**APPENDIX**
*A Comparative Analysis of 'Good Citizenship'*


**I. ICCS Survey Information**

**Good citizenship**
*'How important are the following behaviours for being a good adult citizen?'*
Possible responses: 1=very important; 2=quite important; 3=not very important; 4=not important at all.
Responses 1 and 2 were recoded as '1'; responses 3 and 4 were recoded as '0'.

| Variable Name | Survey Question |
|---|---|
| vote | Voting in every national election |
| party | Joining a political party |
| history | Learning about the country's history |
| news | Following political issues in the newspaper, on the radio, on TV or on the internet |
| respect | Showing respect for government representatives |
| discuss | Engaging in political discussions |
| protest | Participating in peaceful protests against laws believed to be unjust |
| local | Participating in activities to benefit people in the <local community> |
| rights | Taking part in activities promoting human rights |
| envir. | Taking part in activities to protect the environment |
| work | Working hard |
| obey | Always obeying the law |

**Political interest**
*'How interested are you in the following issues?'* (Not at all interested, not very interested, quite interested, very interested).
- Political issues within your local community
- Political issues in your country
- Social issues in your country
- Politics in other countries
- International politics

Sumscale (load on one factor; eigenvalue=3.198; % explained variance=63.95).

**Political efficacy**
*'How much do you agree or disagree with the following statements about you and politics?'* (Strongly disagree, disagree, agree, strongly agree)
- 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 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

Sumscale (load on one factor; eigenvalue=3.309 ; % explained variance=55.15)

**Political trust**
*'How much do you trust each of the following groups or institutions?'* (Not at all, a little, quite a lot, completely)
- The national government of country
- National parliament
- Political parties
- The local government of your city or town

Sumscale (load on one factor; eigenvalue=2.614; % explained variance=65.36).

**Generalized trust**
How much do you trust each of the following groups or institutions?
(Not at all, a little, quite a lot, completely)
- People in general

## II. Supplementary Data Analysis Specification Information

**1. The ICCS and US data:** The US Department of Education decided not to take part in the ICCS, and therefore a direct comparison with the US data assembled by Dalton is not possible with this dataset. The additional survey projects that have been an important data source for scholars of citizenship norms include the European Social Survey in 2002 which was the template used and added to by the US CID; and the International Social Survey Programme in 2004. The ISSP includes more questions on social order and solidarity, while the ICCS includes more questions on participation. These two surveys have in common, however, that they included a number of questions that overlap with (but are not always identical to) the US CID, and both lack items tapping into the broad principle of 'autonomy' that, as noted, might be less relevant for adolescents.

**2. Factor analysis vs. latent class analysis findings for data:** While factor analysis can be useful for identifying contrasting linear dimensions (i.e. factors) in the data, it is less useful for identifying groups of respondents who have shared characteristics, like citizenship norms, across a broad set of indicators. Reviewing the factor analysis findings of the ICCS data helps to explain why this is so. A non-rotated factor analysis on the indicators of good citizenship used in our analysis shows that all items to a large extent load on the same factor, and that there are strong cross loads with other factors that could be distinguished. The LCA findings reported in this article indicate that the non-rotated solution's strong loading on one factor is likely driven by the responses of the three unexpected normative types that have not received attention in the literature (namely, 'all-around', 'respectful', and 'subject'). Adding a varimax rotation to the factor analysis is a common approach on this topic, and doing so with the ICCS data also yields three factors which are more differentiated, but do not clearly correspond to the engaged and duty-based concepts in the literature. Instead of using rotated solutions that emphasize the contrasting norms that do indeed exist in the research population on separate survey items, the LCA findings in this article show that analyzing the comprehensive normative concepts actually adhered to by distinctive groups of respondents allows for a more rigorous empirical analysis of what makes engaged and duty-based citizens unique.

**3. LCA model fit comparison of five-group and four-group solutions:** Although the five-group solution does have improved goodness of fit in comparison to the four-group solution, LCA model fit can also be informed by considering the theoretical relevance of alternate solutions. Our comparison of the substantive results of the four and five-group solutions indicates that the five-group solution includes the same citizenship norm types identified in the four-group solution (all-around, engaged, duty-based and subject), and adds to this an additional fifth group (respectful) that is theoretically interesting in its normative profile and its country distribution. The five-group option is therefore preferable according to fit statistics, as well as its identification of a theoretically informative citizenship norm type. Results are available from the authors.

**4**. **The data on GDP per capita:** these data refer to 2008 and are taken from the IMF. Data from Liechtenstein is missing and was included from the Worldbank. The correlation between IMF and Worldbank measures of GDP is 0.999. 'Years of democracy' was taken for the POLITY IV 2011 dataset and includes the number of years a country has a score on the democracy index of 8 or higher (Marshall, Gurr, and Jaggers, 2011).

**Table A1.** Descriptive statistics of independent variables

| | N | Mean | Std. Dev | Min. | Max. |
|---|---|---|---|---|---|
| Gender =Female | 107,176 | 0.511 | 0.500 | 0 | 1 |
| Books at home | 107,176 | 0.300 | 0.458 | 0 | 1 |
| < 25 books | 107,176 | 0.329 | 0.470 | 0 | 1 |
| 25-100 books | 107,176 | 0.371 | 0.483 | 0 | 1 |
| > 100 books | 107,176 | 0.708 | 0.455 | 0 | 1 |
| Post-secondary educational goal | 107,176 | 1.374 | 0.765 | 0 | 3 |
| Media use | 107,176 | 1.414 | 0.701 | 0 | 3 |
| Political interest | 107,176 | 1.645 | 0.637 | 0 | 3 |
| Political trust | 107,176 | 1.428 | 0.618 | 0 | 3 |
| Political efficacy | 107,176 | 0.577 | 0.494 | 0 | 1 |
| Generalised trust | 107,176 | 37.098 | 31.786 | 0 | 90 |
| Years Stable Democracy | 107,176 | 271.225 | 228.093 | 21.807 | 1025.245 |
| GDP/capita | 107,176 | 0.511 | 0.500 | 0 | 1 |

**Table A2.** Distribution of Citizenship Norms Across Countries

|  |  | All-around (32%) | Engaged (25%) | Duty-based (20%) | Respectful (18%) | Subject (6%) |
|---|---|---|---|---|---|---|
| AUT | Austria | 17 | 26 | 41 | 07 | 08 |
| BFL | Belgium (Dutch) | 14 | 51 | 23 | 02 | 11 |
| BGR | Bulgaria | 21 | 56 | 06 | 12 | 04 |
| CHE | Switzerland | 18 | 20 | 46 | 08 | 09 |
| CHL | Chile | 20 | 26 | 09 | 41 | 04 |
| COL | Colombia | 20 | 23 | 04 | 51 | 02 |
| CYP | Cyprus | 44 | 10 | 30 | 10 | 05 |
| CZE | Czech Republic | 15 | 63 | 10 | 00 | 11 |
| DNK | Denmark | 13 | 16 | 45 | 16 | 10 |
| DOM | Dominican Rep. | 23 | 04 | 13 | 60 | 01 |
| ENG | United Kingdom | 34 | 28 | 26 | 04 | 08 |
| ESP | Spain | 29 | 36 | 15 | 16 | 05 |
| EST | Estonia | 14 | 47 | 19 | 13 | 07 |
| FIN | Finland | 13 | 47 | 19 | 07 | 14 |
| GRC | Greece | 33 | 40 | 23 | 02 | 03 |
| GTM | Guatemala | 29 | 10 | 04 | 56 | 01 |
| HKG | Hong Kong | 45 | 16 | 19 | 16 | 04 |
| IDN | Indonesia | 43 | 00 | 10 | 47 | 00 |
| IRL | Ireland | 39 | 26 | 18 | 12 | 05 |
| ITA | Italy | 52 | 05 | 20 | 21 | 01 |
| KOR | Korea | 71 | 06 | 19 | 00 | 03 |
| LIE | Liechtenstein | 14 | 23 | 44 | 09 | 10 |
| LTU | Lithuania | 28 | 15 | 33 | 19 | 04 |
| LUX | Luxembourg | 22 | 20 | 39 | 10 | 09 |
| LVA | Latvia | 35 | 23 | 36 | 03 | 04 |
| MEX | Mexico | 41 | 18 | 17 | 20 | 04 |
| MLT | Malta | 24 | 22 | 24 | 26 | 05 |
| NLD | Netherlands | 16 | 28 | 42 | 01 | 13 |
| NOR | Norway | 44 | 20 | 15 | 17 | 04 |
| NZL | New Zealand | 29 | 24 | 27 | 10 | 09 |
| POL | Poland | 32 | 11 | 29 | 24 | 04 |
| PRY | Paraguay | 19 | 14 | 08 | 57 | 02 |
| RUS | Russia | 36 | 10 | 23 | 27 | 04 |
| SVK | Slovakia | 15 | 59 | 16 | 01 | 10 |
| SVN | Slovenia | 19 | 43 | 21 | 08 | 10 |
| SWE | Sweden | 21 | 47 | 17 | 02 | 14 |
| THA | Thailand | 69 | 01 | 14 | 15 | 01 |
| TWN | Taiwan | 40 | 47 | 04 | 04 | 05 |

Entries are the percentage of respondents in a country that belongs to one of the five latent classes identified in the LCA analysis (Table 2 and Figure 1).

**Table A3.** Multilevel Multinomial Model Explaining Citizenship Types

| | Engaged | | | Subject | | | Respectful | | | All-around | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | B | B | B | B | B | B | B | B | B | B | B |
| Individual level | (S.E.) | (S.E.) | (S.E.) | (S.E.) | (S.E.) | (S.E.) | (S.E.) | (S.E.) | (S.E.) | (S.E.) | (S.E.) | (S.E.) |
| Female | 0.159*** | 0.155*** | 0.016*** | -0.112 | -0.140* | -0.115* | 0.204*** | 0.194*** | 0.203*** | 0.094** | 0.083* | 0.094** |
| | (0.033) | (0.036) | (0.032) | (0.057) | (0.065) | (0.057) | (0.032) | (0.032) | (0.032) | (0.031) | (0.034) | (0.030) |
| SES proxy [a] | | | | | | | | | | | | |
|   < 25 books | -0.186*** | -0.198*** | -0.168** | -0.051 | 0.031 | -0.002 | 0.241*** | 0.079 | 0.159* | -0.075 | -0.092 | -0.097 |
| | (0.052) | (0.045) | (0.056) | (0.069) | (0.048) | (0.062) | (0.065) | (0.049) | (0.064) | (0.062) | (0.050) | (0.058) |
|   25-100 books | -0.048 | -0.051 | -0.039 | -0.051 | -0.031 | -0.027 | 0.118* | 0.045 | 0.079 | -0.039 | -0.044 | -0.049 |
| | (0.033) | (0.030) | (0.031) | (0.043) | (0.035) | (0.043) | (0.050) | (0.044) | (0.050) | (0.042) | (0.039) | (0.042) |
| Education goal [b] | 0.029 | 0.028 | 0.045 | -0.105* | -0.052 | -0.069 | 0.092 | 0.061 | 0.063 | 0.068 | 0.067 | 0.064 |
| | (0.046) | (0.046 | (0.049) | (0.053) | (0.050) | (0.047) | (0.057) | (0.051) | (0.058) | (0.048) | (0.042) | (0.042) |
| Media use | 0.048* | 0.060** | 0.050* | -0.094** | -0.078* | -0.075* | 0.070* | 0.040 | 0.046 | -0.017 | -0.021 | -0.028 |
| | (0.023) | (0.022) | (0.023) | (0.032) | (0.036) | (0.032) | (0.031) | (0.038) | (0.034) | (0.038) | (0.037) | (0.021) |
| Political interest | -0.088* | -0.066 | -0.072 | -0.335*** | -0.334*** | -0.301*** | 0.148*** | 0.120** | 0.131** | 0.276*** | 0.301*** | 0.278*** |
| | (0.037) | (0.041) | (0.040) | (0.056) | (0.054) | (0 .058) | (0.037) | (0.038) | (0 .0410) | (0.049) | (0.046) | (0.036) |
| Institutional trust | -0.046 | -0.064* | -0.049 | -0.233*** | -0.287*** | -0.267*** | 0.063 | 0.106** | 0.107** | 0.094 | 0.092* | 0.114** |
| | (0.029) | (0.029) | (0.031) | (0.038) | (0.040) | (0 .039) | (0.049) | (0.034) | (0.040) | (0.034) | (0.035) | (0.043) |
| Internal efficacy | -0.127*** | -0.139*** | -0.129*** | -0.266*** | -0.266*** | -0.257*** | 0.067 | 0.023 | 0.050 | 0.069* | 0.031 | 0.060 |
| | (0.027) | (0.025) | (0.026) | (0.039) | (0.033) | (0.033) | (0.035) | (0.039) | (0.034) | (0.027) | (0.028) | (0 .033) |
| Generalized trust | 0.140*** | 0.132*** | 0.134*** | 0.084* | 0.055 | 0.074 | 0.010 | 0.037 | 0.013 | 0.076** | 0.077** | 0.074** |
| | (0.033) | (0.034) | (0.035) | (0.039) | (0.042) | (0.040) | (0.038) | (0.032) | (0.039) | (0.021) | (0.018) | (0 .026) |
| **Country level** | | | | | | | | | | | | |
| GDP/capita | | -0.000** | | | 0.000 | | | -0.001*** | | | -0.001*** | |
| | | (0.000) | | | (0.000) | | | (0.000) | | | (0.000) | |
| Democracy (years stable) | | | -0.005** | | | -0.002 | | | -0.012*** | | | -0.008*** |
| | | | (0.002) | | | (0.001) | | | (0.002) | | | (0.001) |
| Constant | 0.003 | 0.193** | 0.071 | -1.314*** | -1.184*** | -1.309*** | -0.510*** | -0.283*** | -0.338*** | 0.281** | 0.467*** | 0.398*** |
| | (0.074) | (0.064) | (0.071) | (0.085) | (0.078) | (0.082) | (0.092) | (0.081) | (0.094) | (0.089) | (0.064) | (0.080) |

*Source:* 2009 ICCS. n= 107,176; 34 countries. *Notes:* Results of a multilevel multinomial logistic regression analysis. Reference category = duty-based citizens. Log likelihood$_{M1}$= 152,824.98. Log likelihood$_{M2}$ = -143,137.94. . Log likelihood$_{M3}$ = -152,499.06. Variance$_{M1}$: 0.063 (0.005). Variance$_{M2}$: 0.045 (0.003). Variance$_{M3}$: 0.054 (0.001). [a.] Reference category is '>100 books'. [b.] Reference category is tertiary education. *p < 0.05. **p < 0.01. ***p < 0.001.