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Social Cohesion

A New Definition and a Proposal for its Measurement in Africa

Julia Leininger
Francesco Burchi
Charlotte Fiedler
Karina Mross
Daniel Nowack
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Sebastian Ziaja

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Dr Julia Leininger heads the "Transformation of Political (Dis-)Order" programme at the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

Email: julia.leininger@die-gdi.de

Dr Francesco Burchi, Christoph Sommer and Dr Christoph Strupat are researchers in the "Transformation of Economic and Social Systems" programme at the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

Dr Charlotte Fiedler, Dr Karina Mross, Daniel Nowack, Armin von Schiller, PhD, and Dr Sebastian Ziaja are researchers in the "Transformation of Political (Dis-)Order" programme at the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

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Tulpenfeld 6, 53113 Bonn
☎ +49 (0)228 94927-0
🖷 +49 (0)228 94927-130
Email: die@die-gdi.de
http://www.die-gdi.de

Background and acknowledgements

This Discussion Paper is part of the research project “Social Cohesion in Africa” of the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Social cohesion within societies is a key success factor for sustainable development. However, social cohesion is particularly under pressure in societies in Africa and other world regions. The DIE team aims to identify patterns of social cohesion as well as analyse factors that influence the degree of social cohesion (or its absence) and the effects of social cohesion on development outcomes. It furthermore identifies domestic and international policies that contribute to the creation and consolidation of social cohesion. In addition to creating knowledge about social cohesion, the project aims to provide a science–policy interface and dialogue between practitioners. The project also established the Social Cohesion Hub (www.socialcohesion.info), which provides a web-based, collaborative platform for exchanges on social cohesion in research and development cooperation. The project is funded by the Federal Ministry for Economic Cooperation and Development (BMZ).

This Discussion Paper provides a proposal for defining and measuring social cohesion, which allows for studying its patterns, particularly in Africa. We perceive this as a first step towards the measurement of social cohesion across regions. The present work is an inter-disciplinary group effort of the Social Cohesion Team at DIE. We are grateful to research partners and colleagues from the academic and development practice worlds who provided invaluable comments and discussed this important matter with us. Our special thanks go to the participants of our kick-off workshop in July 2018, of the Social Cohesion Week in November 2020 and of the launch event of the virtual Seminar Series “Social Cohesion”, co-hosted by DIE and the World Bank. We are particularly grateful for the intellectual support of Joseph Chan, Emmanuel Gyimah-Boadi, José Cuesta, Armin Langer and the team at Afrobarometer.

We hope that our work contributes to evidence-based policy-making that shall help to foster social cohesion in the current times of global polarisation.

Bonn, 2 November 2021 Julia Leininger

Abstract

Social cohesion is key for sustainable development. While social cohesion has suffered in many societies from the consequences of the Covid-19 pandemic, high levels of social cohesion have helped to overcome critical situations during the pandemic in other societies. As a consequence, protecting and strengthening social cohesion has become an increasingly central goal for most countries and the international community. Despite the strong interest in the topic, the questions of how to define social cohesion and make it an observable phenomenon through proper measurement are still contested, in both academia and policy circles. To date, no consistent, temporally and geographically spread-out data on the different elements of social cohesion exists that would allow for a global analysis of social cohesion. This rather fragmented picture of analytical approaches calls for a more universal definition and measurement of social cohesion.

This paper aims to provide a narrow and measurable definition of social cohesion that travels across regions and countries. Conceptually, it proposes a definition of social cohesion that incorporates the core elements of existing and widely used definitions of social cohesion across disciplines (trust, identity, cooperation for the common good). Our contribution is to offer a definition of social cohesion that is broad enough to cover the essentials holding societies together while at the same time keeping it lean enough to analyse the causes and consequences of social cohesion, for instance the relationship between social cohesion and inequalities or political institutions. Methodologically, we propose an application of our concept to the African context. It is not only a first step towards a more global and inter-regional measurement of social cohesion, but also the basis for further knowledge-creation, the identification of patterns of social cohesion and the analysis of its causes and consequences. From a policy-oriented perspective, a more unified definition of the core elements of social cohesion and its measurement can inform policies that aim at protecting and fostering social cohesion. In development cooperation, it will help not only to build indicators for designing programme objectives and for evaluation and monitoring, but also to advance evidence-based theories of change.

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Abbreviations

CSO	civil society organisation
ICL criterion	integrated complete-data likelihood criterion
V-Dem	Varieties of Democracy Institute
WVS	World Values Survey

1 Introduction

Strong ties that hold societies together are not only an important basis for defining legitimate development goals in a society, but also a relevant requirement for tackling the challenges that emerge from development processes. Social cohesion makes communities and states more resilient in the face of crises and facilitates change processes that benefit everyone (Aldrich, 2012; Townshend, Awosoga, Kulig, & Fan, 2015). However, societies are currently drifting apart in many world regions following multiple developments, such as rising nationalist populism and political polarisation. In particular, the effects of the ongoing Covid-19 pandemic have been a stress test for societies and accelerated problematic trends such as increasing social inequalities and autocratisation (Hellmeier et al., 2021). While social cohesion suffered in many societies from the consequences of the pandemic, high levels of social cohesion helped to overcome critical situations during the pandemic in other societies (Bargain & Aminjonov, 2020; Borkowska & Laurence, 2021).

As a consequence, protecting and strengthening social cohesion has become an increasingly central goal for many countries as well as the international community. Numerous states, international organisations and other stakeholders have placed social cohesion high on their agendas. For instance, the German Federal Ministry for Economic Cooperation and Development (BMZ) has made social cohesion a key topic of its future development policy, and the Development Programme of the United Nations developed a social cohesion framing for programming (United Nations Development Programme [UNDP], 2016, 2020). Moreover, civil society organisations (CSOs) such as the Europe-based "More in Common" and International Refugee Relief increasingly aim to foster social cohesion through dialogue platforms and integrative social assistance programmes.[1]

Despite the strong interest in the topic, a major constraint to understanding its patterns, causes and effects is how to appropriately measure social cohesion (Langer, Stewart, Smedts, & Demarest, 2017; Schiefer & van der Noll, 2017). Studying the fabric that holds societies together has a long-standing tradition in social sciences, in particular in sociology and social psychology (Durkheim, 1999; Forst, 2020; Putnam, 2000).[2] While there is a common sense across the literature that social cohesion is a key trait of any society, its definition varies in different disciplines and socio-cultural contexts. Although how social cohesion emerges and how individual societies frame it in their public discourses is context-dependent, there is a need for a definition of social cohesion that navigates across countries and regions. In contrast to the broad range of existing definitions of social cohesion, "few attempts were made to measure it" (Langer et al., 2017, p. 1). To date, no consistent, temporally and geographically spread out data on the different elements of social cohesion exists that would allow for a global analysis of social cohesion.[3] Measurements of social cohesion either take a comparative regional perspective on Europe, Asia and Africa

1 Although mostly associated with positive images, social cohesion has also become a keyword for those who instead divide societies (Lewis, Pond, Cameron, & Lewis, 2019). For instance, nationalist elites and populists around the globe emphasise the need for cohesiveness in their societies. However, they refer to an exclusive cohesive group, which includes certain nationalities while excluding others. Used in that sense, cohesion can have dividing instead of uniting effects.

2 There are some related concepts that relate to – but are different in substance from – social cohesion, in particular pro-social behaviour or social capital.

3 The authors' team of the Bertelsmann "Social Cohesion Radar" is an exception, in that it aims to provide an international perspective (Dragolov, Ignácz, Lorenz, Delhey, & Boehnke, 2013).

(Dragolov et al., 2016; Dragolov, Koch, & Larsen, 2018; Langer et al., 2017) or are country-specific (e.g. Burns, Lefko-Everett, & Njozela, 2018; McCandless, 2011).

This rather fragmented picture of analytical approaches calls for a more universal definition and measurement of social cohesion. It is the basis for the identification of patterns of social cohesion and the analysis of its causes and consequences. From a policy-oriented perspective, a more unified definition of the core elements of social cohesion and its measurement can inform policies that aim at protecting and fostering social cohesion. In development cooperation, it will help not only to build indicators for designing programme objectives and for evaluation and monitoring, but also to advance evidence-based theories of change.

This paper aims to contribute to this renewed debate on defining and measuring social cohesion by developing a narrow and measurable definition of social cohesion that travels across regions and countries. Conceptually, it offers a definition of social cohesion that incorporates the core elements of existing and widely used definitions of social cohesion across disciplines. We kept the definition of social cohesion broad enough to cover the essentials that hold societies together while at the same time keeping it lean enough to analyse the causes and consequences of social cohesion, for instance the relationship between social cohesion and inequalities or political institutions. Methodologically, we propose an application of our concept to the African context. It is a first step towards a more global and inter-regional measurement of social cohesion.

The remainder of this paper focusses on the introduction of our conception of social cohesion and its application to the African continent. Section 2 focusses on the content of the concept and introduces the theoretical reasoning behind the decisions to focus on three specific attributes that make up social cohesion. In Section 3, based on our conceptual reasoning, we build indicators to measure social cohesion empirically in the African context. For the purpose of this application, we use perception-based and expert data from Afrobarometer and the Varieties of Democracy Institute (V-Dem). Section 4 provides an empirical investigation of social cohesion in 36 African countries, in two steps. It first assesses the state of the three attributes of social cohesion in each country and assesses how the three attributes correlate. In a second step, it identifies different types of typical combinations of the social cohesion attributes across countries. Finally, we conclude with an outlook on future research.

2 A conceptual triad of social cohesion

Social cohesion refers to the ties or the "glue" that holds societies together.[4] Studying social cohesion has a long tradition across disciplines in social sciences. Being a fundamental characteristic of a society, social cohesion was an explicit subject of political philosophy as early as the 17th century. Research on this topic in modern societies is grounded in sociology (Émile Durkheim, Max Weber, Georg Simmel). While there was not much concern with social cohesion in the social sciences during the post–Second World War era, the concept re-emerged in the 1990s in reaction to neo-liberalism (Hino, Langer, Lonsdale, & Stewart, 2019). Research emphasised two different aspects of social cohesion in the

4 Cohesion originates from Latin = *cohaerere* (stick or tie together).

1990s. First, US scholars focussed on shared values, trust and social networks, whereas European research emphasised (in)equalities and access to social rights. During the last decade, research on social cohesion diversified while concerns about what constitutes social cohesion remained. *Geographically*, scholarly interest broadened from high-income countries to developing regions, in particular Africa and Asia. *Thematically*, interest in the relevance and effects of social cohesion for social development and other outcomes increased in the 2000s. A lot of this research was brought to life in the policy world. For instance, the Organisation for Economic Co-operation and Development and the Economic Commission for Latin American and the Caribbean nurtured research in Northern government institutions (Abrahams, 2016). As a result of the growing literature on social cohesion, several attempts have been made to synthesise this field of research and identify a common denominator for defining and analysing social cohesion (Chan, To, & Chan, 2006; Schiefer & van der Noll, 2016).

Although there are different views on the conceptualisation of social cohesion, there is an emerging consensus that includes the following key aspects (Burchi, von Schiller, & Strupat, 2020; Chan et al., 2006; Fonseca, Lukosch, & Brazier, 2019; Schiefer & van der Noll, 2016):

- Social cohesion refers mainly to *relationships* between different types of actors that constitute a society;
- Social cohesion is characterised by *behaviours and attitudes* of individuals and social groups;
- Social cohesion incorporates two dimensions: a *horizontal* (relationship between individuals/groups within a society) and a *vertical* (relationship between individuals/groups and the state/ other public institutions) one.

While scholars and international organisations alike recognise that social cohesion is a multi-faceted concept that includes a horizontal and a vertical dimension, the main disputes concern the actual constitutive elements or attributes of social cohesion. Indeed, both the number of proposed attributes as well as the definitions of such attributes vary significantly across the multiple contributions present in the literature.[5]

Based on a thorough review of the literature, we propose a definition of social cohesion that builds on and adapts the well-known definition provided by Chan et al. (2006). We conceptualise social cohesion as follows:

> *Social cohesion refers to the vertical and horizontal relations among members of society and the state that hold society together. Social cohesion is characterised by a set of attitudes and behavioural manifestations that includes trust, an inclusive identity and cooperation for the common good.*

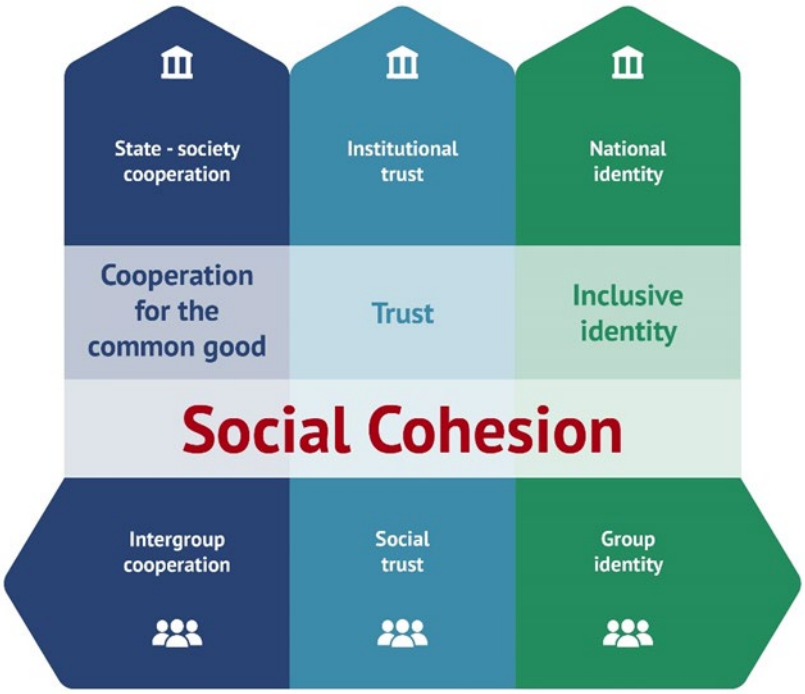
We purposefully put forward a lean definition by focussing on trust, identity and cooperation as the three key attributes of social cohesion, which are also the main attributes that Schiefer and van der Noll (2016) identify as being common to most definitions of social cohesion. We give the reasons for the choice of each attribute in the subsequent sub-sections

5 For an excellent overview of the literature, see Schiefer and van der Noll (2016).

(2.1 to 2.3). At the same time, we argue that there are conceptual and empirical reasons not to consider "well-being" and "inequality" as two other elements that are sometimes suggested in the literature on social cohesion. Firstly, there is well-established literature on the meaning of well-being, which is usually considered a characteristic of the individual and not of a society (Sen, 1985). Moreover, including well-being would impede studying the empirical relationship between social cohesion and human development (and especially the Human Development Index, which is *de facto* an index of well-being). The second controversial element is "inequality", which is part of several concepts of social cohesion (Berger-Schmitt, 2000; Langer et al., 2017). Supporters of this idea, however, seem to be more oriented towards providing a framework for the assessment of social cohesion that includes both drivers and consequences of social cohesion (Burchi & Zapata-Roman, in press). As often generally stated in the academic and policy debates, inequality is likely to play a key role in determining social cohesion in a society. However, as with the relationship between social cohesion and well-being, the relationship between social cohesion and inequality should also be empirically verified (Chan et al., 2006; Schiefer & van der Noll, 2017).

In brief, our proposal sees social cohesion as being composed of three main attributes – cooperation, trust and inclusive identity – that operate in two different dimensions (Figure 1).

Figure 1: Constitutive elements of social cohesion



Source: Authors

We acknowledge that each attribute can work against social cohesion when it is not inclusive and shared across different social groups. For instance, strong cooperation within one social group can undermine the creation of a common good that goes beyond the interests of that social group; ingroup trust can lead to the exclusion of members of another

social group, as is often the case in the relationship between locals and migrants. In the next sub-sections, we illustrate in detail the three attributes and justify on theoretical grounds why we selected them.

2.1 Inclusive identity

The first core element of social cohesion is whether a society is characterised by an inclusive identity. In contrast to Chan et al.'s definition (2006), we assume that social cohesion requires an inclusive identity, which allows different social identities to coexist and offers more than just a sense of belonging or joint identity. In our concept, we focus on social identities rather than personal identities – a conceptual distinction made in the (social) psychology and sociology literature (Abdelal, Herrera, Alastair, & McDermott, 2009). Whereas personal identities are inherently subjective, social identities are based on a shared understanding among individuals about particular social groups (Turner, Oakes, Haslam, & McGarty, 1994). Individuals can hold a number of social identities at the same time and ascribe both meaning and emotional significance to them. Tajfel's (1974) widely applied definition describes social identities as "that part of an individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the emotional significance attached to that membership". Consequently, social identities are relevant for the cohesiveness of groups and whole societies. They are, thus, directly relevant for social cohesion, whereas personal identities play a minor role. This complexity of parallel and overlapping identities creates forms of inclusion and exclusion and influences social cohesion.

Within a society, social identities describe hierarchical membership in different groups. The social identities of large groups are superordinate identities that exist in juxtaposition to the social identities of smaller groups, so-called subordinate identities. National identity is a superordinate identity to the social identities of sub-national groups, but it is itself a subordinate identity to broader identities, such as gender. Greater social identity complexity creates overlapping, non-uniform social identities and is associated with greater social cohesion. With reference to the individual, the meaning of a social identity guides individuals in self-categorising them into social groups (Turner et al., 1994). In this cognitive process, individuals identify themselves as group members by answering the question "Who am I?" In it, individuals sort themselves into hierarchically ordered, de-personalised group categories. The meaning that individuals ascribe to a social identity defines group membership rules, group goals and relations with other groups. In reference to these, a group constructs its social identity. For instance, a group might be open only to a certain ethnic minority (group membership rules) and aim to secede and form a new independent state (group goal) because it perceives itself as oppressed and marginalised in its current nation-state (relations with other groups). The meaning of a social identity is not fixed but is open to contestation and renegotiation.[6]

6 Two dimensions characterise the meaning of social identities: contestation and content (Abdelal et al., 2009). Contestation describes the level of societal agreement over the meaning of a social identity, and it is the process of re-negotiating its content. Content captures its essence and consists of three complementing types (Citrin & Sears, 2009): constitutive norms, social purposes and relational comparison.

Social identity complexity emphasises that the relationship between superordinate identities, such as identity with the nation, and subordinate identities, such as identification with one's ethnic ingroup, plays an important role in determining the effect of social identity on social cohesion (Roccas & Brewer, 2002). Situations that emphasise group identities often manifest themselves in ingroup bias, in which behaviour is biased towards favouring the own ingroup over other outgroups (Huddy, 2013). Social identity thus exists in a constant state of tension, in which superordinate identities, such as national identity, decrease subordinate group identities, and vice versa. Hence, they need to coexist in a balance in order to achieve social cohesion and avoid intergroup tensions.

Superordinate identities can both increase and decrease intergroup tensions by overriding subgroup identities. Dovidio, Gaertner, Isen and Lowrance (1995), for instance, find in experimental settings that the creation of a superordinate identity decreases ingroup bias. However, when transferring these insights outside of the lab, Moss (2017) finds that a strong and coercive emphasis on superordinate national identity in Sudan alienates subordinate identity groups, leading to greater intergroup tension. Accordingly, "dual re-categorisation" – in which superordinate national identity is emphasised while unique differences in subordinate group identities are preserved – reduces intergroup tensions more successfully (Hewstone, Rubin, & Willis, 2002; Hornsey & Hogg, 2000).

Inclusiveness is a precondition for the coexistence of different social identities on an individual and societal level. It is greatest when superordinate social identities create inclusive compatibility between various subordinate identities without dominating them. In this "merger solution", social identities are subordinated to a greater superordinate identity (Roccas & Brewer, 2002). For instance, national and ethnic identities can be part of one African ingroup (a superordinate social identity), as a Rwandan Hutu who primarily perceives both Rwandan and Burundian Hutu (an ethnic subordinate social identity) as well as Rwandan Hutu and Tutsis (a national subordinate social identity) as his/her identity. In contrast, patterns of "intersection" or "dominance" decrease inclusion by narrowing the ingroup (i.e. decreasing social cohesion). In an "intersection" pattern, one specific group monopolistically claims state identity for itself. In a "dominance" pattern, state identity attempts to overwrite all other existing social identities.

2.2 Trust

The second core element we focus on is trust,[7] which can be found in almost all conceptualisations of social cohesion. Social science research has identified and analysed three different types of trust (Bauer & Freitag, 2018; Bjørnskov, 2018; Freitag & Traunmüller, 2009; Gundelach, 2014; Newton, Stolle, & Zmerli, 2018; Uslaner, 2019; Zerfu, Zikhali, & Kabenga, 2009). Particularised trust describes "trust in specific groups, usually one's immediate family, neighbours, or identity group" (Mattes & Moreno, 2018, p. 1). It hence regards relations within social groups and is also known as "bonding" trust. Generalised trust, in turn, is the "ability to trust people outside one's familiar or kinship circles" (Mattes & Moreno, 2018, p. 1). It is also sometimes referred to as "bridging" trust,

7 We follow Gundelach (2014) and define trust "as the expectation that others will contribute to the well-being of a person or a group, or at least will refrain from harmful actions" (based on Offe (1999) and Freitag and Traunmüller (2009)).

as it can be seen as the "bond that people share across a society and across economic and ethnic groups, religions, and races" (Rothstein & Uslaner, 2005, p. 45). As described further below, this is the type of trust that we are interested in for capturing positive horizontal relations in society.

The third type of trust identified in social science research is institutional trust. Institutional trust describes trust at the vertical level, more specifically whether citizens trust the "formal, legal organizations of government and state, as distinct from the current incumbents nested within those organizations" (Mattes & Moreno, 2018, p. 357). This vertical dimension is important because social cohesion requires a superordinate entity that holds society together institutionally. This focus ensures that institutional trust measures a deeper, underlying trust in public institutions that does not waver due to momentary alignment with – or confidence in – current incumbents (Dinesen & Sønderskov, 2015; Rothstein & Stolle, 2008). We distinguish this concept from political trust, which refers to trust in political representatives and confidence in political institutions (in contrast to e.g. Zmerli & Newton, 2008).

The literature agrees that trust is an important component of social cohesion (Chan et al., 2006; Dragolov, Ignácz, Lorenz, Delhey, & Boehnke, 2013; Langer et al., 2017; Schiefer & van der Noll, 2016). Regarding both generalised trust and institutional trust, consensus exists that they are an indication of a cohesive society (Chan et al., 2006; Fukuyama, 1995; Langer et al., 2017; Schiefer & van der Noll, 2016; Zerfu et al., 2009). We based our decision to exclude particularised trust as a constitutive element of social cohesion on empirical evidence that particularised trust might counter social cohesion and eventually even lead to polarisation (Zerfu et al., 2009). Particularly, the social capital literature does not see clear benefits of particularised trust for society (Delhey, Newton, & Welzel, 2011; Gundelach, 2014).[8] One reason for these findings is that particularised trust depicts "bonding social capital" within groups, which does not necessarily result in social cohesion at the aggregate level, as group cohesiveness may weaken outgroup trust and inter-group cohesion (sometimes called "bridging social capital") (e.g. Easterly, Ritzen, & Woolcock, 2006; Putnam, 2000).

2.3 Cooperation for the common good

The third core element of social cohesion is cooperation across groups and between individuals/groups and the state. In order to be indicative of social cohesion, we think it is particularly important that this cooperation is geared towards the common good, meaning that it is "directed at interests that transcend those of the individuals involved" (van Oorschot & Komter, 1998). A strong indication of a manifest cooperation for the common good is an actor who "pays a cost, for another individual or the community to receive a benefit" (adapted from Nowak, 2006, p. 1560), or cooperation that takes place "despite incentives for non-cooperation" (King, Samii, & Snilstveit, 2010, p. 337). Voluntary cooperation for the public good is most beneficial for social cohesion, rather than cooperation incentivised through monetary reward or punishment (Rand et al., 2014). As Schiefer and van der Noll (2016) underline, "A cohesive society [has] the willingness to subordinate personal needs under the welfare of the social environment" (p. 589).

8 However, we do not assume particularised trust to be problematic per se, as particularised and generalised trust can jointly be high. This suggests that a high level of particularised trust does not automatically endanger outgroup trust (Bahry, Kosolapov, Kozyreva, & Wilson, 2005; Mattes & Moreno, 2018).

Our understanding is related to the concept of "solidarity" used by Durkheim and Weber, in the sense of individual acts in view of ends that are not strictly his or her own, to make concessions, to consent to compromises, to take into account interests higher than his or her own (Durkheim, 1999). As Schiefer and van der Noll summarise, "Social cohesion is not a by-product of individual behavior but rather based on solidarity, shared loyalties, cooperation and mutual action" (p. 584). Thus, in this, we go beyond the related concept of social capital, which largely focusses on cooperation for individual and mutual benefits (see Chan et al., 2006, p. 292).

Note that the common good (*Gemeinwohl*) refers to the conception of the material and immaterial living conditions of a collective (Fraenkel, 1964). Balancing individual and collective interests is a precondition for defining the common good of a collective. Hence, the concept of the common good contains a normative element (What is the society we want to live in?) and a procedural dimension (How are individual interests aggregated to a collective interest?). The common good can be defined on different levels of society (individual, group and state). For the purpose of conceptualising and measuring social cohesion, we a) focus on the normative element, which varies between societies, b) refer to the common good at the state level (Ostrom, Burger, Field, Norgaard, & Policansky, 1999).

Scholars on social cohesion largely agree that positive social interactions in society are an important element of broader social cohesion. However, the concepts used to grasp this aspect of a cohesive society vary: positive inter-personal interactions or relational bonds (Friedkin, 2004), "social relations, interaction and ties" (Berger-Schmitt, 2000, p. 4), "social relations" (Schiefer & van der Noll, 2016, pp. 586) or "the quality and strength of people's relationships and bonds" (Australian Bureau of Statistics, 2006, p. 19). The literature makes indirect references to the common good, for instance Lockwood includes general altruism (Lockwood in Chan et al., 2006, p. 276), the "degree of commitment to promoting the common good" (Colletta, Lim, Kelles-Viitanen, 2001, p. 2). Having said this, including cooperation for the common good in our definition and measurement is a value added to the literature.

In contrast to other definitions of social cohesion, we focus on the manifestation and not on the willingness or commitment to cooperate (Chan et al., 2006; Coletta & Cullen, 2000; Schiefer & van der Noll, 2016). We argue that pro-cooperative attitudes, such as the willingness to work towards a common good, are important, but that a cohesive society requires at least a minimal level of actual cooperation. In this, we concur with Chan et al. (2006), who argue that "social cohesion is not only about people's feelings or psychological conditions; it is also about certain behavior" (p. 290). If everybody is willing to cooperate, but nobody actually cooperates, we cannot expect a socially cohesive society. We expect social cohesion to be higher if people widely contribute to the fulfilment of the common good. Cooperation can take place on the individual, group and national levels (see Annex 1).

2.4 Relationships between the three attributes

The three attributes of social cohesion build upon and may reinforce each other (Fukuyama, 2001; Knack & Keefer, 1997; Narayan, 1999). A minimum level of trust and inclusive identity is a precondition for cooperation for the common good. Scholars arguing in these lines state, "Participation in the public life reflects sense of belonging, solidarity and the readiness for mutual cooperation in the pursuit of common goals" (Schiefer & van der Noll,

2016, p. 588). Where people trust each other and identify with a society, they are more likely to define a common good, which benefits society as a whole. Cooperation, in turn, reinforces trust and identity. As Schiefer and van der Noll (2016) summarise (p. 588): "[S]ocial interactions in associations, political parties, unions, or non-governmental organizations strengthen shared values, sense of belonging, and trust" (see also Kuwabara, 2011).

Inclusive identity correlates with trust and cooperation. More precisely, ingroup bias – the favouring of ingroup members over outgroup members – is associated with less trust of outgroup members, but the direction of causality is ambiguous. Attaching an ethnically exclusive meaning to national identity correlates with a decrease in outgroup trust by half, while attaching a civically inclusive meaning to national identity only slightly improves measurements of outgroup trust (Reeskens & Wright, 2013).

There is some evidence that identity is linked to institutional trust as well. An identity based on factors such as identification with the constitution, respect for the law, language proficiency and legal citizenship – sometimes labelled "civic identity" – increases political trust. An "ethnic identity", which emphasises characteristics such as sharing the dominant religion, being born in the country or ethnic ancestry, decreases institutional trust (Berg & Hjerm, 2012). Analogously, Reeskens and Wright (2013) indicate that a civic identity positively affects generalised trust, whereas an ethnic identity has a (stronger) negative effect on generalised trust.

In contrast to trust, evidence suggests more strongly that a shared superordinate national identity improves both the willingness to cooperate and the actual cooperation between groups and individuals. Transue (2007) finds in experiments that priming national identity increases the support for policies benefitting minorities. Miguel (2004) also finds that a stronger superordinate national identity leads to less intergroup tension, and thus more public service provisions in the Tanzanian and Kenyan regions that share the same ethnic diversity. However, evidence also suggests that cooperation between groups can bolster and create a superordinate identity. Cooperation between two previously distinct groups against a common "enemy group" decreased ingroup bias between the cooperating groups in experimental settings (Hewstone, Rubin, & Willis, 2002).

The concepts of trust and cooperation between citizens or social groups are closely related, interlinked and sometimes even hard to distinguish. Chan et al. (2006), for instance, describe participation in associations and voluntary organisations as a behavioural manifestation of trust in other citizens. Indeed, some minimum level of trust is required for membership and cooperation in such organisations. Yet, the act of cooperation, in turn, nurtures and reinforces trust. Analysing the relationship between associations and trust, Knack (2003) finds some empirical support for the Putnam (1993) hypothesis that associations foster generalised trust. Paxton (2007) argues that the link becomes even stronger if one differentiates between connected and isolated associations, that is, groups that are either heterogeneous or homogenous. Thus, they promote/prevent cooperation with people outside one's typical social groups. Other scholars point out that the effect of associations on trust is relatively weak, as these organisations only play a minor role in everyday life (Newton, 2001).

Looking into the interactions between trust and vertical cooperation with the state (or government performance), scholars consent that there is a two-way relationship. Both theory (Fukuyama, 2001; Narayan, 1999) and empirics (Knack & Keefer, 1997) suggest

that states which provide public goods – such as the protection of property rights, contract enforcement and public safety – strengthen (social and political) trust throughout society. Trust, in turn, has been theorised (Fukuyama, 2001) and shown (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998) to influence government efficiency, including aspects of state–citizen cooperation, such as corruption, tax compliance and civic participation.

3 A two-dimensional operationalisation and indicators to measure the triad

The concept of social cohesion presented here is universally applicable. We demonstrate how to apply and operationalise it in the African context. We aim to use this measurement of social cohesion for different types of empirical analyses. For this reason, it is important to have the highest possible data coverage, both across space (countries) and time. When indicators are available for prolonged periods of time and for various countries, changes in social cohesion can be tracked over time and developments compared between countries. This encourages broader analyses of the phenomenon, which in turn paints a more complete picture of the state of social cohesion in Africa and its interrelations. In this sense, the choice of having a slim definition of social cohesion – motivated predominantly on theoretical grounds – helps increase the likelihood of having a larger amount of available data, as it requires a smaller number of indicators. For each attribute, we search for the most suitable set of indicators that are available for African countries. This implies that the final set of indicators selected may not be the ideal ones in strictly theoretical terms, nor necessarily the best ones in other regions of the world. Indeed, there could be data from other sources that could allow a better measurement of social cohesion, for example in Asia or Latin America. We rely on the Afrobarometer surveys as the single most important sources to construct all three dimensions of social cohesion in Africa. Other established surveys, such as the World Values Survey (WVS) and the Gallup World Poll, do not provide sufficient geographical coverage of African countries and are therefore rendered impractical.

The following sub-sections illustrate the choices made to measure the three different attributes of social cohesion in the context of African countries and what typical constellations of these attributes look like.

3.1 Inclusive identity

The Afrobarometer data provides information on the emotional significance of national identity. This means that with Afrobarometer data, we cannot measure whether individuals have and value multiple identities and whether these are subsumed in one (larger) group identity. What we can measure using Afrobarometer data is the extent to which people feel that they belong to the nation-state, which indicates the emotional significance of a superordinate social identity. In general, high levels of belonging to the nation-state would indicate more social cohesion, unless the state identity fully overlaps with the identity of one specific dominant group, and the legitimate minority groups are neglected by/ discriminated against/ treated unfairly by the state.

We therefore used the following question from Afrobarometer data,[9] which asks respondents the following:

> Let us suppose that you had to choose between being a [national identity, e.g. Malawian] and being a [respondent's ethnic group]. Which of the following statements best expresses your feelings?

Respondents were then able to choose from the following response categories:

- I feel only [national identity].
- I feel more [national identity] than [ethnic identity].
- I feel equally [national identity] and [ethnic identity].
- I feel more [ethnic identity].
- I feel only [ethnic identity].
- Don't know (Do not read).

The survey question above is meant to reveal how strong respondents' feelings of national identity are in comparison with their (ethnic) group identity. Given that, ideally, an individual should feel primarily part of a shared national project, a positive answer from the point of view of social cohesion would be: "I feel only national identity", or "I feel more national identity than group identity". Then we could calculate the proportion of "positive" answers from the total and use it as our measurement of social identity, as done by Langer et al. (2017) for their main Social Cohesion Index. However, this relatively simple indicator has some important drawbacks, some of which can be directly addressed. In the other cases, it is important to make the assumptions behind the measurement exercise explicit. Here are the three main critical points:

1. Ethnic group (including also language and tribe) is the most important group. As stressed above, every individual has multiple identities, and being a member of an ethnic group is not necessarily the most valued identity. Although from a theoretical point of view this remains an issue, some statistics support this choice: Data from Round 2 of the Afrobarometer survey indicates that, for most of the countries, the ethnic group is the most important group.

2. Even when the national identity is more important than the group identity, it might be that the state identity is low and the group identity is even lower. That would not be the same as a situation in which the state identity is very strong and group identity "intermediate". Ideally, we would need two separate sets of information on the extent to which people feel that they belong to the state and the extent to which they feel they belong to the group. However, such information is not available in the Afrobarometer survey.

3. It may well be that a high proportion of people providing a "positive" answer would be entirely triggered by one or two dominant ethnic groups, with people belonging to the other groups providing a "negative" answer. This would not indicate a very high level of social cohesion in the country (problem of an overlap of state and dominant ethnic

9 Langer et al. (2017) use the same question in their measurement of social cohesion in Africa.

group identities). Therefore, we need to account for differences in the answers to the same question (comparison state vs group identity) across (ethnic) groups. The assumption is that, when the same value of the national indicator is obtained with more similar values across groups, social cohesion should be higher. Or, in other words, as also stressed by Langer et al. (2017), we should penalise countries where a given value of the national indicator is achieved with large disparities in the group values.

In order to address the third point, we implemented a two-stage procedure:

I. Calculation of the proportion of positive answers for the different ethnic groups
II. Aggregation of the group values into one single index

For this kind of operationalisation of the identity attribute, a number of questions emerge:

a. What if people do not belong to an ethnic group (or just answer "don't know" to the question about their ethnic group)? Including them would mean that these people automatically provide a "positive" answer to the main question, and generate upward biases in the estimates. Although there are not many cases like this, it remains an issue to consider.

b. We reduced the sample to those who reported themselves as being part of an ethnic group and specified which one. In this way, to some extent, we could indirectly address also point two above, as we do not really know whether the level of state identity is low, middle or high if we just know that respondents feel only state identity when they do not belong to any ethnic group.

c. Should we account for the population share of different groups and for the number of ethnic groups present within a country? These are two interrelated points that required developing a consistent solution. Specifically, regarding the population share of the different groups, two extreme approaches were applicable. The first one consisted of not accounting for it: In this case, we basically say that what counts for social cohesion is that all the groups, regardless of their size, consider state identity to be more important than group identity. Clearly, this way the final values may be potentially very different from those obtained by simply looking at the proportion of positive answers in the overall population.[10] In the most conservative approach, we account for group size; therefore, this becomes a way to only minimally adjust the national value for differences across groups.

10 The empirical analysis, however, shows that these differences are not very large.

Table 1:	**How to measure inclusive identity**		
Social cohesion attribute	**Indicator-building**		
	Question (Afrobarometer)	**Calculation**	**Aggregation**
INCLUSIVE IDENTITY	Let us suppose that you had to choose between being a [national identity] and being a [respondent's ethnic group]. Which of the following statements best expresses your feelings? Answers: (1) I feel only [national identity]. (2) I feel more [national identity] than [ethnic identity]. (3) I feel equally [national identity] and [ethnic identity]. (4) I feel more [ethnic identity]. (5) I feel only [ethnic identity]. (7) Don't know (Do not read).	1. Consider individuals who respond (1) or (2) 2. Calculate proportion of positive answers for different ethnic groups (>5% of population; < 5% of population merged to one group, which must not exceed 25% of population)	Unweighted arithmetic mean to aggregate group means (penalise countries with large disparities between group values)
Source: Authors			

Regarding the point concerning the number of ethnic groups, a measure that does not account for it would most probably penalise countries with more ethnic groups (e.g. Nigeria). This is because where there are several groups, some of them are very small, and in small groups we would more easily obtain a very low group value (even zeros), which would push down the final indicator substantially. By construction, we would assume that more socially fragmented societies are less cohesive, which is the drawback of much of the debate on social cohesion.

To account for both of these issues, we adopted an approach that permits for reducing the number of ethnic groups at the same time – so as to alleviate the heterogeneity in the number of groups across countries – and to combine groups that are deemed too small. A further point taken into consideration was that the aggregation of many groups that are too small to be meaningful into one larger group would inflate both the size and heterogeneity of this larger group. We set the ideal threshold for the minimum group share of the overall population (reporting an ethnic group affiliation) at 5 per cent for all the countries: This means that groups which represented a lower population share should be automatically merged. Then we identified the threshold for the population share of the "merged" group at 25 per cent: This means that this group should represent no more than one-quarter of the overall population. In the cases (countries/surveys) where the combination of groups with a population share below 5 per cent led to a "merged" group with a population share above 25 per cent, the 5 per cent threshold was gradually reduced by 0.1 per cent – up to a minimum threshold of 1 per cent – until the merged group remained within the required boundaries. The underlying assumptions are that a population share of a group below 1 per cent is too low for the group to be considered a meaningful one – for example to exercise collective action – regardless of the context (same minimum threshold across all countries): In a similar fashion, a population share of a group equal to or above 5 per cent is large enough for the group to be considered a meaningful one, regardless of the context. However,

a group's population share of, say, 1.5 per cent may be enough for the group to qualify as a stand-alone group in countries where there are many very small groups.

A related point concerns how to aggregate group values into one single index (point two in Table 1). First of all, after reducing the number of groups and merging the small ones, we did not weigh groups according to their size. This means that every group, as long as it reached a minimum size, has the same relevance. Then, as an aggregation function, we initially considered the option of using, for example, the geometric mean, which penalises countries where there are large disparities in the results across groups (low substitutability). However, given that some groups – especially those that barely reach the minimum threshold size – have a low sample size in the Afrobarometer surveys, and therefore can easily have a mean value of 0, this could excessively penalise countries with many (small) groups. Therefore, in the end, we utilised the unweighted arithmetic mean to aggregate group means and to obtain the measurement of identity based on the Afrobarometer data.

3.2 Trust

The Afrobarometer survey comprises one question that addresses generalised trust. The specific question is: "Generally speaking, would you say that most people can be trusted or that you must be very careful in dealing with people?" This is a slightly modified formulation of the well-known original question used by Rosenberg (1956). Delhey, Newton and Welzel (2011) found that, in the vast majority of countries, respondents interpret "most people" as outgroups. Therefore, the "most people" question adequately captures our research interest.

However, we should be aware of its critical points. The first one is the binary nature of the indicator: People can answer only yes ("most people can be trusted") or no ("must be very careful"). Some empirical research in the last years has employed an enlarged scale of trust – capturing the degree of trust – and shown that this is a sounder measurement of trust (Lundmark, Gilljam, & Dahlberg, 2016). Since more nuanced data from the Afrobarometer survey is not available, we decided to retain the dichotomous measure to approximate the level of generalised trust, being fully aware that information is lost when using this rough measure. As shown in the review article of Bauer and Freitag (2018), the binary measurement of generalised trust is still considered a valid one and still largely used. Another problem with the generalised trust question in the Afrobarometer survey is that it was only included in every second round of the survey (see Table 1). However, as the responses to the "most people" question exhibit some variations across countries but little within variations (e.g. Rothstein & Uslaner, 2005), we overcame this problem of missing data points by exploiting the stickiness of generalised trust on the country level through linear interpolation.

To measure trust in the vertical dimension – "institutional trust" – we could potentially rely on a set of questions capturing trust in several institutions: president, parliament, independent electoral commission, revenue services, local government, ruling party, opposition political parties, police, army and courts of law. As previously stated, we intended to measure trust in "formal, legal organizations of government and state, as distinct from the current incumbents nested within those organization" (Mattes & Moreno, 2018, p. 357). Thus, we restricted our focus on state and government institutions. Trust in incumbents (i.e. the president, the local

government, the ruling and the opposition parties) was excluded. In doing so, we followed the line of argument of Zmerli and Newton (2008), building on a well-established literature concerned with the differentiation between trust in political representatives and confidence in political institutions (Giddens, 1990; Hardin, 2000; Luhmann, 1979; Seligman, 1997). One important reason for doing so is that trust in institutions is supposed to measure a more stable, deeper and underlying trust in public institutions that may stem from the past performance of political institutions and that does not waver due to momentary alignment with, or confidence in, current political leaders, parties or governments (Zmerli & Newton, 2008). Rothstein (2011) points out that this representational side of the political system is partisan, implements ideology in accordance with its partisanship and thus creates/destroys confidence among citizens along the lines of support/aversion with regard to the respective ideology. He argues that trust in the implementation side of the government, in contrast, is much more stable, as courts of law, the police and social services and legal institutions (should) gain confidence because of their impartiality, efficiency and fairness reflected in past performance.[11] In accordance with their arguments, we used indicators of trust in the parliament, the police and courts of law to measure institutional trust.

Table 2: How to measure trust

Social cohesion attribute		**Indicator-building**		
		Questions (Afrobarometer)	**Calculation**	**Aggregation**
TRUST	Social	Generally speaking, would you say that most people can be trusted or that you must be very careful in dealing with people?	Binary coding: respondents who trust most people as trusting (1) and (0) otherwise.	Trust Score $= \sqrt{gen\_Trust * inst\_Trust}$
	Institu-tional	Combine three indicators measuring trust in the parliament, the police and the courts of law. Answers: "not at all" (0), "just a little" (1), "somewhat" (2), "a lot" (3).	1st: Trust in each institution was calculated by taking the arithmetic mean across all households in a given country and a given year. 2nd: (unweighted) arithmetic mean of trust in the three institutions = overall measurement of institutional trust. Institutional Trust $= \frac{trust_{parliament}+trust_{courts}+trust_{police}}{3}$	

Source: Authors

As the question about each of these institutions has a four-point Likert scale,[12] we can more soundly measure trust by also capturing the degree of trust. First, the trust in each institution was calculated by taking the arithmetic mean across all households in a given country and

11 Rothstein (2011) further reasons that courts, the police and other legal institutions gain the trust of the citizens because "they are in the business of taking care of people who are better not to be trusted".

12 Possible answers are: "not at all" (coded 0), "just a little" (1), "somewhat" (2), "a lot" (3).

a given year. In a second step, also through (unweighted) arithmetic mean, we aggregated trust in the three institutions to have an overall measurement of institutional trust.

$$\text{Institutional Trust} = \frac{\text{trust}_{\text{parliament}} + \text{trust}_{\text{courts}} + \text{trust}_{\text{police}}}{3}$$

Finally, although it is important to analyse separately the horizontal and the vertical dimensions of trust, it is useful as well to aggregate them into an overall measurement of trust, for example to compare the different attributes of social cohesion across countries. To do so, we divided the vertical trust score (institutional trust) by 3 to normalise it from its original scale (0 to 3) to the same scale (0 to 1) as horizontal trust (generalised trust). Then we employed the geometric mean to aggregate across the two dimensions. This way, we penalised countries that have larger imbalances in the values of the two dimensions of trust.[13] This final measure ranges between 0 (zero overall trust) and 1 (full trust). The formula is given below:

$$\text{Trust Score} = \sqrt{gen\_Trust * inst\_Trust}$$

Table 3: Data availability of trust indicators

Afrobarometer round	**R1 1999**	**R2 2002**	**R3 2005**	**R4 2008**	**R5 2012**	**R6 2014**	**R7 2018**
Social/generalised trust							
Most people can be trusted	x		x		x		re-introduced in R8
Institutional trust							
Trust in parliament		x	x	x	x	x	x
Trust in courts	x	x	x	x	x	x	x
Trust in police	x	x	x	x	x	x	x
Source: Authors							

3.3 Measuring cooperation for the common good

There is an extensive literature on the measurement of cooperation – sometimes identified with other terminologies such as solidarity, participation in the public sphere, or civic or voluntary engagement. However, an important aspect to consider in the search for adequate indicators is that this attribute contains two elements: cooperation and the common good. Thus, a simple measurement of participation in a collective activity that is not likely to contribute to general well-being in the society should be excluded. Recent proposals, such as those advocated by the Bertelsmann Social Cohesion Radar or by Fearon, Humphreys and Weinstein (2009), however, cannot be considered, as they do not cover African countries or are only suitable for sub-national levels. Moreover, as with indicators of trust,

13 This feature is called "non-perfect substitutability" across indicators: This means that low values in one indicator cannot be fully and linearly compensated by high values in another indicator, as instead happens with the arithmetic mean. The same logic is used, for example, for the calculation of the Human Development Index (UNDP, 2010).

established surveys such as the WVS and the Gallup World Poll do not provide sufficient geographical coverage of African countries. We therefore rely on two data sources: The first and main one is Afrobarometer, as in the case of the measurements of identity and trust, and the other is V-Dem, which provides expert data.

The first indicator used to measure cooperation at the horizontal level – between individuals and between groups – is membership in voluntary, non-religious associations or organisations. This information is taken from Afrobarometer and resembles the types of measures used in several other studies (e.g. Berger-Schmitt, 2000; Chan et al., 2006; Schiefer & van der Noll, 2016). Respondents have the possibility to choose between four answers: "not a member" (coded 0), "inactive member" (1), "active member" (2) and "official leader" (3).

However, to ensure that we focussed on the types of associations and organisations that are likely to act for the common good, we made several revisions. We gave more weight to the answers of households that come from spatial units[14] with ethnic heterogeneity. This increases the likelihood that the objective of the voluntary association or organisation is in line with the common good of the society as a whole, and not just in the interest of one social group. To do so, we first generated a measurement of ethnolinguistic fractionalisation – as often done in economic literature (see e.g. Alesina, Devleeschauwer, Easterly, Kurlat, & Wacziarg, 2003) – calculated as one minus the Herfindahl index:

$$\boldsymbol{fract_{spatial\_unit} = 1 - \sum_{i=1}^{N} s_i^2}$$

where s_i is the population share of ethnic group i in the total population of the spatial unit, and N is the total number of different ethnic groups in the spatial unit. The fractionalisation variable reflects the probability that two randomly selected individuals from a spatial unit belong to different groups. In a second step, we multiplied the coded answer to the question about membership in associations or organisation:

$$\boldsymbol{diversity\_weighted\ member\_org = member\_org * fract_{spatial\_unit}}$$

This procedure, however, risks overly penalising countries with fewer ethnic groups. Therefore, in the following step, we made a further adjustment (also at the household level):

$$\boldsymbol{homogeneity\_corrected\ diversity\_weighted\ member\_org =}$$

$$\boldsymbol{(1 - fract_{country}) * member\_org}$$

$$\boldsymbol{+ fract_{country} * member\_org * fract_{spatial\_unit}}$$

where $fract_{country}$ is the analogous fractionalisation measure for the whole country (and not just for the micro spatial unit).[15] This adjustment ensures that more weight is given to the

14 A spatial unit is defined as an area within a 7.5 km radius from the household of interest.

15 The empirical analysis of the African countries shows that, without the further correction for homogeneity at the country level, there was a slight bias against countries with fewer ethnic groups; this bias is no longer present after this correction.

unweighted membership indicator in very homogenous countries, while more weight shifts to the diversity-weighted membership indicator as countries become ethnically more heterogeneous. Finally, to generate the revised indicator of membership in associations or organisations, we used the simple arithmetic mean calculated on the homogeneity-corrected diversity-weighted membership variable across all respondents in a given country and year.

The second indicator used to measure horizontal cooperation is similar to the first one, as it focusses on the extent to which people are involved in CSOs. However, this information does not come from household surveys but from expert evaluations provided for the V-Dem database. The experts were asked to rate how participatory the CSO environment is in each country (and year) from 0 to 3, where 0 captures situations in which the state de facto exercises a monopoly on organisations, and 3 indicates societies in which there are many diverse CSOs, and citizens are at least occasionally active in them (Bernhard, Tzelgov, Jung, Coppedge, & Lindberg, 2015; Pemstein et al., 2019).

The third and last indicator for the horizontal dimension is generated from a question included in the Afrobarometer survey. Respondents are asked whether they joined others to raise an issue. In line with social movement theory (Diani, 1992), a positive answer indicates that there can be cooperation between different social groups/ communities that are pursuing a similar issue/ common good. While the original question has a 5-item scale, we reduced it to a 4-item scale by recoding the answer "no, would if I had the chance" as 0, the same as with the answer "no, would never do this" because we were interested in measuring actual cooperation and not the willingness to cooperate. Therefore, the new scale ranges from 0 ("no") to 3 ("yes, often"). Also in this case, we assigned more weight to spatial units with ethnic heterogeneity, as this increases the likelihood that the raised issue is not only in the interest of one social group. For this reason, we applied the same methodology illustrated for membership in associations and finally generated a homogeneity-corrected diversity-weighted measure.

To build an index for horizontal cooperation, we first normalised the indicators to the common scale used in the three attributes and their horizontal and vertical dimensions. Since all indicators for horizontal cooperation take values between 0 and 3, this was achieved by dividing the indicator values by 3. Then we aggregated the first two indicators though a simple arithmetic mean, as they measure pretty much the same aspect. Finally, we aggregated the derived measure with that measure on "raising issues", again through arithmetic mean.

$$coop\_horiz = \left(\frac{\frac{member\_org + CSOenviron}{2} + raise\_issue}{2} \right)$$

Table 4:		**How to measure cooperation for the common good**		
Social cohesion attribute		**Indicator-building**		
		Questions	**Calculation**	**Aggregation**
COOPERATION FOR THE COMMON GOOD	**Inter-group**	Perception data (AB) Q1: Membership in voluntary associations or organisations Q2: Joined others to raise an issue (homogeneity-corrected diversity-weighted measure) Expert data (V-Dem) Q3: Rate how participatory the CSO environment is in each country	1. Harmonise scale of all indicators to 0 and 1 2. Aggregate Q1 and Q3 through simple arithmetic mean 3. Aggregate derived measure with Q2 through arithmetic mean $coop\_horiz = \left(\frac{\frac{member\_org + CSOenviron}{2} + raise\_issue}{2}\right)$	Geometric mean: $coop\_score = \sqrt{coop\_horiz * coop\_vert}$
	State-society	Perception data (AB) Q1: Frequency of attending community meetings Q2: Frequency of contacting the officials: (1) local government councillors, (2) Members of Parliament, (3) officials of a government agency/ministry, (4) traditional leaders/rulers 4-item scale from 0 ("never") to 3 ("often"); use maximum value. Expert data (V-Dem) Q3: Level of state repression towards CSOs Q4: Extent to which CSOs consulted by policy-makers	Aggregation through arithmetic mean $coop\_vert = \left(\frac{community\_meeting + contact\_official + \frac{CSO\_No\_repress + CSOconsult}{2}}{3}\right)$	
Source: Authors				

Next, we present our measurement of vertical cooperation, that is, cooperation between individuals/groups and public institutions. It is difficult to find adequate information on individuals' cooperation with state (national-level) institutions for several African countries. However, we do have information on cooperation with local institutions. In particular, the Afrobarometer survey asks interviewees about the frequency of attending community meetings. This question captures information on individuals' participation in community life and, thus, willingness to contribute to the common good, which is defined in these meetings. The more a person is willing to contribute to the common good and the

community, the more likely there is a higher degree of cohesiveness in the respective society. Even though community meetings differ a lot across Africa, many are headed by traditional leaders or state representatives. Thus, participation in community meetings implies interaction with the national level.[16] The indicator of participation in community meetings is calculated in each country-year as the mean of the recoded answers.[17] It is transformed to the common scale between 0 and 1 by dividing by 3.

The second indicator is generated from a series of questions available from the Afrobarometer survey that capture the level of interaction (contact) with different public officials. On a four-item scale from 0 ("never") to 3 ("often"), respondents separately rated the frequency of contacting the following four types of officials: local government councillors, Members of Parliament, officials of a government agency/ministry or traditional leaders/rulers.[18] Since few households ever contacted any official, our indicator takes on the maximum value among those four. Aggregation to the country-year level happened through the arithmetic mean across households. Subsequently, the indicator was rescaled to values between 0 and 1 by dividing by 3.

Finally, it is also important to understand whether and to what extent the state is interested in cooperating with civil society, for example, by allowing CSO activities and seeking consultation from CSOs. This information is available from the V-Dem database. A pool of experts is asked to provide a general evaluation of the level of state repression on a scale from 0 (active repression) to 4 (no substantive repression or harassment of CSOs) (Bernhard et al., 2015; Pemstein et al., 2019). Similarly, they evaluate the extent to which CSOs are consulted by policy-makers on policies relevant to their members on a scale from 0 (no regular consultation) to 2 (regular consultation). As these two indicators reflect the same aspect – government interest in interacting with civil society – they are brought to the same scale from 0 to 1 (by dividing by 2 or 4, respectively) and then aggregated through a simple arithmetic mean.

Finally, the index of vertical cooperation is obtained by averaging participation in community meetings, the intensity of contacts with public officials and the mean value of the two V-Dem indicators reflecting government interaction with CSOs, as expressed in the equation below.

$$coop\_vert = \left(\frac{community\_meeting \; + contact\_official \; + \; \frac{CSO\_No\_repress + \; CSOconsult}{2}}{3} \right)$$

In line with the procedure already used for the trust attribute, as a concluding step, we were able to build an overall index of cooperation for the common good. Also in this case, we aggregated the indices for the two dimensions (horizontal cooperation and vertical

16 Also, the question indicates a vertical state–citizen relationship by starting off with: "Here is a list of actions that people sometimes take as citizens."

17 As with the "raise an issue" question discussed earlier, this question originally included five possible answers. However, we reduced it to four, as the answer "no, but would do if had the chance" was recoded as 0 ("no") because we aim at measuring real cooperation and not willingness to cooperate. The maximum value of 3 (before recoding: 4) is given for the answer "yes, often".

18 Round 5 did not include a question on contacting a traditional leader/ruler.

cooperation) through the geometric mean in order to not allow perfect substitutability between the two indices.

$$coop\_score = \sqrt{coop\_horiz * coop\_vert}$$

4 An empirical investigation of social cohesion in Africa

4.1 Analysis by individual attribute

We then measured each of these indicators in those African countries where the respective questions were available. Table 5 reports how many countries are covered per social cohesion attribute in each round of the Afrobarometer survey. Recall that we are not able to distinguish between horizontal and vertical dimensions for inclusive identity. Horizontal trust is missing in Round 6. Our measurement approach covers up to 36 African countries.

Table 5: Number of countries covered – by attribute and Afrobarometer survey round

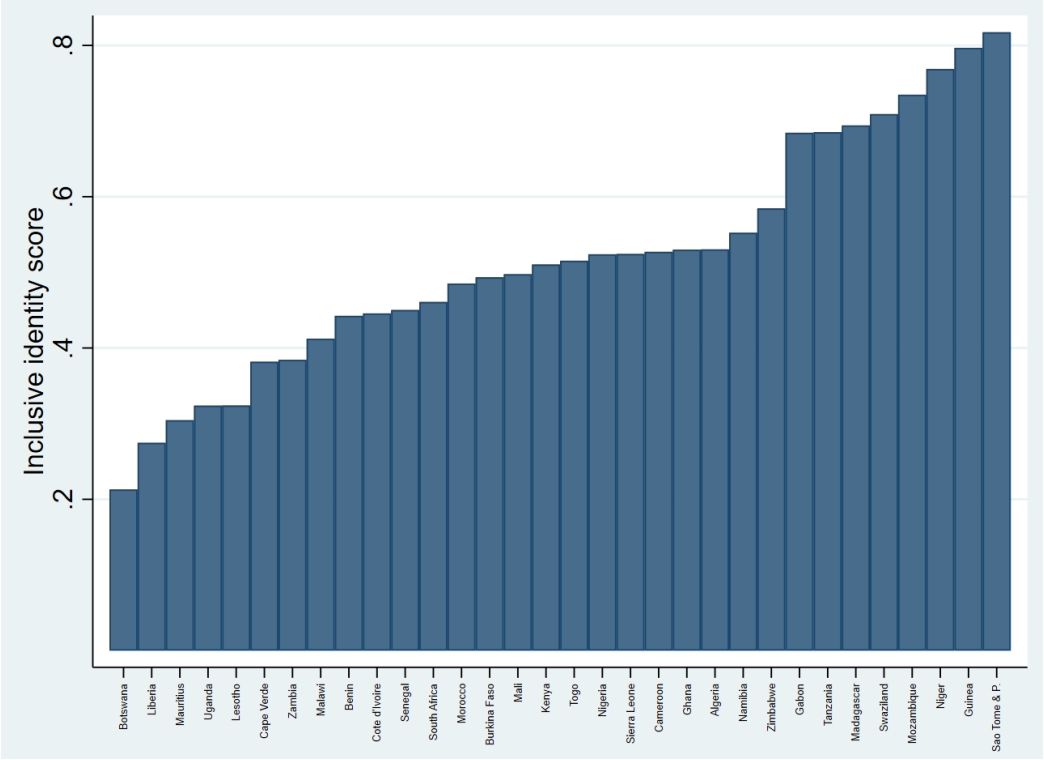
Attribute	Round 3 (2005-2006)	Round 4 (2008-2009)	Round 5 (2011-2013)	Round 6 (2014-2015)
Inclusive identity	17	20	28	32
Trust horizontal	18	20	34	0
Trust vertical	18	20	34	36
Cooperation horizontal	17	20	28	32
Cooperation vertical	18	20	34	36

Source: Authors' elaborations, based on Afrobarometer and V-Dem data

In Annex 2, we report the descriptive statistics for each attribute and sub-attribute for every round of the Afrobarometer survey. The following empirical analysis intends to portray the most recent country situation in terms of social cohesion and, thus, uses data from the latest survey available.

Figure 2 shows inclusive identity scores for Round 6. Only a few countries reach high levels of around 0.7 or above for this score, whereas five countries score very low, that is, below 0.35. Botswana comes in last, which is in line with Langer et al. (2017), who detected that there has been a significant deterioration of the identity attribute in the country since the early 2000s. There is, however, one peculiarity of Botswana, which has to be taken into account when interpreting the results in the identity measure: A large part of the population feels equally close to the nation and to their own ethnic group (see also Dryden-Peterson & Mulimbi, 2016). Indeed, Botswana is, after Cape Verde, the country that loses the most from the decision to define inclusive identity as requiring a higher sense of belonging to the nation as compared to the ethnic group (see Section 4.1).

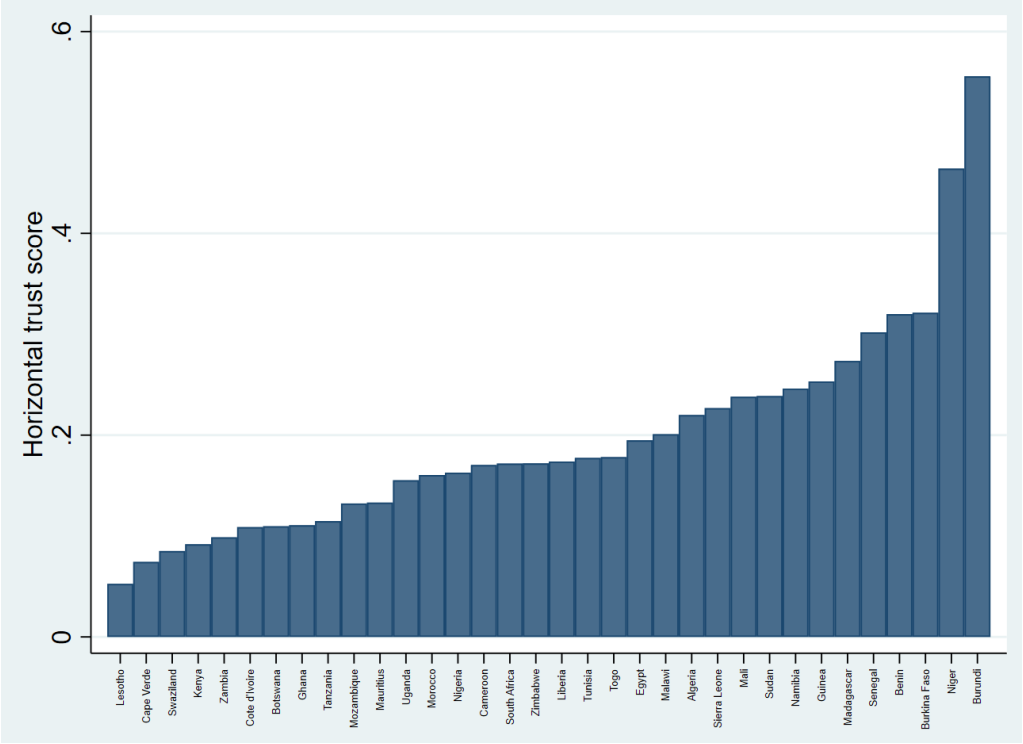
Figure 2: Inclusive identity by country (Round 6, 32 countries)



Source: Authors' calculations, based on Afrobarometer and V-Dem data

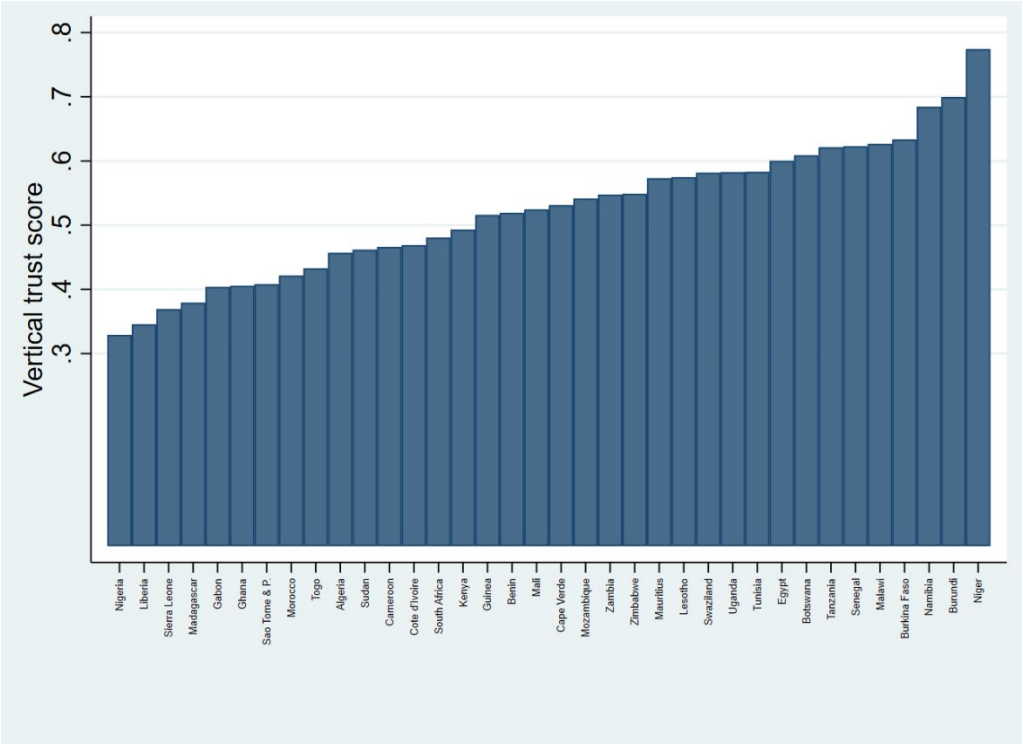
Horizontal trust, as measured with Afrobarometer Round 5 data, is shown in Figure 3. Niger and Burundi stand out for their high levels of horizontal trust. In general, Southern African countries have lower scores than other sub-regions in Africa. Figure 4 shows that Niger and Burundi also have the highest scores in vertical trust. Apart from this, however, vertical and horizontal trust do not correlate strongly. Lesotho, for example, performs poorly in horizontal trust but has a better-than-average performance in vertical trust. Madagascar and Sierra Leone score substantially better in horizontal than in vertical trust.

Figure 3: Horizontal trust by country (Round 5, 34 countries)



Source: Authors' calculations, based on Afrobarometer and V-Dem data

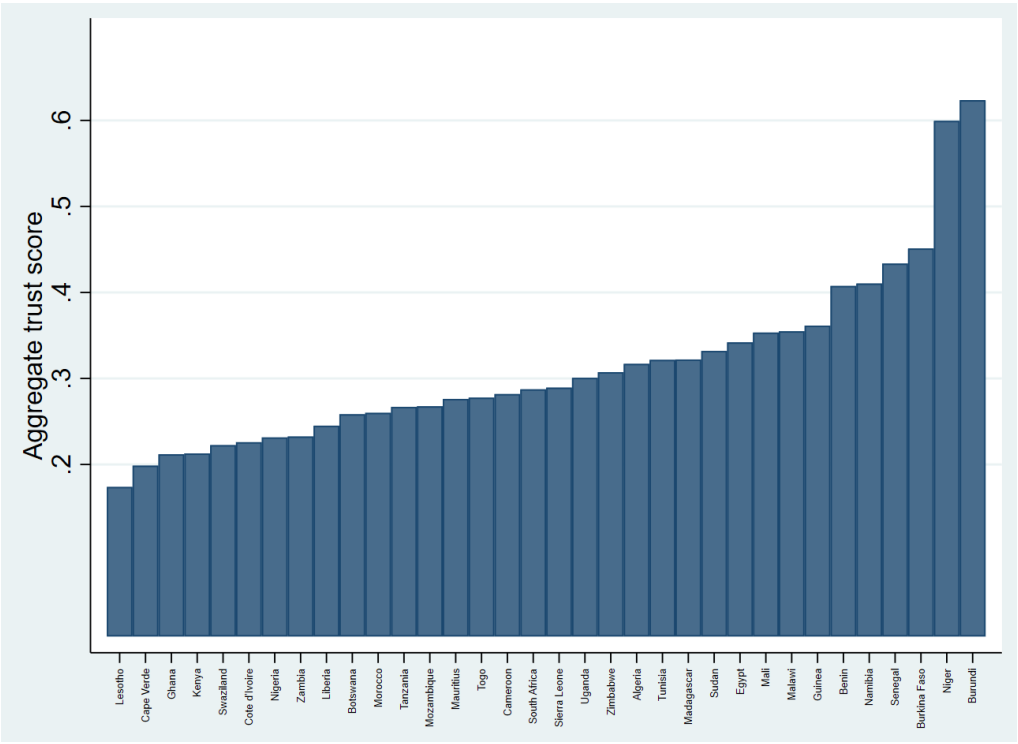
Figure 4: Vertical trust by country (Round 6, 36 countries)



Source: Authors' calculations, based on Afrobarometer and V-Dem data

Finally, to have an overall picture of trust in every country, we examined the aggregate trust scores. To obtain the most recent aggregate score, we combined horizontal trust from Round 5 with vertical trust from Round 6, building on the assumption that horizontal trust is a "sticky" phenomenon, which tends to change only slowly (Uslaner, 2002, 2019). Figure 5 shows that Niger and Burundi can thus extend their substantial lead in this attribute. There is no obvious sub-regional pattern in the aggregate trust scores.

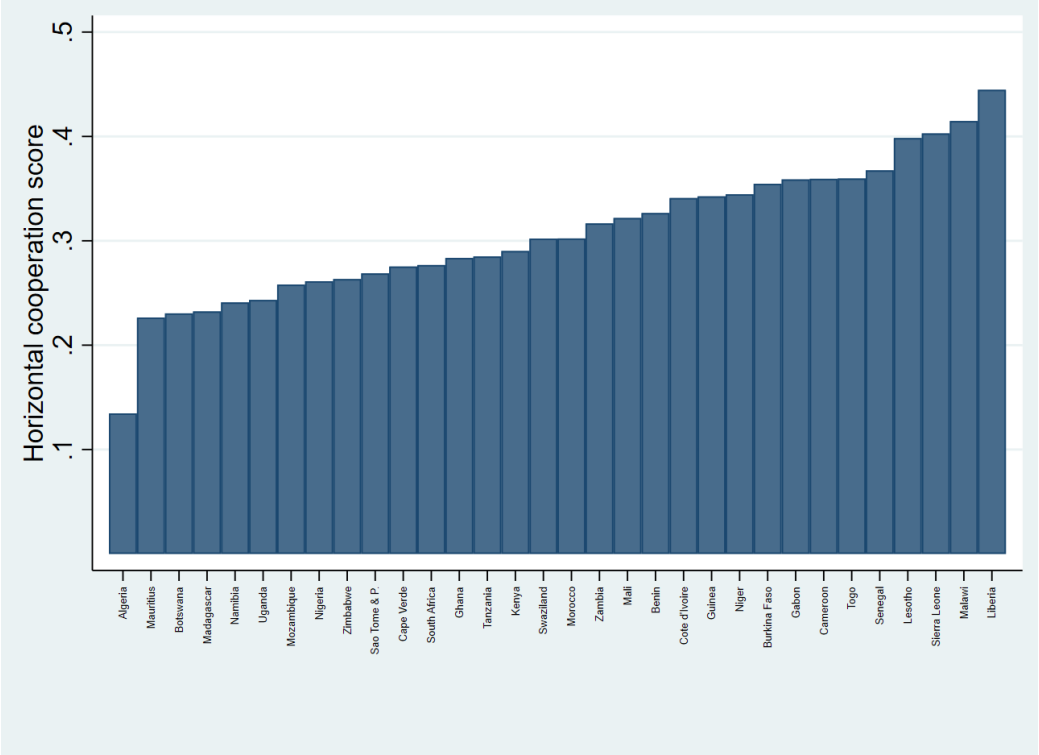
Figure 5: Overall trust by country (34 countries)



Source: Authors' calculations, based on Afrobarometer and V-Dem data

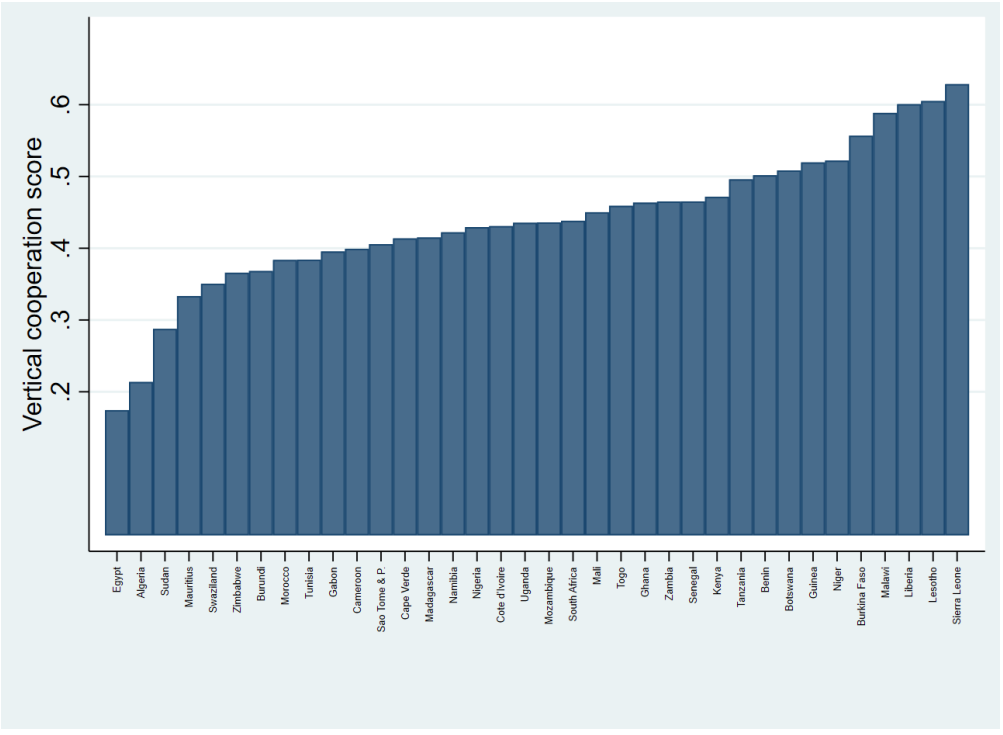
In contrast, horizontal cooperation, as shown in Figure 6, reaches the highest levels in Western Africa, including Liberia, Sierra Leone and Senegal. Countries in this region also score high in vertical cooperation (see Figure 7). However, the most interesting finding is the low performance in vertical cooperation of North African countries such as Egypt and Algeria. Horizontal cooperation cannot be assessed for several North African countries due to missing data. The aggregate cooperation score is shown in Figure 8 and confirms the high performance of Western African countries.

Figure 6: Horizontal cooperation by country (Round 6, 32 countries)



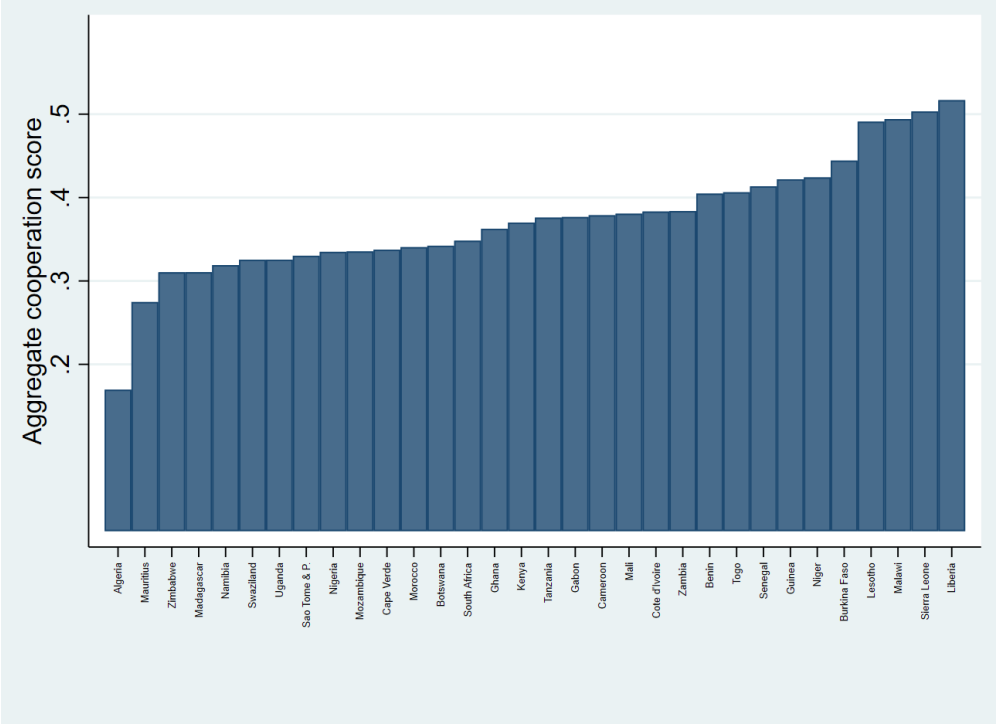
Source: Authors' calculations, based on Afrobarometer and V-Dem data

Figure 7: Vertical cooperation by country (Round 6, 36 countries)



Source: Authors' calculations, based on Afrobarometer and V-Dem data

Figure 8: Overall cooperation by country (Round 6, 32 countries)



Source: Authors' calculations, based on Afrobarometer and V-Dem data

In sum, for both trust and cooperation, vertical and horizontal attributes appear to correspond somewhat on the best performing countries. Table 6 provides a more systematised approach and presents linear correlation coefficients. Trust in people and trust in institutions correlate highly at 0.29. Vertical and horizontal cooperation also correlate highly at 0.79. However, the correlation between attributes is lower: 0.34 between trust and identity, 0.16 between trust and cooperation. Identity and cooperation even correlate negatively at -0.13. These low and negative correlations between the three attributes of social cohesion are at odds with the theoretical expectations that these phenomena should be highly correlated. It will be necessary to analyse these relationships further in the future. However, these results also suggest that social cohesion is empirically – at least in our sample – not a unidimensional phenomenon. Thus, in the following sub-section, we investigate whether different groups of African countries follow specific patterns of social cohesion, based on the combination of the three attributes.[19] This is done using a cluster analysis.

19 One option to properly recognise the multidimensional nature of social cohesion would be to aggregate the three attributes into one single index. This exercise, however, requires several assumptions and is not of particular usefulness for policy-makers. Anyway, we will explore this option further in the future.

Table 6: Correlation between attributes of social cohesion

	Identity score	Trust score	Cooperation score	Horizontal trust	Vertical trust	Horizontal cooperation	Vertical cooperation
Identity score	1						
Trust score	0.34	1					
Cooperation score	-0.13	0.16	1				
Horizontal trust	0.37	0.95	0.21	1			
Vertical trust	0.09	0.56	0.02	0.29	1		
Horizontal cooperation	-0.10	0.15	0.96	0.21	-0.05	1	
Vertical cooperation	-0.18	0.15	0.92	0.17	0.11	0.79	1

Source: Authors' calculations, based on Afrobarometer and V-Dem data

Note: This correlation analysis is based on Afrobarometer Round 6 data. The only exceptions are horizontal trust, which is measured on Round 5 data, and the overall trust score, which combines Round 6 data for vertical trust with Round 5 data for horizontal trust.

4.2 Clusters of social cohesion patterns in African countries

For the cluster analysis, we assumed that the three attributes of social cohesion appear in different typical combinations across countries. Statistical methods helped us identify such combinations. Note that we did not assume that the resulting combinations constitute "true" representations of reality. The combinations are models that helped us to make sense of empirical variations. Moreover, it is also noteworthy that the statistical exercise to arrive at a particular set of clusters involves making several assumptions in different steps. The decisions we took are in our view reasonable – given the theoretical assumptions about how social cohesion works – and lead to insights that may advance our understanding of social cohesion across African countries.

For our clustering exercise, we drew on a subsample of countries with sufficient temporal coverage for the questions we used from Rounds 3 to 6 of the Afrobarometer. Table 7 shows these countries (in bold) as well as the exact years in which the respective data was collected. Earlier rounds could not be used because they did not include the ethnicity question used for the identity and cooperation attribute. Moreover, Round 7 could not be included since the question about generalised trust was discontinued. In addition, 13 country-year observations from 10 countries could not be used in the cluster analysis due to missing data in at least one of the three attributes. As cluster analysis is sensitive to outliers, we removed four more country-years with extremely high trust scores (Burundi 2012, Niger 2013 and 2015; scores between 0.59-0.62 compared to the rest of the sample between 0.14-0.47 with a mean of 0.30 and a standard deviation of 0.077) and extremely low values in the cooperation attribute (Algeria 2015; score of 0.10 compared to the rest of the sample between 0.23-0.49 with a mean of 0.34 and a standard deviation of 0.057). We ended up with 91 country-year observations from 28 different countries for the time period between 2005 and 2015 to be used for the cluster analysis.

Table 7: Overview of Afrobarometer (rounds/years)

	Round 3		Round 4		Round 5			Round 6		Total
	2005	2006	2008	2009	2011	2012	2013	2014	2015	
Algeria							x*		x+	2
Benin	x		x		x			x		4
Botswana	x		x			x		x		4
Burkina Faso			x			x			x	3
Burundi						x+		x*+		2
Cameroon							x		x	2
Cape Verde	x		x		x			x		4
Côte d'Ivoire							x	x		2
Egypt							x*		x*	2
Gabon									x*	1
Ghana	x		x			x		x		4
Guinea							x		x	2
Kenya	x		x		x			x		4
Lesotho	x		x			x		x		4
Liberia			x			x			x	3
Madagascar	x		x				x	x		4
Malawi	x		x			x		x		4
Mali	x		x			x		x		4
Mauritius						x		x		2
Morocco							x*		x	2
Mozambique	x		x			x			x	4
Namibia		x	x			x		x		4
Niger							x+		x+	2
Nigeria	x		x			x		x		4
Senegal	x		x				x	x		4
Sierra Leone						x			x	2
South Africa		x	x		x				x	4
Sudan							x*		x*	2
Swaziland							x*		x	2
São Tomé and Principe									x*	1
Tanzania	x		x			x		x		4
Togo						x		x		2
Tunisia							x*		x*	2
Uganda	x		x			x			x	4
Zambia	x			x			x	x		4
Zimbabwe	x*			x		x		x		4
Total	16	2	18	2	4	17	13	19	17	108
Included in clustering	15	2	18	2	4	16	6	18	10	91

Source: Authors' calculations, based on Afrobarometer and V-Dem data

Countries written in **bold** are included in the clustering analysis

* excluded from clustering due to missing values in at least one of the attributes

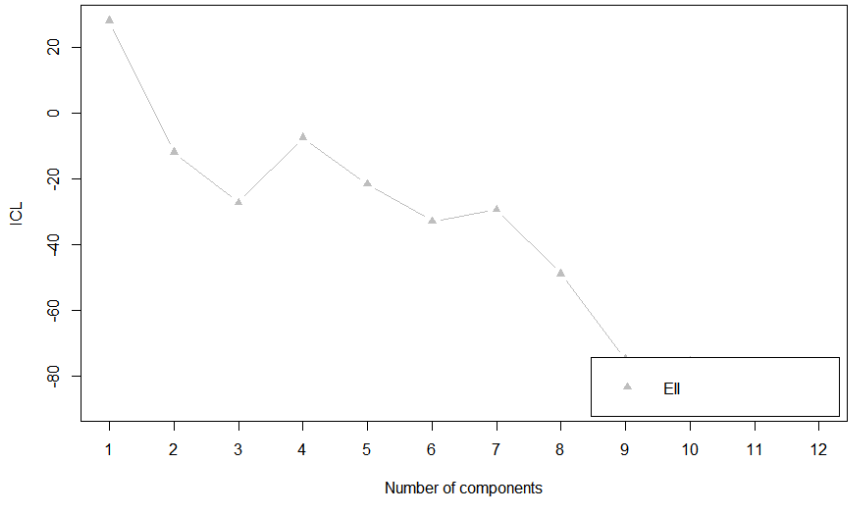
\+ excluded from clustering as outlier

In order to identify typical combinations of social cohesion traits among these countries, we employed finite mixture modelling (Fraley & Raftery, 2002). This model assumes that, within each group, attributes are normally distributed. The model required that we pre-specify the number of clusters to be identified. To find the number of groups best representing the data, models with different numbers of groups were compared to each other using goodness-of-fit measures. The goal of this exercise was not, however, to find a model representing "true" patterns of social cohesion. The goal was to find a useful representation that provides analytical insights into how social cohesion works (Grimmer & King, 2011; cf. Ziaja, Grävingholt, & Kreibaum, 2019, p. 310).

We pooled all country-years, which increased the number of observations and introduced the assumption that combinations of social cohesion are constant over time.[20] As we observed a short time period, this was a defensible assumption. We also re-scaled all scores to ranges from 0 to 1. This was done to acknowledge our ignorance about the "true" scales of these variables. After re-scaling, they all had the same range, which implied the assumption that trust, cooperation and identity all varied to the same extent within our sample. We implemented the model using the statistical software R and the package Mclust (Scrucca, Fop, Murphy, & Raftery, 2016). Finite mixture models permitted a range of specifications that determined possible shapes that groups can take. As we had little data and intended to generate compact clusters, we opted for the simplest specification available. The "EII" specification set all clusters to the same standard variation (i.e. size) across all attributes, resulting in spherical distributions. As our goodness-of-fit measure for identifying the best number of groups, we employed the integrated complete-data likelihood criterion (ICL; Scrucca et al., 2016, p. 297). The ICL penalises models for the number of parameters and for cluster overlap.

Figure 9 shows ICL scores for specifications between one and nine groups. A relative maximum on the curve indicates that four groups best represent the variation present in the data unless we want to treat all data as belonging to the same cluster (i.e. to one group).

Figure 9: Determining the number of groups

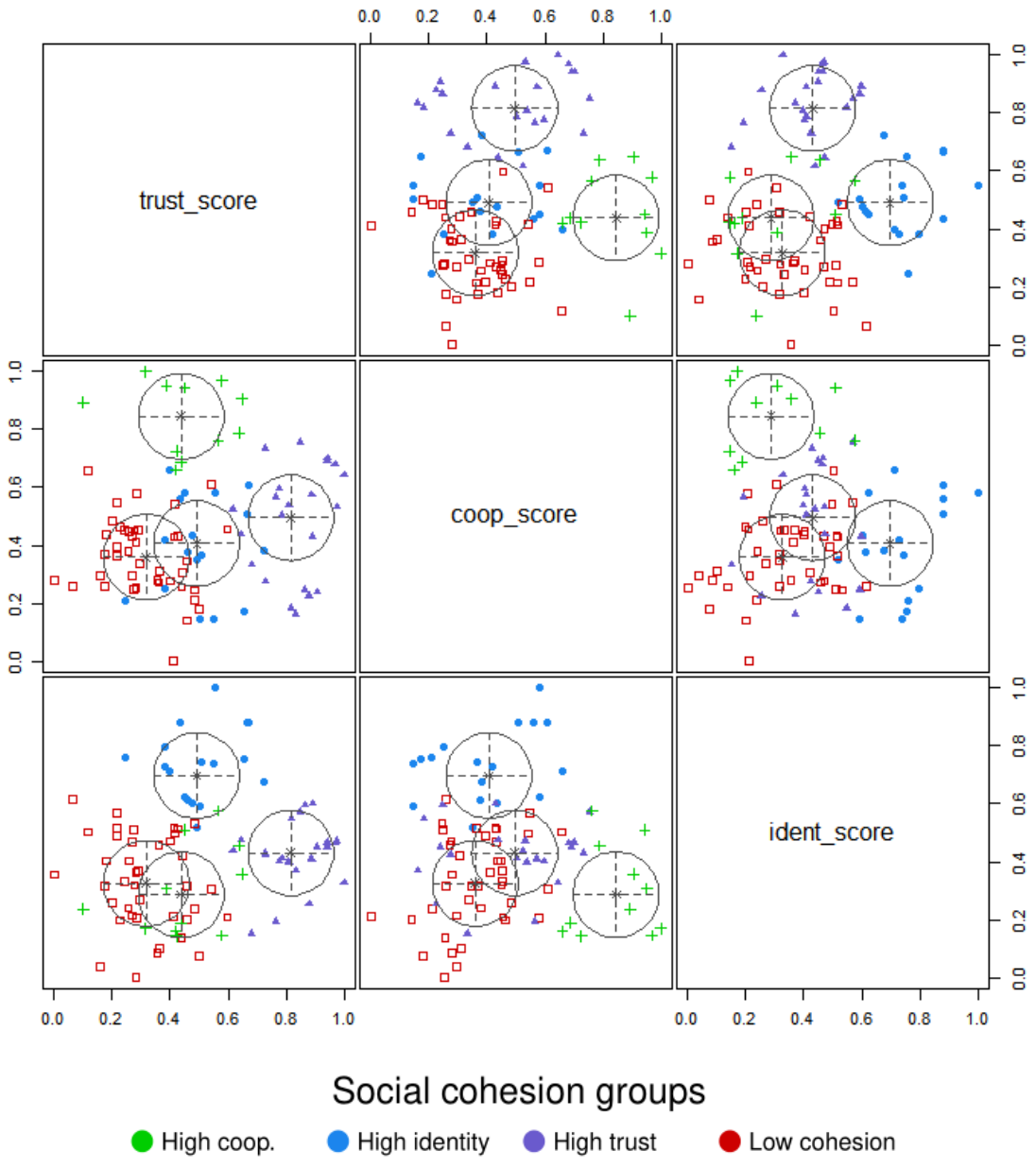


Source: Authors' calculations using the *mclust* package in R

20 We acknowledge that this approach may allow some countries that have been covered by more Afrobarometer rounds to get more weight than others.

Figure 10 shows where clusters are located in the three-dimensional space spanned by our attributes of social cohesion. In each dimension, at least one group outperforms the others. The purple group leads in trust; the green group in cooperation; and the blue group in identity. The red group does not achieve high scores in any of the attributes.

Figure 10: Location of clusters as seen from all possible pairs of attributes (country-years)

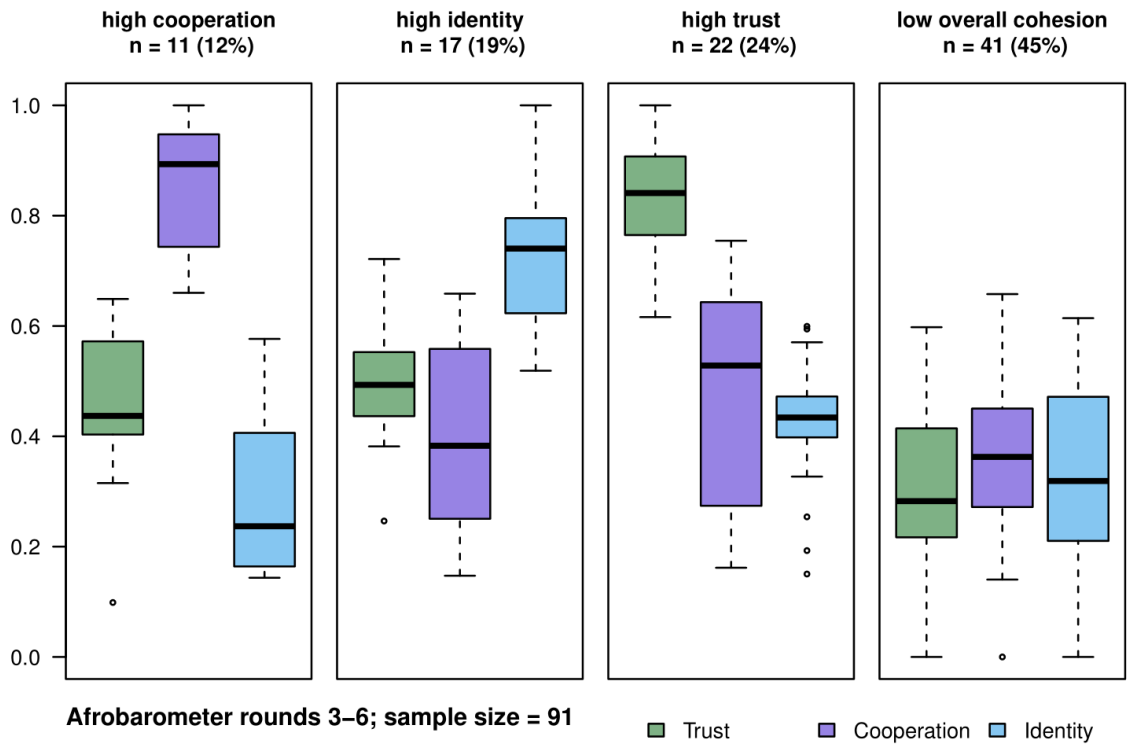


Source: Authors' calculations using the *mclust* package in R

Figure 11 provides an overview of the distribution of social cohesion scores within the four identified groups. The boxes shown contain 50 per cent of all observations that are members of each group. The bold line indicates the median score, and the whiskers and dots represent the top and bottom quartiles. Again, it shows clearly that three groups perform well in the three different attributes of social cohesion, whereas one group performs poorly across all

three. We labelled the groups “high cooperation”, “high identity”, “high trust” and “low overall cohesion”.

Figure 11: Distribution of attribute scores by group



Source: Authors’ calculations, based on Afrobarometer and V-Dem data

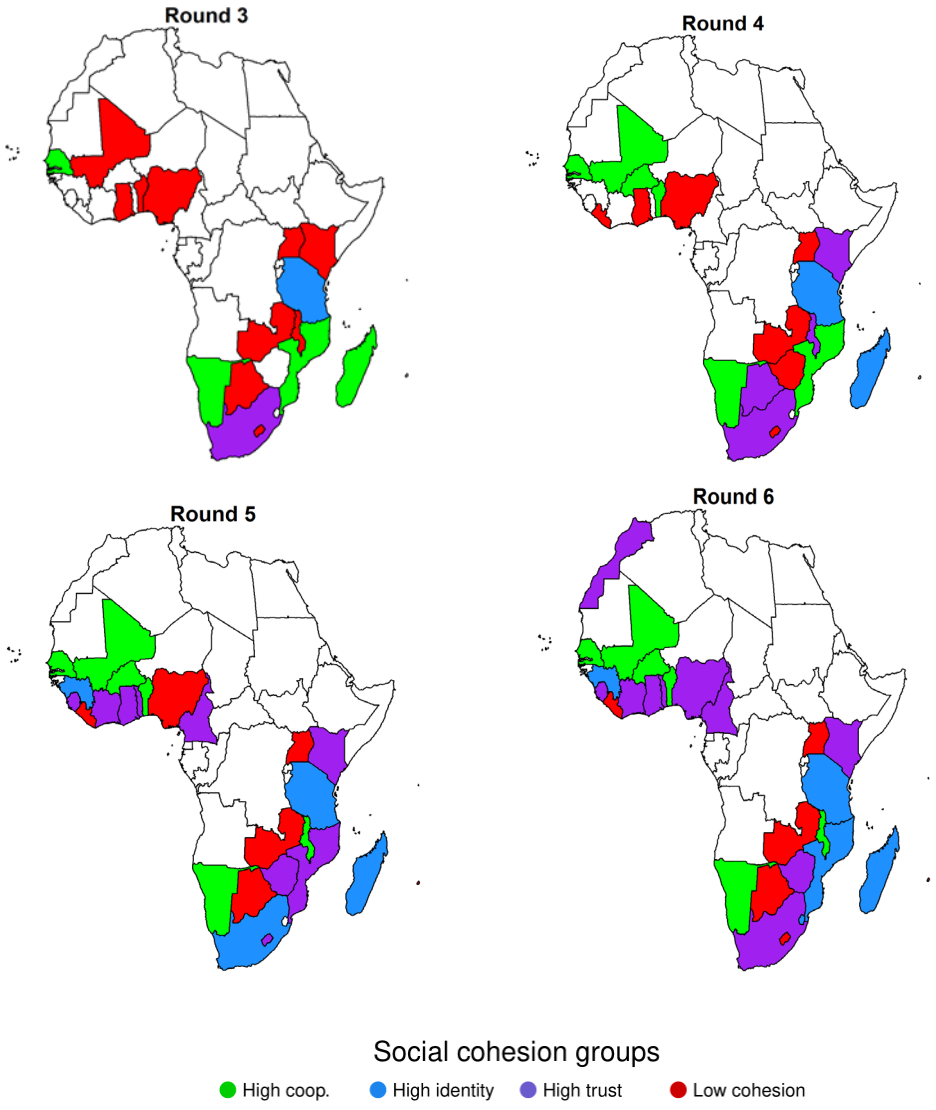
As for the groups’ overall performance levels, the red “low overall cohesion” group has the lowest scores across all attributes. The remaining groups cannot be clearly ranked. As all attributes come with proprietary scales that are not directly comparable, one cannot tell whether social cohesion is “better” in the high cooperation group or the high trust group, or in the high identity group.

Looking at the geographic and temporal distribution of the social cohesion groups (Figure 12 and Annex 3), it is apparent that, in many countries, the levels of social cohesion increase slightly or remain stable over time. In eight countries – namely Ghana, Lesotho, Liberia, Madagascar, Mali, Mozambique, Tanzania and Uganda – overall social cohesion decreases between 2005 and 2015. Most countries stay in the same group over time and show similar constellations of the three attributes. This is in line with our theoretical expectations that social cohesion is a sticky and path-dependent concept. We observed changes of group membership in countries where social cohesion deteriorates and countries move from a group with one highly scored attribute to the group with overall low social cohesion (Mozambique, South Africa); we also observed changes in countries where open and partly violent societal conflicts emerged during the period of observation (Mali) or where social cohesion improved, moving countries from the overall low cohesion group to another group (Lesotho, Malawi). Ghana and Malawi are exceptions because their group memberships vary over time.

With regard to the specific groups, we observed a high number of countries with low levels of overall social cohesion. Some of these countries have experienced severe societal conflicts

with social unrest or violent outbreaks during the last decade, in particular Cameroon, Cote d'Ivoire, Kenya, Nigeria, Togo and Uganda. Countries such as Botswana, Cape Verde and Zambia have peaceful societies but still show low levels of overall social cohesion. In such countries with low human development, social cohesion might compensate for poverty and weak state institutions. Francophone countries tend to have higher levels of trust (Benin, Burkina Faso and Senegal), which might have to do with strong ties in the society during colonial rule.[21] High identity scores coincide with countries with strong liberation movements. This is consistent with the fact that liberation shaped national identities after the independence of these states (South Africa, Tanzania, Zimbabwe). Only a limited number of countries show high levels of cooperation. These are small and partly post-war countries (Lesotho, Liberia, Sierra Leone). These country constellations and the membership of individual countries in one group need further interpretation and explanations in future research.

Figure 12: Maps of social cohesion clusters across Rounds 3 to 6 of Afrobarometer



Source: Authors' calculations using R, *shapefile* from the *cshapes* package

21 Higher trust in francophone countries could be an artefact of language bias in the raw survey data.

5 Conclusions

This paper presented a lean yet comprehensive definition of social cohesion that is cross-national and illustrates its measurement using the African context. In our understanding, social cohesion describes both the relations between groups and individuals as well as their relationship with the state and consists of three main attributes: mutual trust, an inclusive superordinate identity that allows social identities to overlap and cooperation that is oriented to the common good rather than particularistic interests. Based on perception data from the Afrobarometer and expert data from the V-Dem Institute, we were able to operationalise the concept in 36 African countries. Doing so allowed us to identify different constellations of social cohesion facilitating cross-country comparisons. We found four constellations of social cohesion, which indicate high, medium and low levels of social cohesion in the analysed countries.

This research provides a basis for advancing our understanding of social cohesion. By putting forward a lean and measurable concept, it also opens up promising pathways for further investigating the causes and consequences of social cohesion, among others in the context of sustainable development. For instance, preliminary empirical analyses of the relationship between social cohesion and human development suggest a U-shaped relationship might exist between social cohesion and the level of income of a country (Burchi et al., 2021). Empirical evidence emerging from such studies can also inform policy-making, and hence practitioners in development programmes can use it for indicator-building and informing their theories of change.

Having said this, several caveats and tasks remain, in particular regarding the measurement of social cohesion, but also in terms of understanding its causes and consequences. First, despite the rich literature, saturated theories on the causes and consequences of social cohesion are very limited. One main reason for this is that the current literature tends to focus on specific elements of social cohesion instead of the concept as a whole with its three attributes. For instance, we know a lot about the relationship between trust and development outcomes, such as its relevance for government effectiveness or health outcomes (Leininger, Malerba, von Schiller, & Strupat, 2021). Analysing social cohesion "as a whole" by taking into account the different constellations of social cohesion will be decisive for further theory-building in academia and programme design in international cooperation. In order to do so, it will be important to analyse further the relationships between the three attributes of social cohesion.

Second, in particular, improving the measurement of cooperation "for the common good" is the next important task. The main weaknesses of existing definitions and data are that they do not distinguish the type of cooperation that individuals engage in. For instance, although survey respondents can indicate that they have engaged in community activities during the last six months, we cannot know whether this engagement was based on self-interest, dedicated to "one's own" social group or meant to contribute to the broader common good of society as a whole. At the same time, we believe it is key to overcoming this prominent shortcoming in the conceptualisation and measurement of cooperation in order to be able to measure the degree of cooperation for the common good in society, which is one of the key attributes of social cohesion.

Third, to make the necessary analyses of empirical relationships possible, data collection more generally must be further increased and improved. Developing comparable questionnaires and datasets for different world regions is one of the most important steps. The Social Cohesion Team at the German Development Institute has developed a first battery of questions that can serve to collect data for a perception-based measurement of social cohesion across countries and regions. Implementing such surveys on a larger scale remains a challenge. In addition to collecting representative data using surveys, it will be necessary to conduct qualitative studies that contextualise social cohesion. This is important for refining and advancing results from quantitative studies and for informing policy-making.

Finally, it is important to create a sustainable science–policy interface that helps to advance empirical research and feed results into policy-making and development cooperation. As outlined in the introduction, many governments as well as development and international organisations plan to – or already do – proactively support and foster social cohesion in their own societies or abroad. Thus, a clear definition and measurement of social cohesion is key if we want to understand the societal dynamics connected to phenomena central for development.

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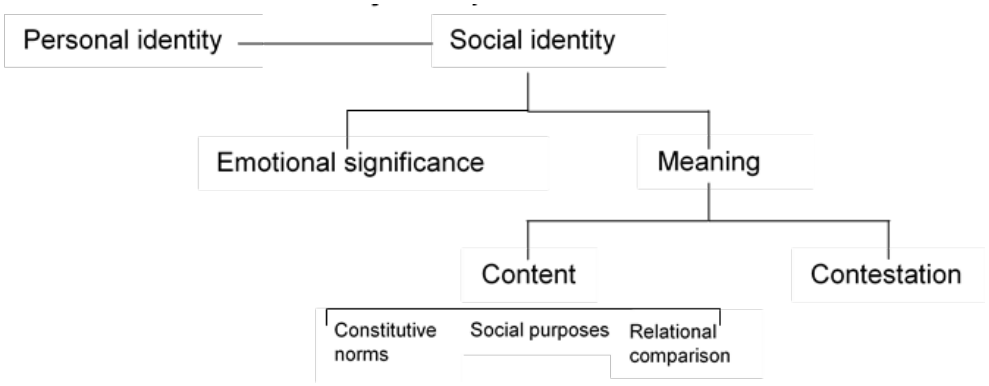
Annex

Annex 1: Additional information on concepts (attributes of social cohesion)

Inclusive identity

Social identities have both cognitive and affective properties (see Figure A1). The affective property is the subjective emotional significance that an individual ascribes to her various social identities. The cognitive property in contrast is the intersubjectively created meaning of a particular social identity (Citrin & Sears, 2009). The emotional significance of a social identity indicates the strength or intensity a person ascribes to a particular social identity (Citrin & Sears, 2009). It comes about by identifying with other group members, and thus creating positive affect for them.

Figure A1: Overview of societal identity concept



Source: Authors

Both the emotional significance and the meaning of social identity are distinct but complement one another. In the case of national identity, for instance, the emotional significance of social identity creates positive feelings towards one's fellow countrymen and one's country's symbols (Citrin, Wong, & Duff, 2001). At the same time, different meanings of national identity exist, such as patriotism, national chauvinism or constructive patriotism (Huddy, 2013).

Cooperation for the common good

Interpersonal cooperation for the common good is the basis of social cohesion. As Chipkin and Ngqulunga (2008, p. 61) observe, "Social cohesion is variously described as the 'affective bond between citizens'". However, strong interpersonal cooperation between individuals within one social group can undermine social cohesion if it benefits only one particular group while penalising others and not contributing or even contradicting the common good (Olson, 1965, p. 2). In contrast to parts of the literature on social capital, we thus assume that the purpose of cooperation should be a contribution to the common good of society at large.

Cooperation between individuals within one group can contribute to the common good and social cohesion, for example if several groups engage to improve literacy. However,

cooperative individuals within one group with an exclusive outcome (e.g. only supporting literacy in a specific ethnic group, while other groups have the same need but do not profit from the outcome) do not contribute to the common good. See also the related discussion on bonding (within group) and bridging (across groups) social capital, and the fact that bonding can run counter to bridging (Cheong, Edwards, Goulbourne, & Solomos, 2007).[22]

Cooperation across groups for the common good refers to cooperation as defined above, but also includes cooperation between individuals across different social groups. In this context, the common good can refer to one community, but it must not undermine the common good of a society as a whole (Knack & Keefer, 1997). The ability to cooperate for the common good across different social groups fosters social cohesion. The importance of cooperation across groups is often emphasised in the literature. "Social relations also encompass relations between various groups within a society […] a cohesive society requires mutual tolerance between such groups. Especially minority groups need to be socially included" (Schiefer & van der Noll, 2016). See also Lockwood (1999) (in Chan et al., 2006) focussing on social integration and social exclusion. The importance of across-group linkages has also received much attention in sociology and the social capital literature differentiating between weak and strong ties, or bonding and bridging relations (Cheong et al., 2007; Granovetter, 1973).

The third level of cooperation for the common good focusses on the state. As with the first two, it is bidirectional: Individuals cooperate with the state, but the state also cooperates with its citizens to promote the common good (e.g. by involving people in political decision-making). It refers to what Chan et al. (2006) describe as "vertical interactions" between the state and society at large (Chan et al., 2006, p. 90). This aspect, often described as participation in public life or civic engagement, is widely portrayed as an important element of social cohesion (Acker, Borsenberger, Dickes, & Sarracino, 2011; Chan et al., 2006; Schiefer & van der Noll, 2016).

22 See also concept paper on social trust.

Annex 2: Descriptive statistics of the social cohesion attributes (and sub-attributes), by survey round						
Variable	Round	Number of countries	Mean	Std. dev.	Min	Max
Inclusive identity score	3	17	0.409	0.168	0.178	0.885
	4	20	0.447	0.150	0.251	0.797
	5	28	0.495	0.173	0.150	0.828
	6	32	0.518	0.155	0.213	0.817
Variable	Round	Number of countries	Mean	Std. dev.	Min	Max
Horizontal trust	3	18	0.169	0.085	0.034	0.328
	4	20	0.177	0.081	0.054	0.321
	5	34	0.197	0.106	0.053	0.556
Variable	Round	Number of countries	Mean	Std. dev.	Min	Max
Vertical trust	3	18	0.607	0.135	0.294	0.829
	4	20	0.566	0.101	0.374	0.725
	5	34	0.553	0.107	0.336	0.749
	6	36	0.523	0.105	0.329	0.774
Variable	Round	Number of countries	Mean	Std. dev.	Min	Max
Trust score	3	18	0.308	0.094	0.141	0.451
	4	20	0.308	0.082	0.163	0.470
	5	34	0.320	0.100	0.180	0.608
	6	34	0.313	0.101	0.174	0.624
Variable	Round	Number of countries	Mean	Std. dev.	Min	Max
Horizontal cooperation	3	17	0.296	0.043	0.223	0.405
	4	20	0.318	0.052	0.250	0.439
	5	28	0.327	0.050	0.240	0.420
	6	32	0.307	0.066	0.135	0.445
Variable	Round	Number of countries	Mean	Std. dev.	Min	Max
Vertical cooperation	3	18	0.499	0.064	0.356	0.640
	4	20	0.498	0.054	0.407	0.581
	5	34	0.417	0.092	0.134	0.560
	6	36	0.439	0.099	0.175	0.629
Variable	Round	Number of countries	Mean	Std. dev.	Min	Max
Cooperation score	3	17	0.387	0.045	0.332	0.509
	4	20	0.397	0.050	0.329	0.505
	5	28	0.381	0.044	0.309	0.459
	6	32	0.373	0.071	0.170	0.517

Annex 3: Geographic and temporal distribution of sample					
Country	*Year*	*Trust*	*Cooperation*	*Identity*	*Cluster*
Benin	2005	0.68	0.33	0.15	high trust
Benin	2008	0.78	0.60	0.40	high trust
Benin	2011	0.89	0.43	0.60	high trust
Benin	2014	0.81	0.54	0.40	high trust
Botswana	2005	0.17	0.37	0.32	low cohesion
Botswana	2008	0.29	0.45	0.37	low cohesion
Botswana	2012	0.36	0.31	0.10	low cohesion
Botswana	2014	0.36	0.28	0.09	low cohesion
Burkina Faso	2008	1.00	0.64	0.33	high trust
Burkina Faso	2012	0.98	0.53	0.47	high trust
Burkina Faso	2015	0.94	0.70	0.47	high trust
Cameroon	2013	0.40	0.28	0.47	low cohesion
Cameroon	2015	0.43	0.43	0.51	low cohesion
Cape Verde	2005	0.00	0.28	0.36	low cohesion
Cape Verde	2008	0.07	0.26	0.61	low cohesion
Cape Verde	2011	0.20	0.48	0.26	low cohesion
Cape Verde	2014	0.17	0.26	0.32	low cohesion
Cote d'Ivoire	2013	0.27	0.43	0.47	low cohesion
Cote d'Ivoire	2014	0.26	0.45	0.40	low cohesion
Ghana	2005	0.54	0.61	0.31	low cohesion
Ghana	2008	0.42	0.66	0.16	high cooperation
Ghana	2012	0.28	0.41	0.36	low cohesion
Ghana	2014	0.21	0.36	0.52	low cohesion
Guinea	2013	0.67	0.51	0.88	high identity
Guinea	2015	0.67	0.61	0.88	high identity
Kenya	2005	0.24	0.45	0.33	low cohesion

Annex 3: Geographic and temporal distribution of sample					
Country	*Year*	*Trust*	*Cooperation*	*Identity*	*Cluster*
Kenya	2008	0.18	0.44	0.40	low cohesion
Kenya	2011	0.22	0.55	0.57	low cohesion
Kenya	2014	0.22	0.39	0.49	low cohesion
Lesotho	2005	0.58	0.97	0.15	high cooperation
Lesotho	2008	0.39	0.95	0.31	high cooperation
Lesotho	2012	0.12	0.66	0.50	low cohesion
Lesotho	2014	0.10	0.89	0.24	high cooperation
Liberia	2008	0.42	0.73	0.14	high cooperation
Liberia	2012	0.44	0.69	0.19	high cooperation
Liberia	2015	0.32	1.00	0.17	high cooperation
Madagascar	2005	0.79	0.50	0.41	high trust
Madagascar	2008	0.72	0.38	0.68	high identity
Madagascar	2013	0.65	0.17	0.75	high identity
Madagascar	2014	0.55	0.15	0.74	high identity
Malawi	2005	0.26	0.38	0.24	low cohesion
Malawi	2008	0.45	0.58	0.62	high identity
Malawi	2012	0.73	0.73	0.43	high trust
Malawi	2014	0.65	0.91	0.36	high cooperation
Mali	2005	0.76	0.57	0.19	high trust
Mali	2008	0.64	0.79	0.46	high cooperation
Mali	2012	0.62	0.52	0.44	high trust
Mali	2014	0.64	0.44	0.47	high trust
Mauritius	2012	0.46	0.14	0.20	low cohesion
Mauritius	2014	0.41	0.00	0.21	low cohesion
Morocco	2015	0.36	0.27	0.46	low cohesion
Mozambique	2005	0.91	0.24	0.45	high trust

Annex 3: Geographic and temporal distribution of sample					
Country	*Year*	*Trust*	*Cooperation*	*Identity*	*Cluster*
Mozambique	2008	0.73	0.27	0.42	high trust
Mozambique	2012	0.48	0.24	0.53	low cohesion
Mozambique	2015	0.38	0.25	0.80	high identity
Namibia	2006	0.86	0.25	0.59	high trust
Namibia	2008	0.88	0.22	0.25	high trust
Namibia	2012	0.83	0.16	0.37	high trust
Namibia	2014	0.82	0.18	0.55	high trust
Nigeria	2005	0.16	0.30	0.04	low cohesion
Nigeria	2008	0.27	0.29	0.21	low cohesion
Nigeria	2012	0.28	0.25	0.00	low cohesion
Nigeria	2014	0.27	0.25	0.51	low cohesion
Senegal	2005	0.94	0.69	0.45	high trust
Senegal	2008	0.85	0.75	0.57	high trust
Senegal	2013	0.97	0.68	0.46	high trust
Senegal	2014	0.89	0.57	0.41	high trust
Sierra Leone	2012	0.57	0.76	0.58	high cooperation
Sierra Leone	2015	0.45	0.94	0.51	high cooperation
South Africa	2006	0.48	0.43	0.60	high identity
South Africa	2008	0.46	0.38	0.61	high identity
South Africa	2011	0.51	0.36	0.74	high identity
South Africa	2015	0.44	0.30	0.42	low cohesion
Swaziland	2015	0.25	0.21	0.76	high identity
Tanzania	2005	0.55	0.58	1.00	high identity
Tanzania	2008	0.44	0.56	0.88	high identity
Tanzania	2012	0.40	0.66	0.71	high identity
Tanzania	2014	0.38	0.42	0.73	high identity

Annex 3: Geographic and temporal distribution of sample					
Country	*Year*	*Trust*	*Cooperation*	*Identity*	*Cluster*
Togo	2012	0.41	0.43	0.52	low cohesion
Togo	2014	0.41	0.54	0.50	low cohesion
Uganda	2005	0.60	0.46	0.21	low cohesion
Uganda	2008	0.44	0.26	0.14	low cohesion
Uganda	2012	0.50	0.18	0.07	low cohesion
Uganda	2015	0.48	0.21	0.24	low cohesion
Zambia	2005	0.23	0.46	0.20	low cohesion
Zambia	2009	0.28	0.58	0.20	low cohesion
Zambia	2013	0.29	0.34	0.27	low cohesion
Zambia	2014	0.28	0.45	0.32	low cohesion
Zimbabwe	2009	0.46	0.34	0.32	low cohesion
Zimbabwe	2012	0.49	0.35	0.52	high identity
Zimbabwe	2014	0.50	0.15	0.59	high identity
Source: Authors					

<table>
<tr><th colspan="4">Annex 4: Questions for Afrobarometer and V-Dem</th></tr>
<tr><td colspan="2">Attribute of social cohesion</td><td colspan="2">Question</td></tr>
<tr><td colspan="2"></td><td>Afrobarometer</td><td>V-Dem</td></tr>
<tr><td colspan="2">Inclusive identity</td><td>Q: Let us suppose that you had to choose between being a [ENTER NATIONALITY] and being a _____ [R's Ethnic Group]. Which of the following best expresses your feelings? (Version Round 6)

- 1=I feel only (R's ethnic group)
- 2=I feel more (R's ethnic group) than [ENTER NATIONALITY]
- 3=I feel equally [ENTER NATIONALITY] and (R's ethnic group),
- 4=I feel more [ENTER NATIONALITY] than (R's ethnic group)
- 5=I feel only [ENTER NATIONALITY]
- 7=Not applicable
- 9=Don't know
- 98=Refused to answer
- - 1=Missing</td><td></td></tr>
<tr><td rowspan="2">Trust</td><td>Social</td><td>Q: Let's turn to your views on your fellow citizens. Generally speaking, would you say that most people can be trusted or that you must be very careful in dealing with people? (Version Round 5)

- 0= Must be very careful
- 1= Most people can be trusted
- 9=Don't know; 998=Refused to answer
- -1=Missing</td><td rowspan="2"></td></tr>
<tr><td>Institu-tional</td><td>Q: How much do you trust each of the following, or haven't you heard enough about them to say: (Parliament? / The police? / Courts of law?) (Version Round 5)
- 0=Not at all
- 1=Just a little
- 2=Somewhat
- 3=A lot
- 9=Don't know/Haven't heard enough
- 998=Refused to answer
- -1=Missing</td></tr>
</table>

Cooperation for the common good	Inter-group	Q1: Let's turn to your role in the community. Now I am going to read out a list of groups that people join or attend. For each one, could you tell me whether you are an official leader, an active member, an inactive member or not a member: some other voluntary association or community group? (Version Round 5) - 0=Not a member - 1=Inactive member - 2=Active member - 3=Official leader - 9=Don't know - 998=Refused to answer - -1=Missing Q2: Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have done any of these things during the past year. If not, would you do this if you had the chance: Got together with others to raise an issue? (Version Round 5) - 0=No, would never do this - 1=No, but would do if had the chance - 2=Yes, once or twice - 3=Yes, several times - 4=Yes, often - 9=Don't know - 998=Refused to answer - -1=Missing	Q: Which of these best describes the involvement of people in civil society organisations (CSOs)? (0-3) - 0: Most associations are state-sponsored, and although a large number of people may be active in them, their participation is not purely voluntary. - 1: Voluntary CSOs exist but few people are active in them. - 2: There are many diverse CSOs, but popular involvement is minimal. - 3: There are many diverse CSOs and it is considered normal for people to be at least occasionally active in at least one of them.
	State-society	Q1: Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have done any of these things during the past year. If not, would you do this if you had the chance: Attended a community meeting? (Version Round 5) - 0=No, would never do this - 1=No, but would do if had the chance - 2=Yes, once or twice - 3=Yes, several times - 4=Yes, often - 9=Don't know - 998=Refused to answer - -1=Missing Q2: During the past year, how often have you contacted any of the following persons about some important problem or to give them your views: (A local government councillor? / A Member of Parliament? / An official of a government agency? / Traditional leaders?) (Version Round 5) - 0=Never - 1=Only once	Q1: Does the government attempt to repress civil society organisations (CSOs)? - 0: Severely. The government violently and actively pursues all real and even some imagined members of CSOs. They seek not only to deter the activity of such groups but to effectively liquidate them. Examples include Stalinist Russia, Nazi Germany and Maoist China. - 1: Substantially. In addition to the kinds of harassment outlined in responses 2 and 3 below, the government also arrests, tries, and imprisons leaders of and participants in oppositional CSOs who have acted lawfully. Other sanctions include disruption of public gatherings and violent sanctions of activists (beatings, threats to families, destruction of valuable property). Examples include Mugabe's Zimbabwe, Poland under Martial Law and Serbia under Milosevic. - 2: Moderately. In addition to material sanctions outlined in response 3

		- 2=A few times - 3=Often - 9=Don't know - 997=Not asked - 998=Refused to answer - -1=Missing	below, the government also engages in minor legal harassment (detentions, short-term incarceration) to dissuade CSOs from acting or expressing themselves. The government may also restrict the scope of their actions through measures that restrict association of CSOs with each other or political parties, bar civil society organisations from taking certain actions or block international contacts. Examples include post-martial law Poland, Brazil in the early 1980s and the late Franco period in Spain. - 3: Weakly. The government uses material sanctions (fines, firings, denial of social services) to deter oppositional CSOs from acting or expressing themselves. They may also use burdensome registration or incorporation procedures to slow the formation of new civil society organisations and side track them from engagement. The government may also organise Government Organised Movements or NGOs (GONGOs) to crowd out independent organisations. Examples would be Singapore in the post-Yew phase and Putin's Russia. - 4: No. Civil society organisations are free to organise, associate, strike, express themselves and to criticise the government without fear of government sanctions or harassment. Q2: Are major civil society organisations (CSOs) routinely consulted by policy-makers on policies relevant to their members? - 0: No. There is a high degree of insulation of the government from CSO input. The government may sometimes enlist or mobilise CSOs after policies are adopted to sell them to the public at large. But it does not often consult with them in formulating policies. - 1: To some degree. CSOs are but one set of voices that policymakers sometimes take into account. - 2: Yes. Important CSOs are recognised as stakeholders in important policy areas and given voice on such issues. This can be accomplished through formal corporatist arrangements or through less formal arrangements.
Source: Authors			

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