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The perceived quality, fairness of and corruption in education in Europe

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ABSTRACT

Although education is arguably one of the most central institutions in contemporary European societies, only recently scholars have started to study opinions that relate to the perceived legitimacy of education among the public at large. This paper contributes to this emerging literature. Based on data from the most recent wave of the European Quality of Life Survey (N = 23,073; 30 countries) we assess what individual- and country-level factors predict citizens' satisfaction with educational quality and the perceived fairness of corruption in education. At the individual level, we find that indicators of one's material vs. educational position are inversely related to the perceived quality, fairness, and corruption of the education system. At the macro level, it turns out that in countries that perform better on PISA tests the perceived educational quality is higher and the perceived corruption lower. In the conclusion we elaborate on the implications of our findings.

KEYWORDS

Perceived quality of education; perceived fairness of education; system justification theory; European Quality of Life Survey; multilevel analysis

Introduction

Recent years have seen a growing interest in studying the general public's attitudes towards education as an institution, such as trust in education (Pizmony-Levy & Bjorklund, 2018), preferences for public investments in education (Busemeyer et al., 2018) or satisfaction with (the state of) education (Fladmoe, 2012; Jacobson et al., 2014). This paper aims to contribute to this literature by assessing the general public's perception of education as a system. Based on data from the third wave (Jacobson & Saultz, 2016) of the European Quality of Life Survey (EQLS), we seek to answer the following question: *what individual- and country-level factors predict (1) citizens' satisfaction with educational quality, (2) the perceived fairness of education, and (3) the perceived level of corruption in education?*

Answering this question is important for at least three reasons. *First*, over the past decades, education has become a central societal institution across countries all over the world (Baker & LeTendre, 2005; Meyer, 1977). In today's 'schooled societies' (cfr. Baker, 2014) educational credentials not only serve as an authoritative gatekeeper on the labour market (Solga, 2002); education has also always been considered the main instrument to

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make a transition from a society in which people's social status was *ascribed* to one in which people *achieve* their position based on merit. Thus, education became linked not only to social mobility but also to the *perceived fairness* of mobility chances (van Noord et al., 2019). Moreover, in schooled societies, there is a strong tendency to 'educationalise' all kinds of social problems, that is, to represent them in such a way that more education is the solution (Labaree, 2008). This way, education has become one of the most important institutions in contemporary societies which in itself justifies research that assesses how this institution is perceived by the public at large. *Second*, but directly related to the first, in highly developed countries public spending on education amounts to about 5% of governments' total budget (OECD, 2020). The 'cost' of education is likely to further increase as the growth of schooled societies fuels credential inflation, which in turn stimulates the further expansion of education. Policy makers justify these costs by referring to education's economic returns. However, the question remains whether these investments (will continue to) receive public support (Busemeyer et al., 2018). It seems reasonable that such support results at least to some extent from how education is perceived to function. *Third*, over the past two decades, the public may have gained a better view of the relative performance of one's own educational system. Besides a growth in National Large-Scale Student Assessments (Jacobson & Saultz, 2016; Verger et al., 2019), from the 2000s onwards, several International Large-Scale Assessments (ILSA) – e.g. PISA, PIRLS, TIMSS – have been conducted on a regular basis. These projects aim to inform the public and stimulate (public) debate about the quality of education. Historical research shows that although originally the leading rationale for ILSA programmes was basic educational research, this objective has shifted towards a more policy-oriented rationale related more to accountability and competition (Pizmony-Levy et al., 2014). Indeed, ILSAs provide the general public with performance scores and ranks. In several countries, intense media campaigns have evoked 'PISA panic' and 'PISA shocks' (Grek, 2009; Piro, 2019). Moreover, previous research found a positive relationship between PISA scores and trust in education (Pizmony-Levy & Bjorklund, 2018). This raises the question whether PISA outcomes are related to other opinions about education among the public at large.

We contribute to the literature in three ways. *First*, previous studies primarily focused on Organisation for Economic Cooperation and Development (OECD) countries – i.e. strongly developed countries – even though even in Europe there are quite a number of non-OECD countries. The EQLS data cover the EU-member states *and* several candidate member-states (e.g. Turkey). These data also offer a unique view on Eastern European (former communist) countries and as such provide us with an encompassing view on the way education is perceived in a wide variety of countries. *Second*, while previous studies have focused on trust in education (Pizmony-Levy & Bjorklund, 2018), our study examines the perceived quality and fairness/corruption in education. To the best of our knowledge, this is the first study that covers *both* crucial aspects of the perception of educational systems and their interrelations both at the individual *and* the country level. It seems reasonable to assume that both elements are important pillars on which perceived trust in an institution rest and as such directly refer to aspects of its legitimacy. *Finally*, this paper contributes to an emerging literature that aims to shed light on the impact of International Large-Scale Assessments (ILSA). While quite a number of studies have analysed (i) the strategy adopted by international organisations such as the OECD to

gain momentum for their ILSA (e.g. Grek, 2009; Hopfenbeck & Görgen, 2017; Piro, 2019); or (ii) the impact of this strategy on educational policy (e.g. Smith, 2016), less research has studied the possible impact of ILSA on the views on education of the general public. Studying such perceptions is a necessary complement to research in this area (Burstein, 2003).

Theoretical background

Regarding perceptions and attitudes towards public institutions, at least two different mechanisms – leading to conflicting expectations – can be distinguished, namely self-interest and system justification motives. In this section, we discuss these mechanisms and formulate specific expectations regarding the empirical analyses. This discussion is organised according to the level – individual vs. country – at which the effects are expected to occur.

Individual-level predictors

A *rational choice perspective* posits that people support those ideas, attitudes and views that align with their material and status-related (self-)interests (Petracca, 1991). In contemporary societies, education has become a major source of wealth and status. Educational credentials act as an authoritative gatekeeper on the labour market and are thus crucial in the allocation of different life chances. Following this reasoning, differences in people's views on education are expected to be structured according to their (i) position in the educational hierarchy; (ii) satisfaction with their own education; and (iii) more general material living circumstances. Higher educated people may therefore be motivated to perceive and present the educational system as highly qualitative and fair, as their socio-economic position strongly depends on it (Jackman, 1994). Similarly, less educated people and/or people who are dissatisfied with the education they received can be expected to generalise their personal experience and project it onto the institution as a whole, perceiving it as of low quality, less equal and even corrupt. A similar pattern can be expected regarding people's level of material deprivation. Indeed, based on a *rational choice perspective* – which argues that people 'rationalise' their own position and adopt attitudes and views that should serve their personal interests – one would expect that the social (educational and material) differences in the perceived quality and fairness of education would work in a fairly similar way.

However, we must bring in a second perspective. Indeed, although compelling at first sight, the self-interest perspective has often failed to accurately predict people's views on society (Elchardus & De Keere, 2013). For instance, scholars have often found that even in situations of great inequality, system-challenging opinions and activities have remained rather limited. Different theories have been proposed to explain this pattern (Jackman, 1994; Jost, 2020; Sidanius, 2001). Some argue that people differ fundamentally in the way they judge their personal situation versus the state of affairs in society (Elchardus & De Keere, 2013) and that collective action requires mobilising forces. The most disadvantaged groups, so the argument goes, lack the sociological imagination to transform 'private troubles' into 'public issues' (Mills, 1973). Other theories go even further. According to *system justification theory*, people are *motivated* to defend and

justify aspects of the existing social, economic and political order, so that even members of disadvantaged groups *want* to believe that the existing system is legitimate and just (Jost, 2020). Endorsing such system justification beliefs would serve the psychological need to reduce uncertainty, threat and social discord. Several case studies have provided empirical support for these ideas. For example, Wiederkehr et al. (2015) found that children of low socioeconomic status believed that academic success was determined purely by effort and talent (i.e. meritocratic factors) and that this belief was positively associated with more general system justification beliefs. Kuppens et al. (2018) compared popular explanations for educational success vs. success in the labour market and found that people referred more to meritocratic factors (i.e. talent and effort) when they explained success in education vs. labour market success.

Previous considerations show that a *system justification perspective* leads to the idea that in contemporary schooled societies education is seen as an authoritative and highly legitimate institution among *all* citizens. It is clear that in order to be an authoritative institution, educational processes should not only be perceived as fair, but also of high quality. Based on this reasoning, one would expect education to be perceived as being of high quality and fair *and* that no important social differences will be found for these views. In fact, some interpretations of system justification theory even suggest that the most disadvantaged most strongly legitimise the social system (Brandt, 2013). Applied to our case, this would imply that the least educated perceive their country's education as being of higher quality and fairer than the highest educated.

It is, however, necessary to add an additional layer to the argument. While both people's material position and their education can be considered indicators of their general socio-economic position (and thus leading to similar expectations regarding the outcomes), theories referring to the legitimating function of institutions lead to the expectation that, depending on particular contextual features, both can have a different relationship with attitudinal outcomes (van Noord et al., 2019). Bourdieu, for example, has described at length how educational credentials act as (objectified) 'symbolic capital', that is, '[...] a reputation for competence and image of respectability and honourability that are easily converted into political positions [...]' (Bourdieu, 1984, p. 291). Symbolic capital provides dominant groups with social status: it converts power into *prestige* by depicting achievements as an outcome of 'natural gifts' (Bourdieu, 2000). As status depends on mutual recognition, education will only confer status if the institution conferring it is considered to be of high-quality and fair by all groups involved (i.e. the higher and the less educated). The latter pattern (i.e. no educational differences in the perceived quality, equality and corruption in education) is also expected to be found when education provides people with more information regarding the performance of, and existing social inequalities in, education. Indeed, if education has an 'enlightening' effect (Jackman & Muha, 1984), it may even be that especially the higher educated are more critical of their educational system's relative performance.

Country-level predictors

The previous mechanisms can easily be translated to the country level. Following the arguments put forward by *system justification theory*, the perceived quality and fairness of educational systems should generally be rather high, while between-country differences

should be modest. Indeed, despite substantial national differences in the practical organisation of education, scholars have drawn attention to the global similarities in the way education has become an authoritative institution in many countries (Baker & LeTendre, 2005). Although people may criticise specific aspects of education in their country, we therefore expect that overall, education is perceived very positively.

However, finding support for this general trend does not imply the complete absence of any between-country differences. Within this variation, we expect that PISA outcomes are systematically related to the perceived quality, fairness and corruption in an educational system. First, it can be assumed that PISA tests measure at least to some degree the (ine)quality of educational systems. Second, numerous studies have documented the OECD's intense efforts to stimulate public debate on such tests (Piro, 2019). Media play a key role in this. Media coverage tends to reduce the complexity of the PISA results by focusing on international league tables. For example, Pizmony-Levy and Torney-Purta (2018) analysed news articles published in the context of the release of PISA 2012 results. They found that 77% of the articles presented the results in the form of country rankings of average knowledge test scores and 36% framed the performance of their country *only* in relation to that of other countries.

Against that background, the *rational choice perspective* leads to the expectation that in countries with high PISA scores, the perceived quality of education will be higher. Previous research provides tentative support for this prediction. Indeed, studies showed an important impact of PISA outcomes on educational policies (for an overview, see Pons, 2017), media (Grek, 2009; Hopfenbeck & Gørgen, 2017; Sahlberg, 2017) and citizens' trust in education (Pizmony-Levy & Bjorklund, 2018). Research among teachers has shown that in countries with high PISA outcomes, teachers feel that their work is more valued by society (Spruyt et al., 2021). In this article, we aim to broaden the scope of this research avenue by focussing on the perceived quality, fairness and corruption of education among the public at large. For all three of our outcomes, we expect to find a relationship with PISA results. Whether such a pattern is really *caused* by the communication of PISA results or is rather a reflection of genuine (e)quality differences in educational systems that citizens also experience in other ways than through media reports, cannot be tested with our data. We do not consider this a major limitation, as our primary objective in this context is to contribute to the 'normalisation' (cfr. Pons, 2017) of research into PISA effects rather than to assume them. In that context, assessing relationships between PISA results and outcomes other than those studied so far is a crucial step.

A possible limitation of the PISA argument, however, is that it implicitly assumes that educational debates in the public sphere effectively reach *all* citizens. Even when a 'media machine' like the OECD is involved, this seems to be a strong assumption. Data from the US and Israel, for example, show that the public is generally relatively uninformed about their country's performance in PISA (Pizmony-Levy, 2017). Consequently, it is likely that people base their overall assessment of the educational system on other elements as well. For instance, in countries where the government is able to invest sufficiently in education (leading to good study materials, school infrastructure, well-trained teachers, etc.), perceived quality might be higher. Although countries vary in terms of the percentage of GDP they spend on education (3–7% on average), these differences remain rather limited (OECD, 2020). Thus, the most important determinant of educational spending would be

a country's GDP. Previous research found that GDP and trust in education were positively related (Pizmony-Levy & Bjorklund, 2018). We therefore expect that the perceived quality of education will be higher in countries with higher GDP and/or spend a relatively higher percentage of their GDP on education. We have no specific hypotheses regarding a possible relationship between GDP and perceived fairness.

Although the previous arguments refer primarily to the perceived quality of the educational system, they could also apply to its perceived fairness. Indeed, even though social reproduction in education is generally considerable, countries differ strongly in the extent to which this is the case (Heisig et al., 2020; Pfeffer, 2008). The self-interest perspective proposes that the more unequal educational outcomes are, the more unfair (i.e. less equal, more corrupt) the educational system will be perceived by its citizens. One could measure such inequality on a direct basis (e.g. the level of explained variance of people's social background characteristics on PISA tests), but it seems unlikely that citizens have a clear view on this feature of their educational systems. Indeed, if inequalities in education are discussed in public debates, they often focus on the level of educational tracking. Tracking – which 'refers to the existence of different [and often hierarchically structured] educational programs at the same point in an educational trajectory' (Bol & van de Werfhorst, 2013, p. 86) – is (i) a very visible feature of educational systems and (ii) highly relevant regarding social inequalities (Bol & van de Werfhorst, 2013; Terrin & Triventi, 2022). Therefore, we expect that perceived equality will be lower and perceived corruption higher in countries with a more tracked educational system.

Data and methods

To answer our research questions, we relied on data from the most recent wave of the European Quality of Life Survey (EQLS). This face-to-face survey initiated by Eurofound focuses on the multidimensional nature of the quality of life in the European Union (see Appendix A.1). Although the primary focus of this survey is on the 28 countries of the EU, the data also include five candidate countries (Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey). Because we have no specific reasons to focus only on EU member states, we used all available data. The fieldwork of round 4 of the EQLS took place between September 2016 and March 2017. The overall response rate was 34%.

Dependent variables

The dependent variables in our analyses are the *perceived quality, fairness and corruption in education*. Regarding (1) perceived quality, respondents were asked to rate the quality of the education system in their country on a 1–10 scale (1: very poor quality – 10: very high quality; $M = 6.73$; $S.D. = 2.01$). Perceived fairness (2) was measured with a question asking respondents to what extent they agreed (1: completely disagree – 10: completely agree) with the statement '*All people are treated equally in school services in my area*' ($M = 7.62$; $S.D. = 2.33$). The questionnaire also included a question that tapped into (3) perceived corruption. Respondents rated the statement '*Corruption is common in school services in my area*' ($M = 2.92$; $S.D. = 2.54$) on a 10-point scale. As the correlation between perceived fairness and corruption was not particularly strong

($r = -0.447$; $p < 0.001$) and the perceived fairness item more strongly refers to the interpersonal level while perceived 'corruption' more strongly focuses on the meso- and macro-level, we treated both variables separately in the analyses. It should be noted that although the perceived quality was measured in terms of the system as a whole, the reference point for the questions tapping into perceived fairness and corruption were more local.

Individual-level independent variables

People's *educational attainment* was recoded into three levels (Lower secondary or below [ISCED 0-2]; Upper secondary or post-secondary [ISCED 3-4]; Tertiary education [ISCED 5-8]). Respondents' *satisfaction with their education* was measured with the question: 'How satisfied are you with your education?' (1: very dissatisfied – 10: very satisfied). Although satisfaction with one's own education is only one indicator to test the predictions based on the rational choice paradigm, one may be concerned about the assumed causality whereby people's private troubles (i.e. dissatisfaction with one's own education) spill over into public issues (i.e. one's assessment of educational system level legitimacy). Indeed, it is possible that their mutual relationship is caused by a common causal antecedent. Therefore, in the Appendix (Table A6), we show the results when satisfaction with one's education is excluded from the analysis.

As an indicator of people's *material wealth*, we included the EQLS's 'composite deprivation index', which reflects the extent that respondents' household could afford a list of six items (e.g. *to keep their home adequately warm*; *to replace any worn-out furniture*). We preferred this deprivation index to an income measure because it better reflects the actual level of deprivation in a household.

Individual-level control variables

Besides our independent variables, we also included several control variables. Although previous research only found small or no age and gender differences in generalised trust (Li & Fung, 2013) and confidence in institutions (Price & Romantan, 2004), we included both characteristics. *Gender* was dummy coded (ref.= women). *Age* was grand mean centred. Because a previous study found a nonlinear relationship between age and trust in education (Pizmony-Levy & Bjorklund, 2018), we also included age squared. Finally, following Pizmony-Levy and Bjorklund (2018), we included employment status (i.e. employed, unemployed, out of the labour force), community (i.e. urban, rural, suburb/town) and whether one had a child (<18 years old) in the household who attends education.

Macro-level independent variables

Regarding *PISA outcomes* and following Pizmony-Levy and Bjorklund (2018), we used the PISA 2015 scores on mathematics as published in the official PISA report (OECD, 2016). Serbia did not participate in the 2015 round, so we imputed this value by their 2012 score. While preparing this paper we re-estimated our models using (i) countries' PISA Science and Reading scores and (ii) countries' PISA rank instead of score. The results of these

analyses (available upon request) confirmed our results and thereby underscore the robustness of our findings. In addition, we also assessed whether using the PISA 2012 (rather than the 2015 score) affected our results. This was not the case (Table A8).

To measure *social inequality in education*, we used the level of educational tracking as a proxy. We borrowed this measure from Bol and van de Werfhorst (2013), who constructed a composed measure based on three characteristics, namely the age at which pupils must first select a particular track, the percentage of the total curriculum that is tracked, and the number of tracks that are available for 15-year-olds (see Technical Appendix for more details). A higher score reflects a more highly tracked educational system. We also controlled our results for another proxy, namely the percentage of explained variance in PISA results by social background characteristics (results available upon request). However, this did not lead to different substantive conclusions.

We also included GDP per capita (PPP in current international \$; 2015) and the percentage of GDP that countries invested in education from the World Development Indicators. The GINI index (2010–2015) was included as an indicator of the general level of inequality in a country (UNDP, 2016). Finally, because EQLS focusses primarily on the member states of the European Union and the response rate in the candidate member states was somewhat lower, we also included a dummy variable that reflected whether a country belonged to the EU28.

Analysis

After deleting cases that had missing values on at least one of the variables, our final sample included data from 23,073 respondents in 30 countries. All models are based on the same number of respondents and countries. We used hierarchical multilevel models with robust standard errors that consider the clustering of our data. Standardised coefficients for the multilevel models were obtained from unstandardised coefficients using the formula proposed by Hox et al. (2017, p. 18). Standardised regression coefficients facilitate comparisons between models and outcomes. Because the number of countries is limited, while preparing this paper we also estimated models whereby we introduced the country-level variables one-by-one (Tables A3–A5). Where relevant, we report the results of these analyses in the text. Finally, we also conducted a series of sensitivity analyses regarding influential cases to check the robustness of our results (Robustness check 4 Technical Appendix). All data and syntaxes necessary to replicate our analysis are stored on the Open Science Framework (<https://osf.io/pzsjb/>). Descriptive statistics of all variables used in the analysis are provided in Table A1 (Technical Appendix).

Results

Perceived quality and (un)fairness of education in Europe

Table 1 presents the country-level differences in the outcomes, as well as the within-country correlations between perceived quality, equality and corruption in education.

Several observations can be made. The overall perceived equality of education was somewhat higher ($M= 7.62$) compared to the perceived quality ($M= 6.73$). The general level of perceived corruption ($M= 2.92$) was low. However, it is clear from the standard

Table 1. Perceived quality, fairness of and corruption in education in 30 European countries.

Country	Quality (Mean ^a)	Quality (SD)	Fairness (Mean ^a)	Fairness (SD)	Corruption (Mean ^a)	Corruption (SD)	Corr. Qual. – Fair ^b	Corr. Qual. – Corruption ^b	Corr. Fairn. – Corruption
Austria	7.42	1.98	7.59	2.61	2.57	2.60	0.277	-0.079	-0.390
Belgium	7.30	1.42	7.34	2.01	2.75	2.15	0.334	-0.197	-0.351
Bulgaria	5.67	2.21	8.29	2.00	2.83	2.38	0.359	-0.287	-0.563
Czech Republic	6.92	1.78	7.47	2.35	3.67	2.63	0.428	-0.192	-0.503
Germany	7.15	1.79	7.83	2.25	2.21	2.00	0.383	-0.178	-0.381
Denmark	7.78	1.58	9.16	1.63	1.26	1.17	0.228	-0.048	-0.102
Estonia	7.24	1.75	8.55	2.17	2.04	2.10	0.344	-0.185	-0.554
Greece	5.77	2.15	7.50	1.98	3.37	2.40	0.377	-0.195	-0.499
Spain	6.62	1.56	7.64	1.85	2.73	2.14	0.313	-0.181	-0.491
Finland	8.21	1.22	8.22	1.73	1.72	1.69	0.387	-0.210	-0.285
France	6.74	1.86	7.85	2.16	2.12	2.02	0.366	-0.234	-0.365
Croatia	6.03	1.95	6.83	2.34	3.92	2.55	0.411	-0.227	-0.478
Hungary	6.40	2.13	7.65	2.33	3.70	2.84	0.443	-0.118	-0.361
Ireland	7.27	1.73	7.96	2.39	2.59	2.38	0.301	-0.167	-0.481
Italy	6.16	1.69	7.19	2.23	3.16	2.49	0.440	-0.298	-0.474
Lithuania	6.51	1.94	7.58	2.35	3.48	2.74	0.296	-0.167	-0.278
Luxembourg	7.10	2.00	7.25	2.67	2.40	2.36	0.400	-0.221	-0.388
Latvia	5.89	1.90	7.85	2.31	2.10	2.13	0.195	-0.090 ^c	-0.331
Malta	7.94	1.51	8.50	1.79	2.86	2.60	0.231	-0.183	-0.478
Netherlands	7.31	1.10	7.71	1.73	2.00	1.85	0.293	-0.202	-0.428
Poland	6.84	1.85	8.22	2.14	2.70	2.53	0.325	-0.131	-0.377
Portugal	6.55	1.79	7.84	1.88	2.54	2.09	0.333	-0.342	-0.424
Romania	6.13	2.28	7.28	2.62	4.84	3.15	0.366	-0.282	-0.402
Sweden	7.15	1.74	8.30	2.26	1.46	1.37	0.301	-0.191	-0.418
Slovenia	6.58	2.08	7.39	2.63	3.52	2.82	0.376	-0.222	-0.463
Slovakia	5.85	2.12	7.06	2.46	3.69	2.68	0.436	-0.390	-0.572
UK	7.01	1.70	7.51	2.44	2.37	2.20	0.428	-0.213	-0.393
Montenegro	6.29	2.30	6.67	2.82	4.42	2.92	0.592	-0.416	-0.603
Macedonia	5.38	2.61	6.87	2.95	3.81	2.94	0.481	-0.357	-0.536
Turkey	6.80	2.20	7.24	2.31	3.63	2.63	0.469	-0.234	-0.264
Pooled sample	6.73	2.01	7.62	2.33	2.92	2.54	0.575	-0.615	-0.447

^aJudged on a 0–10 scale

^bWithin-country Pearson correlation coefficients.

^cp = 0.059, all other correlations significant at p < 0.050.

deviations that variation in the measures of perceived fairness/corruption was also higher compared to the perceived quality: people agreed less on the extent to which education is fair. When we focus on the specific country-level differences in the perceived quality of education, the lowest score was found in Bulgaria (5.67) and the highest in Finland (8.21), the latter being a country that has performed very well on PISA tests in the past. In general, the perceived quality of education in the Scandinavian (e.g. Denmark, Sweden) and Western European countries (e.g. Austria, The Netherlands) was considerably higher than in Eastern (e.g. Latvia, Hungary) or Southern (e.g. Greece, Italy) European countries. The level of perceived fairness of education did not quite reflect this pattern. For example, educational services were perceived as very fair in Bulgaria and Poland, two countries where the perceived quality was rather low. A similar observation was found for the level of perceived corruption. Thus, at least at the country level, the perceived quality of education does not seem to be a good predictor of the perceived corruption. To study the relationships between these three variables in more depth, we calculated bivariate correlations between them. Both at the individual and the country level, we found a positive correlation between perceived quality and fairness ($r_{\text{individual}} = 0.398$; $r_{\text{country}} = 0.575$; p 's < 0.001), indicating that people who perceived education as of high quality also tended to perceive it as fair and vice versa. Regarding perceived quality and corruption, negative correlations were found ($r_{\text{individual}} = -0.273$; $r_{\text{country}} = -0.615$; p 's < 0.001). Interestingly, this correlation was considerably lower at the individual level and higher at the country level when compared to the quality-fairness correlations. This further supports the idea that we cannot treat the perceived fairness and corruption of education ($r_{\text{individual}} = -0.447$; $r_{\text{country}} = -0.743$; p 's < 0.001) as each other's opposites.

More interestingly, however, is that the strength of the within-country correlation between perceived quality and fairness varied between countries. At the country level, we found (i) a negative correlation ($r = -0.399$; $p = 0.029$) between the perceived quality of education and the strength of the within-country Quality-Fairness correlation and (ii) a significant positive correlation ($r = 0.503$; $p = 0.005$) between the perceived quality of education and the strength of the Quality-Corruption correlation. Thus, in countries where the perceived quality of education was higher, the assessment of the perceived fairness was less, and the assessment of the perceived corruption more strongly associated with the public's evaluation of the quality of the educational system. This suggests that the perceived quality of education may be a necessary but not sufficient condition for the perceived fairness of an educational system.

Systematic differences in perceived quality and (un)fairness of education in Europe

After examining the general distributions of our dependent variables and their interrelationships, we assessed whether we could find systematic patterns in the variation in our outcomes. A series of multilevel regression analyses was estimated (Table 2). In the first model, we included only individual-level variables. In Model 2, we added GDP/capita and PISA outcomes. In the final model, we included the measure for social inequality in education (i.e. tracking), the percentage of GDP a country invests in education, the GINI index and a dummy for EU28.

At the individual level, our results show that higher educated citizens perceived the quality of education as lower and were also less convinced that the educational services

Table 2. Results multilevel regression analyses on perceived quality of, fairness of and corruption in education in Europe (N: 23,073; 30 countries).

Independent variables	Perceived Quality of Education			Perceived Fairness of Education			Perceived Unfairness of Education		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
<i>Individual-level characteristics</i>									
Gender (0: Woman)	^a -0.021***	-0.021***	-0.021***	0.012	0.012	0.012	-0.005	-0.005	-0.005
Age	-0.069	-0.069	-0.069	0.093*	0.093*	0.094*	-0.040	-0.039	-0.041
Age Squared	0.091*	0.090*	0.090*	-0.020	-0.020	-0.021	-0.019	-0.019	-0.018
Education (0: Lower secondary or less)	-0.079***	-0.079***	-0.079***	-0.058***	-0.057***	-0.057***	0.012	0.012	0.012
Secondary education	-0.109***	-0.109***	-0.109***	-0.093***	-0.092***	-0.093***	-0.003	-0.003	-0.003
Higher (Tertiary) education	-0.097***	-0.096***	-0.095***	-0.104***	-0.103***	-0.103***	0.110***	0.109***	0.109***
Material Deprivation Index	0.191***	0.191***	0.191***	0.163***	0.162***	0.163***	-0.073***	-0.073***	-0.073***
Satisfaction with one's own education	0.025***	0.025***	0.025***	0.034***	0.034***	0.034***	-0.032***	-0.032***	-0.032***
At least one child (18 or younger) that goes to school	-0.001	-0.001	-0.001	0.010	0.010	0.010	-0.018**	-0.018**	-0.017**
Unemployed	0.009	0.009	0.009	0.012	0.012	0.013	-0.019*	-0.019*	-0.019*
Out of labour force	-0.010	-0.011	-0.011	0.004	0.004	0.004	-0.015*	-0.015*	-0.014
Community (0: Urban)	0.001	0.001	0.001	0.022**	0.022**	0.022**	-0.032***	-0.032***	-0.032***
Rural									
Suburb/Town									
<i>Country-level characteristics</i>									
GDP/capita	0.084	0.084	0.093**	-0.041	-0.041	-0.032	-0.057	-0.057	-0.058*
PISA Mathematics score 2015	0.133**	0.133**	0.199**	0.100*	0.100*	0.057	-0.143**	-0.143**	-0.141*
Tracking secondary education			-0.032			-0.042			0.027
% Expenditure education of GDP			0.077			0.088**			-0.188***
GINI 2015			-0.055			0.073*			-0.183***
EU28			-0.199**			0.058			-0.026
<i>Variance Components</i>									
Variance individual level	3.435	3.435	3.435	4.951	4.951	4.951	5.617	5.617	5.617
Variance country level	0.355	0.207	0.112	0.221	0.183	0.127	0.534	0.330	0.084
% Rho	9.36	5.68	3.16	4.27	3.57	2.50	8.67	5.54	1.47
R ² Total	6.96	10.59	12.91	5.23	5.93	6.95	4.88	8.03	11.83

^aStandardized regression coefficients.
Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001.

are fair. No educational differences were found for perceived corruption. People who were more materially deprived judged their educational system as of lower quality, less fair and more corrupt. A similar pattern could be observed for the degree to which people were satisfied with the education they received: the more satisfied, the higher respondents rated their educational system. No major differences were found regarding employment status, but people who were unemployed were less likely to perceive education as corrupt.

While these findings partially support the self-interest perspective, they also highlight the particularity of people's educational position. Indeed, it is the only characteristic for which people with a stronger position (i.e. the higher educated) were more critical of the current state of their country's education. On the one hand, this could be due to a socialisation effect. Higher educated people may have a clearer view of society and/or act more critically towards the existing state of affairs and institutions. On the other hand, however, these findings align with previous research that showed that the less educated consider educational differences as 'fair' and 'deserved' and largely attribute educational failure to individualistic characteristics such as lack of effort and talent. They are also in line with system justification theory, which argues that under certain circumstances, dominated groups may have an even stronger belief in the fairness of a society's central institutions and the societal status quo than the dominant groups.

Regarding the control variables, very small gender differences were found for both perceived quality and fairness. In general, men judged their country's education being of lower quality than women. No differences were found for perceived fairness/corruption. The relationship between age and perceived quality turned out to be nonlinear, with younger and older respondents tending to judge the quality of education in their country as lower. For the perceived fairness, the relationship with age was positive and linear: older respondents perceived education in their country as fairer when compared to younger cohorts. The latter observation may be a generational effect. On average, over the past decades, every generation went to school longer than their parents (Baker & LeTendre, 2005). This massification of education offers (younger) generations educational opportunities that their parents did not have. It seems reasonable to assume that older cohorts therefore perceive today's education as fairer. People who had at least one child that goes to school judged education as of higher quality, more fair and less corrupt. However, differences were very small. The same applied for the community, for which we found significant but very small differences between people who lived in suburbs/towns versus cities. The former perceived education as more fair and less corrupt.

Regarding the country level, the rho's of our null models (i.e. a model that only includes a constant) indicated that the amount of variance that could be attributed to the country level was modest for the perceived quality and corruption (11.4% and 11.1%, respectively) and small for the perceived fairness (5.4%).

GDP was positively correlated with the perceived quality and negatively with perceived corruption: in rich countries, the public at large perceived education as of higher quality and less corrupt. No significant relationship with perceived fairness was found.

As expected, the quality of education was judged higher in countries that obtained better PISA outcomes. No relationship was found with the perceived fairness, but there was a negative association with the perceived corruption. Thus, while high PISA outcomes

may not improve perceived fairness, they do seem to form a buffer against the feeling that educational services are corrupt.

Adding other country-level variables in the final model led to some interesting conclusions. Countries that spend more on education showed higher levels of perceived educational quality and more/less perceived fairness/corruption of the educational services. A comparison of the standardised regression coefficients showed that investments in education had a much stronger relationship with perceived corruption ($\beta = -0.199$; $p < 0.001$) than with perceived quality and fairness of education (β 's 0.088 and 0.101; $p < 0.01$ and $p > 0.05$, respectively).

The GINI coefficient was clearly and theoretically consistently related to the perceived fairness and corruption in education. In more unequal societies, educational services were perceived as less fair and more corrupt.

Regarding social inequalities, a complex picture emerged. When the level of tracking was entered into a baseline model that also included GDP and PISA score, we found a statistically significant and theoretically meaningful effect for both perceived equality ($\beta = -0.072$; $p < 0.05$) and corruption of education ($\beta = 0.098$; $p < 0.05$ - see Technical Appendix: Tables A4-A5). These findings suggest that in countries with a highly tracked educational system, that system is perceived as less equal and more corrupt. However, when other macro-level characteristics (and especially the GINI index) were taken into account, the effect parameters for tracking decreased and became statistically non-significant. We also tested a series of interaction terms between the indicators that refer to people's self-interest (i.e. material deprivation, education, satisfaction with education) and tracking (Robustness check 2, Table A7). We found significant interaction terms only for perceived corruption. People who live in materially deprived situations perceived more corruption in education. These differences were larger in countries with more unequal (i.e. tracked) educational systems. For people's level of education, we again found an opposite pattern. Educational differences in perceived corruption were lower in countries with a more tracked educational system. No significant interaction terms were found for satisfaction with one's own education.

Discussion and conclusion

Today, societies count on education for their welfare, prosperity and the solution to all kinds of societal problems. Citizens spend large amounts of time in education, first because they attend education themselves, and later when they have children. Against that background, it is remarkable that only a few studies have focused on aspects of the legitimacy (e.g. trust, confidence, satisfaction) of a country's education. Indeed, in schooled societies, education has become so ubiquitous that is often overlooked. Therefore, this paper used data from the fourth round of the European Quality of Life Survey to assess the *perceived quality of, fairness of and corruption in education* in 30 European countries, i.e. three elements that tap into crucial dimensions of the (perceived) legitimacy of this institution.

Overall, we found that the perceived quality and fairness of education was high and the level of perceived corruption was low. That specific finding aligns with a more general observation, namely that most people tend to perceive their society as fair even when social inequalities are considerable (Jost, 2020). Our study corroborates an even more

pronounced version of this theory by showing that less educated people perceived the quality and fairness of education as higher than the higher educated. This finding contradicts the expectations that could be derived from theories that argue that people's opinions and views of society derive from their material interests and the objective characteristics of the society they live in. Interestingly, however, regarding other characteristics (i.e. material deprivation, satisfaction with one's own education) the empirical relationships were consistent with rational choice theory. That is, people living in a more deprived situation or dissatisfied with their own education judged the quality and fairness of education as lower. The latter pattern contradicts the system justification argument so that the overall pattern is more in line with the idea that education 'enlightens' people and renders them more critical regarding the fairness of educational systems and their relative performance (see also Pizmony-Levy, 2017).

In any case, our findings strongly illustrate the special status of people's educational position compared to other dimensions of their socio-economic status. Indeed, in contemporary 'schooled societies' (Baker, 2014), education is not merely a characteristic of social distinction, it is a highly legitimised form of social stratification. Our findings are in line with van Noord et al. (2019), who studied what factors people perceive as important to get ahead in life. They found that educational groups did not differ in the desired importance of education for success in life. Less educated people were just as likely as the higher educated to believe that education should be an important stratifying variable. Similarly, Spruyt (2015) found that the less educated were more inclined to explain differences in educational success by referring to the role of talent when compared to the higher educated.

In sum, there seems to be increasing evidence that the centrality of education in contemporary societies is highly legitimised. That conclusion raises two types of questions. First, who will continue to support policies aimed at counteracting social reproduction in and through education? Especially in times when, on the one hand, public budgets are under pressure and, on the other, an increasing number of (young) people are, on average, attending education for longer periods of time, it is highly unlikely that the needs for educational investments will decrease substantially. Second, one may wonder whether this perceived legitimacy comes at a price. If education is generally considered to be of high quality and fair, this might undermine the (collective) self-esteem of the less educated (Kuppens et al., 2018). Indeed, research in recent years has shown that the less educated report higher levels of fatalism and feelings of being held in contempt for being less educated (Spruyt et al., 2015). Here, too, it becomes clear that people's educational position is more than just an indicator of social status.

Regarding the macro-level differences, when solely tracking was entered into a model that included GDP and PISA scores, we did find a negative relationship with perceived equality and a positive relationship with perceived corruption. No relationship with perceived quality was observed. After controlling for the GINI index, the effect parameter of tracking decreased and was no longer statistically significant. Taken together, these findings suggest that the tracking of an education system may be relevant for the broader public's perception of the educational system, but that its relevance is probably embedded in a broader pattern of social inequality in society. This observation should stimulate further research into the possible ways that the effect of educational tracking transcends direct individual educational outcomes. Indeed, educational tracking

introduces sharp distinctions between pupils (and thereby establishes categorical inequality (Domina et al., 2017), and also institutionalises different expectations towards different pupils. It seems very plausible that this has effects on society at large. But, as our results show, it remains unclear how educational inequality relates to wider social inequality in this context.

We also found that in societies where PISA outcomes are high, citizens assess the quality of education as higher. While no relationship was found for perceived fairness, we found a negative relationship with perceived corruption. Previous research also found that better PISA outcomes are related to higher trust in education (Pizmony-Levy & Bjorklund, 2018) and perceived societal appreciation among teachers (Spruyt et al., 2021). It should be acknowledged, however, that all this research (including our own) relied on correlational data that did not provide an opportunity to determine the precise direction of causality: do PISA scores accurately reflect objective educational quality and are people aware of this objective quality? Or does the communication strategy of the OECD lead to public awareness about their educational system's performance and does this awareness have an independent influence on the public's opinion about their country's educational system? It is perfectly possible that both mechanisms are at play. But what we do want to point out is that the OECD itself aims for the second path. Indeed, precisely because the OECD has no direct means of influencing educational policies, it must take a 'mediatised pathway', i.e. communicate intensively about PISA outcomes so that policy makers cannot simply ignore them (Hopfenbeck & Görger, 2017; Takayama, 2008). This way, 'PISA panic' is not simply a by-product of the communication of scientific results, but *the kernel* of the OECD's political strategy. Previous experimental research has shown that providing information about an educational system (cost, salaries of teachers, etc.) influences citizens' opinions about such an educational system (for an overview: Busemeyer et al., 2018). Unfortunately, to date no experimental research has tested whether information on educational outcomes (as measured in ILSAs) affects citizen's opinions on their educational system. Our results strongly encourage such follow-up research. The latter may shed light on whether PISA politics has some unintended negative consequences. Indeed, even if education systems are underperforming, it is unclear how a decreased perceived quality among the public at large and an increased level of teaching to achieve in a 'global testing culture' (Smith, 2016) may help to improve quality. As the OECD itself stresses time and again, a key element in achieving high quality education is having a highly qualified and well-educated teaching force. As many countries struggle to find teachers, a decreased perceived quality of education among the public at large seems unlikely to help. This discussion cannot be settled in a single paper, but it does indicate an interesting avenue for further research.

Disclosure statement

No potential conflict of interest was reported by the authors.

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