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Operationalising Social Contracts: Towards an Index of Government Deliverables

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Abstract

The international development debate is increasingly referring to the notion of the "social contract" – often, however, without a clear definition of the term and its implications. We therefore make a suggestion for measuring at least some elements of social contracts in order to make it easier to compare them across time and space. We build on a concept developed earlier, according to which social contracts are the "entirety of explicit or implicit agreements between all relevant societal groups and the sovereign (i.e. the government or any other actor in power), defining their rights and obligations towards each other" (Loewe, Zintl, & Houdret, 2021, p. 3). Specifically, we develop indices to capture the three "Ps" that governments can deliver to societies: *protection* against internal and external threats, *provision* of social and economic services, and allowing political *participation*. These indices are composed of indicators for the different aspects or dimensions of the three Ps. We use mainly input variables to gauge the willingness of governments to deliver the three Ps because outcome variables depend on too many other factors influencing the efficiency of the political process. In a second step, we calculate the values of 154 countries for all three indices around the year 2019. The results prove that the three indices are useful and valid. Their values stretch over a large range (almost from 0 to 1), but their means and medians are on similar levels, which shows that the indices are well-scaled. Also, they correlate to a high degree with each other and with other indicators such as per capita income and the Human Development Index, which proves their concurrent validity. Yet, these correlations are not perfect, which means that the three indices add information about the performance of governments in different countries. Finally, we even make a first step in identifying patterns in the results. Particularly, we find noticeable geographic clusters of social contracts with similar characteristics: For example, countries in Latin America were doing comparatively well on average in terms of political *participation* in 2019. Governments in sub-Saharan Africa, in turn were delivering disproportionately well on average in terms of *protection* and political *participation* if we take per capita income levels into consideration, but less so in terms of *provision*. And countries in the Middle East and North Africa tended to fail mainly with regard to political *participation*. Finally, our approach also allows for comparisons across sub-indices, that is, the different aspects of protection, provision and participation.

Keywords

Social contracts; government performance; comparative politics; political participation; protection; social policies; economic policies; measurement.

JEL classification

E01; E61; F52; G31; H10; H11; H41; H50; I00; K20; P16

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Abbreviations

CA	Central Asia
EE	Eastern Europe
EECA	Eastern Europe and Central Asia
EU	European Union
FFP	Fund for Peace
GCI	Global Competitiveness Index
GDP	gross domestic product
HDI	Human Development Index
HIC	high-income country
LAC	Latin America and the Caribbean
LIC	low-income country
MENA	Middle East and North Africa
MIC	middle-income country
ODA	official development assistance
OLS	ordinary-least squares
PPP	purchasing power parities
SSA	sub-Saharan Africa
Three Ps	protection, provision, participation
UCDP	Uppsala Conflict Data Program
USD	United States dollar
WEF	World Economic Forum

1 Introduction

In recent years, the notion of “the social contract” has been used increasingly by academics and policy-makers to draw attention to the complex relationship between governments and different parts of societies as well as to the give and take between these parties. The term goes back to early state philosophers Thomas Hobbes (1651), John Locke (1689) and Jean-Jacques Rousseau (1762), who highlighted the fact that social contracts are a means to overcome anarchy, establish a government and guarantee that the public accepts its rule. Today, more often, the discussion is on existing social contracts, their deficits and alternative social contracts. It bears thus, in many cases, an element of implicit or explicit comparison: between the social contracts of different countries, between the social contracts that one country had at different points in time or between the existing and a hypothetical – often desirable – social contract.

Factual comparisons require comprehensible criteria, however, and it must be clear as to what these criteria are meant to measure. In the current debate, some authors are calling for “better” social contracts (e.g. Al-Razzaz, 2013; Rother & Devarajan, 2016; World Bank, 2004); however, they fail to specify for whom the social contract should be better and in what respect: benefits, sustainability, transparency, inclusiveness, etc. In other words, they are not transparent about the goals they believe a social contract should achieve, or how they intend to measure the degree to which different social contracts succeed in doing so.

This lack of transparency is not surprising since, to our knowledge, no literature so far has compared social contracts on the basis of objective criteria. The reason is two-fold: First, nobody has established commonly acceptable criteria yet. Second, no comprehensive effort has been made to measure social contracts to date.[1]

This discussion paper is meant to fill part of this gap. It proposes criteria to measure three key elements of social contracts. Concretely, it establishes indicators for the amount of what governments deliver to societies. In addition, the paper provides values for these indicators for the social contracts of 154 countries worldwide in 2019 and compares these countries based on these values. The paper makes thus a first step towards a more comprehensive measurement of all elements of social contracts. The second step, still to be done, will be to measure what different societal groups deliver to the government and to other societal groups, and how the different deliverables of the different contracting parties interact.

Based on earlier works (e.g. Loewe, Zintl, & Houdret, 2021), we argue that governments can deliver very different items to the different groups of societies; the items can be assigned to three major categories: *protection* (against internal and external threats), *provision* (of social and economic services) and *participation* (in political decision-making). Any operationalisation of social contracts, we believe, should measure these three “Ps” separately in order to not blur the differences, but instead unveil possible correlations and trade-offs. Therefore, we build a separate index for each of the three Ps based on indicators that measure their key ingredients.

In this way, we hope to contribute to two goals. First, we want to shed light on differences between social contracts and make it easier to compare them. In particular, we want to show which governments are doing better or worse than others in delivering *protection*, *provision* or *participation*. Second, we want to detect patterns in the delivery of the three Ps: Which of them are correlated in which parts of the world? Which countries do better in terms of one or two of the three Ps than they do in terms of the third?

1 An exception is a study by Gasmi, Kouakou, Noumba Um and Milla (2023), which has, however, a quite narrow focus on digital deliverables.

We show that there are huge differences between governments world-wide regarding their delivery of the three Ps to societies. To a large degree, these differences are correlated with the level of economic development – governments with more financial means can spend more. As a result, the values for the three Ps are also to some degree correlated. However, many countries also deviate from this general trend in a statistically significant way. Governments in the Middle East and North Africa (MENA) region, for example, perform much better in the delivery of *protection* and *provision* to societies than of political *participation*. Some governments in Latin America, in turn, do relatively well in terms of political *participation,* but less so in terms of *provision*. Some Asian countries, finally, score particularly high in terms of our *protection* index.

We proceed as follows: Section 2 elaborates in more detail on our definition of the social contract and our concept. Section 3 describes our methodology of indicator selection and the construction of three indices to measure the three Ps of government deliverables. Section 4 presents the data that our methodology delivers for 154 countries for the year 2019 (respectively for some indicators the latest year available). Section 5 discusses our results for different world regions based on ordinary-least squares (OLS) regressions.

2 The concept of the social contract

The term “social contract” has recently gained traction, as it helps to understand and characterise state–society relations. Section 2.1 defines the term “social contract” based on an empirical-analytical model (as opposed to a more normative one) and explains its different elements. This model also forms the basis of our index measuring state deliverables in social contracts, which is an issue that has not yet been captured by other literature aiming at making state–society relations tangible and measurable. Section 2.2 compares the social contract concept with other concepts that are used to analyse state–society relations.

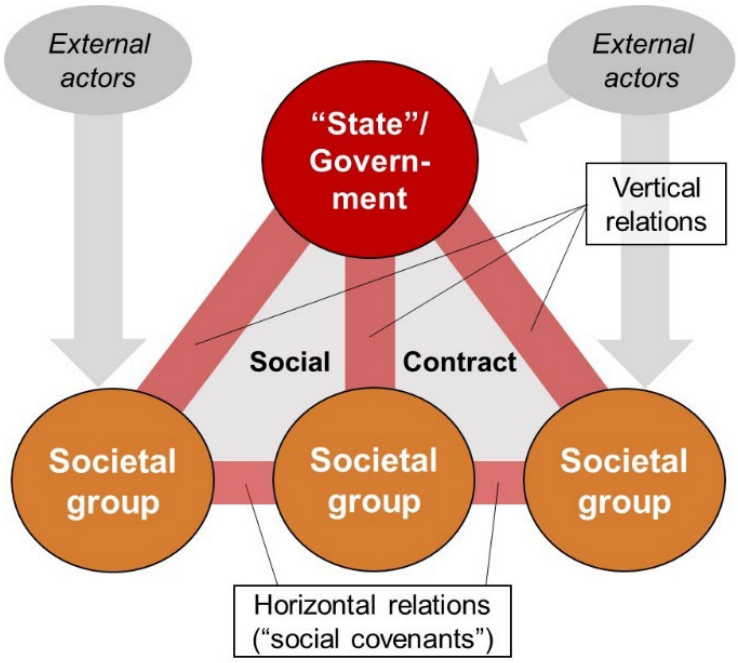
2.1 Definition

Social contracts serve a range of important functions, as they codify state–society relations and thus make them more predictable and stable. They stipulate what governments and societies “owe to each other” (Shafik, 2021) in different countries and at different times. An analysis of the social contract of a country thus helps us (i) understand how state–society relations have evolved and might evolve in the future, (ii) discern major shortcomings or failures that may lead the government or societal groups to call the social contract into question, for example through a coup or revolt and (iii) look at factors and actors that could improve the exchange between state and society and thereby make state–society relations more peaceful and inclusive.

In previous work, we elaborated a consistent framework to analyse social contracts. It defines social contracts as the “entirety of explicit or implicit agreements between all relevant societal groups and the sovereign (i.e. the government or any other actor in power), defining their rights and obligations towards each other” (Loewe, Zintl, & Houdret, 2021, p. 3) (see Figure 1). Rights and obligations can be understood as the contents of an exchange, detailing which resources and services the contracting parties pledge to give one another. The government, on its part, grants citizens what we call the three “Ps”: a degree of *protection* (collective and individual physical and legal security), *provision* (of social and economic services) and *participation* (in political decision-making). Societal groups, in return, accept the government in power and commit to pay taxes, serve in the military or fulfil other duties that are stipulated by law (see Figure 2). This give-and-take lends the government legitimacy, thereby reducing the need for authoritarian regimes to use repression in order to stay in power. Of course, the level

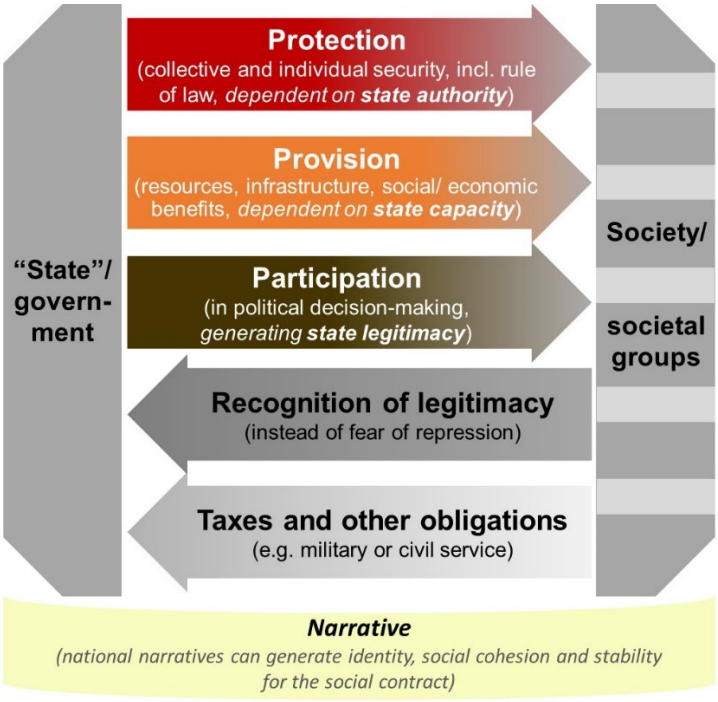
of protection, provision and participation granted by the government varies according to the negotiating power of the contracting partners.

Figure 1: Concept of the social contract



Source: Loewe, Zintl and Houdret (2021)

Figure 2: Deliverables in a social contract



Note: For reasons of better legibility, a sixth set of deliverables (i.e. deliverables exchanged between social groups and citizens, see Section 3.2) is not shown here.

Source: Loewe, Zintl and Houdret (2021)

At the same, the quantity and quality of *protection*, *provision* and *participation* that the government gives to different societal groups can also vary markedly from one group to the other, depending on each group's bargaining power. Some have better access to the government to negotiate a favourable contract, whereas others have to accept a rather poor one. If disaggregate data were available, it would be of utmost interest to compare these different "sub-contracts" with regard to the relationship between the government's offerings and the respective societal group.

At the same time, societal groups also uphold horizontal relations among and between themselves, which can take different forms and are not further categorised to keep the model simple (see Figure 1). Most social contracts have a national scope, but the concept is also applicable to supra-national contracts, such as the European Union (EU), or though purely issue-related, transnational labour relations (Sadiq & Tsourapas, 2023), as well as to sub-national contracts on a local or regional level. In fragile contexts, arrangements between different societal groups often serve as building blocks for national social contracts, that is, the horizontal dimensions are established before the different groups agree on the establishment of a government. Once the government becomes more powerful, the vertical dimension of social contracts turns dominant (Furness & Trautner, 2020).

Due to the multiplicity of exchanged deliverables and involved actors, it is difficult to answer the question of what constitutes a "good" social contract. The early state philosophers (Hobbes, 1651; Locke, 1689; Rousseau, 1762; for more details see Burnyeat & Sheild Johansson, 2022) saw the pure existence of a social contract and the establishment of a political structure to organise societies as an achievement compared to the natural state of anarchy. Yet, today, social contracts exist in every country with a government, so that criteria on what constitutes a "good" social contract are less clear-cut. Some of the literature has normative underpinnings, claiming there are objective criteria to assess whether a social contract is better than another one and to suggest ways to improve it. This literature mostly promotes the Western-centric model of a liberal market economy and democracy (e.g. Bivainis, 2015; Devarajan & Mottaghi, 2015; Shafik, 2021; World Bank, 2004). For instance, Williams (2023) critically discusses the World Bank's usage of the term "social contract" during the 2010s, suggesting it is framed in the interest of neoliberalism.

Policy-makers in different countries have similarly used "social contract" as a catch-all term to support their visions. This includes, for example, Jordan's former prime minister Omar Al-Razzaz (New social contract, 2018), the General Confederation of Enterprises in Morocco (Medias 24, 17 April 2018), Argentina's ultra-liberal president, Javier Milei (Un nuevo "contrato social", 2024), and Dutch party leader Pieter Omtzigt (Voerman & de Jonge, 2023).

Other literature has underlined the positive connotation of the term and applied it only to settings with more inclusive and accountable governance. In this reading, "good governance" is an essential feature of social contracts, whereas other forms of governance would be termed differently (e.g. "repressive-exclusionary social pacts", Heydemann, 2021).

2.2 Comparison with other concepts

We argue that social contracts can help in understanding a wide spectrum of governance possibilities and that only then does the term reveal its full potential as an analytical tool (Loewe, El-Haddad, Furness, Houdret, & Zintl, in press). It can be, for instance, applied to the Islamic State's "rebel social contract" (Revkin & Ahram, 2020) or fragile situations (Kaplan, 2017; McCandless et al., 2018), as in Iraq (Ardovini & O'Driscoll, 2023; Mühlberger, 2023), Syria (Sudermann & Zintl, in press) or Libya (Sawani, 2022). In this sense, it is important to get an

empirically driven view of social contracts that is as objective as possible, though normative notions always resonate.[2]

Meanwhile, the social contract concept has been applied across a large number of case studies in several world regions and across policy fields. Examples include the development of social contracts in Africa (Cloutier, Harborne, Isser, Santos, & Watts, 2021), Arab countries (Hinnebusch, 2020), China (Cassani, 2017) and Russia (Feldmann & Mazepus, 2018). The functioning of social contracts has been described in considerable detail in respect to different policy fields such as education (e.g. Sobhy, 2020), economics (e.g. El-Haddad, 2020; Hertog, 2017; Vidican Auktor & Loewe, 2022), social policies (e.g. Bishara, Jurkovich, & Berman, 2023; Bussolo, Davalos, Peragine, & Sundaram, 2019; Hickey, 2011; Loewe & Zintl, 2021), informal labour and labour migration (Alfers, Chen, & Plagerson, 2022; Cook, 2022; Sadiq & Tsourapas, 2023), or agriculture and rural politics (Houdret & Amichi, 2022). Other writing has focussed on citizens' expectations about social contracts in MENA countries (Albrecht & Loewe, 2022; Bishara et al., 2023; Loewe & Albrecht, 2022). Literature has thus drawn on the social contract as a useful conceptual tool, which also takes into account specific contexts and the "lived experience of state–society relations" (Burnyeat & Sheild Johansson, 2022, p. 229).

Thus far, most of the empirically driven literature has been limited to assessing individual cases or specific regions. Hardly any attempts have been made to measure different forms of social contracts to enable large-scale and rigorous comparisons. For instance, Gasmi et al. (2023) use the definition of social contracts established by Loewe, Zintl and Houdret (2021) as a starting point to measure *protection*, *provision* and *participation.* However, they customise it to focus on their specific subject of interest, that is, the effects of digitalisation on social contracts (using only four IT-related proxies – fixed phone*,* mobile phone*,* fixed broadband, internet bandwidth – for provision). Mina (2023) also takes up the concept but zooms in on the delivery of *provision* by governments, measuring government expenditure on public-sector salaries, health and education in the Arab Gulf countries.

Other scholars who have not worked on the social contract explicitly contribute insightful measurements on state–society relations from slightly different angles. The following two contributions on "social cohesion" and "state fragility" provide interesting starting points to this end. However, they focus on aspects of state–society relations that do not allow for effectively comparing state deliverables – and this, we claim, is at the core of social contracts, as state deliverables show to what extent governments are able and willing to invest in functioning state–society relations.

Leininger et al.'s (2021) measurement of social cohesion is concerned with the quality of intra-societal relations and society's attitudes vis-à-vis the state – which loosely correspond to the horizontal relations as well as society's "recognition of legitimacy" in our model (see Loewe, von Schiller, Zintl, & Leininger, 2024). In order to dissect the norms, attitudes and behaviours of individuals and societal groups towards each other and the state, Leininger et al. (2021) rely on data pertaining to perceptions on inclusive identity, trust and cooperation for the common good. Due to their choice of data sources, their measurements are so far limited to African countries (see methodology section below). The authors thus not only call for more academic literature linking all three attributes of social cohesion, but also for more data collection: Data should span different world regions and include more fine-grained measurements, for example on the types of and motivations for "cooperation for the common good" (Leininger et al., 2021, pp. 33-34).

2 The government is thus not necessarily a formal state but can be any power that exercises authority in a given territory. Consequently, a social contract's respective area of relevance is defined by the area under the influence of its contracting parties.

Grävingholt, Ziaja and Kreibaum (2015), in turn, conceptualise and measure state fragility by assessing specific features of states, that is, authority, capacity and legitimacy. Their approach aims to capture the extent to which the state holds the monopoly of violence over its territory, supports its population's "life chances" through basic services, and is seen as the only legitimate actor to impose rules on a national level (Grävingholt et al., 2015). These three factors resonate with our intention to measure *protection*, *provision* and *participation* (on links between the two concepts, see also Loewe & Zintl, 2021). However, in their effort to measure fragility, Grävingholt et al. (2015) are more interested in whether, and to what extent, states *fulfil* their functions, and therefore not to what extent governments are prepared to *invest*. Thus, Grävingholt et al. (2015) look at the *outcome* of state–society interaction in each of the three fields, taking two important steps at once: measuring what the respective government delivers, and how well societal groups receive state deliverables. We believe that keeping apart the governments' *input* (the goods and services governments are able and willing to give to society, e.g. education expenditure) and the overall *outcome* (i.e. including the uptake or reaction by societal groups, e.g. years of schooling) enables a more detailed comparison between social contracts.

As shown in this section, the term "social contract" has gained currency in scholarly and policy debates over recent years, yet so far there has been no systematic approach to compare the size and value of different government deliverables as a crucial element of social contracts. In the following, we thus suggest a way to quantify and measure the three Ps of government deliverables.

3 Methodology

In the following, we describe how we built the first three indices measuring elements of a social contract. Thereby, we proceed in five steps: Section 3.1 defines the criteria that our indices were meant to fulfil. Section 3.2 explains how we selected the indicators on which our social contract indices are built. Section 3.3 describes how we transformed the original values of these indicators in order to make them fit our social contract indices. Section 3.4 clarifies how we dealt with missing data. Section 3.5 informs how we weighted the different indicators and aggregated the values.

3.1 Criteria to be fulfilled by the social contract indices

In constructing social contract indices, we want to close a gap that exists today in the toolbox of academic measures. In particular, we want to enable researchers anywhere to compare social contracts across time and country borders and to identify the factors that explain the differences in social contracts.

Therefore, we believe that our measure for social contracts should fulfil the following five criteria:

– *Emphasis on the individual elements of social contracts:* We decided not to create one index for the whole social contract but instead a dashboard representing each of the main components of social contracts: the different deliverables of the state to society, of society to the state and of the different societal groups to each other. Such differentiation allows for highlighting the trade-offs between the deliverables of one actor and more-for-more in the deliverables exchanged between two actors, whereas a single measure for the whole social contract would hide such relationships.

– *Emphasis on the social contract rather than its effects:* We decided to measure inputs rather than outcomes or impacts wherever possible, that is, to use indicators for the extension of deliverables by the different actors involved in a social contract instead of their effects. This

was done in order to focus as much as possible on the contents of the social contract rather than its impact on the well-being of citizens, political stability, social cohesion or anything else. The inclusion of outcome indicators leads to difficulties in measuring the impact of different social contracts on these phenomena as well as their effects on social contracts. Yet, we had to accept this disadvantage in some instances where no adequate input variables were available (especially for the measurement of *protection*).

- *Comprehensiveness:* The measure should cover as many aspects of the different elements of social contracts as possible, even if a large number of indices have to be included. Thereby, we accept all the flaws and biases of these indicators and their respective impact on our indices. However, this impact remains small because the high number of indices also reduces their individual weight. It would be stronger if we were more parsimonious in the selection of indicators; in addition, we might then disregard aspects of social contracts that are only weakly correlated with others.

- *Universal applicability:* The measure should allow for comparisons between countries in different world regions and at different points in time. Therefore, it should build on indicators for which data are available for as many countries and as many points in time as possible, rather than utilise resources such as the Afrobarometer or the Arabbarometer, the data for which are only collected in some parts of the world. In addition, these data have to be interpretable in the same way across countries.

- *Reliability and accessibility:* All indicators and indices used are provided for free by reliable, neutral sources such as United Nations organisations and programmes or universities rather than partisan research institutions.

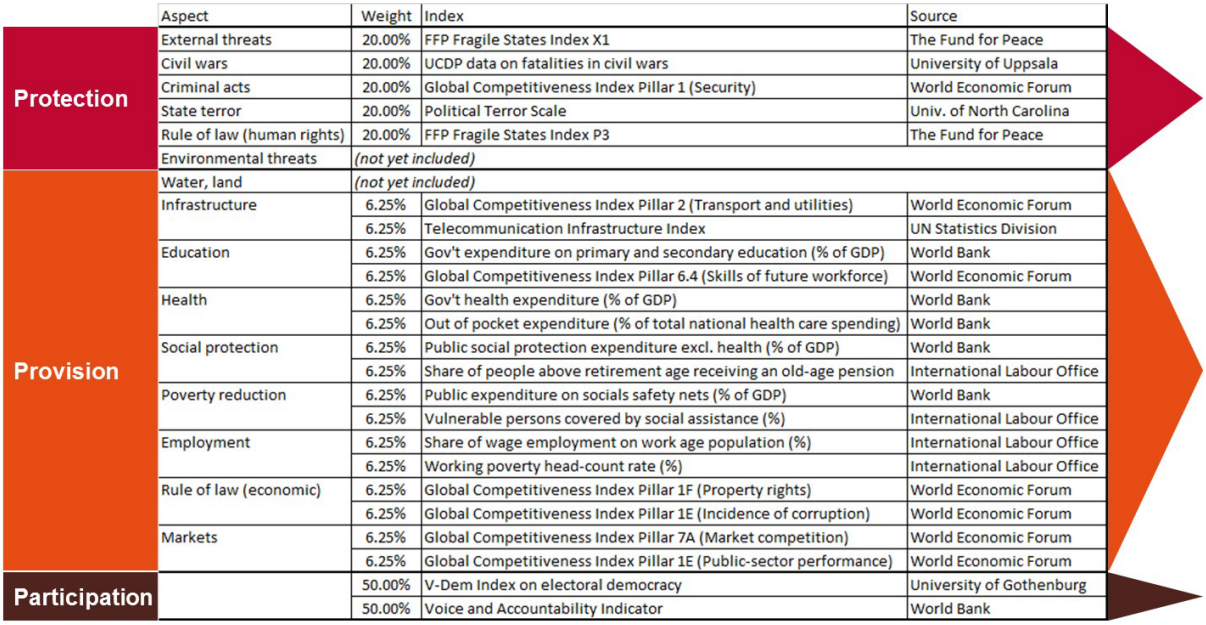
3.2 Selection of indicators and indices

Therefore, we established *first* a list of aspects included in each of the six elements of social contracts (see Figure 3, and Column 2 in Table 1):

- *Protection:* collective security (i) against foreign threats and (ii) against acts of civil war; security of individuals/citizens (iii) against physical threats such as alleged or real terrorist and criminal acts and (iv) against political threats by own government; (v) human rights aspects *of* rule of law (including the law as such, especially the existence and enforcement of human and civil rights); and (vi) security against natural, environmental and other macro risks.[3]

3 Several of our protection variables are outcome rather than input variables – they measure the effective state of protection of citizens rather than the commitments of governments. This flaw is due to the fact that for some aspects of protection, no adequate indicators exist to measure the intentions and efforts of governments to protect citizens.

Figure 3: The three indices for government deliverables of social contracts: overview



	Aspect	Weight	Index	Source
Protection	External threats	20.00%	FFP Fragile States Index X1	The Fund for Peace
	Civil wars	20.00%	UCDP data on fatalities in civil wars	University of Uppsala
	Criminal acts	20.00%	Global Competitiveness Index Pillar 1 (Security)	World Economic Forum
	State terror	20.00%	Political Terror Scale	Univ. of North Carolina
	Rule of law (human rights)	20.00%	FFP Fragile States Index P3	The Fund for Peace
	Environmental threats	*(not yet included)*		
Provision	Water, land	*(not yet included)*		
	Infrastructure	6.25%	Global Competitiveness Index Pillar 2 (Transport and utilities)	World Economic Forum
		6.25%	Telecommunication Infrastructure Index	UN Statistics Division
	Education	6.25%	Gov't expenditure on primary and secondary education (% of GDP)	World Bank
		6.25%	Global Competitiveness Index Pillar 6.4 (Skills of future workforce)	World Economic Forum
	Health	6.25%	Gov't health expenditure (% of GDP)	World Bank
		6.25%	Out of pocket expenditure (% of total national health care spending)	World Bank
	Social protection	6.25%	Public social protection expenditure excl. health (% of GDP)	World Bank
		6.25%	Share of people above retirement age receiving an old-age pension	International Labour Office
	Poverty reduction	6.25%	Public expenditure on socials safety nets (% of GDP)	World Bank
		6.25%	Vulnerable persons covered by social assistance (%)	International Labour Office
	Employment	6.25%	Share of wage employment on work age population (%)	International Labour Office
		6.25%	Working poverty head-count rate (%)	International Labour Office
	Rule of law (economic)	6.25%	Global Competitiveness Index Pillar 1F (Property rights)	World Economic Forum
		6.25%	Global Competitiveness Index Pillar 1E (Incidence of corruption)	World Economic Forum
	Markets	6.25%	Global Competitiveness Index Pillar 7A (Market competition)	World Economic Forum
		6.25%	Global Competitiveness Index Pillar 1E (Public-sector performance)	World Economic Forum
Participation		50.00%	V-Dem Index on electoral democracy	University of Gothenburg
		50.00%	Voice and Accountability Indicator	World Bank

Source: Authors

- *Provision* of economic and social services: (i) infrastructure (communication, information, transport, utilities), (ii) education, (iii) health services, (iv) social protection, (v) poverty reduction,[4] (vi) employment, (vii) economic aspects of rule of law (transparency, fair competition, reliability of government regulation), (viii) a good business climate and (ix) resources in production (e.g. water, land).
- *Participation* by society in political decision-making by (i) free, fair and secret elections, (ii) open public debates and (iii) free mass media and other channels.
- *Citizens' acceptance of the rule of the government.*
- *Citizens' delivery of (i) taxes and other obligations* such as (ii) military or civil service, (iii) respect of public order, (iv) engagement in civil society (e.g. neighbourly help, support for school child care) or (v) financial donations to social work.
- *Deliverables exchanged between social groups and citizens:* (i) mutual respect and recognition, (ii) dialogue on conflictive issues, (iii) mutual support (of course, there is some overlap in contents with engagement and financial donations, mentioned already in the previous element, but they also have an intra-societal specification).

4 For poverty reduction (Table 1, Aspects 2-5), we use indicators for social transfer programmes. Arguably, these are a sub-set of social protection, which is already another sub-index under provision (Table 1, Aspects 2-4). The reason is that in most countries, the bulk of social protection spending (about 70 per cent on average) is on programmes that do not benefit the poor, for example subsidies for contributory programmes or non-contributory programmes for state employees. These programmes are effective in preventing serious declines in the well-being of at least some groups in society, but they have no major impact on poverty reduction. Our category "poverty reduction", in turn, focusses on targeted and universal transfer programmes, which are specifically designed to reduce poverty. Figure A8 in the Annex shows how little spending on social assistance is correlated with spending on all social protection programmes: A few countries allocate all of their social protection spending on non-contributory social assistance schemes, but most give the majority to other kinds of social protection programmes. This difference is confirmed by our finding that the two sub-indices are not closely correlated (see Section 4).

Table 1: Components of the three social contract indices

Index for *protection*										
(1) **No.**	(2) **Aspect**		(3) **Weight**	(4) **Index**	(5) **Source**	(6) **Data coverage (time)**	(7) **Data coverage (countries)**	(8) **Effective range of original data**	(9) **Range of original data resulting in 0-100%**	(10) **Transformation function**
1-1	Collective security	against external threats	20%	Fund for Peace (FFP) Fragile States Index X1	FFP, Washington, DC[2]	2007-2021 annually	177	0.5 - 10.0	0 - 10	reverse: $y_i=1-(x_i/10)$
1-2		against civil wars	20%	Uppsala Conflict Data Program data on fatalities in civil wars per 10,000 inhabitants	University of Uppsala[7]	1989-2021 annually	33	0 - 39	72006 - 0	logarithm of weighted moving average reversed: $y_i=1-[LN(100\underline{x}_i+1)/LN(100+1)]$ with $\underline{x}_i=0,1x_{i-2}+0,2x_{i-1}+0,4x_i+0,2x_{i+1}+0,1x_{i+2}$ and x_i = fatalities in civil wars per 10,000 inhabitants
1-3	Individual security	against criminal acts	20%	Global Competitiveness Index (GCI) Pillar 1A: Security	World Economic Forum (WEF), Switzerland[3]	2017-2019	140	32.9 - 97.5	0 - 100	proportional: $y_i=x_i/100$
1-4		against state terror	20%	Political Terror Scale	Group of researchers/ Univ. of North Carolina[5]	1976-2020 annually	166	1 - 5	5 - 1	reverse: $y_i=1-(x_i/5)$
1-5	Rule of law (human rights facets)		20%	Fund for Peace (FFP) Fragile States Index P3	FFP, Washington, DC[2]	2007-21 annually	177	0.5 - 10.0	0 - 10	reverse: $y_i=1-(x_i/10)$
Index for *provision*										
(1) **No.**	(2) **Aspect**		(3) **Weight**	(4) **Index**	(5) **Source**	(6) **Data coverage (time)**	(7) **Data coverage (countries)**	(8) **Effective range of original data**	(9) **Range of original data resulting in 0-100%**	(10) **Transformation function**
2-1-1	Infrastructure (transport, utilities etc.)		6.25%	GCI Pillar 2: Infrastructure (transport and utilities)	WEF, Switzerland[3]	2017-2019	140	32.0 - 97.4	0 - 100	proportional: $y_i=x_i/100$
2-1-2			6.25%	Telecommunication Infrastructure Index (TII)	E-government development index (United Nations Statistics Division)[6]	2008-2022, biannually	192	0.00063 - 1	0 - 1	proportional: $y_i=x_i$

2-2-1	Education	6.25%	Government expenditure on primary and secondary education (% of GDP)	Education Statistics (UNESCO Institute of Statistics)[1]	1990-2021, but many gaps	140	0.5 - 8.9	0 - 5	proportional: $y_i=x_i/5$
2-2-2		6.25%	GCI Pillar 6B.II: Skills of future workforce[13]	WEF, Switzerland[3]	2017-19	140	9.3 - 87.6	0 - 100	proportional: $y_i=x_i/100$
2-3-1	Health	6.25%	Domestic general government health expenditure (% of GDP)	World Health Organization[12]	2000-2019, annually	205	0.1 - 24.1	0 - 5	proportional: $y_i=x_i/5$
2-3-2		6.25%	Out of pocket expenditure of private households (% of total national health care spending)	World Health Organization[12]	2000-2019, annually	188	0.08 - 86.07	100 - 0	reverse: $y_i=1-(x_i/100)$
2-4-1	Social protection	6.25%	Public expenditure on social protection programmes (excl. health) (% of GDP)	International Labour Office[4]	1995-2020, but many gaps	175	0.1 - 31.69	0 - 10	proportional: $y_i=x_i/10$
2-4-2		6.25%	Ratio of persons above statutory retirement age receiving an old-age pension from a contributory or non-contributory programme	International Labour Office[4]	2012-2022, but many gaps	189 with at least one value	0 - 100	0 - 100	proportional: $y_i=x_i/100$
2-5-1	Poverty reduction	6.25%	Social Assistance Spending (% of GDP)	ASPIRE (World Bank)[9]	only 1 value during 2010-20	126 with at least one value	0.006 - 9.29	0 - 5	proportional: $y_i=x_i/5$
2-5-2		6.25%	Vulnerable persons covered by social assistance (%)[15]	International Labour Office[4]	2012-2022, but many gaps	156 with at least one value	0 - 100	0 - 100	proportional: $y_i=x_i/100$
2-6-1	Employment	6.25%	Share of wage employment on work age population (%)	International Labour Office[4]	2013-21, annually	187	2.8 - 88.3	100 - 0	proportional: $y_i=x_i/100$
2-6-2		6.25%	Working poverty head-count rate (% of persons living in poverty in spite of being employed)	International Labour Office[4]	2010-21, annually	166	0 - 84.34	100 - 0	reverse: $y_i=1-(x_i/100)$
2-7-1	Rule of law (economic facets)[14]	6.25%	GCI Pillar 1F: Property rights	WEF, Switzerland[3]	2017-2019	140	13.9 - 91.3	0 - 100	proportional: $y_i=x_i/100$
2-7-2		6.25%	GCI Pillar 1E: Transparency (= corruption perception)	WEF, Switzerland[3]	2017-2019	140	14.0 - 90.0	0 - 100	proportional: $y_i=x_i/100$
2-8-1	Competition on markets	6.25%	GCI Pillar 7A: Domestic market competition (distortive effect of taxes and subsidies on competition; extent of market dominance; competition in services)	WEF, Switzerland[3]	2017-2019	140	26.2 - 76.3	0 - 100	proportional: $y_i=x_i/100$
2-8-2		6.25%	GCI Pillar 1D: Public-sector performance (burden of government regulation; efficiency of legal framework in settling disputes; e-participation)	WEF, Switzerland[3]	2017-2019	140	17.0 - 86.1	0 - 100	proportional: $y_i=x_i/100$

Index for *participation*									
(1) **No.**	(2) **Aspect**	(3) **Weight**	(4) **Index**	(5) **Source**	(6) **Data coverage (time)**	(7) **Data coverage (countries)**	(8) **Effective range of original data**	(9) **Range of original data resulting in 0-100%**	(10) **Transformation function**
3-1	Elections	50%	V-Dem Index “Electoral democracy”	University of Gothenburg[8]	1789-2021, annually	179	0.006 - 0.926	0 - 1	proportional: $y_i=x_i$
3-2	All mechanisms of participation	50%	Voice and Accountability Indicator	World Bank Governance Indicators[10]	1996-2020, annually	208	-2.3 - +1.8	-2.5 - +2.5	proportional: $y_i=(x_i+2,5)/5$

Notes:

FFP The Fund for Peace, Washington, DC
GCI Global Competitiveness Index
GDP Gross domestic product
WEF World Economic Forum

Sources:

1 Education Statistics: UNESCO Institute for Statistics (2023).
2 FFP Fragile States Index: The Fund for Peace (2017). Data at The Fund for Peace (2023b).
3 Global Competitiveness Index: WEF (2019). Data at WEF (2023).
4 International Labour Organization (ILO) statistics: ILO (2013). Data at ILO (2023).
5 Political Terror Scale: Haschke (2022). Data at Political Terror Scale (2023).
6 Telecommunication Infrastructure Index: UNDESA (2022). Data at UNDESA (2023).
7 Uppsala Conflict Data Program: University of Uppsala (2023a). Data at University of Uppsala (2023b).
8 V-Dem Index: Coppedge (2023). Data at Varieties of Democracy (2023).
9 World Bank Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE). World Bank (2023d).
10 World Bank Governance Indicators: Kaufmann, Kraay and Mastruzzi (2010). Data at World Bank (2023e).
11 World Development Indicators: World Bank (2023c). Data at World Bank (2023b).
12 Global Health Expenditure Database. World Health Organization (2023).

Comments:

13 We include GCI Pillar 6.4 “Skills of future workforce”, among others, because it also covers some aspects of education quality.
14 We included two indicators measuring economic aspects of the rule of law in order to highlight differences in the spread of corruption and in the *protection* of property rights. Both are decisive for the effectiveness of all *provision* by the government (e.g. spending on health, education, infrastructure, social protection). In addition, the government can often do much to reduce corruption and improve the protection of property rights. At the same time, the component rule of law is an aspect of *provision* that runs across all other aspects.
15 We use the ILO indicator “Vulnerable persons covered by social assistance (%)” instead of the World Bank indicator “Coverage of social safety net programs in poorest quintile (% of population)” because data are available for a larger number of countries.

Second, we searched for indices and indicators that embrace as many of these aspects for each of these elements. We realised that hardly any of them are fully covered by one single index or indicator, meaning that we had to seek indices and indicators for their different aspects.

We also realised that it is difficult to find meaningful indicators for the last three elements, that is, the deliverables provided by and among society in general. Some of their aspects are covered by the questions included in the World Value Survey, but only few of their aspects. Other databases, such as the Afrobarometer, include more aspects, but they cover only a limited number of countries. For this reason, the measurement of social cohesion developed by Leininger et al. (2021) currently contains only data on African countries.

Therefore, we decided to disregard these three elements in our first move towards measuring social contracts and instead focus fully on the three Ps that governments can give to society. We measure thus just the efforts of one side of the social contract; we cannot yet assess how much these efforts impact and depend on the deliverables of the other parties (e.g. the readiness of society to pay taxes, do military service and contribute to other public goods). We plan to conduct this second step in another paper.

To measure *participation,* we use two established indices – the V-Dem Index "Electoral democracy" and the World Bank Index "Voice and Accountability" – even though they overlap in three aspects (see Figure 3, and Column 2 in Table 1).[5] Thereby, we pursue three goals. First, we emphasise more formal avenues of participation, which constitute the core of formal democracies, while not neglecting other, more informal aspects of participation. The World Bank Index covers both formal and informal aspects, and it even already contains the V-Dem Index. Nevertheless, we add the V-Dem Index once more in order to give the more formal aspects of political participation more weight. Second, this also allows us to triangulate between the assessments of different sources of information (perhaps even ideational camps). Third, we always have a second source of information for countries for which no data are available for either of the two indices.

For *protection* and *provision*, however, it is necessary to incorporate a full array of aspects – five for *protection* and nine for *provision* (see Figure 3). We thus build on a range of indices/indicators (see Column 4 in Table 1). Yet, as we could not find adequate indicators or indices for two aspects – *Protection against environmental threats*[6] and *Provision of resources in production*

5 The V-Dem Index "Electoral democracy" has been designed by researchers at the University of Gothenburg and focusses on freedom of association, expression and information; the fairness of elections; and the filling of key positions in the political system. The World Bank Index includes this very index but only as one of several components. It also covers various other sources of information and issues such as respect for the rights of minorities; civil liberties; freedom of civil society organisations; freedom of movement for nationals and foreigners; trust in elections and parliament; accountability of political institutions and public officials; adhesion of political institutions to formal rules (e.g. the constitution); adequate communication and open discussions of government policies; and the non-involvement of the military in politics. Figure A11 in the Annex shows that the values of the two indices we use are clearly correlated but diverge considerably for some countries. For example, the V-Dem Index values are substantially higher for Armenia, Burkina Faso, Tunisia, the Republic of Korea and Peru, whereas they are lower than the World Bank Index values for Hungary, Serbia, Thailand and Morocco – the latter meaning that informal elements of political participation are stronger than the formal ones.

6 To measure "Protection against environmental threats", we decided to use the Health Vulnerability Index for Disaster Risk Reduction, developed by researchers from the universities of Oxford and Hong Kong (Chan, Huang, Lam, Wong, & Zou, 2019). We found that it focuses on health outcomes rather than government interventions to protect citizens against environmental and other threats. Likewise, the World Risk Index, developed by researchers from the University of Bochum (Bündnis Entwicklung Hilft, 2021), concentrates on the exposure of countries to risks rather than on governmental risk-mitigation. It includes some indicators on policy fields that help citizens to protect themselves against health, natural and environmental risks, but these overlap to a high degree with the indicators that we have taken up already to measure other aspects of protection.

(e.g. water, land)[7] – we decided to establish a first version of a social contract index without them. Upon the availability of relevant indicators, we hope that we will be able to integrate these two important aspects successively in subsequent versions of the index.

Third, we verified the trustworthiness of the organisations and researchers who have developed the various indices and collected the data for the indicators that we had shortlisted for use in our social contract index as well as the reliability of data sources. In this step, we gave preference to academic and international organisations rather than private foundations (see Column 5 in Table 1). In addition, we checked that the respective thematic academic literature had no caveats about the selected indicators and indices.

Fourth, we checked whether data are available for a majority of countries and as many years as possible (see Columns 6 and 7 in Table 1). For the aspect of social welfare, we could not find an indicator or index for which data are available for a larger number of years and a majority of countries. Ultimately, we decided to use the indicators provided by the International Labour Office on national governments' spending on social transfer schemes and the outreach of these schemes, even though the data are only available for a few specific points in time.

3.3 Transformation of selected indicators and indices

Fifth, we transformed the data of the indicators and indices to a uniform scale ranging from 0 to 1 (see Columns 8-10 in Table 1). The indices that we chose were already scaled. Where the maximum value was the best score, we converted the values of the indices in a linear, proportional way, such that the minimum and maximum of the original scale corresponded to 0, respectively 1, in our scale – sometimes by dividing the value by 100, such as in the case of the components of the Global Competiveness Index provided by the World Economic Forum. In contrast, where the maximum value of an index indicated the worst possible situation, we reversed the scale so that, for example, an initial 10 became a 0 in our scale, and an initial 0 was turned into a 1 in our scale (such as in the case of the FFP Fragile States Indices X1 and P3 that we used, see Column 10 in Table 1).

The data for original indicators, which range almost from 0 per cent to almost 100 per cent (e.g. coverage rates, see Column 8 in Table 1), were also transformed linearly to our scale ranging from 0 to 1. Again, some had to be inverted because higher values indicated poorer performance. For example, the share of out-of-pocket spending on health ranges almost from 0 to 100 per cent, but 100 per cent out-of-pocket spending is the worst scenario. Therefore, we inverted the data, such that 100 per cent would result in a 0, while 0 per cent would result in a 1 (see Columns 9-10 in Table 1).

We also linearly transformed indicators where the data have a smaller effective range (see Column 8 in Table 1), but here we introduced a ceiling. This holds, for example, for indicators representing the share of government spending on specific policies such as for education, health, social protection and non-contributory social transfer schemes. We left 0 per cent as the

7 To measure "Protection against environmental threats", we considered using the Health Vulnerability Index for Disaster Risk Reduction, developed by researchers from the universities of Oxford and Hong Kong (Chan, Huang, Lam, Wong, & Zou, 2019). However, it focuses on health outcomes rather than government interventions to protect citizens against environmental and other threats. Likewise, the World Risk Index, developed by researchers from the University of Bochum (Bündnis Entwicklung Hilft, 2021), concentrates on the exposure of countries to risks rather than on governmental risk-mitigation. It includes some indicators on policy fields that help citizens to protect themselves against health, natural and environmental risks, but these overlap to a high degree with the indicators that we have taken up already to measure other aspects of protection.

lower ceiling and introduced an upper ceiling of 5 per cent of GDP for spending on education, health and social transfers, and an upper ceiling of 10 per cent of GDP for total spending on social protection. These maximum levels can be seen as indications of relatively good performance, even for governments of high-income countries, although there are some countries with considerably higher levels of spending. Without such an upper ceiling, all countries would have rather low scores in the respective areas of interest. All countries spending 5 per cent of GDP or more, for example, on education were given the maximum score of 1 in our scale, while all levels of spending on education below 5 per cent of GDP were rescaled proportionately to our scale:

$$y_i = 1 \quad \text{if } x_i \geq 5\% \text{ of GDP}$$

$$= (x_i/5) \quad \text{if } x_i < 5\% \text{ of GDP}$$

where i is an index for the respective year.

Thereby, we ignore all increases in spending above the maximum score and give more weight to increases in the levels of spending below that score.[8]

For two indices, we used yet another method of rescaling: those for protection against state terror and protection against armed conflict within countries. To measure *protection against state terror*, we used the Political Terror Scale, developed by a group of researchers at Purdue University. It only has five grades: 1 represents the full absence of state terror, whereas 5 is the highest extent of it (Haschke, 2022). Here, we also decided to transform indicators in a linear but reverse way so that the best grade (1) was transformed into a 1 in our scale, and the worst grade (5) was transformed into a 0 on our scale (2 was turned into 0.75, 3 into 0.5, and 4 into 0.25, see Column 10 in Table 1).

For *protection against armed conflict within countries*, we chose the data on fatalities provided by the Uppsala Conflict Data Program (UCDP) (University of Uppsala, 2023a). They are an outcome indicator, but we did not find an indicator measuring the efforts of governments to prevent armed conflict. Based on the absolute number of fatalities, we computed the number of fatalities per 10,000 inhabitants. We then calculated weighted moving averages for each year because the effective number of fatalities is subject to strong fluctuations and serves only as a proxy for the possibility of people dying because of civil war or terrorism. In other words, if a large number of people die in a single terrorist act in one year, the threat of terrorism not only exists in that single year, but also in the years before and thereafter. Thereby, we make sure that our results are not driven by one-time increases or decreases in the number of fatalities.

8 It would be important to also include the efforts of governments in protecting public goods such as water, land, air, biosphere and biodiversity, and providing fair and sustainable access to all citizens. Especially people in rural regions need these goods for their economic activities (e.g. agriculture, fishing). However, we could not find indicators or indices that measure these aspects for a majority of countries and multiple years. For instance, the Land Rights and Access Indicator, produced by the International Fund for Agricultural Development for the Millennium Challenge Corporation (2023), expresses mainly to what extent governments invest in secure land tenure and property rights in rural areas rather than access to land by new owners. Likewise, the World Bank's Doing Business sub-index, which measures Regulatory Standards for Land Administration, focusses on land property transactions, land dispute resolution mechanisms and land administration rather than access to land (World Bank, 2023a); the World Economic Forum's sub-index land administration, which is included in the Global Competitiveness Index, is just a replication of it (WEF, 2019). The indicator "Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure that the Agenda 2030 suggests for measuring progress towards SDG 1.4.2" (United Nations Statistics Division, 2021) has no data for the majority of countries.

The formula that we used is:

$$\underline{x}_i = 0{,}1x_{i-2} + 0{,}2x_{i-1} + 0{,}4x_i + 0{,}2x_{i+1} + 0{,}1x_{i+2}$$

where i stands for the respective year and x_i represents the number of fatalities in year i.

In the next step, the data were scaled logarithmically in order to give an increase in fatalities a higher value, if such an increase is from 0 to 100 rather than from 1,000 to 1,100:[9]

$$y_i = 1 - LN(100\underline{x}_i+1)/LN(100+1)$$

Finally, we inverted the results in order to make sure that high numbers of fatalities result in a score close to 0, whereas zero fatalities result in a score of 1 (see Column 10 in Table 1).

3.4 Inclusion of countries and data

Sixth, we took stock of the data that we had for the different indicators and countries. For the purposes of this paper, we decided to start by measuring the state deliverables in social contracts only around the year 2019. We found data for most indicators and countries for 2018, 2019 or 2020 (see Columns 6-7 in Table 1). For some indicators, however, we had to go back a couple of years (no further than 2014) and use older data, which is a normal praxis for multidimensional indices, including, for example, the Human Development Index (HDI). However, we also found that we were lacking data in general for a considerable number of countries. In order to make sure that the results for all countries were comparable, we left out countries from the first version of our social contract indices for which we did not have at least one indicator for each of the aspects of *protection*, *provision* and *participation* (see Column 4 in Table 1), with one exception: We did not exclude the 17 countries[10] with missing data on *rule of law (economic facets)* and *competition on markets*, because we realised that the difference between the index score of countries in our *provision* index – with and without the two indices – was quite negligible (see Figure A4 in the Annex). We decided to include *rule of law (economic facets)* and *competition on markets* for the 140 countries for which the World Economic Forum provides data in its annual Global Competitiveness Reports, but also compute the index for the other 17 countries as well – just without the two aspects.[11]

9 According to the Uppsala data, there are no fatalities in the vast majority of countries, while in the remainder, the number of fatalities is far above 10 and easily exceeds 100 and 1,000 per year.

10 The 17 countries that we included – although we have no data for the aspects rule of law (economic facets) and competition on markets – are: Afghanistan, Belarus, Central African Republic, Rep. of Congo (Congo-Brazzaville), Fiji, Iraq, Liberia, Maldives, Myanmar, Niger, Papua New Guinea, Sierra Leone, South Sudan, Sudan, Timor-Leste, Togo and Uzbekistan.

11 Due to insufficient data, we could not include 41 sovereign states and 26 semi-autonomous territories. The 41 sovereign states are Andorra, Antigua and Barbuda, the Bahamas, Belize, Bhutan, Cabo Verde, Comoros, Cuba, Djibouti, Dominica, Equatorial Guinea, Eritrea, Grenada, Guinea-Bissau, Guyana, Kiribati, North Korea, Kosovo, Libya, Liechtenstein, Marshall Islands, Micronesia, Monaco, Nauru, Palau, Samoa, San Marino, Sao Tome and Principe, Solomon Islands, Somalia, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Syria, Taiwan, Tonga, Turkmenistan, Tuvalu, Vanuatu and Venezuela. The 26 semi-autonomous territories are American Samoa, Aruba, Bermuda, British Virgin Islands, Cayman Islands, Channel Islands, Curacao, Faroe Islands, French Polynesia, Gibraltar, Greenland, Guam, Hong Kong, Isle of Man, Macao, Mayotte, Netherlands Antilles, New Caledonia, Northern Mariana Islands, Palestine (West Bank and Gaza), Puerto Rico, Sint Maarten, St. Martin, Tokelau, Turks and Caicos Islands, and the US Virgin Islands.

As stressed earlier, this is only a first attempt to operationalise the social contract. In the future, we also plan to calculate the results for additional years, and possibly additional countries.

Seventh, we checked if the scores of all remaining countries for the different aspects of *protection*, *provision* and *participation* are somehow distributed similarly, that is, if the medians and averages are on similar levels. And in fact, the medians and averages are all between 0.45 and 0.65 (mainly between 0.5 and 0.6), with the sole exception of the median and average for poverty reduction, which are lower; the median is 0.251 and the average is 0.36 (see Annex).[12]

3.5 Weighting and aggregation of data

Eighth, we aggregated the scores for the respective aspects of *protection*, *provision* and *participation* to generate the three indices (see Column 3 in Table 1). Thereby, we gave equal weight to all indicators within every aspect (e.g. infrastructure, education, health) of the three Ps:

- To calculate the *protection* index, we calculated the simple average of the scores of all available values of the five indicators used for the index.[13]
- To calculate the *provision* index, we first calculated the simple averages of the scores of all available values of the two indicators used for each aspect/sub-index (i.e. an average value each for infrastructure, education, health, etc.). Then we calculated the simple average of all values resulting from the first step for the eight aspects of *provision*.[14]
- To calculate the *participation* index, we calculated the simple average of the scores of all available values of the two indicators used for the index.

We chose this rather simple aggregation method rather than more complex ones because we are mainly interested in measuring the efforts governments made in delivering to society. Arguably, these efforts add up from the perspective of governments: the more effort they make in one domain, the fewer resources that are available for efforts in other domains. From the perspective of society, the simple sum of efforts can also be interpreted as a measure of how much the government cares about society – even if these efforts are not very effective or helpful for citizens, and even if society wants the government to focus efforts elsewhere. Things might look different if our interest were focussed more on outcomes rather than inputs. In that case, what would matter is how effective the government's efforts in each domain were, and if it could increase the well-being of citizens by making less of an effort in one domain but more in another. In such a case, we would need to capture the marginal effects of more efforts in each domain by using, for example, geometric means as aggregation function – as does the HDI, for example.

12 It should be noted that the median and average values are low for both indicators used for the sub-index "poverty reduction": The average of the transformed data is 0.363 for the public expenditure on social safety nets and 0.364 for the proportion of the population covered by social protection floors, while the respective means are 0.282 and 0.198 (see Table A2 in the Annex).

13 Where we had values for only four of the five indicators used for the protection index, we calculated the average of these but we disregarded countries with fewer than four indicators.

14 Where we had no value for at least one indicator for an aspect of provision, we could not calculate an average. Therefore, we completely excluded the country from our analysis, with the above-mentioned exception of the 17 countries that were only missing values for the aspects rule of law (economic facets) or competition on markets.

4 Description and discussion of the results

The results of our calculations show that the three social contract indices are well-scaled and consistent with each other and with other indices while also still adding additional information. In the following, we present the values of our three indices for 154 countries for the year 2019 and mainly discuss six criteria:

- *Variance:* Do the three indices display existing disparities between different countries?
- *Plausibility:* Are the results in line with possible explanations?
- *Consistency between indices:* Are the indices scaled in a consistent way?
- *Consistency within indices:* Are the components of the three indices (the values of their aspects) consistent, that is, reasonably correlated?
- *Consistency with other indices:* Are the three indices in line with other indices (i.e. do they fulfil the criterion of "concurrent validity")?
- *Added value*: Do the indices add information to other available indicators and indices?

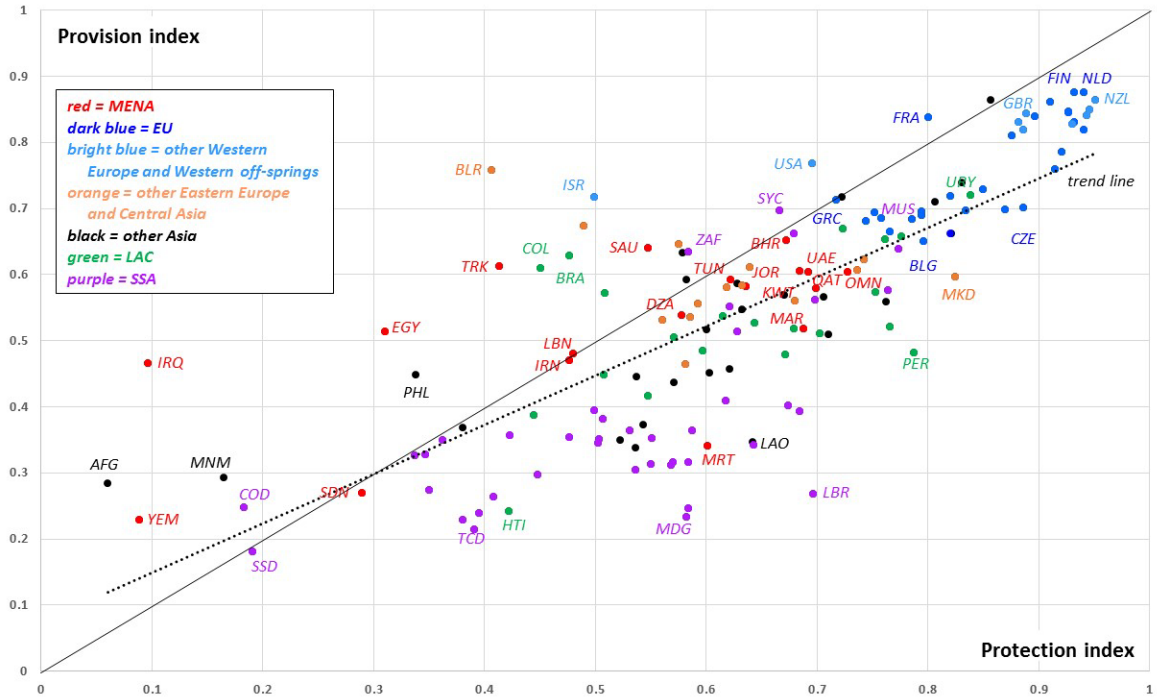
4.1 Variance of results

The three indices cover a broad range of cases. Figures 4-7 show that the values of all three indices almost spread across the theoretically possible span between the bottom line (0) and the maximum (1). They show countries in different colours, with each colour representing a world region. Demarcations between the world regions are by and large based on the World Bank definitions (for details, see caption for Figure 4). The values of the *protection* index for 2019 – or the latest available year – range from 0.06 to 0.95; those of the *provision* index range from 0.18 to 0.88; and those of the *participation* index range from 0.12 to 0.85 (see Table A1 in the Annex). The statistical variance is 0.036 for the *protection* index, 0.033 for the *provision* index and 0.043 for the *participation* index.

4.2 Plausibility of results

The results are more or less in line with possible expectations: The high-income countries in Western Europe and North America (such as Norway, France and Canada) achieve high scores for all three indices, whereas the values of most low-income countries (such as Laos and Burundi) and conflict-affected middle-income countries (such as Iraq and the Philippines) are quite low for all three Ps. The values of war-affected countries (such as Afghanistan, Mali and Myanmar) for *protection* are particularly low (lower than the values for *provision* and *participation*). In addition, the values of autocracies (such as Qatar, China, Russia and Tajikistan) for political *participation* are lower than the values for *protection* and *provision* (see Figures 4-7).

Figure 4: Values for protection and provision in countries world-wide around 2019*

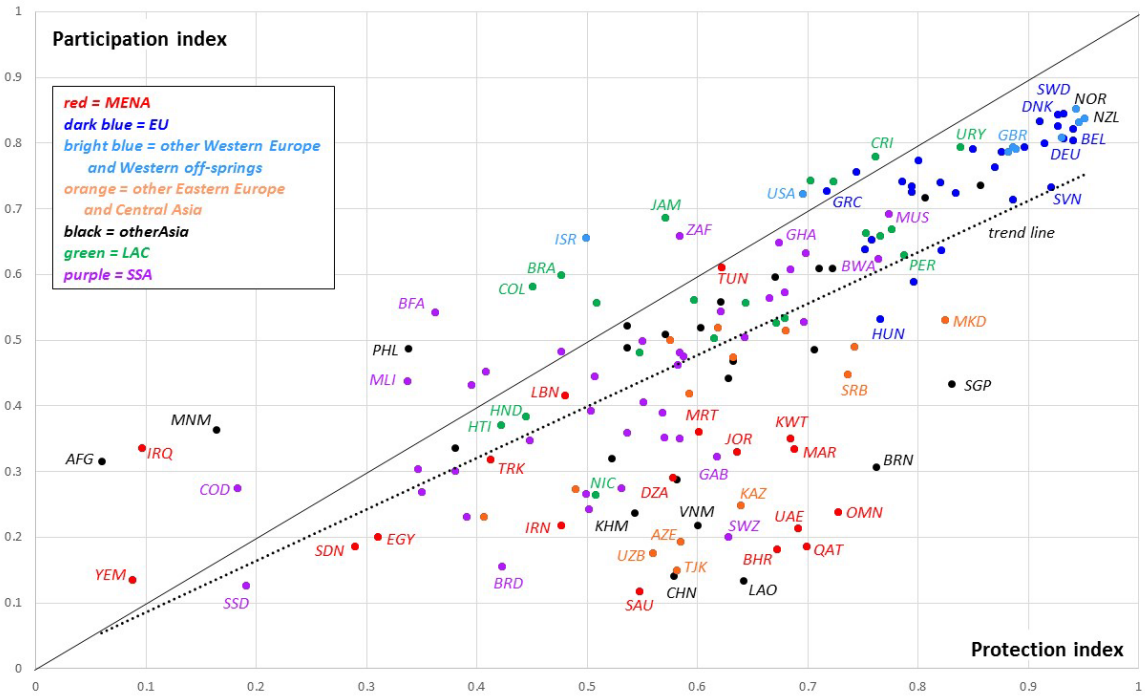


* Most data are for 2019. Where data for 2019 were not available for some aspects of provision, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.

Country groupings: Our breakdown of countries into world regions is primarily based on the World Bank's definitions. This holds in particular for Latin America and the Caribbean (LAC), the Middle East and North Africa (MENA) and sub-Saharan Africa (SSA). In two respects, however, we deviate from the World Bank's definitions. First, we subsume South Asia (SA) and East Asia and the Pacific (EAP) under the heading "other Asia". Second, within Europe, we differentiate between three groups of countries: (i) members of the European Union (EU), (ii) non-EU members in Eastern Europe (EE), which we place in a group with countries in Central Asia (CA), as the World Bank did in the past, and (iii) non-EU members in Western Europe, which we bring together with Canada, the United States, Australia, New Zealand and Israel under the heading "other Western Europe and Western off-springs". Admittedly, the label is a bit awkward and the category is hardly ever used. However, we believe that the countries in this last category have much in common with the countries in the EU but might still be somewhat different. In particular, we try to find out if membership in the EU has an impact on the delivery of *protection*, *provision* and *participation* by governments.

Source: Authors

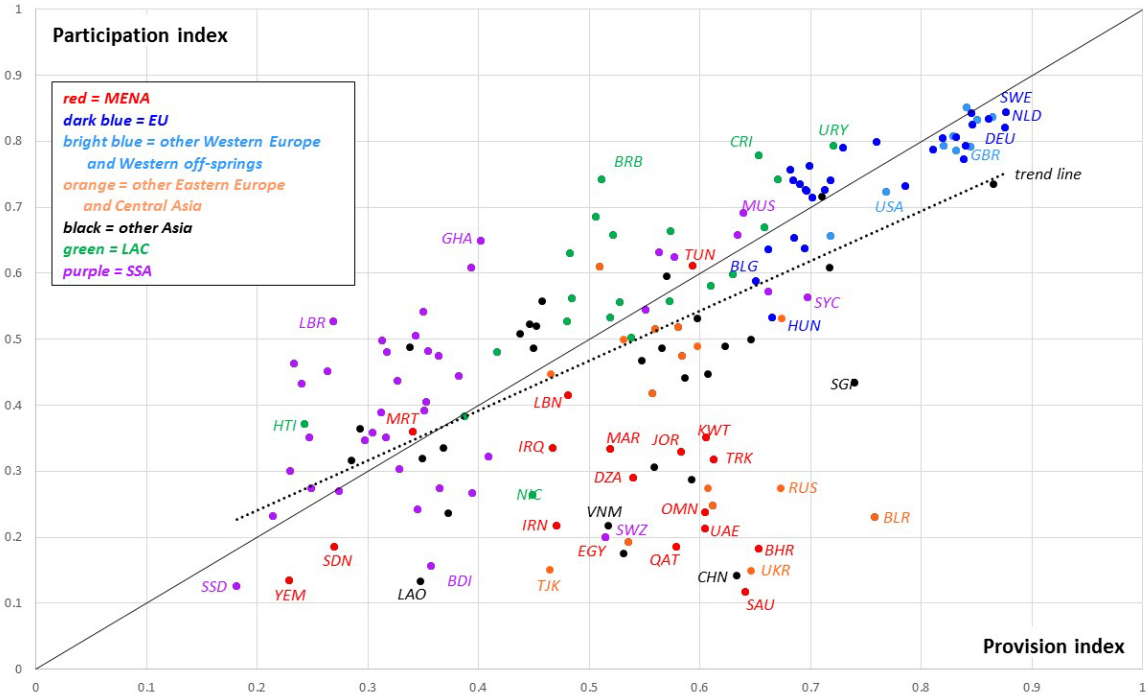
Figure 5: Values for protection and participation in countries world-wide around 2019*



* Most data are for 2019. Where data for 2019 were not available, we used data from 2020, 2018 or 2017 instead.
Country groupings: See caption of Figure 4.

Source: Authors

Figure 6: Values for provision and participation in countries world-wide around 2019*



* Most data are for 2019. Where data for 2019 were not available for some aspects of provision, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.
Country groupings: See caption of Figure 4.

Source: Authors

4.3 Consistency between the three indices

The three indicators are consistent (compatible) with each other. It is possible to compare their respective values as they cover a similar range, and their means and medians are not too different. Their mean values are 0.63 (*protection* index), 0.55 (*provision* index) and 0.50 (*participation* index), and their medians are 0.63 (*protection* index), 0.56 (*provision* index) and 0.50 (*participation* index) (see Table A1 in the Annex).

The three indices are also fairly correlated with each other (see Figures 4-7). The Pearson coefficient for the correlation between *provision* and *protection* is 0.78, it is 0.70 for the correlation between *participation* and *protection*, and 0.65 for the correlation between *participation* and *provision*. Figures 4-6 display the bilateral relationships between the three social contract indices – each figure showing a combination of two of them. Figure 7, in turn, presents the relationship between all three in the three-dimensional space. It alleges that the combination of values for the three indices seems to run more or less strictly from the lower left corner, which is the location of the combination (0;0;0), to the upper right corner, which is the place of the combination (1;1;1).

This result is a further indication of the validity of the three indices. After all, it is not surprising that governments which offer society a large amount of one of the three Ps also tend to be more committed to the other two Ps. Yet, there is still some variation between the three indices, which means that they all contribute additional information about the social contracts in different countries. Otherwise, the correlation coefficients would be even closer to 1.

4.4 Consistency between components of the three indices

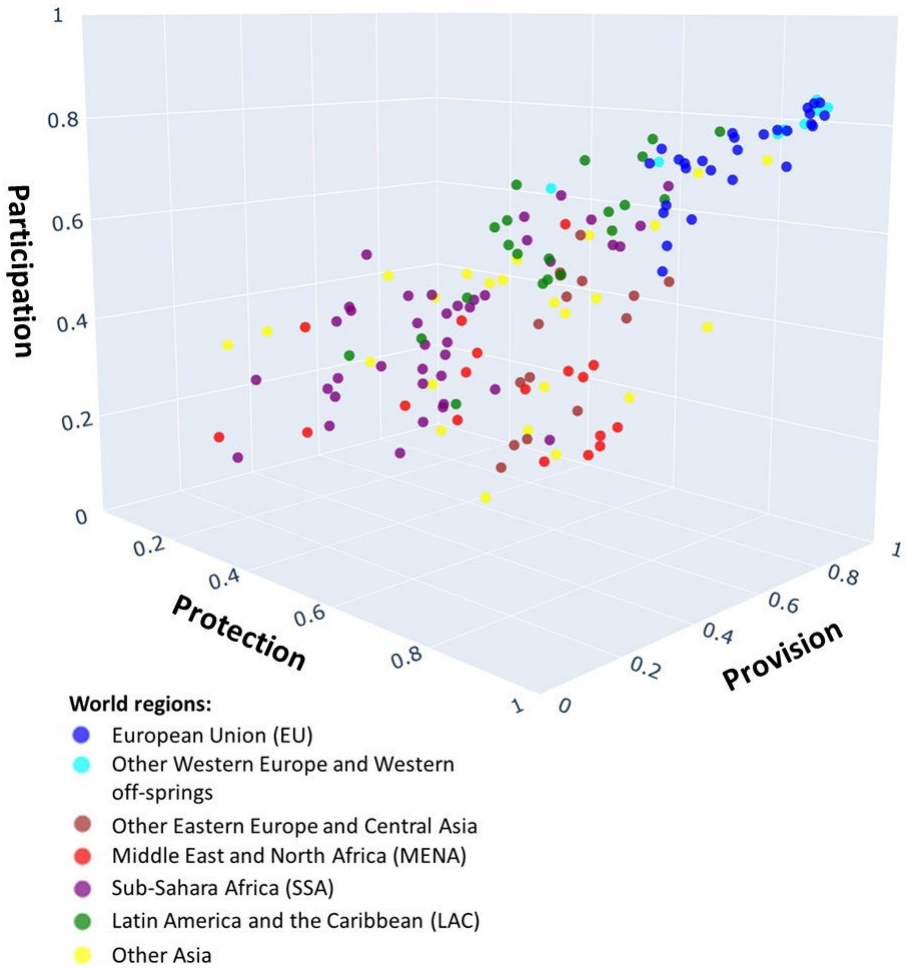
Likewise, the components of the three indices (sub-indices) are also strongly correlated with each other, that is, the different aspects of the three Ps move in the same direction. The Pearson coefficients of more than four-fifths of all bilateral correlations are higher than 0.5, while almost a third are even above 0.7 (see Table A3 in the Annex).

This finding indicates that the three indices are quite robust. Leaving out any of their components does not have very strong effects on their values, as Figures A4-A7 in the Annex show: Most countries have almost the same score if either the components “markets” and “rule of law (economic aspects)” or “infrastructure” or “education” are left out from the provision index.[15] The values for the protection index change more if the component “external security” is omitted (see Figure A7), but all of the Pearson correlation coefficients are still above 0.88.[16]

15 Mainly Malaysia, Rwanda and the United Arab Emirates achieve somewhat worse results without the aspects “markets” and “rule of law (economic aspects)”, whereas, among others, Argentina, Bolivia and Greece achieve somewhat better results. Without “infrastructure”, mainly Timor-Leste achieves a higher value. And without “education”, the Republic of Congo, Papua New Guinea, Timor-Leste, Togo and Yemen achieve worse results, among others, whereas, for example, Germany, Iraq, Mongolia and Spain have higher scores. In any case, all deviations are quite small (see Figures A5-A7 in the Annex).

16 There are two reasons why the values of the protection index change more than the provision index when any of its components are removed. First, the components of the protection index have a greater weight within the index. “Collective security”, for example, has a weight of 40 per cent, whereas all of the components of the provision index have a weight of only 12.5 per cent. Second, the dimensions of protection by their nature have greater differences: Defending a country against external threats is substantially distinct from guaranteeing human rights or safeguarding internal peace. Table A7 in the Annex shows for which countries the value for the protection index changes most if “collective security” is disregarded. It increases for countries that have more problems with their neighbours than with safeguarding peace internally: for example, the Central African Republic, Estonia, Mali, Myanmar and Timor-Leste. The value decreases, in turn, for countries that struggle more with internal than with external problems, such as Brazil, Chile, China, North Macedonia and the United States.

Figure 7: Protection, provision and participation in countries world-wide (around 2019)



* Most data are for 2019. Where data for 2019 were not available for some aspects of provision or participation, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.
Country groupings: See caption of Figure 4.

Source: Authors

Nevertheless, it is important to include the different components, as there is still some variation between them, which means that they all contribute additional information about the delivery of the three Ps by governments that has not yet been fully included in the other components. Even some of the correlation coefficients of relationships that we might expect to be very close are quite distinct from 1, for example, the coefficients for the relationships between health and education, rule of law for citizens and competition on markets, or between employment and poverty reduction.

4.5 Consistency with other indices (concurrent validity)

Furthermore, the three indices are also consistent with popular indicators such as per capita income and indices such as the HDI or the Global Peace Index. The relationship with per capita income (GDP per capita in purchasing power parities, PPP) is statistically significant at the 99.9 per cent confidence level for all three social contract indices, and the Pearson coefficient is 0.66 for the correlation of the *protection* index with GDP per capita in PPP, 0.76 for the correlation of the *provision* index and 0.44 for the correlation of the *participation* index (see also Figure A2 in the Annex).

We do not know if this relationship also holds across time because, so far, we have only used data for one point in time (around the year 2019). Based on these data, however, it looks as if the potential of governments to deliver the three Ps increases with growing per capita income: Countries with high per capita income tend to perform better in the delivery of all three Ps.

The correlation with the HDI is equally strong. It is statistically significant at the 99.9 per cent confidence level for all three social contract indices, and the Pearson correlation coefficients are 0.75 for the *protection* index, 0.92 for the *provision* index and 0.56 for the *participation* index (see also Figure A1 in the Annex). It is not astonishing that the correlation is strongest for the *provision* index because the HDI measures outcomes in income, education and health, and hence similar aspects as the *provision* index. It is remarkable, though, how strong the relation is, even though the HDI looks at only three aspects of human development outcomes (per capita income, education and health), whereas we look at a much larger range of aspects and mainly use indicators for inputs.

Yet, there are some exceptions to the rule. For example, Qatar, the United Arab Emirates, Iran, Gabon and Angola are ranked much higher by the HDI than by our *provision* index. This is mainly due to their high per capita incomes, which do not fully translate into human development inputs and outcomes. Bangladesh has a higher score for the HDI than for the *provision* index, but there must be a different reason. Possibly, government inputs into *provision* lead to above-average outcomes, or the government focusses on education and health (which are covered by the HDI), rather than on social protection and poverty reduction (which are not covered by the HDI). Conversely, Timor-Leste and Lesotho, for instance, fare much better with our *provision* index than with the HDI, probably due to their high levels of spending on social protection. Finally, even the correlation with the Global Peace Index is strong. It was created by the Institute for Economics and Peace (2019) in Sydney to measure the peacefulness of countries world-wide and comprises 23 quantitative and qualitative indicators. It can thus assess, in particular, the concurrent validity of our *protection* index. However, the correlation of the Global Peace Index is statistically significant at the 99.9 per cent confidence level for all three of our social contract indices, and the Pearson coefficient is -0.86 for our *protection* index (see also Figure A3) and -0.60 for both the *provision* and *participation* indices.[17]

4.6 Value added

At the same time, the three social contract indices still add information to other indices and enable a systematic comparison between the three Ps, thus providing added value for cross-country differences. Our indices are not fully correlated with any of the mentioned existing indicators or indices. They are not at odds with them, but they are also not redundant. In fact, they contribute information that is not yet contained in the other indices and indicators. To give an example, Figure A1 in the Annex plots the values of countries by the *provision* index and the HDI. It shows that there is a clear correlation between the two, which is statistically highly significant and strong but not perfect.

Likewise, descriptive analysis reveals remarkable exceptions to the general rule of high collinearity between the different indices: Various countries are outliers, meaning that they perform much better in terms of either of the three Ps than they do in terms of at least one of the two other Ps. Figures 4-7 show that some of these exceptionalities are overrepresented in some world regions.

17 The main outliers in the correlation are Serbia (with a higher value for the Global Peace Index) and Myanmar (with a lower value for the Global Peace Index). The main reason for differences between the values for the two indices is probably that the Global Peace Index measures the behaviour of countries (both in relations with other countries and within society), while our protection index captures the effective security of people living in a country.

For example, a considerable number of countries in the SSA region are below the trend lines in Figure 4, which signifies that, in international comparison, their governments in 2019 performed better in terms of *protection* than *provision*. This finding is confirmed by regression analysis, documented in Table A4 in the Annex. Extreme cases in this regard include Madagascar and Liberia. Though not in SSA, the governments of Laos, Peru and North Macedonia were also more successful in 2019 in delivering protection than they were in delivering provision.

In contrast, some countries perform better in terms of *provision* and *participation* than in terms of *protection*, for example, Israel, the United States, Colombia, Brazil, Jamaica, Iraq and the Philippines – but also some countries in SSA such as South Africa, Mali, Burkina Faso and the Seychelles. Most of these countries are well-known for the problems they have with crime and terrorism.

Other countries are better only in terms of *provision*. This includes, among other, some of the former members of the Soviet Union, such as Belarus, Russia and Ukraine.

The majority of countries in the MENA region and in Central Asia, in turn, perform far better in terms of both *protection* and *provision* than they do in terms of *participation* (see Figures 5 and 6). Countries in both regions still retain the populist-authoritarian social contracts that their governments established after the Second World War during Soviet times (Hinnebusch, 2020). These social contracts were based on the material legitimation of the government – for example, generous *provision* of social and economic benefits such as free public education, public-sector jobs, energy and food subsidies – as compensation for the lack of political participation (Loewe, Zintl, & Houdret, 2021).

Some countries in Asia, SSA and Eastern Europe – such as China, Laos, Vietnam, Singapore, Eswatini, Burundi, Gabon, Russia and Belarus – also perform better in terms of *protection* and *provision* than they do in terms of *participation* (see Figures 5 and 6). However, in terms of representation, these countries are in the minority in their respective regions, and these regions are quite diverse.

Various other countries perform better in terms of *participation* than *provision* (Figure 5). This includes a large number of countries in SSA, such as Liberia, Ghana, South Africa, Botswana, Liberia and Senegal, but also many countries in Latin America and the Caribbean, such as Barbados, Peru, Panama, Barbados, Uruguay and Costa Rica (Figure 5).

5 Discussion of results on world regions

In the following, we demonstrate the applicability of our three social contract indices. For this purpose, we take a closer look at the world regional patterns already observed. We assess to what degree the delivery of *protection*, *provision* and *participation* by governments depends on the level of economic development of countries, but we also examine whether the trends identified in Section 4 for some world regions are statistically significant. We rely on ordinary-least squares (OLS) regressions of our social contract indices with selected independent variables. These include per capita income, dummies for the world regions[18] and some control variables often used in cross-country analyses (see Table 2 and Tables A4-A6 in the Annex):

18 We use the EU, the group of other Western European countries and European off-springs, MENA, Latin America and the Caribbean, other countries in Eastern Europe and Central Asia and SSA as regressors, while we use the group of other Asian countries as a reference group. The reason for this choice is that the category is so heterogeneous that we cannot find any common patterns for it anyhow.

– Some control variables capture natural or geographical conditions that can make the delivery of *protection*, *provision* or *participation* more difficult: *Low precipitation levels* and *water stress* limit opportunities for agricultural production and hence increase dependence on food imports. A *large surface area* or *low population density* can indicate that a country's means of transport and ability to communication within the country are more problematic and the delivery of the three Ps is expensive. Being in a *land-locked position* raises the costs of external trade. S*mall island* countries cannot exploit economies of scale (United Nations, 2016).
– The receipt of *official development assistance* (ODA),[19] *remittances* and *rents from natural resources* (all as a share of GDP) constitutes a helpful source of foreign exchange.
– The age dependency rate is a major factor for economic growth: The more people there are of working age, the less they have to share their incomes with children and people at retirement age, and the more they can invest to foster economic development (Loewe, 2007).
– The *duration of independence* is likely to have a positive impact on government performance. It is the time that countries have had to free themselves from colonial legacies, establish national institutions that conform with the framework conditions and economic needs of the respective country, and improve the capacities of these institutions (see e.g. Easterly, 2000; Sylwester, 2008).[20]

Of course, this set of control variables is not comprehensive. The regressions are more explorative so far; they are mainly meant to showcase the utility of our social contract indices and present a first step of analysis. More research with a larger range of variables will definitely be needed to establish more robust results. In particular, parameters for possible political and cultural factors should be checked in the future. However, many such parameters are likely to suffer from collinearity with the dependent variables.

We find that the delivery of *protection*, *provision* and *participation* by governments is highly correlated with per capita income and with each other (see Figures 4-6). On the whole, the values for all three Ps are higher, the more advanced a country is in terms of economic and human development (Table 2 as well as Figures A1 and A2 and Tables A4-A6 in the Annex). These relationships could be due to the fact that all three deliverables are costly, and hence the governments of "rich" countries can more easily deliver the three Ps. Given that there is collinearity between several of the explanatory variables, we ran regressions with all of them but also some regressions with only a subset of them. Both kinds are rather exploratory though, and more tests are needed to establish causal relationships between specific variables.

19 Not surprisingly, we find collinearity between GDP per capita and the ODA received by countries (significant at the 99.9 per cent confidence level). Therefore, the isolated effect of ODA on the three social contract indices is clearly negative (significant at the 99.9 per cent confidence level in all three cases): Countries tend to receive higher levels of ODA if their per capita income is low, but in this case their governments are less able to deliver much protection, provision or participation. In contrast, we would hope that the direct effect of ODA on the three Ps is positive. However, once we include both ODA and GDP per capita as independent variables in a regression, we find that ODA has no significant effect on any of the three Ps.

20 Several of these factors are correlated with each other. Therefore, we also ran regressions excluding either one of them in order to verify their isolated impacts as well (see Tables A5-A7 in the Annex).

Table 2: Overview of factors influencing the three social contract indices

	Protection index	Provision index	Participation index
Per capita income (in PPP)	+++	+++	(++)
Precipitation		– – –	
Water stress			
Surface area	(–)		(– –)
Population density			
Land-locked position			– –
Small-island position			
Receipt of official development assistance (ODA)			
Receipt of remittances			
Receipt of rents from natural resources			– –
Age dependency rate	(– – –)	– – –	
Duration of independence		–	
European Union (EU)	+++	+++	+++
Other Western Europe and Western off-springs	(++)	+++	+++
Other Eastern Europe (EE)		++	
Central Asia (CA)	(++)	(++)	
Middle East and North Africa (MENA)			– – –
Sub-Saharan Africa (SSA)	++	– *	(+++)
Latin America and the Caribbean (LAC)			+++

Country groupings: see Figure 4.

+ / ++ / +++ Positive correlation at the 90/ 95/ 99 per cent confidence level.

– / – – / – – – Negative correlation at the 90/ 95/ 99 per cent confidence level.

Brackets Results are not consistent across all regression models.

* Statistically significant only in models that disregard four positive outliers (Botswana, Mauritius, the Seychelles and the Republic of South Africa).

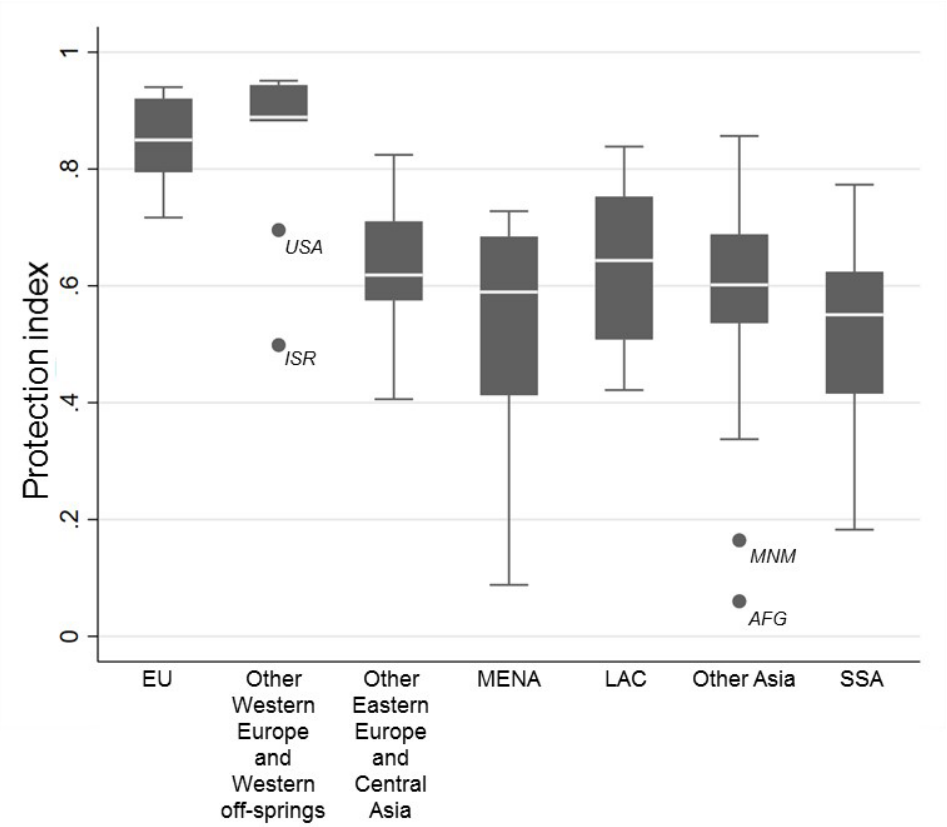
Source: Authors, based on the results of several regression models displayed in Tables A4-A6 in the Annex

The correlations are particularly obvious in Figures 4-6 for high-income countries (HICs) and low-income countries (LICs). Most of the data points representing the countries in these two groups are very close to the angle bisector (45-degree line). Apparently, the governments of HICs deliver large amounts of all three Ps, whereas the governments of LICs tend to deliver small amounts of all of them. In the medium range, however, the data points seem to be more dispersed, which means that the differences between *protection*, *provision* and *participation* in middle-income countries (MICs) are larger. This observation raises the question of whether the governments of MICs are more obliged to take a decision on delivering either a small amount of all three Ps or more of one or two of the three Ps and less of the other, thereby establishing "*protection contracts"*, "*provision contracts*" or "*participation contracts*".

5.1 Protection

Our OLS regressions show that the delivery of *protection* correlates positively with per capita income and with location in two geographical regions: SSA and the EU (Table 2, Figure 8 and Table A4 in the Annex). In turn, it correlates negatively with the age dependency rate, but this effect could be due to collinearity: the fact that families in many LICs have more children, and thus total age dependency rates of up to 106 per cent. Once countries with average incomes of less than USD 7,500 in PPP are excluded, the significance in the correlations between the age dependency rate and our *protection* index disappears. In turn, countries in the EU and in SSA enjoy above-average delivery of *protection* if we take their respective per capita incomes into consideration. However, for SSA the result is mainly due to high significance in correlation with individual security, there is no statistical significance for collective security and the rule of law (see Table A7 in the Annex).

Figure 8: Plotted values of the protection index by region around 2019*



* Most data are for 2019. Where data for 2019 were not available, we used data from 2020, 2018 or 2017 instead.
Country groupings: See caption of Figure 4.

Source: Authors

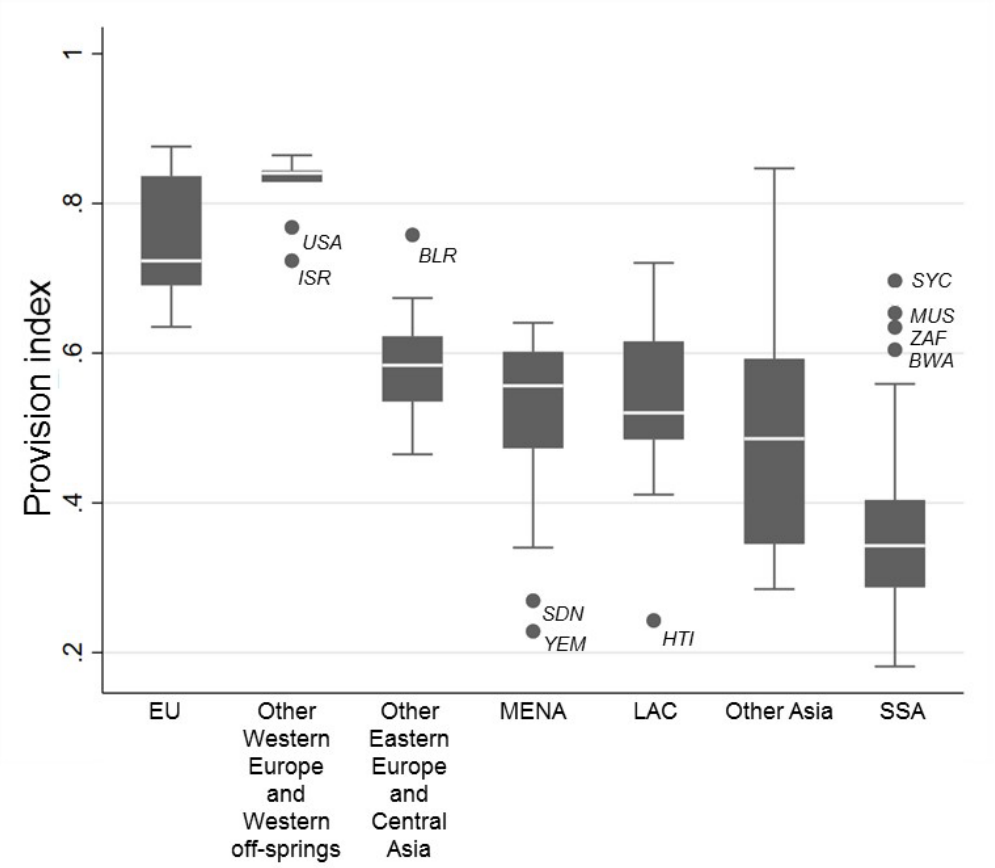
For other regions, the findings on a statistically significant correlation with the protection index are not consistent. For the group labelled “Other Western Europe and Western off-springs”, the reason is particularly interesting: While EU membership correlates at a high level of significance with all aspects of *protection*, the category “Other Western Europe and Western off-springs” correlates at a high level of significance only with *rule of law* and *collective protection* against external threats, but not with the protection of individuals. This means that some countries in the group – especially Israel and the United States – suffer from deficits in terms of internal security against criminality and terrorism (see Table A7 in the Annex).

We do not find statistically significant relationships for any of the other explanatory variables shown in Table 2: neither for binary variables, such as being a landlocked or small island developing country, nor for continuous variables, such as the year of independence, the level of precipitation or the receipt of ODA, remittances or natural resource rents.

5.2 Provision

The delivery of *provision* correlates strongly with per capita income and with several dummy variables for the geographical regions as well as with *low precipitation levels* and with the variable indicating how long ago the country gained independence (Table 2 and Table A5 in the Annex). The *provision* index also correlates with the age dependency rate, but the effect could be due to collinearity (the high number of LICs with very high age dependency rates), such as in the case of the *protection* index. The positive correlation of *provision* with per capita income is statistically significant at the 99 per cent confidence level; the negative correlations with low precipitation levels and the duration of independence are statistically significant at the 95 per cent and the 90 per cent confidence levels, respectively. Geographically, the *provision* index is clearly above average in Europe (EU, other Western Europe and Eastern Europe) and Western off-springs (all statistically significant at the 99 per cent confidence level) – even if we account for the positive impact of per capita income. This finding almost holds across the board for all components of the *provision* index (Figure 9 and Table A7 in the Annex).

Figure 9: Plotted values of the provision index by region*



* Most data are for 2019. Where data for 2019 were not available, we used data from 2020, 2018 or 2017 instead.
Country groupings: See caption of Figure 4.

Source: Authors

In SSA, the *provision* index is markedly lower (statistically significant at the 90 per cent confidence level) – but only if we exclude four positive outliers from the regional group: Botswana, Mauritius, the Seychelles and the Republic of South Africa. This finding holds for most components of the *provision* index, but statistical significance exists only for the composite index and for three of its components: social protection and poverty reduction (at the 95 per cent confidence level) as well as employment (at the 99 per cent confidence level). The correlation with infrastructure, education, health and markets is not statistically significant (Table A7 in the Annex).

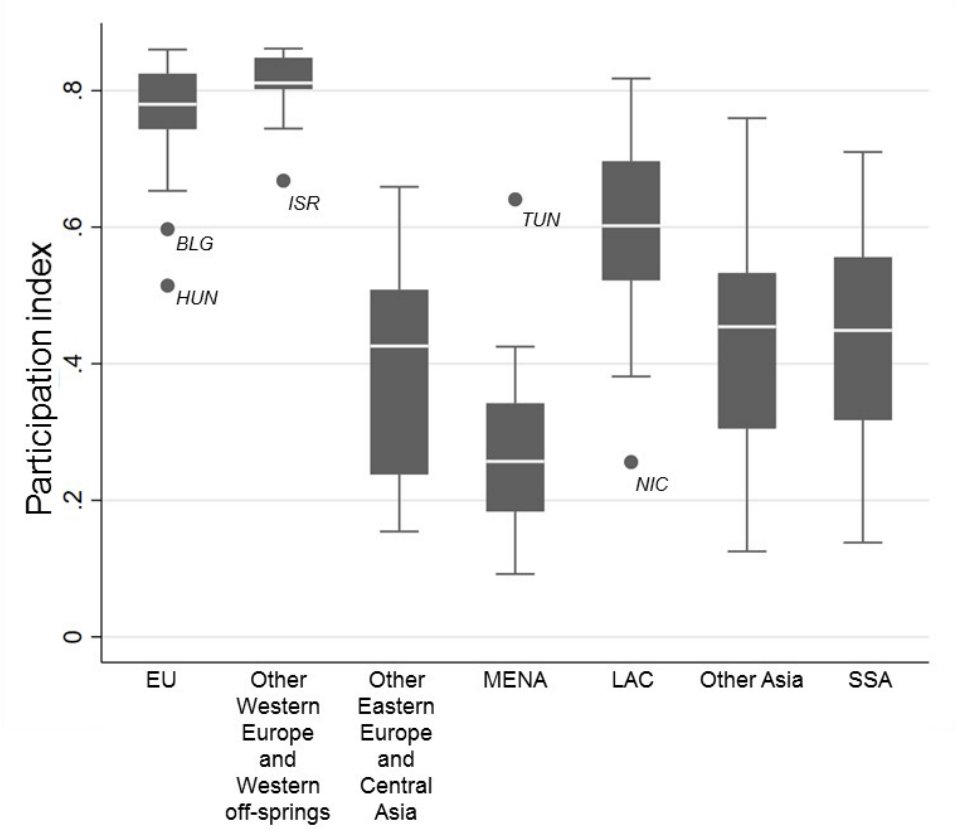
We find no statistically significant results for a correlation of the *provision* index with the countries situated in MENA, Latin America and the Caribbean or the group of land-locked or small island developing countries. However, for MENA, we find statistical significance for a negative correlation with the sub-indices social protection, poverty reduction and infrastructure, and for LAC, we find statistical significance for a positive relationship with the health sub-index (Table A7 in the Annex). The main exception in this regard is Haiti, which achieves a much lower score than the other LAC (Figure 9).

Likewise, there is no statistically significant correlation with the receipt of ODA, remittances or rents from natural resources.

5.3 Participation

In the case of *participation*, we have no consistent findings on the effect of per capita income but consistent results on significance in the correlation with the level of rents received from the export of natural resources, with being a land-locked country and with several geographical country groupings (Table 2, Figure 10, and Table A6 in the Annex). One of our regression models provides statistical evidence (significant at the 95 per cent confidence level) on a positive effect of per capita income on political *participation*, while two others do not. At the same time, all models show that the level of natural resource rents and being land-locked have a clear negative impact on the level of political participation (statistically significant at the 95 per cent confidence level at least). Being situated in MENA has an unambiguous negative effect as well (statistically significant even at the 99 per cent confidence level), while being in the EU, elsewhere in Western Europe, North America or an off-spring of the Western world or in LAC has a clearly positive effect on political *participation* (statistically significant at the 99 per cent confidence level in all cases). We find no significance in the relationship with being in Eastern Europe (outside the EU) or Central Asia, and our results on SSA are not consistent: some OLS models allude a statistically significant positive correlation with political *participation* while others do not. For other indicators, we do not find any significant evidence for a positive or negative relationship: neither for being a small island developing country nor for the level of ODA or remittances received, population density, age dependency or the availability of water.

Figure 10: Plotted values of the participation index by region around 2019*



* Most data are for 2019. Where data for 2019 were not available, we used data from 2020, 2018 or 2017 instead.
Country groupings: See caption of Figure 4.

Source: Authors

5.4 Country categories

Based on these results we suggest five kinds of social contracts. Yet, the attribution of countries to these categories is still rather tentative – not least because so far it is based on only one data point in time for each country.[21]

(i) Some governments deliver a lot of *protection*, *provision* and *participation*. They rule mainly in countries with high per capita incomes in the EU, elsewhere in Western Europe or Western off-springs. The Scandinavian countries, the Netherlands, Luxembourg, Switzerland and New Zealand are at the very top in every regard, but they are followed closely by a large group of countries that includes Germany, Austria, the United Kingdom, Canada, Estonia and Belgium. Japan, Australia and Slovenia are slightly weaker in terms of participation, France in terms of protection and Ireland in terms of provision. In comparison with these countries, the South and East of Europe (Spain, Portugal, Italy, Malta, Cyprus, Latvia, Lithuania, the Czech Republic and the Slovak Republic) perform a bit worse in all three dimensions. Israel, the United States and Greece perform less well in terms of protection, Croatia and Poland in terms of participation and Hungary, Bulgaria and Romania in terms of participation and provision.

21 Please be reminded that several countries (41 sovereign states and 26 semi-autonomous territories) had to be disregarded from the analysis due to insufficient data (for details, see footnote 6) and thus are not mentioned in any of the categories.

(ii) In Central Asian and Eastern European countries outside the EU, the delivery of *provision* and *protection* is above average too, but in contrast to countries in Western Europe, political *participation* is not. Typical examples are Montenegro, Serbia, North Macedonia, Uzbekistan and Azerbaijan. Belarus and the Russian Federation are exceptions, in that they suffer from particularly low levels of both *protection* and *participation*, while Belarus performs comparatively well in terms of *provision* (Figure 9). Albania and Tajikistan, in turn, perform particularly poorly in terms of *participation* and *provision.*

(iii) The third category is similar to the second, but political *participation* is even lower, especially if per capita income levels are taken into consideration. The category includes land-locked countries, countries with high rent income from natural resources and MENA countries. Tunisia, Sudan and Yemen are the main exceptions in this group: Tunisia's *participation* score was quite good in 2019, but it has deteriorated, presumably since then again (Figure 10), while Sudan and Yemen achieved a *provision* score far below the average of the group (Figure 9).

(iv) Countries in Latin America and the Caribbean, in turn, are particularly good on average in terms of political *participation*. Nicaragua is the main exception in this regard (Figure 10). Barbados, Chile and Jamaica, in turn, perform particularly well in terms of *participation*. Brazil and Colombia perform below average in terms of *protection*, while Argentina, Bolivia, Ecuador, Paraguay and the Dominican Republic perform above average in that regard. Guatemala, Panama, Peru and, above all, Haiti underperform in terms of *provision* (Figure 9), while Mexico does particularly well in that regard. Uruguay excels with regard to *all three Ps*.

(v) Governments in SSA tend to guarantee decent levels of *protection* and political *participation* if per capita income is taken into account, but particularly little *provision*. Just four countries perform better in terms of *provision*: the Seychelles, Mauritius, Botswana and South Africa (Figure 9). At the same time, a substantial number of countries in SSA also perform quite badly in terms of *participation*; this is particularly the case in Liberia, Madagascar, Burundi and Chad, but it also affects, inter alia, Eswatini, Rwanda, Gabon, Zimbabwe and the Republic Congo.

6 Conclusion

In this paper, we have suggested a possible way to operationalise the concept of social contract. We have established three indices that quantify the delivery of *protection*, *provision* and *participation* by governments that focus on inputs rather than outcomes. These indices allow for comparing social contracts across countries and time, but also government performance across policy fields. However, they only capture the three elements of social contracts delivered by governments.

In a next step, we have computed the values of these three indices for 154 countries around the year 2019. Comparisons and regressions confirm that the three indices are meaningful and consistent: The three indices exhibit a high variance, and they are highly correlated with each other and with important indicators such as per capita income and the HDI. The fact that there are various exceptional cases from these correlations confirms, in turn, that the three indices are not redundant; each of them adds important information to already existing indices.

Hence, we have already begun to compare social contracts across countries. So far, based on the data point around 2019, we have detected mainly regional patterns. For example, LAC countries are doing comparatively well in terms of political *participation*. SSA governments deliver disproportionately in terms of *protection* and political *participation* if we take their lower per capita income levels into consideration, but they deliver less *provision* than countries elsewhere if we disregard the outliers Botswana, Mauritius, the Seychelles and the Republic of South Africa. Non-EU member countries in Eastern Europe and countries in Central Asia are

doing comparatively well on average in terms of *protection* and *provision*, but not in terms of participation. And MENA countries do not do well in all three indices, but fail mainly in terms of political *participation*. In addition, *participation* also shows a statistically significant, negative correlation with rents received from the export of natural resources and being a land-locked country, while *provision* shows such a correlation with low levels of precipitation.

However, all this is just a first step; others must follow. *First*, social contracts should also be compared across time. For example, it would be interesting to track the direction and magnitude of consecutive changes in social contracts. For that purpose, we will need values for all three indices for additional points in time over a longer period. After all, social contracts are presumably sticky constructs, in that many of them do not change quickly for longer periods of time, even if they can change a lot at once if anything unexpected happens (see Loewe et al., in press). *Second*, the three indices could be refined. In particular, it would be good to add sub-indices for environmental threats and the provision of water, land and other economic inputs. So far, we have left out these dimensions because we could not find adequate indicators for these aspects. *Third*, the existing indices can be used to identify further causalities. For example, the effects of political factors on *protection*, *provision* and *participation* could be tested with panel data. *Fourth*, and most importantly, additional elements of social contracts need to be covered. So far, we can measure only what governments deliver to society, while we should also know what different groups of society deliver to governments and to other groups of society. For that purpose, we will need additional sets of indicators.

All of these steps should go hand in hand with qualitative research conducted in selected countries. First and foremost, qualitative research could help to disaggregate the considerable regional inequalities *within* countries that, due to lack of data, remain masked in quantitative research. For instance, qualitative analysis should discuss governments' delivery of the three Ps by region, social group, gender, etc., so that we learn more about inequities in the well-being of different parts of societies and their treatment by the respective government. Furthermore, a methodological quanti-quali mix will be essential to triangulate the findings from econometric analysis and to identify the causal chains that lead to them. Qualitative research could thus help our understanding as to why some indicators in the quantitative analysis were surprisingly hardly correlated (e.g. health and education, rule of law for citizens and competition on markets or between employment and poverty reduction, see Section 4.4). It can provide more insights on factors that inform the governmental decisions of MICs, as these governments – in contrast to those of HICs or LICs, which deliver either large or small amounts of all three Ps – face trade-offs between providing small amounts of all three Ps or focussing on one or two of them (see Section 5). Quantitative research could look into contextual factors, actor constellations and policy developments that led to regional outliers (Section 5.4), which will help to identify the parameters that inform different types of social contracts.

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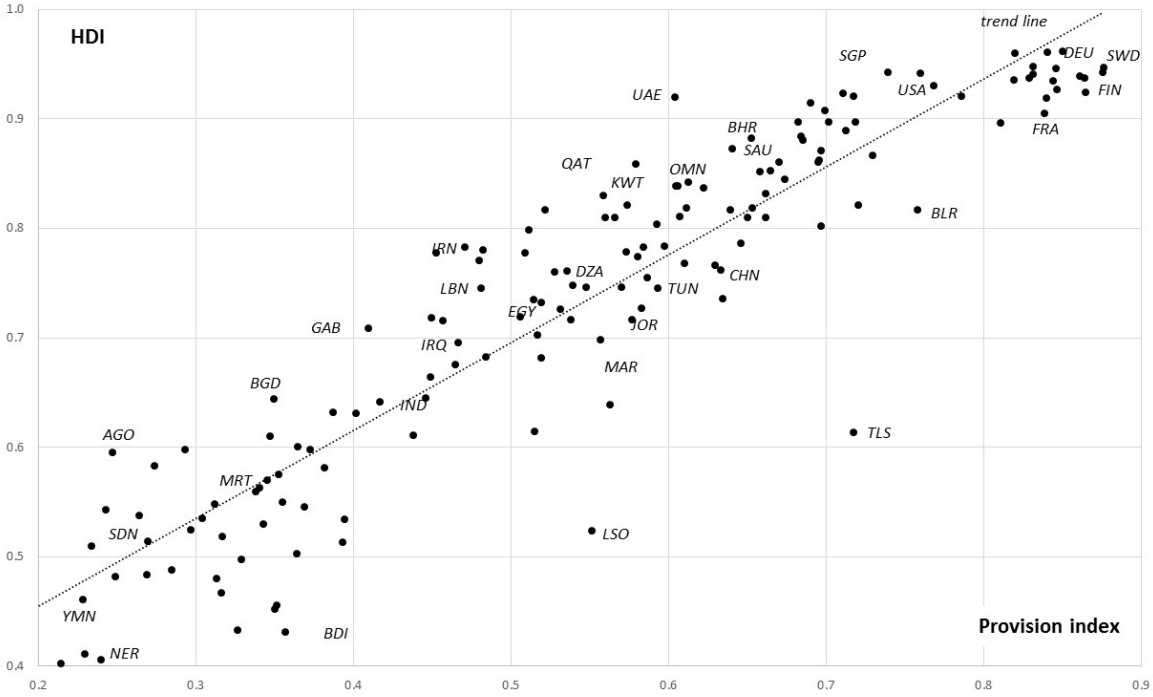
Annex

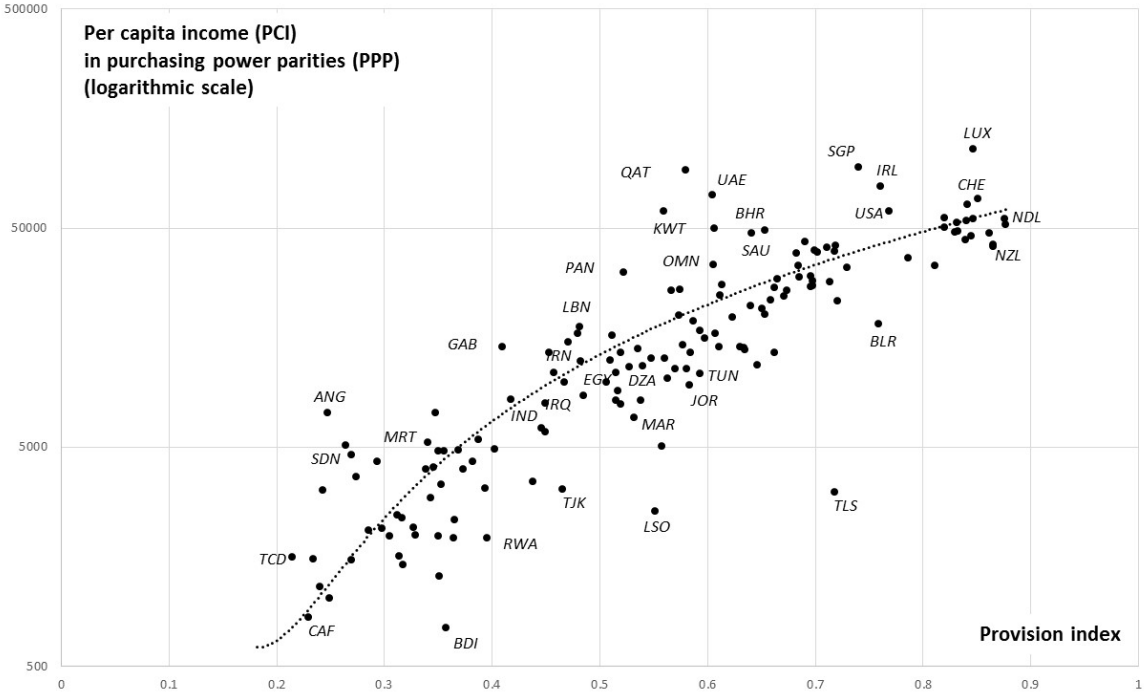
Figure A1: Provision index and the Human Development Index (around 2019)



* Most data are for 2019. Where data for 2019 were not available for some aspects of provision or participation, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.

Source: Authors

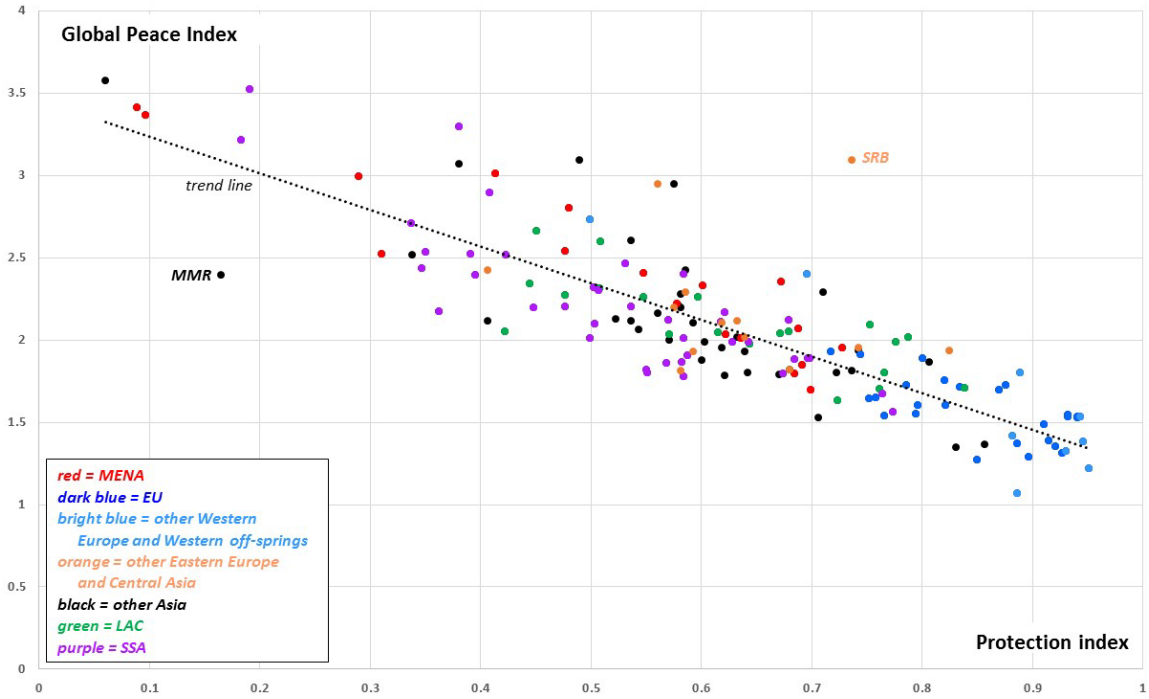
Figure A2: Provision index and per capita income (around 2019)



* Most data are for 2019. Where data for 2019 are not available for some aspects of provision or participation, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.

Source: Authors

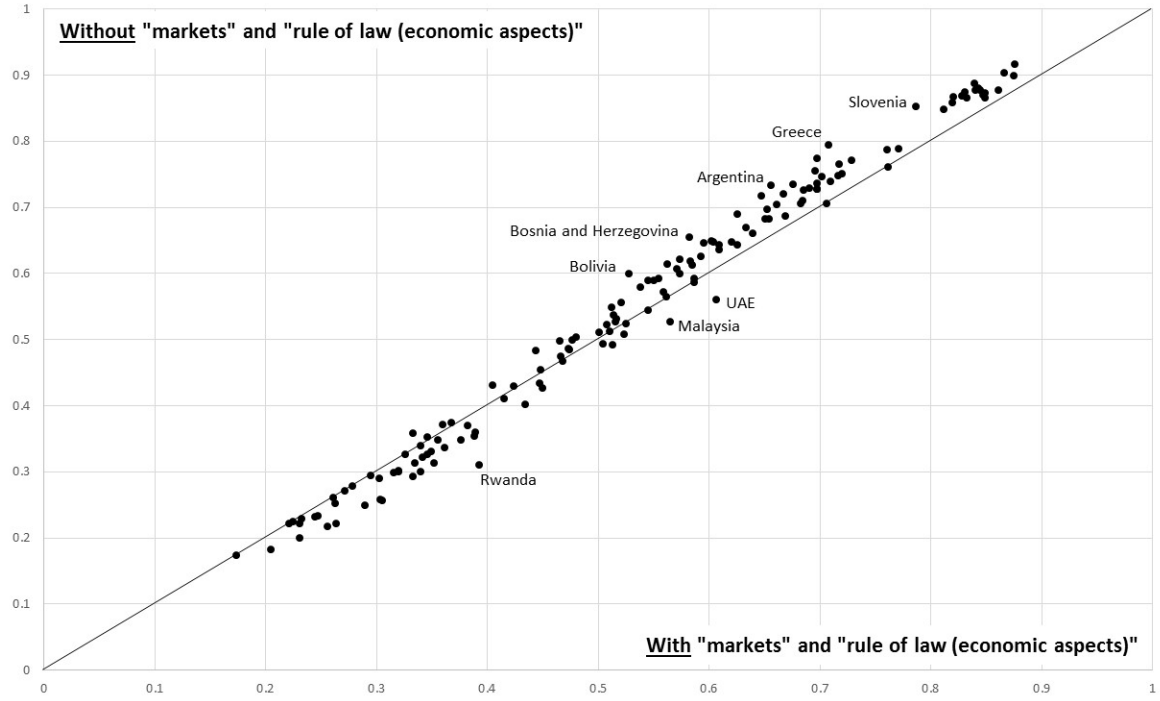
Figure A3: Protection index and the Global Peace Index (around 2019)



* Most data are for 2019. Where data for 2019 are not available for some aspects of provision or participation, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.

Source: Authors

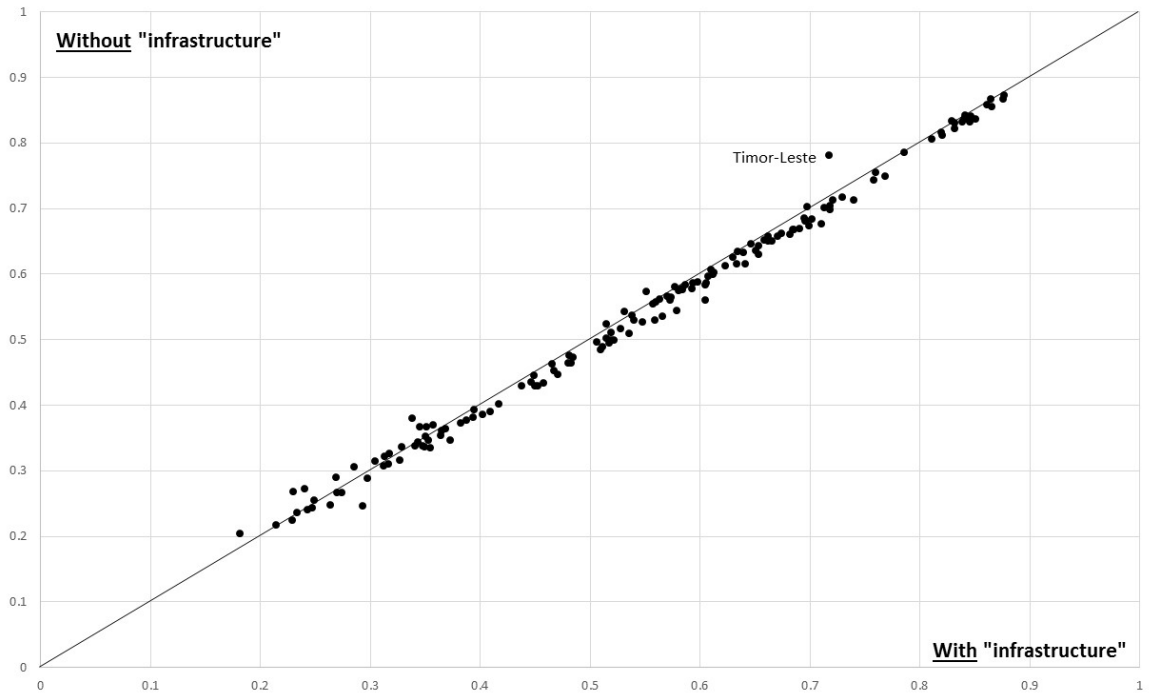
Figure A4: Provision index with and without the components “markets” and “rule of law (economic)” (around 2019)



* Most data are for 2019. Where data for 2019 are not available for some aspects of provision or participation, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.

Source: Authors

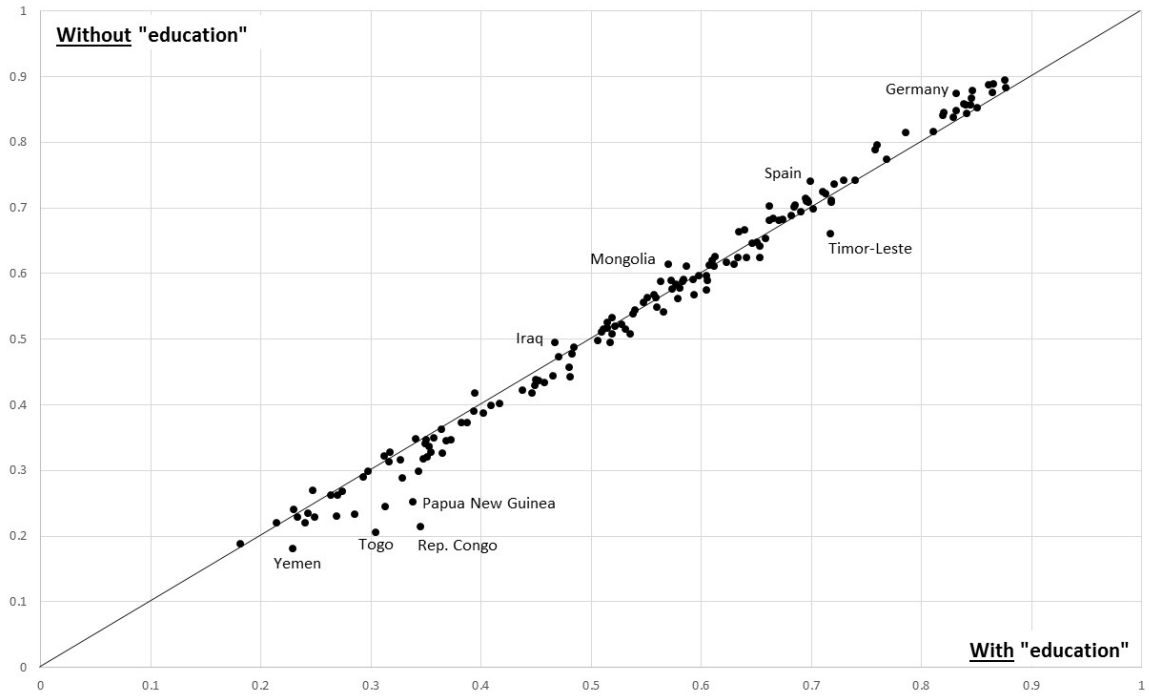
Figure A5: Provision index with and without the component “infrastructure” (around 2019)



* Most data are for 2019. Where data for 2019 are not available for some aspects of provision or participation, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.

Source: Authors

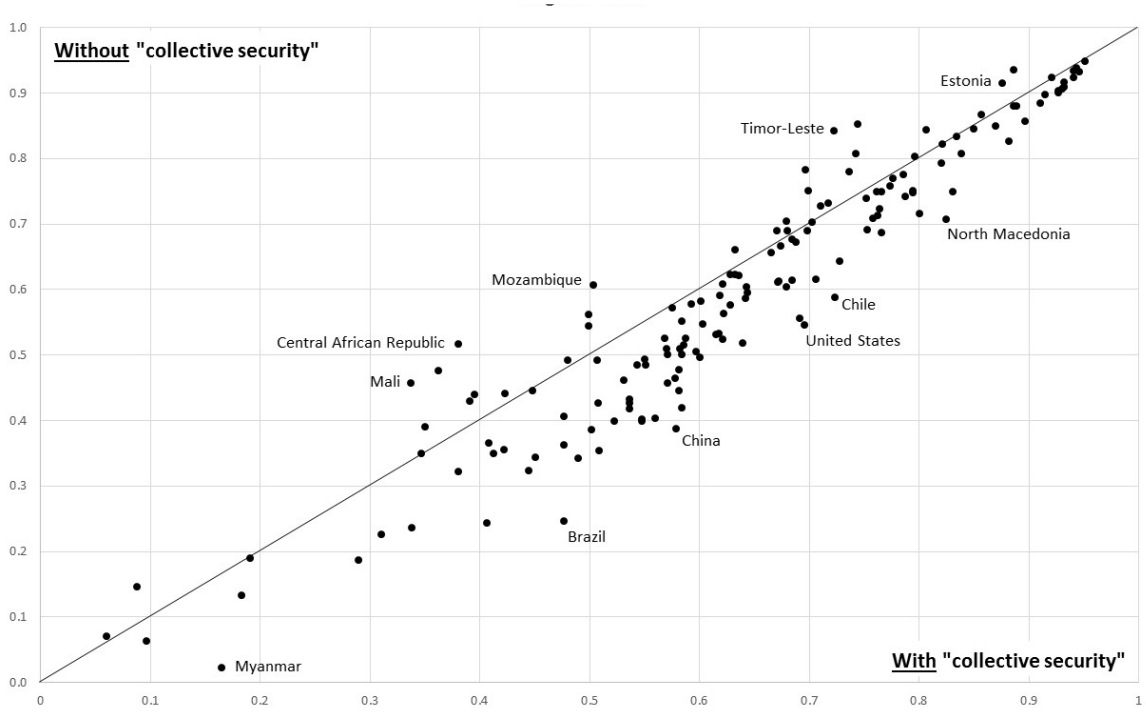
Figure A6: Provision index with and without the component “education” (around 2019)



* Most data are for 2019. Where data for 2019 are not available for some aspects of provision or participation, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.

Source: Authors

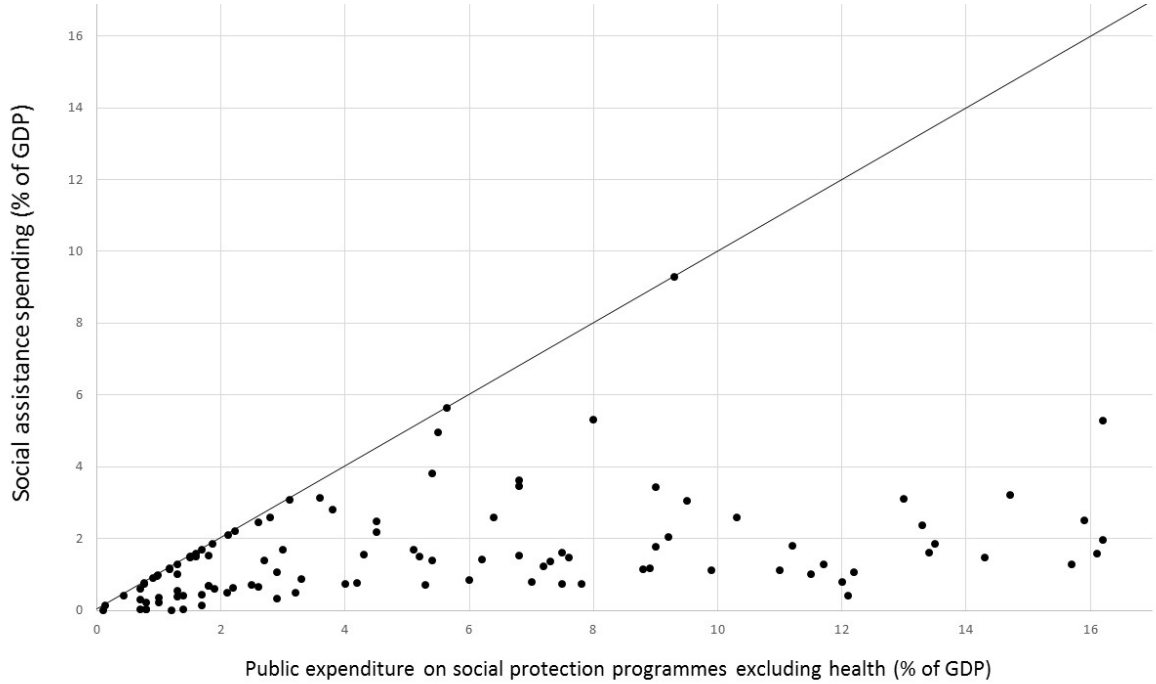
Figure A7: Protection index with and without the component "external security" (around 2019)



* Most data are for 2019. Where data for 2019 are not available for some aspects of provision or participation, we used data from 2020, 2018 or 2017 instead, and for social protection, we used data for any year between 2014 and 2019.

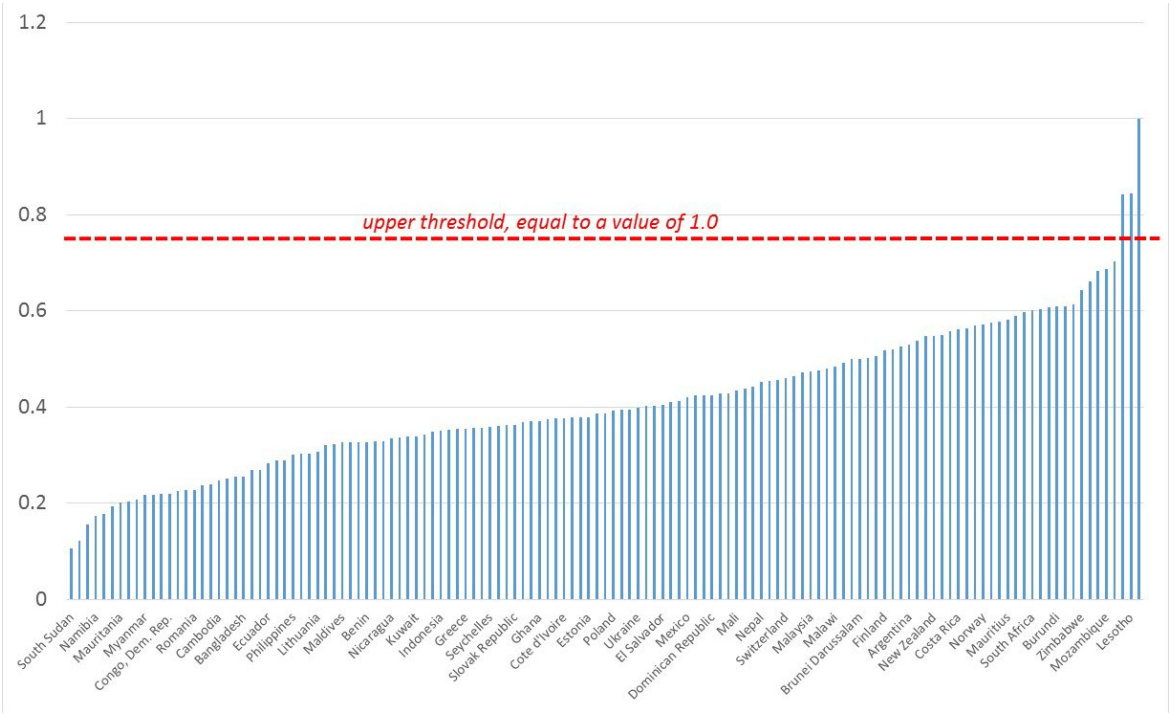
Source: Authors

Figure A8: Spending on social assistance and on social protection in total (latest available year)



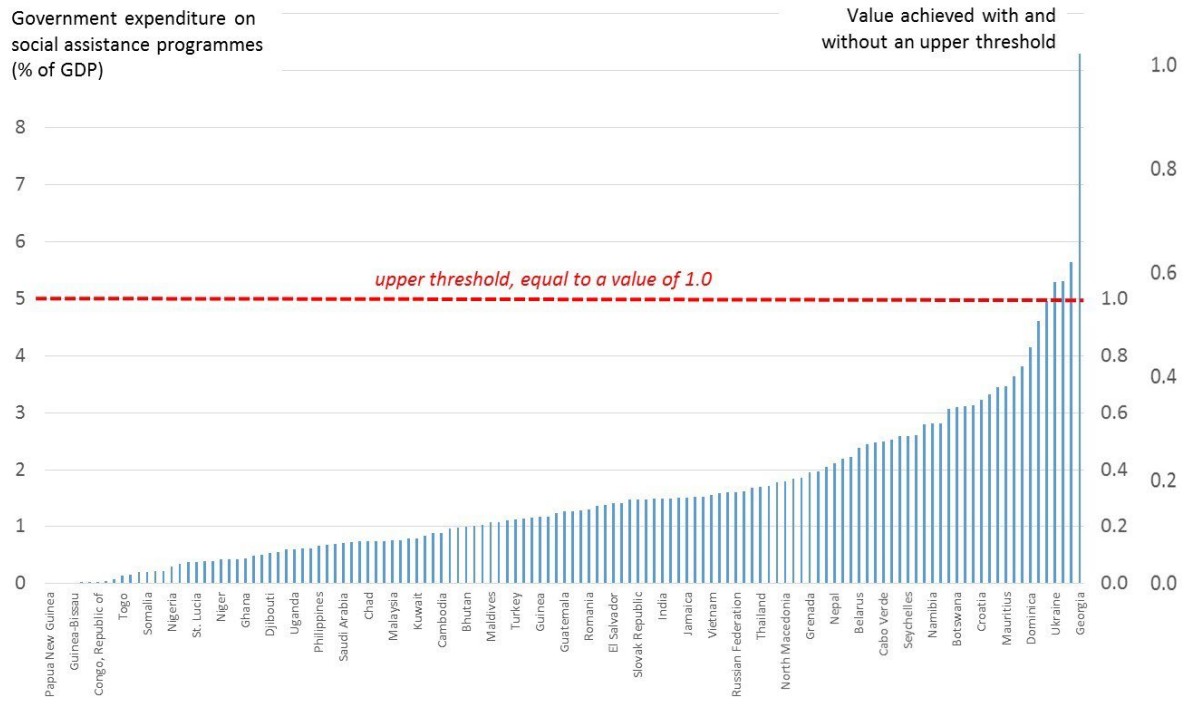
Source: Authors, based on data from the ILO (2023) and the World Bank (2023d)

Figure A9: Distribution of countries by their spending on education (in 2019) and their position above and below the threshold resulting in a value of 1.0 in our index component



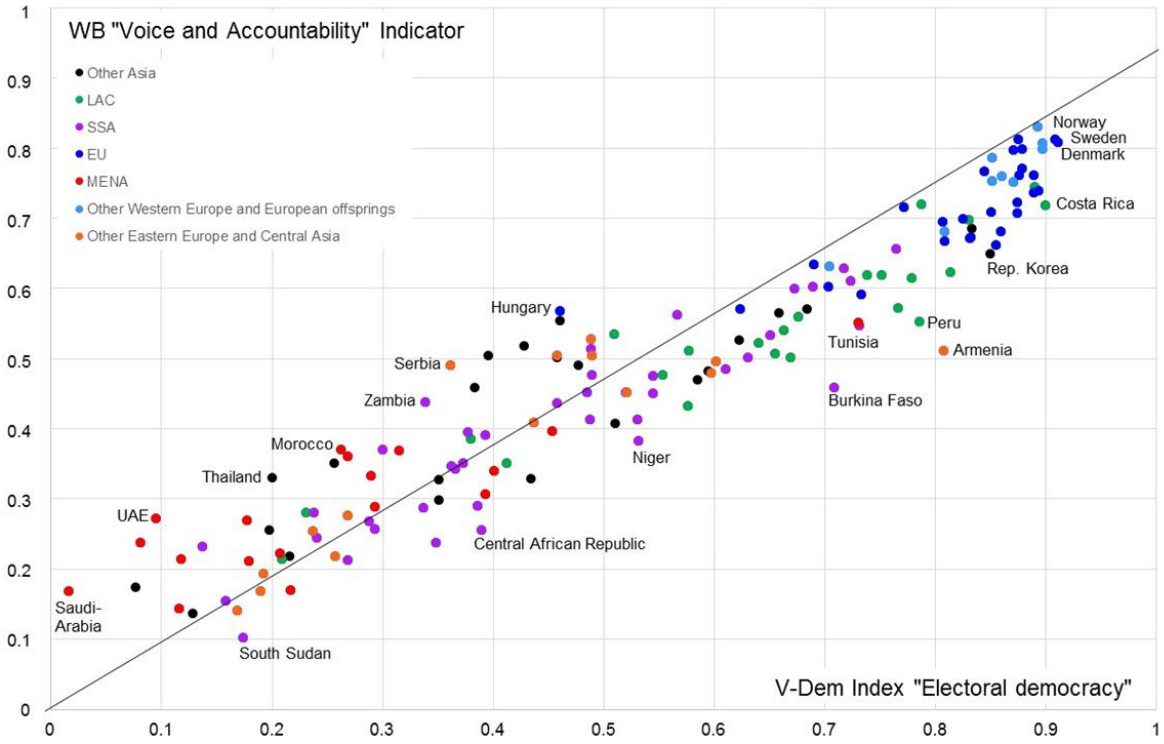
Source: Authors, based on data from UNESCO Institute for Statistics (2023)

Figure A10: Distribution of countries by their spending on social assistance programmes



Source: Authors, based on data from the ILO (2023)

Figure A11: World Bank "Voice and Accountability" Indicator and the V-Dem Index "Electoral democracy" (for 2019)



Source: Authors, based on data from Varieties of Democracy (2023) and the World Bank (2023d)

Table A1: Scores of countries in the indices for protection, provision and participation

	Protection	Provision									Participa-tion	For comparison	
			Infra-structure (transport, utilities, etc.)	Education	Health	Social protection	Poverty reduction	Employ-ment	Rule of law (economic facets)	Competition on markets		Human Develop-ment Index (HDI)	GDP per capita, PPP (current inter-national $)
Global average	**0.632**	**0.547**	**0.599**	**0.562**	**0.644**	**0.567**	**0.360**	**0.642**	**0.503**	**0.521**	**0.511**	**0.733**	**21548**
Global median	**0.632**	**0.559**	**0.630**	**0.576**	**0.669**	**0.655**	**0.251**	**0.681**	**0.453**	**0.521**	**0.508**	**0.764**	**13777**
Regional averages:													
European Union (EU)	**0.848**	**0.757**	0.746	0.830	0.647	0.871	0.980	0.670	0.800	0.669	**0.587**	0.900	43211
Other Western Europe and Western off-springs	**0.847**	**0.821**	0.787	0.863	0.772	0.901	0.971	0.786	0.829	0.777	**0.666**	0.943	52534
Other Eastern Europe and Central Asia	**0.625**	**0.590**	0.385	0.646	0.601	0.580	0.840	0.349	0.711	0.428	**0.515**	0.780	14172
Middle East and North Africa (MENA)	**0.517**	**0.516**	0.279	0.623	0.564	0.600	0.481	0.192	0.688	0.479	**0.536**	0.747	27982
Sub-Saharan Africa (SSA)	**0.527**	**0.376**	0.421	0.361	0.451	0.509	0.250	0.206	0.428	0.396	**0.453**	0.553	5258
Latin America and the Caribbean (LAC)	**0.631**	**0.530**	0.585	0.600	0.553	0.718	0.507	0.304	0.680	0.430	**0.450**	0.750	15170
Other Asia	**0.579**	**0.504**	0.426	0.588	0.552	0.527	0.427	0.290	0.644	0.486	**0.549**	0.711	17662
Afghanistan	**0.060**	**0.285**	0.176	0.539	0.212	0.214	0.181	0.386	..	..	**0.325**	0.488	2096
Albania	**0.680**	**0.560**	0.578	0.635	0.505	0.845	0.408	0.641	0.389	0.478	**0.508**	0.810	12771
Algeria	**0.578**	**0.539**	0.608	0.507	0.739	0.763	0.236	0.637	0.385	0.440	**0.291**	0.748	11809
Angola	**0.584**	**0.247**	0.269	0.093	0.417	0.178	0.075	0.386	0.244	0.315	**0.355**	0.595	7216
Argentina	**0.776**	**0.658**	0.705	0.686	0.862	0.949	0.495	0.723	0.433	0.414	**0.696**	0.852	23597
Armenia	**0.710**	**0.509**	0.674	0.490	0.217	0.666	0.251	0.712	0.485	0.580	**0.659**	0.778	12510
Australia	**0.882**	**0.832**	0.837	0.715	0.920	0.970	1.000	0.810	0.768	0.632	**0.802**	0.941	48400
Austria	**0.896**	**0.835**	0.857	0.679	0.905	1.000	0.965	0.825	0.787	0.665	**0.806**	0.919	54173
Azerbaijan	**0.585**	**0.535**	0.713	0.723	0.288	0.664	0.151	0.612	0.453	0.679	**0.193**	0.761	14121
Bahrain	**0.672**	**0.633**	0.808	0.571	0.589	0.691	0.369	0.857	0.524	0.655	**0.166**	0.882	48929

	Protection	Provision									Participa-tion	For comparison	
			Infra-structure (transport, utilities, etc.)	Education	Health	Social protection	Poverty reduction	Employ-ment	Rule of law (economic facets)	Competition on markets		Human Develop-ment Index (HDI)	GDP per capita, PPP (current inter-national $)
Bangladesh	**0.523**	**0.346**	0.442	0.386	0.183	0.225	0.151	0.590	0.309	0.487	**0.304**	0.644	4831
Barbados	**0.702**	**0.531**	0.665	0.642	0.549	0.523	0.096	0.770	0.589	0.416	**0.754**	0.799	16199
Belarus	**0.406**	**0.758**	0.828	0.600	0.784	1.000	0.476	0.859	..	..	**0.238**	0.817	18356
Belgium	**0.940**	**0.836**	0.838	0.799	0.909	1.000	1.000	0.783	0.770	0.590	**0.826**	0.936	50442
Benin	**0.642**	**0.309**	0.331	0.382	0.319	0.120	0.080	0.343	0.400	0.500	**0.501**	0.530	2934
Bolivia	**0.615**	**0.538**	0.545	0.527	0.874	0.725	0.404	0.608	0.271	0.348	**0.515**	0.717	8245
Bosnia and Herzegovina	**0.632**	**0.584**	0.630	0.533	0.853	0.695	0.558	0.681	0.378	0.343	**0.486**	0.783	13582
Botswana	**0.764**	**0.605**	0.548	0.753	0.959	0.595	0.351	0.641	0.555	0.435	**0.636**	0.717	14657
Brazil	**0.476**	**0.620**	0.653	0.664	0.766	0.958	0.357	0.698	0.411	0.453	**0.618**	0.766	14478
Brunei Darussalam	**0.762**	**0.583**	0.761	0.723	0.675	0.465	0.147	0.789	0.600	0.505	**0.306**	0.830	60173
Bulgaria	**0.796**	**0.635**	0.748	0.542	0.727	0.970	0.251	0.815	0.472	0.557	**0.597**	0.810	21470
Burkina Faso	**0.362**	**0.358**	0.330	0.428	0.555	0.035	0.203	0.395	0.433	0.482	**0.584**	0.452	1978
Burundi	**0.423**	**0.374**	0.259	0.542	0.643	0.150	0.489	0.158	0.281	0.471	**0.157**	0.431	751
Cambodia	**0.543**	**0.344**	0.548	0.328	0.348	0.078	0.111	0.655	0.298	0.387	**0.226**	0.598	3973
Cameroon	**0.350**	**0.281**	0.315	0.377	0.149	0.132	0.008	0.491	0.333	0.447	**0.275**	0.583	3691
Canada	**0.930**	**0.829**	0.795	0.767	0.925	0.915	1.000	0.816	0.777	0.635	**0.819**	0.937	48317
Central African Republic	**0.380**	**0.230**	0.038	0.173	0.280	0.164	0.517	0.207	..	..	**0.323**	0.411	840
Chad	**0.390**	**0.222**	0.197	0.233	0.289	0.038	0.149	0.326	0.256	0.287	**0.241**	0.403	1580
Chile	**0.723**	**0.672**	0.762	0.602	0.811	0.698	0.555	0.722	0.635	0.589	**0.764**	0.861	24547
China	**0.578**	**0.633**	0.759	0.698	0.623	0.860	0.290	0.693	0.523	0.619	**0.125**	0.762	14244
Colombia	**0.451**	**0.616**	0.628	0.586	0.926	0.703	0.514	0.650	0.436	0.485	**0.602**	0.768	14335
Congo, Dem. Rep.	**0.183**	**0.242**	0.203	0.327	0.363	0.145	0.096	0.226	0.264	0.310	**0.293**	0.482	1024
Congo, Rep.	**0.502**	**0.345**	0.236	1.000	0.349	0.180	0.008	0.299	..	..	**0.242**	0.570	4074
Costa Rica	**0.761**	**0.641**	0.717	0.751	0.888	0.646	0.287	0.728	0.588	0.521	**0.809**	0.819	20168
Cote d'Ivoire	**0.476**	**0.338**	0.491	0.408	0.409	0.099	0.002	0.487	0.395	0.416	**0.497**	0.550	4836

	Protection	Provision									Participa-tion	For comparison	
			Infra-structure (transport, utilities, etc.)	Education	Health	Social protection	Poverty reduction	Employ-ment	Rule of law (economic facets)	Competition on markets		Human Develop-ment Index (HDI)	GDP per capita, PPP (current inter-national $)
Croatia	**0.751**	**0.695**	0.756	0.562	0.943	0.949	0.645	0.773	0.524	0.409	**0.662**	0.861	27207
Cyprus	**0.744**	**0.698**	0.827	0.767	0.740	0.989	0.241	0.795	0.638	0.585	**0.780**	0.897	38415
Czech Republic	**0.886**	**0.680**	0.826	0.545	0.929	0.957	0.239	0.813	0.646	0.485	**0.738**	0.897	38825
Denmark	**0.927**	**0.865**	0.934	0.841	0.929	1.000	0.819	0.844	0.845	0.705	**0.860**	0.946	55357
Dominican Republic	**0.671**	**0.472**	0.589	0.576	0.551	0.132	0.367	0.686	0.413	0.467	**0.522**	0.771	16525
Ecuador	**0.643**	**0.515**	0.602	0.456	0.829	0.563	0.203	0.641	0.406	0.418	**0.581**	0.760	11679
Egypt	**0.310**	**0.521**	0.599	0.493	0.318	0.763	0.406	0.635	0.419	0.538	**0.195**	0.735	10995
El Salvador	**0.597**	**0.488**	0.559	0.490	0.813	0.371	0.175	0.684	0.385	0.428	**0.581**	0.683	8618
Estonia	**0.876**	**0.796**	0.839	0.653	0.880	1.000	0.770	0.833	0.761	0.636	**0.813**	0.896	33822
Eswatini	**0.628**	**0.544**	0.446	0.725	0.791	0.720	0.251	0.528	0.456	0.431	**0.185**	0.615	8214
Ethiopia	**0.346**	**0.293**	0.277	0.323	0.384	0.055	0.118	0.462	0.325	0.401	**0.312**	0.498	1988
Fiji	**0.632**	**0.548**	0.647	0.504	0.684	0.562	0.197	0.693	..	..	**0.450**	0.746	12822
Finland	**0.911**	**0.876**	0.872	0.789	0.913	1.000	1.000	0.816	0.882	0.733	**0.844**	0.939	47570
France	**0.800**	**0.836**	0.885	0.676	0.954	1.000	1.000	0.792	0.740	0.645	**0.799**	0.905	44577
Gabon	**0.618**	**0.399**	0.543	0.394	0.552	0.388	0.040	0.624	0.312	0.339	**0.338**	0.709	14478
Gambia	**0.587**	**0.369**	0.435	0.408	0.488	0.130	0.005	0.546	0.414	0.523	**0.486**	0.503	1927
Georgia	**0.679**	**0.654**	0.684	0.465	0.538	0.810	0.965	0.638	0.591	0.540	**0.592**	0.810	13590
Germany	**0.932**	**0.848**	0.894	0.663	0.936	1.000	0.980	0.851	0.760	0.703	**0.825**	0.948	53071
Ghana	**0.674**	**0.402**	0.513	0.497	0.456	0.180	0.070	0.548	0.418	0.533	**0.667**	0.631	4930
Greece	**0.717**	**0.704**	0.793	0.575	0.701	0.979	1.000	0.691	0.416	0.476	**0.759**	0.889	28605
Guatemala	**0.548**	**0.411**	0.521	0.477	0.459	0.149	0.162	0.673	0.373	0.478	**0.504**	0.642	8322
Guinea	**0.570**	**0.313**	0.359	0.314	0.294	0.035	0.234	0.394	0.351	0.525	**0.354**	0.467	2384
Haiti	**0.422**	**0.243**	0.257	0.301	0.336	0.052	0.032	0.485	0.191	0.290	**0.381**	0.543	3200
Honduras	**0.444**	**0.411**	0.449	0.679	0.522	0.074	0.134	0.598	0.391	0.442	**0.383**	0.632	5448
Hungary	**0.766**	**0.673**	0.766	0.587	0.791	0.953	0.465	0.813	0.543	0.465	**0.514**	0.853	29496

	Protection	Provision									Participa-tion	For comparison	
			Infra-structure (transport, utilities, etc.)	Education	Health	Social protection	Poverty reduction	Employ-ment	Rule of law (economic facets)	Competition on markets		Human Develop-ment Index (HDI)	GDP per capita, PPP (current inter-national $)
Iceland	**0.886**	**0.844**	0.874	0.833	0.923	0.852	1.000	0.871	0.790	0.609	**0.810**	0.960	55638
India	**0.537**	**0.425**	0.516	0.470	0.325	0.283	0.232	0.517	0.444	0.616	**0.507**	0.645	6112
Indonesia	**0.621**	**0.455**	0.622	0.596	0.468	0.136	0.138	0.648	0.472	0.558	**0.574**	0.716	10942
Iran	**0.477**	**0.473**	0.634	0.468	0.635	0.607	0.093	0.614	0.342	0.391	**0.215**	0.783	15163
Iraq	**0.096**	**0.467**	0.537	0.322	0.471	0.546	0.283	0.642	..	..	**0.350**	0.696	9977
Ireland	**0.914**	**0.768**	0.790	0.570	0.940	0.950	0.738	0.798	0.742	0.621	**0.819**	0.942	77969
Israel	**0.499**	**0.724**	0.850	0.805	0.878	1.000	0.200	0.803	0.661	0.592	**0.668**	0.921	39448
Italy	**0.820**	**0.700**	0.817	0.630	0.883	0.972	0.426	0.730	0.601	0.538	**0.770**	0.897	41581
Jamaica	**0.571**	**0.520**	0.570	0.677	0.816	0.237	0.223	0.699	0.484	0.456	**0.718**	0.719	9985
Japan	**0.857**	**0.847**	0.927	0.552	0.935	1.000	1.000	0.852	0.786	0.722	**0.760**	0.924	41444
Jordan	**0.635**	**0.587**	0.614	0.581	0.737	0.750	0.226	0.650	0.589	0.550	**0.315**	0.727	9629
Kazakhstan	**0.639**	**0.611**	0.693	0.610	0.498	0.753	0.542	0.783	0.430	0.582	**0.245**	0.819	24863
Kenya	**0.507**	**0.406**	0.438	0.632	0.590	0.116	0.050	0.502	0.404	0.513	**0.448**	0.581	4313
Korea, South	**0.806**	**0.710**	0.945	0.612	0.835	0.815	0.489	0.752	0.649	0.586	**0.750**	0.923	40957
Kuwait	**0.685**	**0.591**	0.735	0.599	0.919	0.488	0.093	0.859	0.481	0.557	**0.342**	0.839	50007
Kyrgyz Republic	**0.593**	**0.557**	0.574	0.481	0.500	1.000	0.330	0.697	0.416	0.457	**0.423**	0.698	5047
Laos	**0.642**	**0.342**	0.415	0.510	0.387	0.067	0.042	0.517	0.366	0.431	**0.132**	0.610	7211
Latvia	**0.834**	**0.703**	0.800	0.639	0.720	0.960	0.527	0.823	0.614	0.539	**0.751**	0.871	28674
Lebanon	**0.480**	**0.481**	0.512	0.744	0.756	0.359	0.017	0.644	0.378	0.438	**0.425**	0.745	17808
Lesotho	**0.621**	**0.551**	0.391	0.461	0.922	0.745	0.539	0.531	0.396	0.425	**0.566**	0.524	2572
Liberia	**0.696**	**0.269**	0.141	0.495	0.364	0.037	0.182	0.339	0.325	..	**0.548**	0.484	1533
Lithuania	**0.785**	**0.684**	0.798	0.562	0.795	0.986	0.300	0.824	0.655	0.554	**0.762**	0.884	33762
Luxembourg	**0.926**	**0.852**	0.879	0.659	0.913	1.000	1.000	0.813	0.829	0.722	**0.838**	0.927	114986
Madagascar	**0.582**	**0.237**	0.212	0.286	0.456	0.073	0.044	0.180	0.292	0.351	**0.468**	0.510	1548
Malawi	**0.584**	**0.340**	0.248	0.428	0.657	0.092	0.247	0.303	0.377	0.371	**0.483**	0.519	1455

	Protection	Provision									Participa-tion	For comparison	
			Infra-structure (transport, utilities, etc.)	Education	Health	Social protection	Poverty reduction	Employ-ment	Rule of law (economic facets)	Competition on markets		Human Develop-ment Index (HDI)	GDP per capita, PPP (current inter-national $)
Malaysia	**0.706**	**0.565**	0.772	0.728	0.527	0.303	0.086	0.750	0.635	0.718	**0.484**	0.810	25935
Maldives	**0.628**	**0.586**	0.598	0.464	0.918	0.645	0.148	0.746	..	..	**0.459**	0.755	18974
Mali	**0.337**	**0.336**	0.397	0.480	0.474	0.147	0.091	0.358	0.344	0.400	**0.450**	0.433	2154
Malta	**0.794**	**0.687**	0.837	0.637	0.827	1.000	0.240	0.809	0.557	0.592	**0.744**	0.915	43509
Mauritania	**0.601**	**0.340**	0.356	0.287	0.399	0.261	0.338	0.567	0.274	0.240	**0.371**	0.563	5259
Mauritius	**0.773**	**0.673**	0.677	0.714	0.563	0.840	0.691	0.751	0.571	0.577	**0.710**	0.817	22144
Mexico	**0.508**	**0.582**	0.658	0.529	0.557	0.875	0.402	0.709	0.404	0.517	**0.585**	0.779	20032
Moldova	**0.619**	**0.583**	0.615	0.622	0.702	0.876	0.223	0.681	0.446	0.504	**0.538**	0.774	11464
Mongolia	**0.670**	**0.594**	0.590	0.453	0.540	1.000	0.695	0.661	0.393	0.419	**0.611**	0.746	11431
Montenegro	**0.742**	**0.623**	0.686	0.660	0.807	0.906	0.120	0.730	0.495	0.575	**0.481**	0.837	19682
Morocco	**0.688**	**0.555**	0.653	0.710	0.478	0.342	0.495	0.613	0.552	0.602	**0.316**	0.682	7922
Mozambique	**0.504**	**0.350**	0.240	0.554	0.617	0.303	0.167	0.265	0.277	0.375	**0.392**	0.456	1287
Myanmar	**0.164**	**0.293**	0.523	0.309	0.194	0.115	0.008	0.608	..	..	**0.381**	0.598	4313
Namibia	**0.698**	**0.559**	0.565	0.352	0.857	0.690	0.375	0.595	0.532	0.504	**0.646**	0.639	10335
Nepal	**0.571**	**0.444**	0.493	0.594	0.321	0.526	0.284	0.523	0.338	0.474	**0.527**	0.611	3496
Netherlands	**0.940**	**0.876**	0.935	0.746	0.947	1.000	0.952	0.827	0.851	0.749	**0.834**	0.943	55089
New Zealand	**0.951**	**0.864**	0.838	0.780	0.939	1.000	1.000	0.818	0.852	0.689	**0.852**	0.937	42205
Nicaragua	**0.508**	**0.430**	0.469	0.426	0.828	0.163	0.234	0.672	0.295	0.351	**0.256**	0.664	5915
Niger	**0.395**	**0.240**	0.074	0.339	0.472	0.099	0.124	0.332	..	..	**0.457**	0.406	1156
Nigeria	**0.408**	**0.264**	0.375	0.274	0.196	0.090	0.039	0.396	0.304	0.437	**0.472**	0.538	5120
North Macedonia	**0.824**	**0.597**	0.656	0.604	0.726	0.843	0.360	0.711	0.458	0.421	**0.549**	0.784	15706
Norway	**0.944**	**0.840**	0.831	0.818	0.931	1.000	0.831	0.852	0.788	0.673	**0.862**	0.961	64590
Oman	**0.728**	**0.602**	0.751	0.788	0.819	0.345	0.017	0.841	0.590	0.663	**0.223**	0.839	34218
Pakistan	**0.380**	**0.343**	0.400	0.331	0.339	0.124	0.087	0.594	0.386	0.487	**0.339**	0.546	4892
Panama	**0.766**	**0.507**	0.672	0.411	0.862	0.212	0.255	0.700	0.439	0.502	**0.679**	0.817	31638

	Protection	Provision									Participa-tion	For comparison	
			Infra-structure (transport, utilities, etc.)	Education	Health	Social protection	Poverty reduction	Employ-ment	Rule of law (economic facets)	Competition on markets		Human Develop-ment Index (HDI)	GDP per capita, PPP (current inter-national $)
Papua New Guinea	**0.536**	**0.338**	0.123	0.764	0.583	0.117	0.001	0.440	..	..	**0.473**	0.560	3967
Paraguay	**0.679**	**0.500**	0.571	0.444	0.622	0.633	0.229	0.700	0.366	0.437	**0.544**	0.732	13604
Peru	**0.787**	**0.485**	0.601	0.537	0.687	0.314	0.214	0.661	0.405	0.461	**0.669**	0.780	12443
Philippines	**0.338**	**0.444**	0.581	0.487	0.423	0.233	0.179	0.682	0.443	0.528	**0.480**	0.718	8002
Poland	**0.757**	**0.693**	0.806	0.613	0.858	0.918	0.457	0.774	0.578	0.542	**0.662**	0.881	29958
Portugal	**0.850**	**0.741**	0.815	0.724	0.848	0.952	0.593	0.794	0.654	0.546	**0.816**	0.867	33045
Qatar	**0.699**	**0.558**	0.820	0.522	0.650	0.142	0.006	0.939	0.694	0.687	**0.160**	0.859	92178
Romania	**0.821**	**0.668**	0.738	0.426	0.866	0.968	0.543	0.749	0.533	0.526	**0.653**	0.832	26943
Russia	**0.490**	**0.674**	0.755	0.607	0.663	1.000	0.541	0.825	0.438	0.560	**0.272**	0.845	25926
Rwanda	**0.499**	**0.406**	0.407	0.319	0.698	0.106	0.090	0.358	0.650	0.622	**0.259**	0.534	1935
Saudi Arabia	**0.547**	**0.641**	0.812	0.753	0.811	0.431	0.320	0.771	0.554	0.672	**0.092**	0.873	47552
Senegal	**0.684**	**0.397**	0.475	0.440	0.348	0.315	0.174	0.442	0.465	0.514	**0.639**	0.513	3259
Serbia	**0.736**	**0.610**	0.679	0.588	0.815	0.818	0.319	0.721	0.450	0.489	**0.426**	0.811	16611
Seychelles	**0.666**	**0.697**	0.658	0.615	0.751	0.820	0.518	1.000	0.647	0.564	**0.564**	0.802	27337
Sierra Leone	**0.550**	**0.313**	0.259	0.720	0.347	0.070	0.105	0.320	0.371	..	**0.510**	0.480	1594
Singapore	**0.830**	**0.712**	0.922	0.499	0.554	0.216	1.000	0.823	0.881	0.798	**0.421**	0.943	95334
Slovakia	**0.795**	**0.691**	0.792	0.556	0.904	0.953	0.498	0.792	0.579	0.452	**0.752**	0.862	30142
Slovenia	**0.920**	**0.791**	0.783	0.618	0.942	1.000	1.000	0.808	0.633	0.544	**0.751**	0.921	36508
South Africa	**0.583**	**0.634**	0.632	0.427	0.972	0.683	0.657	0.657	0.486	0.562	**0.673**	0.736	13950
South Sudan	**0.191**	**0.182**	0.065	0.150	0.481	0.000	0.164	0.229	..	..	**0.138**	0.393	..
Spain	**0.870**	**0.723**	0.878	0.596	0.891	0.991	0.450	0.767	0.625	0.588	**0.791**	0.908	39550
Sri Lanka	**0.603**	**0.439**	0.611	0.451	0.464	0.339	0.131	0.657	0.377	0.480	**0.538**	0.778	13545
Sudan	**0.289**	**0.269**	0.284	0.300	0.267	0.082	0.135	0.548	..	..	**0.193**	0.514	4614
Sweden	**0.932**	**0.875**	0.901	0.815	0.931	1.000	1.000	0.848	0.832	0.671	**0.860**	0.947	51948
Switzerland	**0.946**	**0.841**	0.940	0.758	0.736	1.000	0.851	0.844	0.853	0.744	**0.848**	0.962	68194

	Protection	Provision									Participa-tion	For comparison	
			Infra-structure (transport, utilities, etc.)	Education	Health	Social protection	Poverty reduction	Employ-ment	Rule of law (economic facets)	Competition on markets		Human Develop-ment Index (HDI)	GDP per capita, PPP (current inter-national $)
Tajikistan	**0.581**	**0.465**	0.478	0.611	0.338	0.669	0.112	0.632	0.359	0.521	**0.154**	0.676	3236
Tanzania	**0.568**	**0.326**	0.346	0.349	0.546	0.113	0.030	0.322	0.397	0.503	**0.386**	0.548	2458
Thailand	**0.582**	**0.591**	0.689	0.596	0.728	0.596	0.441	0.685	0.453	0.542	**0.265**	0.804	17008
Timor-Leste	**0.722**	**0.717**	0.394	1.000	0.859	0.900	0.633	0.519	..	..	**0.628**	0.614	3138
Togo	**0.536**	**0.304**	0.253	0.794	0.255	0.100	0.029	0.394	..	..	**0.362**	0.535	1973
Trinidad and Tobago	**0.753**	**0.574**	0.630	0.550	0.588	0.726	0.501	0.734	0.432	0.429	**0.685**	0.821	26214
Tunisia	**0.622**	**0.593**	0.632	0.770	0.708	0.802	0.182	0.668	0.455	0.527	**0.641**	0.745	10875
Turkey	**0.413**	**0.613**	0.685	0.514	0.754	0.995	0.227	0.670	0.503	0.553	**0.311**	0.842	27583
Uganda	**0.448**	**0.297**	0.353	0.281	0.367	0.091	0.066	0.404	0.341	0.474	**0.336**	0.525	2128
Ukraine	**0.575**	**0.646**	0.649	0.647	0.562	0.981	0.695	0.765	0.371	0.500	**0.497**	0.786	11861
United Arab Emirates	**0.692**	**0.604**	0.910	0.659	0.661	0.223	0.012	0.887	0.728	0.754	**0.183**	0.920	71182
United Kingdom	**0.889**	**0.844**	0.904	0.751	0.915	1.000	0.883	0.818	0.792	0.692	**0.811**	0.935	46104
United States	**0.695**	**0.768**	0.899	0.723	0.943	1.000	0.310	0.830	0.710	0.730	**0.744**	0.930	59908
Uruguay	**0.838**	**0.721**	0.772	0.605	0.923	0.940	0.537	0.745	0.692	0.551	**0.818**	0.821	23385
Uzbekistan	**0.560**	**0.531**	0.474	0.610	0.445	0.890	0.153	0.615	..	..	**0.179**	0.726	6841
Vietnam	**0.600**	**0.517**	0.664	0.663	0.515	0.420	0.278	0.673	0.400	0.522	**0.217**	0.703	9051
Yemen	**0.088**	**0.228**	0.257	0.558	0.087	0.072	0.000	0.340	0.199	0.316	**0.130**	0.461	..
Zambia	**0.551**	**0.352**	0.386	0.462	0.662	0.079	0.121	0.300	0.374	0.435	**0.388**	0.575	3395
Zimbabwe	**0.531**	**0.365**	0.383	0.635	0.514	0.255	0.064	0.422	0.287	0.359	**0.278**	0.601	2332

Source: Authors, based on the methodology described and the sources listed in Table 1

Table A2: Scores of countries for the different indicators measuring protection, provision and participation

	Protection					Provision (1)					
Aspect	**Collective**		**Individual**		**Rule of law (human rights facets)**	**Infrastructure (transport, utilities, etc.)**		**Education**		**Health**	
Aspect weight	40.00%		40.00%		20.00%						
Indicator weight	20.00%	20.00%	20.00%	20.00%	20.00%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Indicator number	**1-1**	**1-2**	**1-3**	**1-4**	**1-5**	**2-1-1**	**2-1-2**	**2-3-1**	**2-3-2**	**2-4-1**	**2-4-2**
Indicator name	**FFP Fragile States Index X1**	**UCDP data on fatalities in civil wars per 10,000 inhabitants**	**GCI Pillar 1: Security**	**Political Terror Scale**	**FFP Fragile States Index P3**	**GCI Pillar 2: Infra-structure (transport and utilities)**	**Telecommu-nication Infra-structure Index (TII)**	**Government expenditure on primary and secondary education (% of GDP)**	**GCI Pillar 6.4: Skills of future workforce**	**Government expenditure on health (% of GDP)**	**Out of pocket expenditure of private house-holds (% of total national health- care spending)**
Average	0.473	0.905	0.733	0.621	0.448	0.653	0.580	0.574	0.555	0.617	0.675
Median	0.430	1.000	0.741	0.750	0.410	0.678	0.605	0.551	0.593	0.641	0.694
Regional averages:											
European Union (EU)	0.733	1.000	0.842	0.875	0.790	0.817	0.843	0.594	0.701	0.952	0.790
Other Western Europe and Western off-springs	0.790	0.957	0.874	0.813	0.784	0.823	0.903	0.756	0.787	0.966	0.836
Other Eastern Europe and Central Asia	0.371	0.989	0.744	0.650	0.379	0.667	0.626	0.553	0.626	0.635	0.526
Middle East and North Africa (MENA)	0.374	0.824	0.789	0.458	0.212	0.676	0.599	0.542	0.590	0.558	0.675
Sub-Saharan Africa (SSA)	0.304	0.790	0.668	0.553	0.326	0.458	0.318	0.548	0.347	0.363	0.654
Latin America and the Caribbean (LAC)	0.521	0.989	0.583	0.542	0.493	0.620	0.579	0.605	0.520	0.768	0.667
Other Asia	0.435	0.908	0.733	0.552	0.323	0.685	0.560	0.530	0.558	0.434	0.620
Afghanistan	0.090	0.000	..	0.000	0.210	..	0.176	0.539	..	0.217	0.207
Albania	0.330	1.000	0.741	0.750	0.580	0.577	0.579	0.572	0.699	0.565	0.446
Algeria	0.570	0.924	0.804	0.250	0.340	0.638	0.579	.. ..	0.507	0.812	0.666

	Protection					Provision (1)					
Aspect	**Collective**		**Individual**		**Rule of law (human rights facets)**	**Infrastructure (transport, utilities, etc.)**		**Education**		**Health**	
Aspect weight	40.00%		40.00%		20.00%						
Indicator weight	20.00%	20.00%	20.00%	20.00%	20.00%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Indicator number	**1-1**	**1-2**	**1-3**	**1-4**	**1-5**	**2-1-1**	**2-1-2**	**2-3-1**	**2-3-2**	**2-4-1**	**2-4-2**
Indicator name	**FFP Fragile States Index X1**	**UCDP data on fatalities in civil wars per 10,000 inhabitants**	**GCI Pillar 1: Security**	**Political Terror Scale**	**FFP Fragile States Index P3**	**GCI Pillar 2: Infra-structure (transport and utilities)**	**Telecommu-nication Infra-structure Index (TII)**	**Government expenditure on primary and secondary education (% of GDP)**	**GCI Pillar 6.4: Skills of future workforce**	**Government expenditure on health (% of GDP)**	**Out of pocket expenditure of private house-holds (% of total national health- care spending)**
Angola	0.510	0.906	0.674	0.500	0.330	0.402	0.136		0.093	0.209	0.625
Argentina	0.570	1.000	0.698	1.000	0.610	0.683	0.727	0.755	0.616	1.000	0.723
Armenia	0.370	1.000	0.842	1.000	0.340	0.694	0.654	0.359	0.622	0.281	0.152
Australia	0.930	1.000	0.898	0.750	0.830	0.792	0.883	0.672	0.759	1.000	0.840
Austria	0.910	1.000	0.912	0.750	0.910	0.890	0.824	0.604	0.755	1.000	0.809
Azerbaijan	0.380	1.000	0.876	0.500	0.170	0.774	0.653	..	0.723	0.256	0.320
Bahrain	0.520	1.000	0.951	0.750	0.140	0.784	0.832	0.412	0.730	0.475	0.703
Bangladesh	0.420	0.994	0.679	0.250	0.270	0.511	0.372	0.364	0.407	0.093	0.273
Barbados	0.400	1.000	0.731	..	0.650	0.577	0.752	0.682	0.601	0.565	0.533
Belarus	0.300	1.000	..	0.250	0.230	..	0.828	0.600	..	0.825	0.743
Belgium	0.930	1.000	0.871	1.000	0.900	0.873	0.803	0.868	0.730	1.000	0.818
Benin	0.400	1.000	0.802	0.500	0.510	0.402	0.260	0.467	0.298	0.108	0.530
Bolivia	0.480	1.000	0.663	0.500	0.430	0.571	0.518	..	0.527	0.986	0.761
Bosnia and Herzegovina	0.180	1.000	0.731	0.750	0.500	0.630	0.630	..	0.533	1.000	0.706
Botswana	0.650	1.000	0.680	1.000	0.490	0.537	0.559	0.973	0.532	0.950	0.969
Brazil	0.640	1.000	0.430	0.000	0.310	0.655	0.652	0.819	0.509	0.782	0.751
Brunei Darussalam	0.670	1.000	0.850	1.000	0.290	0.701	0.821	0.711	0.735	0.408	0.943
Bulgaria	0.570	1.000	0.730	1.000	0.680	0.713	0.783	0.468	0.616	0.843	0.610
Burkina Faso	0.250	0.131	0.739	0.250	0.440	0.348	0.312	0.587	0.270	0.457	0.653
Burundi	0.160	0.629	0.725	0.500	0.100	0.392	0.126	0.866	0.218	0.533	0.753
Cambodia	0.260	1.000	0.717	0.500	0.240	0.549	0.547	0.353	0.304	0.340	0.356
Cameroon	0.280	0.299	0.690	0.250	0.230	0.401	0.230	0.479	0.276	0.024	0.275

	Protection					Provision (1)					
Aspect	**Collective**		**Individual**		**Rule of law (human rights facets)**	**Infrastructure (transport, utilities, etc.)**		**Education**		**Health**	
Aspect weight	40.00%		40.00%		20.00%						
Indicator weight	20.00%	20.00%	20.00%	20.00%	20.00%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Indicator number	**1-1**	**1-2**	**1-3**	**1-4**	**1-5**	**2-1-1**	**2-1-2**	**2-3-1**	**2-3-2**	**2-4-1**	**2-4-2**
Indicator name	**FFP Fragile States Index X1**	**UCDP data on fatalities in civil wars per 10,000 inhabitants**	**GCI Pillar 1: Security**	**Political Terror Scale**	**FFP Fragile States Index P3**	**GCI Pillar 2: Infra-structure (transport and utilities)**	**Telecommu-nication Infra-structure Index (TII)**	**Government expenditure on primary and secondary education (% of GDP)**	**GCI Pillar 6.4: Skills of future workforce**	**Government expenditure on health (% of GDP)**	**Out of pocket expenditure of private house-holds (% of total national health- care spending)**
Canada	0.930	1.000	0.860	1.000	0.860	0.808	0.782	..	0.767	1.000	0.851
Central African Republic	0.080	0.272	..	0.750	0.050	..	0.038	0.173	..	0.164	0.397
Chad	0.200	0.461	0.671	0.500	0.120	0.305	0.089	0.296	0.171	0.151	0.428
Chile	0.850	1.000	0.837	0.250	0.680	0.763	0.761	0.610	0.593	0.950	0.672
China	0.730	1.000	0.792	0.250	0.120	0.779	0.739	..	0.698	0.599	0.648
Colombia	0.460	0.762	0.451	0.250	0.330	0.643	0.612	0.631	0.540	1.000	0.851
Congo, Dem. Rep.	0.030	0.485	0.358	0.000	0.040	0.292	0.114	0.313	0.341	0.112	0.615
Congo, Rep.	0.350	1.000	..	0.500	0.160	..	0.236	1.000	..	0.157	0.541
Costa Rica	0.560	1.000	0.699	..	0.850	0.687	0.748	0.801	0.702	1.000	0.777
Cote d'Ivoire	0.160	1.000	0.451	0.500	0.270	0.479	0.503	0.537	0.279	0.192	0.627
Croatia	0.540	1.000	0.787	0.750	0.680	0.782	0.729	..	0.562	1.000	0.885
Cyprus	0.160	1.000	0.838	1.000	0.720	0.749	0.906	0.858	0.676	0.785	0.694
Czech Republic	0.790	1.000	0.862	1.000	0.780	0.838	0.814	0.507	0.584	1.000	0.858
Denmark	0.930	1.000	0.874	1.000	0.830	0.871	0.998	0.809	0.873	1.000	0.858
Dominican Republic	0.520	1.000	0.617	0.750	0.470	0.649	0.528	0.605	0.547	0.532	0.571
Ecuador	0.430	1.000	0.707	0.500	0.580	0.691	0.513	0.403	0.508	0.966	0.691
Egypt	0.270	0.601	0.678	0.000	0.000	0.731	0.468	0.515	0.471	0.263	0.373
El Salvador	0.470	1.000	0.335	0.750	0.430	0.610	0.509	0.576	0.404	0.910	0.716
Estonia	0.630	1.000	0.918	1.000	0.830	0.758	0.921	0.540	0.767	1.000	0.760
Eswatini	0.270	1.000	0.749	1.000	0.120	0.537	0.354	1.000	0.450	0.688	0.894
Ethiopia	0.210	0.473	0.619	0.250	0.180	0.434	0.119	0.432	0.214	0.147	0.621
Fiji	0.290	1.000	..	0.750	0.370	..	0.647	0.504	..	0.499	0.868

	Protection					Provision (1)					
Aspect	**Collective**		**Individual**		**Rule of law (human rights facets)**	**Infrastructure (transport, utilities, etc.)**		**Education**		**Health**	
Aspect weight	40.00%		40.00%		20.00%						
Indicator weight	20.00%	20.00%	20.00%	20.00%	20.00%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Indicator number	**1-1**	**1-2**	**1-3**	**1-4**	**1-5**	**2-1-1**	**2-1-2**	**2-3-1**	**2-3-2**	**2-4-1**	**2-4-2**
Indicator name	**FFP Fragile States Index X1**	**UCDP data on fatalities in civil wars per 10,000 inhabitants**	**GCI Pillar 1: Security**	**Political Terror Scale**	**FFP Fragile States Index P3**	**GCI Pillar 2: Infra-structure (transport and utilities)**	**Telecommu-nication Infra-structure Index (TII)**	**Government expenditure on primary and secondary education (% of GDP)**	**GCI Pillar 6.4: Skills of future workforce**	**Government expenditure on health (% of GDP)**	**Out of pocket expenditure of private house-holds (% of total national health- care spending)**
Finland	0.900	1.000	0.973	0.750	0.930	0.834	0.910	0.737	0.840	1.000	0.826
France	0.850	1.000	0.811	0.500	0.840	0.897	0.872	0.701	0.652	1.000	0.907
Gabon	0.490	1.000	0.589	0.750	0.260	0.462	0.625	0.310	0.477	0.334	0.769
Gambia	0.360	1.000	0.667	0.750	0.160	0.474	0.397	0.383	0.432	0.208	0.768
Georgia	0.280	1.000	0.863	0.750	0.500	0.676	0.692	0.253	0.676	0.543	0.532
Germany	0.930	1.000	0.809	1.000	0.920	0.902	0.886	0.526	0.799	1.000	0.872
Ghana	0.370	1.000	0.751	0.750	0.500	0.466	0.560	0.527	0.467	0.275	0.638
Greece	0.390	1.000	0.775	0.750	0.670	0.777	0.810	0.506	0.645	0.754	0.648
Guatemala	0.540	1.000	0.429	0.500	0.270	0.559	0.483	0.432	0.522	0.477	0.440
Guinea	0.320	1.000	0.738	0.500	0.290	0.417	0.301	0.382	0.245	0.179	0.408
Haiti	0.040	1.000	0.538	0.250	0.280	0.269	0.245	..	0.301	0.104	0.567
Honduras	0.250	1.000	0.412	0.250	0.310	0.574	0.324	0.872	0.486	0.571	0.474
Hungary	0.580	1.000	0.778	1.000	0.470	0.807	0.726	0.482	0.692	0.863	0.718
Iceland	0.620	1.000	0.954	..	0.900	0.764	0.984	0.866	0.800	1.000	0.845
India	0.490	0.939	0.564	0.250	0.440	0.681	0.352	0.536	0.403	0.198	0.452
Indonesia	0.540	0.992	0.772	0.500	0.300	0.677	0.567	0.499	0.693	0.284	0.652
Iran	0.330	0.965	0.728	0.250	0.110	0.648	0.621	0.534	0.402	0.664	0.605
Iraq	0.090	0.200	..	0.000	0.190	..	0.537	0.322	..	0.442	0.499
Ireland	0.880	1.000	0.872	1.000	0.820	0.770	0.810	0.459	0.680	0.996	0.883
Israel	0.250	0.609	0.824	0.500	0.310	0.830	0.869	0.851	0.758	0.967	0.790
Italy	0.720	1.000	0.770	0.750	0.860	0.841	0.793	0.552	0.709	1.000	0.767
Jamaica	0.480	1.000	0.433	0.500	0.440	0.625	0.515	0.779	0.575	0.796	0.836

	Protection					Provision (1)					
Aspect	**Collective**		**Individual**		**Rule of law (human rights facets)**	**Infrastructure (transport, utilities, etc.)**		**Education**		**Health**	
Aspect weight	40.00%		40.00%		20.00%						
Indicator weight	20.00%	20.00%	20.00%	20.00%	20.00%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Indicator number	**1-1**	**1-2**	**1-3**	**1-4**	**1-5**	**2-1-1**	**2-1-2**	**2-3-1**	**2-3-2**	**2-4-1**	**2-4-2**
Indicator name	**FFP Fragile States Index X1**	**UCDP data on fatalities in civil wars per 10,000 inhabitants**	**GCI Pillar 1: Security**	**Political Terror Scale**	**FFP Fragile States Index P3**	**GCI Pillar 2: Infra-structure (transport and utilities)**	**Telecommu-nication Infra-structure Index (TII)**	**Government expenditure on primary and secondary education (% of GDP)**	**GCI Pillar 6.4: Skills of future workforce**	**Government expenditure on health (% of GDP)**	**Out of pocket expenditure of private house-holds (% of total national health- care spending)**
Japan	0.680	1.000	0.923	1.000	0.680	0.932	0.922	0.489	0.615	1.000	0.871
Jordan	0.310	1.000	0.857	0.750	0.260	0.674	0.554	0.550	0.611	0.776	0.697
Kazakhstan	0.640	1.000	0.725	0.500	0.330	0.683	0.702	..	0.610	0.334	0.661
Kenya	0.250	0.807	0.657	0.500	0.320	0.536	0.340	0.823	0.441	0.422	0.757
Korea, South	0.500	1.000	0.852	1.000	0.680	0.921	0.968	0.610	0.613	0.972	0.698
Kuwait	0.580	1.000	0.823	0.750	0.270	0.684	0.786	0.484	0.714	0.956	0.882
Kyrgyz Republic	0.360	0.868	0.675	0.750	0.310	0.558	0.590	..	0.481	0.462	0.538
Laos	0.450	1.000	0.740	0.750	0.270	0.592	0.238	0.466	0.554	0.192	0.582
Latvia	0.670	1.000	0.800	1.000	0.700	0.760	0.840	0.562	0.717	0.797	0.643
Lebanon	0.090	0.835	0.695	0.500	0.280	0.613	0.412	.. ..	0.744	0.847	0.665
Lesotho	0.280	1.000	0.594	0.750	0.480	0.333	0.450		0.461	0.981	0.862
Liberia	0.130	1.000	..	1.000	0.350	..	0.141	0.495	..	0.273	0.456
Lithuania	0.600	1.000	0.846	0.750	0.730	0.770	0.825	0.436	0.687	0.912	0.677
Luxembourg	0.920	1.000	0.906	..	0.900	0.850	0.907	0.526	0.793	0.922	0.904
Madagascar	0.380	1.000	0.590	0.500	0.440	0.314	0.110	0.312	0.260	0.237	0.675
Malawi	0.260	1.000	0.748	0.500	0.410	0.356	0.139	0.690	0.167	0.482	0.831
Malaysia	0.680	1.000	0.840	0.750	0.260	0.780	0.763	0.676	0.781	0.399	0.654
Maldives	0.410	1.000	..	0.750	0.230	..	0.598	0.464	..	1.000	0.835
Mali	0.040	0.273	0.633	0.500	0.240	0.439	0.355	0.619	0.342	0.262	0.686
Malta	0.720	1.000	0.812	0.750	0.690	0.750	0.923	0.574	0.701	1.000	0.654
Mauritania	0.260	1.000	0.747	0.750	0.250	0.324	0.389	0.286	0.288	0.248	0.550
Mauritius	0.590	1.000	0.828	..	0.620	0.687	0.668	0.827	0.602	0.583	0.543

	Protection					Provision (1)					
Aspect	**Collective**		**Individual**		**Rule of law (human rights facets)**	**Infrastructure (transport, utilities, etc.)**		**Education**		**Health**	
Aspect weight	40.00%		40.00%		20.00%						
Indicator weight	20.00%	20.00%	20.00%	20.00%	20.00%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Indicator number	**1-1**	**1-2**	**1-3**	**1-4**	**1-5**	**2-1-1**	**2-1-2**	**2-3-1**	**2-3-2**	**2-4-1**	**2-4-2**
Indicator name	**FFP Fragile States Index X1**	**UCDP data on fatalities in civil wars per 10,000 inhabitants**	**GCI Pillar 1: Security**	**Political Terror Scale**	**FFP Fragile States Index P3**	**GCI Pillar 2: Infra-structure (transport and utilities)**	**Telecommu-nication Infra-structure Index (TII)**	**Government expenditure on primary and secondary education (% of GDP)**	**GCI Pillar 6.4: Skills of future workforce**	**Government expenditure on health (% of GDP)**	**Out of pocket expenditure of private house-holds (% of total national health- care spending)**
Mexico	0.480	1.000	0.401	0.250	0.410	0.724	0.591	0.599	0.460	0.536	0.579
Moldova	0.320	1.000	0.733	0.500	0.540	0.662	0.568	0.645	0.598	0.761	0.643
Mongolia	0.280	1.000	0.741	0.750	0.580	0.566	0.614	0.502	0.403	0.427	0.652
Montenegro	0.290	1.000	0.792	1.000	0.630	0.636	0.737	..	0.660	1.000	0.614
Morocco	0.420	1.000	0.889	0.750	0.380	0.726	0.580	1.000	0.420	0.423	0.532
Mozambique	0.260	0.437	0.631	0.750	0.440	0.352	0.129	0.977	0.131	0.333	0.900
Myanmar	0.230	0.522	..	0.000	0.070	..	0.523	0.309	..	0.147	0.240
Namibia	0.420	1.000	0.639	0.750	0.680	0.585	0.545	0.247	0.457	0.797	0.918
Nepal	0.350	1.000	0.713	0.500	0.290	0.518	0.469	0.645	0.543	0.221	0.421
Netherlands	0.900	1.000	0.901	1.000	0.900	0.943	0.928	0.649	0.843	1.000	0.894
New Zealand	0.910	1.000	0.926	1.000	0.920	0.755	0.921	0.781	0.780	1.000	0.878
Nicaragua	0.260	1.000	0.759	0.250	0.270	0.556	0.381	0.476	0.377	1.000	0.656
Niger	0.220	0.435	..	0.500	0.320	..	0.074	0.339	..	0.405	0.539
Nigeria	0.410	0.533	0.427	0.500	0.170	0.397	0.353	..	0.274	0.097	0.295
North Macedonia	..	1.000	0.692	0.750	0.680	0.669	0.644	..	0.604	0.856	0.596
Norway	0.900	1.000	0.908	1.000	0.910	0.758	0.903	0.815	0.820	1.000	0.861
Oman	0.710	1.000	0.929	0.750	0.250	0.805	0.697	0.766	0.811	0.704	0.934
Pakistan	0.120	0.817	0.455	0.250	0.260	0.556	0.244	0.363	0.298	0.216	0.462
Panama	0.770	1.000	0.720	..	0.620	0.695	0.649	0.290	0.531	1.000	0.724
Papua New Guinea	0.380	1.000	..	0.500	0.300	..	0.123	0.764	..	0.265	0.901
Paraguay	0.580	1.000	0.634	0.750	0.430	0.598	0.544	0.466	0.423	0.660	0.584
Peru	0.710	1.000	0.596	1.000	0.630	0.623	0.578	0.507	0.566	0.656	0.719

	Protection					Provision (1)					
Aspect	**Collective**		**Individual**		**Rule of law (human rights facets)**	**Infrastructure (transport, utilities, etc.)**		**Education**		**Health**	
Aspect weight	40.00%		40.00%		20.00%						
Indicator weight	20.00%	20.00%	20.00%	20.00%	20.00%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Indicator number	**1-1**	**1-2**	**1-3**	**1-4**	**1-5**	**2-1-1**	**2-1-2**	**2-3-1**	**2-3-2**	**2-4-1**	**2-4-2**
Indicator name	**FFP Fragile States Index X1**	**UCDP data on fatalities in civil wars per 10,000 inhabitants**	**GCI Pillar 1: Security**	**Political Terror Scale**	**FFP Fragile States Index P3**	**GCI Pillar 2: Infra-structure (transport and utilities)**	**Telecommu-nication Infra-structure Index (TII)**	**Government expenditure on primary and secondary education (% of GDP)**	**GCI Pillar 6.4: Skills of future workforce**	**Government expenditure on health (% of GDP)**	**Out of pocket expenditure of private house-holds (% of total national health- care spending)**
Philippines	0.340	0.640	0.448	0.000	0.260	0.578	0.584	0.430	0.545	0.331	0.514
Poland	0.660	1.000	0.797	0.750	0.580	0.812	0.801	0.560	0.667	0.920	0.796
Portugal	0.710	1.000	0.909	0.750	0.880	0.836	0.795	0.740	0.708	1.000	0.695
Qatar	0.240	1.000	0.894	1.000	0.360	0.816	0.823	0.221	0.824	0.424	0.877
Romania	0.640	1.000	0.815	1.000	0.650	0.717	0.759	0.325	0.526	0.921	0.811
Russia	0.460	0.962	0.686	0.250	0.090	0.738	0.772	..	0.607	0.691	0.634
Rwanda	0.310	0.499	0.846	0.500	0.340	0.520	0.293	0.411	0.227	0.512	0.883
Saudi Arabia	0.530	1.000	0.887	0.250	0.070	0.781	0.844	..	0.753	0.787	0.835
Senegal	0.390	1.000	0.820	0.750	0.460	0.513	0.436	0.469	0.412	0.207	0.490
Serbia	0.340	1.000	0.752	1.000	0.590	0.738	0.620	0.517	0.659	1.000	0.630
Seychelles	0.360	1.000	0.674	..	0.620	0.623	0.693	0.510	0.721	0.755	0.748
Sierra Leone	0.270	1.000	..	0.500	0.480	..	0.259	0.720	..	0.245	0.448
Singapore	0.900	1.000	0.961	0.750	0.540	0.954	0.890	0.276	0.721	0.410	0.698
Slovakia	0.730	1.000	0.733	0.750	0.760	0.786	0.799	0.517	0.594	1.000	0.808
Slovenia	0.830	1.000	0.872	1.000	0.900	0.781	0.785	0.603	0.634	1.000	0.883
South Africa	0.660	1.000	0.427	0.250	0.580	0.681	0.583	..	0.427	1.000	0.943
South Sudan	0.060	0.323	..	0.250	0.070	..	0.065	0.150	..	0.197	0.765
Spain	0.800	1.000	0.919	0.750	0.880	0.903	0.853	0.539	0.653	1.000	0.782
Sri Lanka	0.370	1.000	0.735	0.750	0.160	0.692	0.529	0.321	0.580	0.385	0.544
Sudan	0.110	0.775	..	0.250	0.060	..	0.28	0.300	..	0.208	0.326
Sweden	0.910	1.000	0.839	1.000	0.910	0.840	0.963	0.803	0.828	1.000	0.861
Switzerland	0.930	1.000	0.938	1.000	0.860	0.932	0.948	0.654	0.863	0.725	0.747

	Protection					Provision (1)					
Aspect	**Collective**		**Individual**		**Rule of law (human rights facets)**	**Infrastructure (transport, utilities, etc.)**		**Education**		**Health**	
Aspect weight	40.00%		40.00%		20.00%						
Indicator weight	20.00%	20.00%	20.00%	20.00%	20.00%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
Indicator number	**1-1**	**1-2**	**1-3**	**1-4**	**1-5**	**2-1-1**	**2-1-2**	**2-3-1**	**2-3-2**	**2-4-1**	**2-4-2**
Indicator name	**FFP Fragile States Index X1**	**UCDP data on fatalities in civil wars per 10,000 inhabitants**	**GCI Pillar 1: Security**	**Political Terror Scale**	**FFP Fragile States Index P3**	**GCI Pillar 2: Infra-structure (transport and utilities)**	**Telecommu-nication Infra-structure Index (TII)**	**Government expenditure on primary and secondary education (% of GDP)**	**GCI Pillar 6.4: Skills of future workforce**	**Government expenditure on health (% of GDP)**	**Out of pocket expenditure of private house-holds (% of total national health- care spending)**
Tajikistan	0.470	1.000	0.795	0.500	0.140	0.606	0.350	..	0.611	0.388	0.288
Tanzania	0.280	0.983	0.719	0.500	0.360	0.449	0.243	0.456	0.241	0.313	0.778
Thailand	0.680	0.891	0.647	0.500	0.190	0.678	0.700	0.585	0.607	0.543	0.913
Timor-Leste	0.080	1.000	..	1.000	0.530	..	0.394	1.000	..	0.800	0.918
Togo	0.400	1.000	..	0.500	0.280	..	0.253	0.794	..	0.173	0.338
Trinidad and Tobago	0.690	1.000	0.435	1.000	0.640	0.580	0.680	0.623	0.476	0.646	0.531
Tunisia	0.420	1.000	0.779	0.500	0.410	0.627	0.637	0.941	0.599	0.795	0.621
Turkey	0.490	0.524	0.610	0.250	0.190	0.743	0.628	..	0.514	0.677	0.831
Uganda	0.250	0.654	0.635	0.500	0.200	0.479	0.228	0.323	0.239	0.116	0.617
Ukraine	0.160	1.000	0.626	0.750	0.340	0.703	0.594	0.567	0.726	0.636	0.489
United Arab Emirates	0.790	1.000	0.928	0.500	0.240	0.885	0.934	..	0.659	0.447	0.875
United Kingdom	0.800	1.000	0.794	1.000	0.850	0.889	0.920	0.747	0.754	1.000	0.829
United States	0.840	1.000	0.767	0.250	0.620	0.879	0.918	0.662	0.784	1.000	0.887
Uruguay	0.770	1.000	0.712	1.000	0.710	0.687	0.857	0.562	0.647	1.000	0.845
Uzbekistan	0.590	1.000	..	0.500	0.210	..	0.474	0.610	..	0.467	0.423
Vietnam	0.510	1.000	0.772	0.500	0.220	0.659	0.669	0.783	0.544	0.460	0.570
Yemen	0.000	0.000	0.430	0.000	0.010	0.339	0.176	0.715	0.400	0.087	..
Zambia	0.300	1.000	0.696	0.500	0.260	0.433	0.339	0.676	0.248	0.426	0.898
Zimbabwe	0.270	1.000	0.704	0.500	0.180	0.398	0.369	0.916	0.353	0.272	0.756

	Provision (2)										Participation	
Aspect	**Social protection**		**Poverty reduction**		**Employment**		**Rule of law (economic facets)**		**Competition on markets**			
Aspect weight	**12.50%**		**12.50%**		**12.50%**		**12.50%**		**12.50%**			
Indicator weight	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**50.00%**	**50.00%**
Indicator number	**2-5-1**	**2-5-2**	**2-6-1**	**2-6-2**	**2-7-1**	**2-7-3**	**2-8-1**	**2-8-2**	**2-9-1**	**2-9-2**	**3-1**	**3-2**
Indicator name	**Public expenditure on social protection programmes (excl. health) (% of GDP)**	**Ratio of persons above statutory retirement age receiving an old-age pension**	**Public expenditure on social safety nets (% of GDP)**	**Proportion of population covered by social protection floors/ systems (%)**	**Share of wage employment on work age pop.**	**Working poverty headcount rate (% of people living in poverty in spite of being employed)**	**GCI Pillar 1F: Property rights**	**GCI Pillar 1E: Transparency**	**GCI Pillar 7A: Domestic market competition**	**GCI Pillar 1E: Public-sector performance**	**V-Dem Index "Electoral democracy"**	**Voice and Accountability Indicator**
Average	0.550	0.588	0.363	0.334	0.385	0.896	0.550	0.458	0.528	0.514	0.540	0.484
Median	0.545	0.686	0.282	0.198	0.372	0.997	0.531	0.410	0.531	0.508	0.531	0.494
Regional averages:												
European Union (EU)	0.996	0.963	0.605	0.712	0.600	1.000	0.697	0.641	0.593	0.580	0.819	0.709
Other Western Europe and Western off-springs	0.973	0.968	0.800	0.801	0.659	1.000	0.774	0.780	0.636	0.697	0.848	0.756
Other Eastern Europe and Central Asia	0.838	0.848	0.361	0.324	0.430	0.992	0.523	0.333	0.513	0.516	0.405	0.375
Middle East and North Africa (MENA)	0.567	0.396	0.318	0.129	0.411	0.965	0.550	0.408	0.547	0.526	0.256	0.290
Sub-Saharan Africa (SSA)	0.213	0.291	0.268	0.119	0.172	0.662	0.434	0.359	0.473	0.432	0.458	0.403
Latin America and the Caribbean (LAC)	0.474	0.539	0.379	0.258	0.387	0.974	0.473	0.388	0.468	0.433	0.658	0.549
Other Asia	0.321	0.532	0.238	0.283	0.338	0.950	0.549	0.423	0.538	0.559	0.441	0.421
Afghanistan	0.180	0.247	0.303	0.059	0.073	0.700	..	..	..	..	0.351	0.299
Albania	0.920	0.770	0.408	..	0.285	0.997	0.417	0.360	0.429	0.527	0.488	0.529
Algeria	0.890	0.636	0.236	..	0.275	0.999	0.421	0.350	0.500	0.379	0.293	0.289
Angola	0.210	0.145	0.099	0.051	0.248	0.525	0.298	0.190	0.300	0.331	0.366	0.343
Argentina	1.000	0.898	0.663	0.328	0.451	0.996	0.465	0.400	0.428	0.399	0.778	0.615
Armenia	0.680	0.652	0.306	0.196	0.426	0.997	0.620	0.350	0.630	0.530	0.807	0.511
Australia	0.940	1.000	..	1.000	0.621	1.000	0.766	0.770	0.603	0.660	0.851	0.753
Austria	1.000	1.000	1.000	0.930	0.650	1.000	0.815	0.760	0.675	0.656	0.844	0.768

	Provision (2)										Participation	
Aspect	**Social protection**		**Poverty reduction**		**Employment**		**Rule of law (economic facets)**		**Competition on markets**			
Aspect weight	**12.50%**		**12.50%**		**12.50%**		**12.50%**		**12.50%**			
Indicator weight	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**50.00%**	**50.00%**
Indicator number	**2-5-1**	**2-5-2**	**2-6-1**	**2-6-2**	**2-7-1**	**2-7-3**	**2-8-1**	**2-8-2**	**2-9-1**	**2-9-2**	**3-1**	**3-2**
Indicator name	**Public expenditure on social protection programmes (excl. health) (% of GDP)**	**Ratio of persons above statutory retirement age receiving an old-age pension**	**Public expenditure on social safety nets (% of GDP)**	**Proportion of population covered by social protection floors/ systems (%)**	**Share of wage employment on work age pop.**	**Working poverty headcount rate (% of people living in poverty in spite of being employed)**	**GCI Pillar 1F: Property rights**	**GCI Pillar 1E: Transparency**	**GCI Pillar 7A: Domestic market competition**	**GCI Pillar 1E: Public-sector performance**	**V-Dem Index "Electoral democracy"**	**Voice and Accountability Indicator**
Azerbaijan	0.600	0.728	0.168	0.134	0.225	0.999	0.656	0.250	0.689	0.668	0.192	0.194
Bahrain	0.630	0.751	..	0.369	0.714	1.000	0.688	0.360	0.642	0.669	0.118	0.214
Bangladesh	0.070	0.380	0.153	0.149	0.235	0.945	0.358	0.260	0.451	0.523	0.256	0.352
Barbados	0.410	0.635	..	0.096	0.540	1.000	0.499	0.680	0.429	0.402	0.787	0.721
Belarus	1.000	1.000	0.476	..	0.719	0.999	..	..	..	..	0.257	0.218
Belgium	1.000	1.000	..	1.000	0.565	1.000	0.790	0.750	0.633	0.547	0.889	0.762
Benin	0.130	0.110	0.080	..	0.068	0.618	0.400	0.400	0.549	0.452	0.488	0.514
Bolivia	0.450	1.000	0.437	0.372	0.255	0.962	0.253	0.290	0.382	0.315	0.553	0.477
Bosnia and Herzegovina	..	0.695	0.558	..	0.363	1.000	0.375	0.380	0.421	0.264	0.521	0.451
Botswana	0.190	1.000	0.619	0.082	0.367	0.915	0.500	0.610	0.479	0.391	0.672	0.600
Brazil	1.000	0.915	0.255	0.459	0.416	0.980	0.471	0.350	0.450	0.457	0.676	0.559
Brunei Darussalam	0.020	0.909	..	0.147	0.578	1.000	0.569	0.630	0.511	0.498	..	0.306
Bulgaria	1.000	0.940	0.215	0.288	0.629	1.000	0.523	0.420	0.547	0.568	0.623	0.571
Burkina Faso	0.010	0.060	0.370	0.036	0.089	0.701	0.456	0.410	0.465	0.498	0.708	0.459
Burundi	0.260	0.040	0.489	..	0.097	0.220	0.392	0.170	0.509	0.433	0.158	0.155
Cambodia	0.090	0.066	0.179	0.043	0.410	0.899	0.396	0.200	0.462	0.313	0.197	0.256
Cameroon	0.080	0.183	0.006	0.009	0.178	0.804	0.415	0.250	0.500	0.393	0.293	0.258
Canada	0.830	1.000	..	1.000	0.633	1.000	0.745	0.810	0.601	0.670	0.851	0.786
Central African Republic	0.280	0.047	0.517	..	0.040	0.374	..	..	..	..	0.389	0.256
Chad	0.060	0.016	0.149	..	0.052	0.600	0.323	0.190	0.286	0.289	0.268	0.213
Chile	0.680	0.715	0.728	0.381	0.444	0.999	0.600	0.670	0.596	0.582	0.830	0.698

	Provision (2)										Participation	
Aspect	**Social protection**		**Poverty reduction**		**Employment**		**Rule of law (economic facets)**		**Competition on markets**			
Aspect weight	**12.50%**		**12.50%**		**12.50%**		**12.50%**		**12.50%**			
Indicator weight	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**50.00%**	**50.00%**
Indicator number	**2-5-1**	**2-5-2**	**2-6-1**	**2-6-2**	**2-7-1**	**2-7-3**	**2-8-1**	**2-8-2**	**2-9-1**	**2-9-2**	**3-1**	**3-2**
Indicator name	**Public expenditure on social protection programmes (excl. health) (% of GDP)**	**Ratio of persons above statutory retirement age receiving an old-age pension**	**Public expenditure on social safety nets (% of GDP)**	**Proportion of population covered by social protection floors/ systems (%)**	**Share of wage employment on work age pop.**	**Working poverty headcount rate (% of people living in poverty in spite of being employed)**	**GCI Pillar 1F: Property rights**	**GCI Pillar 1E: Transparency**	**GCI Pillar 7A: Domestic market competition**	**GCI Pillar 1E: Public-sector performance**	**V-Dem Index "Electoral democracy"**	**Voice and Accountability Indicator**
China	0.720	1.000	0.249	0.332	0.388	0.998	0.656	0.390	0.575	0.662	0.076	0.174
Colombia	0.900	0.506	0.689	0.339	0.327	0.973	0.511	0.360	0.457	0.513	0.663	0.541
Congo, Dem. Rep.	0.140	0.150	0.136	0.056	0.126	0.326	0.329	0.200	0.365	0.256	0.348	0.237
Congo, Rep.	0.180	..	0.008	..	0.138	0.460	..	..	..	..	0.240	0.244
Costa Rica	0.730	0.562	0.273	0.301	0.458	0.997	0.615	0.560	0.543	0.499	0.899	0.719
Cote d'Ivoire	0.120	0.077	0.002	..	0.182	0.791	0.440	0.350	0.477	0.355	0.544	0.451
Croatia	1.000	0.898	0.645	..	0.545	1.000	0.568	0.480	0.460	0.358	0.733	0.591
Cyprus	1.000	0.978	..	0.241	0.591	1.000	0.686	0.590	0.614	0.556	0.850	0.710
Czech Republic	1.000	0.913	0.157	0.320	0.626	1.000	0.703	0.590	0.530	0.440	0.808	0.667
Denmark	1.000	1.000	1.000	0.637	0.688	1.000	0.809	0.880	0.678	0.733	0.911	0.809
Dominican Republic	0.150	0.113	0.319	0.415	0.375	0.996	0.525	0.300	0.468	0.465	0.509	0.535
Ecuador	0.520	0.606	0.300	0.107	0.324	0.958	0.472	0.340	0.421	0.415	0.655	0.507
Egypt	0.950	0.576	0.614	0.199	0.292	0.978	0.488	0.350	0.600	0.476	0.179	0.211
El Salvador	0.540	0.201	0.282	0.069	0.372	0.996	0.420	0.350	0.466	0.390	0.640	0.523
Estonia	1.000	1.000	0.623	0.917	0.666	1.000	0.791	0.730	0.608	0.663	0.889	0.736
Eswatini	0.440	1.000	0.301	0.202	0.266	0.791	0.531	0.380	0.476	0.386	0.137	0.232
Ethiopia	0.070	0.039	0.205	0.032	0.119	0.806	0.311	0.340	0.348	0.455	0.337	0.287
Fiji	0.250	0.873	0.145	0.250	0.387	0.999	..	..	..	..	0.395	0.504
Finland	1.000	1.000	..	1.000	0.631	1.000	0.913	0.850	0.642	0.825	0.875	0.813
France	1.000	1.000	1.000	1.000	0.583	1.000	0.760	0.720	0.622	0.667	0.874	0.723
Gabon	..	0.388	0.040	..	0.262	0.985	0.314	0.310	0.392	0.286	0.386	0.290
Gambia	0.090	0.170	..	0.005	0.162	0.931	0.457	0.370	0.564	0.481	0.520	0.452

	Provision (2)										Participation	
Aspect	**Social protection**		**Poverty reduction**		**Employment**		**Rule of law (economic facets)**		**Competition on markets**			
Aspect weight	**12.50%**		**12.50%**		**12.50%**		**12.50%**		**12.50%**			
Indicator weight	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**50.00%**	**50.00%**
Indicator number	**2-5-1**	**2-5-2**	**2-6-1**	**2-6-2**	**2-7-1**	**2-7-3**	**2-8-1**	**2-8-2**	**2-9-1**	**2-9-2**	**3-1**	**3-2**
Indicator name	**Public expenditure on social protection programmes (excl. health) (% of GDP)**	**Ratio of persons above statutory retirement age receiving an old-age pension**	**Public expenditure on social safety nets (% of GDP)**	**Proportion of population covered by social protection floors/ systems (%)**	**Share of wage employment on work age pop.**	**Working poverty headcount rate (% of people living in poverty in spite of being employed)**	**GCI Pillar 1F: Property rights**	**GCI Pillar 1E: Transparency**	**GCI Pillar 7A: Domestic market competition**	**GCI Pillar 1E: Public-sector performance**	**V-Dem Index "Electoral democracy"**	**Voice and Accountability Indicator**
Georgia	0.710	0.909	1.000	0.929	0.304	0.971	0.602	0.580	0.540	0.540	0.650	0.534
Germany	1.000	1.000	1.000	0.960	0.701	1.000	0.720	0.800	0.697	0.710	0.878	0.771
Ghana	0.170	0.190	0.089	0.051	0.174	0.923	0.425	0.410	0.518	0.548	0.723	0.612
Greece	1.000	0.958	1.000	..	0.382	1.000	0.383	0.450	0.495	0.458	0.855	0.662
Guatemala	0.130	0.167	0.255	0.068	0.379	0.968	0.476	0.270	0.545	0.411	0.576	0.433
Guinea	0.050	0.020	0.234	..	0.040	0.749	0.422	0.280	0.583	0.468	0.362	0.346
Haiti	0.100	0.004	..	0.032	0.151	0.818	0.181	0.200	0.267	0.314	0.412	0.351
Honduras	0.040	0.107	0.086	0.182	0.312	0.885	0.491	0.290	0.484	0.400	0.380	0.385
Hungary	1.000	0.905	0.370	0.560	0.625	1.000	0.625	0.460	0.449	0.481	0.460	0.569
Iceland	0.990	0.714	1.000		0.743	1.000	0.820	0.760	0.590	0.628	0.860	0.761
India	0.140	0.425	0.299	0.164	0.120	0.914	0.478	0.410	0.569	0.664	0.460	0.554
Indonesia	0.130	0.141	0.110	0.165	0.328	0.968	0.564	0.380	0.570	0.546	0.622	0.526
Iran	1.000	0.213	..	0.093	0.230	0.998	0.404	0.280	0.434	0.348	0.207	0.223
Iraq	0.760	0.331	0.297	0.269	0.288	0.996	..	..	..	..	0.393	0.307
Ireland	0.900	1.000	..	0.738	0.596	1.000	0.754	0.730	0.591	0.650	0.876	0.761
Israel	1.000	1.000	0.200	..	0.605	1.000	0.711	0.610	0.571	0.613	0.704	0.632
Italy	1.000	0.944	..	0.426	0.460	1.000	0.683	0.520	0.622	0.453	0.859	0.681
Jamaica	0.070	0.403	0.302	0.143	0.407	0.992	0.529	0.440	0.540	0.372	0.813	0.623
Japan	1.000	1.000	..	1.000	0.705	1.000	0.842	0.730	0.720	0.725	0.833	0.686
Jordan	0.900	0.600	0.355	0.097	0.301	0.999	0.687	0.490	0.581	0.519	0.268	0.361
Kazakhstan	0.510	0.996	0.342	0.742	0.566	1.000	0.550	0.310	0.550	0.613	0.237	0.254
Kenya	0.100	0.132	0.075	0.025	0.268	0.736	0.538	0.270	0.530	0.496	0.458	0.437

	Provision (2)										Participation	
Aspect	**Social protection**		**Poverty reduction**		**Employment**		**Rule of law (economic facets)**		**Competition on markets**			
Aspect weight	**12.50%**		**12.50%**		**12.50%**		**12.50%**		**12.50%**			
Indicator weight	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**50.00%**	**50.00%**
Indicator number	**2-5-1**	**2-5-2**	**2-6-1**	**2-6-2**	**2-7-1**	**2-7-3**	**2-8-1**	**2-8-2**	**2-9-1**	**2-9-2**	**3-1**	**3-2**
Indicator name	**Public expenditure on social protection programmes (excl. health) (% of GDP)**	**Ratio of persons above statutory retirement age receiving an old-age pension**	**Public expenditure on social safety nets (% of GDP)**	**Proportion of population covered by social protection floors/ systems (%)**	**Share of wage employment on work age pop.**	**Working poverty headcount rate (% of people living in poverty in spite of being employed)**	**GCI Pillar 1F: Property rights**	**GCI Pillar 1E: Transparency**	**GCI Pillar 7A: Domestic market competition**	**GCI Pillar 1E: Public-sector performance**	**V-Dem Index "Electoral democracy"**	**Voice and Accountability Indicator**
Korea, South	0.630	1.000	..	0.489	0.504	1.000	0.728	0.570	0.535	0.636	0.849	0.650
Kuwait	0.700	0.276	0.159	0.026	0.718	1.000	0.553	0.410	0.531	0.582	0.315	0.369
Kyrgyz Republic	1.000	1.000	0.519	0.141	0.395	0.998	0.542	0.290	0.442	0.472	0.437	0.409
Laos	0.070	0.063	0.008	0.077	0.131	0.903	0.443	0.290	0.483	0.378	0.128	0.137
Latvia	1.000	0.920	0.205	0.850	0.646	1.000	0.648	0.580	0.581	0.497	0.831	0.671
Lebanon	0.620	0.098	..	0.017	0.290	0.999	0.475	0.280	0.488	0.388	0.453	0.397
Lesotho	0.550	0.940	1.000	0.078	0.246	0.817	0.382	0.410	0.535	0.315	0.630	0.501
Liberia	0.040	0.034	0.337	0.027	0.157	0.520	0.325	..	..	..	0.610	0.486
Lithuania	1.000	0.971	0.086	0.513	0.649	1.000	0.720	0.590	0.547	0.561	0.825	0.699
Luxembourg	1.000	1.000	1.000	..	0.627	1.000	0.848	0.810	0.700	0.744	0.878	0.799
Madagascar	0.100	0.046	0.044	..	0.098	0.261	0.334	0.250	0.399	0.304	0.485	0.451
Malawi	0.160	0.023	0.299	0.196	0.248	0.358	0.435	0.320	0.406	0.336	0.489	0.476
Malaysia	0.420	0.186	0.152	0.021	0.499	1.000	0.800	0.470	0.688	0.748	0.477	0.490
Maldives	0.290	1.000	0.214	0.081	0.492	0.999	..	..	..	..	0.510	0.407
Mali	0.220	0.073	0.124	0.058	0.136	0.580	0.368	0.320	0.458	0.341	0.487	0.413
Malta	1.000	1.000	0.240	..	0.617	1.000	0.574	0.540	0.599	0.585	0.771	0.716
Mauritania	0.360	0.162	0.627	0.049	0.164	0.970	0.278	0.270	0.268	0.212	0.401	0.340
Mauritius	0.680	1.000	0.691	..	0.503	1.000	0.632	0.510	0.562	0.592	0.764	0.656
Mexico	0.750	1.000	0.325	0.480	0.428	0.990	0.529	0.280	0.506	0.529	0.669	0.502
Moldova	1.000	0.752	0.223	..	0.361	1.000	0.562	0.330	0.489	0.518	0.597	0.480
Mongolia	1.000	1.000	0.505	0.885	0.322	0.999	0.416	0.370	0.383	0.455	0.658	0.565
Montenegro	..	0.906	0.120	..	0.463	0.997	0.540	0.450	0.557	0.593	0.458	0.505

	Provision (2)										Participation	
Aspect	**Social protection**		**Poverty reduction**		**Employment**		**Rule of law (economic facets)**		**Competition on markets**			
Aspect weight	**12.50%**		**12.50%**		**12.50%**		**12.50%**		**12.50%**			
Indicator weight	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**50.00%**	**50.00%**
Indicator number	**2-5-1**	**2-5-2**	**2-6-1**	**2-6-2**	**2-7-1**	**2-7-3**	**2-8-1**	**2-8-2**	**2-9-1**	**2-9-2**	**3-1**	**3-2**
Indicator name	**Public expenditure on social protection programmes (excl. health) (% of GDP)**	**Ratio of persons above statutory retirement age receiving an old-age pension**	**Public expenditure on social safety nets (% of GDP)**	**Proportion of population covered by social protection floors/ systems (%)**	**Share of wage employment on work age pop.**	**Working poverty headcount rate (% of people living in poverty in spite of being employed)**	**GCI Pillar 1F: Property rights**	**GCI Pillar 1E: Transparency**	**GCI Pillar 7A: Domestic market competition**	**GCI Pillar 1E: Public-sector performance**	**V-Dem Index "Electoral democracy"**	**Voice and Accountability Indicator**
Morocco	0.450	0.234	0.495	..	0.227	0.998	0.673	0.430	0.589	0.615	0.262	0.371
Mozambique	0.080	0.525	0.233	0.101	0.116	0.413	0.323	0.230	0.387	0.363	0.393	0.391
Myanmar	0.080	0.149	0.006	0.011	0.226	0.990	..	..	..	..	0.434	0.329
Namibia	0.380	1.000	0.561	0.189	0.297	0.894	0.534	0.530	0.528	0.481	0.689	0.603
Nepal	0.210	0.842	0.421	0.148	0.083	0.962	0.365	0.310	0.437	0.510	0.585	0.470
Netherlands	1.000	1.000	1.000	0.903	0.655	1.000	0.883	0.820	0.727	0.771	0.870	0.797
New Zealand	1.000	1.000	..	1.000	0.635	1.000	0.833	0.870	0.640	0.738	0.897	0.807
Nicaragua	0.040	0.286	0.444	0.023	0.366	0.978	0.340	0.250	0.391	0.310	0.231	0.281
Niger	0.140	0.058	0.084	0.164	0.038	0.625	..	..	..	..	0.531	0.383
Nigeria	0.070	0.110	0.059	0.018	0.116	0.676	0.338	0.270	0.503	0.370	0.530	0.413
North Macedonia	1.000	0.686	0.360	..	0.431	0.990	0.547	0.370	0.412	0.429	0.601	0.496
Norway	1.000	1.000	..	0.831	0.705	1.000	0.736	0.840	0.642	0.704	0.892	0.831
Oman	0.220	0.469	..	0.017	0.682	1.000	0.660	0.520	0.619	0.708	0.177	0.269
Pakistan	0.190	0.058	0.124	0.050	0.223	0.966	0.443	0.330	0.495	0.478	0.351	0.327
Panama	0.130	0.293	0.295	0.215	0.403	0.996	0.508	0.370	0.522	0.482	0.738	0.619
Papua New Guinea	0.010	0.223	0.001	..	0.108	0.771	..	..	..	..	0.428	0.519
Paraguay	0.620	0.646	0.282	0.176	0.402	0.997	0.443	0.290	0.471	0.403	0.577	0.512
Peru	0.270	0.357	0.277	0.151	0.348	0.974	0.460	0.350	0.476	0.445	0.785	0.552
Philippines	0.260	0.205	0.133	0.224	0.384	0.980	0.527	0.360	0.521	0.535	0.458	0.501
Poland	1.000	0.836	0.393	0.520	0.547	1.000	0.556	0.600	0.568	0.515	0.690	0.635
Portugal	1.000	0.904	..	0.593	0.587	1.000	0.669	0.640	0.566	0.526	0.893	0.739
Qatar	0.090	0.194	..	0.006	0.877	1.000	0.768	0.620	0.675	0.699	0.081	0.238

	Provision (2)										Participation	
Aspect	**Social protection**		**Poverty reduction**		**Employment**		**Rule of law (economic facets)**		**Competition on markets**			
Aspect weight	**12.50%**		**12.50%**		**12.50%**		**12.50%**		**12.50%**			
Indicator weight	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**50.00%**	**50.00%**
Indicator number	**2-5-1**	**2-5-2**	**2-6-1**	**2-6-2**	**2-7-1**	**2-7-3**	**2-8-1**	**2-8-2**	**2-9-1**	**2-9-2**	**3-1**	**3-2**
Indicator name	**Public expenditure on social protection programmes (excl. health) (% of GDP)**	**Ratio of persons above statutory retirement age receiving an old-age pension**	**Public expenditure on social safety nets (% of GDP)**	**Proportion of population covered by social protection floors/ systems (%)**	**Share of wage employment on work age pop.**	**Working poverty headcount rate (% of people living in poverty in spite of being employed)**	**GCI Pillar 1F: Property rights**	**GCI Pillar 1E: Transparency**	**GCI Pillar 7A: Domestic market competition**	**GCI Pillar 1E: Public-sector performance**	**V-Dem Index "Electoral democracy"**	**Voice and Accountability Indicator**
Romania	1.000	0.935	0.259	0.826	0.498	1.000	0.596	0.470	0.542	0.509	0.703	0.603
Russia	1.000	1.000	0.322	0.760	0.651	1.000	0.596	0.280	0.552	0.569	0.268	0.276
Rwanda	0.180	0.031	0.139	0.041	0.161	0.554	0.741	0.560	0.566	0.678	0.238	0.280
Saudi Arabia	0.530	0.332	0.143	0.498	0.542	1.000	0.619	0.490	0.672	0.672	0.016	0.168
Senegal	0.330	0.299	0.177	0.170	0.173	0.711	0.481	0.450	0.519	0.508	0.731	0.547
Serbia	1.000	0.635	0.319	..	0.443	1.000	0.510	0.390	0.477	0.502	0.361	0.491
Seychelles	0.640	1.000	0.518	..	..	1.000	0.634	0.660	0.551	0.578	0.566	0.562
Sierra Leone	0.070	0.070	0.196	0.014	0.052	0.588	0.371	..	..	..	0.544	0.476
Singapore	0.100	0.331	..	1.000	0.647	1.000	0.913	0.850	0.738	0.859	0.383	0.459
Slovakia	1.000	0.906	0.296	0.700	0.584	1.000	0.658	0.500	0.479	0.426	0.832	0.673
Slovenia	1.000	1.000	..	1.000	0.616	1.000	0.667	0.600	0.607	0.481	0.806	0.696
South Africa	0.550	0.815	0.991	0.324	0.389	0.926	0.542	0.430	0.531	0.593	0.717	0.629
South Sudan	..	0.000	..	0.164	0.058	0.400	..	..	..	..	0.174	0.102
Spain	1.000	0.982	..	0.450	0.534	1.000	0.670	0.580	0.581	0.596	0.874	0.708
Sri Lanka	0.320	0.357	0.102	0.160	0.316	0.998	0.374	0.380	0.481	0.480	0.594	0.482
Sudan	0.070	0.094	0.194	0.075	0.193	0.903	..	..	..	..	0.217	0.170
Sweden	1.000	1.000	1.000	1.000	0.697	1.000	0.813	0.850	0.649	0.693	0.908	0.812
Switzerland	1.000	1.000	1.000	0.702	0.689	1.000	0.857	0.850	0.729	0.760	0.897	0.799
Tajikistan	0.400	0.937	0.149	0.075	0.283	0.981	0.467	0.250	0.532	0.510	0.168	0.141
Tanzania	0.170	0.055	0.031	0.030	0.132	0.512	0.433	0.360	0.471	0.535	0.377	0.395
Thailand	0.300	0.891	0.338	0.543	0.370	0.999	0.547	0.360	0.536	0.548	0.200	0.331
Timor-Leste	0.800	1.000	1.000	0.265	0.211	0.827	..	..	..	..	0.684	0.571

	Provision (2)										Participation	
Aspect	**Social protection**		**Poverty reduction**		**Employment**		**Rule of law (economic facets)**		**Competition on markets**			
Aspect weight	**12.50%**		**12.50%**		**12.50%**		**12.50%**		**12.50%**			
Indicator weight	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**6.25%**	**50.00%**	**50.00%**
Indicator number	**2-5-1**	**2-5-2**	**2-6-1**	**2-6-2**	**2-7-1**	**2-7-3**	**2-8-1**	**2-8-2**	**2-9-1**	**2-9-2**	**3-1**	**3-2**
Indicator name	**Public expenditure on social protection programmes (excl. health) (% of GDP)**	**Ratio of persons above statutory retirement age receiving an old-age pension**	**Public expenditure on social safety nets (% of GDP)**	**Proportion of population covered by social protection floors/ systems (%)**	**Share of wage employment on work age pop.**	**Working poverty headcount rate (% of people living in poverty in spite of being employed)**	**GCI Pillar 1F: Property rights**	**GCI Pillar 1E: Transparency**	**GCI Pillar 7A: Domestic market competition**	**GCI Pillar 1E: Public-sector performance**	**V-Dem Index "Electoral democracy"**	**Voice and Accountability Indicator**
Togo	0.010	0.190	0.029	..	0.132	0.657	..	..	..	..	0.373	0.352
Trinidad and Tobago	0.540	0.911	0.762	0.240	0.468	0.999	0.454	0.410	0.456	0.403	0.751	0.620
Tunisia	0.750	0.854	0.150	0.213	0.337	0.999	0.480	0.430	0.530	0.523	0.730	0.551
Turkey	0.990	1.000	0.227		0.341	0.999	0.596	0.410	0.535	0.571	0.289	0.333
Uganda	0.070	0.112	0.120	0.012	0.151	0.657	0.422	0.260	0.446	0.502	0.300	0.371
Ukraine	1.000	0.962	1.000	0.390	0.531	0.999	0.421	0.320	0.492	0.508	0.489	0.505
United Arab Emirates	0.220	0.226	..	0.012	0.774	1.000	0.756	0.700	0.708	0.800	0.095	0.272
United Kingdom	1.000	1.000	1.000	0.766	0.637	1.000	0.785	0.800	0.643	0.740	0.870	0.752
United States	1.000	1.000	..	0.310	0.659	1.000	0.710	0.710	0.702	0.758	0.808	0.681
Uruguay	0.880	1.000	0.230	0.843	0.491	1.000	0.684	0.700	0.524	0.579	0.890	0.745
Uzbekistan	0.780	1.000	0.150	0.156	0.304	0.925	..	..	..	..	0.189	0.169
Vietnam	0.430	0.409	0.311	0.246	0.361	0.984	0.469	0.330	0.537	0.507	0.216	0.219
Yemen	0.070	0.074	..	0.000	0.150	0.529	0.258	0.140	0.383	0.249	0.116	0.144
Zambia	0.080	0.078	0.044	0.198	0.139	0.461	0.399	0.350	0.456	0.413	0.338	0.438
Zimbabwe	0.290	0.220	0.069	0.058	0.200	0.644	0.354	0.220	0.418	0.301	0.288	0.268

Source: Authors, based on the methodology described and the sources listed in Table 1

Table A3: Correlations among the three main social contract indices and the three sub-indices (Pearson index)

Variable 1	Main indices			Sub-indices									
Variable 2	Protection	Provision	Participation	Collective protection	Individual protection	Rule of law (human rights facets)	Infrastructure (transport, utilities, etc.)	Education	Health	Social protection	Poverty reduction	Employment	Rule of law (economic facets)
Protection													
Provision	0.7793												
Participation	0.7018	0.6515											
Collective protection	0.8768	0.5427	0.5427										
Individual protection	0.8815	0.5960	0.5047	0.6022									
Rule of law (human rights facets)	0.8361	0.7462	0.8935	0.6561	0.6307								
Infrastructure (transport, utilities, etc.)	0.7202	0.9144	0,5396	0.7287	0.5298	0.6259							
Education	0.5229	0.6637	0.3726	0.5039	0.4225	0.4303	0.5477						
Health	0.6775	0.8075	0.5985	0.6074	0.5169	0.6810	0.6803	0.4944					
Social protection	0.6273	0.8878	0.5770	0.5651	0.4721	0.6373	0.7669	0.5289	0.6901				
Poverty reduction	0.6327	0.7958	0.6280	0.5174	0.4874	0.7066	0.6068	0.3917	0.5820	0.6905			
Employment	0.6468	0.8507	0.4634	0.6802	0.4615	0.5456	0.9200	0.5087	0.6269	0.7248	0.5228		
Rule of law (economic facets)	0.7792	0.8715	0.6220	0.6627	0.4611	0.7243	0.8354	0.6380	0.6548	0.6125	0.6975	0.7163	
Competition on markets	0.5751	0.7128	0.3493	0.5575	0.4764	0.4405	0.7603	0.5852	0.4414	0.4414	0.5121	0.6209	0.8455

Source: Authors, based on the methodology described and the sources listed in Table 1

Table A4: Regression analysis of the protection index (OLS models)

Protection index	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GDP per capita in PPP (int. $)	2.47e-06*** *(8.79e-07)*	1.63e-06** *(6.67e-07)*	2.41e-06*** *(6.59e-07)*	2.74e-06*** *(5.62e-07)*	4.02e-06*** *(6.55e-07)*	2.32e-06*** *(6.61e-07)*	2.73e-06*** *(5.64e-07)*
Population density (inhabitants per square kilometre)	-1.58e-05 *(1.73e-05)*						
Total age dependency (number of people below age 15 or above age 65 per person at working age, i.e. between 15 and 65 years)	-0.00346*** *(0.00116)*	-0.00137 *(0.000846)*	-0.00328*** *(0.000846)*	-0.00299*** *(0.000800)*	-0.00299*** *(0.00105)*	-0.00373*** *(0.000925)*	-0.00342*** *(0.000885)*
Surface area (square kilometres)	-1.27e-08* *(6.98e-09)*	-1.12e-08*** *(4.24e-09)*	-7.18e-09* *(4.25e-09)*		-7.12e-09 *(4.83e-09)*	-7.04e-09* *(4.23e-09)*	-4.87e-09 *(4.09e-09)*
Land-locked (binary)	0.00688 *(0.0327)*						
Small island developing (binary)	0.0691 *(0.0479)*						
Total natural resource rents (% of GDP)	-0.000991 *(0.00138)*						
Average annual precipitation (mm per year)	-5.65e-06 *(2.06e-05)*						
Water stress (freshwater withdrawal as a proportion of available freshwater resources)					-2.83e-05 *(3.29e-05)*		
Year of independence	-3.97e-05 *(3.42e-05)*						
Net ODA received (int. $ per capita and year)	-0.00329 *(0.00360)*						
Personal remittances received (% of GDP)	-0.00113 *(0.00206)*						
European Union (EU) (binary)	0.185*** *(0.0496)*	0.0479 *(0.0305)*	0.0860** *(0.0397)*	0.0705** *(0.0286)*	0.114*** *(0.0326)*	0.0798** *(0.0375)*	0.0623** *(0.0286)*
Other Western Europe and Western off-springs (binary)	0.235*** *(0.0617)*		0.0710 *(0.0537)*			0.0645 *(0.0520)*	
Other Eastern Europe and Central Asia (EECA) (binary)	0.0485 *(0.0507)*		0.0671* *(0.0347)*			0.0647* *(0.0337)*	

Protection index	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Other Eastern Europe (EE) (binary)		-0.0316 *(0.0392)*		0.0456 *(0.0375)*	-0.00633 *(0.0467)*		0.0484 *(0.0374)*
Central Asia (CA) (binary)		0.00133 *(0.0460)*		0.112** *(0.0455)*	0.0137 *(0.0526)*		0.112** *(0.0453)*
Middle East and North Africa (MENA) (binary)	-0.0649 *(0.0547)*	-0.101*** *(0.0302)*	-0.0204 *(0.0352)*		-0.127*** *(0.0365)*	-0.0198 *(0.0347)*	
Sub-Saharan Africa (SSA) (binary)	0.0986** *(0.0412)*	0.0592* *(0.0303)*	0.0695** *(0.0338)*	0.0733** *(0.0289)*			
SSA without Seychelles, Mauritius, Botswana and South Africa (binary)					0.0318 *(0.0398)*	0.0859** *(0.0366)*	0.0903*** *(0.0334)*
Latin America and the Caribbean (LAC) (binary)	0.0339 *(0.0363)*		-0.00883 *(0.0333)*			-0.0154 *(0.0315)*	
Other Asia (binary, treated as residual because of large differences between East, South-East, South and Pacific Asia)	-	-	-	-	-	-	-
Provision index		0.592*** (0.*0904*)					
Participation index			0.359*** *(0.0645)*	0.411*** *(0.0495)*		0.380*** *(0.0640)*	0.425*** *(0.0497)*
Constant	0.823*** *(0.115)*	0.357*** *(0.0749)*	0.562*** *(0.0643)*	0.506*** *(0.0544)*	0.724*** *(0.0640)*	0.580*** *(0.0657)*	0.528*** *(0.0564)*
Observations	144	152	152	152	150	152	152
R-squared	0.658	0.684	0.695	0.688	0.590	0.697	0.694

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors, using data from Table A1 in the Annex and the World Bank (2023b)

Table A5: Regression analysis of the provision index (OLS models)

Provision index	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GDP per capita in PPP (int. $)	1.63e-06**	1.54e-06***	2.11e-06***	2.20e-06***	1.58e-06***	2.15e-06***	2.07e-06***
	(6.48e-07)	*(5.40e-07)*	*(5.07e-07)*	*(4.84e-07)*	*(5.11e-07)*	*(4.89e-07)*	*(4.80e-07)*
Population density (inhabitants per square kilometre)	-5.74e-06						
	(1.27e-05)						
Total age dependency (number of people below age 15 or above age 65 per person at working age, i.e. between 15 and 65 years)	-0.00455***	-0.00251***	-0.00333***	-0.00352***	-0.00194***	-0.00315***	-0.00309***
	(0.000858)	*(0.000713)*	*(0.000663)*	*(0.000490)*	*(0.000736)*	*(0.000699)*	*(0.000700)*
Surface area (square kilometres)	5.07e-10						
	(5.14e-09)						
Land-locked (binary)	-0.0193						
	(0.0241)						
Small island developing (binary)	0.0249						
	(0.0353)						
Total natural resource rents (% of GDP)	-0.000267						
	(0.00101)						
Average annual precipitation (mm per year)	-3.32e-05**				-3.70e-05***	-3.42e-05***	-3.26e-05***
	(1.52e-05)				*(1.19e-05)*	*(1.19e-05)*	*(9.29e-06)*
Water stress (freshwater withdrawal as a proportion of available freshwater resources)		-2.31e-05	-1.98e-05				
		(2.19e-05)	*(2.15e-05)*				
Year of independence	-0.000102***	-2.75e-05*	-2.56e-05*	-3.03e-05**	-2.64e-05*	-2.54e-05*	-2.27e-05*
	(2.52e-05)	*(1.41e-05)*	*(1.38e-05)*	*(1.35e-05)*	*(1.35e-05)*	*(1.34e-05)*	*(1.33e-05)*
Net ODA received (int. $ per capita and year)	-0.000473						
	(0.00265)						
Personal remittances received (% of GDP)	-0.00173						
	(0.00152)						
European Union (EU) (binary)	0.167***	0.134***	0.106***	0.116***	0.0757**	0.0611**	0.0808***
	(0.0366)	*(0.0289)*	*(0.0300)*	*(0.0248)*	*(0.0293)*	*(0.0300)*	*(0.0262)*
Other Western Europe and Western off-springs (binary)	0.215***	0.182***	0.138***	0.149***	0.137***	0.105***	0.126***
	(0.0455)	*(0.0379)*	*(0.0395)*	*(0.0354)*	*(0.0364)*	*(0.0379)*	*(0.0355)*
Other Eastern Europe and Central Asia (EECA) (binary)	0.0771**						
	(0.0374)						

Provision index	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Other Eastern Europe (EE) (binary)		0.101***	0.108***	0.106***	0.0584*	0.0645*	0.0779**
		(0.0331)	*(0.0323)*	*(0.0281)*	*(0.0351)*	*(0.0349)*	*(0.0313)*
Central Asia (CA) (binary)		0.0423	0.0905**	0.0851**	-0.0231	0.0346	
		(0.0371)	*(0.0365)*	*(0.0341)*	*(0.0380)*	*(0.0383)*	
Middle East and North Africa (MENA) (binary)	-0.0434	0.0215	0.0422		-0.0580*	-0.0298	
	(0.0403)	*(0.0277)*	*(0.0278)*		*(0.0310)*	*(0.0318)*	
Sub-Saharan Africa (SSA) (binary)	0.0189	-0.0251	-0.0102				
	(0.0303)	*(0.0275)*	*(0.0264)*				
SSA without Seychelles, Mauritius, Botswana and South Africa (binary)					-0.0886***	-0.0532*	-0.0441*
					(0.0279)	*(0.0274)*	*(0.0251)*
Latin America and the Caribbean (LAC) (binary)	0.0174	0.0118	-0.0214		-0.000595	-0.0291	
	(0.0268)	*(0.0243)*	*(0.0251)*		*(0.0224)*	*(0.0233)*	
Other Asia (binary, treated as residual because of large differences between East, South-East, South and Pacific Asia)	-	-	-	-	-	-	-
Protection index		0.295***			0.317***		
		(0.0581)			*(0.0554)*		
Participation index			0.280***	0.239***		0.279***	0.266***
			(0.0489)	*(0.0413)*		*(0.0473)*	*(0.0420)*
Constant	0.972***	0.489***	0.570***	0.605***	0.522***	0.629***	0.614***
	(0.0851)	*(0.0688)*	*(0.0574)*	*(0.0492)*	*(0.0724)*	*(0.0628)*	*(0.0555)*
Observations	144	150	150	152	150	150	150
R-squared	0.807	0.818	0.825	0.818	0.833	0.835	0.829

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors, using data from Table A1 in the Annex and the World Bank (2023b)

Table A6: Regression analysis of the participation index (OLS models)

Participation index	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GDP per capita in PPP (int. $)	1.11e-06 *(1.02e-06)*				1.64e-06** *(8.05e-07)*	9.89e-07 *(7.49e-07)*	
Population density (inhabitants per square kilometre)	-2.83e-05 *(2.00e-05)*				-2.97e-05 *(1.79e-05)*		
Total age dependency (number of people below age 15 or above age 65 per person at working age, i.e. between 15 and 65 years)	-0.000654 *(0.00135)*						
Surface area (square kilometres)	-1.26e-08 *(8.07e-09)*	-6.17e-09 *(4.94e-09)*	-1.10e-08** *(4.81e-09)*	-1.16e-08** *(4.77e-09)*	-1.33e-08** *(5.92e-09)*	-9.84e-09* *(5.37e-09)*	-1.12e-08** *(4.82e-09)*
Land-locked (binary)	-0.0956** *(0.0379)*	-0.0802*** *(0.0276)*	-0.0767*** *(0.0272)*	-0.0636** *(0.0299)*	-0.0937*** *(0.0316)*	-0.0881*** *(0.0319)*	-0.0670** *(0.0287)*
Small island developing (binary)	0.0612 *(0.0553)*						
Total natural resource rents (% of GDP)	-0.00367** *(0.00159)*	-0.00273** *(0.00131)*	-0.00291** *(0.00129)*	-0.00260** *(0.00129)*	-0.00361** *(0.00145)*	-0.00300** *(0.00152)*	-0.00289** *(0.00129)*
Average annual precipitation (mm per year)	-2.39e-05 *(2.38e-05)*						
Water stress (freshwater withdrawal as a proportion of available freshwater resources)						-4.22e-06 *(3.70e-05)*	
Year of independence	-6.45e-05 *(3.95e-05)*				-2.43e-05 *(2.28e-05)*		
Net ODA received (int. $ per capita and year)	8.44e-05 (0.00417)						
Personal remittances received (% of GDP)	-0.00143 *(0.00239)*						
European Union (EU) (binary)	0.235*** *(0.0574)*	0.185*** *(0.0355)*	0.186*** *(0.0392)*	0.189*** *(0.0366)*	0.207*** *(0.0458)*	0.253*** *(0.0416)*	0.153*** *(0.0393)*
Other Western Europe and Western off-springs (binary)	0.320*** *(0.0713)*	0.243*** *(0.0506)*	0.227*** *(0.0540)*	0.231*** *(0.0511)*	0.263*** *(0.0622)*	0.312*** *(0.0588)*	0.192*** *(0.0544)*
Other Eastern Europe and Central Asia (EECA) (binary)	-0.000249 *(0.0586)*				-0.0415 *(0.0459)*	-0.0203 *(0.0458)*	-0.0677* *(0.0405)*

Participation index	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Other Eastern Europe (EE) (binary)		-0.0215	-0.0271				
		(0.0441)	*(0.0467)*				
Central Asia (CA) (binary)				-0.0598			
				(0.0585)			
Middle East and North Africa (MENA) (binary)	-0.177***	-0.140***	-0.137***	-0.139***	-0.188***	-0.167***	-0.164***
	(0.0633)	*(0.0352)*	*(0.0386)*	*(0.0381)*	*(0.0438)*	*(0.0451)*	*(0.0390)*
Sub-Saharan Africa (SSA) (binary)	0.0504		0.0970***	0.0924***			
	(0.0476)		*(0.0310)*	*(0.0313)*			
SSA without Seychelles, Mauritius, Botswana and South Africa (binary)					-0.0103	-0.00354	0.0695**
					(0.0358)	*(0.0362)*	*(0.0348)*
Latin America and the Caribbean (LAC) (binary)	0.143***	0.122***	0.159***	0.160***	0.119***	0.138***	0.132***
	(0.0420)	*(0.0315)*	*(0.0346)*	*(0.0332)*	*(0.0387)*	*(0.0387)*	*(0.0345)*
Other Asia (binary, treated as residual because of large differences between East, South-East, South and Pacific Asia)	-	-	-	-	-	-	-
Protection index		0.384***					
		(0.0727)					
Provision index			0.507***	0.503***			0.537***
			(0.0879)	*(0.0860)*			*(0.0949)*
Constant	0.661***	0.259***	0.199***	0.199***	0.528***	0.475***	0.210***
	(0.134)	*(0.0465)*	*(0.0523)*	*(0.0522)*	*(0.0523)*	*(0.0301)*	*(0.0557)*
Observations	144	152	152	152	152	150	152
R-squared	0.665	0.704	0.715	0.717	0.663	0.652	0.712

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors, using data from Table A1 in the Annex and the World Bank (2023b)

Table A7: Regression analysis of the components of the three indices (OLS models)

Dependent variables	**Protection**			**Participation**			
Independent variables	**Main index**	Collective protection	Individual protection	Rule of law (human rights facets)	Main index	V-Dem Index "Electoral democracy"	World Bank "Voice and Accountability" Indicator
GDP per capita in PPP (int. $)	2.61e-06*** *(7.53e-07)*	1.85e-06** *(8.19e-07)*	3.34e-06*** *(1.10e-06)*	2.64e-06*** *(9.55e-07)*	9.00e-07 *(8.77e-07)*	9.88e-07 *(1.08e-06)*	1.08e-06 *(7.35e-07)*
Year of independence	-8.91e-06 *(2.07e-05)*	-2.43e-05 *(2.25e-05)*	5.94e-06 *(3.01e-05)*	-7.85e-06 *(2.62e-05)*	-1.37e-05 *(2.41e-05)*	-1.82e-05 *(2.90e-05)*	-8.10e-06 *(2.02e-05)*
Total age dependency (number of people below age 15 or above age 65 per person at working age, i.e. between 15 and 65 years)	-0.00391*** *(0.00108)*	-0.00613*** *(0.00117)*	-0.00312** *(0.00158)*	-0.00108 *(0.00137)*	-0.000104 *(0.00126)*	0.000516 *(0.00152)*	-0.000640 *(0.00105)*
Average annual precipitation (mm per year)	5.20e-06 *(1.83e-05)*	6.88e-06 *(1.99e-05)*	8.96e-06 *(2.67e-05)*	-5.68e-06 *(2.32e-05)*	-3.98e-06 *(2.14e-05)*	-3.46e-06 *(2.60e-05)*	-4.98e-07 *(1.79e-05)*
European Union (EU) (binary)	0.197*** *(0.0417)*	0.147*** *(0.0453)*	0.167*** *(0.0608)*	0.359*** *(0.0529)*	0.276*** *(0.0486)*	0.310*** *(0.0592)*	0.233*** *(0.0407)*
Other Western Europe and Western offsprings (binary)	0.170*** *(0.0541)*	0.133** *(0.0588)*	0.127 *(0.0789)*	0.331*** *(0.0686)*	0.306*** *(0.0630)*	0.329*** *(0.0769)*	0.269*** *(0.0528)*
Other Eastern Europe (EE) (binary)	0.000666 *(0.0539)*	-0.0120 *(0.0586)*	-0.0155 *(0.0785)*	0.0584 *(0.0683)*	-0.0210 *(0.0627)*	-0.0166 *(0.0757)*	-0.0276 *(0.0525)*
Central Asia (CA) (binary)	0.0524 *(0.0583)*	0.0777 *(0.0633)*	0.101 *(0.0850)*	-0.0948 *(0.0739)*	-0.147** *(0.0679)*	-0.136* *(0.0818)*	-0.159*** *(0.0568)*
SSA without Seychelles, Mauritius, Botswana and South Africa (binary)	0.0845** *(0.0423)*	0.0664 *(0.0460)*	0.138** *(0.0616)*	0.0136 *(0.0536)*	-0.0307 *(0.0492)*	-0.0398 *(0.0594)*	-0.0253 *(0.0412)*
Middle East and North Africa (MENA) (binary)	-0.0838* *(0.0470)*	-0.0823 *(0.0511)*	-0.0394 *(0.0686)*	-0.176*** *(0.0596)*	-0.196*** *(0.0548)*	-0.231*** *(0.0661)*	-0.165*** *(0.0459)*
Latin America and the Caribbean (LAC) (binary)	0.0390 *(0.0343)*	0.0679* *(0.0373)*	-0.0405 *(0.0500)*	0.140*** *(0.0435)*	0.146*** *(0.0400)*	0.184*** *(0.0485)*	0.102*** *(0.0335)*
Constant	0.760*** *(0.0905)*	1.007*** *(0.0984)*	0.698*** *(0.132)*	0.393*** *(0.115)*	0.481*** *(0.105)*	0.472*** *(0.127)*	0.478*** *(0.0883)*
Observations	150	150	150	150	150	149	150
R-squared	0.614	0.586	0.384	0.678	0.619	0.583	0.648

Dependent variables	**Provision**								
Independent variables	**Main index**	Infrastructure	Education	Health	Social protection	Poverty reduction	Employment	Rule of law (economic facets)	Competition on markets
GDP per capita in PPP (int. $)	2.40e-06*** *(5.44e-07)*	2.95e-06*** *(5.73e-07)*	2.81e-07 *(8.62e-07)*	1.82e-06* *(1.02e-06)*	-6.83e-07 *(1.33e-06)*	5.71e-06*** *(1.39e-06)*	1.95e-06*** *(4.55e-07)*	4.28e-06*** *(5.72e-07)*	2.81e-06*** *(4.79e-07)*
Year of independence	-2.92e-05* *(1.49e-05)*	-3.80e-05** *(1.57e-05)*	2.32e-06 *(2.37e-05)*	-3.56e-05 *(2.79e-05)*	-7.41e-05** *(3.65e-05)*	-6.05e-05 *(3.80e-05)*	-9.42e-06 *(1.25e-05)*	-1.34e-05 *(1.54e-05)*	-9.39e-06 *(1.29e-05)*
Total age dependency (number of people below age 15 or above age 65 per person at working age, i.e. between 15 and 65 years)	-0.00318*** *(0.000780)*	-0.00632*** *(0.000823)*	-0.00323** *(0.00124)*	-0.00401*** *(0.00146)*	-0.00638*** *(0.00191)*	0.00304 *(0.00199)*	-0.00451*** *(0.000652)*	-0.00172* *(0.000937)*	-0.00184** *(0.000785)*
Average annual precipitation (mm per year)	-3.53e-05*** *(1.32e-05)*	-4.01e-05*** *(1.40e-05)*	1.10e-05 *(2.10e-05)*	-4.43e-05* *(2.47e-05)*	-0.000134*** *(3.24e-05)*	-2.82e-05 *(3.37e-05)*	-2.29e-05** *(1.11e-05)*	-7.15e-06 *(1.46e-05)*	-3.78e-06 *(1.29e-05)*
European Union (EU) (binary)	0.138*** *(0.0301)*	0.129*** *(0.0318)*	0.0934* *(0.0477)*	0.217*** *(0.0563)*	0.398*** *(0.0737)*	0.159** *(0.0767)*	0.0742*** *(0.0252)*	0.0711** *(0.0323)*	-0.0200 *(0.0274)*
Other Western Europe and Western off-springs (binary)	0.191*** *(0.0390)*	0.147*** *(0.0412)*	0.213*** *(0.0619)*	0.244*** *(0.0730)*	0.439*** *(0.0956)*	0.226** *(0.0995)*	0.0938*** *(0.0326)*	0.141*** *(0.0411)*	0.0343 *(0.0345)*
Other Eastern Europe (EE) (binary)	0.0587 *(0.0389)*	0.0158 *(0.0410)*	0.0402 *(0.0616)*	0.0587 *(0.0727)*	0.256*** *(0.0952)*	0.136 *(0.0991)*	0.0374 *(0.0325)*	-0.0757* *(0.0429)*	-0.0722** *(0.0360)*
Central Asia (CA) (binary)	-0.00643 *(0.0421)*	-0.00129 *(0.0444)*	0.0493 *(0.0667)*	-0.214*** *(0.0786)*	0.155 *(0.103)*	-0.0679 *(0.107)*	0.0120 *(0.0352)*	-0.0314 *(0.0467)*	0.0492 *(0.0394)*
SSA without Seychelles, Mauritius, Botswana and South Africa (binary)	-0.0618** *(0.0305)*	-0.0373 *(0.0322)*	-0.0121 *(0.0484)*	0.0341 *(0.0571)*	-0.156** *(0.0747)*	-0.186** *(0.0778)*	-0.111*** *(0.0255)*	-0.00100 *(0.0362)*	0.000176 *(0.0309)*
Middle East and North Africa (MENA) (binary)	-0.0846** *(0.0340)*	-0.0650* *(0.0358)*	0.00728 *(0.0538)*	-0.0414 *(0.0635)*	-0.196** *(0.0831)*	-0.230*** *(0.0865)*	-0.0206 *(0.0284)*	-0.0663* *(0.0375)*	-0.0383 *(0.0320)*
Latin America and the Caribbean (LAC) (binary)	0.0118 *(0.0248)*	0.0123 *(0.0261)*	-0.0122 *(0.0393)*	0.156*** *(0.0463)*	0.0395 *(0.0607)*	-0.00384 *(0.0631)*	0.0234 *(0.0207)*	-0.0428 *(0.0270)*	-0.0771*** *(0.0226)*
Constant	0.763*** *(0.0654)*	1.010*** *(0.0689)*	0.703*** *(0.104)*	0.886*** *(0.122)*	1.184*** *(0.160)*	0.227 *(0.167)*	0.918*** *(0.0546)*	0.534*** *(0.0731)*	0.603*** *(0.0614)*
Observations	150	150	150	150	150	150	150	136	134
R-squared	0.793	0.841	0.349	0.549	0.688	0.524	0.849	0.752	0.614

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors, using data from Table A1 in the Annex and the World Bank (2023b)