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QUANTITATIVE
ANALYSIS
OF FACTORS
HINDERING OR
ENABLING THE
PROTECTION OF
HUMAN RIGHTS

AXEL MARX
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QUANTITATIVE ANALYSIS OF FACTORS HINDERING OR ENABLING
THE PROTECTION OF HUMAN RIGHTS

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Frame

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Preface

The EU today stands at a crossroads with regard to human rights: although human rights are high on its agenda the EU is facing multiple challenges of carrying the torch of human rights, within EU Member States and in relation to the wider world.

These challenges are the focus of FRAME, an interdisciplinary research project on Fostering Human Rights Among European (External and Internal) Policies. FRAME is a large-scale, collaborative research project funded under the EU's Seventh Framework Programme (FP7), coordinated by the Leuven Centre for Global Governance Studies and involving 19 research institutes from around the world. Our research focuses on the contribution of the EU's internal and external policies to the promotion of human rights worldwide.

In this series of publications, we have collected some of the work carried out by researchers and other experts at the Danish Institute for Human Rights, in collaboration with researchers from other universities, as part of the FRAME project. The four publications have been written with contributions from scholars and experts from The Ludwig Boltzmann Institute of Human Rights, Vienna; European Training and Research Centre for Human Rights and Democracy, Graz; University of Seville; Leuven Centre for Global Governance Studies, KU Leuven, and the Danish Institute for Human Rights.

In our work we have aimed at illuminating contemporary human rights challenges by way of analysing the historical, political, legal, economic, social, cultural, religious, ethnical and technological factors that both facilitate and hamper the efforts of the EU in its efforts to promote and protect human rights, within the EU and in the world at large.

It is hoped the insights gained from this research may contribute to informing the debate – among human rights academics, practitioners, civil society, and policy-makers - about the EU's future direction in the important field of human rights.

April 2017

Eva Maria Lassen

Senior researcher

The Danish Institute for Human Rights

Executive Summary

Different factors influence the protection of human rights. They are extensively discussed in work package 2. This report adds to previous deliverables by focusing on a quantitative analysis of factors hindering or enabling the protection of human rights at the country level. It aims to explain variation between countries in terms of the protection of human rights. Although this kind of approach misses deep comprehension of the specifics of a given country, it offers a better understanding of how different factors influence the protection of human rights around the world, favouring a comparison between countries.

The first part of this report starts with a discussion of the different measures of human rights (i.e. the dependent variable) available in the quantitative literature on the protection of human rights. Some of these measures or dependent variables try to capture the overall protection of the many different human rights in a specific country, while other measures are far more exact, capturing the respect of a specific human right, e.g., rights of freedom of association and collective bargaining or the right to a fair trial. The authors favour more specific measures for which data is collected on the basis of extensive data-collection protocols (see Section 1.1).

Next, Section 1.2 discusses different political, socio-cultural, economic and international factors that have been used in quantitative studies to explain variation in the protection of human rights. A literature review on the determinants of civil and political rights and workers' rights (the right to freedom of association and collective bargaining) is presented in Sections 1.2.A and 1.2.B, respectively. Factors such as the ratification of international agreements, democracy and development level have a positive net effect on the protection of civil and political rights. On the other hand, civil war, state religion, and economic growth have a negative effect on the protection of civil and political rights. Concerning workers' rights, the main factors positively associated with protection of freedom of association and collective bargaining are democracy, development level, investment flows, and neighbour's pressure, while civil war and large population have a negative effect.

These studies illustrate a standard approach for quantitatively investigating the protection of human rights, which focus on the net effect of one explanatory factor (independent variable) on a measure of human rights (dependent variable) (see Section 1.2.C). This approach often uses statistical techniques to measure, on average, the net-effect of each independent variable on the protection of human rights. Although the average effect is relevant information, this approach neglects the fact that these variables can have different effects depending on their interaction with other variables. Hence, focusing on isolated factors and searching for one or two explanatory variables with most explanatory power

neglects the fact that protection of human rights can be the result of several, mutually complementary models (or causal paths).

As the discussion below will show, some studies find a positive effect for a variable while others do not find any effect or even a negative effect for the same variable. For example, in the case of FACB rights, different authors find different effects for the ratification of ILO conventions and trade openness. This is explained by the fact that, depending on the interaction with other factors, a certain variable can have a different effect. In order to understand these dynamics, we need to focus on the interaction of explanatory variables. In order to address this issue, this report uses a different set of analytic techniques, Qualitative Comparative Analysis (QCA), to analyse variation in the protection of human rights.

Part 2 starts with an introduction to Qualitative Comparative Analysis (QCA). Instead of measuring net effects of explanatory factors on the protection of rights, QCA introduces ideas such as conjunctural causation (i.e., combinations of factors produce an outcome), multifinality (i.e., same factor can have different outcomes), equifinality (i.e., different factors can produce the same outcome) and asymmetric causality (i.e., the presence and absence of the outcome have different explanations). Different from the net effect of each factor, QCA provides a set of analytic techniques allowing researchers to identify necessary explanatory factors (necessary conditions) for the protection of human rights as well as to identify sufficient (combinations of) conditions for the protection of human rights. Section 2 introduces QCA as a research approach and technique and illustrates its *modus operandi*.

The third part of the report then presents an application of QCA to the study of human rights with a specific focus on the rights of freedom of association and collective bargaining (FACB rights), which includes both a longitudinal as well as a cross-sectional analysis. First, the report introduces the outcome/dependent variable (FACB-rights) and presents the results of newly collected data for a set of 73 countries over 30 years. The analysis presented in Section 3.2 shows a downward trend for the protection of freedom of association and collective bargaining rights. This trend is persistent for all regions investigated over the period 1985-2012. Although the results might be cause for concern, the authors also highlight that this trend can be influenced by many different dynamics, including more accurate reporting of violations.

Next, QCA is applied to the case of rights of freedom of association and collective bargaining (Section 3.3). The QCA approach is explained step by step, from the calibration of variables into sets (i.e., the transformation of the original raw data into sets of countries for which FACB rights are well protected and a whole range of explanatory factors) to the analysis of necessary and sufficient conditions. The results show the persistence of three necessary conditions (democracy, ratification of ILO conventions and absence of civil conflicts), independent of the period of analysis (2002 or 2012) and calibration (one set of countries with high level of protection or another set of countries where the protection of

rights is above the mean). These necessary conditions are aligned with theoretical expectations and previous research, since democracy, ratification of ILO conventions, and the absence of civil conflict were also identified in the literature as being significantly correlated with high protection of FACB rights. The QCA analysis adds to this discussion that these conditions are not only merely highly correlated with the protection of these rights, but they are necessary (although not sufficient) factors for protecting FACB rights.

The analysis of necessary conditions was further separated into two analyses; one focusing on the factors influencing the protection of these rights in law and one focusing on the factors influencing the protection of these rights in practice. When comparing necessary conditions for FACB rights overall, in law and in practice, it is evident that the absence of civil conflicts is the most important necessary condition, showing highly consistent results. It is also interesting to note that ratification is a necessary condition for the protection of FACB rights in general (overall) and in law, but not for the protection of these rights in practice. This result confirms the presence of so-called false positives, i.e., countries that ratify conventions without the intention of enforcing them. The comparison also shows that the presence of democracy in a country is a strong necessary condition for the protection of rights overall as well as rights in law. However, contrary to expectations, democracy is not necessary for rights in practice, which might be related to the difficulty of enforcing compliance with standards (i.e., the compliance gap).

Next, an analysis of sufficient (combination of) conditions (i.e., different causal paths to an outcome) for FACB rights in 2002 and 2012 are presented in Section 3.3.C. Considering all explanatory conditions investigated in this study, many different possible explanatory models can be developed to explain the outcome. Four models were selected for further analysis based on measures of consistency, coverage, and complexity, which are explained in the report. Results show that a combination of five conditions is sufficient to reach high protection of FACB rights: democracy, ratification of ILO conventions, absence of civil conflicts, the level of economic development, and the pressure from neighbouring countries. These results are aligned with evidence presented by previous research and are the core conditions associated with the protection of FACB rights.

Other conditions, such as left-wing executive, trade openness and flows of foreign investments are also relevant, but their effect depends on the context (interaction with other explanatory factors). For example, high trade openness is present in some combinations of conditions leading to high protection of FACB rights, but in other combinations of conditions it is the absence of trade openness that contributes to the outcome. Results like this are characteristic of a QCA analysis. QCA presents different paths, or different combinations of conditions, that together can lead to the outcome (i.e. *multiple conjunctural causation*). This particular aspect of QCA can help us to understand why some correlation based statistical studies find a positive relationship between trade and the protection of labour rights, while other studies find the opposite relationship. In Section

3.3.D, we analyse in-depth this relationship between economic indicators and protection of FACB rights. These results indicate that one cannot draw any general conclusions, but that they are highly dependent on the context.

Finally, Part 4 presents our overall conclusions. First, it discusses the importance of rights of freedom of association and collective bargaining, highlighting that the protection of these rights have gained increased attention in international fora. Secondly, Section 4 discusses the main findings of this study and their policy implications, giving special attention to the three necessary conditions for the outcome “high protection of FACB rights” (democracy, ratification of ILO conventions, and absence of civil conflicts), and discusses the five conditions that are sufficient for this outcome: democracy, ratification of ILO conventions, absence of civil conflicts, the level of economic development, and the pressure from neighbouring countries.

Lastly, Part 4 discusses the advantages and disadvantages of using QCA for a quantitative analysis of factors. QCA allows the identification of non-trivial necessary conditions and the analysis of multiple conjunctural causation (see the case of trade openness above). This study also reveals the presence of equifinality, namely the fact that different paths, each consisting of different combinations of conditions, lead to the same outcome. On the other hand, the complexity of this result is discussed as a drawback of QCA. Although it uses minimization procedures to reduce complexity, this can be still a problem, particularly when many explanatory factors are analyzed.

In sum, this report identifies factors that influence the protection of human rights, such as democracy and ratification of treaties, and absence of war. The results are well aligned with previous studies and add new insights for how different combinations of conditions/factors can affect the protection of human rights.

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Introduction

The intention of the FRAME-reports that aim at identifying factors is to analyse the many factors contributing to or inhibiting the protection of human rights. Previous reports in the work package focused on a series of cultural, economic, ethnical, historical, legal, political, religious, social and technological factors that facilitate or hamper the protection of human rights. They provided an in-depth analysis of these factors in a specific context. This report aims to add to this analysis by providing a more macro and aggregated perspective. The report *on quantitative analysis of factors hindering or enabling the protection of human rights* builds on the extensive literature in comparative politics, international relations and political economy that aims to explain variation in the protection of human rights across countries. In other words, they aim to analyse why the protection of (certain) human rights is better in one country compared to another country. This report builds on this type of research and introduces new analytic techniques to analyse data and compare countries.

A first global study was done by Poe and Tate (1994), which aimed to identify what the determinants (factors) were for the violation of personal integrity rights. Subsequently, many studies emerged with the purpose of analysing which structural factors contribute to the protection and/or violation of human rights (for an excellent discussion of first studies see Hafner-Burton and Ron, 2009; Hafner-Burton, 2013; Simmons, 2009; see also annex 4 for an extensive list of studies used in this report). Also, several efforts to develop indicators and gather data started then (for a complete overview of the many different indicators and variables see deliverable 13.1 (Starl et al., 2014)).

Over the years, this body of literature generated several excellent efforts to explain the protection of human rights on the basis of regression-based statistical models (Simmons, 2009; Hafner-Burton, 2013). These studies gained several interesting insights and identified different explanatory variables, which explain the protection of human rights across countries. Human rights as a dependent variable (i.e., the phenomenon to be explained) in this context takes many forms, ranging from the ratification of human rights treaties on very specific human rights to composite indicators that aim to measure the overall protection of human rights. Explanatory factors typically include structural macro-level political, social and economic indicators such as development level, political system (presence of democracy) and/or presence of NGO's. In the first part of the report, we further elaborate on this. It is impossible to discuss the whole body of literature since this contains many hundreds/thousands of studies.¹ Hence, we do not aim at being exhaustive in any way. However, the first part of the report aims to provide a synoptic overview of

¹ It could be argued that the study of some human rights such as women's equality or labour rights have developed in separate disciplines such as gender studies and labor studies with an enormous rich tradition of research, both quantitative as well as qualitative.

some frequently cited studies (see annex 4) with the aim of identifying key factors, which contribute to the protection of human rights. It also, and most importantly, serves as an introduction of what could be called a general approach to quantitative analysis of the protection of human rights, which relies on statistical reasoning and aims to identify/isolate the explanatory power of specific indicators/factors. This is the most frequently used method in quantitative analysis of the protection of human rights. These techniques have some limitations due to the assumptions on which they are based. Most importantly, these models aim to identify the 'net' additive effect of individual explanatory variables, neglecting the fact that these variables can have different effects depending on interaction with other variables. In other words, they neglect to a degree the fact that the protection of human rights can be the result of several, mutually complementary models (or causal paths). This will be further discussed in Part 1. In order to address some of these limitations, this report introduces a new analytic technique, Qualitative Comparative Analysis (QCA), so to quantitatively analyse combinations of factors, which contribute to the protection of human rights. QCA is an analytic technique allowing researchers to identify combinations of factors that generate an outcome. An especially interesting feature of this technique is that it allows researchers to link the research results (different combinations of factors explaining an outcome) to specific cases (in this case countries). Part 1 will end with an introduction to this method and a discussion of its potential key strengths.

Part 2 then applies this method and tests its relevance for the protection of a specific set of human rights, namely the protection of freedom of association and collective bargaining rights (FACB). This decision is based on substantial and methodological grounds. Substantially, it concerns rights of key importance to the EU's external trade policies and which are also extensively discussed in other FRAME deliverables under Workpackage 9 (see also Marx et al., 2015; Wouters et al., 2015). Second, as will be argued in Part 1, the measurement and collection of data on specific rights is very time-intensive and requires the elaboration of data-collection protocols, coding of different sources, etc. For FACB, these coding protocols are available, but the data collected and analysed using these coding protocols are only available up to 2002. In this report we present the results of further data collection efforts for 73 countries up to 2012. This results in an extended and rich dataset, which offers the opportunity to analyse significant changes over time. These data-collection efforts are only possible for one specific right in the context of this deliverable. Moreover, as will be discussed in Part 1, data collection efforts on specific rights are necessary since 'general' human rights indicators such as Freedom House are only a weak, and not always very reliable, proxy for more specific rights. Hence, if we want to better understand the factors contributing to the protection of specific rights, it is better to concentrate on measurement, data-collection and the building of explanatory models for these specific rights. As a result, this report will mainly concentrate on the literature that focused on the protection of FACB, or collective rights as it sometimes is referred to.

We then apply the new analytic technique to analyse the protection of FACB-rights. For this purpose, we created several new datasets collecting data on factors from many different existing international datasets, including data from the World Bank, UNCTAD, etc. The analysis will focus on both a longitudinal (1988-2012) as well as a cross-sectional analysis. The longitudinal analysis will focus on the evolution of the protection of a specific human right over a long period of time. The cross-sectional analysis, most importantly, will focus on explaining variation between countries and identifying factors that explain this variation.

The key-objective of this report is to analyse quantitatively the protection of human rights, with a specific focus on FACB rights, and test the relevance and applicability of new analytic techniques. Their application to freedom of association and collective bargaining will also allow us to draw substantive conclusions that are relevant to policy-makers.

The report proceeds as follows. In a first part, we describe what can be labelled as the general approach towards quantitatively analysing the protection of human rights. This approach starts by defining a dependent variable (i.e., the phenomenon to be explained) and identifying possible explanatory factors. The first part argues that the selection of the dependent variable is crucial for a quantitative analysis of factors. Dependent variables can take many forms ranging from being very general (general human rights indicators) to being very specific. The report argues that there are significant differences between the two approaches and favours the use of specific dependent variables, since they are more valid and reliable. Given the preference for focusing on more specific human rights as a dependent variable, this report narrows down its scope to specific human rights, namely the rights of freedom of association and collective bargaining.

Next, this first part introduces explanatory factors that have been used in the literature and introduces some of the main findings of standard statistical analysis on the association of these explanatory factors with the dependent variable. The key underlying idea in the general/common approach towards the quantitative analysis of factors that contribute or hinder the protection of human rights is to look at which explanatory variables are most significantly correlated with the dependent-variable. The part ends with a discussion of the strengths and weaknesses of this standard approach.

In a second part, we introduce a new analytic technique that can address some of the weaknesses of the standard approach and which might complement existing studies by offering a new way of analysing data, based on different assumptions. This technique is Qualitative Comparative Analysis (QCA). The second part discusses the main features of this technique and introduces how it operates.

In a third, and most substantial part, we then apply this technique to the study of the rights to freedom of association and collective bargaining (FACB-rights). For this purpose, we build on existing research but also collect new data and build new databases offering new

analysis and new findings. This part presents an extensive discussion of the available data on the protection of FACB rights and also collects new data to analyse, longitudinally, the evolution of the protection of these rights over time. To analyse, in cross section, the factors contributing to the protection of these rights, we introduce many different explanatory factors and the data-sources we use to measure these factors. The subsequent parts are dedicated to presenting the research findings of the analysis of necessary conditions (explained in Part 2) as well as the analysis of the different (sufficient) causal paths leading to a better protection of FACB rights (also explained in Part 2).

The fourth part summarizes and discusses the main findings of the study, both from a substantial as well as methodological point of view.

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Part 1: Quantitative (variable-oriented) Approaches Towards Analysing Protection of Human Rights

This first part introduces a general approach to quantitatively analysing the protection of human rights as it has been applied in several studies. Typically, the unit of analysis in these studies is ‘country/year’, i.e., for a specific country in a given year one aims to measure the level of protection of human rights and try to identify which factors might influence this level of protection. One does not perform this analysis for one or two countries but for a substantial number of countries using quantitative data (i.e., statistical data for a set of explanatory indicators/factors such as economic growth, political systems, etc.). Some researchers aim to include all countries in the world in such an analysis, thus building large datasets to analyse and understand variation between countries. This approach is further introduced and discussed. First, we provide a general discussion of the dependent variables used in this type of research. The general approach starts from defining a dependent variable (i.e., the phenomenon to be explained) and by identifying possible explanatory factors. This part argues that the selection of the dependent variable is crucial for a quantitative analysis of factors. Dependent variables can take many forms ranging from being very general (general human rights indicators) to being very specific. In this part we will argue that there are significant differences between the two approaches and favours the use of specific dependent variables since they are more valid and reliable. Aggregate and general composite indicators on human rights pool very different issues together, which makes it harder to disentangle which factors influence the protection of specific human rights. Given the preference for focusing on more specific human rights as a dependent variable, and the data collection efforts related to this, this report narrows down its scope to specific human rights. For this purpose, we select the rights of freedom of association and collective bargaining. This selection is based on substantial and methodological grounds which we further substantiate later.

Next, we illustrate and present the *different explanatory factors* used in quantitative studies and discuss more in-depth the literature on the protection of political and civil rights and the rights of freedom of association and collective bargaining. This discussion illustrates a standard approach to analysing quantitatively the protection of human rights which in essence focuses on the relationship between one explanatory factor and any one measure for the protection of human rights in general or specific aspects of human rights.

1.1 Human rights as a dependent variable: Selection of what needs to be explained

The concept of human rights implies the protection of many different ‘issues/rights’, which relate to different social realities. Throughout the literature, one can identify several

indicators used to measure the protection of human rights as a dependent variable (i.e., the phenomenon to be explained). Early studies focused on the ratification of human rights treaties as a proxy for the protection of human rights. This approach was criticised on the grounds that some countries ratify treaties without the intention of enforcing or implementing them (Simmons, 2009). These are the so-called false positives. Subsequently, scholars focused on measures aiming to capture the reality on the ground with regard to the protection of human rights. Many different indicators were used and developed for this purpose. They range from very specific indicators to composite indices. For example, some studies focused on the issue of cruel and inhumane punishment, which is measured by the degree to which the central government has the death penalty. For the protection of children and the rights of the child, scholars used indicators looking at the share of children between 10-14 in the workforce and the proportion of 1-2 years old that have been inoculated for specific diseases such as measles, diphtheria, pertussis and tetanus.

Other researchers, by contrast, have aimed to compose a measure of the overall level of human rights protection. Several general human rights indicators and indexes exist and have been used in previous studies to assess the protection of human (and labour) rights, such as Cingranelli-Richards (CIRI) Human Rights indicators, Political Terror Scale and Freedom House indicators (i.e., Elkins et al., 2013; Hafner-Burton, 2005; Simmons, 2009). The **CIRI Human Rights Dataset (CIRI)** contains quantitative information on how the practices of 202 governments respect 15 internationally recognized human rights, annually from 1981-2011.² CIRI only records practices of governments that violate the human rights of its own citizens and that occur within the country's internationally recognized borders, except in certain cases of occupation. CIRI uses two data-sources. The primary source, which is used for coding all variables, is the U.S. State Department Country Reports on Human Rights Practices. For personal integrity rights (the rights to freedom from extrajudicial killing, disappearance, torture, and political imprisonment), CIRI uses a second source, the Amnesty International's Annual Report. Thus, CIRI measures the practices of governments that allow or impede citizens to exercise 15 internationally recognized human rights, including physical integrity rights (the right not to be summarily executed, the right not to be disappeared, the right not to be imprisoned for political beliefs), civil liberty rights (freedom of speech and press, freedom of assembly and association, freedom of religion, the freedom of domestic movement, the freedom of foreign movement and travel, the right to an independent judiciary, the right to electoral self-determination), labour rights (the freedom of association for workers at their workplace, the right to bargain collectively with employers, the prohibition on the use of any form of forced or compulsory labour, a minimum age for the employment of children, and acceptable conditions of work with respect to minimum wages, hours of work, and occupational safety and health), and the rights of women to equal treatment politically, economically and socially.

² <http://www.humanrightsdata.com/p/data-documentation.html>. Description right side of page.

The **Political Terror Scale (PTS)** uses data on states' human rights practices during 1978-2008. Originally, the PTS coded 59 countries for the years 1976-1983, but this has been expanded to more than 180 countries.³ The PTS measures 'state terror', meaning violations of physical and personal integrity rights carried out by a state or its agents in a particular year. The measurements are done on the basis of a 5-level 'terror-scale' originally developed by Freedom House. The PTS relies heavily on coding by researchers who interpret sources (Wood and Gibney, 2010, p. 374). Measurements are primarily focused on political violence a state carries out within its own territorial borders, which include political imprisonment, extrajudicial killings, disappearances, and the use of torture and other cruel, inhuman and degrading treatment. The PTS uses three data-sources, namely the Amnesty International Annual Report, the U.S. State Department Country Reports on Human Rights Practices and the Human Rights Watch World Reports.

Freedom in the World is Freedom House's annual global report on global political rights and civil liberties. This report has been published since 1972.⁴ The 2015 *Freedom in the World* report evaluated the state of freedom in 195 countries and 15 related and disputed territories. In this report, Freedom House focuses on the political rights and civil liberties enjoyed by individuals and the violations of these rights by both state and non-state actors. Freedom house uses a variety of sources to measure the protection of rights. *Freedom in the World* covers 7 topical subcategories under political and civil liberties. The first subcategory is the electoral process, which includes executive and legislative elections and the electoral framework. The second subcategory is political pluralism and participation. This includes the party system, competition and minority voting rights. The third subcategory is the functioning of government. This includes corruption, transparency and the ability of elected officials to govern in practice. The fourth subcategory is the freedom of expression and belief, which includes media religious freedom, academic freedom and free private discussion. The fifth subcategory is associational and organizational rights, including free assembly, civic groups and labour unions. The sixth subcategory is the rule of law, which includes a focus on independent judges and prosecutors, due process, crime and disorder, and legal equality. The final subcategory is personal autonomy and individual rights, which includes freedom of movement, property rights, women's and family rights, and freedom from economic exploitation.

These general human rights indices have been used in many quantitative studies on the protection of human rights and have also been intensely discussed (on the respective websites one can find many references to the use of the datasets). A key issue concerning their usability concerns their validity (the degree to which they accurately measure a social reality). Although in general they do a good job in measuring the overall protection of human rights within a country for a certain year, several authors have argued that they do

³ To consult a list of all the countries, see following link to the PTS Data Table: <http://www.politicalterror scale.org/Data/Datatable.html>.

⁴ Freedom in the World 2015, FAQ.

not always accurately capture the protection of specific rights (see below for references). The use of composite indicators in such cases makes them vulnerable to ecological fallacy types of errors (Robinson, 1950), i.e., drawing conclusions from observations on the level of the composite indicator that might not hold for its components separately. In addition, especially in relation to the Cingranelli-Richards indicators, the measurement of indicators is relatively 'rough' and the transformation of information in a three-order ordinal scale generates a significant loss of information and variation, which would be interesting for those seeking a more fine-grained analysis.

Hence, several researchers have developed very specific measures and coding schemes to measure the protection of specific rights. Oona Hathaway (2002), for example, has developed a sophisticated measure on fair trial, using international legal texts – primarily the ICCPR – as her guide and State Department reports for the data to code the index she developed. The index considers the extent to which trials are carried out by independent and impartial tribunals; whether an accused person has a right to counsel (and if necessary, an interpreter) and to present a defence; whether there is a presumption of innocence; and whether the trial is held publicly, in a timely fashion and with a right to appeal. In addition, she coded for prohibitions on ex post facto laws and the right to have charges presented with prior notice. This index captures well the international norms embodied in the ICCPR and provides for a far more accurate measurement of the protection of this right.

Another key example of fine grained measurement concerns freedom of association and the right to collective bargaining, which is a key focus of this report. David Kucera (2001, 2002) developed a new indicator specifically aiming to capture the degree to which two specific core labour rights are protected. David Kucera (2001, 2002) developed an index of freedom of association and collective bargaining, based on 37 evaluation criteria considering both *de jure* and *de facto* violations of these two labour rights (see annex 1). The author identified the 37 evaluation criteria based on the two ILO conventions: Freedom of Association and the Protection of the Right to Organize Convention (No. 87) and the Right to Organize and Collective Bargaining (No. 98). The analysis, carried out following Kucera's FACB-index, is based on a content analysis of three distinct sources: the International Confederation of Free Trade Unions' Annual Survey of Violations of Trade Union Rights, the US State Department's Country Reports on Human Rights Practices, and the International Labour Organization's (ILO) Reports of the Committee on Freedom of Association.

Within the above-mentioned sources, the coders looked for any references to violations of the 37 items for each of the countries and years identified (see annex 1). Violations on each of the 37 items were measured as a dummy variable. When one or more of the sources reported a violation for a specific country, a '1' was given to that country. If none of the three sources provided indications for a violation a '0' was given. Each category was also assigned a specific weight, since some violations are more serious than others. The weight

depends on how severe a violation is, usually ranging from 1 to 2. As a result, the score for a given country and year is the sum of all scores (0 or 1) for each of the 37 categories multiplied by the weight for the specific category. Very recently, Anner and Sari (2015) built on this approach and developed an even more-fine grained framework, which is presented in Annex 3 (see also section 3.3.A.1). In addition, these fine-graded measurements allow to distinguish between protection in law and in practice. The categories covering protection in law concern the incorporation of labour rights (derived from ILO Conventions 87 and 98) into domestic law; for example, the legal right to strike (category 32) or the right to collective bargaining (24). The situation in practice is measured by ‘practice’-categories, covering issues such as trade union members who are fired for union activities (10) or an employer limiting the agenda in collective bargaining (28). This distinction between law and practice is relevant since some countries turn out to have a spotless record in law, but have a contrasting situation on the ground.

The strength of these measures are their fine grained framework and the use of different sources to collect information, which minimizes the bias from specific sources. The indicator developed by Kucera (and also Anner and Sari) shows that a more fine-grained indicator for specific labour rights can generate different results from the Freedom House and CIRI indexes. To illustrate the relevance and importance of the difference between general human rights indicators and specific ones measured via elaborate protocols one can calculate the correlation between the two. If general human rights indicators would be a good proxy for each of its components one would expect a very high correlation (close to 1) between general indicators and specific ones.

When we compare the FACB index (based on the data we collected for FRAME and Mosley (2011) – for an extensive discussion see Part 2 of this report) with these general human rights indicators such as Freedom House and Cingranelli-Richards (see Table 1) we observe that they are correlated, but that these correlations are not sufficiently high as to expect that the indicators measure the same thing. More importantly, the correlations stagnate at around 0.5 indicating both that there are many countries scoring differently on the different indicators and the FACB index captures different realities than the composite indicator. To illustrate the ecological fallacy, consider Cyprus in 2000. In 2000, Cyprus had the best possible score on civil liberties, but its score on freedom of association and collectively bargaining (from Mosley, 2011) was below the average.

Table 1: Relationship between different human rights indicators

		FACB Rights	FACB Rights Law	FACB Rights Practice	CIRI_INDEX WORKER RIGHTS	FREEDOM HOUSE
FACBRights	Correlation	1	.850*	.845*	.572*	-.554*
	N	2,037	2,037	2,037	1,600	1,622
FACBRights Law	Correlation	.850*	1	.437*	.511*	-.583*
	N	2,037	2,037	2,037	1,600	1,622
FACBRights Practice	Correlation	.845*	.437*	1	.460*	-.358*
	N	2,037	2,037	2,037	1,600	1,622
CIRI_ WORKER	Correlation	.572*	.511*	.460*	1	-.601*
	N	1,600	1,600	1,600	1,600	1,539
FH_CL	Correlation	-.554*	-.583*	-.358*	-.601*	1
	N	1,622	1,622	1,622	1,539	1,622

Note: * Significant at 0.01 level.

In sum, several dependent variables can be used to measure the protection of human rights and, on the basis of that, identify factors which contribute to the protection of these rights. **A key issue concerns the specificity with which a specific right is measured. More fine-grained measurements allow for a more specific analysis of factors contributing to the protection or violation of human rights.** Composite indicators tend to aggregate very different ‘realities’ of human rights protection, which makes it difficult to identify factors contributing to the protection of human rights, since some factors might be relevant to explain one part of the composite indicator, but not necessarily other parts. **To further analyse the factors contributing to the protection of human rights, it is better to focus on data concerning specific human rights that is collected on the basis of extensive data-collection protocols.**

1.2 Factors influencing the protection of Human Rights

The previous section introduced and discussed what needs to be explained in terms of human rights protection and the different approaches that are available. These dependent variables have been used in many studies, which aim to explain variation in the protection of human rights and identify the factors (‘independent variables’) promoting or inhibiting the protection of human rights. Typically, these studies then also identify a number of independent variables (factors) which explain this variation. Throughout these studies, authors one can identify many factors contributing to the protection or violation of human rights. Based on an analysis of key-books and a search (on keywords) of the Web of Science, we identified approximately 100 quantitative studies with an aim to explaining variation in the protection of human rights on the basis of a number of independent variables/factors (see annex 4 for an overview of these studies). Several studies use the same or similar factors. Across the many studies, we identify at least 25 factors that positively or negatively influence the protection of human rights and hold for the explanation of more than one

specific right (there are many more rights specific factors). Below we summarize them in four categories of factors.

A. Political Factors

1. The nature of the political system in terms of presence of democracy, whether they are stable democracies versus transitional democracies
2. The nature of the political system in terms of structure (federal versus centralized)
3. The nature of the executive in terms of the presence of left-wing political parties
4. The nature of the legal system (common law or other)
5. The strength of the rule of law in a country
6. The presence and magnitude of civil society activity in a country, with specific reference to the presence and action of international NGOs
7. Whether a country is confronted with an internal civil war
8. Size and control of the military
9. Constitutional alignment with human rights commitments

B. Socio-cultural Factors

10. The dominant religion (Islam, Catholic, Protestant) in a country (i.e., the majority religion in a country) or whether a country is fragmented religion-wise
11. The ethnic character of a country with specific reference to whether a country is fragmented versus more homogenous societies
12. The magnitude of the population
13. Level of (non-economic) development: life expectancy, general level of education
14. Rural-urban distribution of a country
15. The concentration and liberty of the media and press
16. The colonial history (e.g., specific reference to previous British rule)

C. Economic Factors

17. The level of economic development in terms of GDP/head, both in terms of absolute levels as well as in terms of change over time
18. The level of trade openness and the degree to which a country trades measured as a percentage of trade in GDP
19. The amount of incoming Foreign Direct Investment
20. Economic structure of a country in terms of division between agriculture, manufacturing and services
21. The amount of foreign aid (official development assistance) a country receives

D. International Factors

22. Whether a country is in war with another country
23. International commitments and agreements a country included in mainly trade agreements that it concluded
24. The ratification of human rights treaties

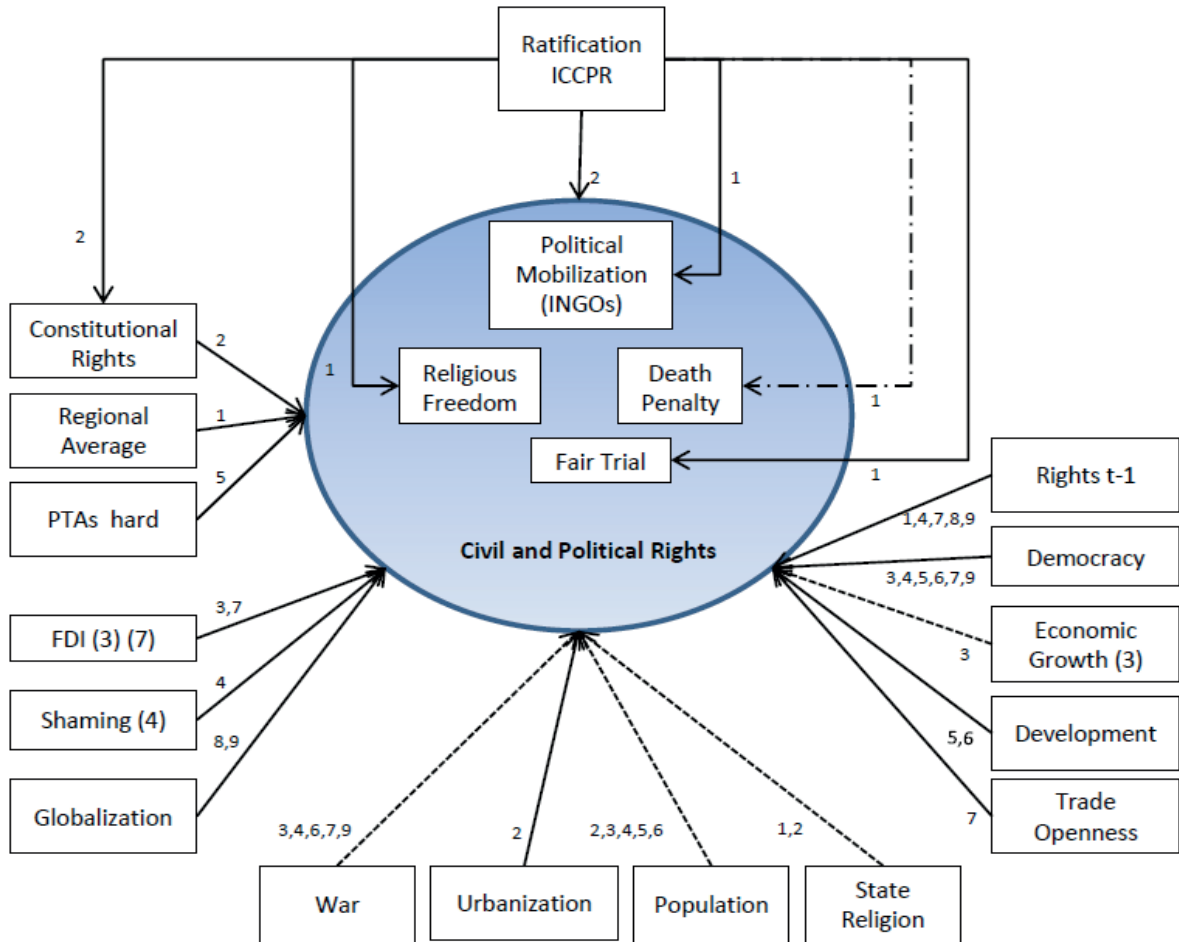
25. The regional and socio-economic embeddedness of countries in terms of aligning human rights protection behaviour with that of neighbours, (economic) peers (same development level) or major trading partners

It is impossible to review all published studies in detail. Important to note in the context of this report is that many factors influence the variation of human rights protection between countries (different dependent variables). In order to further illustrate and discuss how these factors influence the protection of human rights, we try to bring together in a synoptic overview some of the most important/cited results from statistical studies for a selected number of dependent variables. The aim is not at all to provide an exhaustive literature review but identify key factors across studies (on the country level) and, most importantly, illustrate how standard quantitative approaches deal with identifying factors. In the next part, we focus on two areas: the protection of civil and political rights, and, this report's focus, the protection of freedom of association and right to collective bargaining.

A. Civil and Political Rights

Civil and political rights include, among others, physical and integrity rights, freedom from arbitrary arrest, the right to a fair and impartial trial, rights to vote and political participation, and other individual liberties such as the freedom of movement, thought, conscience and religion, speech, association, and assembly. The quantitative literature on the respect of civil and political rights is extensive, covering distinct aspects such as physical and integrity rights, fair trials, and non-discrimination (see above section on dependent variable). Figure 1 presents a summary of this empirical studies literature. In this figure, continuous lines indicate a positive relationship with civil and political rights, whereas dashed lines indicate a negative relationship, i.e., factors that weaken the respect to these rights.

Figure 1: Determinants/Factors of Protection of Civil and Political Rights



Sources: 1) Simmons (2009); 2) Elkins, Ginsburg and Simmons (2013); 3) Blanton and Blanton (2007); 4) Hafner-Burton (2008); 5) Hafner-Burton (2005); 6) Poe and Tate (1994); 7) Apodaca (2001); 8) De Soysa and Vadlamannati (2011); 9) Dreher et al.(2012)

First, the ratification of the United Nations' International Covenant on Civil and Political Rights (ICCPR) is expected to be correlated with respect to civil and political rights, since both the ratification and non-compliance with the terms of the agreement are costly (Simmons, 2009). Beth Simmons presents evidence that the ratification of ICCPR improves at least some aspects of civil and political rights. First, she shows that the ratification of ICCPR enhances political mobilization, since it is associated with an increase in local membership of international NGOs one to four years after the ratification. Next, ratification is also positively associated with fair trials in transitional democracies, while this relationship between better protection and ratification is not significant for stable democracies or stable autocracies. Lastly, Beth Simmons also shows the positive impact ratification of ICCPR has on religious freedom, and also the positive impact ratification of ICCPR and the Optional Protocol on Death Penalty (OPDP) has on the abolition of the death penalty (Simmons, 2009).

The ICCPR also has an impact on citizens' rights in national constitutions. The ratification of ICCPR is associated with an increase in a constitution's similarity to the ICCPR, when controlling for the era and a country's prior constitution tradition vis-à-vis the ICCPR (Elkins et al., 2013). Moreover, Elkins and others' study also shows a positive impact on countries' practices, increasing compliance with ICCPR terms. The authors suggest that the ICCPR affects compliance both directly (an independent effect) and indirectly, through civil liberty provisions in constitutions.

Democracy is also associated with more respect for civil and political rights (Apodaca, 2001; Hafner-Burton, 2005/2008; Blanton and Blanton, 2007). Democratic governments are expected to respect human rights since citizens are allowed to remove oppressive leaders from power (Apodaca, 2001; Poe and Tate, 1994). Other domestic variables also have a positive impact on civil and political rights such as the level of development (Poe and Tate, 1994; Hafner-Burton, 2005), urbanization (Elkins et al., 2013) and trade openness (Apodaca, 2001). However, domestic factors can also increase violations of these rights, such as economic growth (Blanton and Blanton, 2007), larger populations (Poe and Tate, 1994; Blanton and Blanton, 2007; Hafner-Burton, 2005/2008; Elkins et al., 2013), state religion (Simmons, 2009; Elkins et al., 2003), and war (Poe and Tate, 1994; Apodaca, 2001; Blanton and Blanton, 2007; Hafner-Burton, 2008).

External factors can also drive States' practices. First, peer pressure from neighbouring countries seems to improve respect for civil and political rights, since countries' practices positively correlate with practices of other countries in the same region (Simmons, 2009). International trade and investment also have a positive impact. Countries who ratify Preferential Trade Agreements (PTA), including hard human rights clauses, that tie material benefits of integration to human rights principles (Hafner-Burton, 2005) have better respected human rights. Similarly, more foreign investment (Apodaca, 2001; Blanton and

Blanton, 2007) and more globalisation (De Soysa and Vadlamannati, 2011; Dreher et al., 2012) have been associated with greater respect for civil and political rights. There is also some evidence that practices of “naming and shaming” performed by international non-profit organizations (NGO) and by the press reduce human rights violations (Hafner-Burton, 2008). However, Hafner-Burton’s findings are still not robust and also reveal that naming and shaming practices can even increase government’s violations in some cases, when oppressive leaders are under pressure. Lastly, an interesting finding presented by several authors is that civil and political rights in one period strongly correlate with practices in the previous period (Apodaca, 2001; Hafner-Burton, 2008; Simmons, 2009; De Soysa and Vadlamannati, 2011; Dreher et al., 2012). Together, these findings indicate that civil and political rights are marked by a high degree of institutional inertia (Simmons, 2009).

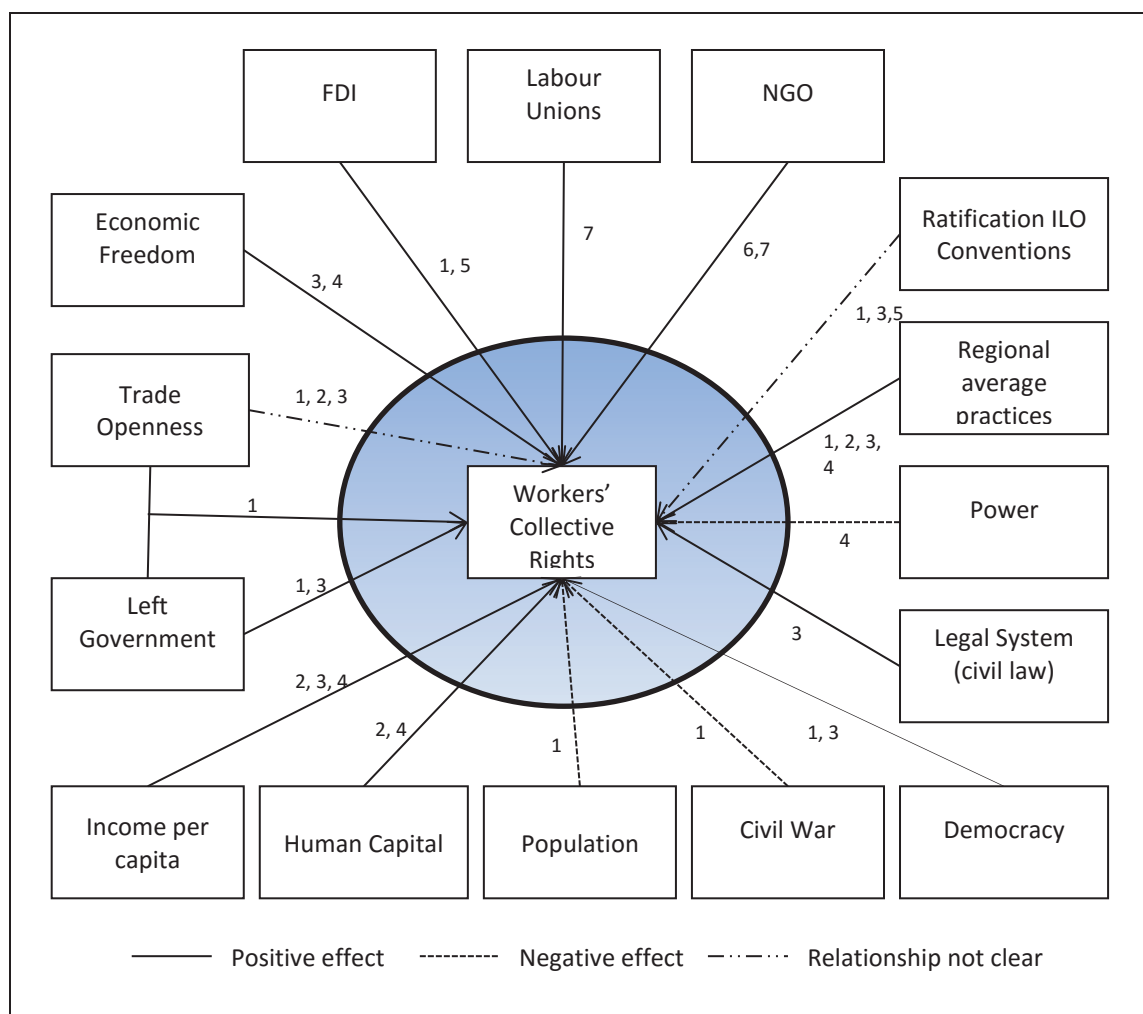
B. Freedom of Association and Collective Bargaining

In order to better understand the dynamics of the protection of FACB rights, several authors have tried to identify the determinants for the protection of FACB rights. Several explanatory variables have been identified in the literature. Figure 2 summarizes the literature on the determinants of the protection of labour rights. Some studies (e.g., Neumayer and de Soysa, 2006; Deloach et al., 2006; Mosley, 2011; Mosley and Uno, 2007) have focused specifically on the protection of FACB rights and used the indicators developed by Kucera (2002) as a dependent variable (see also Mosley, 2011). In order to expand the number of studies reviewed to identify determinants, we also include studies that use another dependent variable, such as the measure of civil liberties (from Freedom House) as a dependent variable (e.g., Busse, 2004; Neumayer, 2005). The latter is a composite measure that includes, apart from associational and organizational rights that are directly connected to FACB rights, other civil rights such as freedom of expression and belief, rule of law, and personal autonomy and individual rights. Lastly, Murillo and Schrank (2005) used a measure indicating whether or not a country adopts a union-friendly collective labour code by legislative means.

Figure 2 identifies the different explanatory variables that were significantly (positively or negatively) associated with the protection of labour rights. These factors can be divided into international and domestic determinants of the protection of labour rights. In the figure, continuous lines indicate a positive effect of the variable on the protection of labour rights, while dashed lines indicate a negative effect. The third type of line, which alternates dashes and dots, represents relationships that are still unclear according to the reviewed literature, i.e., while some studies reveal a positive significant effect, others reveal a

negative significant effect. The numbers on the arrow refer to the studies in which these effects have been identified.

Figure 2: Determinants of Worker’s Rights Protection (FACB Rights)



Sources: authors, based on: (1) Mosley; (2011); (2) Busse (2004); (3) Neumayer and Soysa (2006); (4) DeLoach et al (2006), (5) Mosley and Uno (2007); (6) Neumayer (2005); (7) Murillo and Schrank (2005)

1. International determinants

First, one way by which the international community can influence national performance on the protection of FACB rights is via an international regime of treaties and international law (i.e., ILO conventions). The most relevant in this case are the ILO conventions 87 and 98. Some advocates state that international treaties and conventions are able to promote better practices by mandating compliance (Chau and Kanbur, 2001; Hafner-Burton, 2005; Simmons, 2009). However, critics think their effect is dubious due to their lack of

enforcement (Bhagwati, 1995), lack of state's capacity to comply with labour standards (Levi et al., 2013), and also due to "false positives" - countries that decide to ratify agreements only for political purposes, without truly intending to implement better standards (Simmons, 2009; Hafner-Burton, 2013). Mosley (2011) showed that, when comparing countries who ratified ILO conventions 87 or 98 with countries that did not ratify these conventions, the average scores of FACB rights in law is slightly higher for those who ratified ILO conventions but, on the other hand, is slightly lower in practice. So far, the only study that formally tested the hypothesis that ratification of ILO conventions improve FACB rights was the one published by Neumayer and De Soysa (2006). The authors did not find a significant effect of these conventions on the protection of labour standards, i.e., the effects of ratification of conventions 87 and 98 were not significant (Neumayer and De Soysa, 2006; see also Flanagan 2006, p. 165 for associations between ratification and labour conditions).

Secondly, economic globalisation in terms of trade and investment can also affect the protection of labour rights. Higher flows of foreign investments (FDI) are expected to improve the protection of labour rights, since investors seek out countries with higher rule of law, tend to transnationally standardise managerial practices (including labour standards), and compete to attract qualified work forces, which are usually scarce in developing countries (Mosley, 2011). In this way, FDI tends to contribute to the protection of labour rights. Layna Mosley presents evidence of this effect in developing countries (Mosley and Uno, 2007; Mosley, 2011). Neumayer and De Soysa (2006) also analysed the effects of FDI on labour rights, but their results were not significant. However, the work of Neumayer and De Soysa studied the effects of FDI stocks, instead of FDI flows (as Mosley did). Mosley (2011) also tested the effect of FDI stocks on FACB rights and found no significant effect (in accordance with Neumayer and De Soysa's findings).

The impact of trade openness, measured by the ratio of the sum of imports and exports to GDP, is still controversial. Busse (2004) presents different, partially contradictory results in a study covering 71 developing countries. Busse finds a weak positive effect (improving compliance) in the cross-sectional analysis for the year 2000; and a robust negative effect (reducing compliance) in a panel data analysis for data from 1970 to 2000. Neumayer and De Soysa (2006), on the other hand, found a positive effect of trade openness on labour standards in their cross-sectional analysis using Kucera's measure of FACB rights, a result that is robust across various specifications, including different control variables and samples (only developing countries versus all countries). However, the studies published by Layna Mosley (2011) present evidence of an opposite (negative) effect of trade openness. Layna Mosley argues that the effect of trade openness is different from FDI. While FDI contributes to better practices, trade openness – especially through subcontracting – causes more violations of labour rights, since governments are tempted to reduce the provision or enforcement of such rights due to cost competition (Mosley and Uno, 2007; Mosley, 2011). The effects of globalisation on labour standards have also been

investigated through a measure estimating the level of economic freedom. The index of economic freedom (Fraser Institute), which gives higher scores to neo-liberal, free-market policies, has been used in this case. While Neumayer and De Soysa (2006) found that economic freedom is positively associated with the protection of labour rights, DeLoach et al. (2006) did not find any significant relationship.

Thirdly, the international community can influence national practices through transnational advocacy by NGOs. These organizations can contribute to the improvement of labour standards in many forms, for example, by providing information, training for workers on how to recognize and address violations, and also by undermining the reputation of companies that do not respect labour rights (Levi et al., 2013). The positive effect of NGOs has already found support in empirical studies providing evidence that citizen's rights are more likely to be protected in countries whose citizens belong to a large number of international NGOs (Hafner-Burton and Tsutsui, 2005; Neumayer, 2005; Murillo and Schrank, 2005). On the other hand, Mosley's (2011) findings point in the opposite direction, i.e., a greater number of human rights NGOs in a country is associated with more violations of labour rights. However, as Mosley findings are significant only for violations in practice, and not for violations in law, it is reasonable to think that these NGOs are contributing to the report of such violations, resulting in more reported violations, and not necessarily in an increase in violations.

A final international or transnational determinant of the protection of labour rights is country peer pressure, mainly performed by neighbours and trade partners. The tendency of countries in the same region to perform similarly with regards to labour standards is highlighted in several articles (Busse, 2004; DeLoach et al., 2006; Neumayer and De Soysa, 2006; Mosley, 2011). All find a positive effect of region on the protection of FACB.

2. Domestic determinants

Several authors also analysed domestic determinants for the protection of labour rights. These studies have focused on socio-economic and political variables. Concerning socio-economic variables, most attention has gone to the analysis of the impact of economic and human capital. Concerning the former, a higher level of income per capita is expected to improve compliance with labour standards, based on the assumption that legal enforcement is associated with a country's wealth (DeLoach, Das, and Conley, 2006). This argument seems to be in accordance with most empirical findings, since the positive relationship between income and better protection of labour rights is evident in several studies (Busse, 2004; Neumayer and De Soysa, 2006; DeLoach et al., 2006). However, the findings presented by Mosley and Uno (2007) go in the opposite direction. When discussing this result, Mosley and Uno argue that the relationship between income and labour rights

could vary among countries and affirm that opportunities for violations may be greater in more industrialised developing countries, which also tend to have higher incomes per capita. The authors discuss a possible u-shape relationship but they do not verify this possibility, since their sample only includes developing countries. Human capital is also identified as contributing to a better protection of labour rights. In countries with higher accumulated human capital, labour standards are better protected (Busse, 2004; DeLoach et al., 2006).

Concerning political variables, some robust findings can be identified. First, more democratic countries tend to better protect human rights (Cingranelli and Richards, 1999; Poe, Tate and Keith, 1999, Simmons, 2009; Hafner-Burton, 2013). The empirical literature shows that the positive effect of democratization on labour rights is evident and holds across studies (Neumayer and De Soysa, 2006; Mosley, 2011). Second, the presence of labour unions is also expected to improve labour standards (Levi et al., 2013), although increased outsourcing is reducing union membership (Anner, 2011). This hypothesis was confirmed in Murillo and Schrank (2005) who showed that higher union density is associated with the adoption of more union-friendly collective labour reforms. Third, a positive impact on the protection of labour rights has also been found for left-wing governments, who are supposed to be more aligned with worker's demands (Murillo and Schrank, 2005; Neumayer and De Soysa, 2006; Mosley, 2011). Especially interesting in this context is the interaction effect of left-governments and trade openness. Where trade openness is high and left parties control the executive branch, FACB rights are better protected (Mosley, 2011). Fourth, the legal system also needs to be taken into account, since there is evidence that the German civil law system can decrease violations of FACB rights (Neumayer and De Soysa, 2006). Fourthly, the occurrence of civil conflicts negatively affects the protection of FACB rights (Mosley, 2011). Finally, another interesting finding is related to the effect of power. More powerful countries face more violations of FACB rights, once they are less affected by international pressures, such as the threat of sanctions (DeLoach et al., 2006).⁵

⁵ It should be noted that, in addition, the literature identifies other explanatory variables such as population size (Mosley, 2011). Population size is negatively correlated with the protection of labor rights. Population size reduces compliance with labor standards. Larger populations appear to provide more opportunities for repression, or at least for the reporting of it.

C. Discussion of the 'standard' approach

These studies have generated several interesting insights and identified many different explanatory variables that explain the protection of human rights. We now better understand which factors contribute to better protection of human rights. However, the standard approach, as illustrated above, also has some limitations due to the assumptions on which it is based. First, most importantly, these studies aim to identify the 'net' additive effect of individual explanatory variables, neglecting the fact that these variables can have different effects depending on interaction with other variables. As some authors have argued, it is pointless to try to isolate the "independent" effect of any causal condition when several factors usually must combine for a particular outcome to occur (Ragin, 2008). Figures 1 and 2 clearly show that there are many factors that have a significant impact on the protection of human rights. Hence, focusing on isolated factors and searching for one or two explanatory variables with most explanatory power neglects the fact the protection of human rights can be the result of several, mutually complementary, models (or causal paths).

Secondly, this type of variable-oriented approaches sometimes generates inconsistent results. As the discussion above shows, some authors find for some variables a positive effect while other authors do not find any effect or a negative effect. For example, in the case of FACB rights, different authors find different effects for the ratification of ILO conventions and trade openness. This is often explained by the fact that the mechanisms at play between variables are ill-understood and can differ in relation to the configuration of the other variables in which they occur. In other words, depending on the interaction with other factors, a certain variable can have a different effect. In order to understand these dynamics, we need to focus on the interaction of different variables.

Thirdly, the variable-oriented method is limited by its results inherently not being able to be interpreted in the context of specific cases. The latter is often the aim of more case-oriented studies. Case-oriented strategies are distinctive in that they are centrally concerned with making sense of a relatively small number of cases, selected because they are substantively or theoretically significant in some way. Variable-oriented strategies, by contrast, are centrally concerned with the problem of assessing the relationship between aspects of cases across a large number of generic "observations", usually with the goal of inferring general patterns that hold for a population (Ragin 1997). Hence, the results of the analysis cannot be traced back to specific cases/countries, which limits their capacity for explaining what happens in specific cases.

In order to address these issues, new methodological techniques are developed, which are case-based, but also aim to generate insights that hold for more than a handful of cases. Especially promising in this context has been the development of *Qualitative Comparative Analysis (QCA)* as a research technique. QCA, initiated by Charles C. Ragin in 1987,

constitutes a research strategy and set of techniques with distinctive added value for comparative research, which aims to understand variation and diversity between cases (Ragin, 1987, 2000, 2008). Ragin developed QCA, a comparative case-oriented research technique based on Boolean algebra and set-theory, for the analysis of a medium number of cases (i.e., N between 10 and 150). Increasingly, QCA is used on larger datasets containing over a 100 cases (see Marx, Rihoux and Ragin, 2014)

The broader aim was also to develop a new research approach combining some advantages of qualitative (or 'case-oriented') and quantitative (or 'variable-oriented') research methods (Ragin, 1987). In an era of increased attention on case studies in many social sciences (Brady and Collier, 2004; George and Bennett, 2005; Box-Steffensmeier, Brady and Collier, 2008; Gerring, 2007; Poteete et al., 2010), QCA has the potential to provide a unique set of tools to systematically examine similarities and differences in a set of comparable cases and identify structural conditions that lead to an outcome. QCA is specifically suited to analyse aggregate units such as countries. The next section briefly introduces QCA.

D. Conclusion

The protection of human rights varies between countries. Many authors have sought to understand this variation by analysing a significant number of countries using large datasets and statistical techniques. These studies constitute a variable-oriented approach to research which aims to identify which explanatory factors (independent variables) explain variation between countries in the protection of human rights (dependent variable). In this type of analysis, the specific countries are not of primary interest. Researchers are interested in looking at how variables correlate across a large set of countries. They typically identify a dependent variable and a series of independent explanatory variables.

In a first step, these studies identify, operationalize and measure a dependent variable for the measurement of the protection of human rights. The protection of human rights, as a dependent variable, has been operationalized in different ways. Some authors have focused on the ratification of conventions (*de jure*) as a dependent variable while others look at more specific indicators directly related to how specific rights are protected *in practice*. In this part, we illustrated and briefly discussed this approach. It has generated significant insights; including, that the protection of human rights on a country level is determined by many factors. We also discussed the possible limitations of these approaches' weaknesses. They tend to assume that a factor always has the same effect regardless of the context in which it operates. They typically aim to identify a 'net' effect of a variable while (given the sheer number of variables that affect the protection of human rights) it is probably often a combination of factors influencing the outcome. Next, we will

introduce a possible new approach and analytic technique (QCA) to quantitatively analyse the protection of human rights. This technique addresses some of these limitations and offers some distinctive advantages introduced in the next part.

Part 2: Introducing Qualitative Comparative Analysis (QCA)

A. QCA as a Comparative Case-based Analytic Technique⁶

The aim of QCA is to develop a research strategy that develops a middle road between the case-oriented (qualitative) and the variable-oriented (quantitative – see also part 1 for a general discussion) approaches (Ragin, 1987, pp. 12ff; 1991; 1997). The goal of this systematic comparative case strategy is to ‘*integrate the best features of the case-oriented approach with the best features of the variable-oriented approach*’ (Ragin, 1987, p. 84). This approach consists of four central features (Ragin, 1987, 1994, 2000, 2003, Rihoux and Ragin, 2009; Rihoux, 2008). QCA designates both an approach and an umbrella term for three specific techniques. The whole approach, as well as the first technique, was launched by Charles Ragin’s (1987) seminal volume (see also Marx, Rihoux, and Ragin, 2014).

QCA is first and foremost *comparative* in nature — more precisely, it was initially geared toward multiple case studies, in a small- or medium-*N* research design. It strives to meet two, apparently contradictory goals: not only gathering in-depth insight in the different cases and capturing the complexity of the cases (gaining ‘intimacy’ with the cases) but also producing some level of parsimony across cases, thereby allowing forms of ‘modest generalization’ (Ragin 1987). Ragin’s (1987, 1997) whole intention was to develop an original ‘synthetic strategy’ as a middle way between the case-oriented (or ‘qualitative’) and the variable-oriented (or ‘quantitative’) approaches, which would ‘integrate the best features of the case-oriented approach with the best features of the variable-oriented approach’ (Ragin 1987, 84).

On the one hand, indeed, QCA embodies some key strengths of the case-oriented approach (Berg-Schlosser et al., 2009; Ragin, 1987). To start with, it is a holistic approach, in the sense that each individual case is considered as a complex whole or *configuration* of conditions and an outcome, which should not be forgotten in the course of the analysis. Thus, QCA is in essence a case-sensitive approach.

Furthermore, QCA develops a conception of causality that leaves room for complexity (Berg-Schlosser et al., 2009; Ragin, 1987): *multiple conjunctural causation*. This implies that (a) most often, it is a combination of conditions (potential explanatory variables) that eventually produces a phenomenon—the outcome (phenomenon to be explained); (b) different combinations of conditions may produce the same outcome; and (c) depending on the context, a given condition may very well have a different impact on the outcome.

⁶ The use of QCA has been the focus of much fruitful intellectual debate and criticism during the last decade. For interesting critical contributions see Lieberman, 1991, 1994, 2004; Goldthorpe; Mahoney, 2000; Savolainen, 1994; Seawright, 2004, 2005, Sewell, 1996; Lucas and Szatrowski Symposium in Sociological Methodology, 2014.

Thus, different causal paths—each path being relevant, in a distinct way—may lead to the same outcome. The bottom line is that by using QCA the researcher is urged not to specify a single causal model that fits the data best, as one usually does with standard statistical techniques, but instead to ‘determine the number and character of the different causal models that exist among comparable cases’ (Ragin 1987, 167).

On the other hand, QCA also embodies some key strengths of the quantitative, or analytic-formalized approach. First, it allows one to analyse more than just a handful of cases, which is seldom done in case-oriented studies. This is a key asset, as it opens up the possibility to achieve more parsimonious explanations. Moreover, its key operations rely on Boolean algebra and set logic and require that each case be reduced to a series of variables (conditions and an outcome). Hence, it is an analytic approach, which allows replication (Berg-Schlusser et al. 2009). This replicability enables other researchers to eventually verify or falsify the results of the analysis.

The combination of Boolean algebra, set relations, and a third feature, minimization algorithms, allows researchers to identify (causal) regularities that are parsimonious, that is, that can be expressed with the fewest possible conditions within the whole set of conditions that are considered in the analysis. In the process, QCA systematizes the mental operation of identifying “necessary” and “sufficient” (combinations of) conditions. The level of parsimony is determined by the researcher. In terms of techniques, QCA using conventional Boolean sets (i.e., variables can be coded only “0” or “1,” and thus have to be dichotomized) was developed first, which is why the label “QCA” has been often used to name this first technique. However, the standard practice (following Rihoux and Ragin 2009; Schneider and Wagemann 2007) is now to distinguish between three labels: (a) when referring to the original Boolean version of QCA, we use csQCA (where “cs” stands for “crisp set”); (b) when referring to the fuzzy-set version, which also links fuzzy sets to truth table analysis, we use fsQCA (where “fs” stands for “fuzzy set”); (c) when referring to the version that allows multiple-category conditions, we use mvQCA (where “mv” stands for “multivalued”).

A fourth feature in QCA allows for the analysis of necessary, sufficient and INUS (combination of) conditions. Especially important in this context is the analysis of necessary conditions. This builds on claims by several researchers (Goertz and Starr 2003) to make the analysis of necessary conditions more prominent in social scientific research. The identification for necessity implies that whenever you observe the presence of the outcome you also observe the presence of the explanatory condition (note, the reverse is not required: when you observe the explanatory condition you also observe the outcome). In set-theoretic terms, this means that the explanatory condition X is a superset of the outcome Y (and Y is a subset of X). Due to its ability to distinguish between necessary and sufficient conditions, fsQCA is able to offer the researcher a comprehensive analysis of the relationship between a causal condition and an outcome in question. An assessment of

sufficiency implies that whenever you observe the sufficient condition X you also observe the outcome Y (again the reverse is not required, whenever you observe Y you also observe X). In set-theoretic terms, the outcome Y is a superset of X and X is a subset of Y. In situations of **causal complexity** as described above, no single cause may be either necessary or sufficient. In *The Cement of the Universe*, Mackie (1974) labels these causal conditions **INUS causes/conditions** because each one is: Insufficient (not sufficient by itself) but Necessary components of causal combinations that are Unnecessary (because of multiple paths) but Sufficient for the outcome. This is a third set of conditions that can be identified via QCA.

B. Applying QCA: a brief introduction

A set-theoretic approach starts from the idea that attributes of cases are best described in set relations and not in terms of variables. Variables aim to capture a dimension of variation across cases and distribute cases on this variation. A set assesses whether, or to what degree, a case is a member of a set and then analyses the intersection between sets. For example, a country can be a member of the set of countries protecting human rights. Sets are theoretical constructs. The criteria for set membership are defined by the researchers and are often *calibrated* against an external standard. Membership in sets should not be black or white, absent or present, but can vary by the degree to which they satisfy membership criteria. In QCA, one often makes the distinction between crisp sets, which are dichotomous in nature (in or out) or fuzzy sets (taking different ranges across sets in an analysis) that allow for more fine-grained assessment of set membership.

For some sets, one can easily work with dichotomous sets (crisp sets). For example, countries abolishing the death penalty or not. For other sets, such as, for example, level of economic development or the protection of a specific human right, more fine-grained information and varying degrees of membership can be used. The assignment of set-membership scores follows from the definition and operationalization of the set in question and the calibration to an external standard. Fuzzy sets can take many gradations, from dichotomous to continuous, and are characterized by the fact that their floor value and ceiling value has substantial meaning. In this way, fuzzy sets are both quantitative as well as qualitative. Full membership to a set and full non-membership to a set are qualitative states and assessments.

The QCA analytic protocol is similar in all three techniques, with some specificities and enrichments for mvQCA and fsQCA (Cronqvist and Berg-Schlusser 2009; Ragin 2008, 2009b; Rihoux and De Meur 2009; Schneider and Wagemann 2012). The more formalized steps, based on the formal logic of Boolean or set-theoretic algebra and implemented by computer programs, aim at identifying so-called 'prime implicants' in a truth table. The key

philosophy of QCA is to '[start] by assuming causal complexity and then [mount] an assault on that complexity' (Ragin 1987, x). The analysis of data in QCA proceeds in three distinct steps. One must first produce a *data table* in which each case displays a specific combination of conditions (expressed in terms of set membership for all the conditions) and an outcome (also expressed in set membership).

The QCA software then produces a *truth table* that displays the data as a list of configurations. Technically, a truth table lists all theoretical possible combinations (2^k where K = number of conditions) of configurations. A configuration is a given combination of some conditions and an outcome. A specific configuration may correspond to several observed cases, thereby producing a first step of synthesis for the data. The transformation of a data-matrix into a truth table is the key analytic step in QCA since this transformation will reveal whether the explanatory model is valid or not through the identification of contradictions. Contradictions occur in QCA when an identical configuration of conditions accounts for both the presence and absence of an outcome. Hence, contradictions occur in the transformation of a data-matrix in a truth-table. The occurrence of contradictions is signalled in the output (truth table) of a QCA analysis. The output presents the number of configurations that lead to the presence of the outcome (1), the number of configurations of conditions which lead to the absence of the outcome (0) and the number of configurations that lead both to the presence and absence of the outcome (i.e., contradictory configurations). As Ragin (1987, p. 118) notes the '*lesson here is that an existing data set should not be considered an irrevocable starting point. In qualitative comparative work, the representation of the empirical world in terms of a truth table is a crucially part of the investigation*'. This transformation reveals contradictions which should be resolved (Ragin, 1987, p. 113; see also Rihoux and De Meur, 2009, pp. 48-49). Hence, the development of an explanatory model in QCA goes hand in hand with resolving contradictions. This back and forth process of including and excluding theoretically and empirically relevant conditions in a model until a model has been identified with no or only a few contradictions is the key-mechanism to develop an explanatory model for analytic purposes. The importance of the issue of contradictions in model construction via QCA is repeatedly stressed by QCA-users. Ragin (2005, p. 34; see also Kogut and Ragin, 2006) argued that a QCA analysis forces '*The resolution of contradictions [...] deepens knowledge and understanding of cases and also may expand and elaborate theory.*' In their textbook on QCA, Rihoux and De Meur (2009, pp. 48-56) extensively discuss several strategies to resolve contradictions in QCA. Some models might generate a lot of contradictions (almost every row in a truth table has a contradiction) while other models might only generate a few or one contradiction.

More recently, the measurement of contradictions has been transformed into a single measure, labelled 'consistency' (Ragin 2006, 2008; Schneider and Wagemann, 2012). Consistency '*assesses the degree to which the cases sharing a given condition or combination of conditions [...] agree in displaying the outcome in question*' (Ragin, 2006, p.

292). In other words, consistency is the proportion of cases with a given cause or combination of causes that also display the outcome (Ragin, 2006; Ragin, 2008a, p. 77). Ragin (2006, p. 293) advises researchers to craft models that generate high consistency measures. Low consistency measures flag problems with the explanatory model such as omitted variables or measurement error. Consistency in QCA is measured on the level of a row of a truth table and, as indicated, is the proportion of cases with a given cause or combination of causes that also display the outcome. If, for example, 17 out of the 20 cases displaying a cause or causal combination also display the outcome, then consistency is 0.85 (Ragin 2006, p. 293). This indicates that 3 cases do not display the outcome, *i.e.*, the outcome is absent and hence generates contradictions.

Once a model is identified which does not generate contradictions or only few contradictions, the following step of the analysis is Boolean minimization—that is, reducing the long Boolean expression, which consists of the long description of the truth table, to the shortest possible expression (the minimal formula, which is the list of the *prime implicants*) that unveils the regularities in the data. This minimization is based on the Quine-McCluskey algorithm, which systematically compares rows of truth tables and tries to identify redundant conditions. The minimization procedure is based on the following procedure: if two Boolean expressions differ in only one causal condition, yet produce the same outcome, then the causal condition that distinguishes the two expressions can be considered irrelevant and can be removed to create a shorter, combined expression. Applying the algorithm will result in shorter expressions. It is then up to the researcher to interpret this minimal formula.

How does this work? Let us introduce a virtual example. Suppose you want to assess the protection of a specific right or human rights for a set of 30 cases/countries. Assume in addition that the variables are dichotomous, where number 1 indicates the presence of a condition and 0 indicates its absence.

We identify four factors that might influence the protection of human rights.

- A. Trade Openness
 - a. Absent (0) vs Present (1)
- B. Ratification of International Convention
 - a. Absent (0) vs Present (1)
- C. Income per capita
 - a. Low (0) vs High (1)
- D. Democracy
 - a. Absent (0) vs Present (1)

The first step in a systematic comparison is to construct a raw data table (see Table 2) displaying the scores of each case on the condition variables and the outcome variable (“protection” of a specific human right). In other words, one produces a data matrix, a table

whose rows and columns provide cells for all the combinations of those variables. For example, case 14 shows that the outcome (protection) is achieved when a country has ratified an international convention (presence of B), when a country is a high-income country (presence of C) and the country is a stable economy (presence of D).

Table 2: Hypothetical Data table for 30 cases

Cases	A Trade	B Ratification	C Income	D Democracy	P Protection
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	1	1
5	0	0	0	1	1
6	0	0	1	0	0
7	0	0	1	1	1
8	0	1	0	0	0
9	0	1	0	0	0
10	0	1	0	0	0
11	0	1	0	0	0
12	0	1	0	1	1
13	0	1	1	0	0
14	0	1	1	1	1
15	1	0	0	0	1
16	1	0	0	0	1
17	1	0	0	1	1
18	1	0	0	1	1
19	1	0	0	1	1
20	1	0	0	1	1
21	1	0	1	0	0
22	1	0	1	0	0
23	1	0	1	0	0
24	1	0	1	1	0
25	1	1	0	0	1
26	1	1	0	1	1
27	1	1	0	1	1
28	1	1	1	0	0
29	1	1	1	1	0
30	1	1	1	1	0

In a second step, the researcher transforms the data table into a Boolean truth table, listing all the logical combinations of the causal conditions and, for each one of these combinations, how many observed cases display the “0” (absence) or “1” (presence) value on the outcome variable (see Table 2). Table 2 only shows the combinations for which the outcome is present.

Table 3: Truth Table for Data

Row	A	B	C	D	P	# of cases
1	0	0	0	0	0	3
2	0	0	0	1	1	2
3	0	0	1	0	0	1
4	0	0	1	1	1	1
5	0	1	0	0	0	4
6	0	1	0	1	1	1
7	0	1	1	0	0	1
8	0	1	1	0	1	1
9	1	0	0	1	1	2
10	1	0	0	0	1	4
11	1	0	1	1	0	3
12	1	0	1	0	0	1
13	1	1	0	1	1	1
14	1	1	0	0	1	2
15	1	1	1	1	0	1
16	1	1	1	0	0	2

The truth table (Table 3) summarises – provides a synthetic description of – the causal configurations that exist in a data table. The next step is to simplify the truth table, to discover which configurations of causal conditions are important. For example, if one compares rows 13 and 14 then one can observe that in both rows the outcome ‘protection’ is present. In row 13, conditions A, B and D are present and condition C is absent. Row 14 only differs from row 13 on one condition, namely the absence of condition D (democracy) rather than its presence. The comparison of these 2 rows shows that when the first two causal conditions are present and the third is absent it does not matter whether the fourth is absent or present. Hence, comparative analysis proceeds by comparing configurations of causes – rows of a truth table – and not by comparing the presence or absence of each individual causal condition (columns 2-5) with the presence or absence of the outcome (column 6). The simplification strategy follows the logic of an experiment. Only one condition at a time is allowed to vary (the ‘experimental’ condition). If varying this condition has no discernible impact on the outcome, it can be eliminated as an explanatory factor.

The rule of combining rows of the truth table as a way of simplifying them can be stated formally: If two rows of a truth table differ on only one causal condition yet result in the same outcome, then the causal condition that distinguishes the two rows can be considered irrelevant and can be removed to create a simpler combination of causal conditions (a simpler, 'shorter' expression).

Restating the above in QCA-language

Row 13: $O = A.B.c.D$

Row 14: $O = A.B.c.d$

⇒ Simplified: $O = A.B.c$

The process of combining rows to create simpler terms can be carried on until no more simplification is possible. Table 3 shows the different rounds of simplification.

Table 4: Simplification of Truth Table: Presence of Outcome (P = 1)

Panel A Cases: Outcome present (P = 1)	
Row Table 2	Causal Configuration
2	a.b.c.D
4	a.b.C.D
6	a.B.c.D
8	a.B.C.D
9	A.b.c.d
10	A.b.c.D
13	A.B.c.d
14	A.B.c.D

⇓ ⇓ ⇓ ⇓ ⇓ ⇓ ⇓ ⇓

Panel B: First round of Simplification		
		Label New Term
Rows 2 + 4 ⇐	a.b.D	# 17
Rows 2 + 6 ⇐	a.c.D	# 18
Rows 2 + 10 ⇐	b.c.D	# 19
Rows 4 + 8 ⇐	a.C.D	# 20
Rows 6 + 8 ⇐	a.B.D	# 21
Rows 6 + 14 ⇐	B.c.D	# 22
Rows 9 + 10 ⇐	A.b.c	# 23
Rows 9 + 13 ⇐	A.c.d	# 24
Rows 10 + 14 ⇐	A.c.D	# 25
Rows 13 + 14 ⇐	A.B.c	# 26

⇓ ⇓ ⇓ ⇓ ⇓ ⇓ ⇓ ⇓

Panel C: Second Round of simplification	
# 17 + # 21 ⇐	a.D
# 18 + # 20 ⇐	a.D
# 18 + # 25 ⇐	c.D
# 19 + # 22 ⇐	c.D
# 23 + # 26 ⇐	A.c
# 24 + # 25 ⇐	A.c

As a result it can be concluded in this hypothetical example that the conditions under which the outcome (the protection of human rights) occurs are as follows:⁷

$$P = a.D + c.D + Ac \quad (+ = \text{Boolean operator OR})$$

In other words, the outcome occurs:

- When a is absent (absence of high trade volume) and D is present, (presence of stable democracy); or,
- When c is absent (low income country) and D (presence of stable democracy) is present; or,
- When A is present (presence of high volume of trade) and c is absent (low income country).

C. Stepwise Approach to QCA

Although one can observe diversity in ways QCA is applied, in general, one could summarize the application of QCA in a 9-step approach (Schneider and Wageman, 2012; Marx et al., 2013; Marx et al., 2014).

- 1 Decide what outcome (dependent variable) needs to be investigated, which is in our case freedom of association and collective bargaining.
- 2 Define the research population and select the cases for analysis with sufficient variation on the outcome. Several selection strategies are available (see Gerring, 2007). However, often, as in the case of this report, researchers do not select cases but aim to work with the full population of cases (i.e. all countries) for which sufficient data is available. This is also the case for this report.
- 3 List the most significant conditions, other than the scoping conditions used to define the research population, which might contribute to an explanation of the outcome. Several condition selection strategies can be used (Amenta and Poulsen, 1994; Berg-Schlusser and De Meur, 2009). Part 1 introduced an extensive discussion of explanatory variables based on previous research. These conditions, for which data is available, will also be used in part 3 of this report.
- 4 Define each condition and outcome. As a result, each explanatory factor is discussed and operationalized as a crisp set or fuzzy set condition, which will be used in a QCA analysis. This implies that for each case an explanatory condition is coded 1 (uppercase notation)

⁷ The analytical procedure illustrated can be done via specialised software which include fsQCA, TOSMANA (not set-theoretic) and R. All are freely available on the web.

if the condition is present for that case and 0 (lowercase notation) if the condition is absent in that case. Provide transparent measurement procedures for coding condition as either being absent or present. For some conditions this is straightforward. For other conditions, with more variation, there might be more discussion (Rihoux and Ragin, 2009; Cronqvist and Berg-Schlusser, 2009). In part 3, we will extensively discuss how the outcome and explanatory conditions are defined and transformed into a crisp set. We use multiple data-sources for this purpose.

- 5 Code each condition for each case and bring this information together in a data matrix.
- 6 Analyse the presence of necessary conditions (or configurations of conditions). QCA software allows researchers to analyse their presence. A necessary condition is a condition present in all (or almost all) cases where the outcome is present (Ragin, 2000, p. 203; see also Eliason and Stryker, 2009). The analysis of necessary conditions has received increased attention in the social sciences (Goertz and Starr, 2003; Goertz, 2006) and is becoming increasingly relevant for policy-purposes. An analysis of necessary conditions can complement the existing variable-oriented quantitative studies since it allows not only to identify factors which are highly correlated or associated with the dependent variable but are a necessary condition for the outcome to occur. Addressing these factors such as the promotion of democracy or forcing compliance with international treaties might be especially relevant for policy-makers.
- 7 Analyse the data matrix by selecting and specifying an explanatory model and resolving contradictions (high consistency) through the development of a truth table. Rihoux and De Meur (2009, pp. 48-56) extensively discuss several strategies to resolve contradictions. To select the model, we used the R software⁸ and developed code to generate many different models and information on selection criteria, which are discussed in part 3.
- 8 Analyse the model and generate the most parsimonious explanation on the basis of the minimization procedure that is available in QCA. In QCA, researchers have the possibility to determine several levels of parsimony depending on how many 'simplifying assumptions' one makes. Simplifying assumptions can be used for rows of a truth table for which there is no empirical case available. QCA allows researchers to make assumptions about these rows in terms of the presence or absence of the outcome. For example, one can assume that if one would have an empirical case for that row of the truth table, the outcome for that case would be present. If one makes many assumptions, one can reduce complexity. However, in this report no simplifying assumptions are made.

⁸ We thank Adrian Dusa, founder of QCA in R, for his help with this.

- 9 Interpret the resulting explanatory models, both models which explain the presence of an outcome and as the models that explain the absence of an outcome. This often requires a return to the cases in order to find out how the configuration of the explanatory conditions lead to the outcome, i.e., unpack the dynamics of cases (Rihoux and Lobe, 2009).

D. Conclusion: distinctive strengths of QCA

QCA offers some potential unique strengths for quantitatively analysing factors that contribute to the protection of human rights. Throughout different applications, one can observe at least three distinctive strengths of applying QCA. These include the reduction of complexity by pooling cases together through the use of truth tables, achieving parsimony through minimization and analysing causal complexity. Each is summarized in turn.

First, a systematic comparison of cases allows researchers to reduce complexity and find general patterns in a limited number of cases. In this way, QCA allows one to move away from full complexity (a description of each particular case with its own idiosyncrasies) to a more parsimonious explanation. The reduction of complexity occurs in two distinct steps: through the use of truth table and through the use of minimization procedures. First of all, QCA allows researchers to pool cases together in identical 'configurations'. Technically this is done via the creation of truth tables listing all theoretical possible combinations (2^k where K = number of conditions) of configurations. In case of five conditions and one outcome, a truth table consists of 32 rows (i.e., 2^5). Each case is placed in one row. A row can contain several cases or none.

Second, besides reducing complexity through truth tables, QCA also allows researchers to reduce complexity further and achieve maximum parsimony via minimizing configurations. The difference between reducing complexity and achieving full parsimony is not only one of degree but is fundamentally linked to one's research goals. Researchers might be interested in how cases pool together without being interested in further reducing complexity via minimization. This is done by systematically comparing all cases. In theory, with multiple case studies, a researcher needs to perform $N*(N-1)/2$ paired comparisons if one intends to systematically compare all cases. In the example provided, this would imply 136 paired comparisons. If one would analyse 50 cases, one should in total perform 1225 paired comparisons. It is impossible to keep track of this without software tools and an analytic technique. QCA allows researchers to systematically compare all cases and eliminate irrelevant causes via the minimization procedure. Hence, QCA

reduces complexity in a second round via reducing the number of configurations and reducing the number of causal conditions in a configuration via the elimination of irrelevant causes.

Third, QCA allows for an elaborate causal analysis of cases. It does not search for 'net effects' of specific explanatory conditions and takes some assumptions of statistical based analysis not on board. These assumptions of the standard statistical approach include additivity (one variables adds explanatory power to another), uniformity of causal effects (a variable has always the same effect, e.g., high income always leads to a better protection of human rights) and causal symmetry (positive correlation: high levels of the independent variable generate high levels on the dependent variable and vice versa). Instead, QCA is based on the ideas of conjunctural causation (combination of factors produce an outcome), multifinality (same factor can have different outcomes), equifinality (different factors have the same outcome) and asymmetric causality (presence and absence of outcome have different explanations, absence and presence of condition produces different outcomes).

Finally, QCA helps us to overcome the limitation of analysing only a handful of cases. Single case research often results in a thick description of cases without the possibility of testing theories and conceptual models. This is the problem of indeterminate research designs; i.e., one cannot make more causal inferences than one has observations. It is impossible to decide which causal hypotheses are true in a single case-design because '*each observation can help us make one inference at most*' (King et. al., 1994, p. 119). As a result, a research design based on less cases/observations than explanatory variables can only be used to develop a causal hypothesis. However, it does not enable one to test this hypothesis. In other words, single case studies are important for developing models, but not for testing models or exploring diversity within research populations. A second problem related to single case studies or studies of a few cases concerns selection bias. In order to make generalizations from cases, one has to know how representative they are. This is often a difficulty in case research: admittedly many case researchers are not concerned with regard to the external validity of their research, especially not with regard to some form of 'universal' generalization. There is no general theory of case selection in the context of case study research, and many different strategies are used (see Miles and Huberman, 1994, pp. 27-34; Gerring, 2007). This makes it difficult to relate the research results to a wider population from which the case was selected. By including more cases and sometimes a full population of cases, QCA overcomes these two problems.

In the next part we apply QCA to the study of freedom of association and collective bargaining.

Part 3: Application to the Rights of Freedom of Association and Collective Bargaining

In the third part, we analyse in-depth the protection of two specific human rights, namely the right of freedom of association and the right to collective bargaining (for an extensive discussion on the relationship between labour rights and human rights see Alston, 2005). We start off with a contextualization of these rights and show their importance in world affairs and international relations. Next, we present and introduce the dependent variable/outcome, which we will analyse. This presentation will include a longitudinal analysis of the evolution of these rights for a selected number of countries over 30 years. This longitudinal analysis allows us to analyse change over time. We will show a slight downward trend in the protection of these rights. We extensively discuss these results. In order to better understand the factors influencing this trend, the third part introduces and discusses the results of a QCA analysis of FACB rights. This analysis will focus on necessary conditions for FACB protection and will also analyse multiple models, each consisting of several explanatory factors. The analysis will be performed for several measurements of the outcome. A comparison of different results enables us to identify solid findings across different analyses and also identify divergences between different measurements of the dependent variable/outcome.

3.1 The Relevance of the Rights of Freedom of Association and Collective Bargaining

Since its creation in 1919, the International Labour Organization (ILO) has introduced a system of international labour standards aimed at *'promoting opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and dignity'*.⁹ Over almost a century, many standards related to labour rights have been developed. Especially prominent among these standards and rights are the rights of freedom of association and collective bargaining (FACB rights). The ILO Declaration on Fundamental Principles and Rights at Work adopted in 1998,¹⁰ the Universal Declaration of Human Rights and the 2008 Declaration on Social Justice for a Fair Globalization all identified freedom of association and the right to collective bargaining as key pre-conditions for the attainment of inclusive economic growth and decent work. In addition, several policy documents from international organizations point to the importance of these two rights for inclusive and sustained economic growth (see, for example, the World Commission on the Social Dimension of Globalization, 2004). In 2004, the World

⁹ See: <http://www.ilo.org/global/standards/introduction-to-international-labour-standards/lang--en/index.htm>

¹⁰ See: <http://www.ilo.org/declaration/thedeclaration/textdeclaration/lang--en/index.htm>

Commission on the Social Dimensions of Globalization underlined the importance of freedom of association and collective bargaining in order to reach a more fair globalisation: *'Labour market institutions, including appropriate legal frameworks, freedom of association, and institutions for dialogue and bargaining are also essential in order to protect the fundamental rights of workers, provide social protection and promote sound industrial relations. Social dialogue is an important component of good governance, and an instrument for participation and accountability.'* (p. 56, see also p. 62, p. 91)

As stipulated by the ILO the *'Declaration makes it clear that these rights are universal, and that they apply to all people in all States - regardless of the level of economic development'*.¹¹ The principle of freedom of association and the effective recognition of the right to collective bargaining is laid down in two conventions. The Freedom of Association and Protection of the Right to Organize Convention (ILO Convention No 87) came into force on 4 July 1950 and was, by 2014, ratified by 153 states. It refers to the right of workers to create or participate in organizations of their choice without interference or reprisal (ILO, 2008). The right to freedom of association is also recognised as a basic human right in the Universal Declaration of Human Rights (article 20). Linked to the right of freedom of association is the right to collective bargaining. The convention concerning the application of the principles of the right to organise and collective bargaining (ILO Convention No 98) came into force on 18 July 1951 and has been ratified by 164 states. This right allows workers to freely negotiate their working conditions.

The principles laid down in these conventions have been integrated in many different enforcement mechanisms. First of all, the ILO Declaration itself has a follow-up mechanism that requires states that have not ratified the conventions to report on the steps they are taking to ratify the convention. In addition, the ILO has a Committee of Experts on the Application of Conventions and Recommendations (CEACR), which monitors compliance with ratified Conventions. In addition, the ILO has three complaint mechanisms that help to enforce the standards and conventions (Zandvliet and Van der Heyden, 2015). First, one of the social partners (employers or workers) may file a 'representation' against a member state. Second, a more severe procedure (foreseen in the ILO Convention) allows for the submission of a complaint by a member state, international labour conference delegate or the Governing Body of the ILO. Third, and especially relevant in this context, the ILO has a tripartite Committee on Freedom of Association (CFA). The CFA was founded in 1954 and has dealt with more than 3000 cases. It is important to note that the CFA can handle complaints based on membership in the ILO and not only complaints for violations in countries/members that have ratified Conventions 87 and 98. Secondly, in a proliferating number of bilateral, trilateral and multilateral (economic and trade) agreements, social clauses directly referring to the relevant ILO conventions have been taken on

¹¹ See <http://www.ilo.org/declaration/thedeclaration/lang--en/index.htm>

board (see Marx and Soares, 2015, ILO, 2014). Besides bilateral economic instruments, labour standards are also referred to in unilateral trade measures such as the Generalised System of Preferences (GSP). GSP grants preferential tariff cuts to developing countries in exchange for the implementation of human rights standards including the ILO core labour standards. The importance of the protection of FACB rights in this context is illustrated by the fact that a violation of these rights was invoked to suspend the GSP+ trade preference system with Belarus (EU Regulation 1933/2006; see also Yap, 2013). This suspension of GSP+ has only been applied in three cases (Myanmar, Sri Lanka and Belarus)

Thirdly, reference to the two ILO conventions can also be found in many other international or regional human rights agreements and conventions such as the International Convention on Civil and Political Rights, the International Convention on Economic Social and Cultural Rights, the European Social Charter, European Convention on Human Rights, etc. Each has its own enforcement mechanisms. Some of them are stringent since courts, which can offer binding rules, are linked to these agreements and conventions. As Karen Alter (2014) showed in her recent book, an increasing number of international and regional courts are emerging that use international conventions in their ruling. For example, the European Court of Human Rights issued 349 rulings (counted up to September 2014) related to article 11 of the European Convention on Human Rights, which is about the freedom of assembly and association and is closely related to ILO convention 87. Enforcement via regional courts is important since these mechanisms are often open to individuals or organizations whose rights have been violated, and they are not restricted to certain groups who can file a complaint. In addition, their decisions are binding. Finally, one can also observe an increasing number of private regulatory mechanisms aiming to enforce these rights (Abbott and Snidal, 2009; Marx, 2015). Most prominent among these private enforcement mechanisms are voluntary sustainability standards (VSS). This collection of voluntary standards comprises many different initiatives that aim to implement social and environmental standards, including standards related to human rights (Marx and Wouters, 2015).

In sum, the protection of FACB rights are key rights and integrated in many different international policy instruments, including key EU policy instruments such as trade agreements. These rights constitute core rights which are universal. How well are they protected? This question is addressed in the next sections.

3.2 Evolution of FACB rights: a longitudinal analysis

This section will present the results of a new data collection effort measuring the protection of FACB rights over a period of more than 30 years, covering the period before and after the 1998 ILO Declaration on Fundamental Principles and Rights. The section will first detail the measurement of the outcome and the data collection effort. Next, we present the main results on the evolution of the protection of FACB rights. Finally, we discuss possible explanations for the observed downward trend.

A. Measurement and Data Collection

To measure the protection of these rights, several indicators can be used (see also discussion in section 1.1). In Part 1, we introduced a measure for freedom of association and collective bargaining that was developed by Kucera. Kucera (2001, 2002) developed a new indicator specifically aiming to capture the degree to which two specific core labour rights are protected. Kucera (2001, 2002) developed an index of freedom of association and collective bargaining based on 37 evaluation criteria, which considered both *de jure* and *de facto* violations of these two labour rights (see Annex 1). The author identified the 37 evaluation criteria based on the two ILO conventions: Freedom of Association and the Protection of the Right to Organize Convention (No. 87) and the Right to Organize and Collective Bargaining (No. 98). The analysis, carried out following Kucera's FACB-index, is based on a content analysis of three distinct sources: the International Confederation of Free Trade Unions' Annual Survey of Violations of Trade Union Rights, the US State Department's Country Reports on Human Rights Practices, and the International Labour Organization's (ILO) Reports of the Committee on Freedom of Association. Within the above-mentioned sources, the coders looked for any references to violations of the 37 items for each of the countries and years identified (see Annex 1). Violations for each of the 37 items were measured as a dummy variable. When one or more of the sources reported a violation for a specific country, a '1' was given to that country. If none of the three sources provided indications for a violation a '0' was given. Each category was also assigned a specific weight, since some violations are more serious than others. The weight depends on how severe a violation is, usually ranging from 1 to 2. Three severe types of violations have an especial weight of 10: the ban on all unions (category 6), the absence of any union activity due to social/economic breakdown (category 7), and the general prohibition of collective bargaining (category 24). As a result, the score for a given country and year is the sum of all scores (0 or 1) for each of the 37 categories multiplied by the weight for the specific category. Theoretically, the highest score on this scale is 86.5. The lowest theoretical score is 0. In order to make results more easily and

visibly understandable, we reversed the scores and re-scaled them on a 0-10 scale. This means that a higher score (10 or close to 10) refers to better labour rights situations with fewer violations on FACB, and a lower score indicates more severe violations. In other words, an upward trend indicates an improvement in the protection of FACB, a downward trend, a deterioration.

In order to further refine the analysis, we made a distinction between two groups of categories: categories covering violations in law, on the one hand, and violations in practice, on the other hand. The categories covering violations in law concern the incorporation of labour rights (derived from ILO Conventions 87 and 98) into domestic law; for example, the absence of the legal right to strike (category 32), the absence of the right to collective bargaining (24) or a restriction on the foreign financial contributions a union is allowed to receive (23). The situation in practice is measured by the remaining practice-categories, covering issues such as trade union members who are fired for union activities (10) or an employer limiting the agenda in collective bargaining (28). This distinction between law and practice becomes relevant when we analyse the results. Some countries turn out to have a spotless record in law, but a contrasting situation on the ground. Another potential important difference between the two types of categories concerns the dynamics. The score on violations in practice changes more profoundly under the influence of domestic disturbances or economic downturns. At the same time, changing existing law can take a long time, therefore resulting in a much more stable score for violations in law.

The strength of this measure lies in its fine grained framework (composed of 37 issues related to FACB rights – see Annex 1), and in the use of three sources to collect information, which minimizes the bias from specific sources. The indicator developed by Kucera shows that a more fine-grained indicator for specific labour rights can generate different results from the Freedom House and CIRI indexes, and hence the ecological fallacy and rough measurement problems are relevant in the context of analysing the protection of specific labour rights (see section 1). A clear limitation of Kucera's measure is its cross sectional nature providing data for only one year. To fill this gap, Mosley (2011) used Kucera's template to code FACB rights from 1985-2002. Hence, Layna Mosley created a longitudinal global dataset on FACB rights covering all countries during the period 1985-2002. However, there is already a gap of more than a decade on indicators measuring FACB rights. We build on this work by gathering additional data for a sample of 73 countries during the period 2003-2012, in order to allow for a better understanding of global, long-term labour rights trends. The methodology applied followed as much as possible the one applied by Kucera and Mosley, in order to keep data comparable.

Indeed, given that different coders coded the data, coder bias could be a risk. In order to check this, we correlated our measures with other measures mentioned above. If coder bias is significant, the index should correlate differently with other external measures (Nardo et al., 2005). That is, if there are significant differences in interpretation between FACB rights codified

for the period 1985-2002 and FACB rights codified for the period 2003-2012, these measures most probably would not correlate in the same way with other measures that are not affected by the coders employed in the codification of FACB rights. To check this potential bias, Table 5 presents the correlation of these measures of FACB rights with two other external measures discussed before: the Freedom House Civil Liberties and the Worker's Rights index provided by Cingranelli and Richards. The correlation of FACB rights with the CIRI worker's rights is 0.60 for the period 1985-2002 and 0.55 for the period 2003-2012. The correlation of FACB rights and civil liberties is -0.55 for the period 1985-2002 and -0.60 for the period 2003-2012. In both cases, the correlations of the external indices with FACB rights before and after 2002 point to same direction and the differences are not substantial (only 0.05). Based on this evidence, it does not seem that coder bias had a substantial effect in this case. Consequently, we consider these measures comparable over time.

Table 5: Correlation of FACB rights and other labour rights measures

	2003-2012	1985-2012
CIRI Worker's rights	.60**	.55**
FH Civil Liberties	-.55**	-.60**

** Correlation is significant at the 0.01 level (2-tailed).

In sum, the level of measurement is a clear advantage for the indicator of labour standards developed by David Kucera (2001, 2002). This is an index of freedom of association and collective bargaining based on 37 evaluation criteria considering both *de jure* and *de facto* violations of labour rights. The measure is scaled from 0-10, with 0 indicating the least number of violations observed, and 10 indicating the greatest number of violations observed.

Our sample differs from Kucera and Mosley because we were not able to collect data for all countries given the time-intensive nature of data collection efforts. While these authors worked with a global sample, this was not possible for this research project due to time and resource limitations.¹² Instead, data was collected for only a number of countries, mainly EU member states and all countries that have ratified Free Trade Agreements (FTA) that contain labour rights clauses, based on a study prepared for the ILO (2013). Table 6 provides an overview of all countries included in the sample. It is important to note that our sample is biased in that it mostly contains high-income countries and almost no least developed or low-income countries. Hence, the results, to a degree, apply to the top-tier in the class.

¹² It takes approx. 25 minutes to code one year for one country.

Table 6: List of countries included in the coding of FACB rights for FRAME

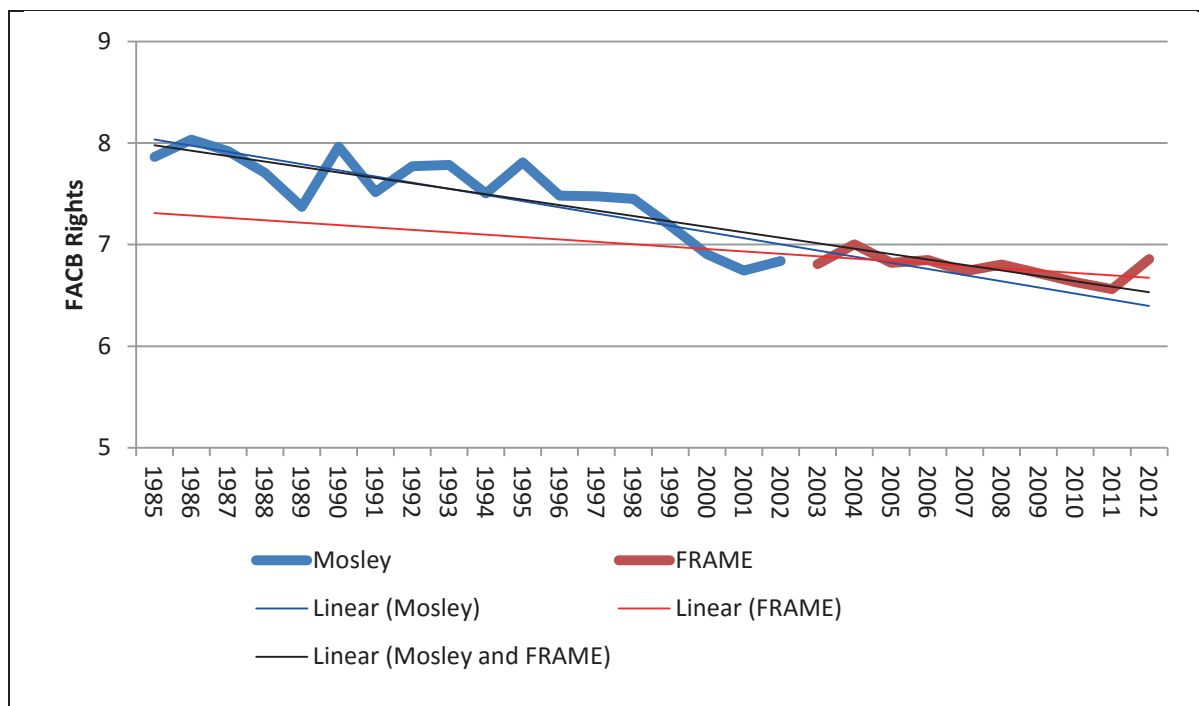
Algeria	Czech Republic	Jordan	Singapore
Antigua & Barbuda	Denmark	Latvia	Slovakia
Argentina	Dominica	Libya	Slovenia
Australia	Dominican Republic	Lithuania	South Africa
Austria	Ecuador	Luxembourg	South Korea
Bahrain	Egypt	Macao (SAR)	Spain
Barbados	Estonia	Malta	Sweden
Belgium	Finland	Mexico	Switzerland
Belize	France	Morocco	Taiwan
Brazil	Germany	New Zealand	Thailand
Brunei	Greece	Norway	The Bahamas
Bulgaria	Hong Kong (SAR)	Oman	The Netherlands
Canada	Hungary	Palestinian Territories	Tunisia
Chile	Iceland	Panama	Turkey
China	Ireland	Peru	United Kingdom
Colombia	Israel	Poland	United States
Costa Rica	Italy	Portugal	Uruguay
Croatia	Japan	Romania	Venezuela
Cyprus			

B. Longitudinal analysis

Figure 3 presents the main results of the data collection and plots the protection of FACB rights over a 30-year period for all 73 countries in the sample (average of all countries per year). The figure shows a clear downward trend on FACB rights over the whole period. The FACB index is scaled 0–10, where 0 represents the worst case (more violations reported), and 10 represents the theoretical maximum of no violations. To avoid differences caused by the different sample of countries, the Mosley index was re-scaled considering only the 73 countries were included in our sample.

The average scores for the period 1985–2002 (measured by Mosley) are plotted in black and the average scores for the period 2003–2012 (FRAME) are plotted in light grey. Figure 3 also includes three trend lines (linear approximation), one for each period and one for the whole period 1985–2012. Although the negative trend for the period 2003–2012 is less outspoken in comparison with the previous period, the trend for the whole period (thin black line) is clearly negative, indicating that on average FACB rights are less protected over the last three decades for the countries in the sample.

Figure 3: Evolution of FACB Protection: 1985-2012

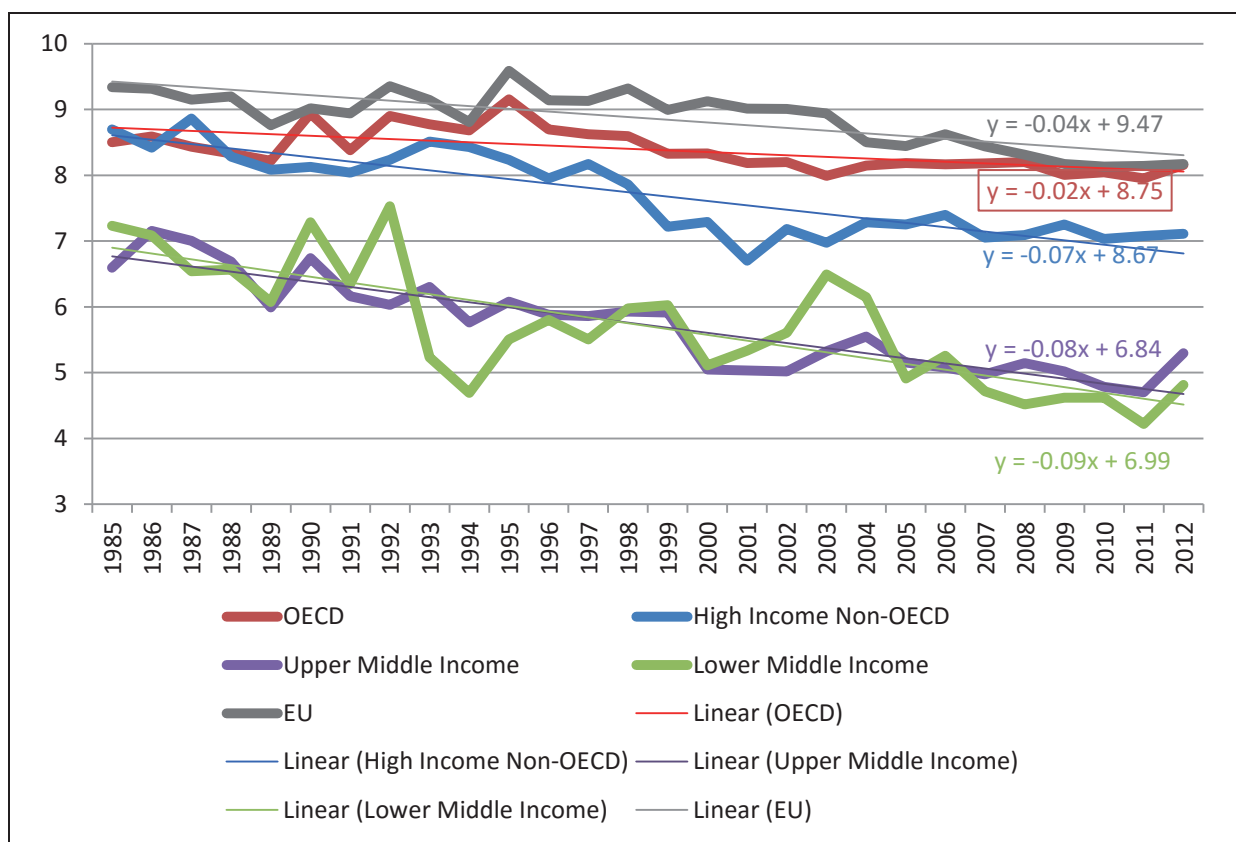


Source: Mosley, 2011 (1985-2002) + own calculations 2003-2012

Next, we differentiate the trend between five categories of countries: EU countries, OECD countries, high-income non-OECD countries, higher middle income countries and lower middle income countries, all based on World Bank categorizations (Figure 4). We also include the linear trend coefficient to indicate the strength of the trend. Figure 4 reveals three interesting facts. First, it shows that the downward trend on FACB rights is independent of the countries' income level, as can be seen by the negative coefficient in all linear equations. Although the EU averages the highest score, their coefficient reveals that FACB rights are decreasing faster in the EU compared to OECD countries (note that there is overlap in membership, meaning that the Non-EU OECD countries significantly raise the trend-line to a more stable pattern). Second, the figure also shows that there are substantial differences in FACB rights protection between different groups of countries. The EU and OECD members score highest for the whole period. Other high-income countries that are not OECD members also score highly until the end of 1990s, but their scores decreased substantially since then. The average scores of lower and upper middle income countries are substantially lower than high-income countries indicating, as could be expected, that the protection of FACB in lower income countries is lower. Third, while the trends for OECD countries point to stability, decreasing very slowly, trends

for lower and upper middle income countries shows that FACB rights in these countries have deteriorated much faster, mainly for the group of lower middle income countries, whose average dropped from 7.2 in 1985 to 4.8 in 2012. The overall trend-line differs as much as four times between groups. This sharp downward trend for developing countries raises great concerns. For these countries, the drop in FACB protection is very significant.

Figure 4: Evolution Protection of FACB Rights By Country Income Level



Source: authors calculations

We further explore the trends and changes at the country level. The average scores for the whole sample or groupings of countries hide quite substantial variation between countries. Table 7 summarizes this data. The first column presents the country; the second column, the average FACB index for the period 2003–2012, with the standard deviation in parentheses; the third column, the average FACB index for the period 1985–2002, with the standard deviation in parentheses; the fourth column, the difference in average

scores for the two periods (a plus indicating improvement and a minus indicating deterioration); the fifth column, the date of ratification of Convention 87; and the sixth column, the date of ratification of Convention 98.

Table 7 orders countries from the highest to the lowest average score for the 2003–2012 period. Austria, with an average of 9.9, is the country where FACB rights were most protected during the period 2003–2012. Austria is closely followed by Ireland and Iceland, whose average score is 9.8, and then by Finland, Denmark, Norway and Sweden, with a score of 9.6. At the bottom of the table, Turkey reached an average score of only 2.3, being the country where FACB rights were most violated during this period. Close to Turkey, Ecuador and Egypt present an average score of 3.0. Surprisingly, the fourth-worst score belongs to an OECD country, the Republic of Korea, whose average is only 3.2.

Table 7: Protection of FACB Rights: Country Scores

Country	Average Score (std) 2003-2012	Average Score (std) 1985-2002	Change	Date Rat. C087	Date Rat. C098
Austria	9.9 (0.2)	9.5 (0.5)	0.4	1950	1951
Ireland	9.8 (0.2)	9.8 (0.4)	0	1955	1955
Iceland	9.8 (0.3)	9.6 (0.5)	0.2	1950	1952
Finland	9.6 (0.1)	9.9 (0.3)	-0.3	1950	1951
Denmark	9.6 (0.4)	9.0 (0.5)	0.6	1951	1955
Norway	9.6 (0.0)	9.3 (0.4)	0.3	1949	1955
Sweden	9.6 (0.5)	10.0 (0.1)	-0.4	1949	1950
Netherlands	9.5 (0.3)	9.1 (0.5)	0.4	1950	1993
Luxembourg	9.5 (0.3)	9.8 (0.3)	-0.3	1958	1958
Italy	9.1 (0.7)	9.7 (0.3)	-0.6	1958	1958
Slovenia	9.1 (0.3)	8.9 (1.3)	0.2	1992	1992
Slovakia	9.1 (1.0)	7.8 (2.4)	1.3	1993	1993
Dominica Rep	9.0 (0.5)	9.6 (0.5)	-0.6	1983	1983
France	9.0 (0.8)	9.9 (0.2)	-0.9	1951	1951
New Zealand	8.9 (1.1)	9.0 (0.5)	-0.1		2003
Uruguay	8.7 (0.8)	8.7 (1.1)	0.0	1954	1954
Greece	8.6 (0.8)	8.0 (0.8)	0.6	1962	1962
Barbados	8.5 (0.5)	9.4 (0.4)	-0.9	1967	1967
Portugal	8.4 (0.6)	9.1 (0.6)	-0.7	1977	1964
Malta	8.4 (0.9)	9.0 (1.1)	-0.6	1965	1965
Cyprus	8.4 (1.0)	8.5 (1.4)	-0.1	1966	1966

Antigua and Barbuda	8.3 (0.1)	9.3 (0.4)	-1.0	1983	1983
European Union	8.2 (1.4)	8.5 (1.6)	-0.3	-	-
Belgium	8.1 (0.4)	9.3 (0.5)	-1.2	1951	1953
Israel	8.1 (0.6)	8.1 (1.2)	0.0	1957	1957
Germany	8.0 (0.6)	9.2 (0.6)	-1.2	1957	1956
Hungary	7.9 (0.6)	8.3 (1.1)	-0.4	1957	1957
Estonia	7.7 (0.3)	8.9 (1.4)	-1.2	1994	1994
Switzerland	7.6 (0.5)	9.7 (0.4)	-2.1	1975	1999
United Kingdom	7.6 (0.5)	7.4 (0.8)	0.2	1949	1950
Latvia	7.6 (0.9)	8.6 (1.3)	-1.0	1992	1992
Spain	7.5 (0.5)	8.7 (1.2)	-1.2	1977	1977
Lithuania	7.5 (0.6)	7.4 (1.4)	-0.1	1994	1994
South Africa	7.4 (0.6)	6.3 (2.2)	1.1	1996	1996
Brunei Darussalam	7.2 (0.2)	8.9 (0.8)	-1.7		
Palestinian Territories	7.1 (1.2)	7.6 (0.9)	-0.5		
Japan	7.0 (0.7)	8.1 (0.9)	-1.1	1965	1953
Hong Kong SAR	7.0 (0.6)	7.7 (1.4)	-0.7		
Belize	7.0 (0.6)	9.0 (0.9)	-2.0	1983	1983
United States	6.8 (0.6)	7.9 (1.2)	-1.1		
Macao SAR	6.8 (0.9)	8.8 (1.1)	-2.0		
Croatia	6.8 (0.4)	7.3 (1.7)	-0.5	1991	1991
Libya	6.5 (0.9)	5.5 (2.0)	1.0	2000	1962
Czech Republic	6.5 (0.5)	6.8 (2.0)	-0.3	1993	1993
Australia	6.4 (0.6)	8.7 (1.0)	-2.3	1973	1973
Poland	6.1 (0.6)	6.3 (1.9)	-0.2	1957	1957
Bahamas	6.0 (1.1)	9.3 (0.6)	-3.3	2001	1976
Canada	6.0 (0.5)	7.6 (0.8)	-1.6	1972	
Tunisia	5.8 (1.0)	7.1 (1.1)	-1.3	1957	1957
Oman	5.8 (1.4)	5.0 (1.8)	0.8		
Argentina	5.7 (0.5)	6.8 (1.8)	-1.1	1960	1956
Costa Rica	5.6 (0.7)	6.1 (1.4)	-0.5	1960	1960
Bulgaria	5.5 (0.6)	6.9 (1.1)	-1.4	1959	1959
Chile	5.5 (0.6)	6.1 (2.0)	-0.6	1999	1999
Bahrain	5.4 (1.4)	4.8 (1.7)	0.6		
Peru	5.4 (0.9)	4.2 (1.6)	0.8	1960	1964
Mexico	5.3 (0.6)	6.1 (2.1)	-0.8	1950	
Romania	5.1 (0.7)	5.2 (1.8)	-0.1	1957	1958
Singapore	5.0 (0.6)	7.5 (1.3)	-2.5		1965
Morocco	5.0 (1.1)	6.1 (1.3)	-1.1		1957
Algeria	4.3 (0.7)	6.8 (1.2)	-2.5	1962	1962
Venezuela	4.3 (0.9)	7.8 (1.7)	-3.5	1982	1968

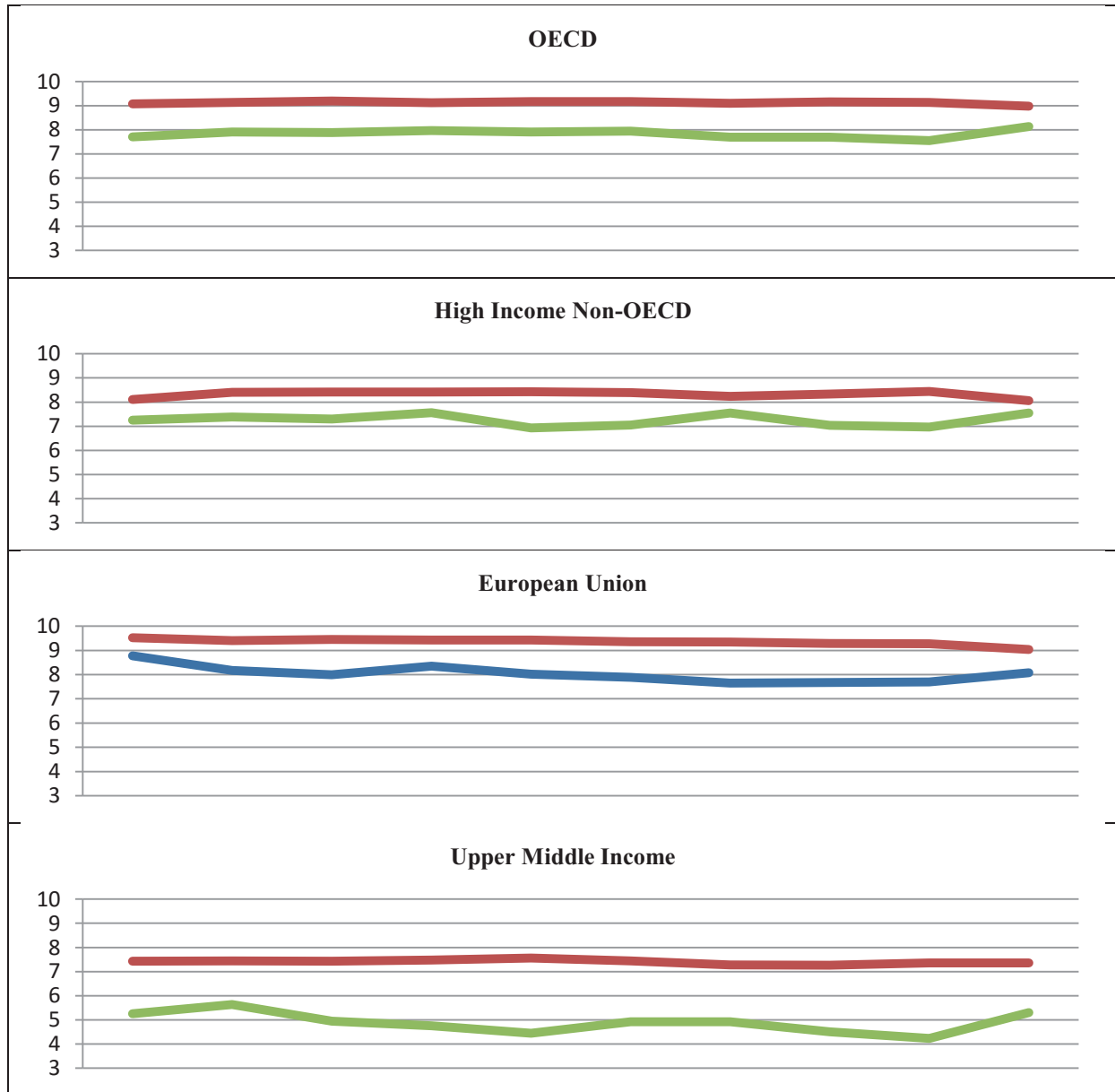
Colombia	4.2 (0.5)	3.5 (1.6)	0.7	1976	1976
Brazil	4.1 (0.9)	5.8 (1.3)	-1.7		1952
Dominican Republic	4.1 (0.6)	5.9 (1.4)	-1.8	1956	1953
China	4.0 (0.4)	4.3 (1.0)	-0.3		
Jordan	4.0 (0.8)	7.1 (1.1)	-3.1		1968
Taiwan	3.9 (1.1)	6.1 (1.4)	-2.2		
Thailand	3.5 (0.7)	5.6 (1.7)	-2.1		
Panama	3.3 (1.0)	5.0 (1.8)	-1.7	1958	1966
Korea, Republic of	3.2 (0.4)	3.8 (0.8)	-0.6		
Egypt	3.0 (0.5)	4.5 (1.6)	-1.5	1957	1954
Ecuador	3.0 (0.6)	4.4 (1.5)	-1.4	1967	1959
Turkey	2.3 (0.8)	2.2 (1.2)	0.1	1993	1952

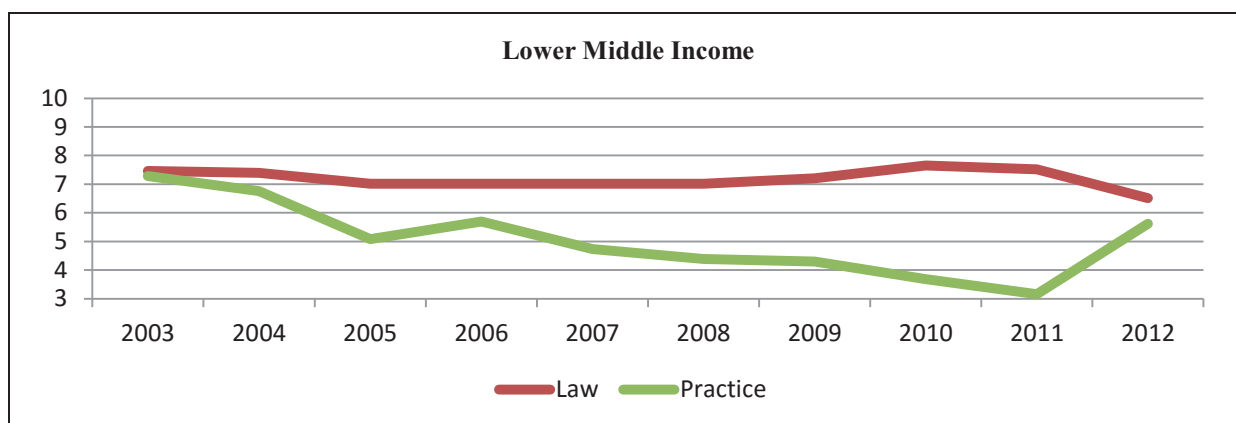
Table 7 clearly shows significant variation between countries and the fact that some countries' scores are very low. It also shows the divergent dynamics between countries in which some states significantly improve the protection of FACB over the 30-year period (comparing average scores of the two periods), while other countries protect FACB rights significantly less. In 16 countries, the protection of FACB rights improved when we compare the 2003–2012 period with the 1985–2002 period; in three countries, there was no change; and in 54 countries, the situation deteriorated. In some cases, such as Jordan and Venezuela, the situation deteriorated very significantly.

The results presented above report on the protection of FACB rights in general and might bias results upward since the measurement includes the protection of FACB rights on paper (legal protection). Several authors have argued that countries sometimes ratify international conventions and adopt legislation concerning FACB but do not respect these rights in practice (Hafner-Burton, 2013; Mosley, 2011; Simmons, 2009). In order to explore this further, we make a distinction between protection of FACB in law and in practice and analyse these differences. Figure 5 presents the average scores of how well FACB rights are protected in law and how well they are protected in practice for five groups. For all groupings, rights are better protected in law than in practice. Among OECD members, EU member states, and other high-income countries the differences between protection in law and protection in practice are small, around 10 percent, indicating a relatively small enforcement gap. However, the differences between rights in law and in practice are higher for lower and upper middle income countries, reaching, in some years, 4 points on a 0–10 scale. One explanation for these differences could be, as discussed by Levi et al. (2013), the lack of state administrative and regulatory capacity to enforce contracts and protect rights. Another possible reason is that governments in countries with low regulatory quality and low rule of law can create regulations that they do not intend to respect as a short-term response to international or domestic pressure (Levi et al.,

2013). Note the strong increase in the protection of rights in practice for low middle-income countries in the last year, which is probably caused by changes in reporting methods of ITUC.

Figure 5: Trends in FACB Rights Protection: Difference in Protection by Law and in Practice





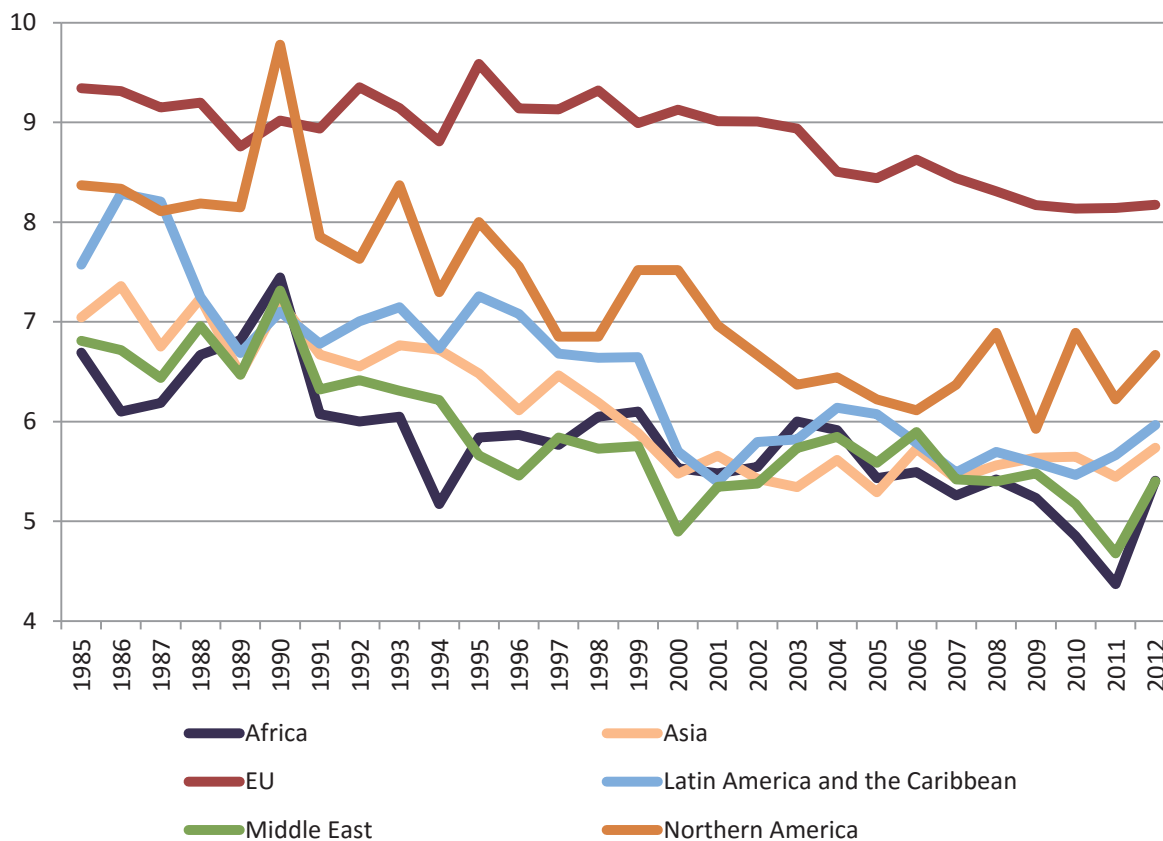
Source: authors calculations

Next, the average FACB rights index by income level is presented in Figure 5, together with the average of the European Union (EU), included for comparison. A downward trend on FACB rights is evident, independent of the countries' income level, as can be seen by the negative coefficient in all linear equations. Although the EU averages the highest, their coefficient reveals that FACB rights are decreasing faster in EU than in other OECD members. This figure makes evident the substantial differences in FACB rights depending on the development level of the countries. EU and OECD members have kept a high level of respect for FACB rights during the whole period, scoring on average around 8 and 9. Other high-income countries that are not OECD members scored very high until the end of 1990s, but their scores have decreased since then. Further, the average scores of lower and upper middle income countries have been kept below high-income countries' average since 1985, ranging from 4 to 7.

Figure 5 also presents a piece of evidence that deserves policymakers' attention. While the trends for OECD countries point to stability, decreasing very slowly, trends for lower and upper middle income countries shows that FACB rights in these countries have deteriorated much faster, mainly for the group of lower middle income countries, whose average dropped from 7.2 in 1985 to 4.8 in 2012. This sharp downward trend for developing countries raises concerns with regards to the most vulnerable people, since the employees who most need fair labour rights have been more restricted in fighting for better working conditions.

Last, in this section, regional differences in FACB rights are shown in Figure 6. On the top of the graph, members of the European Union are among those who most respect FACB rights over the whole period. Until the beginning of the 1990s, North American countries also scored high, even exceeding the EU average in 1990. However, since the mid-1990s respect for FACB rights in North America has deteriorated, and recently the region's scores are closest to Latin American countries. On the other extreme, Africa and the Middle East have oscillated as the regions in which more violations of FACB rights have been reported since 1985.

Figure 6: Variation in FACB Rights – by Region



Source: authors; Mosley (2011)

C. Discussion

We observe a decrease in the protection of FACB rights. How should we make sense of this evolution? We briefly explore three explanations which can shed light on this development. A first explanation might be found in the data-collection process. The data on violations is based on *reported* violations in three different sources. One possibility could be that over time more and more violations get reported. This can be the result of several dynamics. First of all, this may be due to increased attention paid to the protection of freedom of association and collective bargaining (because they are included in so many agreements, arrangements, etc.), so that awareness is raised and several stakeholders are more likely to report violations. Second, due to developments in information technology and news sharing, stakeholders can more easily report violations. Third, and interrelated, the increase in the number of international NGOs, watchdogs, etc. contributes to better spotting and

reporting of violations. Hence, it is reasonable to think that these three factors are contributing to more accurate and increased reporting of violations, resulting in more reported violations, and not necessarily in a real increase in violations in the countries observed.

However, it should be noted that the way in which the FACB index is constructed the number of violations is not important. It is actually one of the weaknesses of the index. We do not count the number of violations in one country, but whether a violation of one of the 37-item questionnaire occurred. If a violation occurred, it is coded as a violation for that item for that country. If in that country many more violations are reported, this will not affect the score. The arguments above mainly influence the reported number of violations but not necessarily the reporting of single violations. With this in mind, the influence of the above three factors might not be very substantial. However, relatively high scores for countries such as Brunei Darussalam might indicate that the measurement could be subject to external influences such as NGOs. The method might underreport violations in countries with low levels of civil society organizations.

A second related explanation focuses on the fact that the observation of an increase in reported violations could be attributed to the fact that in the last decades the number of (international) monitoring mechanisms has increased significantly. This increased monitoring might reveal more violations and hence generate an increase in reported violations. The implementation of the two ILO conventions is monitored (and enforced) via different mechanisms, as discussed above (ILO follow-up mechanisms, trade agreements, regional human rights treaties, private mechanisms). Many of these private governance and monitoring systems are diffusing globally. It is plausible that these different monitoring systems contribute to an increase in reporting violations.

A third explanation for the downward trend starts from the assumption that the trend is real and that we need to understand what drives it. As outlined in the previous section, many international and domestic factors influence the protection of FACB rights. In the next section, we will focus on explaining variation in the protection of FACB by using QCA.

3.3 Set-theoretic and Configurational Analysis of Protection of FACB rights

In order to analyse the factors contributing to better protection of FACB rights, we created two large quantitative datasets that pool together a large amount of data on the outcome and conditions. In this part, we present the data used for that analysis, which includes data presented above on the outcome (FACB-rights) as well as all the explanatory factors identified in Part 1 for which sufficient data is available. Next, we present the analysis of necessary conditions for both FACB in general as well as for the protection of FACB rights in law and FACB rights in practice. We use multiple outcome measures for robustness purposes. A comparison of the different results is presented. Finally, we analyse different models in order to identify the different sufficient conditions (combination of conditions) leading to better protection of FACB rights (i.e., different paths to the outcome). We first detail how we select the models and subsequently apply them and perform a truth-table and minimization analysis. The data-analysis was performed by multiple software packages (R, fsQCA and TOSMANA)¹³ since each has its own strengths (for a discussion, see Schneider and Wagemann, 2012).

A. Data and Calibration of Outcome and Explanatory Factors

This section describes the different indicators used. For the outcome (i.e., phenomenon to be explained, here, protection of FACB-rights), several indicators are used and constructed from different data-sources. For each outcome we present different ways of transforming/calibrating them into a crisp set/dichotomous measure. Different calibrations are used in subsequent analyses. We also present many different conditions/explanatory factors, which contribute to understanding the protection of FACB rights. Since these factors need to be calibrated into sets (crisp sets) for a QCA analysis, we elaborate on how this calibration was done and several calibrations are presented that are also used in subsequent analyses.

1. Outcome

To measure the outcome, i.e., the protection of the rights to freedom of association and collective bargaining, we use three sources. Two sources are based on the work of Kucera (see

¹³ All these software packages are freely available on-line via the COMPASSS-website: www.compass.org

Part 1) and include the data collected by Mosley to cover all countries in the world (cross-sectional) and longitudinal (from 1985-2002) as well as the data collected by the authors for 73 countries, which extends the timeframe to 2012. The measurement of this index was extensively discussed in section 3.2.A.

In addition, we use the Trade Union Rights Indicators database for 2012, released in November 2015 by Anner and Sari (2015). This database (TUR-database) summarises the status of freedom of association and collective bargaining rights for 185 countries, in 2012. Although the idea behind the methodology is the same as the one developed by Kucera (a measure based on content analysis of textual sources), Anner and Sari (2011) have improved it in several aspects: they coded information from nine sources, including, those used by Kucera; instead of 37 evaluation criteria, this index uses 108 criteria (see Annex 3), eliminating catch-all evaluation criteria present in Kucera's framework; separate criteria for violations of rights in law and in practice; and use of the Delphi method of expert consultation to derive the weights for each of the evaluation criteria. The database from Anner and Sari provides the most fine-grained measurement of FACB rights.

In sum, this analysis uses nine dependent variables (i.e., outcomes) from three sources that measure the status of freedom of association and collective bargaining rights overall, in law, and in practice, for a large set of countries around the world. These outcomes need to be transformed ('calibrated') into a dichotomy in order to apply QCA. This calibration process uses the country scores provided by the above mentioned sources to create crisp sets¹⁴ (full membership and full non-membership) for the outcome, i.e., countries in which the protection of FACB rights is present (outcome FACB=1) and countries in which this protection is absent (Outcome FACB=0). The calibration of crisp sets depends on threshold scores defined by the researchers, which determine whether a country is a member of a set or not. The definition of thresholds is a fundamental step in QCA analysis since it determines set membership in both dependent (outcome) and independent variables (conditions/factors). Considering there are no clear rules to determine the ideal threshold point, we decided to create two sets for each outcome, one more strict, consisting of countries with very high scores on FACB rights, and another less strict, including all countries above the mean. Using this strategy, we can compare results at the end and check for robustness, as well as mitigate possible bias caused by the definition of thresholds. We also apply a 'standardized' method for calibration since we have to deal with many cases/observations. A drawback of this approach is that we 'mechanically' calibrate – base it on pure calculation - the membership of each case (country) in the set. For cases that are close to the threshold, this might be problematic since they might fit in either set (member – non-

¹⁴ We prefer to work with crisp sets for several reasons: (1) in fuzzy-sets data is transformed from a fuzzy data-matrix to a crisp set truth table, hence the key analytic device in QCA remains a crisp set truth table; (2) fuzzy-sets are not supported by all QCA software tools.

member). We address this in section 3.3.D where we present a different calibration to deal with this issue. For now, we proceed with using the threshold-approach for scores on the different indicators.

The first set consists of countries in which FACB rights are highly protected ('Threshold High Respect'). We define this threshold in such a way that countries have to have very few violations of FACB rights in order to be considered a member of the set of countries strongly protecting FACB rights. This threshold is set based on a statistical distribution of the variable as well as considering qualitative information about the measurement of the outcome, i.e., an interpretation of the measurement of this indicator. The effect of setting a high threshold for membership is that only a few cases will receive a full membership score of 1, i.e., cases for which the outcome is present. In order to include more cases, we also develop a second threshold, which is set at the mean (a statistical based threshold). Table 8 shows descriptive statistics for each outcome and thresholds used to delimit set membership. For each FACB rights measure, this table presents the number of countries (cases) available for analysis (N), the minimum and maximum score (number of violations of FACB rights), the quartiles (1st, median, 3rd), the mean and the standard deviation. Next, the table displays threshold scores for membership (and non-membership) in the two sets calibrated for each FACB measure: one set of countries in which FACB rights are highly protected and another set of countries in which protection of FACB rights is higher than the mean. Note that these sets are calibrated in the reverse order when compared with the original variables. The original variables measure the number of violations committed in a country. Hence, a score 0 is the best case, indicating that no violations were committed. The sets displayed in Table 8 include countries where protection is high. Thus, the less violations, the higher the protection. Table 8 (below) shows the distribution of number of cases for each calibration.

Table 8: Outcome FACB-rights - summary statistics and csQCA calibration for different outcome measures

	Mosley Overall	Mosley in Law	Mosley in Practice	TUR Overall	TUR in Law	TUR in Practice	FRAME Overall	FRAME in Law	FRAME in Practice
Descriptive Statistics									
N	194	194	194	174	174	174	69	69	69
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1st quartile	4.50	1.50	1.50	13.80	6.74	3.53	5.25	1.50	3.00
Median	10.75	4.25	5.00	24.96	13.69	9.29	9.00	3.75	4.50
3rd quartile	17.00	8.00	9.63	39.72	25.56	17.72	16.25	7.75	8.25
Maximum	34.00	25.25	19.00	73.31	50.79	50.13	25.75	15.25	13.50
Mean	11.59	5.54	6.05	27.93	16.22	11.72	10.62	4.89	5.73
Std. Deviation	8.03	5.36	4.39	18.85	11.49	10.35	7.17	4.27	3.93
Calibration in csQCA									
Threshold High Respect	7.00	2.50	3.50	18.00	9.00	6.00	7.00	2.50	4.00
csQCA Outcome present (1)	Ci < 7	Ci < 2.5	Ci < 3.5	Ci < 18	Ci < 9	Ci < 6	Ci < 7	Ci < 2.5	Ci < 4
csQCA Outcome absent (0)	Ci >= 7	Ci >= 2.5	Ci >= 3.5	Ci >= 18	Ci >= 9	Ci >= 6	Ci >= 7	Ci >= 2.5	Ci >= 4
Threshold at the Mean	11.59	5.54	6.05	27.93	16.22	11.72	10.62	4.89	5.73
csQCA Outcome present (1)	Ci < 11.5	Ci < 5.5	Ci < 6	Ci < 28	Ci < 16	Ci < 12	Ci < 10.6	Ci < 4.9	Ci < 5.7
csQCA Outcome absent (0)	Ci >= 11.5	Ci >= 5.5	Ci >= 6	Ci >= 28	Ci >= 16	Ci >= 12	Ci >= 10.6	Ci >= 4.9	Ci >= 5.7

Source: created by the authors. FACB rights data from Mosley (2011), Anner and Sari (2015), and Marx, Soares and Van Acker (2015).
 Ci = FACB Score for Country 'i'

2. EXPLANATORY FACTORS

As discussed in section 1.2.B., several factors influence the protection of FACB rights. In this section, we present the selected explanatory conditions and their calibration into sets.¹⁵ For each explanatory condition, again, two sets were created: one set only includes countries with a high standard of a given condition, and another set, including more cases, has the threshold fixed at the mean score. We follow the same logic to create the sets for the explanatory factors. For each condition, we collected data for the year preceding the measurement of the outcome. Hence, data from 2001 and 2011 are used.

Data for the explanatory factors comes from different sources. To facilitate data collection, data was taken from Hercules Interdisciplinary Database (KU Leuven, 2010), which integrates several social sciences datasets into one place. In addition, data for factors that are missing was added. This resulted in building extensive datasets that linked all the data for the different countries at the level of country-year. The data-sets are provided with this report.

Table 9 shows a summary of conditions – including the abbreviation of the conditions as the reader will find used later in the analysis of necessary and sufficient conditions – variables used to calibrate these sets, its sources and a brief description.

Table 9: Explanatory Conditions/Factors – summary, description and sources used

Abbreviation	Condition	Variable	Source	Description
AVG_R	High neighbour's pressure	Neighbour's pressure	Mosley (2011), Anner and Sari (2015), and Marx, Soares and Van Acker (2015)	Average FACB rights among countries in the same region.
AVG_RM	Neighbour's pressure above the mean	Neighbour's pressure	Mosley (2011), Anner and Sari (2015), and Marx, Soares and Van Acker (2015)	Average FACB rights among countries in the same region.
AVG_D	High economic pressure	Economic pressure	Mosley (2011), Anner and Sari (2015), and Marx, Soares and Van Acker (2015)	Average FACB rights among at the same level of development.

¹⁵ Some conditions discussed in the literature were excluded from this analysis due to low data availability such as external debt. Data for conditions external debt, human capital, human rights NGO's, and trade union density, are available only for few countries. For this reason, these conditions were excluded to avoid the exclusion of too many cases, on which data is available for most of the conditions, but not for these ones.

AVG_DM	Economic pressure above the mean	Economic pressure	Mosley (2011), Anner and Sari (2015), and Marx, Soares and Van Acker (2015)	Average FACB rights among at the same level of development.
GNI	High income countries	Development level	World Bank	Countries in the same income group (GNI per capita)
GNI_UM	High or upper middle income countries	Development level	World Bank	Countries in the same income group (GNI per capita)
GDP_GR	High economic growth	Economic growth	World Bank	GDP growth
GDP_GRM	Economic growth above the mean	Economic growth	World Bank	GDP growth
GDPPC_GR	High economic growth per capita	Economic growth	World Bank	GDP per capita growth
GDPPC_GRM	Economic growth per capita above the mean	Economic growth	World Bank	GDP per capita growth
TRD	High trade openness	Economic globalisation	World Bank	Trade openness
TRDM	Trade openness above the mean	Economic globalisation	World Bank	Trade openness
FDI_F	High FDI flows per GDP	Economic globalisation	UNCTAD	Foreign direct investments flows per GDP
FDI_FM	FDI flows per GDP above the mean	Economic globalisation	UNCTAD	Foreign direct investments flows per GDP
FDI_S	High FDI stocks per GDP	Economic globalisation	UNCTAD	Foreign direct investments stocks per GDP
FDI_SM	FDI stocks per GDP above the mean	Economic globalisation	UNCTAD	Foreign direct investments stocks per GDP
DEMOC	Democratic countries	Democracy	Polity IV	Democratic countries
DEMOC_S	Stable democracies	Democracy	Polity IV	Stable democracies
CIVIL	Civil armed conflicts	War	Armed Conflicts Database	Civil armed conflicts
CIVIL_I	Intense civil armed conflicts	War	Armed Conflicts Database	Intense civil armed conflicts
LEFT_EXEC	Left-wing executive	Left wing orientation	Database of Political Institutions	Left-wing executive in power
LEFT	Left-wing executive and parliament	Left wing orientation	Database of Political Institutions	Left-wing executive in power and majority of left-wing party in the parliament
C087	Ratification of ILO convention 87	Ratification of international treaties	ILO	Ratification of ILO convention 87
C098	Ratification of ILO convention 98	Ratification of international treaties	ILO	Ratification of ILO convention 98

RAT	Ratification of both ILO convention 87 and 98	Ratification of international treaties	ILO	Ratification of both ILO convention 87 and 98
LEG_EN	English Common Law	Legal system	La Porta et al. (1999)	English Common Law System
LEG_FR	French Commercial Code	Legal system	La Porta et al. (1999)	French Commercial Code
LEG_SOC	Socialist/Communist Laws	Legal system	La Porta et al. (1999)	Socialist/Communist Laws
LEG_GER	German Commercial Code	Legal system	La Porta et al. (1999)	German Commercial Code
LEG_SCA	Scandinavian Commercial Code	Legal system	La Porta et al. (1999)	Scandinavian Commercial Code
POP	Countries with large population	Population size	World Bank	Total population
POPM	Countries which population is larger than the mean	Population size	World Bank	Total population

Source: created by the authors

In the following section, each explanatory factor/condition is introduced and calibration of a crisp set presented.

2.a Neighbour's Pressure (Regional average of FACB rights)

We expect that neighbour countries influence protection of FACB rights through a logic of 'competitive diffusion' (Mosley, 2011, p. 138). In this sense, these countries compete to attract and retain investments and other resources such as labour force. Membership in the high neighbour's pressure set is expected to result in a higher protection of FACB rights for a given country.

As a measure of neighbour's pressure, we use the average of FACB rights index scores from the respective databases (Mosley and TUR) among countries in the same region, according to the UNSD geographical sub-regions.¹⁶ Table 10 summarises the neighbour's pressure variables for each FACB measure. The fewer the average number of violations, the higher the neighbour's pressure. Hence, the region with the minimum average number of violations (2.00) is the region in which pressure is the highest. The table presents descriptive statistics on neighbour's pressure for each regional average of FACB rights. It also includes thresholds for the calibration of two crisp sets: high neighbour's pressure and neighbour's pressure above the mean. For example, those countries where the regional average of FACB rights violations in 2002 is lower than 7 are included in the set of high regional pressure (outcome 1).

¹⁶ See <http://unstats.un.org/unsd/methods/m49/m49regin.htm>

Table 10: Calibration of Neighbour's Pressure

	Average Mosley FACB	Average Mosley in Law	Average Mosley in Practice	Average TUR FACB	Average TUR in Law	Average TUR in Practice
Descriptive Statistics						
N	194	194	194	174	174	174
Minimum	2.00	0.00	1.50	7.95	4.48	0.48
1st quartile	9.75	3.63	4.63	19.65	11.01	8.18
Median	13.64	5.75	7.08	28.43	14.27	14.08
3rd quartile	15.15	7.22	7.89	33.52	23.27	14.53
Maximum	35.00	28.50	25.70	46.65	28.85	17.94
Mean	12.56	6.77	7.16	27.24	15.79	11.44
Std. Deviation	6.09	5.47	4.66	10.87	7.23	4.65
Calibration in csQCA						
Threshold high pressure	7.00	2.50	3.50	15.00	10.00	7.00
csQCA Outcome present (1)	Ci < 7	Ci < 2.5	Ci < 3.5	Ci < 15	Ci < 10	Ci < 7
csQCA Outcome absent (0)	Ci >= 7	Ci >= 2.5	Ci >= 3.5	Ci >= 15	Ci >= 10	Ci >= 7
Threshold at the mean	12.56	6.77	7.16	27.24	15.79	11.44
csQCA Outcome present (1)	Ci < 12.6	Ci < 6.8	Ci < 7.2	Ci < 27.2	Ci < 15.8	Ci < 11.4
csQCA Outcome absent (0)	Ci >= 12.6	Ci >= 6.8	Ci >= 7.2	Ci >= 27.2	Ci >= 15.8	Ci >= 11.4

Source: created by the authors. FACB rights data from Mosley (2011) and Anner and Sari (2015).

Ci = FACB Score for Country 'i'

2.b Economic Pressure (Average of FACB rights among Economic Peers)

Similar to regional (in a geographic sense) pressures, the pressure of economic peers is also expected to influence the protection of FACB rights. Economic peers are expected to influence protection of FACB rights through a similar logic of “competitive diffusion” (Mosley, 2011, p. 138) since peer countries compete to attract and retain investments and trade. This diffusion can generate both upward and downward dynamics. In order to measure the effect of peer countries, we created a set of economic peer pressure measuring the level of protection in peer countries. This set was created from averaging FACB rights index scores from the respective databases, for countries in the same level of development, according to the World Bank income groups.¹⁷ Table 11 presents descriptive statistics and the threshold for set membership. The original variables measure the number

¹⁷ See: <http://data.worldbank.org/about/country-and-lending-groups>

of violations of rights. Hence, the lower the average number of violations is, the higher protection of FACB rights among countries in the same income group is. Consequently, the economic group presenting the minimum average number of violations in 2002 (6.08) is the group on which economic pressure is the highest. For each set, Table 3 displays the thresholds for membership. For example, countries whose economic group had an average number of violations lower than 11 in 2002 are members of the set of high economic pressure, and countries whose economic group average lower than 12.6 are members of the set economic pressure above the mean.

Table 11: Calibration of Economic Pressure

	Mosley Econ. Pressure	Mosley Econ. Pressure in Law	Mosley Econ. Pressure in Practice	TUR Econ. Pressure	TUR Econ. Pressure in Law	TUR Econ. Pressure in Practice
Descriptive Statistics						
N	192	192	192	174	174	174
Minimum	6.08	2.50	3.58	14.27	8.31	5.95
1st quartile	10.51	6.05	4.26	23.90	15.46	6.72
Median	13.15	6.08	7.10	30.47	15.99	13.60
3rd quartile	13.50	6.23	7.42	30.47	17.18	14.48
Maximum	30.92	26.00	23.92	33.56	19.96	14.48
Mean	12.59	6.81	7.17	26.88	15.62	11.25
Std. Deviation	4.42	4.72	4.27	6.64	3.79	3.48
Calibration in csQCA						
Threshold high pressure	11.00	3.00	5.00	18.00	9.00	7.00
csQCA Outcome present (1)	Ci < 11	Ci < 3	Ci < 5	Ci < 18	Ci < 9	Ci < 7
csQCA Outcome absent (0)	Ci >= 11	Ci >= 3	Ci >= 5	Ci >= 18	Ci >= 9	Ci >= 7
Threshold at the mean	12.59	6.81	7.17	26.88	15.62	11.25
csQCA Outcome present (1)	Ci < 12.6	Ci < 6.8	Ci < 7.2	Ci < 26.9	Ci < 15.6	Ci < 11.3
csQCA Outcome absent (0)	Ci >= 12.6	Ci >= 6.8	Ci >= 7.2	Ci >= 26.9	Ci >= 12.6	Ci >= 11.3

Source: created by the authors. FACB rights data from Mosley (2011) and Anner and Sari (2015).

Ci = FACB Score for Country 'i'

2.c Development Level (GNI per capita)

In the literature it is expected that higher levels of economic development are associated with higher protection of FACB rights. As a proxy for the level of development, we use the World Bank classification of countries by income group,¹⁸ which is based on GNI per capita. Table 12 presents the range of GNI per capita for each World Bank income group in 2001

¹⁸ <https://datahelpdesk.worldbank.org/knowledgebase/articles/378834-how-does-the-world-bank-classify-countries>

and 2011. The higher the GNI per capita is, the higher the level of development is. The table also includes thresholds used to calibrate two sets in each year: “high income countries” and “high or upper middle income countries”. For example, the set of high or upper middle income countries in 2011 is formed by countries whose GNI per capita is greater or equal to \$4,036.

Table 12: Calibration of Development Level

	2001	2011
Low income	<= \$745	<= \$1,025
Lower middle income	\$746 - \$2,975	\$1,026 - \$4,035
Upper middle income	\$2,976 - \$9,205	\$4,036 - \$12,475
High income	> \$9,205	> \$12,475
Calibration in csQCA		
Threshold high income countries	9,205	12,475
csQCA Outcome present (1)	$C_i \geq 9,205$	$C_i \geq 12,475$
csQCA Outcome absent (0)	$C_i < 9,205$	$C_i < 12,475$
Threshold high or upper middle income countries	2,976	4,036
csQCA Outcome present (1)	$C_i \geq 2,976$	$C_i \geq 4,036$
csQCA Outcome absent (0)	$C_i < 2,976$	$C_i < 4,036$

Source: created by the authors. GNI per capita from The World Bank.

C_i = FACB Score for Country 'i'

2.d Economic Growth (GDP Growth)

As discussed by Mosley, *'higher levels of economic growth provide greater bargaining power for workers, as growth generates increased demand for employment'* (Mosley, 2011, p. 140). Following this reasoning, higher level of economic growth is expected to be associated with higher protection of FACB rights. To measure economic growth, two variables were used: GDP growth (annual %) and GDP per capita Growth (annual %), both from the World Bank. Table 13 presents summary statistics and thresholds for economic growth in 2001 and 2011. The higher the GDP growth (and GDP per capita growth) is, the higher the economic growth is. For each variable, two sets were calibrated: high economic growth and economic growth above the mean. As an example, countries whose GDP per capita growth in 2011 is higher than 5 are members of the set economic growth per capita above the mean.

Table 13: Calibration of Economic Growth

	GDP Growth 2001	GDP Growth 2011	GDP per capita Growth 2001	GDP per capita Growth 2011
Descriptive Statistics				
N	186	167	184	167
Minimum	-7.98	-7.10	-10.42	-7.07
1st quartile	1.23	1.85	-0.22	0.67
Median	2.93	3.91	1.58	2.37
3rd quartile	5.11	6.33	3.41	4.89
Maximum	61.90	17.51	57.23	15.74
Mean	3.50	4.19	1.93	2.90
Std. Deviation	5.87	3.42	5.76	3.46
Calibration in csQCA				
Threshold high growth	4.30	5.00	3.50	5.00
csQCA Outcome present (1)	Ci > 4.3	Ci > 5	Ci > 3.5	Ci > 5
csQCA Outcome absent (0)	Ci ≤ 4.3	Ci ≤ 5	Ci ≤ 3.5	Ci ≤ 5
Threshold at the mean	3.50	4.19	1.93	2.90
csQCA Outcome present (1)	Ci > 3.5	Ci > 4.2	Ci > 1.9	Ci > 2.9
csQCA Outcome absent (0)	Ci ≤ 3.5	Ci ≤ 4.2	Ci ≤ 1.9	Ci ≤ 2.9

Source: created by the authors. GDP data from The World Bank.

Ci = FACB Score for Country 'i'

2.e Economic Globalisation

Several aspects of economic globalisation can affect labour rights in different ways. In this research, two aspects are considered: trade openness and foreign direct investments (FDI).

The effects of trade openness on respect for FACB rights are still not clear. While some authors argue that trade openness should decrease protection of labour rights (Mosley, 2011; Busse, 2004), others argue the opposite (Neumayer and De Soysa, 2006). In this research, both possibilities will be considered.

Trade Openness is measured by the sum of imports and exports of goods and services, divided by GDP for a given country. The higher the trade openness is, the more globalised a country is. Table 14 presents the descriptive statistics on trade openness calculated on the basis of the data from the World Development Indicators of the World Bank. The table also displays the thresholds chosen to delimit set membership and the calibration into csQCA. Two sets were created for each year: high trade openness and trade openness above the mean. For example, countries whose trade openness is higher than 0.8 in 2011 are members of the set trade openness above the mean.

Table 14: Calibration of Trade Openness

	Trade Openness 2001	Trade Openness 2011
Descriptive statistics		
N	152	169
Minimum	0.21	0.16
1st quartile	0.58	0.48
Median	0.79	0.77
3rd quartile	1.10	1.10
Maximum	3.69	4.19
Mean	0.88	0.81
Std. Deviation	0.48	0.61
Calibration in csQCA		
Threshold high openness	1.20	1.10
csQCA Outcome present (1)	$C_i > 1.2$	$C_i > 1.1$
csQCA Outcome absent (0)	$C_i \leq 1.2$	$C_i \leq 1.1$
Threshold above the mean	0.88	0.81
csQCA Outcome present (1)	$C_i > 0.9$	$C_i > 0.8$
csQCA Outcome absent (0)	$C_i \leq 0.9$	$C_i \leq 0.8$

Source: Trade openness calculated by the authors using data from the World Development Indicators (World Bank).

C_i = FACB Score for Country 'i'

The second aspect of economic globalisation considered is the level of foreign direct investments (FDI). As discussed in the literature review, higher levels of inward FDI are expected to be associated with higher levels of protection of FACB rights. Two measures of FDI are used, taking data from UNCTAD:¹⁹ inward flows, capturing only net flows of investments in a given year, and inward stocks, which also takes into account the value of the capital and reserves previously made. In both measures, FDI is taken as percentage of the GDP. Table 15 presents descriptive statistics for our sample, the thresholds used to determine set membership and calibration to QCA crisp sets. The higher the FDI per GDP is, the more globalised a country is. For each FDI variable and year, two sets were created: high FDI (flows/stocks) per GDP and FDI (flows/stocks) per GDP above the mean. As an example, members of the set high FDI flows in 2001 have FDI per capita flows higher than 5.5.

¹⁹ <http://unctadstat.unctad.org/EN/>

Table 15: Calibration of Foreign Direct Investments Stocks and Flows (FDI)

	FDI flow/GDP 2001	FDI stock/GDP 2001	FDI flow/GDP 2011	FDI stock/GDP 2011
Descriptive statistics				
N	182	178	168	169
Minimum	-2.78	0.28	-74.89	0.36
1st quartile	0.89	11.10	1.70	19.33
Median	2.52	21.74	3.40	36.46
3rd quartile	4.94	41.68	6.63	67.30
Maximum	226.44	623.54	55.03	1128.53
Mean	5.34	38.30	5.11	60.60
Std. Deviation	17.66	63.36	9.58	102.41
Calibration in csQCA				
Threshold High Globalised	5.50	48.00	5.00	50.00
csQCA Outcome present (1)	Ci > 5.5	Ci > 48	Ci > 5	Ci > 50
csQCA Outcome absent (0)	Ci <= 5.5	Ci <= 48	Ci <= 5	Ci <= 50
Threshold at the Mean	5.34	38.30	5.11	60.60
csQCA Outcome present (1)	Ci > 5.34	Ci > 38.3	Ci > 5.1	Ci > 60.6
csQCA Outcome absent (0)	Ci <= 5.34	Ci <= 38.3	Ci <= 5.1	Ci <= 60.6
Source: FDI data from the UNCTAD. Ci = FACB Score for Country 'i'				

2.f Democracy

Democracy is one of the most cited conditions to foster high protection of FACB rights (Mosley, 2011; Simmons, 2009; Hafner-Burton, 2008; Dreher et al, 2012; Poe and Tate, 1994). It provides the means workers need for claiming better protection of their rights. Democracy is measured by the Polity IV Institutionalized Democracy (Marshall et al, 2010). This measure takes into account three interdependent elements: the presence of institutions and procedures through which citizens can express preferences about alternative policies and leaders, the existence of institutionalized constraints on the exercise of power, and the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation. It is an ordinal scale ranging from 0 to 10, where 10 represents the maximum score and indicates the most democratic countries.

Similar to other variables, two sets of countries were calibrated. The first set consists of stable democracies. Stable democracies are those countries which never had a score below 8 on the Polity IV scale since World War II (Simmons, 2009, p. 276). The second set (called democratic countries), consists of countries whose scores are at the median (6) or higher on the Polity IV scale. In this case, the median was used instead of the mean, since the

median is more appropriate when dealing with ordinal scale. Note that the same thresholds were used to calibrate sets for 2001 and 2011.

Table 16: Calibration of Democracy

	Polity IV Democracy
Calibration in csQCA	
Threshold stable democracies	8
csQCA Outcome present (1)	$C_i \geq 8$
csQCA Outcome absent (0)	$C_i < 8$
Threshold democratic	6
csQCA Outcome present (1)	$C_i \geq 6$
csQCA Outcome absent (0)	$C_i < 6$

a) Civil Conflict

The presence of civil armed conflicts can be used by repressive governments to restrict civil rights and also trade union's action. It is expected that armed conflicts are associated with lower protection of FACB rights.

Two indicators of countries involved in civil war were created based on data from the Armed Conflicts Database (Gleditsch et al., 2002; Themnér and Wallensteen, 2013). The first set includes all countries involved in internal armed conflict listed by this source. The second set of countries includes only those countries involved in intense armed conflicts, on which at least 1000 battle-related deaths occur in a given year or since the conflict started. The same criteria for membership were applied to both 2001 and 2011 data. Table 17 summarises criteria for calibration of each set.

Table 17: Calibration of civil conflicts

	Civil armed conflicts	Intense civil armed conflicts
Calibration in csQCA		
csQCA Outcome present (1)	Countries involved in any kind of internal conflicts	Countries involved in internal conflicts which at least 1000 battle-related deaths have occurred
csQCA Outcome absent (0)	Countries not involved in internal conflicts	Countries not involved in internal conflicts, plus countries involved only in minor conflicts

2.g Left Wing Executive

Left-oriented governments are expected to be more labour friendly, given their historical ties with labour unions (Mosley, 2011). We use the political orientation of the executive's party, from the Database of Political Institutions (Beck et al., 2001) to create two sets of countries. The first includes countries which the executive's party is classified as left oriented, and the second includes countries whose political orientation of the executive and the largest party in the parliament are left-wing. The same criteria are applied for the 2001 and 2011 datasets.

Table 18: Calibration of left wing

	Left-exec	Left
Calibration in csQCA		
csQCA Outcome present (1)	executive's party is left oriented	executive's party and the largest party in the parliament are left oriented
csQCA Outcome absent (0)	executive's party is not left oriented	executive's party or the largest party in the parliament (or both) are not left oriented

2.g Ratification of ILO Conventions 87 and 98

The ratification of international agreements designed to protect labour rights is expected to be associated with higher protection of these rights. To capture this effect, ratifications of two conventions of the International Labour Organization (ILO) are investigated: convention 87, Freedom of Association and Protection of the Right to Organise, and 98, Right to Organise and Collective Bargaining. Based on information gathered from the ILO Normlex,²⁰ three sets were calibrated: C087, including countries that have ratified convention 87; C098, including countries that have ratified convention 98; and RAT, including countries that have ratified both conventions. Table 19 summarises criteria used for calibration.

²⁰ <http://www.ilo.org/dyn/normlex/en/f?p=1000:12001:0::NO::>

Table 19: Calibration for ratification of ILO conventions

	C087	C098	RAT
Calibration in csQCA			
csQCA Outcome present (1)	Countries that have ratified ILO convention 87	Countries that have ratified ILO convention 98	Countries that have ratified ILO convention 87 and 98
csQCA Outcome absent (0)	Countries that have not ratified ILO convention 87	Countries that have not ratified ILO convention 98	Countries that have not ratified at least one of these conventions

2.h Legal Systems

The type of legal system can also influence governments' decisions on respecting labour rights (Neumayer and De Soysa, 2006). To investigate this possibility, five conditions were created based on data from La Porta et al. (1999), which identifies the legal origin of the Company Law or Commercial Code of each country. This source provides five possible origins: English Common Law, French Commercial Code, Socialist/Communist Laws, German Commercial Code, and Scandinavian Commercial Code.

As discussed in Simmons (2009), countries whose legal origin is the English Common Law are more sensitive to international treaty commitments because of the independence of the judiciary. These countries tend to face higher costs of ratification, they create more reservations, and ratify agreements at a slower pace compared to countries with another legal tradition. As these countries need to put more effort in the ratification of international labour rights agreements, we expect that they valorise this effort, enforcing the agreement and protecting the rights of its citizens. By contrast, countries with another legal tradition face different incentives and are more often an instrument of the state (La Porta et al., 1999, p. 231). Following this reasoning, we expect that governments of countries from these legal origins do not put much effort in protecting FACB rights and should not be associated with high protection of these rights.

In the following sections, each of these conditions are tested separately in order to verify if some of these legal origins are necessary or sufficient conditions for high protection of FACB rights. Note that a country can be member of only one of these sets. Table 20 shows the criterion for calibration of each set.

Table 20: Calibration for ratification of ILO conventions

	LEG_EN	LEG_FR	LEG_SOC	LEG_GER	LEG_SCA
Calibration in csQCA					
csQCA Outcome present (1)	Legal system origin = English Common Law	Legal system origin = French Commercial Code	Legal system origin = Socialist / Communist Laws	Legal system origin = German Commercial Code	Legal system origin = Scandinavian Commercial Code
csQCA Outcome absent (0)	All other countries	All other countries	All other countries	All other countries	All other countries

2.i Large Population

A larger population presents more opportunities for violating human and labour rights (Poe and Tate, 1994; Mosley, 2011). To check this possibility, two conditions are tested, based on the total population from the World Development Indicators (World Bank).²¹ Descriptive statistics and thresholds for set membership in 2001 and 2011 are presented in Table 21. Note that, for this condition, the set of countries with large populations has more members than the set of countries where the population is higher than the mean. For instance, to be a member of the set of countries with large population in 2001, a country must have a total population higher than 20 million. To be a member of the set “countries whose population is larger than the mean”, a country must have a total population higher than 32.6 million.

Table 21: Calibration of Population

	Population 2001	Population 2011
Descriptive statistics		
N	188	174
Minimum	19,626	9,844
1st quartile	1,875,023	2,047,011
Median	6,658,998	7,844,534
3rd quartile	21,874,020	28,011,038
Maximum	1,271,900,000	1,344,130,000
Mean	32,596,190	38,926,641
Std. Deviation	123,109,610	141,730,880
Calibration in csQCA		
Threshold large population	20,000,000	20,000,000
csQCA Outcome present (1)	$C_i \geq 20 \text{ MI}$	$C_i \geq 20 \text{ MI}$
csQCA Outcome absent (0)	$C_i < 20 \text{ MI}$	$C_i < 20 \text{ MI}$
Threshold at the Mean	32,596,190	38,926,641
csQCA Outcome present (1)	$C_i \geq 32.6 \text{ MI}$	$C_i \geq 38.9 \text{ MI}$
csQCA Outcome absent (0)	$C_i < 32.6 \text{ MI}$	$C_i < 38.9 \text{ MI}$

²¹ <http://databank.worldbank.org/data/home.aspx>

3. Data Summary

Before performing QCA analysis, all outcomes and conditions were joined in two datasets: Mosley and TUR (they are provided as an annex to the report). QCA tools do not easily deal with missing values. For this reason, cases with missing values for conditions were excluded.²² A summary of outcomes and conditions is shown in Table 22. Firstly, Table 22 presents the criteria used to keep a condition in this analysis. Conditions whose data is available for less than the “minimum number of countries to keep the condition” were excluded from this analysis. After cleaning conditions and cases with missing values, the number of cases available in each dataset is displayed in Table 22.

Next, Table 21 shows all outcomes and explanatory conditions used in this analysis. For each outcome and condition, it is informed the number of countries that are members of these sets. For example, 29 countries are members of the set of countries on which FACB rights are highly protected in 2002 and 36 countries are members of this set in 2012. Similarly, 25 countries are members of the set of high neighbour’s pressure in 2001 and 23 countries in 2011.

Table 22: Summary of outcome and conditions and the # of countries with a score of 1 (outcome/condition) present

		MosleyFACB 2002	TUR FACB 2012
Minimum number of countries to keep the condition:		130	125
Number of cases		116	111
Outcome	Description	Number of Countries (Mosley)	Number of Countries (TUR)
FACB	Set of countries in which FACB Rights are highly protected	29	36
FACBM	Set of countries in which the protection of FACB Rights are above the mean	52	53
LAW	Set of countries in which FACB Rights in Law are highly protected	28	36
LAWM	Set of countries in which the protection of FACB Rights in Law are above the mean	67	55
PRACT	Set of countries in which FACB Rights in Practice are highly protected	32	28

²² Beyond the exclusion of cases with missing values, nine countries were excluded due to lack of trust in data, following recommendations available in the literature (Anner and Sari, 2015, p. 10). These countries include Afghanistan, Chad, Congo, Côte d’Ivoire, Gabon, Gambia, Kyrgyzstan, Tajikistan and Yemen

PRACTM	Set of countries in which the protection of FACB Rights in Practice are above the mean	57	57
Conditions	Description	Number of Countries 2001	Number of Countries 2011
AVG_R	Set of high neighbour's pressure	25	23
AVG_RM	Set of neighbour's pressure above the mean	38	34
AVG_D	Set of high economic pressure	36	29
GNI	Set of high-income countries (high GNI per capita)	37	58
GNI_UM	Set of high-income or upper middle income countries (GNI per capita)	74	91
GDP_GR	Set of high economic growth (GDP Growth)	39	40
GDP_GRM	Set of economic growth above the mean (GDP Growth)	52	52
GDPPC_GR	Set of economic growth per capita (GDP per capita growth)	31	24
GDPPC_GRM	Set of economic growth per capita above the mean (GDP per capita growth)	54	50
TRD	Set of high trade openness	18	45
TRDM	Set of trade openness above the mean	40	53
FDI_F	Set of high FDI flows per GDP	22	13
FDI_FM	Set of FDI flows per GDP above the mean	25	29
FDI_S	Set of high FDI stocks per GDP	19	14
FDI_SM	Set of FDI stocks per GDP above the mean	26	21
DEMOC	Set of democratic countries	78	81
DEMOCs	Set of stable democracies	57	63
CIVIL	Set of countries involved in armed conflicts	24	12
CIVIL_I	Set of countries involved in intense armed conflicts	15	11
LEFT_EXEC	Set of countries in which a left wing executive holds the power	40	37
LEFT	Set of countries in which both the executive and the largest party in the parliament are left oriented	39	34
C087	Set of countries that ratified ILO Convention C087	93	92
C098	Set of countries that ratified ILO Convention C098	100	98
RAT	Set of countries that ratified ILO Conventions C087 and C098	90	90
LEG_EN	Set of countries whose legal origin is the English Common Law	33	34
LEG_FR	Set of countries whose legal origin is the French Commercial Code	50	45

LEG_SOC	Set of countries whose legal origin is Socialist/Communist Laws	25	24
LEG_GER	Set of countries whose legal origin is the German Commercial Code	4	4
LEG_SCA	Set of countries whose legal origin is the Scandinavian Commercial Code	4	4
POP	Set of countries with large population	37	44
POPM	Set of countries with populations above the mean	27	27

B. Necessary Conditions for high level of protection of freedom of association and collective bargaining rights

In a first step, we perform a necessary conditions analysis for the identified explanatory factors. Recall that the identification of necessity implies that whenever you observe the presence of the outcome you also observe the presence of the explanatory condition (note the reverse is not required: when you observe the explanatory condition you also observe the outcome). Necessary conditions analysis allows us to identify key explanatory factors. We present the analysis for different outcomes in order to compare the results. Two parameters of fit are presented in order to identify key necessary conditions, namely consistency and coverage. Consistency assesses the degree to which the empirical information is in line with the statement of necessity (Schneider and Wagemann, 2012; Ragin, 2008). In other words, it is the proportion of the number of cases for which both the (necessary) condition and the outcome is present on the total number of cases for which the outcome is present. Coverage, in addition, measures the relevance of this finding in terms of how many cases/observations are covered by this necessary condition, i.e., it is the proportion of number of cases for which both the necessary condition and the outcome is present on the total number of cases for which the condition is present. To be considered as necessary, a condition must have a (very) high consistency. Following the literature, only conditions whose consistency is equal to or higher than 0.9 are considered necessary for the outcome (Ragin, 2006; Emmenegger, 2011; Schneider and Wagemann, 2012). In the analysis of necessary conditions, we include all explanatory factors discussed above. All can be considered as non-trivial necessary conditions (for a discussion of trivialness see Goertz, 2006).²³

²³ For example, one could argue that ratification might be a trivial necessary condition. However, the extensive discussion of ratification as an explanatory factor by Simmons (2009) shows that this is not a trivial condition, since some states ratify treaties without the intention of enforcing them ('false positives')

1. Outcome: FACB Rights Overall

Table 23 shows the results of the analysis of necessary conditions for the outcome “high protection of FACB rights” for four different calibrations: high Mosley FACB rights 2002, Mosley FACB rights above the mean in 2002, high TUR FACB rights 2002 and TUR FACB rights above the mean in 2012. Note that uppercase stands for the presence of a condition, and lowercase stands for the absence of a condition. In the table, we only present the conditions with high consistency scores and which can be considered necessary conditions (compare with Table 22 for the remaining conditions that do not appear in the analysis of necessary conditions).

Table 23: Necessary conditions for protection of FACB rights

Condition	Output Mosley FACB (2002)		Output Mosley FACB above mean (2002)		Output TUR (2012)		Output TUR above mean (2012)	
	Consist.	Cover.	Consist.	Cover.	Consist.	Cover.	Consist.	Cover.
GNI_UM					0.94	0.37	0.87	0.51
AVG_RM	0.86	0.66						
DEMOC	0.90	0.33			0.92	0.41	0.91	0.59
C087	0.90	0.28	0.87	0.48	0.97	0.38	0.98	0.57
C098	0.93	0.27	0.90	0.47	0.97	0.36	0.98	0.53
C087_OR_C098	0.93	0.26	0.92	0.47	1.00	0.36	1.00	0.53
gdppc_gr					0.89	0.37	0.85	0.52
fdi_f					0.86	0.32		
Civil	0.90	0.28			0.94	0.34	0.94	0.51
civil_i	1.00	0.29	0.94	0.49	0.97	0.35	0.96	0.51
Pop	0.86	0.32						
Popm	0.86	0.28	0.87	0.51	0.86	0.37	0.87	0.55

Table 23 reveals several interesting findings. We first discuss the results for the outcome for high protection measured on the basis of Mosley’s dataset.

For this outcome, we identify three necessary conditions: democracy, ratification of ILO conventions, and absence of war. Democracy has a consistency score of 0.90. Among the 29 countries where FACB rights are well respected, only three are not democratic: Burkina Faso, Guinea-Bissau, and Papua New Guinea. Coverage is 0.33, meaning that one third of all democratic countries have reached high standards of respect for FACB rights. This result corresponds to theoretical expectations and earlier research. The presence of democracy provides different means for workers and unions to enforce international commitments and rights.

Ratification of ILO conventions 87 or 98 is also necessary for FACB rights. The consistency is 0.90 for convention 87 and 0.93 for convention 98. Consistency is also 0.93 for the

combination of these conditions. For convention 87, 3 out of 29 countries present inconsistent results: Armenia, Guinea-Bissau and New Zealand. For convention 98 only 2 countries are inconsistent: Armenia and New Zealand. This is partially explained by the fact that we analysed 2002 data. However, New Zealand ratified convention 98 in 2003 and Armenia ratified both conventions in 2006. Hence, these 'inconsistent' cases were probably preparing ratification and hence emerged as inconsistent.

A final necessary condition for the Mosley 2002 data is the absence of civil armed conflicts (consistency of 0.9), and mainly the absence of intense conflicts whose consistency score is 1.00, i.e., among countries in which FACB rights are well protected, there is no single country facing intense civil war. Considering all kinds of civil conflicts, three cases are inconsistent (Macedonia, Mali and Niger), i.e., they show high FACB standards even while facing civil conflicts.

These necessary conditions are aligned with theoretical expectations and previous research. Apart from the three necessary conditions, there are also two other interesting results, also aligned with the existing literature: neighbour's pressure (AVG_RM) and large population. Table 23 shows that neighbour's pressure (average of FACB rights among countries in the same region) is almost a necessary condition, having a 0.86 consistency score. Presenting the same consistency score, the absence of large populations almost reaches the consistency threshold to be considered a necessary condition. The causal mechanism linking populations to better protection is still not well understood but our analysis confirms previous findings.

Secondly, Table 23 also presents results for a larger set of countries in the Mosley database, namely those countries for which the calibration of the outcome is done on the basis of the mean. This analysis allows us (1) to assess necessary conditions for a larger number of countries and hence (2) to test the results (confirmation or not of the necessary conditions). Since this analysis contains a larger set of countries, which increases the probability of contradictions, it is harder to get high consistency scores. (for a discussion see Marx, 2010). The analysis of this outcome identifies four conditions that are necessary for the protection of FACB rights: ratification of ILO conventions, the absence of civil conflict, the presence of democracy and population. This analysis confirms the above results.

Next, Table 23 shows necessary conditions for the other database (TUR FACB rights in 2012), which is included in the analysis. The analysis of this database allows us to check the results on the basis of more recent data. Four conditions are necessary for this outcome: high or at least upper middle level of development (GNI per capita), democracy, ratification of ILO conventions 87 and 98, and the absence of civil war. The consistency of the level of development, measured by GNI per capita, is 0.94. Among the 36 countries in which the protection of TUR FACB rights is high in 2012, only Burkina Faso and Mali present inconsistent results; i.e., the outcome is present, however, the level of development is low (condition is not present). This result confirms studies that identified economic

development as an important factor for the protection of rights. The analysis of this database confirms that democracy is a necessary condition for high protection of FACB rights. The consistency of democracy is 0.92. Among countries in which FACB rights are well protected, only Armenia, Azerbaijan and Burkina Faso are not democratic. Similarly, the ratification of ILO conventions 87 and 98 are necessary for high protection of FACB rights. The consistency in both cases is very high, 0.97. Among countries with high respect for labour rights, only New Zealand did not ratify the convention 87, and only Canada did not ratify convention 98.

Finally, the absence of civil conflicts in a country is also here a necessary condition for high protection of FACB rights. Both conditions/measures for civil conflict show high consistency, 0.94 for civil conflict and 0.97 for intense civil conflict. To illustrate these results, among countries in which FACB rights are well respected, Israel and Mali are involved in civil conflicts, and only Israel faces an intense civil conflict.

Other conditions such as small population, the absence of strong GDP per capita growth, and the absence of high flows of FDI have consistency scores close to the threshold. The results for population confirm the previous results. The high consistency of the absence of strong GDP growth per capita is partially explained by the fact that in many highly economically developed countries (typically OECD countries) GDP growth has been slow following the economic crisis of 2008, but that in these economically high developed countries the protection of FACB rights remains high. A similar logic also possibly explains the results for the absence of FDI flows.

Finally, Table 23 presents necessary conditions for the outcome of FACB rights calibrated to the mean of the TUR database. This calibration captures a larger number of countries than the strict threshold of high protection. Again, this analysis was conducted to confirm/refute the above analysis. Again, three conditions are necessary for this outcome: democracy, ratification of ILO conventions, and absence of civil conflict. With a consistency score of 0.91, only 5 among 53 countries in which FACB rights were well respected in 2012 were not democratic: Armenia, Azerbaijan, Burkina Faso, Kazakhstan, and Mozambique. Similar to previous results, ratification of ILO conventions 87 and 98 are also necessary conditions, being almost perfect necessary conditions with a consistency of 0.98. Lastly, the absence of civil conflicts is also a necessary condition for FACB rights set at the mean in 2012. The consistency for the lack of any kind of civil conflict is 0.94, while for the absence of intense conflicts is 0.96. In the case of intense conflicts, only Israel and Senegal show inconsistencies, since these countries are involved in civil war, while keeping respect to FACB rights above the mean.

In sum, the results presented in Table 22 are highly consistent and show the persistency of three necessary conditions (democracy, ratification of ILO conventions and absence of civil conflict), independent of the period of analysis (2002 or 2012) and calibration (high level or measured at the mean). These results are robust across the different analyses. These

necessary conditions are aligned with theoretical expectations and previous research, since democracy, ratification of ILO conventions, and the absence of civil conflict were also identified in the literature as being significantly correlated with a high protection of FACB rights. The QCA analysis adds to this that these conditions are not only merely highly associated or correlated with the protection of these rights, but they constitute a subset relation for the protection of these rights and are necessary (although not sufficient) factors to protect these rights.

In order to further analyse these necessary conditions, we test whether there is a difference between the protection in law (*de jure*) and in practice. Since overall FACB rights indicators aggregate these two dimensions, it could be the case that some conditions are necessary for better protection in law, but not in practice, and the other way around. For the analysis, we proceed in a fashion similar to the analysis of the overall indicators calculating the consistency scores. We first analyse the necessary conditions for protection in law, next we analyse the necessary conditions for protection in practice.

2. Outcome: FACB Rights in Law

Table 24 presents the necessary conditions for four different calibrations of the outcome “protection of FACB rights in Law”. The different outcomes are high protection of FACB rights in 2002 (Mosley dataset) and 2012 (TUR dataset), and protection of FACB rights calibrated at the mean in 2002 and 2012.

First, two conditions are necessary for high protection of FACB rights in Law based on the analysis of the Mosley dataset: ratification of ILO conventions 87 and 98, and the absence of civil conflicts. The consistency is 0.90 for ratification of convention 87, and 0.97 for convention 98. As an illustration, among 28 States in which FACB rights are highly protected in Law, only Armenia had not (yet) ratified ILO convention 98 (see explanation above). Lack of civil war is also a necessary condition, with a consistency of 0.90. Most interesting, the absence of intense civil conflicts is a perfect necessary condition for high protection of FACB rights in Law in 2002 (consistency 1). Other conditions such as the absence of the stocks of FDI and small population also have high consistency (0.85), but lower than the stringent threshold we apply based on the literature.

Table 24: Necessary conditions for the protection of FACB rights in Law

Condition	Output FACB Law (2002)		Output FACB Law above mean (2002)		Output TUR Law (2012)		Output TUR Law above mean (2012)	
	Consist.	Cover.	Consist.	Cover.	Consist.	Cover.	Consist.	Cover.
GNI_UM					0.92	0.36	0.89	0.54
DEMOC					0.92	0.41	0.95	0.64

C087	0.90	0.27	0.87	0.62	1.00	0.39	0.98	0.59
C098	0.97	0.27	0.93	0.62	0.97	0.36	0.98	0.55
C087_OR_C098	0.97	0.26	0.94	0.61	1.00	0.36	1.00	0.55
gdppc_gr					0.86	0.36		
fdi_fh					0.89	0.33	0.87	0.49
fdi_sh	0.86	0.25						
Civil	0.90	0.27	0.86	0.62	0.94	0.34	0.93	0.52
civil_i	1.00	0.28	0.94	0.62	0.97	0.35	0.95	0.52
Popm	0.86	0.27					0.86	0.56

Secondly, the same conditions, ratification of conventions and absence of civil conflict, are also necessary conditions in order to reach a high level of protection of FACB rights in Law calibrated at the mean (Mosley dataset).

Next, analysing the data on the basis of the TUR database for 2012, we identify four conditions that are necessary for the presence of the outcome **“high respect of FACB rights”**. **These conditions are: upper middle level of development, democracy, ratification of ILO conventions, and absence of civil conflict.** Among 36 countries in which FACB rights are highly protected, only Burkina Faso, Malawi, and Mali did not the development level of upper middle income countries (relatively high economic development level). The consistency for level of high level of economic development is 0.92. Consistency of democracy as a necessary condition for high protection of FACB rights is also 0.92. Again, the ratification of ILO conventions is identified as a necessary condition. Finally, Table 23 also shows that absence of civil conflict is necessary for high respect of FACB rights in 2012. These results are confirmed when we look at the last columns which present the results for the outcome calibrated at the mean. Three conditions are necessary for protection of FACB rights calibrated at mean in 2012: democracy, ratification of ILO conventions, and absence of civil conflict. Democracy has a consistency of 0.95. Among the 55 States on which FACB rights were calibrated at the mean in 2012, only Armenia, Azerbaijan, and Burkina Faso are not democratic. Ratification of ILO conventions also displays a high level of consistency for the protection of FACB rights in 2012, with consistency of 0.98 for conventions 87 and 98. As in previous cases, absence of civil conflicts is necessary for the protection of labours rights.

3. Outcome: FACB Rights in Practice

We conduct a similar analysis for the different outcome measures for the protection of FACB rights in practice. Table 25 shows the analysis of necessary conditions for different measures of the outcome for the Mosley and TUR datasets. Again, we calibrate the

outcome to two thresholds, one for a high level of protection and one calibration measured against the mean score for all countries.

Firstly, neighbour's pressure, absence of intense civil conflicts, and population, are necessary conditions for the outcome "high protection of FACB rights in practice" for the Mosley 2002 dataset. Belonging to a region where labour rights are well protected in practice is necessary for the protection of these rights in a country with a consistency score of 0.91. The absence of intense civil conflict and a large population were also necessary for the protection of FACB rights in practice 2002, with consistency scores of 0.97 and 0.91, respectively. These results are slightly different from the other results since it identifies a strong regional effect as a necessary condition for protection in practice. In this context, this implies a downward pressure on the protection of FACB rights. The absence of strong protection in neighbouring countries leads to less protection of the country under analysis. This might indicate that for the enforcement of rights in practice, the competition with neighbouring countries plays an important role and can generate a downward dynamic for the protection of FACB rights.

Table 25: Necessary conditions for the protection of FACB rights in Practice

Condition	Output FACB Practice (2002)		Output FACB Practice above mean (2002)		Output TUR Practice (2012)		Output TUR Practice above mean (2012)	
	Consist.	Cover.	Consist.	Cover.	Consist.	Cover.	Consist.	Cover.
GNI					0.86	0.41	0.88	0.55
GNI_UM					0.96	0.30		
AVG_D_PRACT					0.86	0.56		
AVG_R_PRACTM	0.91	0.54						
DEMOC					0.86	0.30		
C087					0.86	0.26	0.88	0.54
C098	0.85	0.28			0.93	0.27	0.93	0.54
C087_OR_C098	0.85	0.27	0.86	0.48	0.93	0.26	0.95	0.54
gdppc_gr					0.89	0.29		
fdi_fh					0.89	0.26	0.86	0.50
Civil	0.88	0.31	0.88	0.54	1.00	0.28	0.97	0.56
civil_i	0.97	0.31	0.95	0.53	1.00	0.28	0.98	0.56
Pop	0.88	0.36						
Popm	0.91	0.33	0.85	0.54	0.86	0.29	0.88	0.60

In the 2012 TUR dataset, we identified three conditions necessary for the protection of FACB rights in practice: level of economic development, ratification of ILO conventions, and absence of civil conflicts. Economically well-developed countries protect FACB rights better.

4. Comparing necessary conditions for rights overall, in law and in practice

Some interesting observations can be made when comparing necessary conditions for FACB rights overall, in law and in practice. First, absence of civil conflicts is the most important necessary condition. The absence of intense armed conflict is a necessary condition in all 12 outcomes analysed in previous sections, showing high consistency scores in all cases. Even moderate conflicts can weaken the protection of FACB rights. These results are in line with the literature, which points out that civil conflicts inhibit the protection of FACB rights and other human rights (see section 1.2).

Second, another frequent necessary condition is ratification of ILO conventions 87 and 98, which are designed to protect freedom of association and collective bargaining rights. Ratification of these conventions, mainly convention 98, was necessary for FACB rights overall and in law in both datasets (2002 and 2012), and FACB rights in practice for the TUR dataset (2012). However, it is very interesting to note that ratification is a necessary condition for the protection of FACB rights in general (overall) and in law, but not so for the protection of these rights in practice. This result first shows ratification is a not a trivial necessary condition and, secondly, most importantly confirms the presence of so-called false positives (i.e., countries who ratify conventions without the intention of enforcing them [Simmons, 2009]). It might also show that it is easier for a 'pro-rights' government to change the law than to guarantee compliance.

Next, results discussed above show democracy as a strong necessary condition for rights overall, in both years, and rights in law, in 2012. This result also confirms results from previous studies. However, contrary to the expectations, democracy does not ensure the enforcement of rights in practice, which might be related to difficulty of enforcing compliance with standards (i.e., the compliance gap).

Finally, although the level of development is not important in all tests, it does appear in some analyses as a necessary condition indicating the relevance of economic development for the protection of these rights.

C. Sufficient Conditions for high level of protection of freedom of association and collective bargaining rights

A next step in a QCA analysis is an analysis of sufficient (combinations of) conditions to explain the presence or absence of an outcome. An analysis of sufficiency proceeds through the analysis of truth tables as discussed in Part 2. This section is dedicated to the analysis of conditions that are sufficient for the outcome “high protection of FACB rights” in 2002 and 2012. Similar to the analysis of necessary conditions, measures of consistency and coverage are used to evaluate sufficient conditions. Contrary to an analysis of necessary conditions, which proceeds by analysing the set-relationship between one condition and an outcome, the analysis of sufficiency aims to capture the different paths leading to an outcome. As a result, an analysis of sufficiency requires the development of explanatory models containing several conditions and factors.

This development of models has to take two other interrelated aspects into account, one is the complexity of the model and the other is the number of conditions that can be included in a model. Concerning the first aspect, when analysing sufficient (combinations of) conditions, it is essential to look at the complexity of the results. In QCA, a complex result is one where there are many different paths to an outcome. This can run up to 50 or more paths if more than 6 conditions are included. Hence, complexity reflects how simple or how complicated a solution term is. There are several ways in which one can measure complexity. Varone et al. (2006) propose a measure purely based on the (theoretical) number of rows in a truth table. Marx (2010) proposes a measure based on the proportion of the number of rows of a truth table with empirical cases to the number of theoretically possible rows of a truth table. Schneider and Wagemann, (2012, p. 165) propose a formula of complexity based on the sum of all conditions, logical ANDs, and logical ORs in a solution term. Each of these measures captures the same and can be used interchangeably. In this report, we apply the Schneider and Wagemann formula to calculate complexity. As an example, the complexity of the solution term following this formula for $A*B + C*D \Rightarrow Y$ is 7, which is more complex than a solution term $A*B + C \Rightarrow Y$, which has a complexity of 5. As one of the aims of a QCA analysis is to figure out more parsimonious solutions that express the empirical information through the use of the principle of logical minimization (Schneider and Wagemann, 2012, p. 9; Ragin, 2008), less complex solutions are preferred.

A second aspect needs to be taken into account when developing an explanatory model. As Marx (2010; Marx and Dusa, 2011) has shown, the development of models in QCA should take into account the ratio of the number of conditions to the number of cases in order to generate valid models. In some situations, when there are too many conditions included in a model or when the proportion of conditions to cases is high, QCA is not able to distinguish real from random data. This is a result of the use of Boolean algebra, which

under these circumstances creates a situation in which no analytical reduction is possible and one is confronted with the fact that each case is unique (see also Aarebrot and Bakka, 1997).

In order to circumvent this, Marx and Dusa (2011) developed a benchmark table with precise estimates on the relationship between conditions and cases/observations. This benchmark table informs researchers on how many conditions can be included in an analysis given the number of cases one has. Hence, the benchmark table assesses whether or not a model can be accepted for further analysis and guide researchers in model specification. Table 26 summarizes the benchmark table and shows how many cases are at least needed to perform a QCA analysis for a given number of conditions (for different confidence levels: 10%, 5% or 1%).

Table 26: Benchmark table for model specification assessment

		Cases (CA)			
		Threshold			
		10%	5%	1%	
Conditions (CO)	CO ≤ 2	CA ≥ 6	CA ≥ 8	CA ≥ 11	
	CO ≤ 3	CA ≥ 9	CA ≥ 11	CA ≥ 14	
	CO ≤ 4	CA ≥ 12	CA ≥ 15	CA ≥ 17	
	CO ≤ 5	CA ≥ 17	CA ≥ 20	CA ≥ 25	
	CO ≤ 6	CA ≥ 24	CA ≥ 29	CA ≥ 34	
	CO ≤ 7	CA ≥ 33	CA ≥ 39	CA ≥ 47	
	CO ≤ 8	CA ≥ 49	CA ≥ 55	CA ≥ 66	
	CO ≤ 9	CA ≥ 69	CA ≥ 78	CA ≥ 92	
	CO ≤ 10	CA ≥ 97	CA ≥ 112	CA ≥ 129	
	CO ≤ 11	CA ≥ 139	CA ≥ 154	CA ≥ 181	

Source: based on Marx and Dusa, 2011

Our research design makes use of many explanatory conditions, taken from the literature review (see Table 9), to explain protection of FACB rights. Very many different models can be created based on combinations of these conditions. In the analysis of sufficiency presented below, we started from a more complex model, including all conditions. Next, we removed conditions from the complex model, based on theoretical expectations, trying to identify the model that best explains the empirical data. Ideally, a model should have high consistency (few or no contradictions), high coverage,²⁴ and low complexity, taking into account the limits on the number of conditions. However, higher consistency often comes at the price of lower coverage (Schneider and Wagemann, 2012, p. 149). Taking

²⁴ Coverage “assesses the degree to which a cause or causal combination “accounts for” instances of an outcome. When there are several paths to the same outcome, the coverage of any given causal combination may be small. Thus, coverage gauges empirical relevance or importance” (Ragin, 2006, p. 292).

these issues into account, the criteria below were established to select models for further analysis:

1. The selected model should have equal or less than 10 explanatory conditions.
2. The selected model must have a consistency of at least 0.9
3. The selected models must have a coverage of at least 0.5
4. Among models that passed the first three criteria, choose the model generating more parsimonious (less complex) results

In the following sections, we present the analysis of sufficient combinations of conditions for the outcome high protection of FACB rights in 2002. In the subsequent subsection, the analysis for the outcome high protection of FACB rights in 2012 is presented.

1. Outcome: Mosley FACB 2002 (FACB)

Table 27 summarizes information on the selection criteria for several models. As previously discussed, thousands of models can be created based upon the conditions identified on the basis of previous research. For this reason, Table 26 only includes a collection of models (instead of all possible models) selected based upon theoretical expectations, previous research and whether they scored relatively well on the selection criteria.

A key issue in the selection of a model is high consistency (few contradictions) and good coverage. In addition, we look for models that reduce complexity in terms of pooling cases together in a row of a truth table. In theory, in QCA, it is possible, with many conditions, that each row of a truth table has one case. This can lead to more than a 100 paths to an outcome. This is not ideal and a very complex result. We want to reduce this complexity by selecting a model that reduces complexity. This is done by analysing the complexity indicator introduced above.

Take model 5 as an example. This model includes 13 conditions, what leads to 8192 (2^{13}) truth table rows. Such a model will result in perfect consistency (1.00) and high coverage (0.90) because each row of the truth table only has one case. However, as a consequence, the majority of truth tables rows are empty (logical reminders), which makes the end result very complex (complexity indicator of 449). Such a model is almost impossible to interpret. It would be an enormous task to describe a model with 449 parts. It would also be very difficult for the reader to understand this model. In addition, a model with 13 conditions violates the threshold for the maximum number of conditions to be included in a model when analysing approximately 100 cases.

For these reasons, it is necessary to balance the different criteria and select a model with high consistency and coverage, which generates parsimonious results and does not violate the number of conditions criterion. After constructing and testing several models (some

presented below), we choose model 3 for further analysis of the outcome for high protection of FACB rights. This model contains the explanatory factors on democracy, ratification, intense civil conflict, the effect of neighbouring countries, economic development, trade openness and the political orientation of a country's government. Now, we turn to the presentation of the analysis of model 3.

Table 27: Models for sufficiency analysis for Outcome: Mosley FACB 2002

Model	Outcome	Conditions	Consistency	Coverage	Complexity	Conditions
1	FACB	DEMOC, RAT, CIVIL_I, AVG_R, AVG_D, GNI, TRD, LEFT_EXEC	0.90	0.62	71	8
2	FACB	DEMOC, RAT, CIVIL_I, AVG_R, AVG_D, GNI_UM, TRD, LEFT_EXEC	0.91	0.66	87	8
3	FACB	DEMOC, RAT, CIVIL_I, AVG_R, GNI_UM, TRD, LEFT_EXEC	0.91	0.66	51	7
4	FACB	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R, GDP_GRM	0.94	0.59	59	
5	FACB	DEMOC, RAT, CIVIL_I, AVG_RM, AVG_D, GNI_UM, TRD, LEFT_EXEC, POP, GDP_GR, GDPPC_GR, FDI_F, FDI_S	1.00	0.90	449	13
6	FACB	DEMOC, RAT, CIVIL_I, AVG_RM, POP	1.00	0.07	7	5
7	FACB	DEMOC, AVG_RM, AVG_D, GNI, TRD, LEFT_EXEC	0.85	0.59	43	6
8	FACB	DEMOC, AVG_RM, AVG_D, GNI, TRD, LEFT_EXEC	1.00	0.17	47	6
9	FACB	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R, LEG_SCA	1.00	0.24	47	6
10	FACB	DEMOC, RAT, CIVIL_I, AVG_R, GNI_UM, LEFT	0.93	0.45	33	6
11	FACB	DEMOC, RAT, CIVIL_I, AVG_R, GNI_UM, LEFT, POP	0.93	0.48	48	7
12	FACB	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R	0.84	0.72	24	5
13	FACB	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R, POP	0.86	0.62	33	6
14	FACB	DEMOC, RAT, CIVIL_I, GNI, GDP_GR, TRD, FDI_FH, FDI_SH, LEFT_EXEC	0.93	0.45	65	9
15	FACB	DEMOC, RAT, CIVIL_I, GNI, GDP_GR, TRD, FDI_FM, LEFT_EXEC	0.92	0.41	59	7
16	FACB	DEMOC, RAT, CIVIL_I, GNI, GDP_GR, TRD, FDI_S	1.00	0.21	55	7
17	FACB	DEMOC, RAT, CIVIL_I, AVG_R	0.83	0.66	5	4
18	FACB	DEMOC, RAT, CIVIL_I, FDI_S	1.00	0.03	7	4
19	FACB	DEMOC, CIVIL_I, FDI_F, FDI_S, TRD, AVG_RM, AVG_D, GNI_UM, GDP_GR, POP, LEFT_EXEC	1.00	0.76	269	11

The sufficiency analysis proceeds by transforming a data-matrix in a truth table. Table 28 presents the truth table for model 3. In this table, each of the 116 countries available in our sample is assigned to one of the 128 (2^7) truth table rows. As one can note, there are more truth table rows than cases. Consequently, there are several truth table rows without

empirical information (logical reminders). Table 28 only presents the rows of a truth table containing at least one case.

If the model would have a consistency score of 1 we would not observe any contradictions (i.e., rows of a truth table containing cases with different scores than the outcome). However, contradictions are common when analysing empirical data. Table 28 displays some contradictions (for example, row 1), but overall there are few rows with contradictions and the rows containing contradictions are often generated by one case, i.e., it rarely occurs that a row in a truth table has an equal distribution of cases over the different scores of the outcome. The truth table reduces the complexity of 116 cases to 40 rows in a truth table.

The next step in the analysis of sufficiency is the minimization of truth table rows that display the presence of the outcome. When there are contradictions, researchers need to make a choice about which contradictory truth table rows should be included in the minimization process. We include rows of a truth table whose consistency is equal to or higher than 0.8, i.e., we include in the minimization process truth table rows where at least 80% of cases assigned to the row show the presence of the outcome. This means that, for example, that we include row 34 (for one case, the outcome is absent) in the minimization process.

Table 28: Truth table for sufficiency analysis - database Mosley FACB 2002

Row no.	DEMOC	RAT	CIVIL_I	AVG_R	GNI_UM	TRD	LEFT_EXEC	OUT	N	Consistency	cases Out=1	Cases Out=0
1	0	0	0	0	0	0	0	0	3	0.33	GNB	KEN, MAR
2	0	0	0	0	0	0	1	0	2	0.00		CHN, LAO
3	0	0	0	0	0	1	1	0	1	0.00		VNM
4	0	0	0	0	1	0	0	0	2	0.00		KWT, SAU
5	0	0	0	0	1	1	0	0	5	0.00		BHR, JOR, MYS, OMN, SGP
6	0	0	1	0	0	0	0	0	1	0.00	UGA	
7	0	1	0	0	0	0	0	0	9	0.11	BFA	AZE, CMR, DJI, GEO, GIN, HTI, MWI, TGO
8	0	1	0	0	0	0	1	0	3	0.00		MOZ, TZA, ZMB
9	0	1	0	0	0	1	1	0	2	0.00		AGO, KHM
10	0	1	0	0	1	0	0	0	1	0.00		EGY
11	0	1	0	0	1	1	0	0	2	0.00		BLR, SWZ
12	0	1	0	0	1	1	1	0	1	0.00		TUN
13	0	1	0	1	0	1	0	1	1	1.00	PNG	

14	0	1	0	1	1	1	0	0	1	0.00		KAZ
15	0	1	1	0	0	0	0	0	3	0.00		NGA, PAK, RWA
16	0	1	1	0	1	0	0	0	1	0.00		SYR
17	1	0	0	0	0	0	0	1	1	1.00	ARM	
18	1	0	0	0	1	0	0	0	4	0.00		SLV, KOR, MEX, USA
19	1	0	0	0	1	0	1	0	2	0.00		BRA, CMR
20	1	0	0	0	1	1	0	0	1	0.00		MUS
21	1	0	0	1	1	0	1	1	1	1.00	NZL	
22	1	0	1	0	0	0	0	0	1	0.00		IND
23	1	0	1	0	0	0	1	0	1	0.00		NPL
24	1	0	1	0	1	1	0	0	1	0.00		THA
25	1	1	0	0	0	0	0	0	5	0.40	MLI, NER	BGD, BEN, NIC
26	1	1	0	0	0	0	1	0	1	0.00		MDG
27	1	1	0	0	0	1	0	0	4	0.50	CPV, MNG	GHA, HND
28	1	1	0	0	0	1	1	0	2	0.00		GUY, MDA
29	1	1	0	0	1	0	0	0	0	0.00		ARG, BOL, BWA, CHL, CRI, GTM, JPN, PRY, URY, VEN
30	1	1	0	0	1	0	1	0	8	0.13	GBR	DOM, ECU, JAM, NAM, POL, ROU, ZAF
31	1	1	0	0	1	1	0	0	4	0.00		BGR, CYP, PAN, UKR
32	1	1	0	0	1	1	1	0	3	0.33	TTO	CZE, HUN
33	1	1	0	1	1	0	0	0	4	0.50	ITA, NOR	AUS, ESP
34	1	1	0	1	1	0	1	1	9	0.89	ALB, DNK, FIN, FRA, DEU, GRC, PRT, SWE	HRV
35	1	1	0	1	1	1	0	1	7	0.86	AUT, BEL, EST, IRL, LVA, MKD	LTU
36	1	1	0	1	1	1	1	1	2	1.00	NLD, SVN	
37	1	1	1	0	0	0	1	0	1	0.00		LKA
38	1	1	1	0	0	1	0	0	1	0.00		PHL
39	1	1	1	0	1	0	0	0	4	0.00		COL, ISR, PER, RUS
40	1	1	1	0	1	0	1	0	1	0.00		TUR

The minimization process results in the solution term below:

Model 3: DEMOC*civil_i*AVG_R*GNI_UM*trd*LEFT_EXEC +
 DEMOC*RAT*civil_i*AVG_R*GNI_UM*TRD +
 democ*RAT*civil_i*AVG_R*gni_um*TRD*left_exec +
 DEMOC*rat*civil_i*avg_r*gni_um*trd*left_exec => FACB protection

Note that, as in the analysis of necessary conditions, uppercase stands for the presence of the condition, and lowercase stands for the absence of the condition. The solution term has four combinations of conditions that lead to the outcome. Table 29 presents these combinations of conditions, together with consistency and coverage of each combination.

The first combination is the combination of conditions of democracy, absence of intense civil conflicts, neighbour's pressure, high level of economic development, low trade openness and presence of a left-wing executive. This combination includes New Zealand, Albania, Croatia, Denmark, Finland, France, Germany, Greece, Portugal, and Sweden. The sufficiency of these conditions is in line with theoretical expectations. The effect of trade is still not clear in the literature. Some authors maintain that more globalisation (in terms of trade openness) is associated with more protection of labour rights, while other authors affirm that trade openness is associated with less protection of labour rights. This result confirms the findings of Mosley (2011), who finds that trade openness causes more violations of FACB rights.

The second combination of conditions is the combination of the following conditions: the presence of democracy, the ratification of ILO conventions 87 and 98, the absence of intense civil conflicts, the presence of neighbour's pressure, high economic development level and high trade openness. This combination includes countries such as Austria, Belgium, Estonia, Ireland, Latvia, Lithuania, Macedonia, The Netherlands, and Slovenia. This combination of conditions is also in line with previous research and theoretical expectations. Different from the previous path to the outcome is that it also includes the ratification of ILO conventions. It is also interesting to note that, in this case, trade openness plays a positive role (confirms findings by Neumayer and De Soysa, 2006).

Table 29: Sufficient conditions for High Protection of FACB Rights in 2002

Combination of conditions	Cons.	Raw cover.	Unique cover.	Cases
1 DEMOC * civil_i * AVG_R * GNI_UM * trd * LEFT_EXEC	0.90	0.31	0.31	NZL, ALB, HRV, DNK, FIN, FRA, DEU, GRC, PRT, SWE
2 DEMOC * RAT * civil_i * AVG_R * GNI_UM * TRD	0.89	0.28	0.28	AUT, BEL, EST, IRL, LVA, LTU, MKD, NLD, SVN
3 democ * RAT * civil_i * AVG_R * gni_um * TRD * left_exec	1.00	0.03	0.03	PNG
4 DEMOC * rat * civil_i * avg_r * gni_um * trd * left_exec	1.00	0.03	0.03	ARM
Complete model	0.91	0.66		
Number of cases covered				21 of 29
Number of multiple-covered cases				0

The third and fourth combinations are odd ones out and constitute outliers, which do not correspond to previous research. The third combination is the combination of the following

conditions: the absence of democracy, the ratification of ILO conventions 87 and 98, the absence of intense civil conflicts, the presence of neighbour's pressure, low level of economic development and the absence of a left wing executive. This combination only applies to Papua New Guinea. This is an especially strange combination of conditions that does not make any sense, based upon previous research, and can be a result of measurement error in the outcome (for a discussion of possible measurement errors in the dependent variable see section 3.2). The fourth combination is the combination of the following conditions: the presence of democracy, absence of ratification of conventions 87 and 98, absence of intense civil conflicts, low neighbour's pressure, low level of development, absence of trade openness and absence of left-wing governments. This combination also only covers one country, namely Armenia (for a discussion of Armenia see also section 3.3.B on the necessary conditions analysis).

These findings confirm previous research to a large degree, but also complement it. This is one of the interesting characteristics of QCA: the possibility of finding mutually complementary combinations of conditions that result in a given outcome. In our case, instead of one single model that best fits our data, there are four different combinations that can produce the outcome; of these the first two ones are by far the most important and relevant. Also, the effect of a variable is not always the same (positive or negative), as is illustrated by the condition trade openness. This feature of QCA can help us understand why some correlation-based studies find a positive relationship between trade and labour rights, while other studies find the opposite relationship. Table 15 shows that high trade per GDP can be present but also absent in order to explain the protection of FACB rights.

2. Outcome: TUR (Trade Union Rights) 2012

For the sufficiency analysis of the 2012 TUR database we proceed in a similar fashion. A summary of different tested models for the outcome "high protection of TUR FACB rights in 2012" is presented in Table 30. The same criteria for model selection were used. Sixteen of these models meet the criteria for consistency and coverage. Similar to the previous analysis, several models display high complexity and, hence, are difficult to interpret. For the analysis of this dataset we choose a model with low complexity and a low number of conditions, which is model 1.

Table 30: Models for sufficiency analysis for Outcome on the basis of TUR FACB 2012

Model	Outcome	Conditions	Consistency	Coverage	Complexity	Conditions
1	TUR	DEMOC, RAT, CIVIL_I, GNI, AVG_R	0.91	0.53	9	5
2	TUR	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R, AVG_D, TRD, LEFT_EXEC, GDPPC_GR, FDI_F, POPM	0.97	0.83	293	11
3	TUR	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R, AVG_D, TRD, LEFT_EXEC, GDPPC_GR, FDI_F, POPM	1.00	0.72	271	11
4	TUR	DEMOC, RAT, CIVIL_I, GNI, AVG_R, AVG_D, TRD, LEFT	1.00	0.58	107	7
5	TUR	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R, TRD, LEFT_EXEC, GDPPC_GR, FDI_F	0.93	0.72	101	9
6	TUR	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R, TRD, GDPPC_GR, FDI_F	0.96	0.58	59	8
7	TUR	DEMOC, RAT, CIVIL, GNI, AVG_R, GDPPC_GR	0.95	0.50	23	6
8	TUR	DEMOC, RAT, CIVIL, GNI, TRD, AVG_R	0.91	0.56	19	6
9	TUR	DEMOC, RAT, CIVIL, GNI, TRD, AVG_R, FDI_F	0.91	0.58	46	7
10	TUR	DEMOC, RAT, CIVIL, GNI_UM, POPM, GDPPC_GR, AVG_R, AVG_D, TRD, LEFT_EXEC, GDP_GR, FDI_F, FDI_S	1.00	0.83	415	13
11	TUR	GNI, DEMOC, TRD, LEFT_EXEC, AVG_R, AVG_D	1.00	0.47	53	6
12	TUR	DEMOC, RAT, CIVIL, GNI, TRD, FDI_F	0.88	0.19	23	6
13	TUR	DEMOC, RAT, CIVIL, GNI, TRD, LEFT_EXEC	0.83	0.14	11	6
14	TUR	DEMOC, RAT, CIVIL, GNI, TRD, AVG_R, POP	0.95	0.53	63	7
15	TUR	DEMOC, RAT, CIVIL, GNI, TRD, AVG_R, GDP_GRM	0.95	0.50	23	7
16	TUR	DEMOC, RAT, CIVIL, GNI, GDP_GR	1.00	0.03	9	5
17	TUR	DEMOC, RAT, CIVIL, GNI, FDI_F, TRD	0.88	0.19	23	6
18	TUR	DEMOC, RAT, CIVIL, GNI, GDP_GR, FDI_FH, FDI_SH, TRD, LEFT_EXEC	1.00	0.28	139	9
19	TUR	DEMOC, RAT, CIVIL_I, AVG_RM, POP	0.86	0.53	17	5
20	TUR	DEMOC, RAT, CIVIL_I, AVG_R, GNI_UM, TRD, LEFT_EXEC	0.94	0.44	23	7
21	TUR	DEMOC, RAT, CIVIL_I, AVG_RM, AVG_D, GNI_UM, TRD, LEFT_EXEC, POP, GDP_GR, GDPPC_GR, FDI_F, FDI_S	1.00	0.86	455	13
22	TUR	DEMOC, RAT, CIVIL_I, AVG_R, AVG_D, GNI, TRD, LEFT_EXEC	1.00	0.56	105	8
23	TUR	DEMOC, RAT, CIVIL_I, AVG_R, AVG_D, GNI_UM, TRD, LEFT_EXEC	1.00	0.50	73	8
24	TUR	DEMOC, RAT, CIVIL_I, GNI_UM, AVG_R, GDP_GRM	0.90	0.50	11	6
25	TUR	DEMOC, RAT, CIVIL_I, AVG_R	0.87	0.56	7	4
26	TUR	DEMOC, RAT, CIVIL_I, GNI, GDP_GR, TRD, FDI_FH, FDI_SH, LEFT_EXEC)	1.00	0.28	139	9

The truth table for model 1 is shown in Table 31. As in the previous section, only truth table rows with consistency scores equal to or higher than 0.8 for the presence of the outcome are included in the minimization process.

Table 31: Truth table for sufficiency analysis (Model 1) - database TUR FACB 2012

Row no.	DEMOC	RAT	CIVIL_I	GNI	AVG_R	OUT	N	Consistency	Cases Y=1	Cases Y=0
1	0	0	0	0	0	0	4	0.00		CHN, JOR, MAR, VNM
2	0	0	0	1	0	0	6	0.00		BHR, OMN, QAT, SAU, SGP, ARE
3	0	1	0	0	0	0	13	0.15	ARM, BFA	KHM, CMR, ECU, EGY, MDG, MRT, MOZ, LKA, TZA, UGA, ZWE
4	0	1	0	1	0	0	4	0.25	AZE	KAZ, KWT, VEN
5	0	1	1	0	0	0	1	0.00		NGA
6	0	1	1	1	0	0	2	0.00		DZA, RUS
7	1	0	0	0	0	0	2	0.00		KEN, NPL
8	1	0	0	1	0	0	7	0.29	CAN, NZL	BRA, KOR, MYS, MEX, USA
9	1	0	1	0	0	0	2	0.00		IND, THA
10	1	1	0	0	0	0	25	0.24	GUY, JAM, MLI, MNG, NAM, ZAF	BGD, BEN, BOL, BDI, DOM, SLV, GEO, GHA, GTM, HND, IDN, LSO, MWI, MDA, NIC, PRY, PER, UKR, ZMB
11	1	1	0	0	1	0	2	0.50	MKD	ALB
12	1	1	0	1	0	0	16	0.25	CYP, SVK, TTO, URY	AUS, BWA, BGR, CHL, CRI, CZE, HUN, JPN, MUS, PAN, POL, ROU
13	1	1	0	1	1	1	21	0.91	AUT, BEL, HRV, DNK, EST, FIN, FRA, DEU, GRC, IRL, ITA, LVA, LUX, NLD, NOR, PRT, SVN, ESP, SWE	LTU, GBR
14	1	1	1	0	0	0	4	0.00		COL, PAK, PHL, SEN
15	1	1	1	1	0	0	2	0.50	ISR	TUR

After the minimization process, the solution term is:

Model 1: DEMOC*RAT*civil_i*GNI*AVG_R => TUR

It indicates that the combination of conditions the presence of democracy, ratification of ILO conventions 87 and 98, absence of intense civil conflicts, high development level, and high neighbour's pressure are sufficient for the outcome high protection of TUR FACB rights in 2012. This result is well aligned with theoretical expectations and the previous results, which indicate that all these conditions are associated with higher protection of FACB rights. It is also interesting to note that, as shown in table 10, four of these five conditions are also necessary for the outcome: democracy, ratification, absence of civil war, and

development level. This model typically covers the explanation of OECD countries such as Austria, Belgium, Croatia, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxemburg, The Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, and United Kingdom.

In addition to model 1, we analyse two additional models that fulfil the criteria and are theoretically interesting, namely models 8 and 9 (Tables 32 and 33). Model 8 adds one condition (trade), and model 9 adds two (trade and FDI flows). These models have the same consistency as model 1, but both have a bit higher coverage and complexity.

The truth table for model 8 is shown in Table 32. In this case, three truth table rows display the outcome: rows 52, 55, 56. After the minimization process, it results in the following solution term:

Model 8: DEMOC*RAT*civil_i*GNI*AVG_R + DEMOC*RAT*civil*TRD*AVG_R => TUR

Table 32: Truth table for sufficiency analysis (Model 8) - database TUR FACB 2012

Row no.	DEMOC	RAT	CIVIL_i	GNI	AVG_R	TRD	OUT	N	Consistency	Cases Y=1	Cases Y=0
1	0	0	0	0	0	0	0	2	0.00		CHN, MAR
2	0	0	0	0	0	1	0	2	0.00		JOR, VNM
5	0	0	0	1	0	0	0	2	0.00		SAU, ARE
6	0	0	0	1	0	1	0	4	0.00		BHR, OMN, QAT, SGP
17	0	1	0	0	0	0	0	11	0.18	ARM, BFA	CMR, ECU, EGY, MDG, MRT, LKA, TZA, UGA, ZWE
18	0	1	0	0	0	1	0	2	0.00		KHM, MOZ
21	0	1	0	1	0	0	0	3	0.33	AZE	KAZ, VEN
22	0	1	0	1	0	1	0	1	0.00		KWT
25	0	1	1	0	0	0	0	1	0.00		NGA
29	0	1	1	1	0	0	0	2	0.00		DZA, RUS
33	1	0	0	0	0	0	0	2	0.00		KEN, NPL
37	1	0	0	1	0	0	0	5	0.40	BRA, MEX, USA	CAN, NZL
38	1	0	0	1	0	1	0	2	0.00		KOR, MYS
41	1	0	1	0	0	0	0	1	0.00		IND
42	1	0	1	0	0	1	0	1	0.00		THA
49	1	1	0	0	0	0	0	15	0.20	JAM, MLI, ZAF	BGD, BEN, BOL, BDI, DOM, SLV, GHA, GTM, IDN, MWI, PER, ZMB
50	1	1	0	0	0	1	0	10	0.30	GUY, MNG, NAM	GEO, HND, LSO, MDA, NIC, PRY, UKR
51	1	1	0	0	1	0	0	1	0.00		ALB
52	1	1	0	0	1	1	1	1	1.00	MKD	

53	1	1	0	1	0	0	0	6	0.17	URY	AUS, CHL, CRI, JPN, ROU
54	1	1	0	1	0	1	0	10	0.30	CYP, SVK, TTO	BWA, BGR, CZE, HUN, MUS, PAN, POL
55	1	1	0	1	1	0	1	9	0.89	HRV, FIN, FRA, GRC, ITA, NOR, PRT, ESP	GBR
56	1	1	0	1	1	1	1	12	0.92	AUT, BEL, DNK, EST, DEU, IRL, LVA, LUX, NLD, SVN, SWE	LTU
57	1	1	1	0	0	0	0	4	0.00		COL, PAK, PHL, SEN
61	1	1	1	1	0	0	0	2	0.50	ISR	TUR

Source: created by the author using R QCA package (Dusa, 2007).

In this model, two combinations of conditions can produce the outcome. Firstly, the combination of **democracy, ratification of ILO conventions 87 and 98, absence of intense civil conflicts, high development level, and high neighbour's pressure are sufficient for the outcome high protection of TUR FACB rights in 2012**. This is exactly the same conjunct of conditions presented in model 1 and covers the same countries.

Additionally, the combination of conditions democracy, ratification of ILO conventions 87 and 98, absence of intense civil conflicts, high trade openness, and high neighbour's pressure are sufficient for high protection of TUR FACB rights in 2012. This combination of conditions is partially in line with some findings in the literature, since some authors argue trade openness can be associated with higher protection of rights (Neumayer and De Soysa, 2006).

Next, the truth table for model 9 is presented in Table 33. This model adds one condition: the flows of foreign direct investments (FDI_F). As one can see, five truth table rows show the outcome: rows 103, 109, 111, 112, and 114. After minimization of these rows, the solution term is:

Model 9: DEMOC*RAT*civil*GNI*AVG_R*fdi_f +
 DEMOC*RAT*civil*GNI*TRD*AVG_R +
 DEMOC*RAT*civil*TRD*AVG_R*fdi_f +
 DEMOC*RAT*CIVIL*gni*trd*avg_r*FDI_F => TUR

Table 33: Truth table for sufficiency analysis (Model 9) - database TUR FACB 2012

Row no.	DEMOC	RAT	CIVIL_I	GNI	AVG_R	TRD	FDI_F	OUT	N	Consistency	cases Y=1	Cases Y=0
1	0	0	0	0	0	0	0	0	2	0.00		CHN, MAR
4	0	0	0	0	0	1	1	0	2	0.00		JOR, VNM
9	0	0	0	1	0	0	0	0	2	0.00		SAU, ARE
11	0	0	0	1	0	1	0	0	3	0.00		BHR, OMN, QAT
12	0	0	0	1	0	1	1	0	1	0.00		SGP
33	0	1	0	0	0	0	0	0	7	0.14	BFA	CMR, ECU, EGY, LKA, UGA, ZWE
34	0	1	0	0	0	0	1	0	4	0.25	ARM	MDG, MRT, TZA
36	0	1	0	0	0	1	1	0	2	0.00		KHM, MOZ
41	0	1	0	1	0	0	0	0	2	0.50	AZE	VEN
42	0	1	0	1	0	0	1	0	1	0.00		KAZ
43	0	1	0	1	0	1	0	0	1	0.00		KWT
49	0	1	1	0	0	0	0	0	1	0.00		NGA
57	0	1	1	1	0	0	0	0	2	0.00		DZA, RUS
65	1	0	0	0	0	0	0	0	2	0.00		KEN, NPL
73	1	0	0	1	0	0	0	0	5	0.40	CAN, NZL	BRA, MEX, USA
75	1	0	0	1	0	1	0	0	2	0.00		KOR, MYS
81	1	0	1	0	0	0	0	0	1	0.00		IND
83	1	0	1	0	0	1	0	0	1	0.00		THA
97	1	1	0	0	0	0	0	0	12	0.17	JAM, ZAF	BGD, BEN, BOL, BDI, DOM, SLV, GTM, IDN, MWI, PER
98	1	1	0	0	0	0	1	0	2	0.00		GHA, ZMB
99	1	1	0	0	0	1	0	0	3	0.00		MDA, PRY, UKR
100	1	1	0	0	0	1	1	0	7	0.43	GUY, MNG, NAM	GEO, HND, LSO, NIC
102	1	1	0	0	1	0	1	0	1	0.00		ALB
103	1	1	0	0	1	1	0	1	1	1.00	MKD	
105	1	1	0	1	0	0	0	0	3	0.00		AUS, JPN, ROU
106	1	1	0	1	0	0	1	0	3	0.33	URY	CHL, CRI
107	1	1	0	1	0	1	0	0	7	0.14	SVK	BWA, BGR, CZE,

												HUN, MUS, POL
108	1	1	0	1	0	1	1	0	3	0.67	CYP, TTO	PAN
109	1	1	0	1	1	0	0	1	9	0.89	HRV, FIN, FRA, GRC, ITA, NOR, PRT, ESP	GBR
111	1	1	0	1	1	1	0	1	8	0.88	AUT, DNK, EST, DEU, NLD, SVN, SWE	LTU
112	1	1	0	1	1	1	1	1	4	1.00	BEL, IRL, LVA, LUX	
113	1	1	1	0	0	0	0	0	4	0.00		COL, PAK, PHL, SEN
114	1	1	1	0	0	0	1	1	1	1.00	MLI	
121	1	1	1	1	0	0	0	0	2	0.50	ISR	TUR

The solution term has four combinations of conditions that lead to the outcome. Table 34 present these combinations of conditions, together with consistency and coverage of each combination. The first combination of conditions that leads to the outcome is the combination of conditions democracy, ratification of ILO conventions 87 and 98, absence of intense civil conflicts, high development level, high neighbour's pressure, and small flows of FDI. This combination has a consistency of 0.88 and coverage of 0.42, including 17 countries: Croatia, Finland, France, Greece, Italy, Norway, Portugal, Spain, United Kingdom, Austria, Denmark, Estonia, Germany, Lithuania, The Netherlands, Slovenia, and Sweden. Contrary to theoretical expectations, FDI flows to not correspond to higher levels of protection of labour rights.

Secondly, the combination of **democracy, ratification of ILO conventions 87 and 98, absence of intense civil conflicts, high development level, high neighbour's pressure, and high trade openness is sufficient for the outcome to be present**. This combination has a consistency a bit higher and coverage of 0.31, includes the following countries: Austria, Denmark Estonia, Germany, Lithuania, The Netherlands, Slovenia, Sweden, Belgium, Ireland, Latvia, and Luxembourg. The last four countries are covered only by this combination. This combination of conditions is well aligned with our expectations, since the presence/absence of all these conditions are in line with the literature.

Next, the combination of conditions democracy, ratification of ILO conventions 87 and 98, absence of intense civil conflicts, high neighbour's pressure, high trade openness, and small flows of FDI is sufficient for high protection of FACB rights in 2012. Similar to the first combination of conditions, only small flows of FDI are not aligned with theoretical expectations. This combination has a consistency of 0.89 and coverage of 0.22, including 9 countries. However, among these countries, only Macedonia is not covered by the two previous combinations, leading to a small, unique coverage (0.03).

Table 34: Sufficient conditions for High Protection of FACB Rights in 2002 – Model 9

Combination of conditions	Cons.	Raw cover.	Unique cover.	Cases
DEMOC*RAT*civil*GNI*AVG_R*fdi_f	0.88	0.42	0.22	HRV, FIN, FRA, GRC, ITA, NOR, PRT, ESP, GBR, AUT, DNK, EST, DEU, LTU, NLD, SVN, SWE
DEMOC*RAT*civil*GNI*TRD*AVG_R	0.92	0.31	0.11	AUT, DNK, EST, DEU, LTU, NLD, SVN, SWE, BEL, IRL, LVA, LUX
DEMOC*RAT*civil*TRD*AVG_R*fdi_f	0.89	0.22	0.03	MKD, AUT, DNK, EST, DEU, LTU, NLD, SVN, SWE
DEMOC*RAT*CIVIL*gni*trd*avg_r*FDI_F	1.00	0.03	0.03	MLI
Complete model	0.91	0.58		
Number of cases covered				23 of 29
Number of multiple-covered cases				8

Source: created by the author using R QCA package (Dusa, 2007).

Lastly, the outcome is also achieved through the combination of democracy, ratification of ILO conventions 87 and 98, the presence of civil conflicts, low level of development, low neighbour's pressure, low trade openness, and high FDI flows. This combination of conditions is not well aligned with the literature, since higher development level and higher neighbour's pressure are expected to be associated with higher protection of rights. Although it has a perfect consistency (1.00), it only covers one outlier case, which is Mali. This path needs further investigation.

Comparing these three models that present sufficient conditions for the outcome high protection of FACB rights in 2012, it is interesting to note the presence of necessary conditions for the outcome, discussed in section 3.3.B, democracy, ratification of ILO conventions, absence of intense civil conflicts, and higher level of development. Two of these necessary conditions (democracy and ratification) are part of all combinations of conditions that lead to the outcome. Absence of civil conflicts is not present in only one combination of conditions, which also covers only one case. High development level is also part of sufficient solutions in 4 out of 7 combination of conditions. Adding to these necessary conditions, neighbour's pressure also plays an important role. Similar to civil conflicts, it is not part of only one combination of conditions that cover only one country. These findings reinforce the importance of these conditions for the protection of labour rights. Other conditions discussed in the literature, such as trade openness and FDI flows, are also relevant, but depend on the context. We explore further the role of trade indicators in the next section since this has received increased attention in the literature.

D. Further Analysis of the Importance of Trade related factors

In the selection and the analysis of the ‘best fit’ model trade (openness and investment) indicators play a less significant role. However, in the academic literature, significant attention has been devoted to the relationship between economic liberalization, on the one hand, and the protection of labour rights, on the other hand. As Mosley and others have argued, trade openness and the need to participate in an increasingly global supply-chain world might put downward pressure on the protection of labour rights. Over the last half century, the growth of international trade has been spectacular. With an almost 30-fold increase over 50 years, it has truly transnationalized economic activities (Hoekman, 2014). These developments might generate downward pressures on the protection of labour rights.

The conventional argument holds that higher labour standards in general will inhibit competitiveness and growth due to the increase of costs related to the provision of labour and the reduction of flexibility in the labour market. Several dynamics play out here. At the start, labour standards may increase cost and lead to decreased competitiveness (and export). As a result, manufacturing might move from one country to another due to the fact that companies will source from countries with the lowest level of costs. Countries might be played out against one another not to enforce labour standards, especially in a context of short-term ownership and mobility of factories. Within several manufacturing industries some factories, or capital sustaining them, are highly mobile, searching constantly for locations with the lowest input costs (Levi et al., 2013). Hence, as Levi et al., note *‘When challenged by workers forming unions or pressured by MNCs trying to induce compliance with private regulatory schemes, many factories will simply shut their doors without paying severance to workers and re-locate’* (2013, p. 22).

These dynamics provide incentives for countries to not strictly enforce standards, especially in relation to freedom of association and collective bargaining, in order to attract business opportunities. As Levi et al. (2013) identify, states fail to comply with labour standards for at least three interrelated reasons. The first is opposition by state actors to enforce compliance with labour standards. The state may oppose compliance because it would lose some measure of authority, be obliged to expend resources, or no longer be able to promote certain export sectors by ignoring labour standards violations. The second explanation is opposition by private actors who have captured state policy: domestic and multinational businesses may oppose compliance to reduce costs and preserve flexibility. Finally, the state may lack the capacity to implement; many developing countries face ‘a severe dearth of the requisite scientific, technical, bureaucratic, and financial wherewithal to build effective domestic enforcement systems’ (Chayes and Chayes, 1993, p. 194).

Hence, countries may face strong incentives not to enforce labour rights in order to promote export industries.

However, it has also been argued that trade and investment each impact differently the protection of labour rights in the host country (Mosley 2011, p. 237). Foreign Direct Investment (FDI) is hypothesized to positively affect labour rights by taking into account a wide range of considerations other than production costs, standardizing 'good labor practices' and pressuring host governments to safeguard these standards. However, these results are not conclusive. Blanton and Blanton (2012), for example, concluded that 'while [upholding] labor rights is negatively related to total FDI, as well as investment in the services, it is positively related to investment in manufacturing sectors'. There are three ways through which directly owned production (FDI) could enhance the capacity of workers to demand improvements in their collective rights. First of all, firms may urge governments to improve rule of law and protect internationally agreed upon rights, since stronger rule of law lowers investment risks for firms (Mosley, 2011, p. 52). Second, as firms move to the developing world, they try to attract the best workers. Given that firms are competing with local firms to hire skilled workers, they may want to avoid the competitive disadvantage that would result from a reputation for repressing labour rights (Flanagan, 2006). Third, foreign multinationals often transfer new technologies and procedures, including procedures on labour rights, to host economies. These procedures are initially used in the international firms but then often diffuse to a broader set of firms within the economy. Firms also tend to standardize procedures across their facilities for efficiency reasons. Standardization of management practices allows firms to limit the fixed costs associated with operating subsidiaries abroad (Mosley, 2011, p. 55).

In order to further explore the relevance of trade and investment, we analyse models taking these indicators on board. We analyse the model for the 2002 dataset created by Mosley and introduce a new calibration for the outcome (high protection of FACB rights). The previous sections analysed the models based on a 'standard' calibration in which the score on the outcome is automatically transformed into a '1' when it reaches a certain threshold (see section 3.3.A.1). The standard calibration results in a rather limited number of cases on which the outcome is present (high-level of FACB protection) (29 cases). This calibration was strict in the sense of using a high threshold for full-membership. In addition, we created another threshold that is lower in order to include more cases in the analysis. This calibration was done by inspecting the individual cases and the scores they generated according to different calibrations of the outcome. In this case, we used two types of calibration, the high-threshold one presented above and a threshold set on the mean of the distribution for all FACB indicators. Hence, we applied the high and mean threshold for FACB in general, FACB law and FACB practice. Then, we compared all scores (all 0s and 1s) and scored the FACB FRAME outcome following the rule that if a country scored 1 on all indicators, it received a score of 1 and a 0 if it scored a 0 on all six indicators. For the doubt cases in between we used the 'majority' rule. If a country scored 1 on 4 (out of 6) or more

indicators it received a 1. If it scored 0 on 4 or more indicators it received a 0. Following this calibration, we coded 42 countries where the outcome is present. On the basis of this data-matrix we also conducted a truth table analysis.

The model we use to analyse the data includes, on the one hand, key components such as economic development (GNI, GDP_GR), the presence or absence of democracy and left-wing executives, the presence or absence of intense civil conflict, and the ratification of the core conventions 87 and 98. On the other hand, we include a measure of trade openness as well as indicators for FDI, both stocks and flows. FDI stocks better capture accumulated FDI over the years while the flows give an indication of the current incoming FDI flows.

Hence the tested model includes the following variables:

v1:GNI v2:GDP_GR v3:DEMOC v4:TRD v5:FDI_FH v6:FDI_SH v7:CIVIL_I
v8: LEFT_EXEC v9: RAT

The truth table for this model is presented in table 35.

Table 35: Truth Table Trade and Investment Analysis (Mosley – 2002 database)

v1	v2	v3	v4	v5	v6	v7	v8	v9	O	Id
0	1	1	0	0	0	0	1	1	0	Albania,Ecuador,Madagascar,Romania
0	0	0	1	1	1	0	1	1	0	Angola
0	0	1	0	0	0	0	0	1	0	Argentina,Botswana,Costa Rica,Guatemala,Nicaragua,Paraguay,Uruguay,Venezuela
0	1	1	0	0	0	0	0	0	1	Armenia
1	0	1	0	0	0	0	0	1	1	Australia,Italy,Japan,Norway,Spain
1	0	1	1	0	0	0	0	1	1	Austria
0	1	0	0	0	1	0	0	1	0	Azerbaijan
1	1	0	1	0	1	0	0	0	0	Bahrain
0	1	1	0	0	0	0	0	1	0	Bangladesh,Benin,Niger
0	1	0	1	0	0	0	0	1	0	Belarus
1	0	1	1	1	1	0	0	1	1	Belgium
0	0	1	0	1	1	0	0	1	0	Bolivia
0	0	1	0	0	0	0	1	0	0	Brazil
0	0	1	1	1	0	0	0	1	C	Bulgaria,Honduras,Macedonia. the former Yugoslav Republic of,Mongolia
0	1	0	0	0	0	0	0	1	C	Burkina Faso,Cameroon,Georgia
0	1	0	1	0	0	0	1	1	0	Cambodia
1	0	1	0	0	0	0	1	0	1	Canada,New Zealand
0	0	1	1	0	1	0	0	1	C	Cape Verde,Panama
1	0	1	0	1	1	0	0	1	1	Chile
0	1	0	0	0	0	0	1	0	0	China,Lao People's Democratic Republic
0	0	1	0	0	0	1	0	1	0	Colombia,Peru

1	0	1	0	1	0	0	1	1	1	Croatia,Denmark
1	0	1	1	1	0	0	0	1	1	Cyprus
1	0	1	1	1	0	0	1	1	0	Czech Republic
0	0	0	0	0	0	0	0	1	0	Djibouti,Egypt,Guinea,Haiti,Malawi,Togo
0	0	1	0	0	0	0	1	1	0	Dominican Republic
0	0	1	0	0	0	0	0	0	0	El Salvador,Mexico
1	1	1	1	1	1	0	0	1	1	Estonia,Ireland
1	0	1	0	0	0	0	1	1	1	Finland,France,Germany,Greece,Portugal,Sweden,United Kingdom
0	0	1	1	0	0	0	0	1	0	Ghana
0	0	0	0	0	0	0	0	0	C	Guinea-Bissau,Kenya
0	0	1	1	0	1	0	1	1	0	Guyana
1	0	1	1	1	1	0	1	1	1	Hungary,Netherlands,Trinidad and Tobago
0	1	1	0	0	0	1	0	0	0	India
1	0	1	0	0	0	1	0	1	1	Israel
0	0	1	0	1	0	0	1	1	C	Jamaica,Namibia,South Africa
0	1	0	1	0	0	0	0	0	0	Jordan
0	1	0	1	1	1	0	0	1	0	Kazakhstan
1	0	1	0	0	0	0	0	0	C	Korea. Republic of,United States
1	0	0	0	0	0	0	0	0	0	Kuwait,Saudi Arabia
0	1	1	1	0	0	0	0	1	0	Latvia,Ukraine
1	1	1	1	0	0	0	0	1	1	Lithuania
0	0	0	1	0	0	0	0	0	0	Malaysia
0	1	1	0	1	0	0	0	1	1	Mali
0	0	1	1	0	0	0	0	0	0	Mauritius
0	1	1	1	0	0	0	1	1	1	Moldova
0	1	0	0	1	0	0	0	0	0	Morocco
0	1	0	0	1	0	0	1	1	0	Mozambique
0	1	1	0	0	0	1	1	0	0	Nepal
0	0	0	0	0	1	1	0	1	0	Nigeria
1	1	0	1	0	0	0	0	0	0	Oman
0	0	0	0	0	0	1	0	1	0	Pakistan
0	0	0	1	0	0	0	0	1	C	Papua New Guinea,Swaziland
0	0	1	1	0	0	1	0	1	0	Philippines
0	1	1	0	0	0	1	0	1	0	Russian Federation
0	1	0	0	0	0	1	0	1	0	Rwanda,Syrian Arab Republic
1	0	0	1	1	1	0	0	0	0	Singapore
1	0	1	1	0	0	0	1	1	1	Slovenia
0	0	1	0	0	0	1	1	1	0	Sri Lanka,Turkey
0	1	0	0	0	0	0	1	1	0	Tanzania. United Republic of
0	0	1	1	0	0	1	0	0	0	Thailand
0	1	0	1	0	1	0	1	1	1	Tunisia
0	1	0	0	0	0	1	0	0	0	Uganda
0	1	0	1	0	1	0	1	0	0	Viet Nam
0	1	0	0	0	1	0	1	1	0	Zambia

17 rows of the truth table display cases where the outcome is present. Applying logic minimization, we can 'reduce' this complexity to 13 paths to the outcome

1. GNI * gdp_gr * DEMOC * fdi_fh * fdi_sh * civil_i * RAT +
2. GNI * gdp_gr * DEMOC * trd * fdi_fh * fdi_sh * left_exec * RAT +
3. GNI * gdp_gr * DEMOC * TRD * fdi_sh * civil_i * left_exec * RAT +
4. GNI * DEMOC * TRD * fdi_fh * fdi_sh * civil_i * left_exec * RAT +
5. GNI * gdp_gr * DEMOC * FDI_FH * FDI_SH * civil_i * left_exec * RAT +
6. GNI * DEMOC * TRD * FDI_FH * FDI_SH * civil_i * left_exec * RAT +
7. GNI * gdp_gr * DEMOC * TRD * FDI_FH * FDI_SH * civil_i * RAT +
8. GNI * gdp_gr * DEMOC * trd * fdi_fh * fdi_sh * civil_i * LEFT_EXEC +
9. GNI * gdp_gr * DEMOC * trd * fdi_sh * civil_i * LEFT_EXEC * RAT +
10. gni * GDP_GR * DEMOC * trd * fdi_fh * fdi_sh * civil_i * left_exec * rat +
11. gni * GDP_GR * DEMOC * trd * FDI_FH * fdi_sh * civil_i * left_exec * RAT +
12. gni * GDP_GR * DEMOC * TRD * fdi_fh * fdi_sh * civil_i * LEFT_EXEC * RAT +
13. gni * GDP_GR * democ * TRD * fdi_fh * FDI_SH * civil_i * LEFT_EXEC * RAT

This extensive model generates complex results in terms of the number of paths to the outcome. The truth table contains 17 rows in which the outcome (high protection of FACB) is present. After logical minimization, we reduce the complexity to 13 rows explaining the 40 cases. Overall, the different paths show that high levels of economic development, the presence of democracy and having ratified the relevant conventions are associated with higher levels of protection. Concerning economic development, 9 out of 13 paths contain cases where high economic development measured by GDP while the other four were characterized by strong economic growth (GDP growth). In almost all paths (except one) to the outcome, democracy and ratification are present.

When we specifically focus on the trade and investment indicators we find neither clear evidence that the presence of trade-openness corresponds to the absence of the outcome, nor that the absence of trade openness would correspond to the presence of better protection. Similarly, high level of investment flows and stocks do not necessarily lead to a better protection. The presence and absence of trade openness and the presence and absence of investment are present in paths leading to the outcome. If there were a strong effect, we would expect a pattern close to the one observed with democracy, ratification and level of economic development.

We can further explore this by testing smaller models with a specific focus on the trade and investment indicators. The advantage of this is that it allows for more parsimonious results

in terms of fewer paths to an outcome. A drawback is that consistency decreases and contradictions become more omnipresent.

Following the above analysis, one can identify five components of factors playing a role. Component 1 relates to overall economic development measured both in current terms (GNI) as well as in terms of growth (GDP growth). Component 2 relates to trade factors in terms of trade openness and/or inflowing investment. Component 3 relates to political factors such as the presence of democracy as well as the ideology of the executive. Component 4 concerns security issues in terms of conflict and component 5 refers to international commitments and the ratification of treaties.

Subsequently, we test several models focusing on these components with a maximum of five conditions. Ratification, democracy and civil conflict are included in all models. For the trade component, we alternate between measures of trade openness and investment. For economic components, we alternate between growth and current levels of development.

We will not present the truth tables for all models. However, it is interesting to note that for these models the truth tables generate several contradictions, as could be expected; but, closer inspection of the truth tables reveal that these contradictions are most of the time only generated by a few cases.

Below we present the truth table for the model on high level of economic development with high stocks of foreign direct investment. The factors included are GNI, DEMOC, FDI_SH, CIVIL_I and RAT. We also present for each row of the truth table the number of cases corresponding to outcome 1 and the number of cases corresponding to outcome 0. Rows 1, 3, 5, 7, 8, 9 and 10 are contradictory rows. However, for example in row 1, there are only two cases generating the contradictions out of a total of 23. Similarly in row 7, 10 cases display the outcome, while the outcome is absent for only one case. This indicates that these models fit relatively well.

Table 36: Truth Table Economic Development and Investment Flows (Mosley database)

	GNI	DEMOC	FDI_SH	Civil_I	RAT	Outcome	
						1	0
1	0	1	0	0	1	2	21
2	0	0	1	0	1		3
3	0	1	0	0	0	1	4
4	1	1	0	0	1	12	
5	0	0	0	0	1	13	4
6	1	0	0	0	0		4
7	1	1	1	0	1	10	1
8	0	1	1	0	1	5	4
9	1	1	0	0	0	3	1
10	0	0	0	0	0	1	8
11	0	1	0	1	1		7
12	0	1	0	1	0		3

13	1	1	0	1	1	1	
14	0	0	1	0	0		1
15	0	0	0	1	1		5
16	1	0	1	0	0		1
17	0	0	0	1	0		1

For the four models, we analyse the truth table and generate the prime implicants, those factors relevant for the presence and the absence of the outcome after minimization. We include an analysis of the absence of the outcome since we are interested in disentangling the effect of investment and trade. Mosley (2011) found positive significant effects of FDI flows and negative significant effects of trade openness on the protection of FACB rights. According to correlation logic, this also implies the reverse, namely that the absence of FDI contributes to less protection and the absence of trade openness might contribute to a better protection of FACB-rights. Since QCA does not assume symmetry, we analyse both the presence as well as the absence of the outcome. Model 1 shows, as expected, that democracy, ratification and absence of conflict play a role, but high levels of FDI are absent both in paths leading to the presence of the outcome as well as in paths leading to the absence of the outcome. A similar result can be observed in Model 3, which also focuses on investment and FDI. Models 2 and 4 present the same findings for trade-openness. These results confirm that there is indeed no symmetry in the effect of trade and investment. High levels of investment neither necessarily lead to better protection, nor low levels lead to less protection. The absence of high levels of investment can both lead to the presence as well as the absence of the outcome.

Model 1: High level of economic development with investment flows

v1: GNI v2: DEMOC v3: FDI_SH v4: CIVIL_I v5: RAT

Presence of outcome: DEMOC * civil_i * RAT + GNI * DEMOC * fdi_sh * RAT

Absence of outcome: gni * fdi_sh + gni * democ * RAT + democ * civil_i * rat

Model 2: High level of development with trade openness

v1: GNI v2: DEMOC v3: TRD v4: CIVIL_I v5: RAT

Presence of outcome: GNI * DEMOC * trd * RAT

Absence of outcome: gni * trd + gni * DEMOC + democ * civil_i * rat

Model 3: high level of economic growth with high level of investment

v1: GDP_GRH v2: DEMOC v3: FDI_SH v4: CIVIL_I v5: RAT

Presence: $DEMOC * fdi_sh * civil_i + DEMOC * civil_i * RAT$

Absence: $democ * civil_i + gdp_grh * fdi_sh + gdp_grh * democ * RAT + democ * fdi_sh * RAT$

Model 4: high level of economic growth with trade openness

v1: GDP_GRH v2: DEMOC v3: TRD v4: CIVIL_I v5: RAT

Presence of outcome: $DEMOC * trd * civil_i$

Absence of outcome: $democ * civil_i + gdp_grh * DEMOC + gdp_grh * trd + democ * trd * RAT$

These results suggest that investment and trade can have an effect on the protection of FACB rights, but this is highly contingent on contextual factors and interaction with other different factors. The idea that economic globalisation, measured in terms of trade openness and investment, generates in general either a positive or a negative impact on the protection of FACB rights is not supported by our analysis. In contrast to some political factors, such as the presence of democracy and the absence of civil conflict, economic factors do not have a clearly identified positive or negative effect. In fact, they can have both. In this respect, our results support studies that find a negative effect as well as those that find a positive effect.

Part 4: Discussion and Conclusion

A. The relevance of FACB rights

The protection of human rights is influenced by many different factors. The different reports in Workpackage 2 detail these factors *in extenso* and discuss how they influence the protection of human rights. This report adds to these insights by aiming to understand on an aggregate level, across countries, which factors contribute to the protection of human rights on the basis of an analysis of quantitative data. Indeed, the protection of human rights varies between countries. Many authors have sought to understand this variation by analysing a significant number of countries using large datasets and statistical techniques. These studies aim to identify which explanatory factors (independent variables) explain the variation between countries concerning the protection of human rights (dependent variable). Typically, they aim to assess the impact of one (or two) independent variable on the dependent variable (net-effect of one variable-oriented research strategy). In this type of analysis, the specific countries are not of primary interest. Researchers are interested in looking at how variables correlate across a large set of countries. They typically identify a dependent variable and a series of independent explanatory variables. This report builds on this research but also aims to complement existing studies by using different analytic techniques that are more grounded in specific case studies/observations. We use another analytic technique, Qualitative Comparative Analysis, which can add to the existing studies based on standard statistical techniques. In Part 1, we discussed the more general quantitative approach towards factors, while in Part 2, we introduced this new technique.

We argued, in Part 1, that in order to properly understand the different factors influencing the protection of rights, one has to focus on specific rights. Hence, this report narrowed the scope to a specific set of human rights, namely the protection of the rights to freedom of association and the right to collective bargaining. These rights were chosen for several reasons.

First of all, the rights to freedom of association and collective bargaining (FACB) are key labour/human rights. In an era of increased attention to stakeholder mobilisation and engagement, they constitute one of the cornerstones of national and international democracy. This is recognized through many different international cooperation instruments such as *inter alia* international conventions, regional human rights treaties, and trade agreements. We briefly discussed this in section 3.1. In unilateral trade policies such as the GSP scheme, these rights also feature prominently (see European Commission, 2016). Throughout all these instruments and bodies, FACB rights are recognized and pursued as key universal rights.

Secondly, these rights have been studied extensively and a significant amount of data is available. This report builds on existing data and adds new data. One of the reasons for this research attention results from the fact that many researchers are interested in the link between economic globalisation – in terms of increased trade and a transformation to global supply chains – on the one hand, and social protection, on the other hand. This topic generated significant research and data. As a result, we could build on existing data and models in order to better understand which factors contribute to better protection of specific rights.

Third, FACB-rights also feature prominently in another debate that has exploded over the last three or four years, namely the debate on rising inequality. A recent article by McKibben in the *New York Review of Books* (August 2015) stated that the *“data show right now that inequality is reaching almost absurd heights: for instance, the six heirs to the Walmart fortune have more assets than the bottom 42 percent of all Americans combined”*. The most extensive and discussed treatment of inequality is provided Thomas Piketty (2014) who shows that the increase in wealth based on financial assets far outpaces the accumulation of wealth through labour. Hence, part of these enormous inequalities are explained by the enormous profits of economic activity, which only go to a happy few. If we prefer less inequality, we have to find mechanisms through which to redistribute this wealth. One key mechanism to achieve this is via wages based on productive labour. If profits are transformed into higher wages of workers, redistribution occurs, which might result in less inequality. We tend to assume that an increase in productivity, and profits, automatically leads to an increase in workers’ wages. For example, the final August issue of the *Economist* (August 2015, p. 12) on the migration issue claims that by *“moving to Europe [...] they [migrants] can become several times more productive, and their wages rise accordingly.”* However, the link between higher productivity and higher wages is not an automatic mechanism. A recent paper by Dean (2015) shows that the degree to which wages increase along with productivity depends on the domestic institutions that protect labour rights to act collectively. Dean’s paper tests the relationship between worker productivity and wages by analysing data from twenty-eight manufacturing industries, in 117 countries, from 1986 to 2002. The results demonstrate that the degree to which an increase in worker productivity leads to an increase in wages depends on a country’s level of protection for labour rights, especially freedom of association and collective bargaining (i.e., FACB rights). Hence, FACB rights play a potentially important role in the debate on inequality.

Finally, as Pasture (2010) notes, the rights of freedom of association and collective bargaining are also one of the most contested global values and perhaps the most difficult to uphold. Indeed, our longitudinal analysis (see section 3.2) of the protection of FACB rights shows a downward trend in their protection, confirming Mosley’s earlier findings (2011). We offer several possible explanations for this observation, including explanations

related to the data-collection procedures. However, most importantly, we focus on factors that might explain variation in the protection of these rights.

B. Discussion of Substantive Findings

In this study we used the qualitative comparative analysis (QCA) approach to figure out necessary and sufficient conditions for the outcome “high protection of FACB rights” in two periods of time: 2002 and 2012. Data on violations of FACB rights around the world are taken from three distinct sources: Mosley (2011), which provides data for 2002; Anner and Sari (2015), called TUR, which provides data for 2012; and Marx, Soares and Van Acker (2015), called FRAME, which also includes data for 2012. These sources provide measures of overall FACB rights, FACB rights in law, and FACB rights in practice.

The analysis considered several explanatory conditions/factors (variables) identified in the literature (see part 1.2.B). Data for these conditions were collected from different sources, summarized in Table 9. Following the first step of QCA analysis, outcomes and explanatory conditions were calibrated into sets, a process that transforms the original scores into dichotomies representing membership (1) or non-membership (0) in a given set of countries, e.g., set of high developed countries, set of democratic countries, etc. A list of these sets is shown in Table 22.

After calibration, an analysis of necessary conditions for the outcome was performed. In this analysis, 12 outcomes were investigated: high protection of FACB rights overall, in law and in practice, in 2002 and 2012; and protection of FACB rights (overall, in law, and in practice) above the mean, in 2002 and 2012. Results presented in section 3.3.B reveal that three necessary conditions are identified for high protection of FACB rights to occur. First, absence of civil conflicts (mainly intense conflicts) is necessary for the protection of FACB rights for all 12 outcomes studied. This result confirms previous studies indicating that civil conflicts inhibit the protection of FACB and other human rights. This result is extremely robust.

Next, ratification of ILO conventions 87 and 98 is also a necessary condition in most of the cases. Ratification of international agreements designed to protect human rights is expected to improve standards, but its effect is not clear-cut in the literature (see Simmons, 2009). This finding helps to elucidate its importance. In addition, it is worth noting that ratification is a necessary condition for the protection of FACB rights overall and in law, but not so for the protection of these rights in practice. This result shows that ratification is not a trivial necessary condition and also indicates the presence of so-called false positives (i.e., countries who ratify conventions without the intention of enforcing them [Simmons,

2009]). It might also show that it is easier for a 'pro-rights' government to change the law than to guarantee compliance.

Lastly, democracy is a strong necessary condition for rights overall, in both years, and rights in law in 2012. This result also confirms previous studies that present evidence of the positive effect democracy has on promoting human rights. However, contrary to the expectations, democracy is not necessary for rights in practice, which might be related to the difficulty of enforcing compliance with these rights (i.e., the compliance gap).

These findings are important from a policy perspective since they provide clear evidence in support of democracy promotion programmes and also making ratification of treaties mandatory for international cooperation, as is done in the GSP+-scheme (see Beke and Hachez, 2015). These necessary conditions are not sufficient for better protection of FACB rights but are important factors contributing to better protection. Further pursuit of policy initiatives that promote democracy (and aspects related to the promotion of democracy), tackle civil conflict and require ratification of treaties is highly recommended from this perspective.

After the analysis of necessary conditions, the next step in our QCA analysis was the investigation of conditions that (together) are sufficient for reaching high protection of FACB rights (i.e., different paths to the outcome). In this case, thousands of different models are candidates for explaining the outcome. Among several models that were investigated, four models (Model 1 for 2002 and 3 for 2012) were selected based on theoretical expectations and measures of consistency, coverage and complexity of each model. Results discussed in section 3.3.C and 3.3.D show that five conditions are sufficient for reaching high protection of FACB rights: democracy, ratification of ILO conventions, absence of civil conflicts, the level of economic development and pressure from neighbouring countries. These conditions are part of the solution term in the four models which were used to identify the different paths leading to the outcome. These results are well aligned with evidence presented by previous research. These are, according to the results presented above, the core conditions associated with the outcome.

Additionally, other conditions, such as left-wing executive, trade openness and flows of foreign investments are also relevant, but their effect depends on the context. In other words, it so happens that in one conjunction leading to the outcome, one condition is present, and in another conjunction, the same condition is absent. Taking trade openness as an example, high trade openness is present in the first conjunction of conditions that lead to high protection of FACB rights in 2002, but in a second conjunction of conditions leading to the same outcome in 2012, it is the absence of trade openness that contributes to the outcome. Situations like this are characteristic of QCA analysis. Instead of one single model that best fits the data and shows the average effect of each explanatory variable on the outcome, QCA presents different paths, or different combinations of conditions that together can lead to the outcome. In one combination, a condition such as high trade

openness is present in the path to the outcome, in conjunction with other conditions. In another combination, the absence of high trade openness in combination with other conditions leads to the presence of the outcome (i.e., *multiple conjunctural causation*). This particular aspect of QCA can help us to understand why some correlation based studies find a positive relationship between trade and investment, on the one hand, and the protection of labour rights, on the other hand, while other studies find the opposite relationship. In the final part of section 3.3.D, we analysed in-depth this relationship between economic indicators and protection of FACB rights. These results indicate that one cannot draw any general conclusions, but that they are highly dependent on the context.

C. Discussion of QCA as a tool for human rights analysis

The application of QCA clearly has some advantages. It allows for an analysis of set-theoretic relations and the identification of non-trivial necessary conditions. It also clearly allows for the analysis of multiple conjunctural causation, which generates several interesting insights. First of all, it is a combination of factors that produce an outcome. We found different paths (combination of factors) that generate a high protection of FACB rights. Second, the same factor, such as the presence of high trade openness, can generate different outcomes (both the presence of high protection of FACB rights as well as the absence of high protection of FACB rights). Third, the application of QCA reveals the presence of equifinality, namely the fact that different paths, each consisting of different combinations of conditions, lead to the same outcome. We discussed those different paths in part 3.3.C of this study. Finally, the application of QCA also shows the importance of asymmetric causality, which implies that the presence and absence of the outcome have different explanations. We mainly concentrated on the explanation of the presence of the outcome, but in the last section of Part 3 we also presented the different paths leading to the absence of the outcome, showing that they are distinct paths that are not symmetrical with the paths leading to the outcome. Asymmetry also implies that the presence and absence of a factor produces different outcomes, as is illustrated by the economic factors of trade openness and investment. Finally, the fact that one can trace back every result to cases is a distinctive advantage, since it allows for the identification of cases covered by 'surprising' results.

The application of QCA also has some drawbacks. First of all, results overall, remain quite complex, especially when we use models with several explanatory factors. We achieve some level of parsimony, but still, there are several paths to an outcome. A second issue is that QCA is sensitive to individual cases, since the inclusion or exclusion of a *single* case can modify the results of an analysis (see also Goldthorpe, 1997). This argument needs to be qualified in several respects. To point, the *inclusion* of new cases is not problematic. Two

situations can occur. First, a case is added to a row in a truth table that already contains other empirical cases. This will result in the fact that this casual path explains more cases and has a higher coverage. Second, the inclusion of new cases can also result in the discovery of new observed empirical cases, which can fill the property space, i.e., diminish the number of rows in a truth table without observations. In other words, one discovers an additional causal path to an outcome. It may not be very significant in terms of number of observed cases, but it is a new causal path that might be theoretically relevant. The existence of multiple causality is, as argued above, one of its strengths. In both instances, researchers can examine which causal paths (i.e., combinations of conditions) are more “traveled” than others, and hence *could* be considered more important (see e.g. Rihoux, 2001; 2003). As a result, the inclusion of a new case is not problematic. The *exclusion* of cases is potentially more problematic since the exclusion of a case can result in the disappearance of contradictions or the occurrence of higher consistency scores. If the exclusion of cases is not conducted transparently and is not supported by theoretical or methodological arguments, it might influence the results and, hence, is troublesome. In this report we excluded countries only when insufficient data was available, but QCA is clearly sensitive to individual cases.

In sum, the report clearly identifies some key factors that contribute to the protection of FACB rights. They confirm earlier studies but also add new insights in the more complex ways factors combine to produce an outcome. The report also clearly identifies the importance of political factors such as the presence of democracy and the ratification of treaties (the latter at least for protection in law).

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Annexes

A. Annex 1: Kucera's template for measuring FACB rights violations

Category	Description	Weight
	Freedom of association/collective bargaining related liberties	
1	Murder or disappearance of union members or organizers	2
2	Other violence against union members or organizers	2
3	Arrest, detention, imprisonment, or forced exile for union membership or activities	2
4	Interference with union rights of assembly, demonstration, free opinion, free expression	2
5	Seizure or destruction of union premises or property	2
	Right to establish and join union and worker organizations	
6	General prohibitions	10
7	General absence resulting from socio-economic breakdown	10
8	Previous authorization requirements. <i>Does not include requirements that unions register with governments, unless these requirements are deemed onerous by the ILO.</i>	1.5
9	Employment conditional on non-membership in union	1.5
10	Dismissal or suspension for union membership or activities. Includes dismissal for strike activities.	1.5
11	Interference of employers (attempts to dominate unions)	1.5
12	Dissolution or suspension of union by administrative authority	2
13	Only workers' committees and labour councils permitted.	2
14	Only state-sponsored or other single unions permitted. <i>Includes allowing only one union per industry or sector.</i>	1.5
15	Exclusion of tradable/industrial sectors from union membership	2
16	Exclusion of other sectors or workers from union membership. <i>Includes exclusion of public sector workers from union membership. Excluding "essential services" is acceptable, provided the definition of "essential services" is not excessively broad (i.e. following ILO guidelines, limitations on armed forces' union membership are acceptable).</i>	2
17	Other specific de facto problems or acts of prohibition	1.5
18	(No) Right to establish and join federations or confederations of unions	1.5
19	Previous authorization requirements regarding above row	1
	Other union activities	
20	(No) right to elect representatives in full freedom. Includes requirement that union leaders must work full time in a given industry.	1.5
21	(No) right to establish constitutions and rules	1.5
22	General prohibition of union/federation participation in political activities. Includes limits on union contributions to political parties.	1.5
23	(N) Union control of finances. <i>Includes situations in which unions receive a substantial portion of financing from government sources, or rules that unions may not receive financial contributions from abroad or from certain groups.</i>	1.5
	Right to collectively bargain	
24	General prohibitions	10
25	Prior approval by authorities of collective agreements	1.5

26	Compulsory binding arbitration. Includes systems in which compulsory binding arbitration is necessary before a (legal) strike may be called.	1.5
27	Intervention of authorities. Includes unilateral setting of wages by authorities.	1.5
28	Scope of collective bargaining restricted by non-state employers	1.5
29	Exclusion of tradable/industrial sectors from right to collectively bargain	1.75
30	Exclusion of other sectors or workers from right to collectively bargain. <i>Includes the exclusion of civil servants or all public sector workers. Excluding "essential services" is acceptable, provided the definition of "essential services" is not excessively broad.</i>	1.75
31	Other specific de facto problems or acts of prohibition. <i>Includes "no legal right" to bargain collectively (but no legal prohibition on doing so).</i>	1.5
	Right to strike	
32	General prohibitions	2
33	Previous authorization required by authorities. <i>Includes requirement for official approval prior to strike. A requirement to notify officials prior to a strike is not coded as a violation.</i>	1.5
34	Exclusion of tradable/industrial sectors from right to strike	1.5
35	Exclusion of other sectors or workers from right to strike. <i>Includes the exclusion of civil servants or all public sector workers. Excluding "essential services" is acceptable, provided the definition of "essential services" is not excessively broad.</i>	1.5
36	Other specific de facto problems or acts of prohibition	1.5
	Export processing zones	
37	Restricted Rights in EPZs. Includes export processing zones, free trade zones, and/or special economic zones.	2
Source: Kucera (2002). Weights according to Mosley (2011)		

B. Annex 2: Sources and Coding

Sources

The State Department's reports are prepared by US embassy personnel, with input from several local and US actors. They then get reviewed by the State Department Bureau for Democracy, Human Rights and Labour with input from other State Department Bureaus and outside experts, after which they are submitted to Congress. The reports cover a range of issues, amongst which are two specific sections on freedom of association for labour organizations and collective bargaining rights.

The ILO's Freedom of Association cases are handled by the Committee on Freedom of Association (CFA). The Committee has nine members, three from each part: governments, employers, and workers. If a complaint against a government violating ILO Convention 87 or 98 is lodged, the Committee first looks to see if the complaint is relevant. If it is considered relevant, the Committee then consults with the government for a response. When the Committee finds that a violation has occurred, it finally writes and publishes a report outlining ways to resolve the conflict.

The ILO's Supervising Reports are produced by the CEACR (Committee of Experts on the Applications of the Conventions and Recommendations). It only supervises the conventions a given country has actually ratified (in contrast to the CFA who can accept complaints about countries who have ratified neither 87 nor 98). The CEACR's reports on ILO Convention 87 or 98 come out whenever the Committee makes relevant observations on the country's application of core labour standards.

The last source is the International Trade Union Confederation (ITUC, formerly ICFTU), the largest global trade union federation, who reports on collective labour right violations in almost all countries. These reports, the Survey of Violations of Trade Union Rights, are published annually (although recently changed into a regularly updated blog-format), and are based on information by the ILO, NGOs, member organizations and their own observations. Although this is the source with the biggest potential bias, it is also the most elaborate and detailed one.

Coding

One should take into account that, although following the same methodology, the codification process includes the interpretation of text documents made by different coders. Then, distinct coders could interpret FACB rights violation in distinct ways, resulting in a kind of coder bias. To avoid this problem, beyond following the same methodology applied by Layna Mosley, multiple coders were used in this task and, for a random sub-

sample of country-years, more than one person codified the same country-year for comparison of results. All issues identified as possible sources for different interpretations were discussed (*infra*).

In addition, systematic coding differences could arise between our coding and Mosley's coding. In order to spot systematic differences, we correlate our index and Mosley's with external measures. If differences would be systematic, the index should correlate differently with other external measures (Nardo et al., 2005). That is, if there are significant differences in interpretation between FACB rights codified for the period 1985-2002 and FACB rights codified for the period 2003-2012, these measures most probably would not correlate in the same way with other measures that are not affected by the coders employed in the codification of FACB rights. To check this potential bias, Table 37 (Annex 1) presents the correlation of these measures of FACB rights with two other measures of labour rights discussed previously: the Freedom House Civil Liberties and the Worker's Rights index provided by Cingranelli and Richards. The correlation of FACB rights with the CIRI worker's rights is 0.60 for the period 1985-2002 and 0.55 for the period 2003-2012. The correlation of FACB rights and civil liberties is -0.55 for the period 1985-2002 and -0.60 for the period 2003-2012. In both cases, the correlations with the external indices with FACB rights before and after 2002 point in the same direction and the differences are not substantial (only 0.05). Based on this evidence, it does not seem that there are systematic coding differences. Consequently, we consider these measures comparable over time.

Table 37: Correlation of FACB rights and other labour rights measures

	2003-2012	1985-2012
CIRI Worker's rights	.60**	.55**
FH Civil Liberties	-.55**	-.60**

** Correlation is significant at the 0.01 level (2-tailed).

During the coding process we noted some issues related to coding, which we now discuss. First, it is not possible in practice to add up the number of observations of different violations within the same category. The sources with which we work are regrettably not systematically constructed enough to get an accurate and reliable picture of the complete number of violations that take place. It is, however, possible to get a reliable and valid picture of the different types of violations that occur within a certain country. In this way, a global picture of the labour rights situation in any given country is extracted. For this purpose, when a similar violation was observed several times, these observations still count as one violation. As a result, all violations are coded as being either present (1) or absent (0) (i.e., dichotomous). This means that cases in which single, solitary events occur are weighted as equally as systematic abuses of the same category. A case in point would be category '2': 'Other violence against union members or organizers'. When, for example,

one employee in Belgium in 2009 was threatened with a knife to step down as a trade union leader, this was an isolated incident. This however clearly constitutes a violation of category 2, and was coded as such. In the same year in Colombia there were numerous reports of (death) threats and structural physical violence by employers towards striking or negotiating employees. This was coded in the same way as the Belgian case, even though in Colombia these violations are more common practice, while in Belgium they constitute an exception.

Secondly, even though Kucera's template is elaborate and refined, and Mosley adds a number of coding notes to the template, problems still arise in practice when the observations and coding starts. Some cases fall in between categories, or do not seem to fit any description. Other observations can be interpreted in several ways. In the spirit of full transparency and consistency, we include a list of all the problems encountered and explain how we dealt with them during the coding process. Inter-coder agreed upon interpretations of sources and the coding of violations:

- Violations in sub-national regions, states, provinces, etc., within countries are coded as violations for the country as a whole (e.g. Canada, reported in ITUC, 2011, p. 84).
- When relevant, and given that there is enough information, (semi-) autonomous regions are observed apart from the country they form a part of (e.g. Macau and Hong Kong with regards to China).
- If a government is a party in a collective agreement (e.g. in negotiations with civil servants) the unilateral changing of terms, negotiable terms, etc. are considered a violation '27' (e.g. Hong Kong, reported in ITUC, 2011, p. 139).
- The requirement to get approval of a negotiated agreement by the government is not seen as a violation (e.g., Brazil, reported in ITUC, 2011, p. 83). The requirement to get approval to start negotiations, on the other hand, is a violation.
- If a government or a mediator proposes 'binding' solutions to a conflict, but the parties both have the capacity to reject them, it is not seen as a form of compulsory and binding arbitration (e.g., Uruguay, reported in ITUC, 2011, p. 114).
- Threats, death threats and harassment are considered to be a '2' violation ('Other violence').
- Violation '37' (regarding EPZs) is only coded if there are less rights in the EPZs (it is a law-variable, not a practice-variable).
- 'Yellow' or 'Parallel' unions are considered a violation 11. A pro-management union, taking over the position formerly held by an independent union, is a de facto act of interference by the employer (e.g., Mexico, reported in ITUC, 2011, p. 103).
- Blacklisting union members is considered a violation 9, since the list consists of union-members and organizers in order to shut them out of other jobs (e.g., Macau, reported in ITUC, 2011, p. 155).
- If one sector is allowed to have 'worker's councils' instead of unions (e.g. South Korea), it is considered a violation 16.

- If one sector is allowed only one union (e.g., Spain, reported in ITUC, 2011, p. 219), it is considered a violation 17.
- The freezing of union-assets after a strike (e.g., Malta, reported in ITUC, 2006, p. 316) is considered a violation 36 due to its direct link with the strike.
- One allowed state-sponsored union confederation, with only semi-autonomous sub-unions (e.g. Jordan, 2011, p. 241), is considered a violation 14.
- A requirement to notify the management of a union meeting and a cap on the number of hours per year a union can meet during working-hours (e.g. Portugal, reported in ITUC, 2011, p. 211) is not considered a violation.
- In the information for category 16, it is noted that limitations on armed forces' union membership are acceptable. However, the ILO makes an exception for armed forces and the police. Throughout the coding we have followed Mosley's codebook and have accepted the armed forces as the only limitation on the right to union membership, instead of the ILO definition. The other 'sector exclusion categories' do not mention the ILO definition, but only speak of 'essential services' not being defined too broadly. Here we have used the ILO definition that it concerns sectors, which have an impact on the immediate health and security of the people and society.

C. Annex 3: Anner and Sari Template for Freedom of Association and Collective Bargaining

Table 38: : TUR's template for measuring FACB rights violations

no.	Evaluation Criteria	Weights
	Ia. Fundamental civil liberties in law	
1	Arrest, detention, imprisonment, charging and fining of trade unionists in relation to their trade union activities	2.00
2	Infringements of trade unionists' basic freedoms	1.93
3	Infringements of trade unions' and trade unionists' right to protection of their premises and property	1.73
4	Excessive prohibitions/restrictions on trade union rights in the event of state of emergency	1.66
5	Lack of guarantee of due process and/or justice re violations nos. 1-4	1.86
	Ib. Fundamental civil liberties in practice	
6	Killing or disappearance of trade unionists in relation to their trade union activities	2.00
7	Committed against trade union officials re violation no. 6	2.00
8	Lack of guarantee of due process and/or justice re violation no.6	1.89
9	Other violent actions against trade unionists in relation to their trade union activities	1.82
10	Committed against trade union officials re violation no.9	1.82
11	Lack of guarantee of due process and/or justice re violation no.9	1.84
12	Arrest, detention, imprisonment, charging and fining of trade unionists in relation to their trade union activities	1.95
13	Committed against trade union officials re violation no.12	1.95
14	Lack of guarantee of due process and/or justice re violation no.12	1.88
15	Infringements of trade unionists' basic freedoms	1.82
16	Committed against trade union officials re violation no.15	1.82
17	Lack of guarantee of due process and/or justice re violation no.15	1.88
18	Attacks against trade unions' and trade unionists' premises and property	1.77
19	Committed against trade union officials re violation no.18	1.77
20	Lack of guarantee of due process and/or justice re violation no.18	1.77
21	Excessive prohibitions/restrictions on trade union rights in the event of state of emergency	1.70
22	Lack of guarantee of due process and/or justice re violation no.21	1.73
	Ila. Right of workers to establish and join organizations in law	
23	General prohibition of the right to establish and join organizations	1.96
24	Exclusion of workers in EPZs from the right to establish and join organizations	1.86
25	Exclusion of other workers from the right to establish and join organizations	1.86
26	Previous authorization requirements	1.63
27	Restrictions on the freedom of choice of trade union structure and composition	1.63
28	Imposed trade union unity	1.68

29	Dissolution/suspension of legally functioning organizations	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	1.93
31	Lack of adequate legal guarantees against anti-union discriminatory measures	1.75
32	Provisions in law allowing for interference of employers and/or public authorities	1.80
33	Lack of adequate legal guarantees against acts of interference	1.70
34	Infringements of the right to establish and join federations/confederations/international organizations	1.73
35	Lack of guarantee of due process and/or justice re violations nos. 23-34	1.80
	IIb. Right of workers to establish and join organizations in practice	
36	General prohibition of the development of independent workers' organizations	1.93
37	Exclusion of workers in EPZs from the right to establish and join organizations	1.84
38	Exclusion of other workers from the right to establish and join organizations	1.86
39	Previous authorization requirements	1.70
40	Restrictions on the freedom of choice of trade union structure and composition	1.70
41	Imposed trade union unity	1.70
42	Dissolution/suspension of legally functioning organizations	1.95
43	Anti-union discriminatory measures in relation to hiring, during employment (e.g. transfers and downgrading) and dismissal	1.82
44	Committed against trade union officials re violation no. 43	1.89
45	Lack of guarantee of due process and/or justice re violation no. 43	1.80
46	Acts of interference of employers and/or public authorities	1.75
47	Lack of guarantee of due process and/or justice re violation no. 46	1.77
48	Infringements of the right to establish and join federations/confederations/international organizations	1.79
49	Lack of guarantee of due process and/or justice re violations nos. 36-48	1.77
	IIIa. Other union activities in law	
50	Infringements of the right to freely draw up constitutions and internal rules and administration	1.63
51	Infringements of the right to freely elect representatives	1.80
52	Infringements of the right to freely organize and control financial administration	1.59
53	Infringements of the right to freely organize activities/programmes	1.80
54	Prohibition of all political activities	1.73
55	Lack of guarantee of due process and/or justice re violations nos. 50-54	1.82
	IIIb. Other union activities in practice	
56	Infringements of the right to freely draw up constitutions and internal rules and administration	1.75
57	Infringements of the right to freely elect representatives	1.82
58	Infringements of the right to freely organize and control financial administration	1.71

59	Infringements of the right to freely organize activities/programmes	1.79
60	Prohibition of all political activities	1.70
61	Lack of guarantee of due process and/or justice re violations nos. 56-60	1.79
	IVa. Right to collective bargaining in law	
62	General prohibition of the right to collective bargaining	1.93
63	Insufficient promotion of collective bargaining	1.45
64	Exclusion of workers in EPZs from the right to collective bargaining	1.86
65	Exclusion of other workers from the right to collective bargaining	1.82
66	Exclusion/restriction of subjects covered by collective bargaining	1.68
67	Compulsory arbitration accorded to collective bargaining	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	1.99
69	Acts of interference in collective bargaining	1.66
70	Violations of collective agreements	1.64
71	Infringements of the consultation with workers' organizations	1.61
72	Lack of guarantee of due process and/or justice re violations nos. 62-71	1.73
	IVb. Right to collective bargaining in practice	
73	General prohibition of collective bargaining	1.89
74	Insufficient promotion of collective bargaining	1.45
75	Exclusion of workers in EPZs from the right to collective bargaining	1.82
76	Exclusion of other workers from the right to collective bargaining	1.84
77	Exclusion/restriction of subjects covered by collective bargaining	1.59
78	Compulsory arbitration accorded to collective bargaining	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	1.64
80	Acts of interference in collective bargaining	1.64
81	Violations of collective agreements	1.73
82	Infringements of the consultation with workers' organizations	1.59
83	Lack of guarantee of due process and/or justice re violations nos. 73-82	1.71
	Va. Right to strike in law	
84	General prohibition of the right to strike	1.95
85	Exclusion of workers in EPZs from the right to strike	1.84
86	Exclusion of other workers from the right to strike	1.82
87	Exclusion/restriction based on the objective and/or type of the strike	1.46
88	Provisions in law allowing for the suspension and/or declaration of illegality of strikes by administrative authority	1.59
89	Lack of compensatory guarantees accorded to lawful restrictions on the right to strike	1.55
90	Infringements of the determination of minimum services	1.45
91	Compulsory arbitration accorded to strikes	1.64
92	Excessive prerequisites required for exercising the right to strike	1.71
93	Acts of interference during the course of strike action	1.61
94	Imposing excessive sanctions in case of legitimate strikes	1.82

95	Lack of guarantee of due process and/or justice re violations nos. 84-94	1.80
	Vb. Right to strike in practice	
96	General prohibition of strikes	1.93
97	Exclusion of workers in EPZs from the right to strike	1.84
98	Exclusion of other workers from the right to strike	1.82
99	Exclusion/restriction based on the objective and/or type of the strike	1.55
100	Suspension and/or declaration of illegality of strikes by administrative authority 3	1.70
101	Lack of compensatory guarantees accorded to lawful restrictions on the right to strike 3	1.59
102	Infringements of the determination of minimum services	1.52
103	Compulsory arbitration accorded to strikes	1.61
104	Excessive prerequisites required for exercising the right to strike	1.68
105	Acts of interference during the course of strike action	1.64
106	Imposing excessive sanctions in case of legitimate strikes	1.82
107	Committed against trade union officials re violation no. 106	1.80
108	Lack of guarantee of due process and/or justice re violations nos. 96-107	1.77
Source: Anner and Sari (2015)		

D. Annex 4: Literature on Factors

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Human rights are high on the EU agenda. However, the EU is facing multiple challenges to fulfil its declared commitment to promote and protect human rights.

These challenges are the focus of FRAME, an interdisciplinary research project on Fostering Human Rights Among European (External and Internal) Policies. FRAME is a large-scale, collaborative research project funded under the EU's Seventh Framework Programme (FP7), coordinated by the Leuven Centre for Global Governance Studies and involving 19 research institutes from around the world. Our research focuses on the contribution of the EU's internal and external policies to the promotion of human rights worldwide.

As part of the FRAME project, researchers and other experts at the Danish Institute for Human Rights, in collaboration with researchers from other universities, have been working on key historical, cultural, legal, economic, political, ethnic, religious and technological factors that may impact human rights at the EU, international and national levels.

In this series, we present some of the results of our work.

The research is relevant to human rights academics, practitioners, civil society, and policy-makers at the national, regional, international and EU levels.