

**New “Labour Rights Indicators”:  
Method and Results**

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**Center for Global Workers' Rights**  
Working Paper Series  
Working Paper 002  
<http://lser.la.psu.edu/gwr/projects>

April 2016

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[Version: 27 April 2016]

## 1. Introduction

In order to undertake statistical analysis on the relationship between international labour standards and foreign direct investment and international trade, Kucera (2002, 2007) developed a method for constructing country-level indicators of trade union rights. The method was based on the coding of violations in textual sources and endeavored to apply the definitions of freedom of association and collective bargaining (FACB) rights embodied in ILO Conventions 87 on Freedom of Association and Protection of the Right to Organize and 98 on Right to Organize and Collective Bargaining. In spite of its limitations, the method continues to be fairly-widely used among researchers. In their survey of related indicators, Peels and Develtere (2008) write:

From this overview, we conclude that so far the Kucera dataset on FACB [freedom of association and collective bargaining] rights is the best option if one wants to measure the policy involvement of trade unions. The main reasons are its extensive country coverage, its focus on FACB rights and more in particular on de facto FACB rights, and the high transparency in methodology (Peels and Develtere, 2008, p. 341).

In his survey of related indicators done for the US Department of Labor, Barenberg provides useful criticisms of the Kucera method and concludes:

In any event, Kucera’s methodology stands as the leading effort to measure compliance with freedom of association and collective bargaining rights...in light of social scientists’ use of the methodology. The *American Political Science Review*, as recently as November 2009, published an article by Greenhill et al., using Kucera’s methodology in modeling the trade-based diffusion of labor rights (Greenhill, et al., 2009). For another use of Kucera’s methodology by political scientists, see Mosley, et al. (2007) (Barenberg, 2010, p. 56).

In an effort to address some of the shortcomings of the Kucera method, Sari and Kucera (2011) developed an alternative coding scheme which provides the foundation for our new method of constructing what we refer to as Labour Rights (LR) indicators. Among the most important differences with the Kucera (2002, 2007) method are the following:

- Coding nine rather than just three textual sources and thus making full use of textual sources available through the ILO’s supervisory system, as well as coding national legislation and other related reports.
- Distinct evaluation criteria for violations of FACB rights in law (*de jure*) and in practice (*de facto*).
- Greater emphasis on violations of FACB rights regarding due process.
- Greater emphasis on violations of FACB rights committed against trade union officials.
- Eliminating catch-all evaluation criteria, such as “Other de jure acts of prohibitions, infringements and interference” or “Other de facto acts of prohibitions, infringements and interference”.

- Following from the prior four points, an increase in the number of evaluation criteria from 37 to 108.
- More comprehensive definitions of what constitutes a violation of each of the evaluation criteria.
- The use of the Delphi method of expert consultation to derive the weights for each of the evaluation criteria.
- Perhaps most fundamentally, whereas the Kucera (2002, 2007) method was the work of an economist with essentially no legal knowledge, our new method was developed in equal measure by a labour lawyer and an economist working in close collaboration, with the coding was done by labour lawyers rather than economists.

Another novel characteristic of the new LR indicators is that they are accompanied by a website, at the Center for Global Workers' Rights at Penn State University.<sup>1</sup> The website facilitates access to the indicators and allows researchers to use the data in different ways to suit their research interests. The website also provides access to the text on which the coding is based, thus lending itself to legal as well as statistical analysis.

Regarding the main elements of our new method, the next sections of this paper address its key premises, the 108 evaluation criteria, the textual sources coded, the use of the Delphi method to derive weights, and the rules for converting the coded information into normalized indicators ranging in value from 0 to 10 (best and worst possible scores, respectively). This is followed by a description of the coding results and indicators for 2012 as well an assessment of current progress and our plans for moving this project forward. Two other main elements of the method are the definitions of each evaluation criteria and the general and source-specific coding rules. Our discussion of these elements is, unavoidably, quite lengthy and technical and so we decided to address them in a separate companion paper.<sup>2</sup>

## 2. Key premises

The key premises on which we endeavored to base the indicators are: (i) definitional validity – the extent to which the evaluation criteria and their corresponding definitions accurately reflect the phenomena they are meant to measure; (ii) transparency – how readily a coded violation can be traced back to any given textual source; and (iii) inter-coder reliability – the extent to which different evaluators working independently are able to consistently arrive at the same results.

*Definitional validity.* As these are meant to be indicators of *international* FACB rights, the 108 evaluation criteria and their corresponding definitions are directly based on the ILO Constitution, ILO Conventions No. 87 and 98 and the related ILO jurisprudence.<sup>3</sup> Given that the ILO supervisory system is also guided by these definitions, this facilitates the act of coding itself given our heavy reliance on ILO textual sources produced by the supervisory system.

*Transparency.* A key rationale for the large number of evaluation criteria is to eliminate catchall evaluation criteria for violations of FACB rights not elsewhere coded, that is, violations for

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<sup>1</sup> Available at: <http://labour-rights-indicators.la.psu.edu/>

<sup>2</sup> Available at: <http://labour-rights-indicators.la.psu.edu/docs/Coding%20Rules.pdf>

<sup>3</sup> The related ILO jurisprudence is: *Digest of Decisions and Principles of the Freedom of Association Committee of the Governing Body of the ILO* (ILO, 2006); *Freedom of Association and Collective Bargaining: General Survey of the Reports on the Freedom of Association and the Right to Organise Convention (No. 87), 1948, and the Right to Organise and Collective Bargaining Convention (No. 98)* (ILO, 1994); *General Survey on the Fundamental Conventions Concerning Rights at Work in Light of the ILO Declaration on Social Justice for a Fair Globalization, 2008* (ILO, 2012).

which there is not an explicit evaluation criteria. This addresses a criticism of the Kucera (2002, 2007) method and Sari and Kucera's (2009) prior work on these issues (Barenberg, 2010). More generally, the aim was to avoid pigeon-holing violations that are not of similar character or severity. (And after all, the coding can always be aggregated up into various clusters of evaluation criteria, depending on the user's interest.) This level of detail also facilitates the transparency of the method, in that very specific violations can be readily traced back to individual textual sources. This is made possible by the coding itself, in which violations are coded with the letters "a" through "i," with each letter standing for one of the nine textual sources coded, as discussed below.

*Inter-coder reliability.* We endeavored to develop clear and comprehensive coding rules as well as definitions for each of the evaluation criteria with the aim of making the indicators reproducible. We informally assessed inter-coder reliability in the process of training two lawyers (sequentially and independently of each other) to do the coding and in double-checking their coding, which resulted in a number of revisions to the coding rules and definitions. This process led us to believe the method is indeed highly reproducible. In our view, the extent of inter-coder reliability depends not on the clarity or comprehensiveness of the method as such, but on the coders being sufficiently well-trained and in particular with being sufficiently well-versed in the coding rules and definitions as to be able to apply them consistently. That is, coders must develop a detailed working knowledge of what constitutes compliance with international FACB rights as defined by the ILO. In having a large number of evaluation criteria and corresponding definitions, we were mindful that there is a fine line between being exhaustive and exhausting. Yet this is less daunting than it may seem when one considers the branching relationship among these evaluation criteria, discussed in the next section of this paper. Still, a concern in this regard is that coding errors may creep in as a result of the ambiguous wording of textual sources or indeed simple fatigue. This is one of the issues we intend to address in the future with formal statistical tests of inter-coder reliability (e.g., Hayes and Krippendorff, 2007).

### 3. The 108 evaluation criteria

Table 1 enumerates the 108 evaluation criteria and groups them into categories.<sup>4</sup> The five broader categories are: I. "Fundamental civil liberties," II. "Right of workers to establish and join organizations," III. "Other union activities," IV. "Right to collective bargaining," and V. "Right to strike." These categories are themselves split into violations of FACB rights in law and in practice, yielding 10 categories all together (represented in the table as Ia, Ib, etc.). In other words, most of the evaluation criteria representing violations in law have a partner representing violations in practice, and vice versa.

- Violations in law refer to national legislation that is not in conformity with FACB rights as defined by the ILO as well as to actions taken on the basis of such legislation.
- Violations in practice refer to acts committed and in violation of the existing national legislation that is in conformity with FACB rights as defined by the ILO.<sup>5</sup>

[Insert Table 1 about here]

In addition to facilitating an assessment of the relative prevalence of violations in law and in practice for any given evaluation criteria or cluster of evaluation criteria, the split between violations

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<sup>4</sup> Note that these evaluation criteria and this paper more generally use "trade union rights" as a synonym for FACB rights.

<sup>5</sup> In cases where there is no relevant national legislation, violations in practice refer to acts committed in violation of FACB rights as defined by the ILO.

in law and in practice enables more nuanced analyses of how the causes and effects of FACB rights violations may differ in law and in practice, as well as how changes in law may be reflected in changes in practice over time. Aside from these analytical advantages, the rough doubling of evaluation criteria by splitting them into violations in law and in practice makes their sizeable number more tractable for both coders and users. Such branching relationships among the evaluation criteria extend to two additional types of evaluation criteria addressing “Lack of guarantee of due process and/or justice” and “Violations committed against trade union officials.”

The evaluation criteria “Lack of guarantee of due process and/or justice” are incorporated into the 10 categories of evaluation criteria as the last-listed evaluation criteria within each, with the exception of category on “Fundamental civil liberties in practice” (Ib). This is based on the premise that the exercise of FACB rights depends on their effective protection defined in terms of fair and sufficiently prompt trials by an independent and impartial judiciary. Under the category of “Fundamental civil liberties in practice,” on the other hand, these evaluation criteria are attached to each of the six more specific evaluation criteria (EC 6, 9, 12, 15, 18 and 21). This emphasis on fundamental civil liberties in practice is meant to reflect the emphasis of the CEACR and CFA, in particular their view that a free and independent trade union movement can develop only to the extent that fundamental human rights are respected and where in the event of violations, measures are taken to identify, bring to trial and convict the guilty parties (ILO, 2006, Paras. 33 and 51). In addition, these criteria are attached to “Anti-union discriminatory measures” (EC 43) and “Acts of interference of employers and/or public authorities” (EC 46) under the category of “Right of workers to establish and join organizations in practice” (IIb), motivated by Article 3 of ILO Convention 98 which states that “Machinery appropriate to national conditions shall be established, where necessary, for the purpose of ensuring respect for the right to organise...”

The evaluation criteria “Violations committed against trade union officials” are attached to the first five of the six more specific evaluation criteria (EC 6, 9, 12, 15 and 18) under the category of “Fundamental civil liberties in practice” (Ib) (EC 21 does not apply here). In addition, this criterion is attached to “Anti-union discriminatory measures” (EC 43) under the category of “Right of workers to establish and join organizations in practice” (IIb) as well as to “Use of excessive sanctions in case of legitimate and peaceful strikes” (EC 106) under the category of “Right to strike in practice” (Vb). The emphasis on trade union officials is motivated by the view that violations against them are particularly damaging to the exercise of FACB rights.

For those interested in the comparison, we constructed a correspondence table (available on request) between the 37 evaluation criteria used by Kucera (2002, 2007) and 108 evaluation criteria of our new method, which shows that the latter can be largely mapped onto the former.

#### **4. Textual sources**

The Kucera (2002, 2007) method was based on the coding of three recurring reports: The ILO’s *Report on the Committee on Freedom of Association*, the International Trade Union Confederation’s (ITUC) *Annual Survey of Violations of Trade Union Rights*, and the US State Department’s *Country Reports on Human Rights Practices*. Yet the more textual sources there are, the better it is for coding purposes, to the extent that these sources provide additional credible information consistent with the ILO’s definition of FACB rights. Moreover, additional sources need to be produced on a regular basis to minimize biases over time and be publically available so that the indicators are reproducible.

The principle of more being better holds all the more strongly insofar as the use of a given textual source offsets potential biases in the indicators resulting from the use of other textual sources. Such biases can result not because information in the sources themselves is biased, but because of asymmetries between the availability of information for different countries and types of FACB rights violations. Of particular concern are biases that may arise between countries that have and have not

ratified ILO Conventions 87 and 98 (ratifying and non-ratifying countries hereafter) as well as between FACB rights violations in law and in practice. Some ILO sources only apply to ratifying countries and while it is not possible to collect all relevant information for FACB rights violations in practice, one can do so for FACB rights violations in national legislation itself, if not for actions taken on the basis of such legislation.<sup>6</sup>

On these grounds, the present method makes use of five additional ILO textual sources: *Reports of the Committee of Experts on the Application of Conventions and Recommendations*; *Reports of the Conference Committee on the Application of Standards*; *Country Baselines Under the ILO Declaration Annual Review*; *Representations under Article 24 of the ILO Constitution*; and *Complaints under Article 26 of the ILO Constitution*.

The method also codes relevant national legislation for non-ratifying countries. We regard the coding of national legislation as particularly important to offset information asymmetries between ratifying and non-ratifying countries as regards FACB rights in law (at the same time noting our intention to code national legislation for ratifying countries in the future). Note that we define ratifying countries as those that have ratified both Conventions 87 and 98, in which case its national legislation is not coded at present. Non-ratifying countries, on the other hand, fall into two categories, those that have ratified neither 87 nor 98 and those that have ratified only one of these Conventions. If a country has ratified only 87, its national legislation is coded for violations pertaining to 98, as violations under 87 fall under the remit of the ILO's Committee of Experts as well as Committee on the Application of Standards. Similarly, if a country has ratified only 98, its national legislation is coded for violations pertaining to 87. Note that for federal states, we only code federal-level legislation. A useful example of how labour standards indicators can be constructed for jurisdictions within federal states is provided by Block and Roberts, who constructed such indicators for the 50 states of the US and the 13 Provinces and Territories of Canada (Block and Roberts, 2000; Block, 2007).

The nine textual sources are recapitulated in Table 2, along with the associated letters by which they are coded as well as whether these sources pertain to ratifying countries, non-ratifying countries, or both. Some of these textual sources may be regarded by some users as less credible than others. To accommodate such concerns, the project's website enables the scores for any given country to be automatically re-calculated by deselecting any source or combination of sources.

[Insert Table 2 about here]

## 5. Using the Delphi Method to Construct Evaluation Criteria Weights

The Kucera (2002, 2007) method of constructing trade union rights indicators assigned weights of 1, 1.25, 1.5, 1.75 or 2 to each of 37 evaluation criteria, based solely on one non-lawyer's impressionistic sense of what constituted more or less severe trade union rights violations. Clearly, one could do better, and the use of the Delphi method to construct evaluation criteria weights represents our efforts to do so (Cf. Cuhls, 2005; Hsu and Sandford, 2007 for more on the Delphi method). To our knowledge, ours is the first use of the Delphi method to construct weights for the construction of statistical indicators.

Our application of the Delphi method involved two rounds of surveys conducted via email of internationally-recognized experts in labour law having knowledge of the ILO's supervisory system and particular knowledge of FACB rights as defined by the ILO. Regional representation was another consideration. Experts remained anonymous with respect to each other throughout the

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<sup>6</sup> For example, about two-thirds of cases brought before the Committee on Freedom of Association in recent years originate from in Latin America, suggesting that workers' organizations in these countries are more actively rely on this mechanism.

process. Initial invitations to participate were sent to 37 experts, of whom 18 initially agreed to participate and of whom 14 went through both survey rounds. Of these 14 experts, 13 were lawyers and one a political scientist, with five based in Western Europe, one in Eastern Europe, three in the US, two in Latin America, two in Asia and one in Africa.

Experts were asked to provide ratings of 1, 2, 3, 4 or 5 for each of the evaluation criteria, in response to the following question:<sup>7</sup>

The Survey asks one overriding question: On a scale of 1 to 5, how would you rate the 108 evaluation criteria in terms of the severity of their impact on the development of a free and independent trade union movement, voluntary collective bargaining and the exercise of trade union rights? (With 1 indicating least severe and 5 indicating most severe.) The severity of each of these violations depends, of course, on how frequently it occurs. For the purposes of responding to the survey, however, we ask experts to consider each violation in its own right independently of the frequency with which it might occur. Put in other words, the weights are meant to compare any single violation represented by a given evaluation criteria against any single violation represented by other evaluation criteria.

After having received the first round of replies, the average first round ratings among the experts for each evaluation criteria were sent back to each of the experts alongside their first round ratings. Experts were invited to make changes, if they wished, to their first round ratings. Final ratings used to construct the weights were the average second round ratings among the experts for each evaluation criteria.

Main results of the two rounds of surveys are shown in Table 1. Consistent with the logic of the Delphi method, there was considerable convergence in the experts' ratings in the second round. As the table shows, variation in the experts' ratings as measured by standard deviations declined for 103 of 108 of the evaluation criteria, remained the same for three (EC 6, 38 and 77), and increased (slightly) for only two (EC 26 and 98). As for variation in final ratings across the evaluation criteria, these ranged in value from 2.79 (EC 63, 74 and 90) – considerably higher than the possible minimum rating of 1 – to 5 (EC 1, 6, and 7). The average value among these final ratings is correspondingly high, at 4.03. From the point of view of the experts, that is, all of the 108 evaluation criteria represent FACB rights violations of at least moderate severity. For the purposes of constructing indicators, it is worth noting that the less variation there is in ratings among the evaluation criteria, the closer weighted indicators are to equally-weighted indicators.

These ratings are not the weights themselves, however. The ratings can be converted into weights using different ranges of minimum and maximum weighting and rating values. For our purposes, we follow Kucera (2002, 2007) and let minimum and maximum weighting values range from 1 to 2, based on *possible* minimum and maximum rating values ranging from 1 to 5, shown in the last column of Table 1. This is, in effect, a relatively light weighting scheme. For the purposes of statistical analysis, though, it is useful to test the sensitivity of findings with respect to alternative weighting schemes.

## **6. Applying the weights, normalization and default scores**

The raw coding uses the letters “a” through “i” (again, with each letter corresponding to one of the nine textual sources) to represent coded violations of FACB rights for each evaluation criteria, yielding a column of 108 cells for any given country and year. In order to apply the weights, any cell containing one or more letters is assigned a value of 1 and any blank cell for which there are no

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<sup>7</sup> Given their expertise on these issues, experts were not provided with the full definitions for each of the evaluation criteria, but rather with a set of clarifying footnotes (available on request). Experts were also invited to make overall comments as well as comments on each of the evaluation criteria.

coded violations is assigned a value of 0, creating a binary coding column. As with Kucera (2002, 2007), the number of letters in a cell does not affect the construction of the binary coding column, in order to avoid double-counting given that the textual sources commonly reference each other. The cells of the column of weights is then multiplied by corresponding cells of the binary coding column, and summing across the cells of the resultant column yields a weighted non-normalized score for any given country and year. A hypothetical example is provided in Table 3, showing only those evaluation criteria with coded violations. In this example, 24 evaluation criteria are coded. Applying the weights yields a non-normalized score of 42.3 and a normalized score of 4.5, based on the rules describe next.

**[Insert Table 3 about here]**

As Kucera (2002, 2007) only coded one point in time, normalization was done with respect to the maximum observed value, taking the score for the country with the worst weighted non-normalized score as the maximum. This is problematic, however, when normalizing over time, given that the maximum observed value can change. We addressed this by looking at the roughly one-third of countries having the most coded violations of FACB rights for the years 2000, 2005, 2009 and 2012 and calculating for them the weighted non-normalized score for these same four years. The highest weighted non-normalized score for several countries hovered around 80. As such, we decided to assign 95 as the maximum weighted non-normalized score for the overall LR indicator, roughly equal to one-half the hypothetically possible maximum weighted non-normalized score of 189.7 (that is, the sum of weights across all 108 evaluation criteria). On this basis, the non-normalized score for any given country and year is normalized to range in value from 0 to 10, the best and worst possible scores respectively. In the future, if any country should receive a non-normalized score of greater than 95, this will be capped at 95, yielding a normalized score of 10.<sup>8</sup>

We also construct separate LR indicators in law and in practice following similar rules and yielding indicators ranging in value from 0 to 10 as the best and worst possible scores. Here again, we looked at the roughly one-third of countries having the most coded violations of FACB rights for four years going back to 2000 and calculating the weighted non-normalized scores. For both LR in law and in practice, the highest weighted non-normalized scores were about 50. We decided to apply a proportionate buffer in normalizing the LR in law and LR in practice indicators as the overall LR indicator, assigning 60 as the maximum weighted non-normalized score. Again, should any country in the future receive a non-normalized score of greater than 60, this will be capped at 60, yielding a normalized score of 10.<sup>9</sup> One could apply similar rules to construct indicators for other clusters of evaluation criteria, for example, focusing just on categories IIa and IIb on the right of workers to establish and join organization.<sup>10</sup>

In addition, the method applies the notion that general prohibitions in law imply general prohibitions in practice (though not vice versa). In terms of coding, this means that the direct coding of “General prohibition of the right to establish and join organizations” in law (EC 23) automatically triggers the coding of “General prohibition of the development of independent workers’

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<sup>8</sup> The formula is thus:  $(x*10/95)$ , where  $x$  = the weighted non-normalized score for a given country and year and is capped at 95.

<sup>9</sup> The formula is thus:  $(x*10/60)$ , where  $x$  = the weighted non-normalized score for either evaluation criteria in law or in practice for a given country and year and is capped at 60.

<sup>10</sup> One of our reasons for having the overall LR indicator as well as the in law and in practice indicators range between 0 and 10 was to facilitate the direct comparison of the magnitude coefficient estimates in econometric analysis. Depending on users’ interests, however, one could alternatively normalize the in law and in practice indicators as well as other categories of indicators by assigning 95 as the maximum weighted non-normalized score for each component, in which case the indicators for the full set of components (across all 108 evaluation criteria) would sum to the overall LR rights indicator, leaving aside for the moment the default score rules discussed below.



organizations” in practice (EC 36); the direct coding of “General prohibition of the right to collective bargaining” in law (EC 62) automatically triggers the coding of the “General prohibition of collective bargaining” in practice (EC 73); and, finally, the direct coding of “General prohibition of the right to strike” in law (EC 84) automatically triggers the coding of the “General prohibition of strikes” in practice (EC 96). Given that the general prohibition of the development of independent workers’ organizations implies the general prohibition of collective bargaining (though not vice versa), similar coding rules apply. That is, the direct coding of EC 23 automatically triggers the coding of EC 62 and EC 73 (as well as EC 36, as noted) and the direct coding of EC 36 automatically triggers the coding of EC 73.

Similar to Kucera (2002, 2007), there is one deviation from the above normalization rules. That is, a “default” worst possible score of 10 is given for all-encompassing violations of FACB rights, that is, for “General prohibition of the right to establish and join organizations” in law (EC 23), “General prohibition of the development of independent workers’ organizations” in practice (EC 36), “General prohibition of the right to collective bargaining” in law (EC 62), and “General prohibition of collective bargaining” in practice (EC 73). These rules applies both for the overall LR indicator as well as the LR indicators in law and in practice.

One of the advantages of applying the default score rules is that this enables us to partly address a source of information bias in the textual sources. For many cases, the textual sources read like an insurance assessor’s report on an automobile damaged in an accident. For a minor accident, the report will address the specifics of surface damage. For a moderately serious accident, the report will additionally address such issues as damage to the frame, axles and engine. When an automobile is totally beyond repair – analogous to general prohibitions in our case – the insurance assessor’s report can be most brief and not explicitly refer to the damage that would be reported in a minor or moderately serious accident, even though such damage has occurred. Similarly, our reading of the textual sources suggests to us that the lack of reporting of other less sweeping violations when general prohibitions occur does not mean that these other violations do not occur, but rather that they are underreported because the sources do not trouble to report them.<sup>11</sup> While one could test the sensitivity of findings of statistical analysis by using indicators that do not apply the default score rules, we provide evidence in the next section that applying these rules better enables the indicators to capture the FACB rights situation in a country.

## 7. Coding results and LR indicators

Moving on to the main results of our coding, Table 4 shows the distribution of (unweighted) coded violations for 183 countries for 2012 broken out by the five broader categories (in rows) as well as all violations, violations in law and violations in practice (in columns).<sup>12</sup> In total, 2,862 violations were coded – an average of 15.6 violations per country – with about 60 percent of these violations in law (1,688 in law compared to 1,174 in practice). Note that this is based on the binary coding, not the raw coding by letters “a” through “i” (illustrated by the example in Table 3) so as to avoid double-counting across sources.<sup>13</sup> Whether we look at all violations, violations in law or violations in practice, we see that the largest share of violations was under category II, the “Right of workers to establish and join organizations,” making up 36.5 percent of all violations, 34.4 percent of violations in law and 39.5 percent of violations in practice. The more striking difference between

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<sup>11</sup> This type of information bias also affects the distribution of coded violations, described in Table 4 and Figure 1 below.

<sup>12</sup> There were 185 ILO member states in 2012. However, we did not include Somalia and South Sudan as no information was available for them in the textual sources from the ILO supervisory bodies or ITUC, verifiable laws were not accessible, and the ILO’s *Country Baselines* and US State Department’s *Country Reports* did not provide codable information.

<sup>13</sup> Based on the non-binary coding, the number of letters under which violations were coded for 2012 was considerably higher, at 5,193.

violations in law and practice are for category I, “Fundamental civil liberties,” making up only 2.7 percent of violations in law but fully 22.7 percent of violations in practice; and category V, the “Right to strike,” making up 30.0 percent of violations in law and 9.3 percent of violations in practice.

**[Insert Table 4 about here]**

A more detailed look at the coded violations is provided by Figure 1, which shows their distribution across all 108 evaluation criteria. The 10 evaluation criteria with the most coded violations (ranging from 77 to 114 coded violations, as shown in the figure) and the categories under which they fall are as follows:

*Ia. Right of workers to establish and join organizations in law*

- EC 25: Exclusion of other workers from the right to establish and join organizations
- EC 26: Previous authorization requirements
- EC 31: Lack of adequate legal guarantees against anti-union discriminatory measures

*Iib. Right of workers to establish and join organizations in practice*

- EC 43: Anti-union discriminatory measures in relation to hiring, during employment (e.g. transfers and downgrading) and dismissal
- EC 46: Acts of interference of employers and/or public authorities

*IIIa. Other union activities in law*

- EC 51: Infringements of the right to freely elect representatives

*IVa. Right to collective bargaining in law*

- EC 65: Exclusion of other workers from the right to collective bargaining

*IVb. Right to collective bargaining in practice*

- EC 80: Acts of interference in collective bargaining

*Va. Right to strike in law*

- EC 86: Exclusion of other workers from the right to strike
- EC 92: Excessive prerequisites required for exercising the right to strike

Also worth noting is that six of the 108 evaluation criteria were *never* coded, at least for 2012. Following the format above, these are:

*Ia. Fundamental civil liberties in law*

- EC 4: Excessive prohibitions/restrictions on trade union rights in the event of state of emergency

*Ib. Fundamental civil liberties in practice*

- EC 21: Excessive prohibitions/restrictions on trade union rights in the event of state of emergency
- EC 22: Lack of guarantee of due process and/or justice re violation no. 21

*IIIb. Other union activities in practice*

- EC 60: Lack of guarantee of due process and/or justice re violations nos. 56-60

*Vb. Right to strike in practice*

- EC 99: Exclusion/restriction based on the objective and/or type of the strike
- EC 101: Lack of compensatory guarantees accorded to lawful restrictions on the right to strike

Regarding general prohibitions of categories of FACB rights, the coding results show that such sweeping restrictions are not infrequent.<sup>14</sup> There are 14 coded violations for: “General prohibition of the right to establish and join organizations” in law (EC 23) as well as “General prohibition of the right to collective bargaining” in law (EC 62, the same 14 countries as EC 23); 18 coded violations for “General prohibition of the development of independent workers' organizations” in practice (EC 36) as well as “General prohibition of collective bargaining” in practice (EC 73, the same 18 countries as EC 36); 6 coded violations for “General prohibition of the right to strike” in law (EC 84) and 17 coded violations for “General prohibition of strikes” in practice (EC 96).

**[Insert Figure 1 about here]**

Even leaving aside the indicators, such coding results – particularly at the country level – may have useful research and policy applications in their own right. Regarding research, for example, it would seem worthwhile to analyse the variation in coded violations across evaluation criteria, addressing how and why this differs among countries and over time. Regarding policy, such results may usefully inform initiatives to improve FACB rights in a country, providing a quick but detailed overview of the problems occurring based on information that is otherwise spread among multiple of textual sources. Combined with our companion website, the coding by textual sources also serves as an index to these textual sources, enabling rapid access to the relevant passages within each. For example, one line of inquiry we are interested in pursuing is to estimate the share of workers in a country for which FACB rights are applicable, based on the text underlying the coding of the 12 evaluation criteria referring to the exclusion of certain categories of workers from different aspects of FACB rights protection (that is, EC 24, 25, 37, 38, 64, 65, 75, 76, 85, 86, 97 and 98).

Moving on to the indicators themselves, our three main indicators of LR overall, in law and in practice are shown in the Appendix, Table 1. The correlation coefficient (Pearson) between LR in law and LR in practice is moderately strong, at 0.73.<sup>15</sup> Taking the indicators at face value, the absence of a stronger correlation means that stronger LR in law does not necessarily go hand in hand with stronger LR in practice. As noted above, our indicators can facilitate analysis of the relationship between the two as they become available over time, addressing such questions as the extent to which improvements in FACB rights in law leads to improvement in practice.

We next look at the correlations between our three LR indicators with other indicators addressing broader but related concepts. These are the Freedom House (FH) political rights and civil liberties indexes, the associational and organizational rights component of the FH civil liberties index, the Polity IV Polity2 index and the CIRI empowerment rights index. The FH political rights index is based on a set of questions broken down into three categories: electoral process, political pluralism and participation, and functioning of government. The FH civil liberties index is based on a set of questions broken down into four categories: freedom of expression and belief, associational and organizational rights, rule of law, and personal autonomy and individual rights. Under associational and organizational rights, one question relates directly to trade unions: “Are there free

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<sup>14</sup> The definitions for EC 23, 36, 62 and 73 are primarily based on the “Resolution concerning the independence of the trade union movement,” adopted by the International Labour Conference in 1952. Coded violations are generally in regard to situations of state monopoly imposed either in law or in practice in countries where political power is controlled by a single party.

<sup>15</sup> This remains the same when dropping nine countries from the sample for reasons noted below.

trade unions and peasant organizations or equivalents, and is there effective collective bargaining?” (Freedom House, 2012).

Polity IV’s Polity2 index is based on the competitiveness and openness of executive recruiting, constraints on chief executives, the competitiveness of political participation and the regulation of participation, and so addresses similar issues as the FH political rights index (Marshall et al., 2011). Finally, the CIRI empowerment rights index addresses several aspects of democracy and human rights, namely, electoral self-determination, freedom of speech, freedom of assembly and association, freedom of foreign movement, freedom of domestic movement, freedom of religion, and workers’ rights (Cingranelli and Richards, 2010).

**[Insert Table 5 about here]**

Table 5 shows four sets of correlation coefficients between our LR indicators and these related indicators. Regarding the signs of correlation coefficients, note that the FH political rights and civil liberties indexes are scaled like our LR indicators, such that higher values mean weaker rights, whereas the other three indicators are scaled in reverse. Panel A includes all 183 countries and applies the default score rules; Panel B also includes all 183 countries but does not apply the default score rules; Panel C – which we think most relevant – drops nine countries from the sample and like Panel A applies the default score rules; and Panel D drops the same nine countries from the sample but does not apply the default score rules. It is important to note that the correlation coefficients in Panel A are consistently higher than the corresponding values in Panel B, and likewise that those in Panel C are consistently higher than the corresponding values in Panel D (with the gaps particularly wide for the LR in practice indicator). In our view, this suggests the preferability of applying the default score rules.

In constructing his indicators, Kucera (2002, 2007) dropped nine countries from the sample on the grounds that their implausibly favorable scores primarily reflected a large degree of information bias, specifically an underreporting of violations. This was based on a comparison with the FH indexes as well as whether country profiles were available in the ITUC’s annual reports. Given our greater reliance on other textual sources, we dropped nine countries simply based on whether the overall LR indicator was 5.0 or less than the FH civil liberties index after rescaling the FH index to also range from 0 to 10 as the best and worst possible scores, respectively.<sup>16</sup> That is, we drop those nine countries for which the FH civil liberties index suggests a much worse situation than do our indicators. Comparing Panel C to Panel A, the correlation coefficient is inevitably higher for FH civil liberties but is also higher for the other related indicators. For the overall LR indicator, correlation coefficients in Panel C range between 0.65 and 0.74, larger than comparable correlation coefficients for the Kucera method as well as Teitelbaum’s alternative to this method, evaluating the mid-1990s (Kucera, 2007, p. 155; Teitelbaum, 2010, p. 470).<sup>17</sup> For the purposes of statistical analysis

<sup>16</sup> These countries are Afghanistan, Chad, Congo, Côte d'Ivoire, Gabon, Gambia, Kyrgyzstan, Tajikistan and Yemen.

<sup>17</sup> Teitelbaum (2010) applied item response theory analysis (analogous to factor analysis for continuous variables) to Kucera’s binary coding for the mid-1990s to construct an alternative trade union rights indicator. This indicator is based on a reduced set of evaluation criteria, dropping five criteria that are argued by Teitelbaum to not relate to the underlying concept of trade union rights, among these – strikingly – general prohibitions of the right to establish and join unions as well as general prohibitions of collective bargaining. Teitelbaum’s alternative indicator is also based on weights derived from variation in the coding itself as well as on different default score rules. While we find this approach certainly worth consideration, we are also concerned that it is too mechanically-based on the pattern of coded violations for a given point in time rather than more longstanding considerations based on the judgement of experts in the ILO and academia and also does not adequately account for the possibility of information bias in the textual sources. In our view, our derivation of weights based on our survey of internationally-recognized experts (in our new method) is considerably more transparent and so in keeping with our key premises, as well as more readily conveyed to a wide range of users. Moreover, by basing our evaluation criteria directly on relevant ILO Conventions and jurisprudence (in both our old and new methods) and all the accumulated knowledge that went into developing them, we believe that our evaluation criteria do indeed reflect the underlying concept of trade union rights. In particular, Teitelbaum’s finding that general

and more generally, we thus think it preferable to drop these nine countries from the sample. In constructing a dataset over time for the purposes of panel data analysis, one needs of course to be mindful of maintaining a consistent sample of countries when using such filters to arrive at reduced samples, given that countries may cross relevant thresholds in some years but not others.

The broader but related indicators produced by FH, Polity IV and CIRI can serve as useful complements to our LR indicators in statistical analysis, providing robustness checks in alternative specifications (including as possible interacting variables) and guiding the filtering of reduced samples, particularly with respect to the underreporting of FACB rights violations.<sup>18</sup> Given the alternative methods of construction of these related indicators, their use as complements to our indicators is all the more important given that the underreporting of violations is likely to be a significant source of information bias for any indicator based solely on the coding of reported violations. This is likely to be particularly problematic in less open societies, creating not merely random noise in the data, but also systematically biased data. We return to these points in our concluding section.

Shown in Figure 2 are regional averages of the LR indicators – overall, in law and in practice – based on country groupings used in the ILO’s *Global Employment Trends* (ILO, 2014), dropping nine countries from the sample for reasons noted above, and applying the default score rules.<sup>19</sup> For 2012, the region with the lowest (best) scores are the Developed Economies & EU (1.3 for LR overall) and with the highest (worst) scores the Middle East & North Africa (7.1 for LR overall). Among the developing regions, Latin America & Caribbean and Sub-Saharan Africa have the lowest (best) scores (3.2 and 3.4 for LR overall, respectively), with South Asia and East & South-East Asia & Pacific having middling scores (5.4 and 4.4 for LR overall, respectively). Three regions have substantially higher LR in law than LR in practice scores: South Asia, East & South-East Asia & Pacific and Middle East & North Africa. Taking the indicators at face value, it appears then that in these regions the primary causes of violations are those in law, which are further aggravated by those in practice. The opposite holds in just one region: Central & South-Eastern Europe (non-EU) & Commonwealth of Independent States (CIS), which has substantially higher scores for LR in practice than LR in law.

[Insert Figure 2 about here]

## 8. Taking stock and looking ahead

In our introduction, we noted how our new method addresses a number of shortcomings of earlier efforts, yet limitations remain. There is an important limitation intrinsic to any indicator based solely on the coding of violations, in that such an approach does not account for the latent, underlying rights context in which these violations occur. Kucera described this problem as follows: “There are clearly cases...when observed violations are a reflection of a vibrant trade union

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prohibitions of the right to establish and join unions as well as general prohibitions of collective bargaining are not related to the underlying concept of trade union rights appears to us to be largely the result of information bias in the textual sources, as discussed above in the context of our default score rules.

<sup>18</sup> A useful example is provided by Teitelbaum (2010), who drops all countries from the sample that experienced state failure in the mid-1990s, based on the Polity IV dataset. Note that Polity IV classifies only three countries as failed states in 2012: Haiti, Libya and Mali.

<sup>19</sup> In these sources, there are nine major country groupings, based on a combination of level of development and geography – one development grouping: (Developed Economies and European Union) and eight geographic groupings: Central & South-Eastern Europe (non-EU) & Commonwealth of Independent States (CIS); East Asia; South-East Asia & the Pacific; South Asia; Latin America & the Caribbean; the Middle East; North Africa; and Sub-Saharan Africa. Each country appears in only one group. For our analysis, East Asia and South-East Asia & the Pacific were merged into one group as was Middle East and North Africa. Note that an alternative version of Figure 2 based on all 183 countries is available on request, but is broadly similar to the figure shown.

movement and, conversely, where violations are not observed and indeed do not occur because the trade union movement is suppressed and under threat” (2007, p. 162). In an effort to partially address this limitation, we coded not just FACB rights violations but also instances of progress noted in the textual sources, based on our 108 evaluation criteria plus two broad additional evaluation criteria, “Labour law reform” and “Promotional activities.” For 2012, we coded 352 instances of progress, 104 referring to “Labour law reform,” 80 referring to “Promotional activities,” and the remaining 168 instances referring to the 108 evaluation criteria used to code violations.

It was our hope to incorporate the coding of progress into the construction of the indicators. In our judgement, however, instances of progress are not systematically enough reported for such purposes. This results in two potential types of information bias, one between ratifying and non-ratifying countries and the other between worse and better performing countries, in that more information is available on instances of progress for non-ratifying and worse performing countries. This seems to result in part from the fact that it is only the *Country Baselines Under the ILO Declaration Annual Review* that specifically requests non-ratifying countries to report on “Promotional activities” and “Special initiatives/Progress.” While the form submitted for the *Reports of the Committee of Experts on the Application of Conventions and Recommendations* asks Governments to provide information on any new legislative or other measures affecting the application of the Conventions (which explains the high number of coding for “Labour law reform”), in general the sources are more inclined to address progress in response to previously documented violations. Such concerns particularly apply to the *Reports of the Conference Committee on the Application of Standards*, the *Representations under Article 24 of the ILO Constitution*, and the *Complaints under Article 26 of the ILO Constitution*, where the pre-condition for these three reports is severe violations of trade union rights.

As such, we leave incorporation of the coding of progress into the indicators as a possible future development, until such time as the textual sources (or additional sources) adequately reflect progress.<sup>20</sup> Still, the underlying rights context would remain a concern even with the coding of progress, which is why we believe that analyses based on our indicators would be usefully complemented by broader rights indicators constructed by different methods, such as those produced Freedom House, Polity IV and CIRI. Of course, the progress of countries regarding FACB rights is captured by the method as it stands, insofar as fewer or less severe violations occur over time.

Another limitation is that while our new method uses a weighting scheme to account for differences in the severity of violations *across* the evaluation criteria, it does not account for differences in the severity of violations *within* any given evaluation criteria, particularly regarding violations in practice. For example, the methods treat the dismissal of one thousand workers for union activities the same as the dismissal of a single worker. We endeavored to address this by coding the severity of reported violations for the following seven evaluation criteria, with severity in this sense defined in terms of whether the violations were “widespread and/or systematic”:

- EC 6: Killing or disappearance of trade unionists in relation to their trade union activities
- EC 9: Other violent actions against trade unionists in relation to their trade union activities
- EC 12: Arrest, detention, imprisonment, charging and fining of trade unionists in relation to their trade union activities
- EC 15: Infringements of trade unionists’ basic freedoms
- EC 18: Attacks against trade unions’ and trade unionists’ premises and property
- EC 21: Excessive prohibitions/restrictions on trade union rights in the event of state of emergency

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<sup>20</sup> In spite of its limitations, we nonetheless believe that our coding of progress as it stands provides useful background information, and so we make it available on request.

- EC 43: Anti-union discriminatory measures in relation to hiring, during employment (e.g. transfers and downgrading) and dismissal

In practical terms, such coding meant adding an additional row under each of these evaluation criteria, in which severity within the corresponding evaluation criteria is coded with letters representing the textual sources just as for our other coding. Note that the first six of these evaluation criteria fall under “Fundamental civil liberties in practice” (Ib) and the last under “Right of workers to establish and join organizations in practice” (IIb), but it would be possible to extend such coding to most other evaluation criteria addressing violations in practice. In our view, however, we did not feel we could code severity within evaluation criteria with sufficient consistency to assure a reasonable degree of inter-coder reliability. This is, of course, a testable proposition, and as part of our future testing of inter-coder reliability of the method as it stands, we also plan to test for the inter-coder reliability of the coding of severity within evaluation criteria.

We also leave as desired future developments the coding of national legislation for all countries in our sample, not just non-ratifying countries (regarding ILO Conventions 87 and 98), as well as the coding and construction of indicators for years before and after 2012. In constructing indicators over time, we aim to be mindful of possible biases that can result from changes in the quality of reporting, especially given that our textual sources focus on FACB rights violations rather than instances of progress. We are particularly concerned that improved reporting – as evidenced by the increased word count of textual sources over time – can create the false impression of LR worsening when they may in fact be stable or improving, or at least worsening by less than the indicators suggest. An analogous problem may arise once we begin coding national legislation for ratifying countries. For the purposes of econometric analysis, such biases can be addressed to an extent by the inclusion in estimates of time-related independent variables, but particular caution may be required when interpreting face value changes in the LR indicators themselves.

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**Table 1: Evaluation Criteria, Delphi Method Results and Weights**

Evaluation Criteria	Delphi method results				Weights (1 to 2)
	1st round		2nd round		
	Avg. (1 to 5)	Std. Dev.	Avg. (1 to 5)	Std. Dev.	
<b>la. Fundamental civil liberties in law</b>					
1 Arrest, detention, imprisonment, charging and fining of trade unionists in relation to their trade union activities	4.92	0.27	5.00	0.00	2.00
2 Infringements of trade unionists' basic freedoms	4.46	0.76	4.71	0.47	1.93
3 Infringements of trade unions' and trade unionists' right to protection of their premises and property	3.85	0.83	3.93	0.62	1.73
4 Excessive prohibitions/restrictions on trade union rights in the event of state of emergency	3.68	1.09	3.64	0.63	1.66
5 Lack of guarantee of due process and/or justice re violations nos. 1-4	4.23	0.91	4.43	0.65	1.86
<b>lb. Fundamental civil liberties in practice</b>					
6 Killing or disappearance of trade unionists in relation to their trade union activities	5.00	0.00	5.00	0.00	2.00
7 Committed against trade union officials re violation no. 6	4.92	0.27	5.00	0.00	2.00
8 Lack of guarantee of due process and/or justice re violation no.6	4.39	0.76	4.57	0.51	1.89
9 Other violent actions against trade unionists in relation to their trade union activities	4.16	0.70	4.29	0.47	1.82
10 Committed against trade union officials re violation no.9	4.16	0.70	4.29	0.47	1.82
11 Lack of guarantee of due process and/or justice re violation no.9	4.01	0.83	4.36	0.50	1.84
12 Arrest, detention, imprisonment, charging and fining of trade unionists in relation to their trade union activities	4.62	0.63	4.79	0.43	1.95
13 Committed against trade union officials re violation no.12	4.54	0.76	4.79	0.43	1.95
14 Lack of guarantee of due process and/or justice re violation no.12	4.23	0.83	4.50	0.52	1.88
15 Infringements of trade unionists' basic freedoms	4.23	0.73	4.29	0.47	1.82
16 Committed against trade union officials re violation no.15	4.23	0.73	4.29	0.61	1.82
17 Lack of guarantee of due process and/or justice re violation no.15	4.16	0.89	4.50	0.52	1.88
18 Attacks against trade unions' and trade unionists' premises and property	4.01	0.62	4.07	0.47	1.77
19 Committed against trade union officials re violation no.18	4.01	0.62	4.07	0.47	1.77
20 Lack of guarantee of due process and/or justice re violation no.18	4.08	0.77	4.07	0.62	1.77
21 Excessive prohibitions/restrictions on trade union rights in the event of state of emergency	3.68	1.02	3.79	0.43	1.70
22 Lack of guarantee of due process and/or justice re violation no.21	3.85	1.07	3.93	0.62	1.73
<b>lla. Right of workers to establish and join organizations in law</b>					
23 General prohibition of the right to establish and join organizations	4.77	0.43	4.86	0.36	1.96
24 Exclusion of workers in EPZs from the right to establish and join organizations	4.31	0.84	4.43	0.51	1.86
25 Exclusion of other workers from the right to establish and join organizations	4.23	0.73	4.43	0.51	1.86
26 Previous authorization requirements	3.38	0.63	3.50	0.65	1.63
27 Restrictions on the freedom of choice of trade union structure and composition	3.46	0.76	3.50	0.65	1.63
28 Imposed trade union unity	3.83	0.93	3.71	0.61	1.68
29 Dissolution/suspension of legally functioning organizations	4.45	0.74	4.57	0.51	1.89
30 Provisions in law allowing for anti-union discriminatory measures in relation to hiring, during employment (e.g. transfers and downgrading) and dismissal	4.62	0.74	4.71	0.61	1.93
31 Lack of adequate legal guarantees against anti-union discriminatory measures	3.85	1.07	4.00	0.55	1.75
32 Provisions in law allowing for interference of employers and/or public authorities	4.08	0.83	4.21	0.70	1.80
33 Lack of adequate legal guarantees against acts of interference	3.62	1.01	3.79	0.70	1.70

34	Infringements of the right to establish and join federations/confederations/international organizations	3.85	0.77	3.93	0.73	1.73
35	Lack of guarantee of due process and/or justice re violations nos. 23-34	3.93	1.11	4.21	0.58	1.80
	<b>IIb. Right of workers to establish and join organizations in practice</b>					
36	General prohibition of the development of independent workers' organizations	4.54	0.65	4.71	0.61	1.93
37	Exclusion of workers in EPZs from the right to establish and join organizations	4.31	0.63	4.36	0.50	1.84
38	Exclusion of other workers from the right to establish and join organizations	4.39	0.51	4.43	0.51	1.86
39	Previous authorization requirements	3.77	0.70	3.79	0.43	1.70
40	Restrictions on the freedom of choice of trade union structure and composition	3.62	0.74	3.79	0.58	1.70
41	Imposed trade union unity	3.91	0.80	3.79	0.70	1.70
42	Dissolution/suspension of legally functioning organizations	4.58	0.52	4.79	0.43	1.95
43	Anti-union discriminatory measures in relation to hiring, during employment (e.g. transfers and downgrading) and dismissal	4.23	0.91	4.29	0.73	1.82
44	Committed against trade union officials re violation no. 43	4.39	0.65	4.57	0.51	1.89
45	Lack of guarantee of due process and/or justice re violation no. 43	3.93	1.18	4.21	0.58	1.80
46	Acts of interference of employers and/or public authorities	3.85	0.83	4.00	0.68	1.75
47	Lack of guarantee of due process and/or justice re violation no. 46	3.85	1.14	4.07	0.73	1.77
48	Infringements of the right to establish and join federations/confederations/international organizations	3.83	0.80	4.14	0.53	1.79
49	Lack of guarantee of due process and/or justice re violations nos. 36-48	3.93	1.11	4.07	0.62	1.77
	<b>IIIa. Other union activities in law</b>					
50	Infringements of the right to freely draw up constitutions and internal rules and administration	3.54	0.85	3.50	0.76	1.63
51	Infringements of the right to freely elect representatives	3.93	0.96	4.21	0.80	1.80
52	Infringements of the right to freely organize and control financial administration	3.46	0.94	3.36	0.93	1.59
53	Infringements of the right to freely organize activities/programmes	3.99	0.83	4.21	0.43	1.80
54	Prohibition of all political activities	3.62	1.34	3.93	0.92	1.73
55	Lack of guarantee of due process and/or justice re violations nos. 50-54	4.00	1.24	4.29	0.73	1.82
	<b>IIIb. Other union activities in practice</b>					
56	Infringements of the right to freely draw up constitutions and internal rules and administration	3.92	0.77	4.00	0.55	1.75
57	Infringements of the right to freely elect representatives	4.16	0.70	4.29	0.61	1.82
58	Infringements of the right to freely organize and control financial administration	3.92	0.66	3.86	0.53	1.71
59	Infringements of the right to freely organize activities/programmes	4.07	0.96	4.14	0.77	1.79
60	Prohibition of all political activities	3.69	1.33	3.79	1.05	1.70
61	Lack of guarantee of due process and/or justice re violations nos. 56-60	3.85	1.17	4.14	0.86	1.79
	<b>IVa. Right to collective bargaining in law</b>					
62	General prohibition of the right to collective bargaining	4.69	0.61	4.71	0.47	1.93
63	Insufficient promotion of collective bargaining	2.77	0.97	2.79	0.70	1.45
64	Exclusion of workers in EPZs from the right to collective bargaining	4.23	0.83	4.43	0.51	1.86
65	Exclusion of other workers from the right to collective bargaining	4.15	0.77	4.29	0.47	1.82
66	Exclusion/restriction of subjects covered by collective bargaining	3.46	0.85	3.71	0.61	1.68
67	Compulsory arbitration accorded to collective bargaining	3.62	0.93	3.79	0.58	1.70
68	Excessive requirements and/or lack of objective, pre-established and precise criteria for the determination/recognition of trade unions entitled to collective bargaining	3.23	0.99	3.36	0.74	1.59
69	Acts of interference in collective bargaining	3.62	1.08	3.64	0.93	1.66
70	Violations of collective agreements	3.68	1.16	3.57	0.85	1.64
71	Infringements of the consultation with workers' organizations	3.46	1.02	3.43	0.94	1.61
72	Lack of guarantee of due process and/or justice re violations nos. 62-71	3.54	1.45	3.93	0.92	1.73

<b>IVb. Right to collective bargaining in practice</b>						
73	General prohibition of collective bargaining	4.54	0.65	4.57	0.51	1.89
74	Insufficient promotion of collective bargaining	2.92	0.83	2.79	0.70	1.45
75	Exclusion of workers in EPZs from the right to collective bargaining	4.08	0.77	4.29	0.61	1.82
76	Exclusion of other workers from the right to collective bargaining	4.08	0.66	4.36	0.50	1.84
77	Exclusion/restriction of subjects covered by collective bargaining	3.38	0.50	3.36	0.50	1.59
78	Compulsory arbitration accorded to collective bargaining	3.69	0.93	3.71	0.47	1.68
79	Excessive requirements and/or lack of objective, pre-established and precise criteria for the determination/recognition of trade unions entitled to collective bargaining	3.62	0.84	3.57	0.76	1.64
80	Acts of interference in collective bargaining	3.77	0.97	3.57	0.85	1.64
81	Violations of collective agreements	4.07	0.88	3.93	0.73	1.73
82	Infringements of the consultation with workers' organizations	3.54	0.85	3.36	0.84	1.59
83	Lack of guarantee of due process and/or justice re violations nos. 73-82	3.85	1.23	3.86	0.86	1.71
<b>Va. Right to strike in law</b>						
84	General prohibition of the right to strike	4.62	0.74	4.79	0.43	1.95
85	Exclusion of workers in EPZs from the right to strike	4.08	1.23	4.36	0.74	1.84
86	Exclusion of other workers from the right to strike	4.16	0.89	4.29	0.73	1.82
87	Exclusion/restriction based on the objective and/or type of the strike	2.77	1.25	2.86	0.95	1.46
88	Provisions in law allowing for the suspension and/or declaration of illegality of strikes by administrative authority	3.16	0.89	3.36	0.63	1.59
89	Lack of compensatory guarantees accorded to lawful restrictions on the right to strike	3.08	1.12	3.21	0.97	1.55
90	Infringements of the determination of minimum services	2.77	0.70	2.79	0.43	1.45
91	Compulsory arbitration accorded to strikes	3.54	1.22	3.57	0.94	1.64
92	Excessive prerequisites required for exercising the right to strike	3.54	0.85	3.86	0.53	1.71
93	Acts of interference during the course of strike action	3.31	1.07	3.43	0.65	1.61
94	Imposing excessive sanctions in case of legitimate strikes	4.08	1.07	4.29	0.73	1.82
95	Lack of guarantee of due process and/or justice re violations nos. 84-94	4.08	1.17	4.21	0.89	1.80
<b>Vb. Right to strike in practice</b>						
96	General prohibition of strikes	4.62	0.63	4.71	0.47	1.93
97	Exclusion of workers in EPZs from the right to strike	4.08	0.86	4.36	0.63	1.84
98	Exclusion of other workers from the right to strike	4.16	0.58	4.29	0.61	1.82
99	Exclusion/restriction based on the objective and/or type of the strike	3.08	1.14	3.21	0.80	1.55
100	Suspension and/or declaration of illegality of strikes by administrative authority	3.77	0.70	3.79	0.58	1.70
101	Lack of compensatory guarantees accorded to lawful restrictions on the right to strike	3.17	0.90	3.36	0.74	1.59
102	Infringements of the determination of minimum services	3.08	0.73	3.07	0.62	1.52
103	Compulsory arbitration accorded to strikes	3.54	0.76	3.43	0.65	1.61
104	Excessive prerequisites required for exercising the right to strike	3.54	0.76	3.71	0.61	1.68
105	Acts of interference during the course of strike action	3.54	0.94	3.57	0.76	1.64
106	Imposing excessive sanctions in case of legitimate strikes	4.08	0.92	4.29	0.61	1.82
107	Committed against trade union officials re violation no. 106	4.08	0.92	4.21	0.70	1.80
108	Lack of guarantee of due process and/or justice re violations nos. 96-107	3.93	1.11	4.07	0.83	1.77
<b>Average</b>		3.92	0.85	4.03	0.62	1.76

**Table 2: Textual Sources**

	<b>Coding letter</b>	<b>Ratifying countries (Both C. 87 &amp; C. 98)</b>	<b>Non-ratifying countries</b>
<i>Reports of the Committee of Experts on the Application of Conventions and Recommendations</i>	a	X	
<i>Reports of the Conference Committee on the Application of Standards</i>	b	X	
<i>Country Baselines under the ILO Declaration Annual Review</i>	c		X
<i>Representations under Article 24 of the ILO Constitution</i>	d	X	
<i>Complaints under Article 26 of the ILO Constitution</i>	e	X	
<i>Reports of the Committee on Freedom of Association</i>	f	X	X
National legislation	g		X
<i>Annual Survey of Violations of Trade Union Rights</i>	h	X	X
<i>Country Reports on Human Rights Practices</i>	i	X	X

**Table 3: Hypothetical Example of Coding and Indicator Construction (for a Single Country and Year)**

Evaluation Criteria		Textual coding	Binary coding	Weights	Binary coding x Weights
<b>Ia. Fundamental civil liberties in law</b>					
2	Infringements of trade unionists' basic freedoms	i	1	1.93	1.93
<b>Ib. Fundamental civil liberties in practice</b>					
6	Killing or disappearance of trade unionists in relation to their trade union activities	fhi	1	2.00	2.00
9	Other violent actions against trade unionists in relation to their trade union activities	fhi	1	1.82	1.82
12	Arrest, detention, imprisonment, charging and fining of trade unionists in relation to their trade union activities	hi	1	1.95	1.95
<b>Ila. Right of workers to establish and join organizations in law</b>					
25	Exclusion of other workers from the right to establish and join organizations	ahi	1	1.86	1.86
31	Lack of adequate legal guarantees against anti-union discriminatory measures	a	1	1.75	1.75
34	Infringements of the right to establish and join federations/confederations/international organizations	abhi	1	1.73	1.73
<b>Ilb. Right of workers to establish and join organizations in practice</b>					
39	Previous authorization requirements	fhi	1	1.70	1.70
44	Committed against trade union officials re violation no. 43	hi	1	1.89	1.89
45	Lack of guarantee of due process and/or justice re violation no. 43	hi	1	1.80	1.80
<b>Illa. Other union activities in law</b>					
51	Infringements of the right to freely elect representatives	ah	1	1.80	1.80
52	Infringements of the right to freely organize and control financial administration	ahi	1	1.59	1.59
54	Prohibition of all political activities	ahi	1	1.73	1.73
<b>Illb. Other union activities in practice</b>					
58	Infringements of the right to freely organize and control financial administration	fhi	1	1.71	1.71
61	Lack of guarantee of due process and/or justice re violations nos. 56-60	f	1	1.79	1.79
<b>IVa. Right to collective bargaining in law</b>					
69	Acts of interference in collective bargaining	a	1	1.66	1.66
76	Exclusion of other workers from the right to collective bargaining	abhi	1	1.84	1.84
80	Acts of interference in collective bargaining	hi	1	1.64	1.64
<b>Va. Right to strike in law</b>					
87	Exclusion/restriction based on the objective and/or type of the strike	af	1	1.46	1.46
88	Provisions in law allowing for the suspension and/or declaration of illegality of strikes by administrative authority	ahi	1	1.59	1.59
94	Imposing excessive sanctions in case of legitimate strikes	afhi	1	1.82	1.82
<b>Vb. Right to strike in practice</b>					
105	Acts of interference during the course of strike action	hi	1	1.64	1.64
107	Committed against trade union officials re violation no. 106	h	1	1.80	1.80
108	Lack of guarantee of due process and/or justice re violations nos. 96-107	h	1	1.77	1.77
<b>Sum (non-normalized score)</b>			24		42.29
<b>Normalized score (0 = best, 10 = worst)<sup>1</sup></b>					<b>4.45</b>

1. Note that the weighted non-normalized score is capped at 95, as described in the text.

**Table 4: Coded Violations for 183 Countries by Category, 2012**

	All countries					
	All violations		Violations in law		Violations in practice	
	Number	% share	Number	% share	Number	% share
I. Fundamental civil liberties	312	10.9	45	2.7	267	22.7
II. Right of workers to establish and join organizations	1,045	36.5	581	34.4	464	39.5
III. Other union activities	322	11.3	227	13.4	95	8.1
IV. Right to collective bargaining	567	19.8	328	19.4	239	20.4
V. Right to strike	616	21.5	507	30.0	109	9.3
<b>Sum</b>	<b>2,862</b>	<b>100.0</b>	<b>1,688</b>	<b>100.0</b>	<b>1,174</b>	<b>100.0</b>

**Table 5: Correlation Coefficients (Pearson) with Related Indicators, 2012**

<b>A. All 183 countries WITH default scores</b>					
	<b>FH Political Rights</b>	<b>FH Civil Liberties</b>	<b>FH Assoc. &amp; Org. Rights</b>	<b>Polity2</b>	<b>CIRI Empowerment<sup>1</sup></b>
<b>LR overall</b>	0.62	0.67	-0.68	-0.60	-0.71
<b>LR in law</b>	0.55	0.57	-0.59	-0.55	-0.66
<b>LR in practice</b>	0.58	0.63	-0.63	-0.58	-0.64
<b>B. All 183 countries WITHOUT default scores</b>					
	<b>FH Political Rights</b>	<b>FH Civil Liberties</b>	<b>FH Assoc. &amp; Org. Rights</b>	<b>Polity2</b>	<b>CIRI Empowerment</b>
<b>LR overall</b>	0.44	0.48	-0.48	-0.33	-0.52
<b>LR in law</b>	0.45	0.48	-0.49	-0.40	-0.56
<b>LR in practice</b>	0.30	0.34	-0.33	-0.15	-0.34
<b>C. Dropping 9 countries WITH default scores</b>					
	<b>FH Political Rights</b>	<b>FH Civil Liberties</b>	<b>FH Assoc. &amp; Org. Rights</b>	<b>Polity2</b>	<b>CIRI Empowerment</b>
<b>LR overall</b>	0.69	0.74	-0.73	-0.65	-0.74
<b>LR in law</b>	0.61	0.64	-0.64	-0.59	-0.69
<b>LR in practice</b>	0.65	0.69	-0.68	-0.62	-0.68
<b>D. Dropping 9 countries WITHOUT default scores</b>					
	<b>FH Political Rights</b>	<b>FH Civil Liberties</b>	<b>FH Assoc. &amp; Org. Rights</b>	<b>Polity2</b>	<b>CIRI Empowerment</b>
<b>LR overall</b>	0.50	0.54	-0.53	-0.37	-0.55
<b>LR in law</b>	0.52	0.54	-0.54	-0.44	-0.58
<b>LR in practice</b>	0.35	0.39	-0.36	-0.17	-0.36

1. Note that data for CIRI Empowerment is for 2011.



**Appendix Table 1: LR Indicators, 2012**

Country	LR		LR in
	overall	LR in law	practice
Afghanistan*	0.90	1.42	0.00
Albania	2.00	1.76	1.41
Algeria	4.53	3.24	3.93
Angola	2.47	2.80	1.11
Antigua and Barbuda	0.91	1.44	0.00
Argentina	4.00	2.27	4.06
Armenia	1.07	1.40	0.29
Australia	3.30	3.71	1.51
Austria	0.00	0.00	0.00
Azerbaijan	1.85	1.48	1.45
Bahamas	3.23	3.93	1.18
Bahrain	6.27	6.57	3.36
Bangladesh	7.63	6.99	5.10
Barbados	1.45	1.10	1.19
Belarus	10.00	3.44	10.00
Belgium	1.82	0.59	2.29
Belize	1.64	1.70	0.90
Benin	2.38	1.98	1.79
Bolivia (Plurinational State of)	3.28	4.33	0.87
Bosnia and Herzegovina	2.01	0.59	2.60
Botswana	4.54	4.27	2.92
Brazil	4.07	3.08	3.37
Brunei Darussalam	3.17	4.70	0.32
Bulgaria	2.70	2.55	1.73
Burkina Faso	1.45	1.12	1.18
Burundi	3.40	3.63	1.76
Cabo Verde	0.50	0.80	0.00
Cambodia	6.60	3.23	7.22
Cameroon	5.61	3.25	5.63
Canada	1.79	1.43	1.41
Central African Republic	2.29	3.35	0.27
Chad*	2.61	1.71	2.43
Chile	2.89	3.43	1.15
China	10.00	10.00	10.00
Colombia	5.27	2.06	6.29
Comoros	0.34	0.29	0.24
Congo*	1.25	1.38	0.60
Costa Rica	2.90	1.99	2.61
Côte d'Ivoire*	2.40	1.92	1.88
Croatia	1.12	0.57	1.21
Cuba	10.00	10.00	10.00
Cyprus	0.19	0.00	0.30
Czech Republic	2.05	1.77	1.47
Democratic Republic of the Congo	3.85	4.00	2.10
Denmark	0.19	0.30	0.00
Djibouti	3.56	1.73	3.90
Dominica	0.36	0.58	0.00
Dominican Republic	3.81	2.29	3.74
Ecuador	4.17	4.55	2.05
Egypt	10.00	10.00	10.00
El Salvador	5.28	4.51	3.84
Equatorial Guinea	10.00	1.14	10.00
Eritrea	10.00	1.75	10.00
Estonia	0.94	0.90	0.60

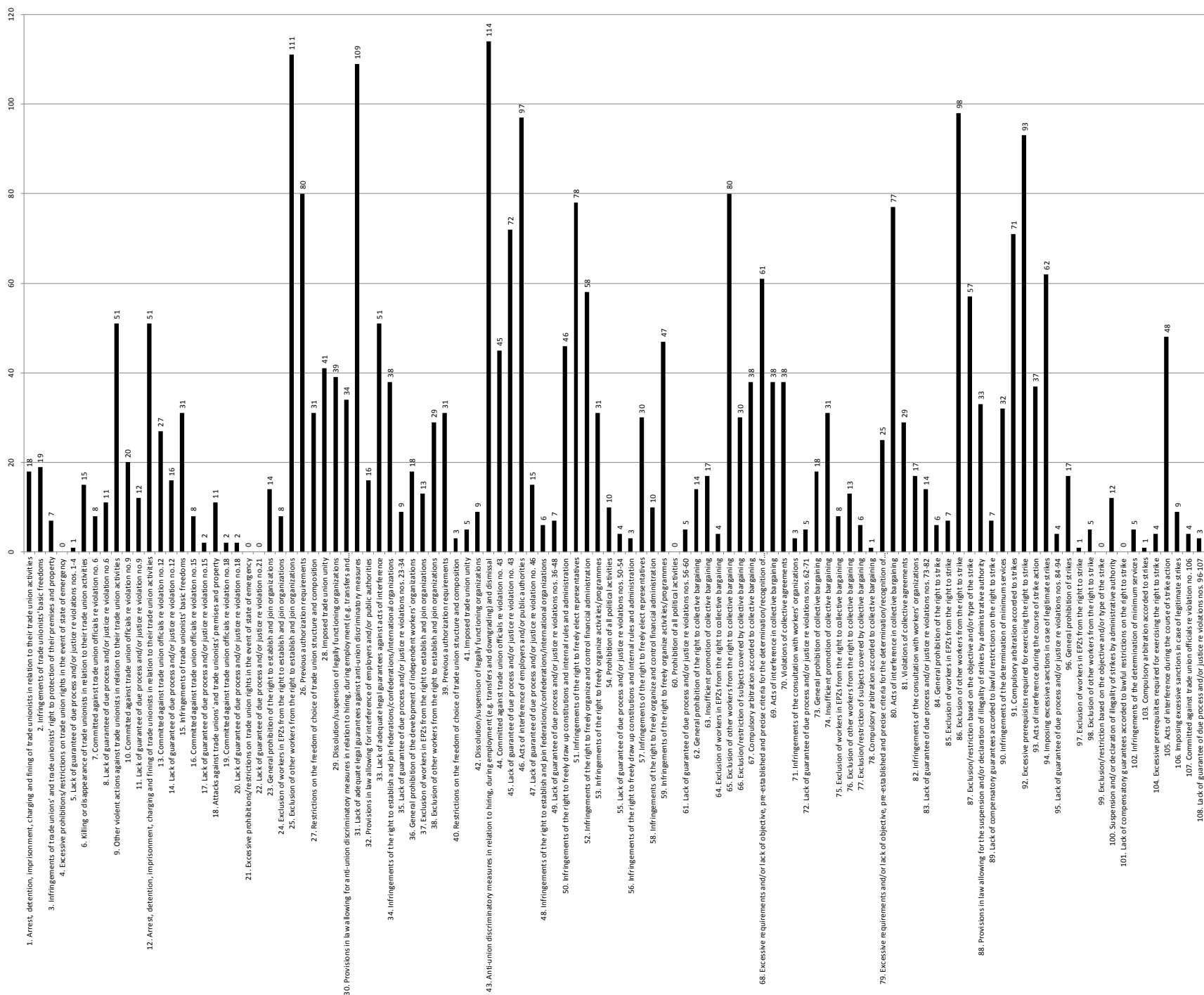
Ethiopia	5.84	4.97	4.28
Fiji	6.88	6.04	4.85
Finland	0.00	0.00	0.00
France	1.42	1.39	0.86
Gabon*	1.08	0.00	1.71
Gambia*	1.28	2.02	0.00
Georgia	3.70	2.55	3.31
Germany	0.78	0.93	0.30
Ghana	2.02	2.01	1.18
Greece	1.71	1.91	0.79
Grenada	0.71	1.12	0.00
Guatemala	7.08	2.86	8.36
Guinea	2.16	1.64	1.78
Guinea-Bissau	0.50	0.55	0.24
Guyana	1.61	1.68	0.87
Haiti	3.63	2.81	2.94
Honduras	4.50	3.96	3.16
Hungary	2.73	1.15	3.17
Iceland	0.53	0.57	0.27
India	6.83	6.95	3.86
Indonesia	5.18	4.93	3.27
Iran (Islamic Republic of)	10.00	10.00	10.00
Iraq	10.00	10.00	10.00
Ireland	0.52	0.82	0.00
Israel	1.47	0.85	1.48
Italy	0.19	0.00	0.30
Jamaica	1.10	0.54	1.21
Japan	2.21	2.94	0.57
Jordan	3.69	4.03	1.80
Kazakhstan	2.55	2.86	1.17
Kenya	4.60	4.61	2.68
Kiribati	1.82	2.88	0.00
Kuwait	3.09	4.33	0.57
Kyrgyzstan*	1.10	1.15	0.60
Lao People's Democratic Republic	10.00	10.00	10.00
Latvia	1.63	1.08	1.50
Lebanon	4.05	4.91	1.50
Lesotho	3.17	2.94	2.08
Liberia	1.51	1.79	0.60
Libya	10.00	10.00	10.00
Lithuania	2.31	1.90	1.76
Luxembourg	0.19	0.30	0.00
Macedonia	1.48	0.58	1.76
Madagascar	3.71	3.19	2.68
Malawi	2.27	1.47	2.12
Malaysia	6.65	7.59	2.95
Maldives	1.97	1.36	1.76
Mali	1.30	0.58	1.47
Malta	0.70	1.11	0.00
Marshall Islands	0.67	0.82	0.24
Mauritania	5.34	5.18	3.27
Mauritius	3.67	1.92	3.89
Mexico	4.15	3.39	3.19
Mongolia	1.05	0.24	1.42
Montenegro	1.99	1.39	1.77
Morocco	3.68	3.73	2.11
Mozambique	2.93	3.50	1.15
Myanmar	4.05	4.00	2.41
Namibia	1.81	1.14	1.73

Nepal	3.25	4.90	0.24
Netherlands	0.18	0.29	0.00
New Zealand	1.83	2.04	0.86
Nicaragua	2.23	0.85	2.69
Niger	1.30	1.14	0.92
Nigeria	5.20	4.61	3.62
Norway	0.17	0.27	0.00
Oman	3.47	5.49	0.00
Pakistan	7.40	8.47	3.26
Palau	0.52	0.82	0.00
Panama	6.67	5.38	5.18
Papua New Guinea	1.66	2.02	0.60
Paraguay	3.45	2.75	2.71
Peru	5.64	4.26	4.67
Philippines	5.81	4.33	4.87
Poland	3.01	1.79	2.98
Portugal	1.20	1.37	0.53
Qatar	10.00	10.00	10.00
Republic of Korea	7.72	6.23	5.99
Republic of Moldova	1.98	1.96	1.17
Romania	3.73	3.92	1.98
Russian Federation	5.61	3.85	5.03
Rwanda	3.08	2.87	2.02
Saint Kitts and Nevis	0.85	1.35	0.00
Saint Lucia	0.39	0.61	0.00
Saint Vincent and the Grenadines	0.70	1.11	0.00
Samoa	1.29	2.05	0.00
San Marino	0.00	0.00	0.00
Sao Tome and Principe	1.53	2.19	0.24
Saudi Arabia	10.00	10.00	10.00
Senegal	2.72	2.27	2.03
Serbia	2.57	2.27	1.80
Seychelles	2.33	2.58	1.11
Sierra Leone	1.72	0.58	2.15
Singapore	3.66	4.57	1.24
Slovakia	0.00	0.00	0.00
Slovenia	0.18	0.28	0.00
Solomon Islands	3.09	4.89	0.00
South Africa	1.68	0.84	1.82
Spain	1.11	0.00	1.75
Sri Lanka	5.17	3.76	4.43
Sudan	10.00	10.00	10.00
Suriname	0.35	0.00	0.56
Swaziland	6.46	5.19	5.04
Sweden	0.54	0.24	0.61
Switzerland	1.47	1.72	0.60
Syrian Arab Republic	10.00	10.00	10.00
Tajikistan*	1.65	1.73	0.88
Thailand	6.09	6.06	3.59
Timor-Leste	0.58	0.91	0.00
Togo	1.31	1.17	0.91
Trinidad and Tobago	1.77	1.94	0.87
Tunisia	2.40	1.20	2.60
Turkey	6.39	5.61	4.50
Turkmenistan	10.00	10.00	10.00
Tuvalu	1.60	2.29	0.24
Uganda	3.70	2.89	2.97
Ukraine	3.76	1.47	4.48
United Arab Emirates	10.00	10.00	10.00

United Kingdom	2.58	2.30	1.79
United Republic of Tanzania	4.22	4.57	2.12
United States of America	4.57	4.58	2.65
Uruguay	0.51	0.54	0.27
Uzbekistan	10.00	3.13	10.00
Vanuatu	2.68	4.24	0.00
Venezuela	7.01	3.36	7.75
Viet Nam	10.00	10.00	10.00
Yemen*	2.60	2.90	1.21
Zambia	4.63	4.91	2.43
Zimbabwe	7.19	6.06	5.32

\* Note that we recommend dropping the 9 asterisked countries from the sample for reasons noted in the text.

Figure 1: Coded Violations for 183 Countries by Evaluation Criteria, 2012



**Figure 2: Average Normalized LR Scores by Region, 2012 (dropping 9 countries)**

