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Walls, Barriers, Checkpoints, No-man's-land. A Typology of Border Infrastructure on the African Continent[1]

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ABSTRACTS

Der Beitrag untersucht, wie afrikanische Staaten ihre territorialen Grenzen organisieren. Die afrikanischen Territorialgrenzen zeichnen sich dadurch aus, dass sie während des „Wettlaufs um Afrika" in kurzer Zeit und ohne Beteiligung der Bevölkerung von externen Kolonialmächten gezogen wurden. Im Zuge der Dekolonialisierung wurde an diesen Grenzen festgehalten. Wir beschäftigen uns mit der Frage, welche Typen von Grenzinfrastrukturen sich auf dem afrikanischen Kontinent finden, wofür wir eine taxonomische Indikatorik nutzen. In der Literatur wird einerseits vermutet, dass Staaten ihre prekären Grenzen mit Barrieren ausstatten, während ebenfalls argumentiert wird, dass der afrikanische Kontinent in seiner Gesamtheit durch poröse und dysfunktionale Grenzen gekennzeichnet ist. Die Analyse zeigt, dass die Mehrheit der afrikanischen Staaten ihre Grenzen mit Kontrollorten ausstattet. Wir finden nur eine geringe Anzahl an unkontrollierten Grenzen, die wir als Niemandsland bezeichnen. Barrieren und Fortifizierungen sind nur an spezifischen Grenzen installiert. Wir entwickeln auf Grundlage von Fallstudien Hypothesen zu den fortifizierten Grenzen.

This article investigates how African states manage their territorial borders. These borders have been drawn during the "Scramble for Africa" in a swift way by colonial powers without the participation of inhabitants. During decolonization, the colonial borders were retained in order to avoid militarized conflicts. We analyze which types of border infrastructure are maintained on the African continent today. For this purpose, we develop a taxonomical indicator of border infrastructure. The research literature assumes that African states install barriers in order to protect their precarious borders but scholars also argue that the whole continent is characterized by porous and dysfunctional borders. The analysis shows that checkpoints are installed at the majority of borders. We find that only a small number of cases are "no-man's-land" borders. Barriers and fortified borders are only implemented in specific cases. We use case studies to develop hypothesis on the situation that drives states to fortify their boundaries.

1. Introduction

Borders are an important part of a country's sovereignty since they mark and affirm state order in its territorial form. Fortification of state borders and regulation of cross-border exchanges therefore exemplify state's efforts to gain control over its own territory and to guard against unauthorized access.

Borders allow to include or to exclude and are thus an important structuring element of social order. After all, the existence and impact of borders segments the world population into distinguishable and clearly assigned populations. However, the way borders are organized varies significantly from country to country depending on the requirements and opportunities of government control, relationships with the neighbouring countries and geopolitical contexts.

In this work, we focus on the physical infrastructure of state borders, namely on their design and the building materials used, be it a checkpoint, a barrier or a partition in space. How do African states design their territorial borders in the twenty-first century? What do borders look like? Our research focuses on Africa, whose borders appear to be particularly controversial and precarious due to the continent's colonial history.[2] The nexus between state sovereignty and territorial integrity, which is taken for granted from the Eurocentric perspective, is far not that obvious here, and the state's ability to control its borders is weaker, too.[3] Demarcation of boundaries has been largely accepted and taken over by the new political elites as a "legacy" of decolonization; however, in everyday life in border regions, boundaries are being crossed routinely and as a matter of fact. One reason is that boundaries often ran through ethnic or same-language communities and thus cut through the long-established connections, while law enforcement and state control capacity in the period of state building remained weak.[4] At the same time (and possibly also in response), border conflicts, militarization of the borders and – as elsewhere – expansion of border barriers are common on the African continent, all of which

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2   M. Foucher, African Borders: Putting Paid to a Myth, in: Journal of Borderlands Studies (2019), pp. 1–20.
3   M. Anderson, Frontiers. Territory and State Formation in the Modern World, Cambridge 1996, p. 83.
4   R. R. Larémont (ed.), Borders, Nationalism, and the African State, Boulder 2005.

indicate that border control and operational enforcement of border security are essential tasks of state actors.

It was shown that well-founded border research already exists for the countries of the "Global North", whereas borders beyond the centre of global economy receive less attention.[5] This is particularly true for Africa, where state proceeding to secure and organize the borders has hardly been mapped so far.[6] In this paper we wish to present for the first time a taxonomic overview of the entirety of territorial boundaries in Africa. We are interested in the border as a physical infrastructure and thus in the way territoriality manifests at the border. What type of border landmarks and fortification – such as walls, fences, barriers or checkpoints – can be found in places where two countries adjoin? This is a narrow definition of a border that is related to the concept of territorial state and construction features of the respective fortification; however, it allows to access how territories are marked, defined and reinforced nowadays. For this purpose, we have developed a multi-level system of indicators to describe the variance and spread of territorial border infrastructures. Thanks to this approach, the discussion on borders focuses on the broad spectrum of physical constructions rather than on walls predominantly.

We describe the infrastructure and constructions of the respective border structures and hypothesize what might determine the physical shape of boundaries. The objective is to map border fortifications and border landmarks on the African continent, which in turn would allow to answer the question what role border barriers play here and what properties distinguish them. Based on this data, we formulate assumptions regarding the variance of certain types of constructions and state's motives to build or not to build walls, fences or checkpoints, respectively. Using selected examples, we will demonstrate that levels of border fortification may vary.

2. Borders, Border Control, and New Fortifications

The question of opening and de-institutionalization of borders has played an important role in the discussion on the transformation of nation states in the historical process of globalization. However, meanwhile it has become clear that the vision of the increasingly globalized world, in which walls and fences seem to be mere relics of the past, is an optic illusion existing primarily within the European perspective. Partial dismantling of border facilities does take place, the examples being the inner German border or that of the Schengen area; however, this trend is not widespread and can hardly be described as a global phenomenon. In contrast to the assumptions made earlier in the theories of globalization, the latest research deals increasingly with the apparent border reinforcement.[7]

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5   M. B. Salter, At the Threshold of Security: A Theory of International Borders, in: E. Zureik/M. B. Salter (eds.), Global Surveillance and Policing. Borders, Security, Identity, London 2005, p. 37.

6   Foucher, African Borders, p. 15.

7   An overview is provided by D. Newman, The Lines that Continue to Separate Us: Borders in Our 'Borderless' World, in: Progress in Human Geography 30 (2006) 2, pp. 143–161.

Instead of "de-bordering", we deal with "re-bordering"; instead of deterritorialization we deal with reterritorialization.[8]

From this point of view, a classical territorial border with its respective attributes like control and safeguarding measures is no relic but still matters and will possibly even gain in importance. Research shows that we observe a renaissance of fortified borders.[9] The number of fortified borders and walls has increased in particular since the 1990s: a lot more boundaries have been newly established and erected in the 2000s than in decades since the 1950s.[10] Today at least 45 walls[11] and 56 fences[12] exist on the borders between states, not including fences put up in Europe during the "refugee crisis".[13]

The existing research provides various answers to the question why such border structures aimed at sealing off are becoming increasingly important. Explanations range from marking and defending territorial sovereignty, exclusion of migrants, functions of defence, geopolitical interests, threat of terrorism, and needs for national protection to symbolic policy of "othering", which allows to deny certain rights to the persons on the other side of the border.[14] The construction of walls, for instance, was connected to the "global war on terror" and "securitization" of migration, among others.[15] Several studies reveal an explicit link between the building of walls and terrorist or military threats that many countries believe to be exposed to.[16]

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8   P. Andreas, Introduction: The Wall After the Wall, in: P. Andreas/T. Snyder (eds.), The Wall Around the West. State Borders and Immigration Controls in North America and Europe, Lanham 2000, pp. 1–11.

9   R. E. Hassner/J. Wittenberg, Barriers to Entry. Who Builds Fortified Boundaries and Why?, in: International Security 40 (2015) 1, pp. 157–190.

10   Ibid., pp. 165–167; E. Vallet/C.-P. David, Introduction: The (Re)Building of the Wall in International Relations, in: Journal of Borderland Studies 27 (2012) 2, p. 113.

11   Ibid., p. 112.

12   N. Avdan, Visas and Walls. Border Security in the Age of Terrorism, Philadelphia 2019, pp. 128–129.

13   A recent study even provides a count of 67 fortified boundaries for 2018, see V. Vernon/K.F. Zimmermann, Walls and Fences: A Journey Through History and Economics, in: GLO Discussion Paper 330 (2019), pp. 1–25. Small deviations in the number of fortified borders are due to slightly different operationalization.

14   Measuring the effect of border walls is even more complicated. For instance, Wendy Brown (2017) underlines that the newly erected walls are mere iconographic images. They claim to manifest a sovereignty of nation states that is long gone. In that sense, the increasing number of fortified border walls is understood as symbol of eroding nation states rather than a marker of their strength, W. Brown, Walled States, Waning Sovereignty, New York 2017. In any case, the empirical results are rather mixed; only in rare cases border walls provide a complete seal against unwanted mobility. In addition, it remains an open question whether rebordering signifies territorial control, see Hassner/Wittenberg, Barriers to Entry, pp. 182–187.

15   F. B. Adamson, Crossing Borders: International Migration and National Security, in: International Security 31 (2006) 1, pp. 165–199; R. Jones, Border Walls: Security and the War on Terror in the United States, India, and Israel, London 2012; Vallet/David, Introduction, pp. 111–119; N. Yuval-Davis/G. Wemyss/K. Cassidy, Bordering, Cambridge 2019. Peter Andreas distinguishes military, economic, and police borders. He assumes that the military and economic function of borders is in decline while the policing function becomes more prevalent, see P. Andreas, Redrawing the Line: Borders and Security in the Twenty-First Century, in: International Security 28 (2003) 2, pp. 78–111, p. 85. Police borders are meant to provide protection against a heterogeneous group of unwanted migrants, smugglers, and terrorists – so-called "clandestine transnational actors" (CTAs) – rather than against hostile nations or trading partners, see ibid., p. 78.

16   Avdan, Visas and Walls; Hassner/Wittenberg, Barriers to Entry, pp. 157–190; S. M. Jellissen/F. M. Gottheil, On the utility of security fences along international borders, in: Defense & Security Analysis 29 (2013) 4, pp. 266–279; Jones, Border Walls.

Other studies cite primarily economic reasons: border structures are supposed to safeguard privileges of prosperity.[17] Global inequality and the knowledge of the privileged living conditions of other people lead to the increased pressure of migration on the wealthy countries. Large income disparities between countries act as push or pull factors, respectively, that may motivate people to migrate and host countries to build "prosperity walls".[18] Border fortifications are understood here as "barriers" along the prosperity borders, which are supposed to keep out unwanted migrants. Hard borders are thus to be expected where a strong and a weak economy adjoin.[19] Numerous studies confirm that differences in prosperity increase the probability that a fence would be erected at the border[20], and the wealthier countries are ready to pay the costs[21], which are sometimes immense.[22]

Border reinforcement may also have political reasons, for example, conflicts between states[23], self-preservation interests (North Korea being an example) or attempts to make use of and exploit issues of identity.[24] Some countries react to territorial conflicts with neighbours or territorial disputes by building fences or reinforcing borders.[25] Further explanations emphasize the role of the differences in political systems, which may lead to increased isolationism; however, this correlation seems to be difficult to verify.[26] Finally, cultural factors have been researched: for example, Hassner and Wittenberg[27] examine to what extent the majority religion affects a country's border fortification. The authors claim that at boundaries with the countries whose population is mostly Muslim fences are erected more frequently; along with that, these countries themselves build fences most frequently.[28]

To sum up, current research speaks of a "re-bordering" trend manifested through a growing number of hard borders. The assumed reasons behind this trend are first of all the new threats caused by transnational terrorism along with differences in wealth, which hard borders are supposed to safeguard. In addition, researchers refer to cultural differences and differences in political systems.

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17 I. Moré, The Borders of Inequality, Tucson 2011; S. Rosière/R. Jones, Teichopolitics: Re-considering Globalisation Through the Role of Walls and Fences, in: Geopolitics 17 (2012) 1, pp. 217–234.
18 C. R. Boehmer/S. Peña, The Determinants of Open and Closed Borders, in: Journal of Borderlands Studies 27 (2012) 3, pp. 275–276; D. B. Carter/P. Poast, Why Do States Build Walls? Political Economy, Security, and Border Stability, in: Journal of Conflict Resolution 61 (2017) 2, pp. 243–244.
19 I. Moré, The Borders of Inequality; Rosière/Jones, Teichopolitics, pp. 217–234.
20 Carter/Poast, Why Do States Build Walls, pp. 239–270; Hassner/Wittenberg, Barriers to Entry, pp. 157–190.
21 Carter/Poast, Why Do States Build Walls, p. 247.
22 Avdan, Visas and Walls, p. 135.
23 Carter/Poast, Why Do States Build Walls, p. 247.
24 A. Paasi, A Border Theory: An Unattainable Dream or a Realistic Aim for Border Scholars?, in: D. Wastl-Walter (ed.), The Ashgate Research Companion to Border Studies, London 2012, pp. 14–15.
25 Carter/Poast, Why Do States Build Walls, pp. 239–270.
26 Hassner/Wittenberg, Barriers to Entry, pp. 157–190; cf. Carter/Poast, Why Do States Build Walls, pp. 239–270.
27 Hassner/Wittenberg, Barriers to Entry, pp. 157–190.
28 Ibid., pp. 174–176.

3. Border Formation on the African Continent

When we observe new border fortifications, the "usual suspects" are often in the lime-light, such as the border between the USA and Mexico, fortifications in Spanish exclaves Melilla and Ceuta, the demarcation line between the North and South Korea or barriers between Israel and the West Bank. Notably, research focuses primarily on the construc-tion of walls and fences secured by military installations, i.e. on more or less spectacular cases, rather than on the land borders as a whole. In this paper we attempt to create a taxonomy of border fortifications on the African continent. We have mapped all African land borders and included information on the type of border security and construction properties of the border facilities. Based on this mapping, we want to take a closer look at the selected borders and speculate on the factors that determine border fortification.

The subject of our study – territorial boundaries on the African continent – has to be put into conceptual and historical contexts first. The borders of state entities on the continent are considered to be rather instable, often disputed and burdened with the legacy of colonialism.[29] Factors contributing to instability and "vulnerability" of the borders comprise the multi-ethnic character of many countries, big role of tribes and clans, rather weak manifestation of national identities, and limited state capacities to control and secure their territories effectively. Another important factor is that colonial powers played a decisive role in territorial demarcation that was frequently violent. The Berlin Conference held by the colonial powers in 1884/1885 is generally regarded to be the basis of the territorial order on the African continent. This was an externally enforced territorial arrangement without participation of the indigenous population, in which power-political considerations dominated and cultural, ethnic and religious issues only played a subordinate role. Previously, borders had been drawn but, unlike the Westphalian model, they were not fixed on land, were not legally secured and not established by states. Africa's geography was characterized rather by spatial zones or areas in which different groups and tribes were living.[30] Many boundaries were not supposed to demarcate clearly separated territories; they had to be understood as frontiers rather than borderlines. In addition, particularly true for Africa was that there existed various contact spaces between different groups or spaces that overlapped, which made spatial separation difficult; moreover, nomadic tribes such as Maasai or Tuareg were not settled but remained mobile.

The debate repeatedly points out that many African borders are ultimately artificial and arbitrary boundaries, which entail high maintenance costs and at the same time make secession attempts and territorial conflicts likely.[31] Fragmentation and incongruity be-

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29 Foucher, African Borders, pp. 1–20.

30 E. M. Gbenenye, African Colonial Boundaries and Nation-Building, in: Inkanyiso: Journal of Humanities and Social Sciences 8 (2016) 2, pp. 117–124.

31 The discussion draws on P. Englebert/S. Tarango/M. Carter, Dismemberment and suffocation: A Contribution to the Debate on African Boundaries, in: Comparative Political Studies 35 (2002) 10, pp. 1093–1118; Foucher, African Borders, pp. 1–20; Gbenenye, African Colonial Boundaries; E. Green, On the Size and Shape of African

tween ethnic, social and political-territorial borders are generally regarded as an ongoing problem with high political costs (secession efforts, civil war or political instability).[32] From a border revisionist position, border changes are seen as a possible solution because under the current circumstances borders may constantly be politicized.[33] Particularly where border demarcation is associated with conflicting relationships between ethnic groups or where formerly connected ethnic, religious and social groups had been separated artificially, the renegotiation of borders is seen as a chance of pacification.[34] On the other hand, one can argue that the existing borders can also be traced back to pre-colonial and post-colonial patterns of population structure as well as to the traditional social and ethnic demarcations; in other words, they have history.[35] In addition, it is believed that modernization and social mobilization along with political integration could ensure (or in some cases have already ensured) that national territorial model prevails, and as a result border conflicts would tend to decrease.[36] Some studies even identify "territorial nationalism" as a dominant pattern.[37] Cases like ethnically diverse Tanzania, for example, show that "national consolidation" can also develop here, which makes national-territorial affiliation more apparent.[38]

Separation of cultural and ethnical communities by borders is not unique to Africa; however, the number of areas divided by territorial borders and the resulting "partitioned cultural areas" is particularly high here: according to the latest census, the border between Nigeria and Cameroon alone carves through 14 and the one in Burkina Faso through 21 culturally related regions.[39] African exceptionalism also implies that many borders were imposed from outside in a short period of time, i.e. they were not negotiated by local powers in an endogenous process with the engagement of local population.[40] The formal acknowledgement of the existing border demarcation by the postcolonial elites after independence is mainly explained by the fact that border disputes seemed to be hard to resolve and could have led to new tensions in a precarious situation of transition to

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States, in: International Studies Quarterly 56 (2012) 2, pp. 229–244; I. Griffiths, The scramble for Africa: Inherited political boundaries, in: The Geographical Journal 152 (1986) 2, pp. 204–216; J. Herbst, States and Power in Africa: Comparative Lessons in Authority and Control, Princeton 2014.

32 Englebert/Tarango/Carter, Dismemberment and Suffocation, pp. 1093–1118; Griffiths, The Scramble for Africa, pp. 204–216; S. Michalopoulos/E. Papaioannou, The Long-Run Effects of the Scramble for Africa, in: American Economic Review 106 (2016) 7, pp. 1802–1848.

33 E. N. Amadife/J. W. Warhola, Africa's Political Boundaries: Colonial cartography, the OAU, and the Advisability of Ethno-National Adjustment, in: International Journal of Politics, Culture, and Society 6 (1993) 4, pp. 533–554.

34 Amadife/Warhola, Africa's Political Boundaries, pp. 533–554; Gbenenye, African Colonial Boundaries, pp. 117–124; M. wa Mutua, Why Redraw the Map of Africa: A Moral and Legal Inquiry, in: Michigan Journal of International Law 16 (1995) 4, pp. 1113–1176.

35 E. Green, On the Size and Shape of African States, pp. 229–244.

36 R. L. Kapil, On the Conflict Potential of Inherited Boundaries in Africa, in: World Politics 18 (1966) 4, pp. 656–673.

37 A. L. Robinson, National Versus Ethnic Identification in Africa: Modernization, Colonial Legacy, and the Origins of Territorial Nationalism, in: World Politics 66 (2014) 4, pp. 709–746.

38 Ibid., pp. 709–746.

39 A. I. Asiwaju, Partitioned Africans: Ethnic Relations Across Africa's International Boundaries 1884–1984, London 1985; Michalopoulos/Papaioannou, The Long-Run Effects of the Scramble for Africa, pp. 1802–1848.

40 Foucher, African Borders, pp. 3–5.

national independence. For this reason, already in its founding charter back in 1963, the Organization for African Unity (OAU), which was the predecessor of the African Union, committed itself to the protection of state sovereignty and territorial integrity and in the following year proclaimed in addition, while acknowledging possible disputes, that the existing borders must be respected. The idea was that the establishment of status quo would go hand in hand with a gradual process of adaptation and growing acceptance. After all, despite relatively weak political institutions, Africa has had largely stable territorial borders since the late nineteenth century, and an assertive alternative model of "rational" or "ethnic" borders is apparently not in sight.[41] Accordingly, it is also argued that the once enforced "extrinsic borders" have now become recognized "African borders".[42] Border demarcation and border control that organize territoriality are the reality in Africa now; however, both are put into effect by political elites rather than by social practice of everyday life, spatial relationships, and imagination of many people.[43] The established state boundaries and social *doing border* are not congruent. People's everyday social practices involve a variety of exchanges and mobility across territorial boundaries – often below the radar or bypassing state control. Since many states lack administrative and police capacities to consistently safeguard their territorial interests, border regions are confronted with a variety of informal activities like smuggling, human trafficking or paramilitary conflicts. The example of the Great Lakes region including Rwanda, Burundi, and the Democratic Republic of the Congo, demonstrates how easily "inflammable" border regions are.[44] At the same time, "small-scale border traffic" characterized by informal agreements with border officials or circumvention of checkpoints is the basis of life for many people who make their living by crossing the border.[45]

4. Mapping of Border Infrastructure: Proposal for an Indicator

To investigate the design of borders on the African continent, we developed a multi-level indicator that would allow to obtain a more detailed picture of state border infrastructure. We follow the research programme that aims to analyse "territorial designs"[46] and deals with the question of how territoriality is institutionalized and materialized by political actors, whereby we focus on the border infrastructure. To construct an indicator, one can draw on previous research; however, the existing studies have some substantial

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41   J. Herbst, The Creation and Maintenance of National Boundaries in Africa, in: International Organization 43 (1989) 4, pp. 673–692; Herbst, States and Power in Africa.

42   Foucher, African Borders, pp. 1–20.

43   R. R. Larémont (ed.), Borders, Nationalism, and the African State; A. Mbembé, At the Edge of the World: Boundaries, Territoriality, and Sovereignty in Africa, in: Public Culture 12 (2000) 1, pp. 259–284.

44   F. N. Ikome, Africa's International Borders as Potential Sources of Conflict and Future Threats to Peace and Security, in: Institute for Security Studies Working Paper (2012) 233, pp. 6–7.

45   B. Chalfin, Neoliberal Frontiers: An Ethnography of Sovereignty in West Africa, Chicago 2010, pp. 64–68.

46   B. Atzili/B. Kadercan, Territorial Designs and International Politics: The Diverging Constitution of Space and Boundaries, in: Territory, Politics, Governance 5 (2017) 2, pp. 115–130.

drawbacks. Thus, border type and border impact are often lumped together[47], which makes empirical examination of the effects of different border types difficult. Relevant studies discuss a multi-level indicator but in an empirical analysis confine themselves to its most pronounced feature.[48] Here we propose a five-level indicator to measure degrees of hardness of border infrastructure, and in the following we are going to apply it to African borders.

Fortified borders. In history, the hardest borders were constructed by countries who believed to be threatened by war. Accordingly, such borders were equipped militarily since their purpose was to impede enemy invasions.[49] Andreas thus refers to this type of borders as "military borders" characterized by physical barriers (fences or walls) and buffer zones.[50] Current examples are the demilitarized zone between North and South Korea or the so-called "Line of Control" (LoC) in Kashmir.[51] Various authors have rightly noted that the role of fortified borders for military purpose is declining, and the main concern nowadays is prevention of unauthorized border crossings.[52] Fortified borders today often comprise high fences reinforced through barbed wire, motion detectors, and sensors, which for example were set up along the Balkan route during a "continuing flurry of wall building".[53] Since military and other fortified borders are morphologically converging, the purpose of this type of boundaries tends rather to impede the "infiltration" of the territory by unwanted actors (close-off function),[54] and at the same time the character of their construction symbolically emphasizes their separation function.

Barrier borders: Barrier borders follow a different logic: they should be understood primarily as selective border closings and reinforcements.[55] The focus lies on prevention of irregular entries, whereas the main goal is to control border crossings. Barriers are therefore used not to close off a territory completely but to channel and steer mobility towards a specific border crossing.[56] At the same time, longer sections of boundaries are reinforced through fences and are usually monitored, however not to the degree of secu-

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47   Andreas, Redrawing the Line, pp. 78–111; A. Székely/B. Kotosz, From Fence to Wall? Changes in the Mental Space of Border Zones in Eastern Europe, in: Regional Science Policy and Practice 10 (2018) 4, pp. 1–14.

48   Avdan, Visas and Walls, pp. 120–121; Hassner/Wittenberg, Barriers to Entry, p. 161.

49   J. W. Donaldson, Fencing the Line: Analysis of the Recent Rise in Security Measures Along Disputed and Undisputed Boundaries, in: E. Zureik/M. B. Salter (eds.), Global Surveillance and Policing. Borders, Security, Identity, London 2005, p. 174.

50   Andreas, Redrawing the Line, p. 85.

51   The latter is described as follows: "The Line of Control marks the frontlines where the armies met. Despite the imposing terrain (…) neither country is willing to make a territorial concession, and the Line of Control has remained militarised ever since. Despite being an unrecognised boundary, the frontline is well fortified including 550 km (340 mi) of double-row fencing on the Indian side", Rosière/Jones, Teichopolitics, pp. 224–225.

52   Andreas, Redrawing the Line, p. 81; H. Dittgen, The End of the Nation-State? Borders in the Age of Globalism, in: M. Pratt/J. A. Brown (eds.), Borderlands Under Stress, London 2000, pp. 53–54; Donaldson, Fencing the line, p. 174; R. Jones/C. Johnson, Border Militarisation and the Re-Articulation of Sovereignty, in: Transactions of the Institute of British Geographers 41 (2016) 2, pp. 187–200.

53   Brown, Walled States, p. 16.

54   Donaldson, Fencing the line, p. 174.

55   Hassner/Wittenberg, Barriers to Entry, p. 161.

56   R. Jones, Checkpoint Security: Gateways, Airports and the Architecture of Security, in: K.F. Aas/H. O. Gundhus/H. M. Lomell (eds.), Technologies of InSecurity. The Surveillance of Everyday Life, Oxon 2009; P. Pallister-Wilkins, How

rity that fortified borders have. In addition to barbed-wire fences, berms, and ditches are used to curb smuggling.

Checkpoints: Checkpoints are the most common form of territorial design on busy roads and bridges. Typically, satellite images show one lane that splits and widens up before it comes to a checkpoint. The same picture is often visible on the territory of a neighbouring state; noteworthy, African states tend to pool checkpoints in so-called "One-Stop Border Posts" (OSBPs).[57] Western development aid often supports the establishment of such border posts as part of border management projects.

Landmark/"no-man's-land" borders: As the last form, we distinguish landmark borders and "no-man's-land borders"; typical for both is the absence of physical border structures. However, motives behind differ considerably: landmark borders are set up between countries that have agreed to dismantle border infrastructure on the basis of bilateral or multilateral agreements, whereas no-man's-land borders can be found in places where states lack administrative and organizational means to carry out basic border controls. The border infrastructure of those boundaries is identical ("green borders"), whereas contexts differ considerably.

Figure 1. Schematic presentation of the border index

Walls Do Work: Security Barriers as Devices of Interruption and Data Capture, in: Security Dialogue 47 (2016) 2, pp. 151–164.

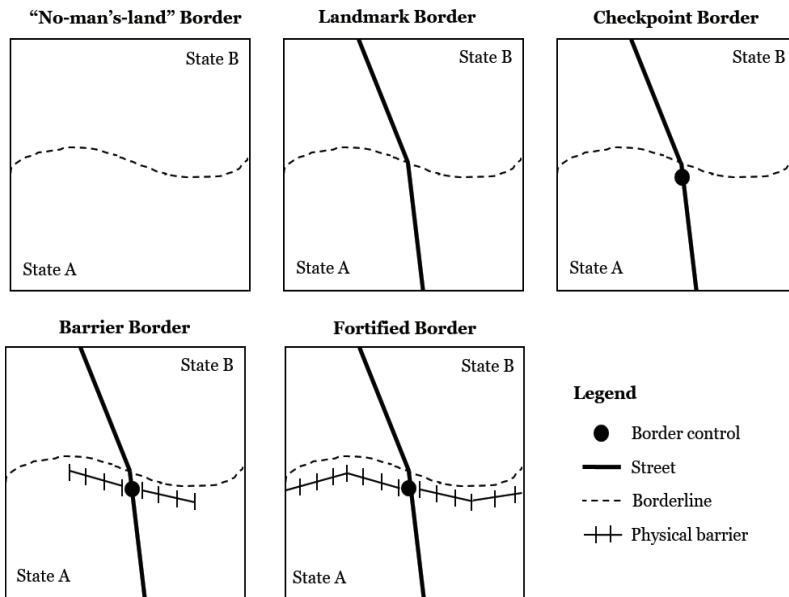57   OECD/SWAC, Accessibility and Infrastructure in Border Cities, Paris 2019.

Figure 1 shows possible forms identified using the five-level index. Obviously, the index specifies the physical-material design at the border line, whereby we always distinguish designs on both sides of the border. While at no-man's-land boundaries state border infrastructures and landmarks are typically absent, efforts to impose control increase, and the corresponding infrastructure gradually expands (according to the respective status of the indicator) up to the attempt to seal off territory through fortified borders. The focus on physical and material design, however, entails that administrative procedures and mobility policies (e.g. visa procedures or entry restrictions) are not taken into account at this stage. Case studies show that infrastructure projects such as setup of the OSBPs mentioned above may be stalled if states are unwilling to coordinate action or if local population resists.[58] Individual border crossings and local selection practices, nevertheless, are subject of extensive research, which can be used for reference.[59] Mobility policies such as visa practices have been examined in-depth, too.[60] Noteworthy, many African countries are members of regional integration alliances, some of which have ambitious goals regarding freedom of movement.[61] Since adjustments of borders are largely ruled out, many authors pin hopes on such alliances that can lead to de-institutionalization of borders.[62] Nonetheless, the implementation of the freedom of movement, which is part of many initiatives, has numerous obstacles such as reservations on the part of more prosperous countries or lack of supervisory authorities.[63]

What does "prevalence" of various boundary types imply? Consistent with the research literature cited above, we assume that bigger prosperity gaps between countries and differences in political systems lead rather to strengthening and reinforcement of the borders. In other words: the higher similarity in economic and political terms, the lower is the tendency to isolate oneself through border constructions (for example, homophily theory was applied to examine visa policies,[64] among others). Assumptions regarding cross-border ethnic groups are somewhat less clear. On the one hand, one could expect that if ethnic or same-language communities are found on both sides of the border,

58   P. Nugent, Africa's Re-Enchantment with Big Infrastructure: White Elephants Dancing in Virtuous Circles?, in: J. Schubert/U. Engel/E. Macamo (eds.), Extractive Industries and Changing State Dynamics in Africa. Beyond the Resource Curse, London 2018, pp. 34–35.

59   G. Gavrilis, The Dynamics of Interstate Boundaries, Cambridge 2010; P. Nugent, Boundaries, Communities, and State-Making in West Africa: The Centrality of the Margins, Cambridge 2019; V. Satzewich, Points of Entry. How Canada's Immigration Officers Decide Who Gets In, Vancouver 2015.

60   S. Mau/F. Gülzau/L. Laube/N. Zaun, The Global Mobility Divide: How Visa Policies Have Evolved over Time, in: Journal of Ethnic and Migration Studies 41 (2015) 8, pp. 1192–1213.

61   F. Gülzau/S. Mau/N. Zaun, Regional Mobility Spaces? Visa Waiver Policies and Regional Integration, in: International Migration 54 (2016) 6, pp. 164–180. On the African continent, there are ten bodies of regional integration that work towards the provision of freedom of movement. see: S. Nita, Free Movement of People Within Regional Integration Processes: A Comparative Perspective, in: S. Nita et al. (eds.). Migration, Free Movement and Regional Integration, Paris 2017, pp. 3–44.

62   A. I. Asiwaju, Fragmentation or Integration: What Future for African Boundaries?, in: M. Pratt/J. A. Brown (eds.), Borderlands Under Stress, The Hague, London, Boston 2000.

63   Nita, Migration, Free Movement and Regional Integration, pp. 35–37.

64   S. Mau/H. Brabandt, Visumpolitik und die Regulierung globaler Mobilität: Ein Vergleich dreier OECD Länder, in: Zeitschrift für Soziologie 40 (2011) 1, pp. 3–23.

boundaries are less designed for "separation" in order not to create social tensions and not to inhibit solidarity of the community. On the other hand, rugged borderlines could be the expression of state strategy to claim territorial control despite the interests of ethnic communities concerned. Presumably, states need to safeguard national unity and thus overlay territorial and social spatial divisions in contrast to the way tribes and ethnicities view them. Majority religion is another cultural factor to consider: studies indicate that Islamic states are more likely to erect border fences but are also more affected by those.[65] One more factor which seems to be decisive in this regard is the country's economic potential since border fences and walls are costly both in terms of construction and maintenance.[66] It has been hypothesized that walls are mainly built by highly developed countries since they are able to bear the immense costs, while fences can be erected faster and cheaper and thus are more likely to be found in countries of the global South.[67] With regard to Africa we assume that above all countries that are economically more potent can "afford" extensive border reinforcement.

5. Data

Data which serve as basis for the border index were collected between April 2018 and May 2019. Information was collected for all African land borders listed in the "Direct Contiguity" (Version 3.2) data set of the Correlates-of-War project (COW).[68] According to this data set, Africa comprises 54 sovereign states, whereby our data set only considers states that share at least one land border with another state. These amount to 50 countries with a total of 107 land borders (214 border relations): Africa is a highly parcelled continent.[69] For these 50 states, border dossiers have been compiled which contain information on individual state borders and are based on data obtained through database queries (e.g. Scopus), on media research, and on the existing data records. In addition, satellite images obtained through automated queries of the Google Maps API are included.

To break down the variance in border infrastructures, we use macro-structural indicators to capture economic, political, and cultural factors which reveal large social disparities on the African continent. In many countries, the overall low economic output goes hand in

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65   Hassner/Wittenberg, Barriers to Entry, pp. 174–176.

66   Avdan, Visas and Walls, pp. 119–120. Besides direct costs, rigid border regimes can be expected to induce indirect costs by inhibiting trade, see D. B. Carter/P. Poast, Barriers to Trade. How Border Walls Affect Trade Relations, in: International Organization 74 (2020) Winter, pp. 165–185. Accordingly, nation states have to consider security and identity but also economic consequences of specific border designs. In short, states inevitably incur opportunity costs when deciding between re- and debordering.

67   Rosière/Jones, Teichopolitics, p. 225.

68   D. M. Stinnett et al., The Correlates of War (COW) Project Direct Contiguity Data, Version 3.0, in: Conflict Management and Peace Science 19 (2002) 2, pp. 59–67. In addition, we included the border between Nigeria and Chad, which became a land border due to the progressing aridification of Lake Chad.

69   The analysis includes the border between Morocco and Spain as well as the border of Egypt and Israel. However, the additional borders of Spain and Israel are excluded as they are not adjoining any African state.

hand with large inequality gaps across borders. In 2017, gross domestic product (GDP) per capita of Equatorial Guinea (USD 9,668) exceeded that of Burundi (USD 293) by 33 times.[70] These disparities are reflected also in differences in political systems. According to the "POLITY2" index from the PolityIV project, the African continent has both autocratic and democratic countries. We operationalize countries' cultural characteristics through a variable that describes ethnic groups divided by state borders.[71] The variable has been binarized and indicates whether a border divides at least one ethnicity. Finally, we use data from the "World Religion Dataset" that originates from the COW project.[72] Here we refer to data from the latest records dating back to 2010 and assume that the majority religion in the respective countries has not changed drastically in the meantime. Individual variables and their distribution are described in more detail in the appendix.

6. Mapping of Borders in Africa

Having presented the underlying logic of the border index and our independent variables, we turn to the African sample and demonstrate how different types of border infrastructure are distributed here. In a further step, we attempt to breakdown the variance of the border typology using macro-structural indicators. Thereby we first focus on the characteristics of a country and then consider its relationship to the neighbouring countries.

First descriptive evaluation of the relative frequency of the indicator in Africa is shown in Figure 2. It clearly shows that fortified borders (4.2 per cent of total number) play only a subordinate role on the African continent. Selective border reinforcements in the form of barriers whose purpose is to steer mobility can only be found in 8.4 per cent of African boundaries. In total, stronger border fortifications with fences or walls make up only 12.6 per cent. Far more common are border regimes that use checkpoints to organize access to the country's territory. This type of border control is used in 70.1 per cent of the examined borders. A considerable part of boundaries (no-man's-land borders) is not marked by any border posts 17.3 per cent). In some cases, there are no developed road connections that would allow crossing the border. In the African sample there are no de-institutionalized borders, which we call "landmark border"; however, there exist regional integration alliances, which aim to provide for the free movement of people.

70   These differences increase considerably once Israel and Spain are included.
71   Michalopoulos/Papaioannou, The Long-Run Effects of the Scramble for Africa, pp. 1802–1848.
72   Z. Maoz/E. A. Henderson, The World Religion Dataset, 1945–2010: Logic, Estimates, and Trends, in: International Interactions 39 (2013) 3, pp. 265–291.

Figure 2. Relative distribution of the border index
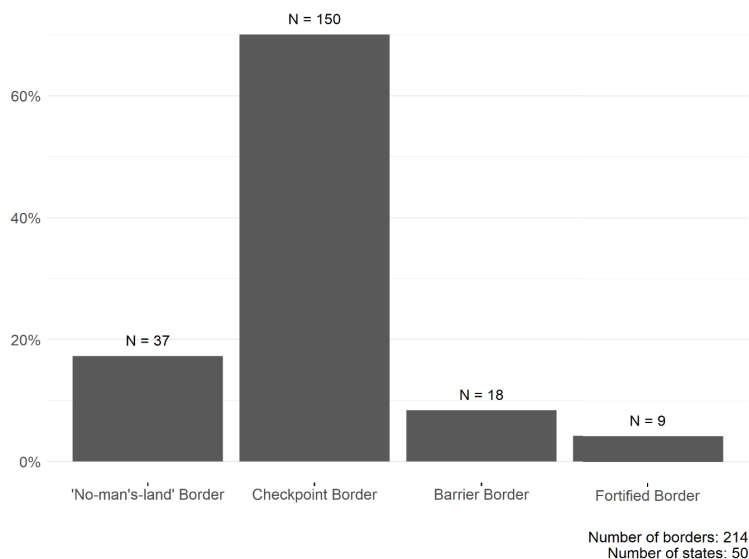
Source: own compilation

The results show that the vast majority of African countries strive to control mobility across national borders. The index does not allow to gauge how effective border controls are; however, the frequently used general claim that African borders are "arbitrary and absurd, porous and undermined, indefensible and undefended"[73] cannot be confirmed. As mentioned above, less than one-fifth of the boundaries that we examined have no state border infrastructure at all.

In the next step, we consider factors which are discussed in the literature to define border infrastructures and examine to what extent they are suitable to account for the variance of border regimes. We pay particular attention to the economic, political, and cultural characteristics of African states, whereby we first consider their economic and political structure focusing on the state that maintains a specific border infrastructure. For this purpose, we use a scatterplot which shows GDP per capita and political system according to the border type. To illustrate the comparison, group-specific medians of GDP per capita and democracy indices (grey lines) are also shown. Finally, we introduce cultural affinities between countries across ethnic groups divided by a territorial boundary; these are highlighted as black dots in the scatterplot. Each dot represents a border, and each border appears twice because border infrastructure can differ on both sides of the border line.

73   Foucher, African Borders, p. 1.

Figure 3. GDP per capita and political system according to the border index
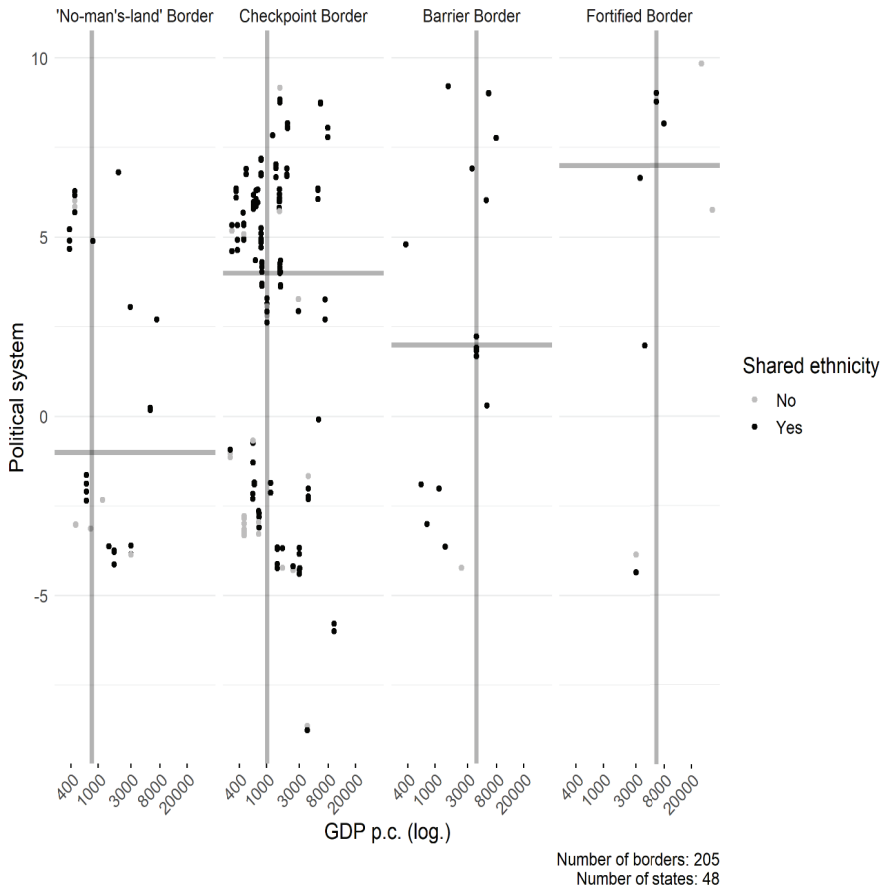
Source: own compilation

As Figure 3 shows, fortified borders are extremely rare on the African continent. If we consider the occurrence of fortified borders, it is apparent that these are more likely to be installed by wealthy and democratic states. This becomes clear when looking at the medians of the political system and GDP per capita, which are highlighted by grey lines. The median of the political system is 7 and the log of GDP per capita is 8.7, which is around USD 6,100 per capita. Barrier borders as a means of territorial control are not very common either. While countries that have this type of border can still be described as rather wealthy compared to other African states (median: log GDP p.c. 8.3, i.e. USD 4,100 per capita), their political systems may vary considerably and combine democratic and autocratic features. In most cases, checkpoints are installed. States that have erected such border structures can be divided into two groups that differ in their political sys-

tems. First comes a large group that can be described as relatively democratic (PolityIV
> 5). However, checkpoints are also installed by states that have a rather anocratic or
autocratic political systems (PolityIV < 0). In contrast, the subgroups differ less strongly
in their economic output, which is around USD 1,100 per capita, on average. Overall,
these states are economically relatively weak. Countries with no-man's-land borders have
an even lower economic output and at the same time are increasingly autocratic. In sum,
wealthy countries tend to erect strongly fortified borders, whereas countries that install
barriers are less democratic than countries with fortified borders. The graph indicates
that wealthy states are more likely to secure their borders more strongly. This finding is
also reflected in the literature on boundaries.[74]

Borders that separate cross-border ethnic groups do not allow to make a clear statement.
Overall 79 per cent of African borders separate ethnicities scattered over several coun-
tries. As mentioned earlier, divided ethnic groups are a widespread phenomenon on the
African continent. To further monitor the impact of cultural factors, in the next step we
want to check whether the majority religion of a country has an influence on its border
infrastructure. In case of fortified borders, such effect has been established.[75]

Figure 4. Majority religion in relation to the border index

Number of borders: 213
Number of states: 50
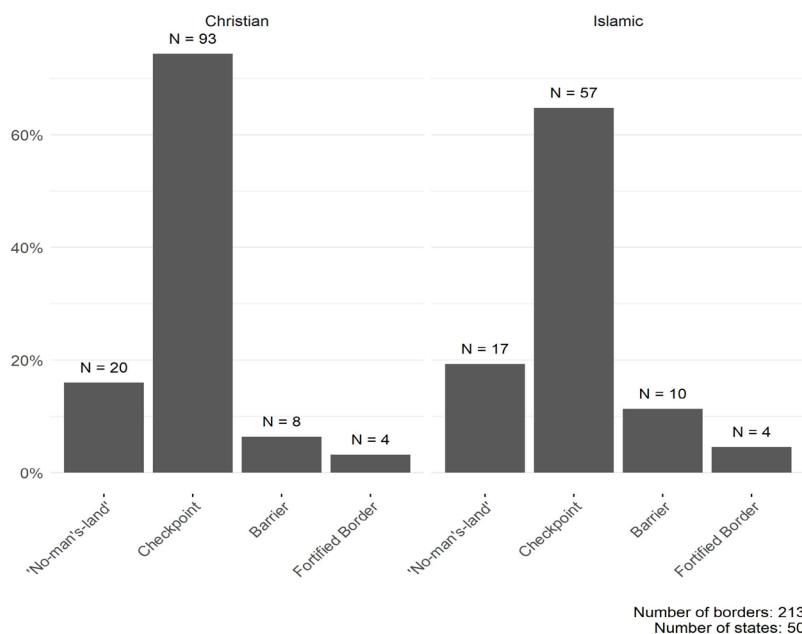
Source: own compilation

74   Avdan, Visas and Walls; Carter/Poast, Why Do States Build Walls, pp. 239–270.
75   Hassner/Wittenberg, Barriers to Entry, pp. 174–176.

Figure 4 shows no consistent picture either.[76] In case of the African continent, our findings indicate that states whose majority are Muslim are only slightly more likely to set up fortified borders.[77] In contrast, barrier borders are being increasingly constructed in countries whose majority population is Muslim. However, both groups are only sparsely populated, making quantitative inference difficult. Lastly, checkpoints at the borders are more often set up in countries whose majority is Christian. No-man's-land borders are distributed almost equally with regard to religious confession. All in all, we can conclude that economic and political factors are more essential for the understanding of border infrastructures on the African continent than the cultural factors we examined above.

Since the design of border infrastructure can not only be traced back to "internal" factors of the respective state but it also reflects the situation "beyond" the boundary line, in the second step we examine what influence certain properties of neighbouring countries have on border design. For this we calculate the absolute difference between countries with a specific border infrastructure and the respective neighbouring country "affected" by the border. The respective medians are shown in Figure 5.

Figure 5. Border index, absolute difference in GDP median, and political system of a respective neighbouring state
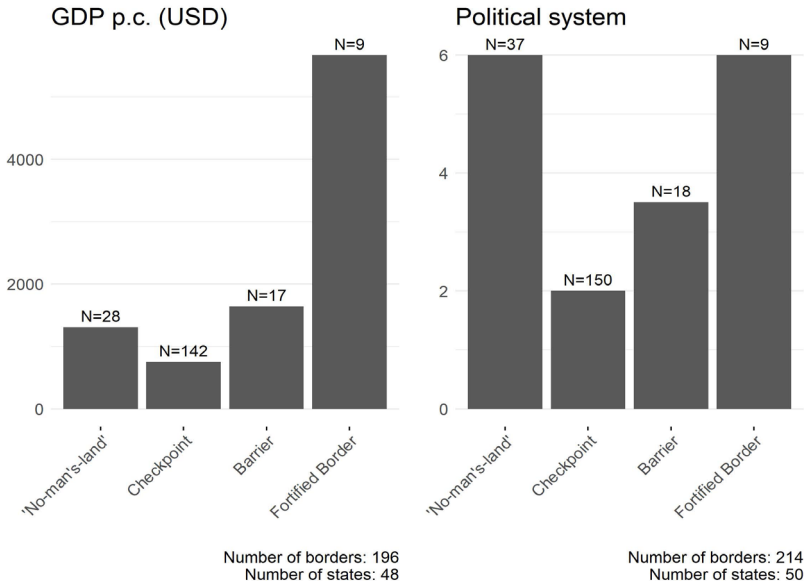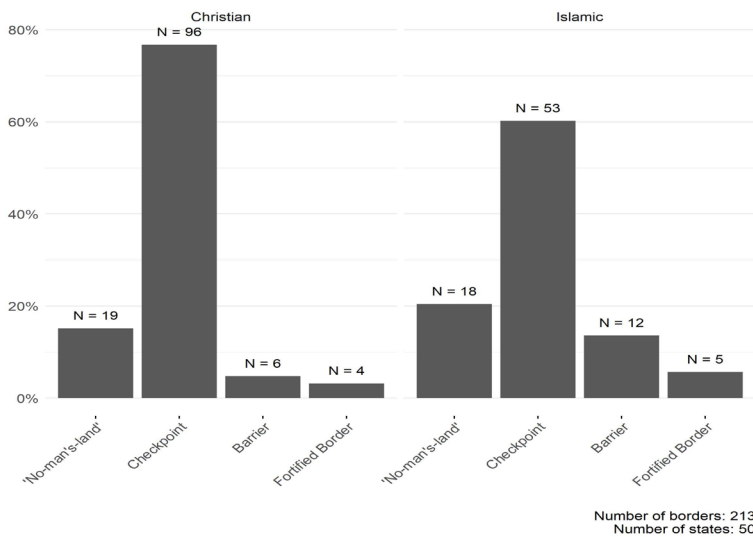

Source: own compilation

The two graphs indicate that large economic and political differences may motivate states to strengthen their borders, whereas in countries with smaller differences the borders are expected to be less "hard", as assumed by the homophily theory mentioned above. Differences in GDP per capita as well as in the political system are most pronounced in countries that have fortified borders. The same is true for barrier boundaries, though not as pronounced. Surprisingly, strong differences in political systems are typical for countries that have no-man's-land borders. However, since these values are absolute, the graph provides no information about the direction of these differences.[78]

Figure 6. Border index and majority religion in neighbouring states

Source: own compilation

In the analysis of neighbouring countries, one can consider the factor of majority religion to check whether states with a specific majority religion are more likely to be affected by hard borders (see Figure 6 above). The graph shows that the religious confession of the majority of the population impacts on whether the neighbouring country establishes a fortified border. States with a Muslim majority are more often the target of fortified boundaries. This also holds for barrier borders. However, as Figure 4 shows, these are also slightly more often built by countries with a majority Muslim population. This phenomenon was reported by Hassner and Wittenberg, who presented a global sample for fortified borders.[79] We demonstrate here that in Africa states with a Muslim majority

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78   The analysis also shows that nation states with fortified borders have larger values on the PolityIV scale and in regard to their GDP per capita than their neighbouring states. However, there is no such pattern in the additional groups such that differences occur in both directions.

79   Hassner/Wittenberg, Barriers to Entry, pp. 174–176.

are more likely to be the target of hardened borders than states with a Christian majority population. However, we find that Muslim majority states are only slightly more likely to erect such walls. Again, the number of cases is low, which makes interpretation difficult. Checkpoints, being the most common form of territorial control, are mostly set up at borders with countries that have a Christian majority. No-man's-land borders can be found in countries with Christian as well as with Muslim majority populations.

In the final step, we are going to focus on hard borders. To do so, we are reproducing Figure 3 and add a label that identifies the countries involved in the respective border formation. For example, in the field "fortified border" on the right, label "ESP-MAR" shows that Spain has built a fortified border with Morocco. Label "MAR-ESP" in the same field indicates that Morocco has secured its border with Spain, too. This is a case of border fortification on both sides.

Figure 7. GDP per capita and democracy index in relation to border type (barrier borders and fortified borders)
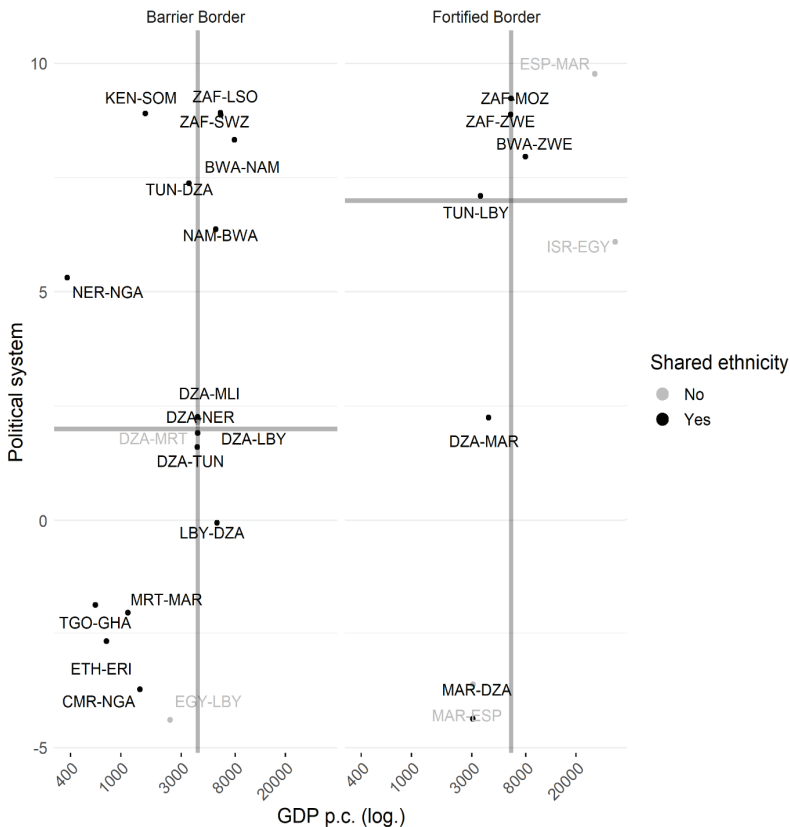
Source: own compilation

It is conspicuous that barrier borders and fortified borders prevail in the North and in the South of Africa, which is partly explained by the fact that countries mostly reinforce not just a single border but their other borders, too. South Africa and Algeria, for example, reinforced several of their boundaries with fences, barbed wire, and berms.

The analysis has shown so far that checkpoints prevail on the African continent. These are a key component of border regimes today, which is often underestimated in studies that focus solely on border fences or walls. We also find that fortified borders and those that we call barrier borders are more likely to be erected by wealthier states, which indicates the high cost of reinforced border fences. In the following, we complement the perspective based on quantifiable variables by analysing three case studies and thus shed light on the motives countries may have to secure their borders with fences and walls. Individual cases include Algeria, South Africa and Togo. We selected those to cover a wide range of regions on the African continent.

South Africa: Prosperity gaps and xenophobia

Today South Africa is one of the wealthiest countries in Africa (GDP: USD 6,132 per capita) and can be described as a stable democracy (PolityIV: 9). The country used to be a Dutch and later a British colony before it gained independence in 1910. The onset of apartheid policy led to manifold social upheavals that persisted after the end of apartheid in the form of social problems such as high unemployment, social inequality, and rampant xenophobia. South African border fences can also be seen as a legacy of apartheid. During this time, some boundaries were fortified with electrified fences that could cause fatal electric shocks. However, shortly before the democratic change in 1994, those fences were put into the so-called "alarm mode", with lethal voltage being switched off.[80] Nevertheless, before this changeover came into effect, almost a hundred migrants had died trying to climb over the fence, so that the catastrophic effects of the fence were already compared to that of the "death strip" of the Berlin Wall.[81] Electric fences, however, were aimed not against "Republic refugees" but against unwanted migration, which included not only refugees but also opponents of the regime.[82]

The oldest border fence was built in 1975 on the border with Mozambique over a length of 120 kilometres, at a time when independence of this then Portuguese colony was in sight.[83] The fence is made of barbed wire laid in several rolls so that the fence reaches a

80   S. Peberdy, Imagining Immigration: Inclusive Identities and Exclusive Policies in Post-1994 South Africa, in: Africa Today 48 (2001) 3, pp. 22–23.

81   T. Monteiro, 'Hundreds killed' by South Africa's Border Fence, in: New Scientist, 27 January 1990, https://www.newscientist.com/article/mg12517011-000-hundreds-killed-by-south-africas-border-fence/ (accessed: 5 May 2020).

82   J. Crush, The Dark Side of Democracy: Migration, Xenophobia and Human Rights in South Africa, in: International Migration 38 (2001) 6, p. 110.

83   M. Kiruga, Kenya Plans for 'Anti-Terror' Somalia Border Wall; Here Are Six Other Border Barriers in Africa, The Mail & Guardian, 2 April 2015, https://web.archive.org/web/20150418000015/http://mgafrica.com/article/2015-04-02-kenya-plans-for-anti-terror-somalia-border-wall-here-are-six-other-border-barriers-in-africa (accessed: 5 May 2020).

height of 3 metres and a width of 4.5 metres. In addition, cables with a lethal voltage of 3,500 volts were installed within the wire rolls.[84] Another 225-kilometer-long border fence was erected in 1984 on the border with Zimbabwe replacing a previously "natural" barrier made from sisal agave.[85] This border fence is similar to the fortification on the Mozambican border; in addition, it is enclosed by two chain-link fences with barbed wire. However, according to the current media reports, the fences are in poor condition in the absence of continuous monitoring and repair works.[86]

After the fall of apartheid, fortified border fences continued to exist and were controlled by the Army (South African National Defence Force, SANDF) who focused primarily on prevention of irregular migration.[87] South African militants even considered reinstalling lethal voltage at the border fences.[88] Table 1 shows the border infrastructure that South Africa maintains today.

Table 1. Border infrastructure in South Africa

Border	Border type	Start of construction works	Length (km)	Description
Botswana	checkpoint border	/	/	/
Lesotho	barrier border	/	discontinuous	chain-link fence
Mozambique	fortified border	1975[a]	120[b]	barbed wire fence "alarm mode"
Namibia	checkpoint border	/	/	/
Swaziland/ Eswatini	barrier border	1985[c]	discontinuous	chain-link fence
Zimbabwe	fortified border	1984[d]	225[b]	barbed wire fence "alarm mode"

[a]Avdan, Visa and Walls.; [b]Kiruga, Kenya plans for 'anti-terror' Somalia border wall.; [c]Hassner and Wittenberg, Barriers to Entry; [d]M. Tebas and J. Alberto, African frontiers: walls to face threats, IEEE (2016) 1, pp. 1–18, http://www.ieee.es/en/Galerias/fichero/docs_analisis/2016/DIEEEA01-2016_Muro_Fronteras_Africa_JAMT_ENGLISH.pdf (accessed: 5 May 2020).

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84   Ibid.
85   Ibid.
86   R. Nel, Moz-SA Border Fence Currently a Walkover 2016, in: Lowvelder, 6 October 2016. https://lowvelder.co.za/357534/border-holes/ (accessed: 5 May 2020).
87   Ibid., pp. 5–35; Peberdy, Imagining Immigration, pp. 14–32.
88   Ibid., pp. 5–35; Peberdy, Imagining Immigration, pp. 14–32.

All in all, migration policy of democratic South Africa seems to remain restrictive, which some authors explain through the process of nation building, whereby national "we" is juxtaposed with outside "others".[89] In addition, restrictive migration policy is backed by xenophobic and anti-migration sentiments within South African society.[90]

Last but not least, heavily fortified borders in South Africa are built between countries with high economic inequality (Mozambique and Zimbabwe), whereas checkpoints are set up at borders between countries with similar economic status (Botswana and Namibia). This may indicate that mobility from wealthier countries is seen more positively compared to that from poorer countries. This manifests itself for example in visa restrictions and fees that for a long time only affected people from Mozambique and Zimbabwe.[91] Mozambicans continue to be affected by visa fees and, like citizens of Lesotho and Swaziland/Eswatini, are only granted a 30-day residence permit. Though previously considered, the borders had not been transferred from the military to police control, and a renewed reinforcement of fortified borders is currently being discussed.[92]

Algeria: Colonial history and multiple threats

Another country that has several hard borders is Algeria. It is also one of the most developed countries in Africa with a relatively high economic output (GDP: USD 4,111 per capita). However, the country has long had autocratic rule; recently, as a result of social unrest President Bouteflika was forced to resign. Until 1962, Algeria was occupied by France and administered as a separate "Département". During the Algerian war, the French colonial power established the so-called "Morice Line", which was named after the French Minister of Defence at the time. This fortified border, which was equipped with an electrified barrier, barbed wire, and minefields on both sides of the border, was aimed against the Algerian liberation movement that used the neighbouring countries as a refuge.[93] The Morice line was completed in 1957 and stretched over 460 kilometres along the Tunisian border with similar fortifications being installed on the border with Morocco.[94] Algeria gained independence in 1962, and border barriers had been dismantled; nevertheless, the country kept its borders closed and maintained physical border barriers, surveillance technologies, and a massive number of troops.[95] Table 2 shows the

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89   Ibid., pp. 5–35; Peberdy, Imagining Immigration, pp. 14–32.

90   A. Chingwete, Immigration Remains a Challenge for South Africa's Government and Citizens, in: Afrobarometer Dispatch (2016) 72, pp. 1–10; S. Peberdy/J. Crush, Histories, Realities and Negotiating Free Movement in Southern Africa, in: A. Pécoud/P. de Guchteneire (eds.), Migration Without Borders: Essays on the Free Movement of People, Paris 2007, pp. 182–183.

91   Peberdy, Imagining Immigration, in: Africa Today 48 (2001) 3, p. 17.

92   C. McMichael, The Re-Militarisation of South Africa's Borders, in: Open Democracy, 2012, https://www.opendemocracy.net/en/re-militarisation-of-south-africas-borders/ (accessed: 5 May 2020).

93   F. Tusa, Responses to Low Intensity Warfare: Barrier Defences in the Middle East, in: The RUSI Journal 133 (1988) 4, pp. 38–39.

94   D. Porch, Counterinsurgency: Exposing the Myths of the New Way of War, Cambridge 2013, pp. 195–196.

95   Q. Hanlon and M. M. Herbert, Border Security Challenges in the Grand Maghreb, Washington 2015, pp. 31–35; International Institute for Strategic Studies, Middle East and North Africa, in: The Military Balance 114 (2014) 1, pp. 297–354.

current border infrastructure in Algeria, whereby it reveals that Algeria primarily builds berms combined with ditches to impede undesired mobility.

Table 2. Border infrastructure in Algeria

Border	Border type	Start of construction works	Length (in km)	Description
Libya	barrier border	/	discontinuous	berm
Morocco	fortified border	2014	40[a]	barbed wire berm ditches
Mali	barrier border	/	selective	berm
Mauritania	barrier border	/	selective	berm
Niger	barrier border	ca. 2017	selective	berm
Tunisia	barrier border	/	discontinuous	berm

[a] D. Ould Khettab, Algeria turns 'deaf ear' to border dispute, Al Jazeera, 31 October 2014, https://www.aljazeera.com/news/middleeast/2014/09/algeria-turns-deaf-ear-border-dispute-2014925121752206960.html (accessed: 5 May 2020).

Algeria's most strongly fortified border is the one with Morocco. This border has been closed since 1957; a period of tensions, including military clashes, in 1989 and 1994 was followed by five years of rapprochement, which was put to an end by a terrorist attack and subsequent allegations.[96] Algeria and Morocco have now returned to their old rivalries due to political instability in the Sahel region and divergent foreign-policy interests.[97] This rivalry prompted the two states to continue investing in border construction, with both governments responding to each other's neighbours' initiatives with new fortifications.[98] The strongest fortifications are located near the city of Maghnia in north-western Algeria. A trench six metres deep and just as wide was dug here, and the earth masses were used to construct a berm behind the trench.[99] Some media reports provide evidence that Algeria seeks to erect a border fence.[100]

96 M. H. de Larramendi, Doomed Regionalism in a Redrawn Maghreb? The Changing Shape of the Rivalry Between Algeria and Morocco in the post-2011 Era, in: The Journal of North African Studies 24 (2018) 3, pp. 2–3; The Economist, 27 July 2017, Morocco and Algeria Keep Building More Barriers, https://www.economist.com/middle-east-and-africa/2017/07/27/morocco-and-algeria-keep-building-more-barriers (accessed: 5 May 2020).

97 De Larramendi, Doomed Regionalism in a Redrawn Maghreb.

98 Ibid., p. 5.

99 D. Ould Khettab, Algeria Turns 'Deaf Ear' to Border Dispute, Al Jazeera, 31 October 2014, https://www.aljazeera.com/news/middleeast/2014/09/algeria-turns-deaf-ear-border-dispute-2014925121752206960.html (accessed: 5 May 2020).

100 Ibid.

However, Algeria uses barriers not only on the border with Morocco but also on other national borders, which are obviously viewed as a security risk.[101] Except the border to Tunisia, all Algerian borders have been closed meanwhile and declared military restricted zones.[102] In addition, border control has largely been withdrawn from the discretion of regional authorities and centralized under the jurisdiction of the Ministry of Defence.[103]

Togo: Colonial history and cultural dynamics

Finally, we consider Togo – a small autocratic state with low economic output (GDP: USD 626 per capita) –, which erected a border fence on parts of its border with Ghana in 1996.[104] This barrier separates groups of shared ethnicity like the Ewe tribe.[105] Togo's state borders were moved several times during the 20th century. The territory of today's Togo used to be a German colony and during the First World War was divided between France and Great Britain.[106] The British part eventually joined Ghana in 1957, while the French part, which is today's Togo, became independent from France in 1960.[107] Togo has three state borders with Benin, Burkina Faso, and Ghana, whereby Togo and its neighbouring countries are members of the "Economic Community of West African States" (ECOWAS), which has pledged to provide for the free movement of goods, capital and people.[108] These freedoms have been ratified and partly implemented; however, there are still obstacles to their practical implementation. These include, in particular, corruption and tedious procedures at border posts, but also language differences which split ECOWAS into smaller groupings.[109] The fact that ECOWAS comprises Anglophone, Francophone, and Lusophone member states facilitates partial integration but at the same time impedes comprehensive integration efforts.[110]

Togo is often referred to in the literature as the "Entrepôt State", which is involved in trade with neighbouring countries through its deep-sea port in the Togolese capital Lomé.[111] At the same time, it is a cross-border "twin city": Lomé and the adjacent Gha-

101 M. Gallien/M. Herbert, The Risks of Hardened Borders in North Africa, Carnegie Endowment for International Peace; Sada Middle East Analysis 2018, https://carnegieendowment.org/sada/77053 (accessed: 5 May 2020).

102 M. Ben Ahmad, Algeria Closes Most of Its Land Borders, 2014, https://www.al-monitor.com/pulse/security/2014/05/algeria-border-closing-military-terrorism-threat.html (accessed: 5 May 2020).

103 Hanlon/Herbert, Border Security Challenges, p. 31.

104 P. Nugent, Smugglers, Secessionists & Loyal Citizens on the Ghana-Togo Frontier. The Lie of the Borderlands Since 1914, Athens 2002, p. 4, footnote 19.

105 Ibid.; A. Spire, Lomé, ville post-frontière. Dynamiques identitaires et territoriales d'une capitale frontalière, in: EchoGéo (2010) 14, pp. 1–14.

106 Nugent, Smugglers, Secessionists & Loyal Citizens, pp. 21–38.

107 Ibid., pp. 197–198.

108 A. Adepoju, Creating a Borderless West Africa: Constraints and Prospects for Intra-Regional Migration, in: Pécoud/de Guchteneire (eds.), Migration Without Borders, pp. 164–165.

109 Ibid., p. 166.

110 Ibid., pp. 169–170.

111 P. Nugent, Boundaries, Communities, and State-Making in West Africa: The Centrality of the Margins, Cambridge 2019, p. 449.

naian city Aflao yet are separated by a state border.[112] The so-called "One-Stop Border Posts" (OSBP) have meanwhile been installed at all national borders, and neighbouring countries have combined border and customs controls in one building complex in order to accelerate processing[113]; however, only the OSBP on the border with Burkina Faso is fully operational.[114]

Table 3. Border infrastructure in Togo

Border	Border type	Start of construction works	Length (in km)	Description
Benin	checkpoint border	/		OSBP (under construction)
Burkina Faso	checkpoint border	/		OSBP (in use)
Ghana	barrier border	1996[a]		chain-link fence barbed wire OSBP (not in use)

[a]Nugent, Smugglers, Secessionists & Loyal Citizens, p. 4 footnote 19.

Chain-link fence on the border was built in 1996.[115] In the 1990s, Togo lived through a multiannual political crisis while the long-time authoritarian ruler Gnassingbé Eyadéma increasingly faced demands for democratic opening and accused neighbouring Ghana of various coup attempts.[116] Regardless the border fence, cultural groups that had been separated adhered to their common identity by appointing "international chieftains" whose authority stretched beyond state borders.[117] However, state border officials occasionally harassed the Ewe group when they had to cross the border for certain funeral rituals.[118] Nevertheless, there exist numerous informal ways to cross this border, which is one of the busiest border crossings in western Africa.[119] These include, for example, strategic use of the language to appear as a Togolese or Ghanaian, or special transport vehicles that allow for irregular border crossings.[120] Finally, despite its separating nature, the border enjoys certain level of acceptance since residents, dealers, smugglers, and other salesmen take

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112 I. Soi/P. Nugent, Peripheral Urbanism in Africa: Border Towns and Twin Towns in Africa, in: Journal of Borderlands Studies 32 (2017) 4, pp. 547–552.

113 OECD/SWAC, Accessibility and Infrastructure in Border Cities, Paris 2019, pp. 50–58.

114 Ibid., pp. 58–62.

115 Nugent, Smugglers, Secessionists & Loyal Citizens, p. 4, footnote 19.

116 Nugent, Boundaries, Communities, and State-Making in West Africa, pp. 459–460.

117 E. Adotey, 'International Chiefs': Chieftaincy, Rituals and the Reproduction of Transborder Ewe Ethnic Communities on the Ghana–Togo Boundary, in: Africa 88 (2018) 3, pp. 560–578.

118 Ibid., pp. 564.

119 B. Chalfin, Neoliberal Frontiers, p. 59.

120 Foucher, African Borders, pp. 1–20; Spire, Lomé, ville post-frontière.

advantage of the barrier effect to make a profit.[121] This is also evidenced by the fact that local population has some difficulties to accept a modern OSBP which was built 40 km away and has not been operating yet.[122]

7. Conclusion

This article examined how African countries secure their borders and what type of border fortifications these comprise. Fifty-five years after the Organization for African Unity had decided to maintain colonial borders, territorial control through border infrastructures has obviously become a standard script on the African continent. The respective infrastructure is missing on few borders only; the majority of the examined countries organize border control by installing checkpoints in places where border crossings are being regulated. Our data contradict the widespread belief that African borders are largely porous and have poorly developed facilities beyond government control. Indeed, some borders are either largely ignored by state actors or are closed off through rigid barriers; yet, such cases are by no means typical for the majority of African territorial borders. However, sealing-off boundaries can also be found on the African continent, which allow for far-reaching separation through walls and militarized security systems and thus aim at restricting cross-border movement and contacts. Such boundaries often focus rather on the efficient separation of authorized and unwanted persons than only on sealing off. We demonstrated that particularly wealthy and rather democratic countries on the African continent tend to build fortifications on their borders. As anywhere else in the world, a large gap in wealth seems to lead to attempts to seal off through border fortifications in order to impede irregular migration or smuggling, among others. In other cases, highly secured and militarized borders have their roots in a country's specific history and can be legitimized by security issues, territorial conflicts or rivalries between countries. Our case studies demonstrate that hard borders on the African continent were built in response to specific circumstances and conflicts, some of those being no longer relevant. In many cases, the context that had given a pretext to erect those borders has meanwhile shifted. For example, South Africa's military borders are no longer directed against opponents of the regime but against unwanted migration. The trenches on the Algerian border with Morocco no longer protect against military intervention but are intended to prevent smuggling. Last to be mentioned is the Togolese border fence in Lomé – a relic from the times when the country expected attacks from the neighbouring Ghana. Our case studies show that border fences have specific origins, but their current legitimation can vary considerably. Moreover, one can assume that barriers, once erected, have a lock-in effect which thwarts the attempts to open the border.

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121   Chalfin, Neoliberal Frontiers, pp. 64–68.
122   OECD/SWAC, Accessibility and Infrastructure in Border Cities, p. 61.

This paper presents for the first time a complete overview of border infrastructures on the African continent and provides information on determinants of various border formations. However, a few points need to be considered in more detail in further research. For instance, here we could only focus on the physical-material dimension of border structures, whereas the actual depth of administrative and border police intervention through border controls was not taken into account. Furthermore, restrictions regarding the number of cases mean that the dyadic dimension of the indicator could not be considered in full.

Regarding the more general question of the significance of physical border infrastructure in times of globalisation, the African example shows that it is not a case of absent or decaying state border infrastructure either. Yet, we cannot draw any conclusions regarding legal and administrative regulation of mobility based solely on the existence of border locations and mobility barriers. High border permeability may exist along with border guards and checkpoints. Moreover, the effectiveness of some border systems is presumably not very high if those can be circumvented relatively easily. Our research data, however, did not allow to record this, and here we draw upon findings of other studies. Yet, we demonstrated that African countries have very different reasons – political, material or symbolic ones – to maintain borders, including those that in the form of separation lines have a far-reaching impact on cross-border mobility and interaction. Control over territory proves to be a key component of a country's sovereignty claims.

Appendix

Figure A1 shows distribution of the variables we used. We operationalize the economic performance of African countries through their gross domestic product (GDP) per capita in US dollars using the variable "NY.GDP.PCAP.CD" from the World Development Indicators.[123] Political system is measured by the "POLITY2" variable taken from the PolityIV project, which ranges from -10 (strongly autocratic) to +10 (strongly democratic).[124] Another indicator is used to record ethnic groups separated by a state border: the variable is binarized, and we only consider ethnicities whose population is at least 10 per cent on both sides of the border.[125] A further cultural factor we considered is majority religion of a respective country. The data originates from the "World Religion Datasets" of the COW project.[126]
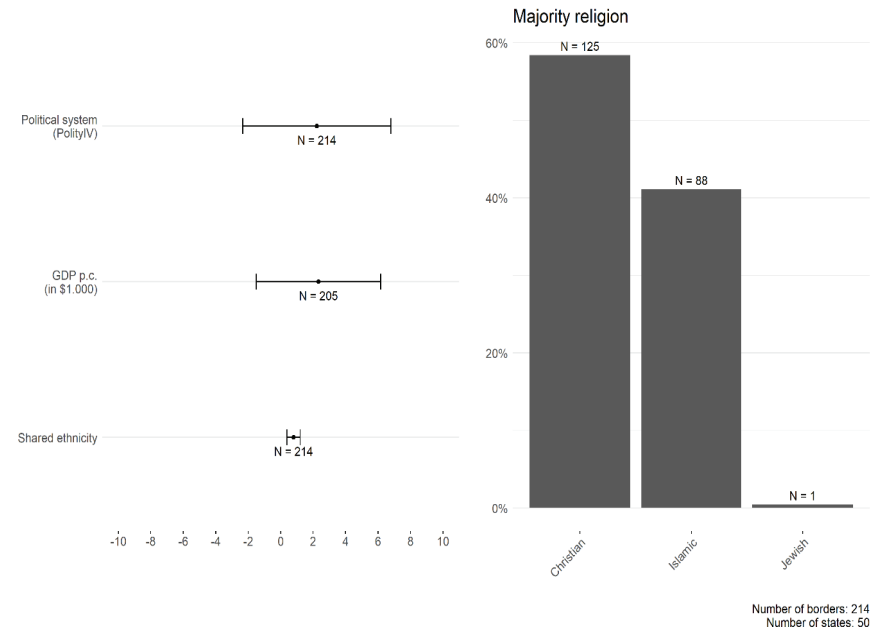
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123   The World Bank, World Development Indicators, https://databank.worldbank.org/reports.aspx?source=2&type=metadata&series=NY.GDP.PCAP.CD (accessed: 5 May 2020).

124   M. G. Marshall, T. R. Gurr and K. Jaggers, Polity IV Project. Political Regime Characteristics and Transitions, 1800–2018 (2014), http://www.systemicpeace.org/inscr/p4v2017.sav (accessed: 5 May 2020).

125   S. Michalopoulos and E. Papaioannou, The Long-Run Effects of the Scramble for Africa, in: American Economic Review 106 (2016) 7, pp. 1802–1848.

126   Z. Maoz/E. A. Henderson, The World Religion Dataset, 1945–2010: Logic, Estimates, and Trends, in: International Interactions 39 (2013) 3, pp. 265–291.

Figure A1. Descriptive summary of independent variables (averages +/- 1 standard variance)

Source: own compilation