African Households: National and Subnational Trends from Censuses and Surveys

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Abstract

Using census and survey microdata from 49 African countries across 330 subnational regions, we offer a comprehensive overview of household size and composition trends in Africa. The study emphasizes the potential of these data for understanding family dynamics through co-residential units. Clear regional patterns emerge, showcasing a wide range of household sizes. Trends indicate that household size is primarily linked to the number of children and, secondarily, to the presence of family and non-family members beyond the nuclear household. The analysis of household composition also highlights the uneven influence of polygamy and extended families. This research is a first step in harmonizing and examining census and survey data to delve, from a demographic perspective, into the structure and dynamics of households across Africa.

Keywords: *Households, Family Demography, Africa, Coresidence, Spatial Analysis, Comparative Research*

Introduction

This article provides an unprecedented overview of African households, examining their size and internal composition over time from national and subnational perspectives. Households are fundamental units of societal organization and reproduction that can provide crucial information about the living arrangements of families (Becker, 1998; Bongaarts, 2001; Esping-Andersen, 2016; Esteve & Reher, 2021; Lesthaeghe, 2020). However, despite the importance of households from social, economic, and demographic perspectives, such analyses are frequently based on individuals rather than households as the units of analysis (Bongaarts, 2001). Much comparative research has focused on families and changes in family structure in Europe and North America and more recently on Asia and South America, yet substantially less research has studied families, households, and living arrangements in Africa, where households and families are more complex and diverse in terms of size and composition compared to other world regions (Bongaarts & Zimmer, 2002; Lesthaeghe, 1989; Pesando & GFC team, 2019; Therborn, 2014; Van De Walle, 2006). This study aims to describe and compare change across and within Africa on multiple levels. We answer the following questions: (1) Which patterns and trends in household size and composition do we observe over time? and (2) Which household members drive the observed changes in household size and composition?.

The core contributions of this article are its scope and focus. We provide a vast temporal and geographical coverage using the novel CORESIDENCE database, which contains household-level data for 49 African countries, comprising 239 samples for the period from 1960 to 2021. Moreover, we contribute a novel combination of regional, national, and subnational perspectives to analyze

trends and patterns over time across different spatial levels. The analysis is based on an extensive data harmonization process across different sources, samples, and spatial levels. Existing research often focuses on single data sources, such as the Demographic and Health Surveys (DHS) or census data and tends to group countries (Bongaarts, 2001; Gabrielli et al., 2018; Ruggles & Heggeness, 2008). While a vast body of ethnographic and anthropological studies of households and families acknowledge the rich cultural and contextual diversity, we provide a first step to a systematic study of households and families across Africa. The focus of this article is to describe and compare core dimensions of households, namely household size, structure, and complexity, across different spatial levels and over time. We further decompose the observed changes by the contribution of household members and across subnational regions.

Background

Family Systems and Households in Africa

We cannot approach household-level research without paying close attention to the family systems and dynamics that underpin trends of household characteristics. Households frequently consist of family members. Thus, coresidence patterns are partly determined by norms and values that govern family and societal organization. Family systems in Africa are heterogeneous and differ across regions which might not always be perfectly aligned with nation state borders, as cultural, religious, or other social groups might live in areas that cross such boundaries. Nonetheless, broadly constructed family systems have been identified in the literature for the continental regions and guide the clustering of countries in our data presentation. The

subnational analysis then allows us to see where subnational regions might diverge from such predefined groups.

Family systems are of crucial importance for households because they tend to shape characteristics of households such as size and composition (Therborn, 2004; Van De Walle, 2006). In macro-level demographic research, countries in Africa are often grouped into one large group (e.g., sub-Saharan Africa) despite substantial variability with respect to demographic and socio-economic histories and trajectories (Bongaarts, 2001; Hertrich, 2017; C. Odimegwu et al., 2018). However, the diversity of countries both on the national and subnational levels are not emphasized sufficiently which can affect not only the quality of the analysis but also the relevance of any results. Thus, we aim to highlight the different family systems across Africa. In our subnational analysis we are able to identify intra-country divergence from broader trends. Additionally, by focusing on change over time, we provide insights into the relevance and appropriateness of such clusters in countries with rapidly changing demographic, social, and economic conditions.

Pan-African research on family systems from a comparative demographic perspective is somewhat uncommon, due to the vast scope and social diversity of the continent. Nonetheless, Therborn (Therborn, 2004, 2014) distinguishes two family systems across Africa: The North African family shaped by Islamic culture and tradition that shares commonalities with the West Asian family systems and the sub-Saharan African family system with unique marriage rules and kinship structures. He argues that the North African family structure is shaped by holy law,

which governs intra-family social and gender relations. Part of this tradition are patrilineality, male guardianship, polygyny, endogamy, and strictly regulated sexuality. Thus, women have property rights, legal capacity if married, and cannot be forced to marry. However, marriages are tightly controlled by male guardians and the protection of inheritance contributes to close family and kinship networks that are reinforced by endogamy (Therborn, 2004, 2014; Todd, 1985). The sub-Saharan African kinship system, as defined by Therborn (Therborn, 2004, 2014), is internally heterogeneous, due to regional cultures, customs, and traditions. Some of these differences are noted in marriage practices: polygyny is primarily a mass practice in sub-Saharan West Africa, whereas South African family systems are shaped by premarital sexual relations and later marriages. Strictly regulated sexuality is common in the Sahel zone. Shared norms across the sub-Saharan African countries are the high importance of fertility, the strong patriarchal societal organization, and marriage payments made to the bride's family (Therborn, 2004, 2014). The sub-Saharan family system, according to Therborn (Therborn, 2014), has experienced severe disruptions in the twentieth century: declining polygyny, access to birth control; ecological and socio-economic changes; rapid urbanization in absence of development; and the HIV-AIDS epidemic.

Social, demographic, and economic changes can be conceptualized in the context of varying family regimes. Family systems shape living arrangements, the timing of life course events, and socio-demographic dynamics. Tabutin and Schoumaker (Tabutin & Schoumaker, 2004) highlight how the rapid societal and economic changes across Africa between the 1950s and the early 2000s contributed to a diversification of demographic systems across the continents; however,

uncertainty surrounding trends and their permanence and data limitations demand further attention. Family structures and living arrangements are further shaped by changes in the population structure and the rapid urbanization process observed in many African countries (Cleland & Machiyama, 2017; Foster, 2000; Lesthaeghe, 2020; Tabutin & Schoumaker, 2004). Subsequently, living arrangements and households evolve, and the changes could contribute to fragmentation and increased heterogeneity both within and across countries (Gabrielli et al., 2018, 2021) and to increases in intergenerational coresidence (Esteve & Reher, 2021). Changing family systems can also contribute to a shift in norms and values that structure the life course and the path to family formation. Odimegwu and colleagues (C. Odimegwu et al., 2018), based on an analysis of cohabitation across 16 sub-Saharan countries, note that the prevalence of cohabitation increased in all studied countries, particularly in urban areas, with the exception of Mozambique. Changes in family systems could also affect identified clusters of family configurations (Castro Torres et al., 2022) and household characteristics. Thus, family systems shape the broader realm in which households are embedded and guide our household-level analysis.

The Household Concept in Africa

When it comes to operationalizing household-level analysis, we need to elaborate on and define the household concept. Households are the default unit of enumeration in censuses and surveys and have long been used in demography to study families and societies (Goode, 1963; Hosegood & Timaeus, 2006; Therborn, 2004; Van De Walle, 2006). Household definitions are somewhat inconsistent across the literature. The United Nations defines a household as "a small group of persons who share the same living accommodation, who pool some, or all of their income and

wealth and who consume certain types of goods and services collectively, mainly housing and food" (United Nations, 1993). Differences are commonly made between *de jure* and *de facto* household members, with the former including individuals who are usual household residents, even if they are temporarily absent. The latter approach counts people in the households of presence (Menashe-Oren et al., 2023; Randall et al., 2011; Van De Walle, 2006). Households are suitable units of analysis for studies of families in different contexts due to their often-overlapping definition and the close relations between both concepts. Moreover, household structures can provide insights into the social organization of society and acknowledge the fundamental role and universal presence of family as a social institution, without the need for *a priori* consensus on the definition of families' structural and functional dimensions (Van De Walle, 2006).

In the African context, some authors have questioned the appropriateness of the household as a concept to study residences, kinship, families, or societal organization due to different sizes and compositions, and resulting complexity (Randall et al., 2011, 2015). Assumptions about size, composition, and complexity of African households are often not based on empirical analysis but brought about by a lack of distinction between households and families (Rabe, 2008; Van De Walle, 2006). On the one hand, families are commonly described as nuclear when the household consists of a married couple and their children. Yet, while the households may have been nuclear, the family and the kinship network would be omitted by this description due to different residences (Van De Walle, 2006). On the other hand, households might be described as large and complex because of a lack of distinction between the observation of large kinship networks and

small households. Thus, a conceptual separation between households and families ought to be emphasized. In other words, "[w]hile both households and families are culturally defined, the former are task-oriented residence units, and the latter are conceived as kinship groupings that need not be localized" (McC. Netting et al., 2022: 20).

Van de Walle (Van De Walle, 2006) identified three limitations of the household concept in Africa. The first problem refers to the challenge of defining a physical boundary of the household. If several households share a compound, it can be difficult to distinguish separate households if no clear physical boundaries (i.e., separate kitchens) exist. Polygynist men may share different residences with wives, who may live near or far from one another, depending on the contextual norms (Coast et al., 2011; Randall et al., 2011). The second limitation refers to linking household members to a designated head and identifying the members' relationships in reference to this person. In some cases, the selection of the head may be based on age or sex, rather than other dimensions of headship. If the head is absent from the household, identifying a temporary selection can complicate the definition of relationships among household members. In African countries where polygyny is common, such as Senegal and the Gambia (Van de Walle & Gaye, 2006), polygynous men cannot be linked to all wives in a census, thus contributing to an increase in female headed households. Lastly, in census recording, the household is understood to be the "usual place of residence"; however, some living arrangements may not fit this definition and put household members at risk of being enumerated twice or not at all (Coast et al., 2011; Randall et al., 2011, 2015).

Definitions that include criteria about economic cooperation or even shared residence may not be consistent with the household as a unit of enumeration recorded in censuses or surveys and may not always be consistent with lived conceptualization of households and living arrangements across Africa (Randall et al., 2011, 2015; Van De Walle, 2006). Family is generally understood as a group of kin, although there is no singular definition of family (Bongaarts, 2001). Households in Africa frequently consist of family members but do not have to be synonymous with family; thus, they can provide insights about social organization and, to some extent, families' living arrangements. Family structures and living arrangements in Africa are highly context-dependent and influenced by a complex interplay of factors, such as historical means of production, consumption and reproduction, demographic dynamics, and cultural settings. Thus, the characteristics of households vary across space and time (Bongaarts, 2001) and households may be relatively more complex compared to other world regions. Despite these limitations, household data that are particularly relevant when conducting research in contexts where they are the only or one of few data sources.

The challenges of household-level analysis are not only encountered when conducting research on Africa. The four criteria used to define a household, co-residence, co-operation, income sharing, and commensality, are frequently not fulfilled, a problem that has been identified and explored within and beyond the African context (Bustamente & Alemán, 2007; Glenn, 1983; Spiegel et al., 1996), especially when analyzing families in which one or more members are absent due to migration. Similarly, children who do not reside with their parents to access educational opportunities or because the parents have migrated are not unique to Africa (Rabe, 2008),

although the tradition of child-fostering as a common practice in some African countries (Foster, 2000; Lloyd & Desai, 1992; Zimmer & Dayton, 2005). Kinship networks spread across several households are also found and acknowledged in census enumeration beyond Africa (Therborn, 2004). Nonetheless, their contribution to large households and possible household complexity has to be carefully considered. The high prevalence of polygynous families in parts of Africa can also bring about higher levels of household complexity compared to other contexts (Therborn, 2004; Van De Walle, 2006). Overall, we emphasize that a variety of household types are a reality in many parts of the world and "there is a danger in problematizing African families and African households by comparing them with a simplified 'Western category' […]" (Rabe, 2008: 174). While we cannot impact existing household definitions and associated challenges, we are aware of them and cautiously interpret the trends emerging from our analysis. Despite any limitations, households have substantial research value in their most fundamental capacity - as coresident units - to explore who lives with whom.

Household Size and Composition

Household size can be influenced by and indicative of various social patterns and changes. For one, household size is closely linked to the number of children people have and can provide information about fertility trends (Cherlin, 2012; Dorius, 2008; Glick, 1976; Pesando & GFC team, 2019) and about living arrangements of young children. Large households, in absence of high fertility, may indicate underlying complexities in terms of housing availability, social organization, and living arrangements. Household size is further relevant from an economic perspective, as household members are likely to share at least some of the resources available to

them, thus influencing consumption and savings patterns (Hammer & Prskawetz, 2022; Vargha et al., 2017). In the context of Africa, household size varies substantially across time and space. Grouping countries into broad categories, such as Sub-Saharan Africa, does not acknowledge vast differences within this group. Social groups may live in cross-national regions and shape the household size in adjacent regions of different countries.

Research on households and families in Africa often takes on, explicitly or implicitly, a developmental perspective by comparing Africa to historical or contemporary family settings in other parts of the world, especially Europe and North America, thereby "reading history sideways" (Thornton, 2005). Such analyses often aim to predict or assess the future of families in Africa based on developments in other world areas based on the assumption that a convergence towards smaller and simpler nuclear households can be expected (Bongaarts, 2001; Bongaarts & Zimmer, 2002; Thornton, 2005). In this context, smaller households and socio-economic development are perceived to be intrinsically linked. Global convergence is presumed to be part of the modernization and demographic transition processes witnessed in the Global North. However, such perspectives fail to acknowledge existing evidence that shows that household size and structure in Northwestern European countries never mirrored household characteristics found globally (Thornton, 2005).

Average household size is closely related to fertility trends (Burch, 1967). Theories on fertility decline, development, and convergence have long predicted a convergence to smaller, nuclear households. Goode (Goode, 1963) predicted a global convergence towards a "conjugal family

form" and a decreased importance of the extended family. However, decomposing the contributions of different demographic and social dynamics to changing household size across Africa can be challenging. Data limitations, especially at the subnational level, and the heterogeneous societal contexts contribute to the complexity of such an undertaking. We explore household size across Africa based on the number of people living in a household but also by the distribution of small and large households. We further compare trends and patterns over time and explore members' contributions to these trend on the subnational level to understand core dynamics of household changes. Existing literature highlights the importance of acknowledging the context dependency of family change with respect to their starting points and trajectories (Furstenberg, 2019), the long-standing heterogeneity regarding families and households, and the uncertainty about future changes (Cherlin, 2012; Therborn, 2004, 2014). Discussions about the convergence of household size are frequently based on the developmental belief that a society will follow a European model of transition from "[...] a predominantly extended-family system to a predominantly nuclear family system during its progression through the stages of development" (Pesando & GFC team, 2019: 137). However, a vast body of literature suggests that the extended family coresident patterns never existed in many "Western" countries (Thornton, 2001). Thus, household size across Africa, especially in regions with extended family coresidence, might not converge to smaller, nuclear households over time.

Household composition can be analyzed based on the age structure of the members and the members' relationships to the household head. We consider four different intra-household relationships to the head: the number of spouses, children, other relatives, and non-relatives. The

household composition and the relationship to the head can provide insights into living arrangements, care regimes, family organization, and fertility (Van De Walle, 2006). Moreover, cultural norms, such as patrilineality or matrilineality, marriage regimes, the strength of family ties, and the timing of life course events might be reflected in household composition (Therborn, 2004, 2014). We analyze household composition based on national and subnational data to explore how the proportions of children, spouses, and (non)-relatives evolve and whether unique characteristics across countries and regions emerge.

Across Africa, different dynamics shape the composition of households and such diversity has been well-researched within anthropological studies (Heuveline, 2004). Factors that shape the composition of households include the overlap of kinship structures across multiple households, for instance due to polygynous family structures, practices of child fostering by relatives and non-relatives, labor migration, and effects of the HIV epidemic (Avogo & Somefun, 2019; Foster, 2000; Heuveline, 2004; Lesthaeghe, 2020; Lloyd & Desai, 1992; Whitehouse, 2018). Moreover, the transition to marriage in some countries is a process rather than a point in time (Hertrich, 2017) and can contribute to intergenerational living arrangements. Similarly, frequent divorce and remarriage, and high prevalence of remarriage after widowhood shape household composition in some regions (Clark & Brauner-Otto, 2015; Therborn, 2004).

Household composition can be linked to the availability and structure of the housing market and might be shaped by population growth, changes in the population age structure, and urbanization (Buzar et al., 2005; Clark & Dieleman, 2017; Lesthaeghe, 2020; Mulder, 2006; Myers,

1990). Mortality patterns and age gaps in marriage further contribute to women surviving their partners, thus increasing the likelihood of women to live alone or with extended families (Zimmer & Dayton, 2005). Fertility trends, such as the timing of a first birth or the progression rates to higher order births, also influence the family composition (Esteve & Reher, 2021; Furstenberg, 2019; Lloyd & Desai, 1992; Moultrie & Timæus, 2001; Pesando & GFC team, 2019). Household composition with respect to female headship might provide insights into gender norms (Milazzo & Van De Walle, 2017) and demographic dynamics. Lastly, living arrangements of children might affect their well-being and resource access, thus household structures can possibly indicate areas for policy intervention (Lloyd & Desai, 1992).

Household complexity is linked to the presence of non-nuclear household members (Bongaarts, 2001). Complexity can be introduced via vertical or horizontal extension, the former referring to the presence of members of more than the two generations included in nuclear households, and the latter to an extension of siblings, their spouses and children, other relatives or non-relatives (Bongaarts, 2001; Van De Walle, 2006). As relationships in household enumeration are linked to a head, household complexity is closely connected to the idea of headship. Rabe (Rabe, 2008) emphasizes that the complexity of households in Africa is at times overstated and that comparisons to nuclear households fail to acknowledge the diverse household typologies found outside of Africa. Indeed, variation in households found across Europe has long been highlighted within the social sciences (Kertzer, 1991; Laslett, 1970; Laslett & Wall, 1972). Likewise, there are multiple typical African household structures (Rabe, 2008) brought about by different cultural, ethnic, social, economic, and demographic factors and trajectories.

Cross-national and cross-regional studies in Africa frequently rely on household-level data as they are the only available, comparable, and representative sources of information on macro level changes over large periods of time. Thus, despite the outlined conceptual and empirical challenges, household data remains invaluable for understanding demographic processes, population structure, and socio-economic dynamics in Africa. They provide essential insights into the complex interplay of factors shaping social organization and living arrangements across diverse African contexts.

In this analysis we aim to improve the understanding of how household members contribute to changes in household characteristics, such as size and composition. While our analysis is descriptive in nature and cannot identify causal relationships, we can nonetheless analyze the observed changes in terms of the contribution of children (i.e., fertility) and the presence of other or non-relatives (i.e., living arrangements, family structure) to the average household size. Thus, we gain insights into possible socio-demographic determinants of household characteristics, such as fertility, family structures, and norms about living arrangements. By analyzing trends over time on the national and subnational levels, we explore how homogeneous countries and regions are and if we observe convergence in household characteristics across space and time.

Data and Methods

The data for this study are obtained from the open-access and open-source CORESIDENCE database (https://zenodo.org/records/8142652). The database provides household-level indicators

at the national and subnational levels for more than 150 countries to facilitate comparative analysis of households over time. For Africa, data was combined and harmonized from population censuses obtained from the Integrated Public Use of Microdata Series - International (IPUMS-i) (Minnesota Population Center, 2020), and survey data from the Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS). Figure 1 presents an overview of the number of the available samples on the three spatial levels (regional, national, subnational), the data sources, and the time period covered.

About here: Figure 1

Indicators within the CORESIDENCE database are organized into four broad categories: (1) Size and age composition; (2) Relationship to the head; (3) Household typology; and (4) Household headship. Additionally, the database contains information about time, geography, sample, and source, as well as socio-economic and demographic contextual indicators. We use national data to analyze regional and cross-country differences. For the subnational analysis we use data for harmonized subnational regions. We focus primarily on the contribution of spouses, children, and other and non-relatives of the head to household size and composition. The latter two groups are combined in the analysis, with the exception of the decomposition of the contribution to heterogeneity in household size, due to somewhat inconsistent coding of other and non-relatives in some of the microdata. Thus, overlap between the two groups could not be avoided with certainty. However, other relatives of the household head generally contribute to household size to a far larger extent as highlighted by the decomposition.

The harmonization process primarily concerned the construction of indicators across sources and samples. While data from IPUMS is already harmonized with respect to the available variables, DHS data across samples can differ substantially with respect to the available variables, categories, and definitions. Any distinctions are particularly relevant when constructing indicators based on intra-household relationships and household typologies. While we standardized indicators and data across microdata samples and sources, the underlying definitions for variables cannot be standardized. Thus, any potential definitional differences, such as those for household headship, have to be acknowledged. Additionally, to construct indicators on the subnational level, the harmonization process entails addressing changing geographical regions and boundaries over time. Overall, we find data across sources for a particular country or region to be highly consistent. Nonetheless, we do not connect data points across sources when analyzing trends. Regarding the weighting of samples, we maintained the individual-level and household-level weights that were assigned by the respective sources. In line with standard practice for macro level descriptive analysis, no additional weights are assigned because we treat countries and subnational regions as individual units.

Countries are grouped into five clusters: Central Africa, East Africa, North Africa, South Africa, and West Africa. The clusters follow the geographical grouping of IPUMS and DHS, which are consistent for nearly all countries that are represented in both data sources. In addition to a geographical representation, the grouping of countries loosely represents Therborn's classifications of different historic family systems (Therborn, 2004, 2014). The clusters also serve

a practical purpose as they allow for an easier visualization of such a diverse and large group of countries. Generally, the clusters should not be understood as rigid, pre-defined groups. Instead, the analysis also explores to which extent such regional groupings are supported by the data.

Results

Household Size

Figure 2 shows two maps of Africa, illustrating the average household size per subnational region. Each map is accompanied by a box plot displaying the variation around the national mean household size. Countries in the box plot are listed from highest median household size to lowest. The upper panel shows the data for the latest available sample after the year 2000 and the lower panel displays the data for the earliest available sample between 1980 and 2000. The maps highlight the persistent heterogeneity within countries. Figure 2 is complemented by Table 2, which provides the national average household size by source and decade.

About here: Figure 2

No clear regional patterns emerge based on Figure 2 and Table 1. While household size in West Africa is highest on average, outliers on the national level, such as Ghana and Liberia, are notable. On the subnational level, further complexity emerges. Regions display lower average household size along the coast of the Gulf of Guinea with its major urban agglomerations, such as Lagos (3.53 people) and Accra (3.13 people). Inland regions in these countries have higher average household sizes. The coastal countries further North, such as Senegal and The Gambia, appear

internally homogenous due to the high national average household size (>8 people) but the average hides large internal dispersion.

In Central Africa, the mean household size on the country level is below five in Gabon, Congo, and Angola, and internal variation is low in the former two. In Chad, the Central African Republic (CAF), and Congo DR, the mean household size exceeds five, but internal dispersion is low. The outliers in this region are Cameroon, with an internal variability of more than two individuals, and Sao Tome and Principe, with an average household size below four and negligible dispersion.

In North Africa, average household size decreased in all countries with data for both periods, yet differences within and across countries persist. Household size is smaller in Egypt and Tunisia compared to Morocco and Algeria. Household size in Sudan is in line with that of other Sahel zone countries but not with North African countries. The countries in the East of Africa differ with respect to average household size and internal variation. In Kenya, the region of Nairobi (3 people) contrasts the North Eastern one (5.8 people). Likewise, the average household size in Tanzania differs by around three people between the regions with the largest (Tabora, 6.96 people) and smallest households (Kilimanjaro, 3.97 people).

The average household size among the countries of South-East Africa ranges from around five in Zambia to around four people in Zimbabwe, with low internal variation. In this region, household size and internal dispersion declined substantially over time. Lastly, the South African countries have the lowest average household size in Africa. Botswana stands out in the analysis

over time, as household size decreased in all regions (>3 people) between the 1980s and the 2010s. In Namibia, subnational heterogeneity prevails despite decreases in the average national household size of around two people between the 1990s and the 2010s.

About here: Table 1.

Overall, comparing the trends in average household size highlights the continent's diversity regarding the number of people living together. Moreover, the decreases in average household size in the Southern and Northern parts of Africa stand in contrast with trends in West Africa. Our analysis emphasizes that intra-country heterogeneity reflects cross-country patterns, such as the lower average household size in the coastal areas of countries in the Gulf of Guinea compared to those further inland. However, we find that intra-country patterns can also be inconsistent with cross-border trends.

Household Composition

Table 2 provides a country-level overview of the proportion of the different household members (head, spouse, children, non-relatives and other relatives) relative to the average household size and the share of female headship. Country classifications by continental region follow those of the data sources. Table 2 supports Figure 3, which outlines the proportion of the different household members relative to the household size on the subnational level. Slight differences in the household size indicated in Table 2 compared to Table 1 are possible for countries with several samples per decade and source. In that case, Table 1 provides the mean across those samples.

About here: Table 2.

Households in South African countries stand out with the lowest proportion of spouses and children but relatively more non-relatives and other relatives ((non-) relatives)) of the head (30.67%) because as the number of children decreases, the relative weight of other household members increases. In this continental region, the proportion of female headships is highest, with an average of over 40%. However, this analysis does not control for household size and female-headship may be driven, at least in part, by increase in one-person households. Despite the similarity in the regional means for North, East, and Central Africa, the composition of households across North Africa and the other two continental regions differs. North Africa has a large proportion of children (50.68%) in households and a small proportion of (non-) relatives (9.81%). Moreover, the share of spouses (17.48%) is higher than in any other region. Female headship across North Africa is lowest in Africa (16.21%). Sudan is a regional outlier, with 25.62% of households headed by women. In East and Central Africa, household composition and female headship are similar, with less than a 2% difference in the proportions of the head, spouse, children, and female headship. In West Africa, the proportion of spouses (13.55%) ranges from 8.84% in Mauritania to 18.95% in Burkina Faso, the third lowest and highest values among all African countries, respectively. The proportion of children in the household is close to that of Central and East Africa. The share of (non-) relatives (22.49%) is second highest among the continental region with low female headship (23.78%).

At the subnational level (Figure 3), regions with strong traditions of polygyny, predominantly in West Africa and to a lesser extent in parts of East and Central Africa, exhibit the highest average number of spouses. In North and South Africa, where polygyny is less common and marriage is not universal, the number of spouses is comparatively lower.

About here: Figure 3.

The variations within and across countries in the number of spouses are most pronounced in West Africa. Benin, Ghana, and Nigeria have a lower mean number of spouses compared to other countries in the region, but they exhibit significant internal dispersion. Mauritania stands out with a lower mean number of both spouses and internal dispersion. Seven out of the top ten countries with the highest number of spouses are located in West Africa and three in North Africa. The latter (Algeria, Egypt, and Tunisia), and the runner-up Morocco are internally homogenous.

In Central Africa, landlocked countries such as Chad, Central African Republic, and Congo have higher average number of spouses compared to coastal nations. East Africa has different household compositions, with Somalia having the highest and Zimbabwe the lowest number of spouses per household. Internal differences are more pronounced in Tanzania, Mozambique, Zimbabwe, and Ethiopia compared to Kenya, Uganda, and South Sudan. A stark North-South divide is evident in Zimbabwe and Mozambique, with fewer spouses in Southern households compared to Northern ones. Although the average number of spouses is around or below one in most regions, their role is crucial in understanding household formation, marriage, and

cohabitation customs. In polygynous societies, jointly exploring the number of spouses and female headship proportions can illuminate living arrangements and possible socio-economic implications. In monogamous societies, the number of spouses can indicate links between partnership, household formation, and the acceptance of cohabitation.

The average number of children (Figure 3, Panel 2) in households reflects the fertility patterns of countries. The pattern of children per household closely resembles that of spouses, with fewer children in South African countries, such as Namibia, Botswana, and South Africa (<= 1.28 children per household). Notably, the mean number of children in households in these countries falls below the total fertility rates, warranting a closer look into the living arrangements of children. In North Africa, the average number of children is equal to or below 2.55 in all regions of Egypt and Tunisia, and equal to or above 2.55 in all regions of Algeria, Morocco, and Sudan.

In West Africa, significant internal variation persists. Senegal and The Gambia rank highest in the number of children in households. Nigeria shows considerable diversity, ranging from around 1.5 children per household in the Southwest to 3 or more in the Northwest and Northeast. Similar dispersion is also found in Cameroon. Generally, coastal regions in Central and Eastern Africa have fewer children in households compared to their inland counterparts. The Sahel Zone, and Somalia and Congo, are characterized by higher numbers of children and internal variation of less than one child.

The last panel of Figure 3 shows the combined average of non-relatives and other relatives in the household. In some countries, larger household sizes result not only from higher numbers of children and spouses but also from complex extensions. In Senegal and The Gambia, there are around three (non-) relatives on average in the household. Some other West African nations exhibit high number of non-nuclear household members with little dispersion (e.g., Guinea-Bissau, Sierra-Leone, Mauritania, Côte d'Ivoire), while others have fewer (non-) relative members on average (e.g., Ghana, Nigeria, Burkina Faso, Niger). Southern regions in Cameroon exhibit higher numbers of (non-) relative household members but fewer children, resulting in similar household sizes but different compositions across regions. Gabon, Namibia, and Botswana showcase (non-) relative counts comparable to the proportion of children in several regions. South Africa's internal dispersion in household size is driven by a higher proportion of (non-) relative household members in Eastern Cape and KwaZulu-Natal.

Across East Africa, except in South Sudan and parts of Tanzania, non-nuclear household members are relatively uncommon. South Sudan's (non-) relative count surpasses 1.22 individuals per household in most regions, contributing to a larger national average household size compared to other East African countries. Somalia and Djibouti, despite having larger households, have fewer non-nuclear members, suggesting that their larger household size results from nuclear family members' contributions. Egypt, Tunisia, and Algeria have low (<= 0.43 people per household) numbers of non-nuclear family members, with little intra-county variation. Sudan has the highest internal variation in North Africa with respect to non-nuclear family members. Overall, Figure 3 shows that household composition often transcends national

borders and that similar household sizes can result from vastly different internal compositions. Household complexity may not always align with size, as smaller households can be complex due to the contribution of (non-) relatives.

Decomposing Members' Contributions to Variability in Household Size

Figure 4 provides an overview of the variability in household size linked to the contribution of different sets of household members, based on the most recent data available since 2000. We begin by comparing the variability of the different continental regions in household size, starting with the household head (A). Then we successively add spouses (B), children (C), other relatives (D), and non-relatives (E). This exercise highlights that the contribution of children (C) to the average household size and regional variation far exceeds that of other members, followed by the contribution of other relatives (D).

About here: Figure 4.

We further analyze the contribution of children to the variation in household size between countries and subnational regions (Table 3). We then compare the average household size to a hypothetical scenario in which children are absent. Moreover, we provide the regional maximum and minimum for each country, and we compare the coefficient of variation (CV) for each country based on subnational data, as well as the quartile coefficient of dispersion (QCD). The CV is a measure of relative variability (Hosseinpoor et al., 2016). It is calculated by dividing the standard deviation by the mean of a data set. A CV close to zero indicates that the data points are clustered

close to the mean, as indicated by a small standard deviation with respect to the mean. Higher CV values indicate a higher level of dispersion, which in this case translates to a higher subnational variation. The QCD is calculated by dividing the difference between the third and first quantiles by the sum of the two (Botta-Dukát, 2023).

About here: Table 3.

When removing the contribution of children to the household, internal dispersion decreases in all continental regions according to the CV, with the exception of West Africa where it increases to 29%. This suggests that among West African countries, other family members contribute substantially to variations in household size. The variability indicated by the CV among countries after removing children decreases by 6% to the lowest value in Central Africa (9%), suggesting that household configurations without children are similar. The QCD after removing children from the household is in line with the CV. Its decrease of 13% for Central Africa highlights that internal variability in household size among countries in this region is driven by outliers with respect to the number of children. In South Africa, the QCD decreased by 9%. The variation in household size in this region is driven by the high number of children in Zambia relative to the other countries. In North and West Africa, regional heterogeneity in household size remains largely unchanged when removing children.

Intra-country variation is highest in Nigeria (QCD 37%) and Benin (QCD 39%). The heterogeneity in Nigeria is brought about by subnational differences regarding the average number of children

in the household, whereas in Benin the contribution of other household members appears more relevant in explaining heterogeneity. Similarly, Guinea-Bissau (QCD 30%) and Tanzania (QCD 28%) also have high internal variation in household size, however, the changes in dispersion without the children's contribution are much smaller (2% and 5%, respectively), compared to the 21% reduction in Nigeria. In some countries, internal variation increased after removing the children (e.g., Namibia, Comoros, Mozambique, Cameroon, Sudan). These increases are driven by differences in the number of other relatives in the household (Figure 5).

Conclusions

We make two core contributions to the literature with this article. The first is the scope: This study contributes an overview of African households on different geographical levels based on data from 139 samples from 48 countries. We analyze household-level data over time and compare indicators within and across subnational regions, countries, and continental regions. The second contribution is the focus on describing and comparing core dimensions of households to build the foundation for further analysis of the underlying drivers of changes in household configurations in Africa, the demographic mechanisms that contribute to the observed patterns, and analysis dedicated to exploring the links between macro-level trends in household size and composition and micro-level determinants.

Our research shows that it is possible to harmonize and analyze household data across countries and sources to conduct comparative research on family demography for nearly all African countries. Given the complexity of the underlying family systems and the heterogeneity in

household characteristics across and within countries, studying residential units can provide insights into African societal and family organizations. While we acknowledge that this exploratory research only scratches the surface of household and family dynamics in Africa, we see it as a needed step in further developing the field of comparative family demography with research on households and living arrangements and to link changes in households to the core demographic dynamics and events (Menashe-Oren et al., 2023). Thus, the article aims to offer a glimpse into the rich and detailed classifications of African households in the source data and the CORESIDENCE database. Future research might explore living arrangements across countries and subnational regions to contribute to comparative theories on African family systems.

This analysis further reveals crucial findings concerning the fundamental characteristics of households across Africa. Firstly, we note that African households are decreasing in size, although intra- and inter-country heterogeneity is high. Average household size on the national level ranges from 8.41 in Senegal to 3.5 in South Africa. Variation in the number of children in households drives differences in size, which reflects the countries' fertility rates. Countries in West and Central Africa have higher fertility rates, despite some degree of subnational variation, compared to countries in South and North Africa. Polygynous family structures in West Africa (Whitehouse, 2018) contribute to large households in this region, although we found substantial intra-country heterogeneity in nearly all West African countries. Overall, household size across Africa declined most in countries and subnational regions that witnessed declines in fertility over time. The regional patterns highlight that existing classifications of family systems across Africa are evolving to varying extents. Heterogeneity in household size on the subnational level,

frequently driven by urban areas, reflects the ever-changing and context-dependent nature of households. Further research into the changes in living arrangements over time could improve the understanding of how such transformative processes occur within countries.

Secondly, while we observe that children are the primary driver of the observed declines in household size, our results emphasize that the number of other- and non-relatives of the household head also determines household size. In West Africa, extended households, in addition to the relatively high number of children, are somewhat typical, thus resulting in a prevalence of large and complex households. These household structures reflect family patterns in this region (Therborn, 2004, 2014), although trends indicate slow changes. Small households, however, can also be complex due to the relatively higher weight of individuals who do not belong to the nuclear family. Several regions of Botswana, Namibia, and South Africa with relatively low fertility have a high prevalence of small and complex households. Investigating the role of other- and non-relatives in the complexity and extension of households could be fruitful. The role of female headship and possible changes in the proportion and characteristics of female-headed households could be vital for theory development.

As lower fertility drives the decline in household size, the relative weight of extended family members or non-relatives in the household might increase. Our analysis shows that the contribution of extended family members to household size far exceeds that of non-relatives. However, in the long run, this dynamic might change as a decline in fertility will reduce the size of the family network. Thus, fewer kin are available to live in complex households (Furstenberg

et al., 2015; Murphy, 2011). Subsequently, the ability to maintain traditional household and living arrangements might decrease with declines in fertility.

While our analysis is purely exploratory and cannot identify determinants of changes in household characteristics, socio-demographic dynamics are likely to shape household size and composition across Africa. Increases in life expectancy can contribute to more shared years across generations, with implications for living arrangements (Esteve & Reher, 2021) and changes in intergenerational transfers (Hammer & Prskawetz, 2022; Lee & Mason, 2011; Vargha et al., 2017). Other African countries might face challenges to meet the needs of large, young generations and growing older populations in absence of economic prosperity and social services (Aboderin, 2004; Cleland & Machiyama, 2017; Eastwood & Lipton, 2011; Ikamari & Agwanda, 2020; Rowland, 2009). Across Africa, these incongruous changes happen as countries follow unique trajectories and undergo the stages of the demographic transition at different speeds (Lesthaeghe, 2020). Moreover, subnational diversification occurs likely due to the rapid urbanization processes witnessed in many African countries (Cleland & Machiyama, 2017).

Our analysis shows the importance of subnational comparative analyses to identify patterns in household characteristics that might not align with national trends or borders. Since households and families are often closely intertwined, analyzing the roots of subnational heterogeneity and changes over time can provide important insights into socio-demographic dimensions and aid the development of theories on family systems and household demography in the African context.

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Figures and Tables

Figure 1. Overview of the Available Samples in the CORESIDENCE Database for Africa.

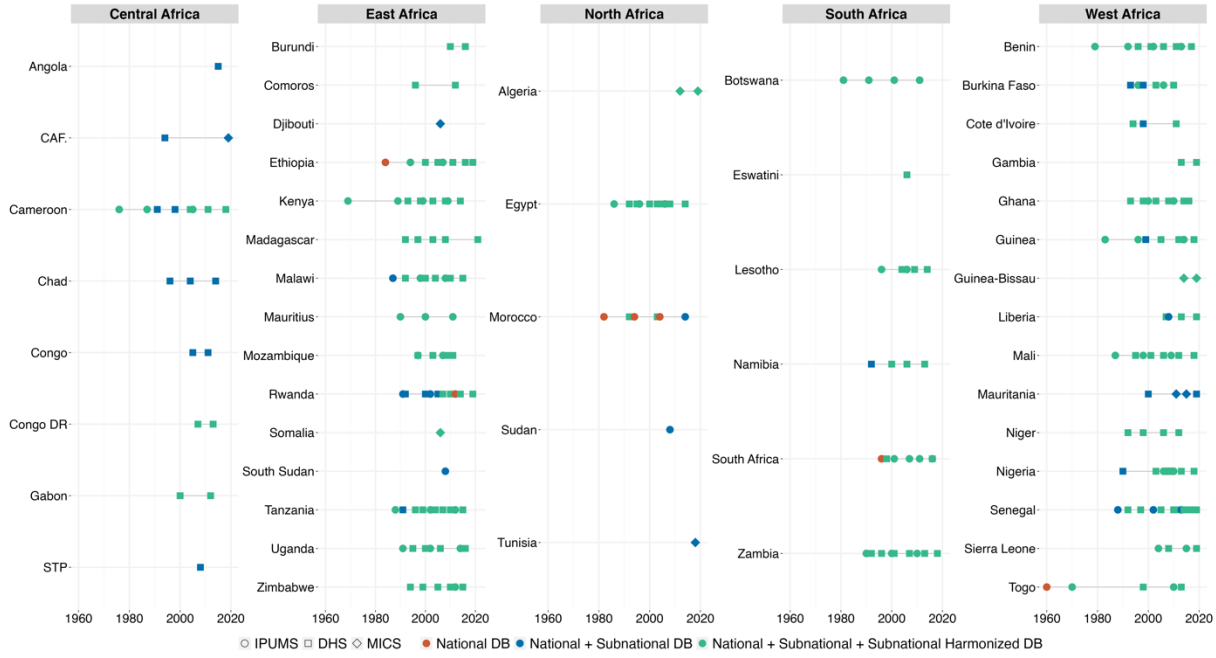
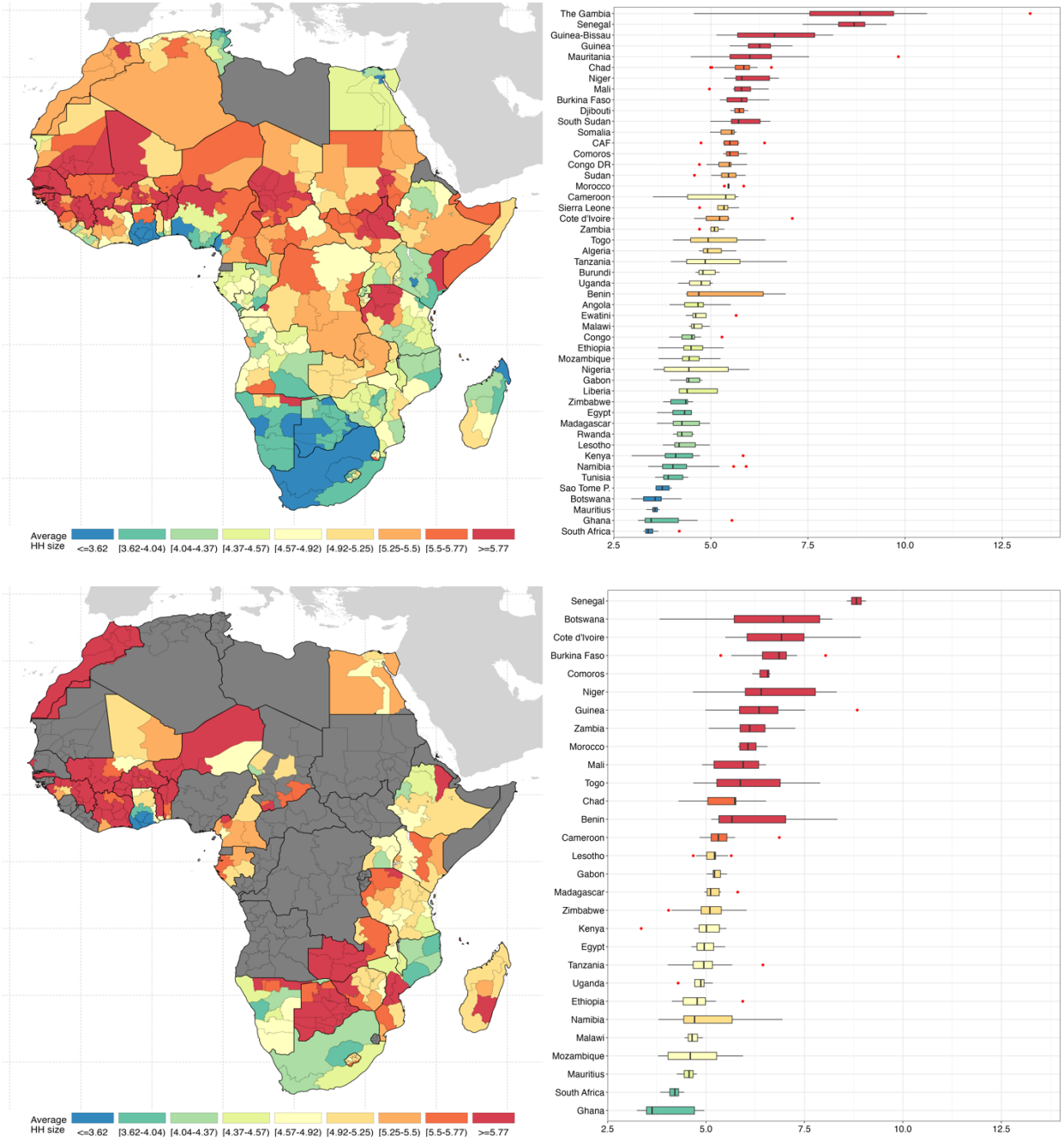


Figure 2. Comparison of Average Household Size on the National and Subnational Levels: Latest Available Sample after 2000 (upper panel) and Earliest Available Sample between 1980 and 1995 (lower panel).



Note. Color categories in the map represent the quantiles of the distribution, corresponding to the average household size in each subnational region. For countries and regions highlighted in dark gray no data is available on the subnational level in the database for the chosen period. The boxplots show the distribution around the mean on the national level based on the subnational regions. The red dots highlight outlier regions respective to the country mean. Countries are ordered by the mean average household size on the national level. The group (non-) relatives encompasses other relatives, beyond children and spouses, and non-relatives of the head of the household. Source: CORESIDENCE Database

Table 1. Trends in Average Household Size on the National Level.

	IPUMS					DHS/MICS				
	1970	**1980**	**1990**	**2000**	**2010**	**1980**	**1990**	**2000**	**2010**	**2020**
Central Africa										
Angola	.	.	.	.	.	.	.	.	4.87	.
Cameroon	5.25	5.26	.	5.19	.	.	5.89	4.98	5.13	.
CAR	.	.	.	.	.	.	5.11	.	*5.59*	.
Chad	.	.	.	.	.	.	5.45	5.44	5.82	.
Congo	.	.	.	.	.	.	.	5.46	4.49	.
Congo DRC	.	.	.	.	.	.	.	5.53	5.37	.
Gabon	.	.	.	.	.	.	5.24	.	4.21	.
Sao Tome & P.	.	.	.	.	.	.	.	3.86	.	.
East Africa										
Burundi	.	.	.	.	.	.	.	4.83	4.87	.
Comoros	.	.	.	.	.	.	6.37	.	5.43	.
Djibouti	.	.	.	.	.	.	.	*5.89*	.	.
Ethiopia	.	4.49	4.81	4.55	.	.	5.02	5.10	4.78	.
Kenya	.	4.91	4.43	4.39	.	.	4.91	4.46	3.99	.
Madagascar	.	.	.	.	.	.	5.31	4.70	.	4.36
Malawi	.	4.26	4.34	4.60	.	.	4.58	4.45	4.55	.
Mauritius	.	4.47	3.95	.	3.51	.	.	.	.	.
Mozambique	.	.	4.24	4.43	.	.	4.72	4.94	4.41	.
Rwanda	.	.	4.91	4.70	4.28	.	5.13	4.63	4.33	.
Somalia	.	.	.	.	.	.	.	*5.50*	.	.
South Sudan	.	.	.	5.77	.	.	.	.	.	.
Tanzania	.	5.08	.	4.64	4.67	.	5.53	5.04	5.03	.
Uganda	.	.	4.76	4.83	4.79	.	4.89	5.13	4.64	.
Zimbabwe	.	.	.	.	4.24	.	4.94	4.55	4.22	.
North Africa										
Algeria	.	.	.	.	.	.	.	.	*5.18*	.
Egypt	.	4.91	4.65	4.18	.	.	5.74	5.14	4.20	.
Morocco	.	5.91	5.84	5.24	4.58	.	6.09	5.46	.	.
Sudan	.	.	.	5.45	.	.	.	.	.	.
Tunisia	.	.	.	.	.	.	.	.	*3.89*	.
South Africa										
Botswana	.	6.82	4.73	4.11	3.52	.	.	.	.	.
Eswatini	.	.	.	.	.	.	.	4.74	.	.
Lesotho	.	.	5.06	4.32	.	.	.	4.61	4.19	.
Namibia	.	.	.	.	.	.	6.27	4.68	4.34	.
South Africa	.	.	4.20	3.87	3.50	.	4.29	.	3.43	.
Zambia	.	6.08	5.30	.	5.27	.	5.79	5.36	5.21	.
West Africa										
Benin	5.44	.	5.97	5.63	5.61	.	6.12	5.30	4.98	.
Burkina Faso	.	.	6.61	5.98	.	.	6.78	6.56	.	.
Côte d'Ivoire	.	.	.	.	.	.	6.54	.	5.16	.
Gambia	.	.	.	.	.	.	.	.	8.32	.
Ghana	.	.	5.07	.	4.41	.	3.80	4.07	3.54	.
Guinea	.	6.41	6.92	.	7.17	.	6.72	6.19	6.34	.
Guinea-Bissau	.	.	.	.	.	.	.	.	*7.01*	.
Liberia	.	.	.	5.11	.	.	.	5.08	5.02	.
Mali	.	5.71	6.14	6.19	.	.	5.69	5.41	5.78	.
Mauritania	.	.	.	.	.	.	5.92	.	6.29	.
Niger	.	.	.	.	.	.	6.25	6.14	5.94	.
Nigeria	.	.	.	4.58	4.48	5.44	.	5.05	4.64	.
Senegal	.	8.99	.	9.24	8.41	.	9.06	8.90	9.29	.
Sierra Leone	.	.	.	6.08	5.60	.	.	5.92	5.33	.
Togo	.	.	.	.	4.83	.	5.49	.	4.62	.

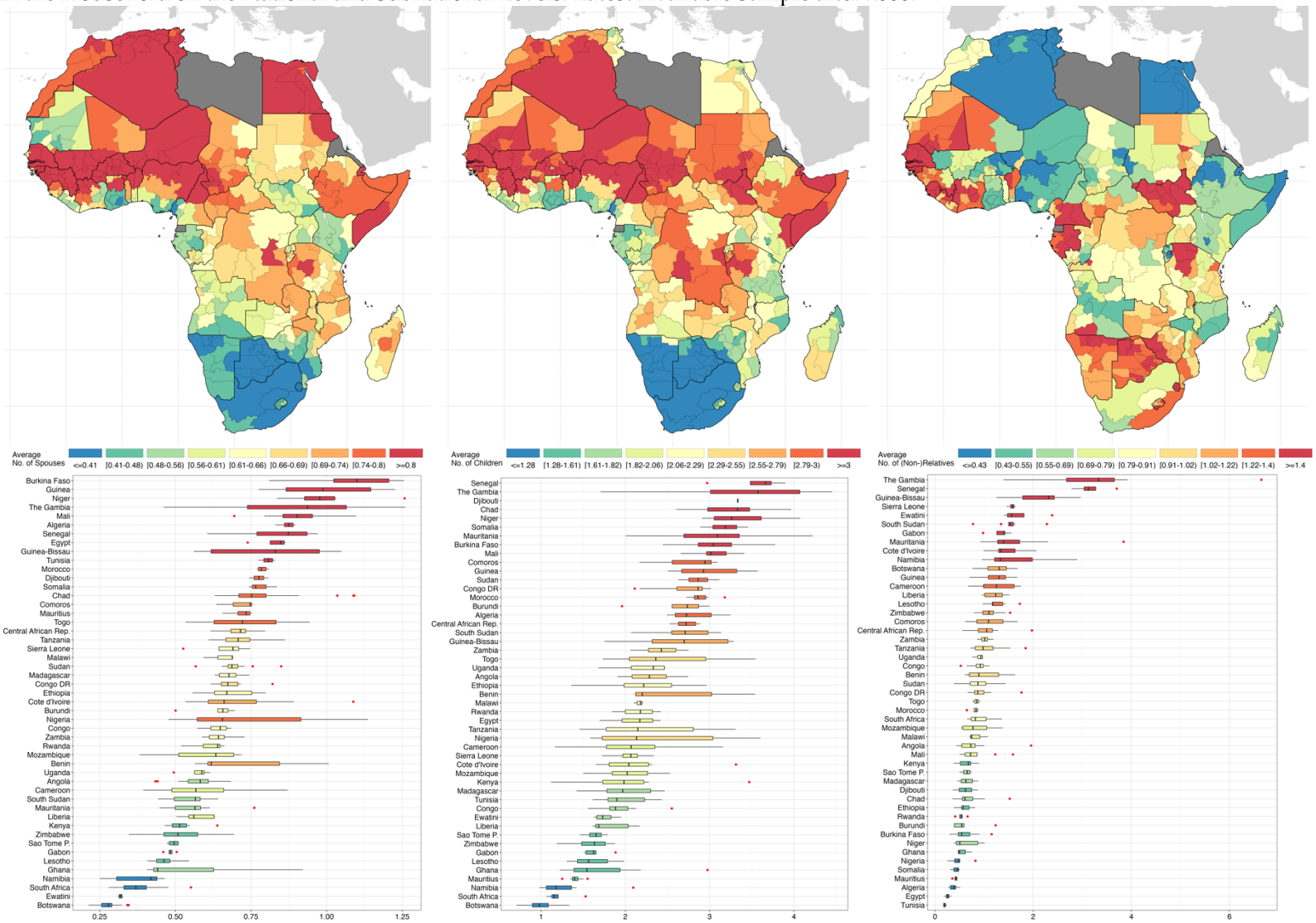
Note. Average household size on the national level by decade in which census or survey was recorded. Mean values for countries with multiple surveys per decade. Values in italics obtained from Multiple Indicator Cluster Survey. Source: CORESIDENCE Database.

Table 2. Proportion of Different Household Members relative to the Average Household Size.

Country, Sample Year	Average HH. Size	Proportion Head	Proportion Spouse	Proportion Children	Proportion (Non-)Relative	Female Headship
Central Africa						
Angola, DHS 2015	4.87	20.51	12.54	51.02	15.93	34.48
Cameroon, DHS 2018	5.23	19.14	12.60	45.45	22.81	26.04
CAF, MICS 2019	5.59	17.90	12.88	49.45	19.76	25.39
Chad, DHS 2014	5.82	17.18	14.02	56.22	12.56	22.06
Congo, DHS 2011	4.49	22.28	13.96	42.29	21.48	23.04
Congo DRC, DHS 2013	5.37	18.61	12.67	50.72	18.00	24.95
Gabon, DHS 2012	4.21	23.75	11.22	37.59	27.43	29.99
Sao Tome and P., DHS 2008	3.86	25.89	12.51	43.69	17.91	38.97
Eastern Africa						
Burundi, DHS 2016	4.87	20.53	13.43	55.52	10.51	28.72
Comoros, DHS 2012	5.43	18.40	12.91	47.89	20.74	39.30
Djibouti, MICS 2006	5.89	16.98	12.82	56.73	13.41	18.98
Ethiopia, DHS 2019	4.79	20.88	15.54	52.50	11.08	22.07
Kenya, DHS 2014	3.99	25.07	12.77	47.13	15.03	32.20
Madagascar, DHS 2021	4.36	22.91	15.79	46.82	14.48	24.74
Malawi, DHS 2015	4.55	21.96	14.13	47.12	16.79	30.61
Mauritius, IPUMS 2011	3.51	28.52	20.59	39.03	11.84	20.79
Mozambique, DHS 2011	4.41	22.67	14.18	46.37	16.78	35.55
Rwanda, DHS 2019	4.33	23.09	14.26	50.30	12.34	31.85
Somalia, MICS 2006	5.50	18.17	14.62	58.46	8.55	18.00
South Sudan, IPUMS 2008	5.77	17.32	9.48	47.47	25.73	39.36
Tanzania, DHS 2015	5.03	19.89	13.78	44.36	21.97	24.48
Uganda, DHS 2016	4.64	21.57	12.23	46.67	19.53	31.02
Zimbabwe, DHS 2015	4.22	23.68	12.55	38.76	25.01	40.57
North Africa						
Algeria, MICS 2019	4.94	20.24	17.56	54.77	7.43	10.88
Egypt, DHS 2014	4.20	23.80	19.79	50.60	5.81	12.94
Morocco, IPUMS 2014	4.58	21.84	16.82	46.78	14.38	16.12
Sudan, IPUMS 2008	5.45	18.35	12.63	52.60	16.41	25.62
Tunisia, MICS 2018	3.89	25.72	20.59	48.67	5.02	15.51
South Africa						
Botswana, IPUMS 2011	3.52	28.42	8.16	28.38	35.03	47.59
Eswatini, DHS 2006	4.74	21.10	6.75	36.65	35.50	47.84
Lesotho, DHS 2014	4.19	23.86	11.20	36.55	28.38	35.51
Namibia, DHS 2013	4.34	23.02	8.72	28.87	39.35	43.93
South Africa, IPUMS 2016	3.53	28.32	10.16	35.51	26.01	44.67
Zambia, DHS 2018	5.08	19.67	12.98	47.58	19.77	26.79
West Africa						
Benin, DHS 2017	5.25	19.03	13.65	48.56	18.76	24.88
Burkina Faso, DHS 2010	5.71	17.52	18.95	53.04	10.49	9.93
Côte d'Ivoire, DHS 2011	5.16	19.37	13.45	40.00	27.17	17.96
Gambia, DHS 2019	8.28	12.07	9.74	38.69	39.50	21.99
Ghana, DHS 2016	3.67	27.26	13.46	42.94	16.33	31.40
Guinea, DHS 2018	6.26	15.98	15.73	47.93	20.35	18.72
Guinea-Bissau, MICS 2019	6.81	14.69	11.92	40.45	32.93	22.67
Liberia, DHS 2019	4.64	21.54	12.00	38.63	27.83	33.68
Mali, DHS 2018	5.85	17.08	16.01	53.09	13.82	17.39
Mauritania, DHS 2019	6.29	15.89	8.84	48.97	26.30	39.00
Niger, DHS 2012	5.94	16.84	17.03	56.71	9.42	15.85
Nigeria, DHS 2018	4.69	21.32	16.54	52.63	9.52	18.03
Senegal, DHS 2019	8.42	11.88	9.31	41.09	37.72	30.31
Sierra Leone, DHS 2019	5.33	18.76	12.61	39.06	29.56	27.41
Togo, DHS 2013	4.62	21.64	14.07	46.69	17.60	27.48

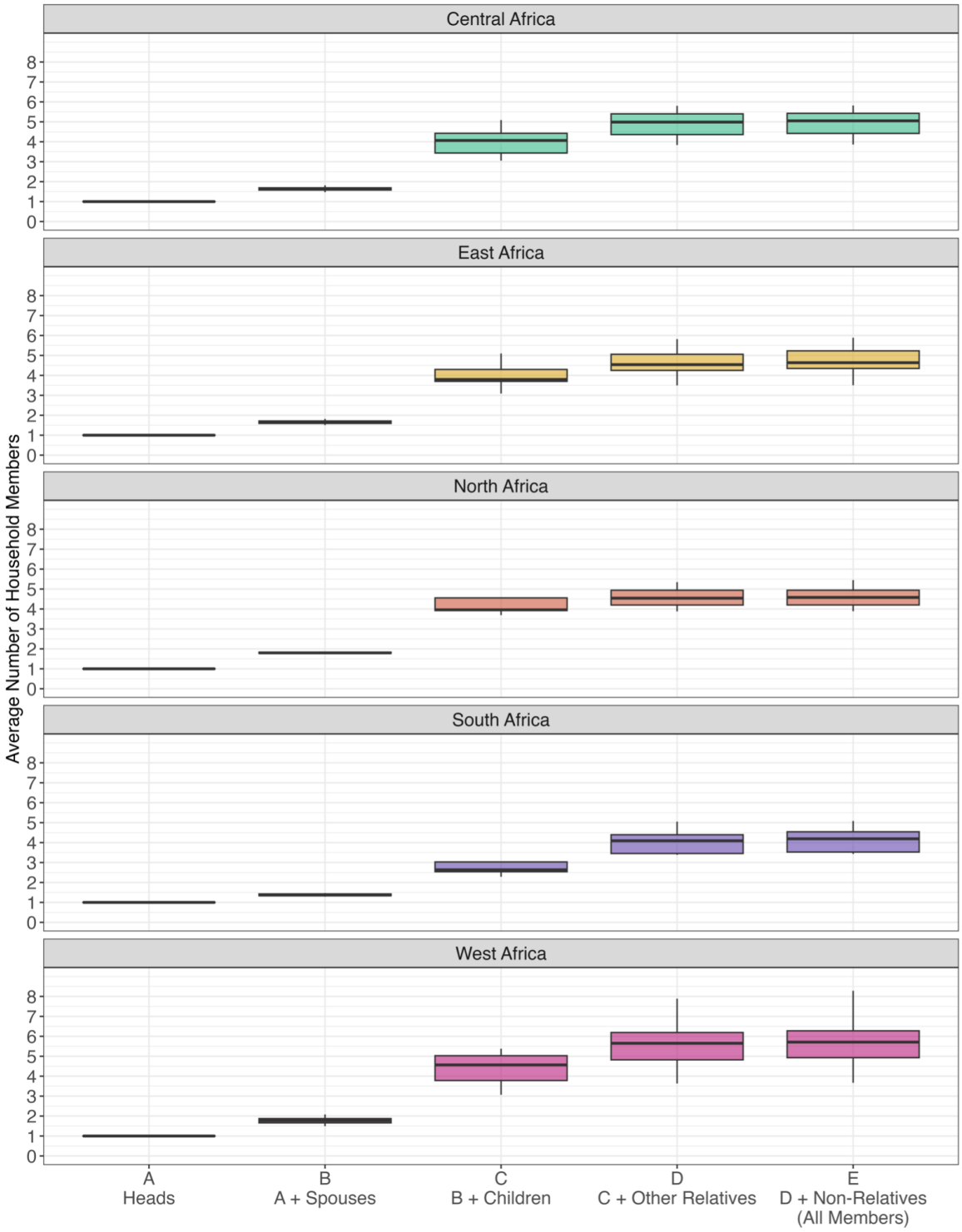
Note. Average proportion of different types of household members based on their relationship to the person designated as the head of the household in the respective census or survey (latest available sample). Proportions are relative to the average number of household members. Countries ordered alphabetically and by continental regions. Source: CORESIDENCE Database

Figure 3. Dispersion and Comparison of the Average Number of Spouses (left panel), Children (middle panel), and (Non-)Relatives (right panel) in the Household on the National and Subnational Levels. Latest Available Sample after 2000.



Note. Colors represent the distribution deciles, corresponding to the mean number of spouses, children, or relatives & non-relatives in households in subnational regions. Boxplots show the distribution around the national mean. Dots indicate outliers. Source: CORESIDENCE Database.

Figure 4. Member's Contributions to Variation in Average Household Size. Latest Available Data after 2000.



Note. Variation in household size within each region and the contribution of the different member groups to size and variation. Initially, only the household head is shown (A). We consecutively add spouses (B), children (C), other relatives (D), and non-relatives (All Members). Source: CORESIDENCE Database.

Table 3. Contribution of Children to Intra- and Inter-Country Heterogeneity in Household Size.

	Household Size all Members					Household Size excluding Children				
	HH Size	**Max.**	**Min.**	**CV**	**QCD**	**HH Size**	**Max.**	**Min.**	**CV**	**QCD**
Central Africa										
Angola	4.63	5.51	3.94	0.10	0.10	2.32	3.39	2.00	0.14	0.13
Cameroon	5.14	6.31	3.51	0.17	0.22	2.92	3.94	2.34	0.19	0.25
CAR	5.53	6.38	4.75	0.09	0.07	2.81	3.59	2.22	0.15	0.11
Chad	5.77	6.56	4.99	0.07	0.06	2.49	3.23	2.11	0.10	0.07
Congo	4.46	5.29	3.93	0.08	0.07	2.52	2.74	2.14	0.07	0.07
Congo DRC	5.36	5.93	4.71	0.06	0.06	2.65	3.42	2.46	0.10	0.07
Gabon	4.48	5.96	3.71	0.15	0.19	2.85	3.69	2.36	0.14	0.17
Sao Tome & P.	3.77	4.00	3.58	0.06	0.09	2.13	2.21	1.98	0.05	0.06
East Africa										
Burundi	4.92	5.79	4.31	0.07	0.08	2.17	2.74	1.98	0.09	0.09
Comoros	5.58	5.93	5.32	0.06	0.06	2.84	3.32	2.37	0.17	0.17
Djibouti	5.73	5.97	5.50	0.06	0.04	2.40	2.62	2.17	0.13	0.09
Ethiopia	4.65	6.07	3.64	0.14	0.13	2.29	2.44	2.08	0.05	0.07
Kenya	4.19	5.83	2.97	0.21	0.17	2.15	2.44	1.85	0.10	0.12
Madagascar	4.44	5.31	3.58	0.11	0.14	2.34	2.72	2.13	0.07	0.10
Malawi	4.66	4.98	4.44	0.06	0.06	2.50	2.77	2.34	0.09	0.09
Mauritius	3.55	3.68	3.34	0.03	0.03	2.14	2.19	2.08	0.02	0.03
Mozambique	4.49	5.25	3.66	0.09	0.10	2.44	2.92	2.16	0.11	0.17
Rwanda	4.30	4.56	4.02	0.05	0.09	2.15	2.20	2.07	0.02	0.02
Somalia	5.39	5.66	4.98	0.07	0.06	2.22	2.35	2.09	0.06	0.06
South Sudan	5.78	6.53	4.99	0.09	0.13	3.07	3.84	2.25	0.13	0.06
Tanzania	5.19	7.65	3.97	0.18	0.28	2.82	3.89	2.33	0.15	0.23
Uganda	4.69	5.61	3.63	0.11	0.11	2.46	2.78	2.21	0.07	0.10
Zimbabwe	4.21	4.54	3.77	0.06	0.10	2.63	2.93	2.38	0.07	0.05
North Africa										
Algeria	5.06	5.66	4.69	0.07	0.09	2.25	2.41	2.12	0.04	0.04
Egypt	4.18	4.75	3.61	0.10	0.12	2.07	2.20	1.92	0.06	0.10
Morocco	4.56	5.62	3.73	0.10	0.06	2.42	2.95	2.10	0.10	0.07
Sudan	5.43	5.89	4.58	0.06	0.07	2.57	3.13	1.95	0.11	0.14
Tunisia	4.00	4.42	3.57	0.08	0.13	2.00	2.07	1.95	0.02	0.02
South Africa										
Botswana	3.52	4.24	2.95	0.10	0.13	2.53	2.93	2.11	0.10	0.14
Eswatini	4.81	5.65	4.35	0.12	0.07	3.05	3.70	2.73	0.15	0.12
Lesotho	4.33	4.98	3.76	0.10	0.13	2.73	3.16	2.44	0.08	0.10
Namibia	4.28	5.91	3.39	0.18	0.15	3.03	4.17	2.38	0.19	0.23
South Africa	3.52	4.19	3.09	0.09	0.11	2.35	2.68	2.05	0.09	0.15
Zambia	5.13	5.47	4.71	0.04	0.05	2.65	2.83	2.47	0.04	0.05
West Africa										
Benin	5.32	7.75	4.00	0.23	0.39	2.75	3.85	2.13	0.22	0.32
Burkina Faso	5.78	6.50	5.23	0.07	0.09	2.70	2.98	2.39	0.08	0.10
Côte d'Ivoire	5.23	7.10	4.37	0.14	0.13	3.12	3.79	2.57	0.12	0.13
Gambia	8.72	13.22	4.56	0.30	0.24	5.32	8.77	2.86	0.33	0.22
Ghana	3.97	5.30	3.13	0.19	0.21	2.23	3.08	1.84	0.16	0.14
Guinea	6.26	7.10	5.49	0.09	0.09	3.27	3.61	2.87	0.09	0.13
Guinea-Bissau	6.70	8.15	5.15	0.17	0.30	4.00	4.94	3.09	0.16	0.28
Liberia	4.62	5.19	4.19	0.11	0.22	2.79	3.15	2.50	0.10	0.16
Mali	5.68	6.49	4.74	0.10	0.07	2.72	3.46	2.30	0.13	0.06
Mauritania	6.21	9.83	4.49	0.21	0.18	3.20	5.61	2.39	0.25	0.17
Niger	5.86	6.76	5.31	0.10	0.11	2.56	3.02	2.22	0.10	0.12
Nigeria	4.63	5.99	3.53	0.23	0.37	2.23	2.48	1.94	0.10	0.16
Senegal	8.94	10.77	6.50	0.14	0.18	5.25	6.28	3.89	0.15	0.18
Sierra Leone	5.37	5.73	4.71	0.08	0.07	3.27	3.50	2.99	0.06	0.01
Togo	4.95	6.41	3.95	0.18	0.22	2.57	2.93	2.26	0.11	0.18

Note. CV: Coefficient of Variation; QCD: Quartile Coefficient of Dispersion. Average household size based on data for subnational regions, thus differences are possible compared to prior tables. Source: CORESIDENCE Database.