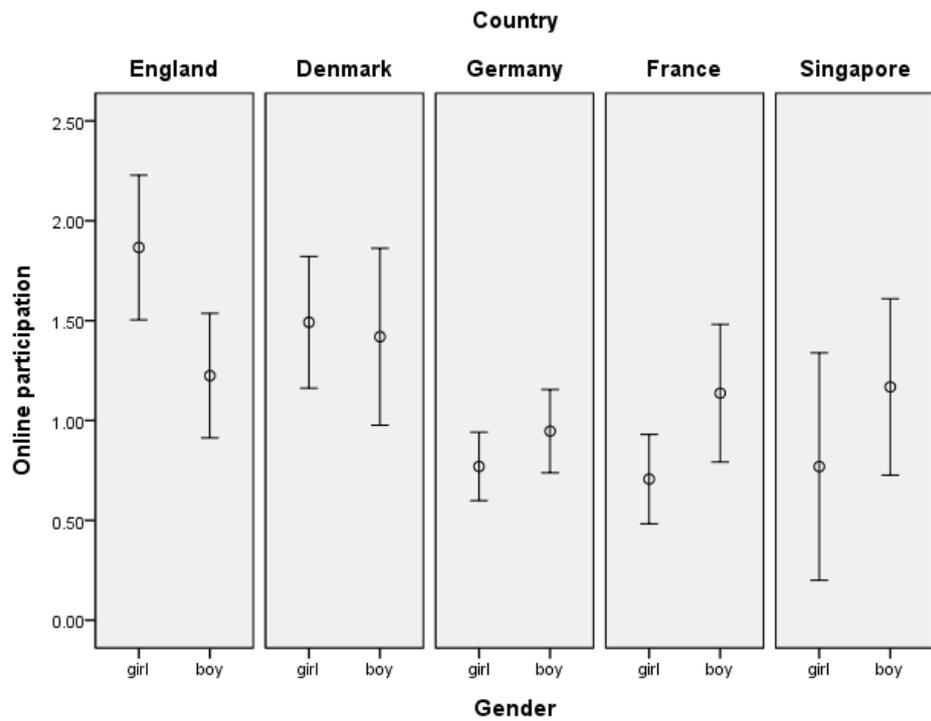
Online participation: means by education level and country



Online participation: means by place of birth and country



Online participation: means by gender and country



Online participation: correlations with social background

Correlations

Country			technological participation
England	number of books in family home	Pearson Correlation	.072
		Sig. (1-tailed)	.063
		N	458
Denmark	number of books in family home	Pearson Correlation	.163**
		Sig. (1-tailed)	.001
		N	376
Germany	number of books in family home	Pearson Correlation	.100**
		Sig. (1-tailed)	.002
		N	842
France	number of books in family home	Pearson Correlation	.112**
		Sig. (1-tailed)	.010
		N	437
Singapore	number of books in family home	Pearson Correlation	-.008
		Sig. (1-tailed)	.458
		N	172

** . Correlation is significant at the 0.01 level (1-tailed).

3.10. Future community participation

Name of scale: **future community activism**

Items composing scale after factor and reliability analysis:

What do you expect that you will do over the next few years?

- "Volunteer time to help people in the community."
- "Collect money for a cause."
- "Collect signatures for a petition."

answer categories: <I will certainly not do this>, <I will probably not do this>, <I will probably do this>, <I will certainly do this>

3.10.1. Interpretations of results

The scale represents a very coherent construct, both overall and in each country, given the high factor loadings of the items and the high alpha reliabilities for both the pooled data and for the data of individual countries.

Only the mean of English youngsters is above the mid-point of the scale and therefore represents slightly more positive than negative attitudes on future community activism. France and Singapore are not significantly lower but Denmark and Germany are significantly

lower than the English mean and are more negative than positive about future community activism.

Educational attainment does not significantly enhance the chance for future community activism. In France there is an increase with education levels and this is almost significant.

In England, migrants are significantly more likely to be engaged in community activities than those who are born in the country. However, there are no significant differences for the remaining countries.

In all countries girls have higher levels of intention to participate than boys and in all the European countries this result is significant.

Social background is significantly related to future community participation in England and Denmark.

3.10.2. Results in tables and diagrams

Factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
dim 1	1.898	63.250	63.250	1.898	63.250	63.250
ensi 2	.645	21.511	84.761			
on0 3	.457	15.239	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
volunteer in community	.805
collect money for cause	.838
collect signatures for petition	.740

Extraction Method: Principal Component Analysis.

a. 1 component extracted.

Reliability analysis

Reliability Statistics:

Pooled data

Cronbach's Alpha	N of Items
.709	3

Reliability Statistics

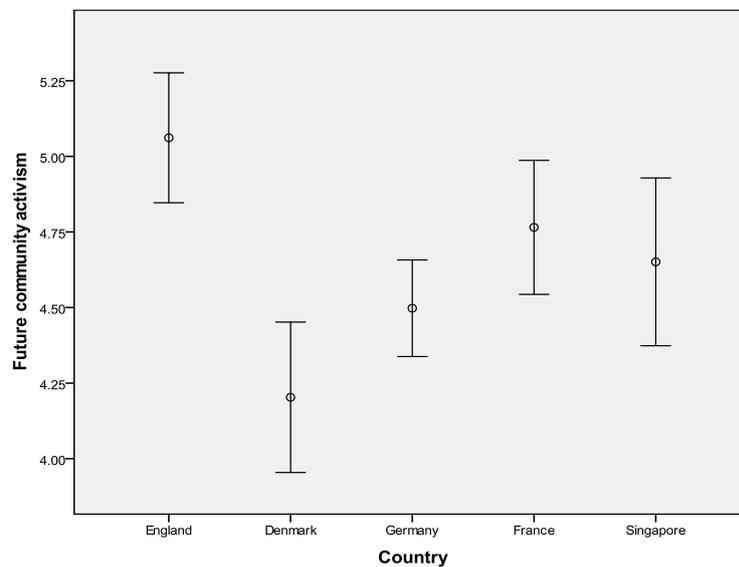
Country	Cronbach's Alpha	N of Items
England	.749	3
Denmark	.786	3
Germany	.704	3
France	.644	3
Singapore	.674	3

Descriptive statistics, error plots and correlations

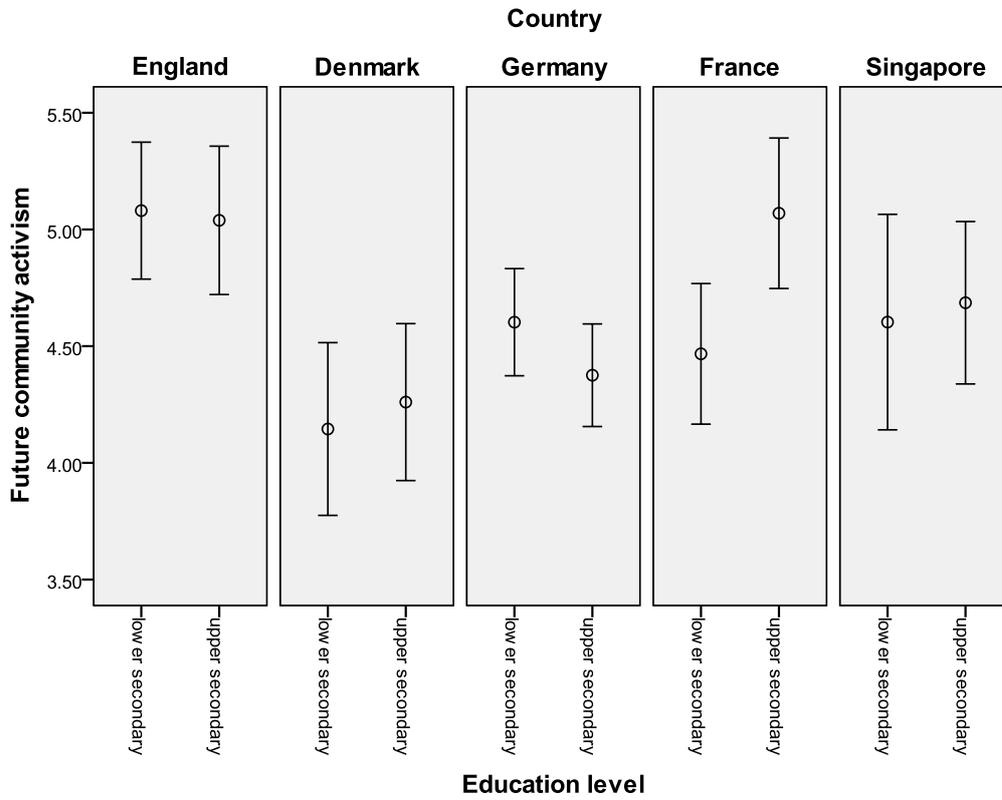
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
future community activism sum	2011	.00	10.00	4.6445	2.20569
Valid N (listwise)	2011				
Missing values	528				

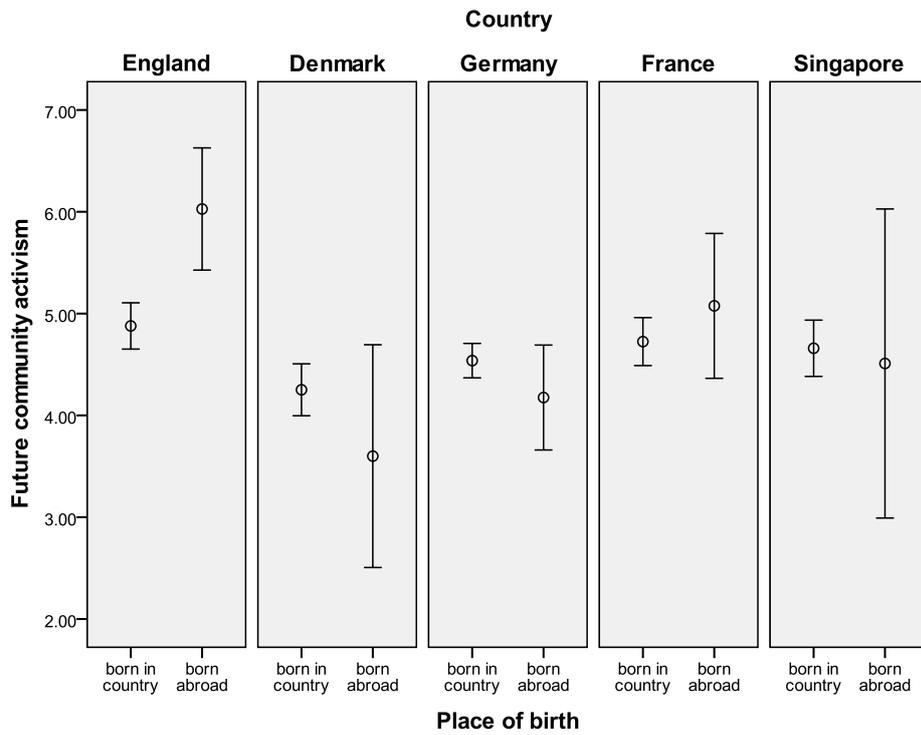
Future community activism: country means



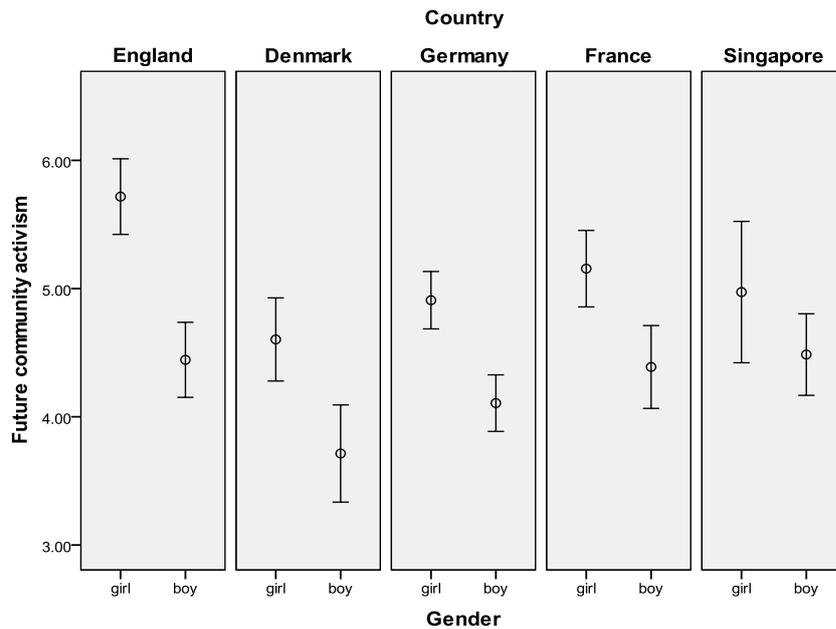
Future community activism: means by education level and country



Future community activism: means by place of birth and country



Future community activism: means by gender and country



Future community activism: correlations with social background

Correlations

Country			future community activism
England	number of books in family home	Pearson Correlation	.256**
		Sig. (1-tailed)	.000
		N	457
Denmark	number of books in family home	Pearson Correlation	.250**
		Sig. (1-tailed)	.000
		N	334
Germany	number of books in family home	Pearson Correlation	.052
		Sig. (1-tailed)	.100
		N	616
France	number of books in family home	Pearson Correlation	.083
		Sig. (1-tailed)	.051
		N	388
Singapore	number of books in family home	Pearson Correlation	.038
		Sig. (1-tailed)	.296
		N	199

** . Correlation is significant at the 0.01 level (1-tailed).