Measuring Electoral Integrity:

Using practitioner knowledge to assess elections

Abstract: The integrity of the electoral process is vitally important for the delivery of democracy. However, there is an ongoing debate about how the integrity of elections can be measured. This article makes the theoretical and normative case for the use of practitioner knowledge. Unlike public and expert perceptions, electoral officials have unique practice-based, experiential, tacit knowledge about the conduct of elections, and more insights about the technical aspects of administration of which the public and even experts may be unaware. The article presents results from the first ever cross-national datasets based on a survey of electoral officials in 31 countries. Practitioner assessments are then compared to expert and public assessments, the traditional methods for assessing electoral integrity, and are found to be a reliable measure of electoral integrity. Analysis also shows that gender does shape practitioner assessments, suggesting that some electoral malpractices might be gendered in nature. Job satisfaction is also significant, which suggests that it should be controlled for in future studies. Overall, this study is significant for identifying the utility of a new method for assessing electoral integrity and provides important lessons for how they should be surveyed in the future.

Keywords: electoral integrity; electoral management; election administration; public opinion; elections; gender

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1. Introduction

Elections are fundamental to democratic life, but for an election to be a success, they must help to ensure political equality and popular control of government (Beetham, 1994). Yet, operationalizing the 'success' or 'integrity' of an election remains a challenge for political scientists and practitioners alike. There is an ongoing debate about how the quality of elections can be measured. Some scholars have relied on public perceptions (Garnett, 2019; Kerr, 2014; Norris, 2014; Norris, Garnett, & Grömping, 2019). If elections are only as good as they are trusted, then the opinions of citizens about the quality of their elections can have serious implications for democratic life.

Others have relied on expert perceptions, such as the data disseminated by the Electoral Integrity Project or the Varieties of Democracy Project (Coppedge et al., 2020; Norris, 2014; Norris, Frank, & Martinez i Coma, 2014). This is of critical importance because in an age where there are concerns about democratic backsliding and autocratisation, electoral integrity is a central concept in the broader evaluation of democracy and in the classification of regime type (Mechkova, Lührmann, & Lindberg, 2017). Mismeasurement of the nature and frequency of electoral malpractices can therefore lead to misinformation about patterns of democratisation – and what can be done to address them.

This article makes the case for the use of an alternative measure of electoral integrity: the evaluations of electoral officials who are tasked with the day-to-day management and administration of elections. They may work for a government department or independent agency. They may report to the centralized national level or manage elections locally. They may be involved in a variety of tasks: from registering voters, to counting ballots. Yet they all have in common a mission to conduct the fundamental tasks associated with elections.

What benefits can we gain from asking what electoral officials think about the quality of elections? Unlike public and expert perceptions, electoral officials have unique practice-based insights into the conduct of elections, and a better knowledge of the technical aspects of administration of which the public and even experts may be unaware. This grassroots knowledge may lead to a richer picture of how well elections are run in a country. We theorise that practitioner knowledge is different in nature to that of 'experts.' Drawing on the broader literature on practitioner knowledge, we argue that it often involves tacit rather than scientific understandings drawn from concrete everyday, rather than abstract experience. It is therefore an important, but too often overlooked, source of information about political phenomena in general and the electoral process in particular.

This article makes the case for including the perceptions of electoral officials in our toolkit of ways to evaluate electoral integrity. It analyzes data from two recent surveys of electoral officials: the Electoral Management Survey (EMS) (James, Garnett, Loeber, & Van Ham, 2020) and the ELECT Survey (Norris, Nai, & Karp, 2016). Respondents were electoral officials who worked on national-level elections, in 31 participating countries. In total, about 1,800 employees responded to the pertinent questions the survey.

The article uses this original data to consider two important research questions on electoral integrity. Firstly, do the perceptions of electoral officials broadly match with other measures of electoral integrity at our disposal? To test this, the perceptions of electoral integrity of electoral officials are compared with public and expert perceptions, as a means of determining convergent validity. Secondly, what potential variations exist in the evaluations of electoral officials in their elections? Like any evaluations, there are always factors that may push a

respondent to be more positive or negative, or to respond in a certain way. These might include variations in the experiences of practitioners depending on their gender, organisational and career position; as well as the political context that they find themselves. Which factors should we consider when using electoral officials' perceptions of electoral integrity?

In sum, this article argues that the perceptions of electoral officials should be included in our attempts to measure electoral integrity around the world. This article continues by outlining the current state of research on measuring electoral integrity. It then presents several hypotheses that will be tested using data collected from two aforementioned surveys of electoral officials. Finally, it considers the two major questions listed above: namely of convergent validity and potential biases of electoral officials. Finally, it discusses the results of the surveys in light of these finding. This article aims to make a crucial methodological and empirical contribution to the study of electoral integrity, democratisation and comparative political systems.

2. Defining and Measuring Electoral Integrity

There are competing conceptualisations of electoral integrity. Approaches to defining the concept include those who anchor it against a minimal approach democracy such as the work Robert Dahl (1971) or a more substantive approach such as that set out by David Beetham (1994). Sarah Birch (2011), for example borrows more from the latter approach, footnoting David Beetham directly, when she defines democracy as "a polity in which decisions of public policy are subject to popular control, and all members are considered equal for the purposes of exercising control" (p.14).

Alterative approaches include defining it as the extent to which elections meet international norms and standards. Pippa Norris defined electoral integrity as the adherence to "international conventions and universal standards about elections reflecting global norms applying to all countries worldwide throughout the electoral cycle, including during the pre-electoral period, the campaign, on polling day, and its aftermath" (2014, p. 12).

Elections have also been conceptualised as public services and therefore evaluated in a similar way to how schools and hospitals are evaluated: with criteria such as efficiency, service outputs and service outcomes deployed (James, 2020).

We prefer a conceptualisation of electoral integrity based on a substantive theory of democracy. If electoral integrity is not anchored against normative theory, then should international norms change, there is no normative basis to evaluate the changes. Democracy involves fulfillment of key principles including the realisation of political equality and popular control of government (Beetham, 1994). Electoral integrity, by extension is '*the realisation of principles in the conduct of election that are necessary to support the broader realisation of these democratic ideals'* (James & Alihodzic, 2020, in press). These include, but are not limited, opportunities for deliberation, equality of participation, equality of contestation and electoral management quality (Garnett & James, 2020; James & Alihodzic, 2020, in press).

There is also a longstanding debate about how to measure electoral integrity. One method commonly used are public surveys, such as national election studies, which have long captured voters' opinions on elections in their country (Atkeson, Alvarez, & Hall, 2015). It can be argued that elections are only as good as they are trusted and voters are willing to abide by the results.

However, we also recognise the limitations of this approach, especially in cross-national perspective.[1] Voters' perceptions of electoral integrity may be influenced by issues such as a lack of attention to the conduct of the election, social desirability in their responses to surveyors, self-censorship, bias based on whether their preferred party or candidate won the election, or the influence of the media or political rhetoric (Howell & Justwan, 2013; Singh, Karakoç, & Blais, 2012). Additionally, there may be challenges in the cross-national comparability of these public surveys since some terms may mean different things in different context (King, Murray, Salomon, & Tandon, 2009).

When using public perceptions of electoral integrity, it is important to consider the drivers of their viewpoints, including whether they voted for the winning party or candidate (Anderson, Blais, Bowler, Donovan, & Listhaug, 2007; Anderson & Tverdova, 2001; Moehler, 2009; Sances & Stewart, 2014) or socio-demographic variables including education, gender or minority group status (especially the issue of black and Hispanic voters in the American context) (Atkeson et al., 2015). Certain population groups may feel disenfranchised from the political system, and therefore be distrustful of elections, or even government in general.

Institutional variables can also help predict voters' confidence in elections, such as the proportionality of the electoral system (Birch, 2008), the public funding of political parties (Birch, 2008), the use of technology (Claassen, Magleby, Monson, & Patterson, 2013) or polling procedures (Atkeson & Saunders, 2007). Other studies have tested whether the independence of the electoral management body (EMB) has an impact on perceptions of electoral integrity, with mixed results (Birch, 2008; Kerevel, 2009; Kerr & Lührmann, 2016).

Due to some of the challenges associated with using public perceptions to measure electoral integrity, many scholars have turned to surveying experts instead. Expert surveys are used in a variety of fields to capture data on concepts that cannot be directly observed, or are difficult to measure (Maestas, 2016; Meyer, 1991; Norris, 2014). Surveys are distributed to experts (usually academics) who then provide their perceptions of the concept. These data are then provided anonymously at the individual level, or (more often) aggregated into a cross-national dataset. There are two noteworthy datasets that use expert perceptions to evaluate electoral integrity, the Varieties of Democracy project (Coppedge et al., 2020) and the Electoral Integrity Project's Perceptions of Electoral Integrity (PEI) Index (Norris, Wynter, & Cameron, 2018).

Experts may benefit from additional knowledge about complex concepts or events. For example, the public may not be aware of a country's institutions of electoral management, whereas experts in the field of electoral integrity may know whether these bodies act impartially or not. While experts are certainly not immune to biases, they may be better able to consider specifically the questions asked, rather than base their perceptions on other issues or personal feelings, due to their additional training and cognitive skills.

However, there are some important limitations to the use of expert perceptions. From a more practical perspective, it is difficult to find actual experts on every country, especially for countries where domestic experts may be limited due to small population sizes or challenges

[1] In addition to domestic studies that ask respondents about their views of elections several cross-national surveys probe the public's perceptions of their elections. The World Values Survey (6th wave) asked perhaps the most comprehensive battery of questions regarding electoral integrity, including questions on topics such as election coverage by the media, perceptions of electoral officials, and the fairness of the vote count.

with academic freedom. Research has demonstrated that experts are less consistent when asked to provide evaluative judgements (Martinez i Coma & van Ham, 2015). Research has also found that experts assessments may be limited by their ideological biases (Curini, 2009), or may differ from the region they come from (Castanho Silva and Littvay, 2019).

There are, however, means to account for these biases, either statistically (Curini, 2009), or by using anchoring vignettes (Bakker et al., 2014). Others call for researchers to simply provide experts with carefully-crafted and tested questions to experts (Castanho Silva & Littvay, 2019). Nonetheless, the limitations of using experts in the study of electoral integrity must be noted. We instead encourage the use of a diversity of viewpoints in order to triangulate the major challenges and strengths of elections in any given country.

3. The Value of Practitioner Knowledge

In this article we set out the case for the evaluation of electoral integrity through the experiences of the officials who run them. Practitioners accrue specialist experiential knowledge that comes from *being there*. Those working on the frontline with a public service, industry or profession can come to be equipped with a unique knowledge of the situation.

There has been some detailed consideration of the qualitative differences and value of practitioner knowledge over expert knowledge. The early philosophical ground work is often traced back to Michael Polanyi (1958, 1967) who set out the concept of *tacit knowledge*. Humans, he argued, would develop a greater amount of knowledge than they would be able to articulate and that can be codified or shared. Tacit knowledge involves the informal collection of broader experiential information to develop situational understandings. Tacit knowing is "when we know something only by relying on our awareness of it for attending to a second activity; it is a hallmark of skilled practice, but also a feature of many everyday activities" (Meerabeau, 1995, p. 33).

More recently, Dvora Yanow (2004) defined 'local knowledge' as "the very mundane, yet expert understanding of and practical reasoning about local conditions derived from lived experience" (p.12). Local knowledge would be accrued by those within different organisational forms and was often overlooked. For example, market research companies could be employed to measure consumer preferences. However, this would overlook the knowledge of those on the ground with more direct insights. This would include the drivers of delivery vans who provided baked goods to local shops. Through their contact with shop owner, who were in contact with consumers, they would have a strong sense of what was selling and why.

Local knowledge can be contrasted with 'expert' knowledge, Yannow argues. Local knowledge is practice based, and interactively derived through lived experience and the every day, whereas expert knowledge is theory-based, abstract, scientifically constructed without any immersion into the everyday experience of the phenomenon under study. The nature of the knowledge is therefore different, but no less specialised or valuable.[2] It is instead a turn to more anthropological research and knowledge. The role and importance of practitioner knowledge has therefore been explored in a variety of disciplinary settings, notably in health care (Meerabeau, 1995).

[2] Elsewhere, for example, Andrew Sayer (2000, 2010) also questions the hierarchy and value of different knowledge types.

The knowledge that practitioners have in the field of elections has been less systematically gathered or theorised. It has been common to consider electoral officials as street level bureaucrats, borrowing from the work of Michel Lipsky (1980), who defined them as "public service workers who interact with citizens in the course of their jobs, and who have substantial discretion in the execution of their work" (p.3).

The experience of poll workers also been studied (Clark & James, 2017). Poll worker surveys gather information about problems that might occur such as insufficient resources, problems with electoral fraud or potentially eligible voters being turned away. Studies using this method have been used in the UK (James & Clark, 2020b), US (Burden & Milyo, 2015), Mexico (Cantú & Ley, 2017) and Ukraine (Herron, Boyko, & Thunberg, 2017), with the focus varying to cover issues such as training, skills and worker motivations.

The perception of middle level managers have also been surveyed in national studies. Interviews and surveys with middle level managers have been undertaken to evaluate the quality of electoral management for major electoral events such as the UK Brexit referendum in 2016 (Clark & James, 2016; James & Clark, 2020a). They have been used to identify the effects of reforms such as individual electoral registration (James, 2014; James & Clark, 2020b). Surveys of UK election agents have been analysed to assess electoral integrity (Fisher & Sällberg, 2020). There has been no cross-national collection of practitioner experiences, however.

Not all electoral officials are 'street level bureaucrats' – because they are often a long way from the street. They are often managers who have no direct contact with the public and are often in managerial control of those at the bottom of the hierarchy that the 'bottom up' school of implementation encouraged policy makers to listen to (Sabatier, 1986). They undoubtedly do have important practitioner knowledge, however.

4. Theoretical Expectations, Research Questions and Hypotheses

We argue that using the views of electoral practitioners will provide a rich source of information about electoral integrity. It is therefore important to examine how evaluations compare to other measures of organisational success such as public or expert. This is the first aim of this article. Do the perceptions of electoral officials broadly align with expert and public perceptions? [RQ1] We expect that they will be similar, though not be entirely identical, since, as mentioned earlier, electoral officials benefit from the tacit, practitioner knowledge that experts or the public do not have.

We also argue, however, that practitioner knowledge will not be universal and vary across practitioners. The literature on practitioner knowledge tends to conceptualise practitioners as a homogenous group. This is in conflict, however, with other literatures which shows how politics and organisational experience is experienced unevenly by citizens because of gendered, racial and class pressures. We might also expect variation in how practitioners respond to requests for information on the evaluating their organisation. Their individual workplace experiences might be important. We therefore question whether the assessment of the electoral process by practitioners varies by individual characteristics [RQ2].

To study this second question, we might firstly expect there to be individual-level variations by *gender*. Women may be likely to assess electoral integrity differently because of the gendered nature of the organisations that they work in and the gendered nature of electoral integrity. Human resource management theory has shown how structural engrained norms and practices based on stereotyped male and female workers can persist, regardless of the composition of the

workforce (Kanter, 2008; Mastracci & Arreola, 2016). Ethnographic research has documented how political organisations can have gendered experiences for its members. Research on the UK Parliament, for example, has revealed that women are not only outnumbered at parliamentary meetings and can then find their voices unheard. Their interactions with journalists are also that questioning might be more likely to 'dwell on women's character flaws, clothes, and shoes' (Crewe, 2014, p. 676). The importance for gender in electoral integrity has been well documented,. For example, Schneider and Carroll (2020) have unpacked how electoral violence can have a gendered nature. Pathways into politics can also be exclusionary in nature (Durose, Richardson, Combs, Eason, & Gains, 2012). These alternative experiences will be likely to shape the perceptions of the quality and fairness of parliamentary institutions because they are intuitively aware of flaws in their institutions in ways in which others are not. The local knowledge that a street-level bureaucrat will acquire may therefore be different based on gender.[3]

Other individual level factors that might be important might include *job satisfaction*. Job satisfaction has been shown elsewhere to be a driver of electoral integrity (James, 2019). Human management resource theory has shown that individuals who have a more enjoyable working environment are more likely provide further discretionary effort, which will then improve organisational performance (Harter, Schmidt, & Hayes, 2002). We also consider it possible that there will be an individual effect. An individual employee who is less satisfied in their working conditions and career path may view their organisation and profession in a less positive light and therefore provide a lower assessment of electoral integrity. There might also be a 'begrudging employee' who could provide a low assessment of their organisation and their professional field to spite their employer.

The *hierarchical position* that an individual has within an organisation may also shape their perception of organisational performance and electoral integrity. Some electoral official may be street-level bureaucrats as they regularly work with the public on the frontline – perhaps responding to citizens' queries. In contrast, others at a managerial and strategic level will have a different experience. They might be privy to different knowledge and encounter different problems. The difference in types of knowledge at organisational level and the inability that this creates for parts of the same organisation to communicate effectively has been well documented (Wilson, 1989).

It is also possible that organisational level factors might shape the responses from employees about organisational performance and electoral integrity. We hypothesise that some organisations might have more intimidating *organisational cultures* which causes members to supress the truth, so we want to test for a 'gagging' effect in which employees might view their organisational performance poorly, but respond to external enquiries about it positively, and vice versa.

Meanwhile, there are obviously important country level controls that we would want to build into our models because there is a rich vein of research which already helps to identify the drivers of electoral integrity, including economic and human development, and level of democracy (Norris, 2015; Lipset, 1960).

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[3] We also acknowledge that the experience of employees within organisations may also vary by race and ethnicity (Proudford & Nkomo, 2006). The empirical focus of the article, however, is concentrated on gender for reasons that will be explained below.

5. Data and Methods

Original data on electoral officials' perceptions of electoral integrity were collected simultaneously by two surveys between 2016 and 2017. The EMS Survey and the ELECT Survey (James et al., 2019; Norris, Nai, & Karp, 2016) were coordinated surveys with common questions collected by two teams of researchers.[4] Both surveys were conducted via an online platform and respondents were ensured confidentiality of their responses.[5] Each contained a similar set of questions, including information about the electoral officials' backgrounds, and perceptions of their employment. See Appendix A for question wording comparisons.

The surveys were distributed to electoral officials, defined as any employee working on national-level elections in the country, in participating countries with cooperation of their EMBs. It is important to note that the datasets used in this article are therefore based on only those countries and individuals who were willing to participate in the survey. In total, 2,026 employees in 51 countries provided responses. However, in 20 of these countries, less than 5 employees provided responses. Since the analysis in this article will include multi-level modelling to capture important country-level effects, responses from these 20 countries are dropped from these more complex analyses. See Appendix B for a listing of the countries that had responses from at least one electoral official, and the listing of countries included in the analysis. While it is possible to conduct these types of models with fewer respondents at level 1, we dropped them from analysis since we were unsure whether those countries with only one or two respondents had been disseminated properly to their entire workforce as requested.

The survey asked respondents: 'How would you rate the overall integrity of the last national election in your country'? on a scale of 0-10 (where 10 was high). This is the primary dependent variable in the study. Further questions were also asked about different dimensions of electoral integrity on a 0-4 scale (where 4 was high). The questions were taken from World Values Survey to enable a direct comparison against a survey of the public and experts.

The survey included data on the gender of the respondent and other basic socio-demographic variables such as age and education. We chose not to ask sensitive questions on ethnicity and ideology. It was deemed inappropriate to ask this on the survey of electoral officials as they work directly for the government. We were concerned about reducing response rates and jeopardizing the perceived (if not actual) privacy of respondents if this question was asked.

The survey included a range of questions to explore the workplace conditions of employees, more results from which are published elsewhere (James, 2019). For the purpose of this study we measure job satisfaction as the response to the question 'All things considered, how satisfied are you with your job as a whole these days?.'[6] The hierarchical position was measured in the survey by a questions about the individuals' position as senior management (1), or Middle-level management, policy officer/professional, or office and administrative support (0).

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[4] Each team of researchers was working with a different organization of EMBs: the EMS Survey with the Venice Commission, and the ELECT with the Association of World Electoral Management Bodies. After all country members of these two organizations were contacted, any remaining counties' EMBs were invited to take part by the EMS team. See EMS for more details about survey administration.

[5] While there was a great deal of coordination between these surveys and a set of common questions (which are used in this article) the surveys were not identical. A detailed comparison of both survey texts is available upon request.

[6] The EMS survey used a 7-point scale, while the ELECT survey used a 5-point scale. See Appendix A for details on how these were combined.

We measure organisational culture using a variable from the VDEM 10.0 dataset on autonomy of the electoral management board which asked 'Does the Election Management Body (EMB) have autonomy from government to apply election laws and administrative rules impartially in national elections?' (v2elembaut) for 2016 (Coppedge et al., 2020). We use also data from V-DEM to measure the overall level of liberal democracy (v2x_polyarchy') which captures 'How can the political regime overall be classified considering the competitiveness of access to power (polyarchy) as well as liberal principles?.' Economic development is operationalised through the World Bank measures for GDP per capita in 2016.

In the proceeding analysis, we first respond to the question: do the perceptions of electoral officials broadly align with expert and public perceptions? We know that experts and the public differ but show broadly the same trends (Norris, 2014). Can the same be said for electoral officials? Testing how electoral officials' perceptions compare with existing measures of electoral integrity that are commonly used serves as a good robustness check. In other words, it assures that each type of measure, though different in their source and the type of perspective they give, are broadly capturing the same concept. Testing measurement validity in this way has proven a useful tool for many comparative social scientists seeking to better measure key concepts relating to elections and democracy (Bollen, 1980; Elkins, 2000; Hill, Hanna, & Shafqat, 1997).

Simple correlations comparing country means for each dataset (electoral officials, the public and experts) are used. When testing convergent validity, country-level control variables are not included because this is an exercise in measurement validation, rather than explanation. In other words, these models do not seek to explain a causal relationship between the two measures, but rather to simply show their association, regardless of the other structural variables that may influence both.

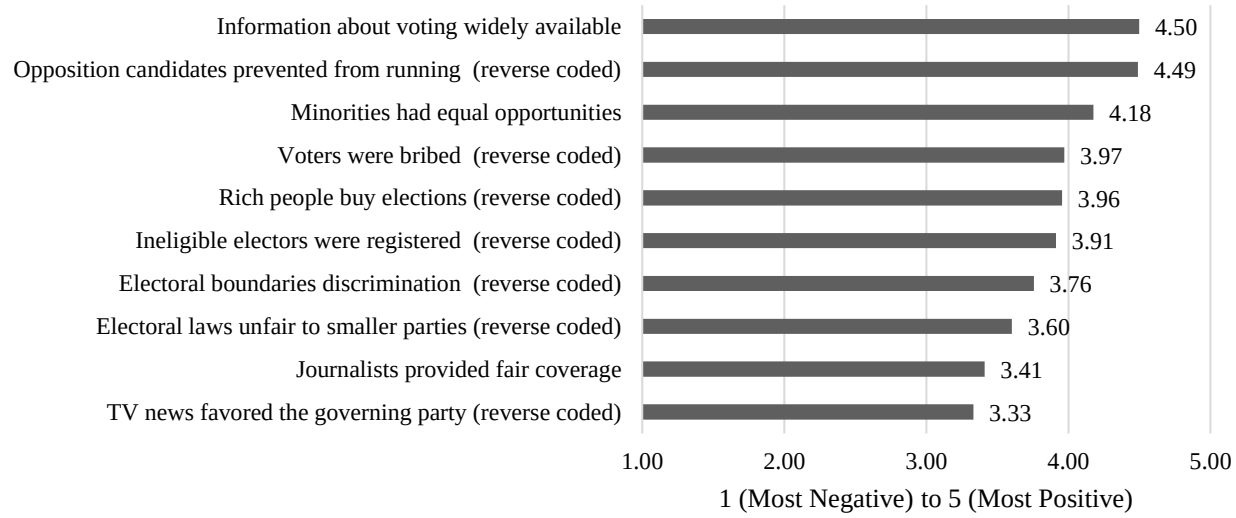
Secondly, does the assessment of the electoral process by practitioners vary by individual-level characteristics, including gender, job satisfaction, hierarchical position, reflecting underlying differences in the nature of the knowledge that they accrue? Furthermore, can institutional or country-level variables predict their responses? To test this, we employ mixed-effects models, with the individual (gender, education, supervisory position, and job satisfaction) at level 1 and the country (EMB autonomy, Polyarchy Score and GDP) at level 2.

6. Results

6.1 Electoral Officials' Evaluations of Electoral Integrity

All respondents were asked to rate the overall level of electoral integrity in their country's last election. The responses on total were rather high, with a mean response of 7.54 (0-10 scale), and standard deviation of 2.11 (see more details in Appendix C). The surveys additionally contained a battery of questions asking about electoral officials' perceptions of elections in their country. This battery of questions is the same as have been asked in other datasets measuring the quality of elections. The questions are identical to those asked to experts by the PEI Index (Norris et al., 2018), and quite similar to those posed to the public in the sixth wave of the World Values Survey. See Appendix D for a comparison of question wording across the three surveys (PEI, WVS and the surveys of electoral officials). The responses of electoral officials to these questions are found in Figure 1, and a comparison between electoral officials, the public and experts is found in Appendix E.

Figure 1: Electoral Officials' Perceptions of Electoral Integrity (mean of all respondents)



Note that the responses to some of these questions were reverse-coded (see Appendix A) for ease of interpretation (high scores indicate higher levels of electoral integrity throughout).

6.2 Testing for Congruent Validity

To assess congruent validity we can compare the perceptions of electoral officials, experts and the public to help assessment the reliability of electoral officials' responses. One means of doing this is consider whether they correlate with the other data available on the quality of elections, namely the perceptions of experts and the public (Norris, 2013). If these measures tend to correlate, we may be more confident in the reliability of the assessments of electoral officials as broadly capturing the same concepts as a means of measurement validity.

Table 1 presents the correlations between the assessments of electoral integrity by each group: the public, experts, and electoral officials, as measured by the percentage of respondents who indicated positive assessments in each country where data were available.

Table 1: Correlations between Officials, Experts, and the Public

Electoral Integrity Question	**Correlation Officials & Experts**	**Correlation Officials & Public**	**Correlation Experts & Public**
Electoral laws unfair to smaller parties (reverse coded)	0.27, p>0.1	Not asked	Not asked
Information about voting widely available	0.15, p>0.1	Not asked	Not asked
Electoral boundaries discrimination (reverse coded)	**0.39, p<0.05**	Not asked	Not asked
Ineligible electors were registered (reverse coded)	**0.69, p<0.01**	Not asked	Not asked
Opposition candidates prevented from running (reverse coded)	**0.64, p<0.01**	0.10, p>0.1	0.42, p>0.1
Minorities had equal opportunities	0.12, p>0.1	Not asked	Not asked
TV news favored the governing party (reverse coded)	**0.39, p<0.05**	-0.04, p>0.1	0.43, p>0.1
Voters were bribed (reverse coded)	**0.83, p<0.01**	**0.69, p<0.01**	**0.61, p<0.1**

Journalists provided fair coverage	**0.57, p<0.01**	**0.50, p<0.01**	**0.36, p>0.1**
Rich people buy elections (reverse coded)	**0.87, p<0.01**	**0.58, p<0.01**	**0.60, p<0.1**

Correlations between country percentages of positive responses to each question.

In the second column, we note that seven of the ten the indicators of electoral integrity do correlate between electoral officials and experts. Broadly speaking this points to similar trends between the responses of experts and electoral officials to the same set of questions. We note three differences though, regarding the fairness of electoral laws, the provision of voting information and the equality of opportunities for minorities. The differences in perceptions of the provision of voting information is unsurprising since electoral officials may rate this component of electoral integrity quite differently since they are often directly involved in the process. However, before discounting their opinions, we can also note that the registration of voters, another area directly under the purview of the EMB, correlates well between experts and electoral officials.

We also find that the perceptions of electoral officials correlate with the perceptions of the public for only three (of five) of the dimensions of electoral integrity, like the two (of five) dimensions where the public and experts correlate. Thus, we find no clear evidence that there are any systematic or more pronounced reliability or congruence issues with the perceptions of electoral officials as a means of gauging levels of electoral integrity within a country than other common means of measuring specific various of the quality of elections.

6.3 Drivers of Electoral Officials' Evaluations

To identity whether there are variations in the perceptions of electoral integrity of electoral officials, a series of mixed effects regressions were run (Table 2). In the first model only country-level control variables introduced. The control variables of Polyarchy and GDP are positive but not statistically significant in these models. Nonetheless, they remain important controls for predicting electoral integrity levels.

Table 2: Drivers of Individual-Level Electoral Officials' Perceptions of Electoral Integrity

	(1) Overall Evaluation of Electoral Integrity in their Country	(2) Overall Evaluation of Electoral Integrity in their Country
VDem Polyarchy	0.11	0.63
	(1.78)	(1.75)
VDem EMB Autonomy	0.58*	0.53*
	(0.27)	(0.26)
GDP PC PPP	0.00	0.00
	(0.00)	(0.00)
Female		-0.55***
		(0.09)
Post-secondary Education		0.45***

		(0.13)
Job Satisfaction		1.12***
		(0.20)
Senior Management		-0.07
		(0.11)
Constant	6.46***	5.32***
	(0.89)	(0.89)
Var (Constant)	0.89	0.78
	(0.14)	(0.12)
Var (Residual)	2.98***	2.85***
	(0.05)	(0.05)
N (Individuals)	1873	1789
N (Countries)	31	31

*Standard Errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1*
Mixed-Effects Models (random intercept) with Level 1 (Individual) Level 2 (Country)

Additionally, we importantly test for the autonomy of the EMB. This is important because we concerned that there might be a 'gagging effect' whereby respondents would boost their evaluation of electoral integrity because of their organisational culture. For there to be a 'gagging effect we would expect that EMB autonomy would negatively affecting perceptions of electoral integrity. In fact, EMB autonomy positively predicts the judgement of electoral integrity, however, with a β value of .58 ($p<0.01$). This suggests that there is no 'gagging effect' and officials are giving honest evaluations. The relationship between EMB autonomy and electoral integrity is line with that found in the literature elsewhere (James, 2020, pp. 89-159; van Ham & Lindberg, 2015). It therefore reinforces this relationship that EMB autonomy improves electoral integrity with new evidence at the individual level. The effect is relatively small, but this is also not inconsistent with earlier findings.

In the second model, individual-level characteristics were introduced. We first draw attention to the impact of gender in perceptions of electoral integrity. The models to show a relationship between gender and perceptions of electoral integrity. There is a β value of -0.55 ($p<0.01$), with those respondents self-identifying in the survey as female more likely to view electoral integrity more critically. This provides support for argument made that electoral integrity may have a gendered nature.

We also see that those who were more satisfied with their job were also more likely to be positive about electoral integrity. There are several reasons why this might be the case. Firstly, bodies that create a culture of employment where job satisfaction is high may also be likely to achieve high levels of organizational performance, thus the model demonstrates a high level of correlation between these two variables. Additionally, employees with low job satisfaction evaluate the performance of their body lower, since they are unhappy with their employer or disgruntled with their organization. Thus, it is important to control for this variable in further research, noting that electoral officials' perceptions may be influenced by their working conditions.

Finally, we see no systematic difference between those in management and those who are not supervisors. It would appear that those working at both the higher and lower levels of the EMB apparatus have similar perceptions.

8. Conclusion

Elections are indispensable for the realisation of democratic goals. However, there is an ongoing debate about how to assess and measure electoral integrity. This is of critical importance in an age where there are concerns about democratic backsliding and autocratisation. Electoral integrity is a central concept in the broader evaluation of democracy and in the classification of regime type (Mechkova et al., 2017).

We have argued that electoral officials have on-the-ground *practice-based* knowledge of the conduct of elections, including the technical aspects of election administration. For this reason, their experiences of electoral integrity provide unique insights that cannot be captured by the commonly used public and expert surveys that measure the quality of elections in much of the current research. We have therefore argued that their knowledge should be mined and incorporated into our assessment of elections and democracy. This can deeply enrich the tracing of broader trends electoral integrity and democratic backsliding.

It also follows that the experiences and knowledge of employees should also be mined more carefully by employers because they can help to assess organisational performance and weaknesses. Workplace democracy has long been proposed by democratic theorists, seeking to improve the quality of democracy. Carol Pateman (1970) argued that workplace democracy would have 'spillover' effects that would encourage employees to take part in public participation outside of the workplace. However, in the field of elections, we suggest that elements of workplace democracy can also improve democracy from within, by carving out better run public organisations.

This article therefore used original data from surveys of electoral officials in 31 countries to gauge their perceptions of electoral integrity. As a test of measurement validity, we find that there is some, albeit inconsistent, correlation with the measures of experts and the public perceptions of electoral integrity. This further supports the assertion that the assessments of electoral officials can provide a unique perspective and contribution.

It also considered the correlates of electoral officials' perceptions of electoral integrity. It is important to take the drivers of their perceptions into consideration when using these measures as evaluations of electoral integrity. At a country-level, we find that greater levels of EMB autonomy are related to higher perceptions of electoral integrity. This is consistent with some previous research suggesting autonomy as a crucial factor to promoting quality electoral management. It also provides us with greater confidence that electoral officials are responding to the surveys with honesty and did not feel compelled to give false impressions of the quality of elections in their country.

At the individual level we note that those with higher job satisfaction have better assessments of electoral integrity. This result highlights both that those who are satisfied at their employment may work better, which leads to better quality electoral administration, but also that those disgruntled employees are more likely to rate their organizations poorly.

Additionally, we note that women rated the quality of elections more poorly, suggesting that some electoral malpractices are gendered in nature. Political institutions and organisations are known to often produce different experiences for employees because of underlying gendered and racial politics. Although it was not possible to test the effects ethnicity in this study, this study gives further weight to the importance to these wider findings.

These data provide an important first step towards the greater incorporation of the views of electoral officials into our research on electoral integrity. The regular collection of these data in the future is encouraged. Further research on survey bias could be used to determine under what circumstances electoral officials, or any government employees, are afraid or unwilling to give their honest opinions of their work and the work of their organizations. Our inclusion of the variable of EMB autonomy presents a first step towards this line in inquiry, though we recognise the difficulty of disentangling whether more positive perceptions of electoral integrity reflect better-quality elections, or feeling as though their true opinions cannot be safely expressed (or both). It is also clearly important that survey samples include measures for gender and job satisfaction and that this is factored into the subsequent analysis.

We furthermore advocate for an approach to measuring electoral integrity that seeks to 'triangulate' from various sources of data, including experts, the public, and practitioners. The views of each of these groups are interesting in their own right, but when combined can provide the most accurate picture of electoral integrity from all major stakeholders.

Future research may wish to further explore how the differences between these three groups' perceptions of electoral integrity speak to the broader issues of public confidence in elections, and communication with voters about election procedures and electoral integrity. If there is a large discrepancy between what the public perceives, and what election administrators are doing, perhaps there is room to explore different means of communication and instilling public confidence. Differences between practitioner assessments and expert assessments may lead to an important conversations about the sources of experts' assessments of elections, especially if they rely on what is communicated to them through the media, observers or other organizations or groups.

In sum, this article has demonstrated the importance of practitioner knowledge in the assessment of elections and democracy and presented new data to allow the first cross-national analysis of electoral integrity through the knowledge of those who know them most intimately.

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Appendix A: Variables from the Electoral Management Survey and ELECT Survey

Variable	Coding
Electoral Integrity	Overall how would you rate the integrity of the last election in this country? 0 very low -5 average - 10 very high electoral integrity
Gender	0 Male 1 Female
Education	0 No post-secondary 1 Post-secondary <u>Original Coding:</u> *Electoral Management Survey:* *What is the highest level of education you have completed?* *0 No formal education* *1 Primary education only* *2 Secondary education only* *4 University under-graduate degree or equivalent* *5 University master graduate degree or equivalent* *6 University PhD graduate degree or equivalent* *ELECT:* *Education, highest diploma* *1. No formal education* *2. Primary education only* *3. Secondary education only* *4. Post-secondary vocational education* *5. University under-graduate degree or equivalent* *6. University master graduate degree or equivalent* *7. University PhD graduate degree or equivalent*
Job Satisfaction	Different scales are reduced to a 0-1 scale. <u>Original Coding:</u> *Electoral Management Survey:* *All things considered, how satisfied are you with your job as a whole these days* *0 (Strongly Disagree) to 6 (Strongly agree)* *ELECT:* *Job satisfaction: Overall* *0. Very dissatisfied* *1. Fairly dissatisfied* *2. Neither dissatisfied nor satisfied* *3. Fairly satisfied* *4. Very satisfied*
Senior Management	1 – Senior Management 0 – Other <u>Original Coding:</u> *Electoral Management Survey:* *Which of the following best describes the level of your current occupation?* *0 Senior management* *1 Middle-level management* *2 Policy officer/professional* *3 Office and administrative support*

	ELECT: *Level of current post* *1. Senior management* *2. Middle-level management* *3. Office and administrative support*
GDP	GDP 2016 USD PPP from World Bank
VDem EMB Autonomy	'Does the Election Management Body (EMB) have autonomy from government to apply election laws and administrative rules impartially in national elections?' (v2elembaut)
VDem Polyarchy	'How can the political regime overall be classified considering the competitiveness of access to power (polyarchy) as well as liberal principles?.'(v2x_polyarchy')

Data Sources:

Electoral Officials:

- Toby S. James; Holly Ann Garnett; Leontine Loeber; Carolien van Ham, 2020, "Comparative Structural Survey Election Management Bodies EMS (version 1, European and International Data, February 2019)", https://doi.org/10.7910/DVN/1X5FVB, Harvard Dataverse, V1, UNF:6:4c7JS0AcNhG58rajT5Q8HA== [fileUNF]
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Country-level Variables

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Appendix B: Response Rates by Country

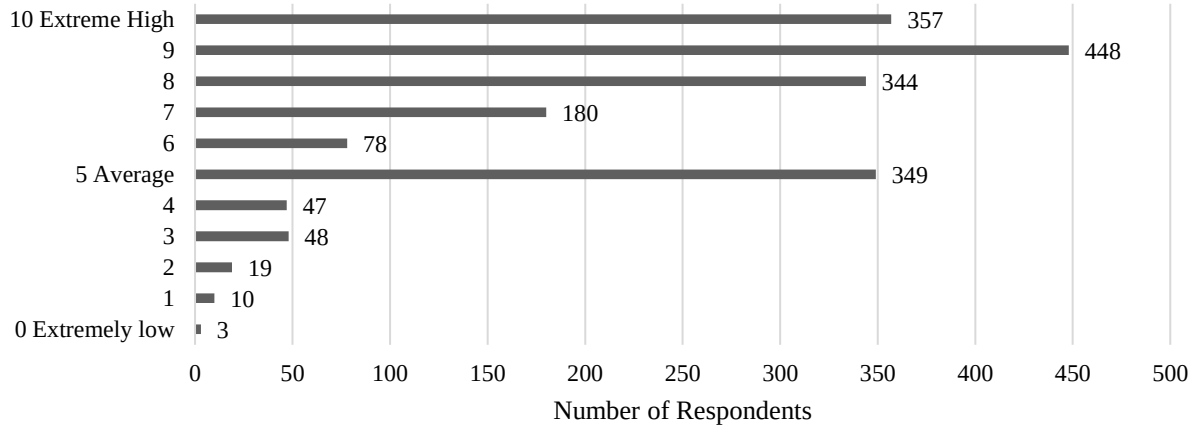
The survey was sent to all employees either directly by the researchers or indirectly through the organization.

Country	Number of Responses	Included in Analysis
Albania	9	Yes
Belgium	3	No
Belize	7	Yes*
Benin	9	Yes
Bosnia and Herzegovina	52	Yes
Brazil	1	No
Bulgaria	2	No
Burkina Faso	2	No
Cameroon	1	No
Congo, Democratic Republic of	21	Yes
Costa Rica	1	No
Croatia	529	Yes
Czech Republic	1	No
Denmark	34	Yes
Ecuador	13	Yes
Finland	22	Yes
Georgia	19	Yes
Ghana	8	Yes
Greece	1	No
Hungary	15	Yes
Iraq	4	No
Ireland	37	Yes
Kenya	1	No
Korea, Republic of	245	Yes
Kyrgyzstan	25	Yes
Latvia	1	No
Libya	10	Yes
Malawi	2	No
Maldives	9	Yes
Malta	16	Yes
Mauritius	12	Yes
Mexico	357	Yes
Moldova	17	Yes
Mongolia	5	Yes

Mozambique	3	No
Namibia	1	No
Netherlands	66	Yes
Nigeria	2	No
Norway	65	Yes
Palestine	6	Yes
Panama	1	No
Philippines	25	Yes
Portugal	12	Yes
Romania	11	Yes
Saint Lucia	1	No
Sierra Leone	1	No
South Sudan	3	No
Sweden	77	Yes
Switzerland	7	Yes
Timor Leste	3	No
Togo	7	Yes
United Kingdom	244	Yes
TOTAL	**2,026**	**32***

***** While there were sufficient responses from electoral officials for Belize to be included in these models, the associated Vdem Data was not available for 2016 (the year studied), so it is dropped from the analysis in Table 2.

Appendix C: Electoral Officials' Perceptions of Electoral Integrity in their Country



Combined Data from the Electoral Management Survey and the ELECT Survey.

Appendix D: Perceptions of Electoral Integrity Indicators Compared

	Electoral Management Survey	**PEI**	**WVS**
Electoral Integrity Variables	When thinking of the last national election in your country, do you agree or disagree with the following statements? Response Options: 1. Disagree strongly 2. Disagree somewhat 3. Neither agree nor disagree 4. Agree somewhat 5. Agree strongly Not applicable Don't know	… do you agree or disagree with the following statements? Response Options: 1. Strongly Disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly Agree Don't know Not applicable	In your view, how often do the following things occur in this country's elections? Response Options: 1. Very often 2. Fairly often 3. Not often 4. Not at all often Missing Unknown
Electoral laws were unfair to smaller parties	agree_laws (reverse coded)	Lawsunfair (reverse coded)	
Information about voting procedures was widely available	agree_information	votinginfo info	
Electoral boundaries discriminated against some parties	agree_boundaries (reverse coded)	Bdiscrim (reverse coded)	
Some ineligible electors were registered	agree_registered (reverse coded)	Ineligible (reverse coded)	
Some opposition candidates were prevented from running	agree_opposition (reverse coded)	oppprevent (reverse coded)	V228B (reverse coded)
Ethnic and national minorities had equal opportunities to run for office	agree_minorities	minorityopp	
TV news favored the governing party	agree_news (reverse coded)	tv (reverse coded)	V228C (reverse coded)

Voters were bribed	agree_bribed (reverse coded)	bribed (reverse coded)	V228D (reverse coded)
Journalists provided fair coverage of the elections	agree_journalists	faircoverage	V228E
Rich people buy elections	agree_rich (reverse coded)	rich (reverse coded)	V228G (reverse coded)

Data Sources:

- Toby S. James; Holly Ann Garnett; Leontine Loeber; Carolien van Ham, 2020, "Comparative Structural Survey Election Management Bodies EMS (version 1, European and International Data, February 2019)", https://doi.org/10.7910/DVN/1X5FVB, Harvard Dataverse, V1, UNF:6:4c7JS0AcNhG58rajT5Q8HA== [fileUNF]
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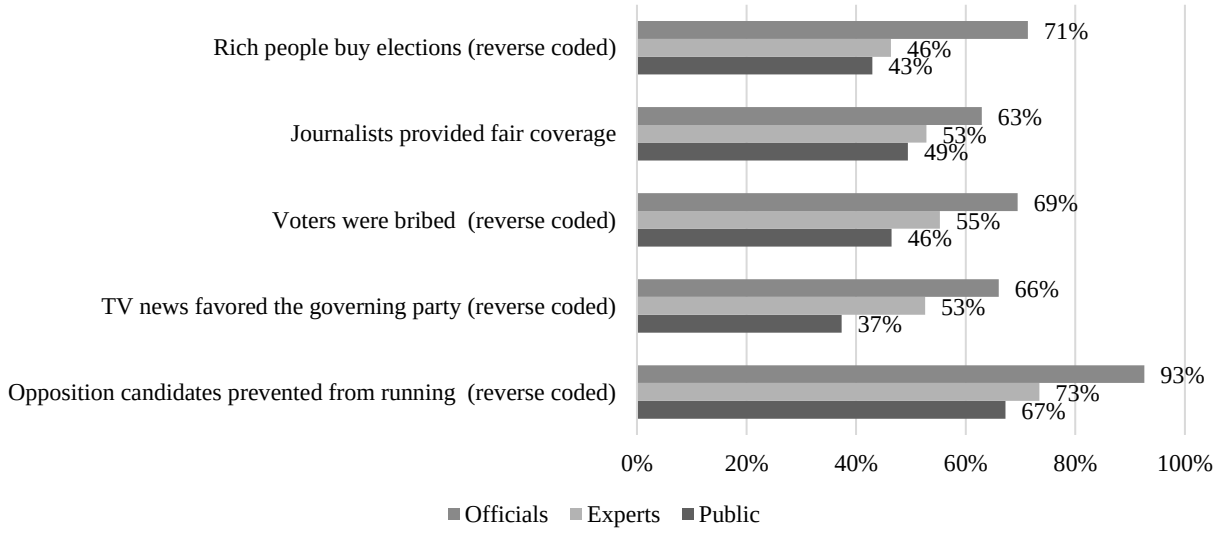
- Norris, Pippa; Wynter, Thomas; Cameron, Sarah, 2018, "Perceptions of Electoral Integrity, (PEI-6.0)" https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/Q6UBTH

Appendix E: How do the perceptions compare?

This figure the mean of public, experts and electoral officials' responses to questions about electoral integrity in their country. Only five questions were asked of all three groups of respondents. The mean for each country was created, and then the mean of all eight country scores was created. The numbers reported are the percentage of respondents who stated "agree" or "strongly agree," compared with those who stated "often" or "fairly often."

Mean Perceptions of Electoral Integrity: Comparing the Public, Experts and EMB Officials



Reverse coding so 0 is least positive for electoral integrity and 1 is most positive for electoral integrity

Data reduced to a 0 (disagree or strongly disagree, not often or not often at all) to 1 scale (agree or strongly agree, often or fairly often). Percentage who indicated they agreed or strongly agreed, all countries equally weighted.

N: 8 countries had public, expert and officials' perceptions