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IMPROVING LIVES THROUGH DATA ECOSYSTEMS

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Acronyms and abbreviations

CS	Community Survey
DC	District
HH	Households
HHE	Household Estimates
HR	Headship Ratio
HRM	Headship Ratio Method
LM	Local Municipality
MYPE	Mid-Year Population Estimates
PES	Post Enumeration Survey
SA	South Africa
SDG	Sustainable Development Goals
SRA	Statistical Research Agency
Stats SA	Statistics South Africa
UN	United Nations

Definition of concepts

Acting Head of Household: A person recognised or nominated by the household as assuming the role of the household head in the absence of the usual household head.

Dwelling Unit: Structures or part of structures or group of structures occupied or meant to be occupied by one or more households.

Household head: A person recognised as such by the household, usually the main decision-maker or the person who owns or rents the dwelling, or the person who is the main breadwinner.

Household: A group of persons who live together at least four nights a week, eat together, and share resources, or a single person who lives alone.

Household member: A person who resides with the household for an average of four nights a week for the past four weeks.

Headship ratio: Proportion of persons in a specific population group who are the head of a household.

Headship ratio method: A demographic technique used to estimate the number of households in a population by applying age-specific household headship rates to population projections.

Risenga Maluleke
Statistician-General

1. Aim and objective

The main aim of this report is to outline the methodology that is applied by Stats SA in estimating households at national, provincial, district, and local municipal levels. The report outlines input data used from different censuses as well as an evaluation of the used input data. Different estimation and projection methods as outlined by the United Nations (UN) are also discussed. Steps followed when estimation and projections were done are outlined. The report discusses estimated and projected households at national, provincial and district levels.

2. The purpose and need for household estimation

National Statistical Offices (NSOs) are mandated to produce household estimates for a wide range of statistical and policy-related purposes. A fundamental function of official statistics systems is to provide timely, reliable, and policy-relevant data to support planning and decision-making processes. In this context, household estimates and projections are essential tools used by the government to plan for housing needs, infrastructure development, and the provision of basic services (UN, 2017; Eurostat, 2013). These estimates are particularly important at sub-national levels, where localised planning and resource allocation decisions are made. Beyond planning, household estimates play a critical role in the design, weighting, and calibration of household-based surveys. Since many may use the household as their primary unit of analysis, accurate estimates of household numbers and structures are required to ensure representativity (UN, 2015). Since South African population censuses are conducted decennially, and are costly and logistically demanding, large-scale sample surveys such as Community Surveys (CS) are often used as an alternative data sources. However, these surveys are usually calibrated at both the individual and household levels to produce reliable and unbiased estimates (Deville et al., 1992; Eurostat, 2013). Moreover, the household constitutes a key unit of analysis in demographic and socioeconomic research, as many important decisions, such as those related to fertility, education, labour force participation, and migration, among others, are made within the household context (Bongaarts, 2001; UNPD, 2019). As a result, the production and evaluation of high-quality household estimates are critical not only for national development planning but also for monitoring progress towards international development frameworks, including the National Development Plan (NDP), Sustainable Development Goals (SDGs), and Agenda 2063.

Household estimates and projections are a common framework for informing local-level policy and planning and should be seen as a starting point for calculating future housing needs. At Statistics South Africa (Stats SA), household estimates and projections are integrally linked to the calibration and weighting of household data from surveys. Similar to population projections, household projections become increasingly uncertain as they extend into the future, particularly for smaller geographical areas and detailed age and sex breakdowns (Shryock et al., 1976; ONS, 2019). Household estimates and projections are a result of trends in household formation between the census years, and population change indicated by the national and subnational population projections.

Even though a Community Survey (CS) took place in 2016, the household data of the CS was calibrated to household estimates provided from the Mid-year Population Estimates (MYPE) and as such cannot be used in the calculation of household estimates.

Household projections depict the number of households that would be in South Africa currently and in the future if a set of assumptions about the size and structure of the population and that population's patterns of household formation were to hold. The current household estimates and projections are developed using the household headship rate method (HRM).

3. Concepts of a household and household head

According to the United Nations (2017a) a “household” is persons (individually or in a group) who provide themselves with food or other essentials for living. A household may therefore be either a one-person household or a multi-person household. These persons may be related or unrelated or a combination of both. Similarly, the United Nations (2017a; 2017b) reiterates that a private household comprises persons who share living arrangements and jointly occupy a housing unit. The World Bank (2018) further emphasises that shared consumption and joint provision of living arrangements as central elements of household definitions in censuses and surveys.

According to Stats SA (2011a), a household is defined as a group of persons who live together at least four nights a week, eat together and share resources, or a single person who lives alone. Other explanatory phrases can be 'eating from the same pot' and 'cook and eat together’.

A household should not be confused with a dwelling unit/ structure, and it should be noted that a single household may occupy more than one structure. For example, if individuals living on the same plot, stand or yard share meals but sleep in separate structures – such as young male family members living in a backyard room – they are considered part of the same household (Stats SA, 2011b).

Conversely, individuals occupying the same dwelling unit who do not share food or other essentials are considered separate households. For instance, persons who share a dwelling but purchase food separately and provide for themselves independently are counted as multiple households within a single dwelling unit (Stats SA, 2011a; World Bank, 2018). Such distinctions are essential for ensuring accurate household enumeration and preventing under or over-estimation in population statistics.

The head of the household is defined as the person recognised as such by other household members. This individual is usually the primary decision-maker, main income earner, the person responsible for the household’s maintenance, or the oldest member of the household (UN, 2017b; UN, 2017a). In many settings, the identification of a household head is self-reported and may reflect social, cultural, or economic considerations rather than strictly age-based criteria (OECD, 2011). The head of the household is therefore used as a proxy for the household unit, with each head representing a household (UN, 2017b).

It is important to distinguish a household from a *family*, which usually refers to individuals related to each other by birth, marriage or adoption (Hall & Mokomane, 2018; UN, 2017b).

Four categories of questionnaires were used during Census 2022 to collect information from different classifications of persons in South Africa (Stats SA, 2023a). These included:

1. A household questionnaire for persons living in private households.
2. A questionnaire for persons residing in special dwelling institutions (SDI), such as hospitals and correctional facilities.
3. A transient questionnaire for individuals in transit on census night, including those at airports and border posts; and
4. A questionnaire for persons who were homeless and not residing in shelters.

4. Household headship rate method

Projecting households involves estimating the future number and characteristics of households based on existing data, trends and assumptions. According to the UN’s 1973 manual on methods of projecting households, methodologies on projections can be classified into two broad groups: the cohort method and the

ratio method (UN,1973). The cohort method in household estimation uses marriage rates, family size, family composition and characteristics of head of the household. The method traces persons through life to ascertain proportions of the population with specific characteristics, including household headship (UN, 1973; O'Neill et al., 2001).

Applying a cohort-based approach to household projections is often challenging in practice, despite it being theoretically preferred over simpler ratio-based methods. The cohort approach requires detailed longitudinal data on household formation, dissolution, and transitions, which are rarely available in most statistical systems. As a result, many practitioners rely on ratio methods, which are more feasible to implement. These methods involve first projecting the population by key demographic characteristics such as age and sex and then deriving the number of households by applying "participation ratios" (e.g., headship rates) to the projected population (UN, 1973).

Compared to population projections, household projections present additional complexities because the underlying data on household dynamics, such as the formation and dissolution of households, as well as movements of individuals between households are not routinely collected in official statistics. This lack of "household vital statistics" limits the application of more sophisticated projection techniques (UN, 1973; Jiang et al, 2004). Consequently, ratio-based approaches remain widely used.

Broadly, four main ratio methods can be distinguished: the simple household-to-population ratio method, the life table method, the vital statistics method, and the headship rate method (UN, 1973; Jiang et al., 2004). Among these, the headship rate method is one of the most commonly applied approaches and forms the primary focus of this report.

The headship rate method (HRM) is the most commonly used approach to household projections, particularly among national statistical offices and planning institutions, because of its operational simplicity and consistency with cohort-component population projections (UN, 1973; UN, 1989; ONS, 2018; Clark et al., 1992). As described by the United Nations (1973), the method is based on the proportion of household heads within specific demographic groups of the population. Age-specific headship rates are calculated by dividing the number of household heads in a given age-sex group by the total population in that same age-sex group. These rates are then applied to the corresponding projected population groups to derive the projected number of households. The total projected households are obtained by summing across all demographic categories. Because household formation is closely associated with age and sex, the use of disaggregated rates improves the demographic consistency of the projections. Furthermore, where data permits, headship rates (HR) may be developed by additional classifications such as marital status, population group, or geographic area (UN, 1973). This flexibility makes the method particularly suitable in contexts where detailed longitudinal household transition data are unavailable, but reliable population projections exist. The headship rate specific for sex and age at time *t, h (i, j, t)*, is expressed by the following formula:

$$h(i,j,t) = \frac{H(i,j,t)}{P(i,j,t)}$$

Where *P (i, j, t)* is the population by sex *i*, age *j* and at time *t* and

H (i, j, t) is the number of heads of households by sex *i*, age *j* and at time *t*

The headship rate method has been widely used in the past for housing forecasting and official household projections because of its simplicity and compatibility with population projection frameworks. However, the method has been criticised within demographic literature. As noted by the United Nations (1973), ratio-based approaches such as the headship rate method do not explicitly model the underlying demographic processes that drive household formation, such as marriage, divorce, fertility, and migration transitions; instead, they apply observed proportions to projected populations, implicitly assuming stability or trend-based adjustments

in headship patterns. Broader work on demographic forecasting has similarly cautioned that projection models based on fixed ratios may underestimate structural or behavioural change over the medium to long term (Keilman, 2003). For South Africa, the method may be the only option available to use as we have limited housing data, although with a caveat that caution should be taken with regard to the projected number of households for the medium to long term.

Using census data, Table 1 below, indicates that the number of households in South Africa has increased over time (about 9 million in 1996 to almost 18 million in 2022). This is a crude measure as we have not yet disaggregated by age, sex, population group or geography.

Table 1 – Household Population and size over time, Census 1996, 2001, 2011, and 2022

	1996	2001	2011	2022	% Change 1996-2001	% Change 2001-2011	% Change 2011 - 2022
Total population	40 583 573	44 819 778	51 770 560	62 027 503	10,4	15,5	19,8
Household population	39 201 672	43 369 667	49 609 278	61 367 659	10,6	14,4	23,7
Average household size	4,5	4,0	3,6	3,5	-10,7	-10,4	-2,9
Headship rate	22,3	25,0	27,9	28,7	12,0	11,6	3,0

Table 1 above, provides the population and household numbers based on census data in South Africa over time (1996 to 2022). Even though the number of households have increased since 1996, the average household size has declined (from 4,5 persons per household in 1996 to 3,5 persons per household in 2022). Consequently, the headship rate has increased over time, indicating more households and marginally fewer persons per household when looking at the average household size over time.

Table 2 – Household size over time, 1996, 2001, 2011, and 2022

	1996	2001	2011	2022	% Change 1996-2001	% Change 2001-2011	% Change 2011-2022
One person Household: male	856 821	1 231 804	2 514 121	3 315 296	43,8	104,1	31,9
One person Household: female	630 068	846 209	1 341 311	1 330 970	34,3	58,5	-0,8
Households with 2-5 persons	5 345 072	6 706 532	8 387 756	11 014 479	25,5	25,1	31,3
Households with 6-9 persons	1 971 781	2 037 469	1 896 958	1 867 918	3,3	-6,9	-1,5
Households with 10+ persons	255 829	383 692	310 014	300 115	50,0	-19,2	-3,2

Table 2 above, examines the different types of households over time. The table indicates that there are more males than females in one-person households. This gender profile pattern remains prevalent over time. In South Africa, the majority of households are 2-5 person households. However, although the number of one-person households increased over time, the proportion of households with more than six members showed little to no growth.

5. Estimating and projecting households

Since the HRM relies on projected population distributions by age and sex, it partially captures changes in the demographic composition of the population that influence household formation and household size. Changes in age structure, fertility, mortality, migration, and socioeconomic conditions can therefore affect the number of households over time. A major methodological challenge in producing household projections using this method is the accurate estimation of future headship rates by age and sex, since these rates are influenced by demographic behaviours and social trends that may change over time. Although the HRM provides the overall framework for estimating households, its implementation may vary depending on the availability and quality of data. In practice, different assumptions are made regarding how headship rates will evolve in the future. These assumptions are generally grouped into four broad approaches: the constant headship rate method, the extrapolative (trend) method, the regression, and the normative methods, each of which reflects different assumptions about future household formation patterns (UN, 1973; ONS, 2020).

5.1. Constant rate method

The constant HRM projects the number of households by applying fixed age- and sex-specific headship rates from a base period to projected population totals. This approach assumes that household formation behaviour remains unchanged over the projection period. According to the United Nations (1973), the method provides a relatively simple framework for estimating household growth because it relies only on existing headship rates and population projections. However, its simplicity also represents a major limitation, as it does not account for social, economic, and demographic changes that influence household formation. Consequently, the constant headship rate approach is generally more appropriate for short-term than for long-term projections (O'Neill et al., 2001).

The limitations of this method become particularly evident when it is applied at lower levels of geography, such as provinces or districts. At these levels, migration, urbanisation, and local economic dynamics can significantly alter the age structure and living arrangements of populations, thereby affecting household formation patterns. Historically, the constant headship rate method was widely used by statistical agencies when household projections were derived from a single census dataset (UN, 1973).

5.2. Extrapolative method

The extrapolative (trend) method projects future household numbers by extending observed historical trends in headship rates. Unlike the constant headship rate approach, which assumes that household formation behaviour remains unchanged, the extrapolative method assumes that past patterns in headship rates will continue into the future.

In this approach, headship rates observed across multiple censuses or surveys are analysed over time, and statistical techniques such as linear or exponential trend models are used to project future rates. The projected headship rates are then applied to the projected population by age and sex to estimate the number of households. According to the United Nations (1973), this approach improves upon the constant headship rate method by allowing household formation patterns to evolve over time, reflecting gradual demographic and social change.

However, the extrapolative method also has limitations. Its reliability depends heavily on the quality and length of the historical data series, and the assumption that past trends will persist into the future may not always hold if there are sudden changes in economic conditions, housing markets, or social norms. Also, demographic transitions, changes in marriage patterns, migration and changes in living arrangements can alter household

formation behaviour in ways that are not fully captured by a simple trend extrapolation (O'Neill et al., 2001; Zeng et al., 2013; Grundy, 2013). Despite these limitations, the extrapolative approach remains widely used in household projection studies because it allows analysts to incorporate observed temporal changes in headship rates while maintaining a relatively straightforward projection framework.

5.3. Regression method

The regression approach to household projections estimates future headship rates by modelling their relationship with demographic, social, or economic variables. In this method, headship rates are treated as the dependent variable and are statistically related to explanatory factors such as income, employment, marital status, housing supply, or urbanisation levels. Regression models are then used to estimate how changes in these variables influence household formation behaviour, allowing projected values of the explanatory variables to generate future headship rates (UN, 1973). This approach has the advantage of explicitly incorporating determinants of household formation, rather than relying solely on historical trends. The approach is more sophisticated compared to a simple extrapolation method and can take into account multiple variables that can influence household growth over time. Variables like marital patterns over time can be incorporated into the model to better estimate households using a regression method. In South Africa, marriage is not the ideal measure of co-residence (Posel and Rudwick, 2013). Many couples choose to cohabitate for extended periods of time. Whist cohabitation can be considered a better variable to adjust trends in household formation this information is captured only in census every 10 years.

Despite its advantages, the regression approach requires reliable time-series data for both headship rates and the explanatory variables, which may not always be available.

Furthermore, projections depend on the assumptions made about future values of the explanatory variables, introducing additional uncertainty into the estimates. Nevertheless, regression-based methods can provide a more flexible and analytically robust framework for household projections compared with simpler approaches that rely only on constant or extrapolated headship rates (UN, 1973).

5.4. Normative approach

The normative approach to household projections involves estimating future headship rates based on assumed or desired patterns of household formation, rather than strictly relying on historical trends. In this method, analysts adjust headship rates to reflect expected social or demographic changes, often drawing on comparisons with other regions or countries that are considered to represent a more advanced stage of demographic or socioeconomic development. For example, a country undergoing rapid urbanisation may assume that household formation patterns will gradually converge toward those observed in more urbanised societies. This approach allows analysts to incorporate expert judgement and policy considerations when projecting household numbers (UN, 1973).

The normative approach is inherently subjective, as it depends on assumptions about future social behaviour and institutional conditions. While it can be useful when historical data are limited or when major structural changes are anticipated, however its results may vary significantly depending on the assumptions adopted by analysts. Nevertheless, the approach has been used in various household projection exercises where planners aim to account for anticipated changes in living arrangements associated with demographic transition, urbanisation, and economic development (Bongaarts, 2001).

6. Evaluation of input data

Evaluation of headship ratios, disaggregated by age and sex, is a key and important step in the process of household estimation and projections (UN, 1973; Mason et al., 1992; O'Neill et al., 2009). Typically, headship ratios follow a specific and predictable life-cycle pattern. The probability of being a household head would be

very low in younger ages, rapidly increasing with age, peaking in adulthood (30 and over), and thereafter a slight decline or plateau in probability of headship at older ages is expected. Headship ratios are usually higher among males compared to females. As part of the evaluation process, detecting instances where headship rates exceed unity i.e. exceed logical bounds, would allude to data issues/errors. Other issues include unexpected peaks or zig-zag patterns in certain ages. Smoothing of headship ratios should be applied to develop a trend of headship probabilities that can be used to estimate household headship by age (UN, 1973). Consistency of age patterns over time needs to be evaluated across all four censuses. Census headship rates should follow a pattern that is fairly consistent unless there are structural demographic changes that would warrant a change in pattern or there are issues with the data.

Figure 1 – Comparison of headship ratios across census points

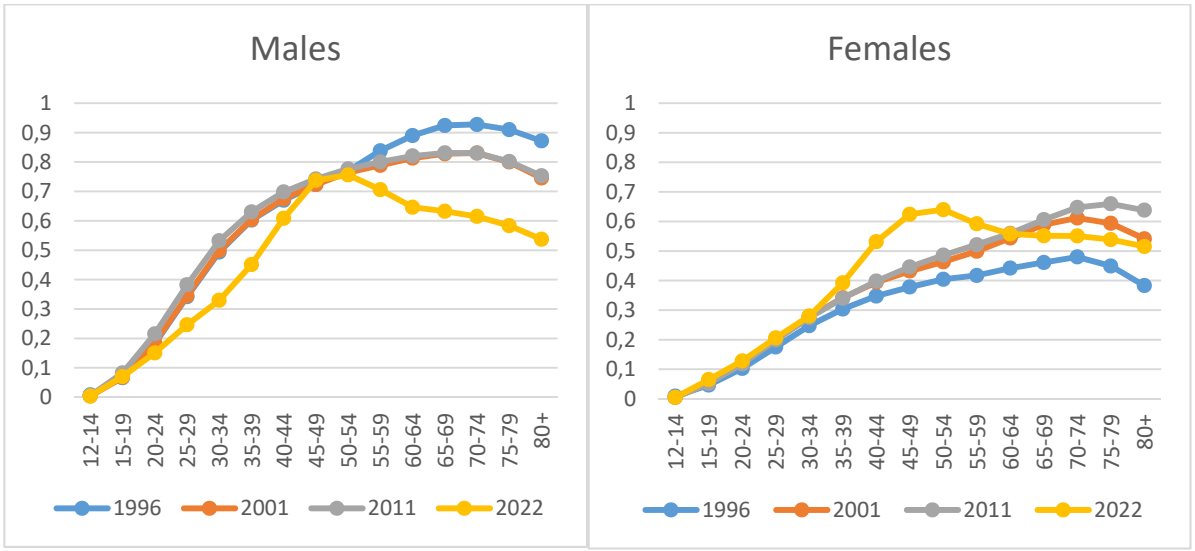


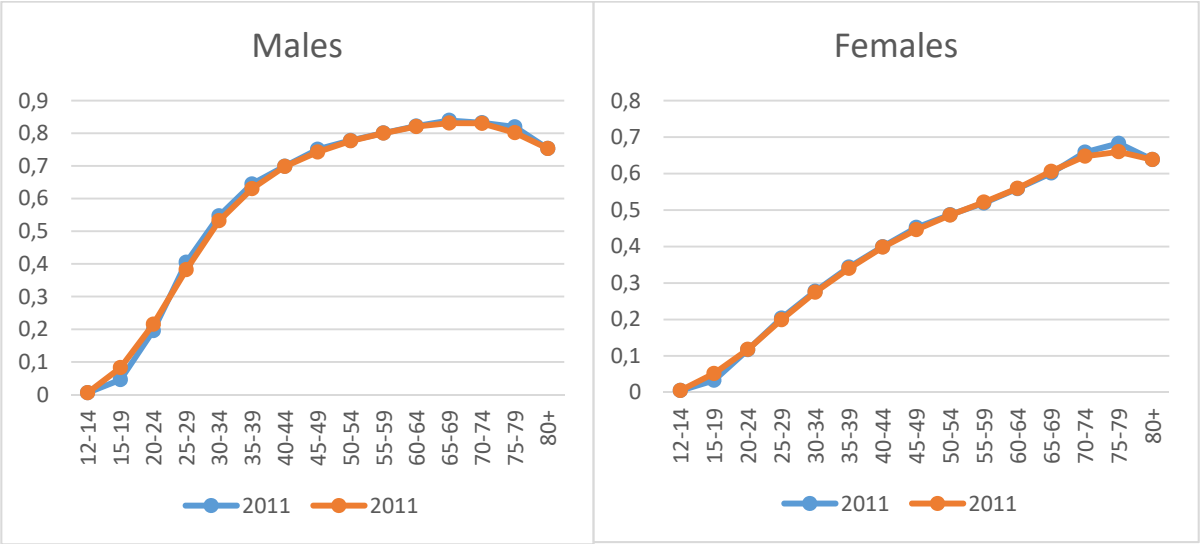
Figure 1 above, compares headship ratios for all census points by age and sex as part of data evaluation. As expected, the headship rates are higher for males than for females across all ages. It is also observed that headship rates are low at younger ages (12-19 below 0,1) increasing with age, with the highest ratios being in older ages. This pattern is consistent across the 1996, 2001, and 2011 Censuses. Additionally, headship rates increase with each census as the proportions of households grow. In Census 2022, headship rates peak between 40 and 50 years of age, followed by a decline at older ages, representing a shift from the pattern observed in earlier censuses. According to Stats SA (2023b), the Census 2022 data were adjusted using results from the Post Enumeration Survey (PES) to account for coverage errors. The shift in the 2022 headship pattern relative to earlier censuses is noted and may reflect changes in household composition and living arrangements over time.

6.1. Smoothing of headship ratios

Headship rates in certain age groups for certain census years exceeded logical bounds due to population universe inconsistencies. Headship ratios should not exceed unity. Values that are theoretically implausible indicate problems such as inconsistencies in the population universe, misclassification of household heads, or other data processing errors (UN, 1973; ONS, 2015; O'Neill et al., 2001). Headship rates in certain age groups for certain census points that exceeded logical bounds were constrained to <1. The application of a capped headship ratio ensures that growth in household heads of certain ages is not overstated. Also, it is important to note that capping should be treated as a numeric safeguard rather than a substantive demographic assumption.

Smoothing of headship ratios using a three-point moving average, ensures that household heads of certain ages are not overstated. Once the smoothing of the census headship ratio was implemented, headship ratios were estimated over the full projection period 2002-2030 using an exponential growth method.

Figure 2 – Comparison of smoothed and unsmoothed headship ratios from Census 2011



Above is Figure 2. It demonstrates an example of a comparison between unsmoothed and smoothed headship ratios from Census 2011. It is clear that smoothing just softens the “noise” seen in the data.

7. Household estimation methodology applied by Stats SA

Stats SA disaggregates the household estimates at national level by age, sex and population group. Provincial, district and local municipal households are estimated by age and sex only. Stats SA uses the extrapolative method in deriving households over time. The following steps are followed when estimating households:

a. The first step in the household estimation process is to prepare input data from the censuses. This means that population and household head data are prepared from Census 1996, 2001, 2011 and 2022

b. Create headship ratios for each of the censuses by age and sex.

$$h(i,j,t) = \frac{H(i,j,t)}{P(i,j,t)}$$

Where $P(i, j, t)$ is the population (census total population) by sex i, age j, and at time t, and

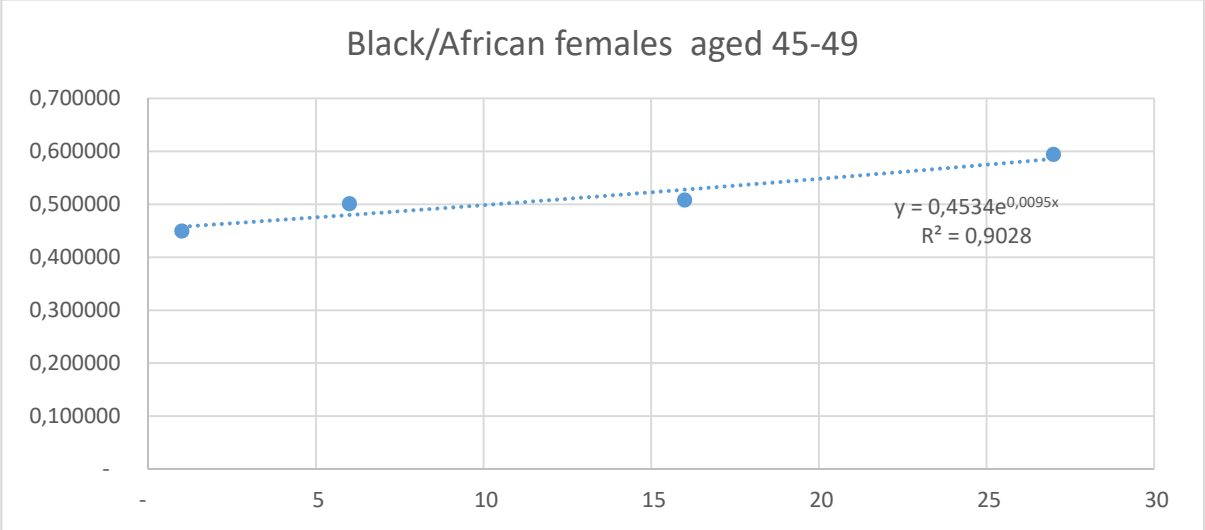
$H(i, j, t)$ is the number of heads of households by sex i, age j, and at time t

The headship ratios are then smoothed using a three-point moving average.

c. Based on the smoothed headship ratios, we calculate the intercept (a) and slope (b) in preparation for regression lines for each age by sex.

d. Fit regression lines based on (d) and project forward headship ratios with beyond 2022 by extrapolating based on past census data (see example below for black African females of a particular age group).

Figure 3 – Exponential model for black African females aged 45-49



e. Apply headship ratios developed (e) to MYPE population data aged 12+, to create heads of households by age and sex.

$$H_{i,j,t} = P_{i,j,t} * h_{i,j,t}$$

Where $H_{i,j,t}$ is the number of heads of households by sex i, age j, and at time t;

$P_{i,j,t}$ is the mid-year population by sex i, age j and time t and;
$h_{i,j,t}$ is the headship rate specific for sex and age at time *t*

f. At the provincial, district and local municipal level, there is an additional step that ensures integrity of the household estimates between the various geographic levels. Establishing adjustment factors to ensure that the totals of the newly created households in provinces sum to the national household totals is imperative for internal consistency of the household estimates and projections. At district level, this ensures that the sum of the district households sums to the number of households in each of the provinces. Similarly, the sum of the households in the local municipalities (LMs) must equal the number of households in their respective district.

8. Challenges and limitations in projecting households over time

Given the limited data available regarding household formation in the country, census data becomes the most relevant and representative data we have regarding household formation and size over time. Consequences of an exponential extrapolation method used to project households is an assumption that over time the trend is likely to follow such a pattern, and no change of direction post 2022 is likely to occur. However, this bias is somewhat addressed with the use of population estimates that are developed via a cohort-component method that does incorporate annual changes in fertility, mortality and migration over time. The inclusion of more recent data on household formation from Census 2022 also addresses this limitation for the short-term.

Even though census data captures indicators that influence household formation over time, such as marital status, family size, household type etc., the MYPE does not disaggregate the population estimates by such characteristics. Thus, such factors cannot be incorporated into this methodology. However, as already indicated, the population estimates take into consideration empirical data regarding population growth over time. Changes in the age and sex profile of the population over time, disaggregated by population groups and geography, is incorporated into the household estimation. The MYPE adjusts the HH estimates to current trends and data somewhat.

At lower levels of geography where demographic change is likely to occur in specific localities, we anticipate a greater impact on local municipalities. Local municipal population estimates (used in the derivation of household estimates at LM level) are derived by a simple linear model, using census information at local municipal level over time, tempered by the MYPE district estimates. The MYPE district estimates are derived via a cohort-component method which does incorporate changes in fertility, mortality and migration. Even though this approach does have limitations, the lack of pre-requisite data negates the development of alternative headship rates. As such, the extrapolation method is the most convenient and viable method of estimation given the lack of data.

9. Conclusion

Household estimates are essential for calibrating household surveys and evaluating coverage of service delivery. The updated household estimates are accompanied by an entire series of revised estimates for the period 2002–2030. This report details the methodology applied using the MYPE 2025 series population data. On this basis comparisons between the Household estimates 2025 series and previous series should not be made.

The methodology applied by Stats SA in estimating and projecting households is based on the concept of headship rates (probability of being a head of household). Probability of household headship generally follows a non-linear, often accelerating trend. Household formation is driven by societal changes (such as urbanization, population aging, and declining marriage rates) that generally lead to higher probabilities of individuals forming their own households. The impact of COVID-19 deaths on population i.e. the resultant excessive adult mortality methodologically results in decline in households in 2021 (peak of COVID-19 deaths). Post 2021, the decline in deaths due to health interventions in response to the COVID-19 virus, is evident in the increase in the growth rate for both the population and subsequently the households.

All 4 census points (1996, 2002 and 2011 and 2022) are used in the development of household estimates 2002-2030. Headship ratios developed from census are applied to the MYPE population data aged 12+ (2025 series), to create heads of households by age and sex. Predictions regarding future headships rates is developed by extrapolating headship rates based on past trend i.e. census 1996-2022. HH estimates are available for the period 2002-2030 (projected) by age and sex disaggregated various levels of geography i.e. national, provincial and district levels. Data from various points in time are geographically harmonised to the most recent geographic boundaries so that results remain meaningful.

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11. Appendices

Appendix 1 – Distribution of household heads by population group

	1996	2001	2011	2022
Black/African	6 399 079	8 620 183	11 347 098	13 563 385
Coloured	730 161	887 824	1 055 446	1 588 703
Indian/Asian	241 009	282 909	347 100	565 216
White	1 460 124	1 409 635	1 606 074	2 058 248

Numbers do not add to total published households because only heads of households aged 12+ are included, unspecified is excluded for age, sex & pop. group

Appendix 2 – Distribution of household heads by province

	1996	2001	2011	2022
Eastern Cape	1 284 213	1 480 804	1 685 419	1 838 961
Free State	614 152	733 128	822 902	845 250
Gauteng	2 034 512	2 791 390	3 906 980	5 318 675
KwaZulu-Natal	1 651 792	2 115 425	2 533 713	2 853 742
Limpopo	882 295	1 116 941	1 416 595	1 811 564
Mpumalanga	651 258	785 040	1 074 218	1 421 720
Northern Cape	215 047	244 984	301 113	333 554
North West	583 349	759 724	1 061 069	1 141 283
Western Cape	970 383	1 173 121	1 633 310	2 264 032

Numbers do not add to total published households because only heads of households aged 12+ are included, unspecified is excluded for age & sex

Appendix 3 – Distribution of household heads by metro/district municipality

	1996	2001	2011	2022
BUF Buffalo City	164 124	198 823	230 622	268 442
DC10 Sarah Baartman	82 007	100 281	125 555	158 406
DC12 Amathole	191 032	216 921	227 389	241 609
DC13 Chris Hani	169 138	188 321	213 676	226 447
DC14 Joe Gqabi	69 887	84 539	97 387	124 293
DC15 O.R.Tambo	238 463	266 921	297 760	313 535
DC44 Alfred Nzo	147 214	164 248	168 928	198 300
NMA Nelson Mandela Bay	222 345	260 755	324 099	307 930
DC16 Xhariep	30 182	38 868	37 653	36 065
DC18 Lejweleputswa	158 676	184 154	182 160	189 807
DC19 Thabo Mofutsanyane	164 549	196 594	217 584	244 417
DC20 Fezile Dabi	102 773	120 320	144 900	145 538
MAN Mangaung	157 974	193 188	240 600	229 427
DC42 Sedibeng	179 882	225 049	279 675	376 970
DC48 West Rand	150 128	207 710	267 368	356 533
EKU Ekurhuleni	533 358	745 674	1 014 942	1 421 002
JHB City of Johannesburg	719 350	1 006 505	1 433 990	1 841 915
TSH City of Tshwane	451 797	606 442	911 007	1 322 254
DC21 Ugu	114 757	144 353	172 551	172 627
DC22 Umgungundlovu	184 692	217 736	272 058	307 842
DC23 Uthukela	91 151	134 539	146 693	172 195
DC24 Umzinyathi	76 990	93 640	113 858	125 425
DC25 Amajuba	72 450	96 744	110 768	150 239
DC26 Zululand	101 447	141 005	156 957	165 618
DC27 Umkhanyakude	70 467	101 374	127 504	129 063
DC28 King Cetshwayo	118 980	171 307	202 249	205 740
DC29 iLembe	106 607	120 253	157 299	187 182
DC43 Harry Gwala	75 152	102 351	111 994	115 065
ETH eThekwini	639 096	792 121	961 776	1 122 737
DC33 Mopani	195 279	239 109	296 025	358 152
DC34 Vhembe	205 327	264 008	334 959	436 958
DC35 Capricorn	205 133	272 484	342 496	427 174
DC36 Waterberg	110 891	146 212	179 714	248 525
DC47 Sekhukhune	165 661	195 121	263 398	340 750
DC30 Gert Sibande	169 522	211 515	273 132	378 181
DC31 Nkangala	201 453	245 393	356 561	483 170
DC32 Ehlanzeni	280 284	328 126	444 525	560 369
DC37 Bojanala	238 046	323 914	501 389	531 489
DC38 Ngaka Modiri Molema	135 685	180 351	226 684	257 555
DC39 Dr Ruth Segomotsi Mompati	84 756	101 922	125 109	132 097
DC40 Dr Kenneth Kaunda	124 862	153 537	207 889	220 144

	1996	2001	2011	2022
DC45 John Taolo Gaetsewe	37 955	44 164	61 264	66 348
DC6 Namakwa	25 983	27 771	33 843	33 947
DC7 Pixley ka Seme	38 482	41 696	49 106	53 739
DC8 Z F Mgcawu	41 524	48 081	61 039	70 434
DC9 Frances Baard	71 098	83 270	95 859	109 089
CPT City of Cape Town	644 499	759 373	1 068 113	1 452 842
DC1 West Coast	55 280	73 436	106 754	150 841
DC2 Cape Winelands	129 100	149 294	198 174	242 281
DC3 Overberg	40 604	56 718	77 173	134 797
DC4 Garden Route	88 688	119 292	164 028	255 977
DC5 Central Karoo	12 214	15 008	19 065	27 288

Numbers do not add to total published households because only heads of households aged 12+ are included, unspecified is excluded for age & sex