Measuring Adult Mortality Using Sibling Survival: A New Analytical Method and New Results for 44 Countries, 1974-2006

Prepared for presentation at the 26th IUSSP International Population Conference, Marrakech
27 September – 2 October, 2009

Ziad Obermeyer
Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA, USA
Department of Emergency Medicine, Brigham and Women's Hospital, Boston, MA, USA

Julie Knoll Rajaratnam
Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA, USA

Chang H Park
Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA, USA
Mount Sinai School of Medicine, New York, NY, USA

Emmanuela Gakidou
Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA, USA

Margaret C Hogan
Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA, USA

Alan D Lopez
School of Population Health, The University of Queensland, Brisbane, Queensland, Australia

Christopher JL Murray
Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA, USA

Correspondence to:

Julie Rajaratnam
Assistant Professor
Institute for Health Metrics and Evaluation
2301 5th Avenue, Suite 600
Seattle, WA 98121
Tel: +1 206 897 2800
Email: jrajarat@u.washington.edu

Abstract

Background:

For several decades, global public health efforts have focused on the development and application of disease control programs to improve child survival in developing populations. The need to reliably monitor the impact of such intervention programs in countries has led to significant advances in demographic methods and data sources, particularly with large-scale cross-national survey programs such as the Demographic and Health Surveys (DHS). While no comparable effort has been undertaken for adult mortality, the availability of large datasets with information on adult survival from censuses and household surveys offers an important opportunity to dramatically improve our knowledge about levels and trends in adult mortality in countries without good vital registration. To date, attempts to measure adult mortality from questions in censuses and surveys have generally led to implausibly low levels of adult mortality owing to biases inherent in survey data such as survival and recall bias. Recent methodological developments and the increasing availability of large surveys with information on sibling survival suggest that it may well be timely to reassess the pessimism that has prevailed around the use of sibling histories to measure adult mortality.

Methods and Findings:

We present the Corrected Sibling Survival (CSS) method, which addresses both the survival and recall biases that have plagued the use of survey data to estimate adult mortality. Using logistic regression our method directly estimates the probability of dying in a given country, by age, sex and time period from sibling history data. The logistic regression framework borrows strength across surveys and time periods for the estimation of the age patterns of mortality, and facilitates

the implementation of solutions for under-representation of high mortality families and recall bias. We apply the method to generate estimates of and trends in adult mortality, using the summary measure $_{45}q_{15}$, the probability of a 15 year old dying before his or her 60th birthday, for 44 countries with DHS sibling survival data.

Our findings suggest that levels of adult mortality prevailing in many developing countries are substantially higher than previously suggested by other analyses of sibling history data. Generally, our estimates show the risk of adult death between ages 15 and 60 years to be about 20-35% for females and 25-45% for males in sub-Saharan African populations largely unaffected by HIV. In countries of Southern Africa, where the HIV epidemic has been most pronounced, as many as 8 out of 10 men alive at age 15 will be dead by age 60, as will 6 out of 10 women. Adult mortality levels in populations of Asia and Latin America are generally lower than in Africa, particularly for women. The exceptions are Haiti and Cambodia where mortality risks are comparable to many countries in Africa. In all other countries with data, the probability of dying between ages 15 and 60 was typically around 10% for women and 20% for men, not much higher than the levels prevailing in several more-developed countries.

Conclusions:

Our results represent a major expansion of direct knowledge of levels and trends in adult mortality in the developing world. The CSS method provides grounds for renewed optimism in collecting sibling survival data. We argue that all nationally representative survey programs with adequate sample size ought to implement this critical module for tracking adult mortality. These opportunities must be seized if we are to more reliably understand the levels and patterns of adult mortality, and how they are changing.

Introduction

The availability of large datasets with information on adult survival from censuses and household surveys offers an important opportunity to improve our knowledge about levels and trends in adult mortality in countries without good vital registration. Hill and Trussell discussed spousal survival and parental survival as indirect estimators of adult mortality in 1977; in the same paper they also introduced and argued for the wider use of sibling survival data to estimate adult mortality [1]. More than ten years following, the need to reliably estimate maternal mortality led the eventual inclusion of a full sibling history module in many household surveys [2], which allows for the direct estimation of adult mortality.

Sibling survival is especially appealing for the measurement of adult mortality because a single respondent can provide information on a potentially large number of siblings, providing estimates of mortality levels by age and sex at different periods of time prior to the survey [3]. However, there are numerous potential biases that have limited the use of these data. Families which have disintegrated because of discord or death will be under-represented in population surveys, implying that mortality measures calculated from surveys will be biased downwards. It is also likely that respondents will fail to recall some deaths of siblings, especially those that occurred several years prior to the survey, or in cases where the respondent has not had recent contact with his or her siblings [2,4].

Despite these concerns, several authors have used these complete sibling histories to directly estimate adult mortality. Bicego [2] examined adult mortality in the context of the HIV/AIDS epidemic in six of the early sibling history modules from sub-Saharan Africa. In another study motivated by the HIV/AIDS epidemic, Timaeus [5] showed that sibling histories can capture plausible trends and produce estimates similar in level to indirect estimates via parental survival.

Other studies have been less optimistic about the level of mortality produced from sibling histories. Stanton et al [6], in examining the data quality of the DHS maternal mortality module, conclude that sibling histories seem to produce an underestimation of adult mortality, an effect more pronounced among women. Gakidou et al [3] reach a similar conclusion, noting that while analogous birth history data produce child mortality estimates consistent with modeled UN estimates, adult mortality numbers from sibling histories are substantially lower.

The most comprehensive analysis of sibling history data to date was carried out by Timaeus & Jasseh [4]. This regression-based analysis quantified trends in adult mortality in 23 sub-Saharan countries using 26 surveys. The evidence from sibling history data is consistent with parental survival estimates, but there is strong evidence of substantial recall bias leading to an exaggerated rate of mortality rise.

Recent methodological work has addressed the issue of selection bias in sibling survival data [7], a persistent concern expressed in the literature. Recall bias is another limitation in the use of sibling history data, but the use of consecutive surveys to evaluate the magnitude of recall bias has been explored in the estimation of both child mortality [8] and fertility [9,10].

Building on this literature, in this article we develop new methods to adjust for the underestimation of mortality arising from the recall of deaths, adapt the Gakidou-King approach to correct for selection bias, and propose a new correction for the downward bias resulting from zero-survivor families. We collectively refer to this new set of methods as the Corrected Sibling Survival (CSS) method. We have applied the CSS method to sibling survival data from 85 surveys in 44 countries, primarily in Africa, where uncertainty about true levels and trends in adult mortality has been greatest.

Methods

Data

We use data from the Demographic and Health Survey (DHS) program. The standard DHS instrument, with nationally representative sample sizes ranging from 3,000 to 90,000 women of reproductive age (typically 15-49), is widely used for demographic estimation [11,12]. As of June 25, 2009, 88 surveys in 46 countries had incorporated a sibling history (also known as the maternal mortality) module. This module collects information from the respondent on each sibling born to the same mother, including sex, date of birth, whether alive, and if dead, the date of the death. Appendix Table 1 summarizes the characteristics of the sibling history modules from these surveys with various measures of survey quality.

In addition to the DHS, we use supplementary sources of data to categorize country-periods into groups of similar age patterns (explained in detail below). For this purpose, we use HIV seroprevalence estimates from UNAIDS historical time series [13]. These seroprevalence numbers are based on data from antenatal clinics and population-based surveys, and models that synthesize the available data. They are the most comprehensive estimates of historical HIV seroprevalence available. We identify country-periods with a substantial history of war using combined data from the PRIO [14] war databases for battle deaths, one-sided war deaths, and non-state war deaths. Finally we categorize country-periods using estimates of child mortality from Murray and colleagues' analysis of multiple data sources [15].

We have excluded three DHS from our analysis, and these are not included in Appendix Table 1. Based on published reports of poor data quality in the sibling history module, we exclude the Nigeria 1999 survey [16]. We exclude Jordan 1997 because HIV sero-prevalence time series data were not available. We also exclude the Nepal 1996 survey because ages and dates are not coded consistently.

Data structure

The sibling history data is structured such that there is one observation per respondent, with the entire collection of siblings born to the same mother ("sibship") recorded within that observation. The application of the CSS method requires substantial restructuring of the data. We first reshape each dataset so that there is one observation per sibling, including one observation for the respondent. We then reshape the data again, so that one observation refers to one person-year of one sibling. In this data structure, every member of a sibship receives an observation for every year that they were alive and an observation for the year in which they died, if they died. Only years where observation is complete for all siblings are used; in other words, we truncate the data to the last complete year before the survey. Each observation also includes information on the sex of the sibling, the calendar year of the observed person-year, the age of the sibling in that calendar year, and the survival status of the sibling within that year. Since the DHS only interviews women up to 49 years of age, the data become increasingly sparse for the older age groups as we trace the sibling records back in time. To avoid small number problems, we only use sibling history data up to 15 years prior to the survey year.

Dependent variable

The dependent variable is a dummy variable indicating the sibling's survival status during the particular person-year of observation. A value of 1 indicates that the individual died during the year of observation, while a value of 0 indicates that she or he was alive at the end of the year of observation.

Independent variables

There are three groups of independent variables included in our model: 1) country-period effects, 2) age patterns, and 3) recall bias.

First, we include a dummy variable for each country and five-year calendar period. This allows the level of mortality to vary non-parametrically by country and time-period. We experimented with both two-year and five-year time periods and opted for five-year time periods because it was evident that the two year periods did not have enough observations to generate stable rates over time.

Second, we model stable age patterns across sets of countries because each survey has insufficient person-years of observation to generate a stable pattern of mortality by age. Given the demographic and epidemiology literature, we expect that in the absence of major shocks such as war or HIV, death rates between the ages of 15 and 60 will change in a consistent way with respect to age [17]. The slope of this relationship also tends to get steeper as general mortality levels decline (this can be seen by plotting the age patterns of mortality for sequential time periods for a country with good historical vital registration data like Sweden's [18]). Further, we know that major war events tend to lead to disproportionate increases in mortality at younger adult ages. Finally, the HIV epidemic characteristically increases mortality at younger adult ages and has a smaller effect at older ages [5].

With these expectations of differences in age patterns and also to test the sensitivity of the final estimates to different ways of modeling age patterns, we have implemented four different approaches to modeling age patterns across the country-periods in the sibling history data. Model 1 uses a constant age-pattern of mortality across all country-periods. The other three models group country-periods into four different classes for modeling age patterns. Model 2 divides country-periods into four groups on the basis of HIV prevalence (0-1.9%, 2-6.9%, 7-11.9%, and 12+%); model 3 divides country-periods into one group with a history of substantial war, and the remainder into three groups on the basis of general levels of mortality as captured by levels of child mortality. The three groups of child mortality were determined by tertiles of the child mortality distribution for the country periods in the sibling history dataset. Model 4 divides country-periods into 4 groups: those with a history of substantial war, those with high HIV (seroprevalence greater than 7%), and for the remainder, low (bottom 2 tertiles) and high (top tertile) levels of child mortality. For models 2 and 4, we use 2008 UNAIDS historical estimates of HIV sero-prevalence but classify based on the 5-year lag of HIV sero-prevalence which accounts for the lag between HIV incidence and mortality [19]. For models 3 and 4, country-periods with greater than 0.75 recorded war deaths per 1,000 population are included in the war grouping, as are the following country-periods, since we observe in the raw data a continuation of war-like age patterns for some years post conflict.

The implementation of the models involves, for models 2 through 4, constructing four dummy variables (denoted H_0, H_1, H_2, and H_3) to indicate to which age-pattern group within that particular model an observation belongs. We then interact these four dummy variables with a set of dummy variables for each 5-year age group (15-19, 20-24, …, 55-59). By including a set of dummy variables representing each age-group in the model, we borrow strength across all surveys to inform the age pattern of mortality without imposing a model-based age structure *a priori*. By interacting the age dummies with the pattern-group dummies, we allow the age pattern of mortality to vary according to the above mentioned criteria used to establish each set of age-pattern groups.

Third, we include a continuous variable—time prior to the survey (*TiPS*)—which measures how many years prior to the survey each person-year of observation occurred. For example, if a respondent to a survey carried out in the year 2000 reported on the death of a sibling in 1990, the value of *TiPS* would be 10 for that observation. Several previous studies have raised the possibility that respondents may omit reporting some sibling deaths [4,6,7,20]. The *TiPS* variable empirically measures recall bias and can be used to correct for it. Intuitively, *TiPS* captures the difference between deaths reported in the more recent periods of older surveys and deaths reported for more distant periods in more recent surveys. It can only be estimated if there is sufficient overlap of observations from different surveys for the same country-year. When modeled as dummy variables, we found the relationship of the *TiPS* values to be essentially linear with the log odds of death, so we included *TiPS* as a continuous variable in our final model. In the regression models presented below, we assume that recall bias is the same across countries. To test this, we performed a sensitivity analysis and compared country-specific estimates of the TiPS coefficient with the all-country coefficient estimated in our regression model.

Selection bias

Sibling-year observations are weighted to address the under-representation of high-mortality families in population-based surveys following the general methods proposed by Gakidou and King [7]. This method (which we abbreviate GK) incorporates a family-level weight, $W_f = B_f / S_f$, where B_f is the original sibship size and S_f is the number of siblings in family f surviving to the time of the survey. This weight algebraically corrects for the under-representation of high-mortality families in the survey sample. To generate the final weight for each observation, we multiply W_f by the DHS sampling weight.

The respondents to the sibling history survey are exclusively women, so by definition the sample includes no sibships where 1) the siblings are all men, or 2) all the women have died. For both of these situations, the GK method does not adjust for the non-representation of these sibships. In the first case, if we assume that the mortality rates for men in all-male sibships are the same as mortality rates for males in sibships with one or more females, mortality rates for men will not be biased. In the second case where all the women in a sibship have died, mortality rates will be biased downward. Therefore, we need to further adjust the female rates to account for this bias (the reverse would be true if all respondents were men). Appendix 1 shows our proposed correction for this bias.

Regression model

There is a long history of using logistic regression to model mortality/survival in epidemiology and demography [21-24]. We employ a logistic regression framework to directly estimate the probability of death by age, sex, time period and country. This framework facilitates borrowing strength across surveys and time periods for the estimation of the age patterns of mortality, allows us to implement the GK correction for selection bias, and serves as a means for quantifying and correcting for recall bias. Other models, such as the Poisson count model used by Timaeus & Jasseh [4], would not allow for the application of individual-level GK weights, which have been shown to have a large impact on estimated mortality rates [7].

We pool data from all surveys and apply the following logistic regression models estimated separately for males and females:

$$Logit(Y_{ait} = 1) = \beta_0 + \beta I_a^{H0} + \beta I_a^{H1} + \beta I_a^{H2} + \beta I_a^{H3} + \beta I_{it}^{CY} + \beta TiPS$$

Where Y_{ait} indicates survival or death of an individual in age group *a*, in country *i* at time *t*, I_{it}^{CY} is the set of dummy variables denoting country *i* in the five year period designated by *t*. $TiPS$ is the continuous variable representing time prior to the survey. I_a^{H0} through I_a^{H4} are the four sets of dummy variables indicating the five-year age groups from 15 to 60 (*a* = 20-24, 25-29, …, 55-59, with 15-19 as the reference category) and dependent on H_0, H_1, H_2, and H_3, the criteria used to define the age patterns, summarized in Table 1.

We compute standard errors to allow for clustering at the primary sampling unit (PSU) level. The correlation of the probability of death at the individual level (*i.e.*, the fact that a sibling's probability of death at time *t* is likely to be correlated with his probability of death at time *t*-1) will lead to artificially low standard errors. This would typically be addressed by clustering standard errors at the individual level (equivalent to the concept of shared frailty in survival analysis); however, our approach of clustering errors at the higher PSU level produces even larger standard errors than clustering at the individual level, and we thus view it as a more conservative approach.

Estimating ${}_{45}q_{15}$

Our ultimate quantity of interest is the probability of dying between ages 15 and 60, a commonly used indicator of adult mortality which can be compared across populations. In standard demographic notation, this is referred to as ${}_{45}q_{15}$.

We use the coefficients from the logistic regression model to predict all linear combinations of age group, time period, country and sex. To estimate what the level of adult mortality would be in the absence of recall bias, we set the coefficient on the *TiPS* variable to zero. The inverse logit transformation of the predicted values represents the one-year probabilities of death for each particular age group, time period, country and sex. From these single year age specific probabilities we compute age-specific probabilities of survival and then five-year estimates of $_{45}q_{15}$.

Comparing model fits

We compare the fits of Models 1 through 4 using three metrics, (1) the root mean squared error (RMSE) comparing differences in predicted age-specific probabilities of death ($_nq_x$) to observed, (2) RMSE of differences between predicted and observed $_nq_x$ in log space (which weights differences across the age groups more equally), and (3) RMSE of differences between predicted and observed $_{45}q_{15}$, our summary measure of adult mortality. For each metric, we rank the performance of the model by sex and then create a summary rank score by adding the ranks for each metric across both sexes. We consider the model with the lowest summary rank score (the one which overall minimizes the differences between predicted and observed values across sexes) to have the best fit.

Uncertainty

Following the methods outlined in King, Tomz, and Wittenberg [25], uncertainty in the model parameters used to generate estimates of $_{45}q_{15}$ is captured by taking 1000 simultaneous draws from the variance-covariance matrix of the logistic regression model and then producing 1000 estimates of $_5q_x$ for every age group and 1000 corresponding estimates of $_{45}q_{15}$ as outlined above. The 95% uncertainty interval is defined by the 25^{th} and 976^{th} ranked estimates of the 1000 simulated values.

All analyses were carried out in Stata 10.1/MP [26]. Data files of final estimates and Stata code used to produce them are available on request from the authors.

Results

Corrected Sibling Survival (CSS) model results

The root mean squared errors between observed and predicted values for the each of the four models are shown in Table 2, along with the summary rank score for each model. The full set of regression results (including age pattern, TiPS, and all 175 country-period coefficients) can be found in Appendix Table 2. Figure 1 graphs each set of age patterns relative to 15-19 year olds in a given country-period. The age patterns for populations with high prevalence of HIV are similar to what is seen in South African vital registration data in recent years (comparison not shown). In models 3 and 4, the slope of the war age pattern is less steep across the age range compared to the lower $_5q_0$ age patterns, and more so for males than for females, which is expected given young males tend to be the age group most susceptible to battle death in times of war. Similarly, across levels of $_5q_0$, the slope of mortality over age decreases with higher levels of child mortality, again similar to what we observe in other data sources (Human Mortality Database 2009). We choose Model 4 as our optimal model because it minimizes the differences between the empirically observed and model predicted age patterns as well as between observed and predicted $_{45}q_{15}$, thus ensuring the closest fit to the data. However, the resultant estimates of $_{45}q_{15}$ generated from each of the models are quite similar (correlation coefficients comparing any 2 models ranged from 0.9789 to 0.9941).

The impact of the three components of the CSS model on the estimates of adult mortality rates is illustrated for six countries in Figure 2. Computation of ${}_{45}q_{15}$ using the Gakidou-King weights has a major effect on measured levels of adult mortality for males and females in all countries. This indicates that under-representation of high mortality sibships is an important consideration when analyzing sibling survival data. On average, the GK weights raise the estimated ${}_{45}q_{15}$ by 28% ranging from 6 to 66% across country-periods.

Regression results for the *TiPS* variable are summarized in Table 3. For males, the all-country coefficient is -0.0216, representing a 2.1% decrease in reported deaths for each additional year prior to the survey. For females, the annual decrease is lower at 1.4%. We have also estimated the value of the *TiPS* coefficient separately for each country for the ten countries where three or more surveys with sibling history modules are available. These results are summarized in Figure 3 and show that the estimated decline in deaths reported due to recall bias varied from -0.8% (Mali females) to 7.7% (Madagascar males) across this set of countries. Of the 20 single country estimates of recall, 8 are statistically significantly different from the mean effect across all countries. Figure 2 illustrates how inclusion of the *TiPS* variable in the model leads to higher estimates of adult mortality especially in time periods further removed from the survey year.

Corrections for sibships where all females have died lead to much more modest changes in the estimated rates of adult female mortality. Table 4 summarizes the magnitude of these corrections for each country ranging from 1.0% to 4.5%. While conceptually important, these corrections do not profoundly alter the estimated levels of adult mortality. Overall, the combined effect of the

GK weights, the *TiPS* recall bias correction and the correction for missing female sibships leads to a profound increase in adult mortality rates estimated from sibling histories.

Levels of Mortality in 44 Countries

Figure 4 shows CSS estimates of adult mortality for select countries using Model 4; the same graphs for all countries included in our study can be found in Appendix Figure 2. Appendix Table 3 also provides estimates of ${}_{45}q_{15}$ from all 4 models.

Our findings suggest that levels of adult mortality prevailing in many developing countries are substantially higher than previously suggested by analyses of sibling history data [3,4]. In sub-Saharan African populations largely unaffected by HIV, we estimate the risk of death between ages 15 and 60 years to be 20-35% for females and 25-45% for males, though considerable heterogeneity exists among countries. In Southern African countries where the HIV epidemic has been most pronounced, rates are uniformly and strikingly high: at current rates, as many as 8 out of 10 men alive at age 15 will be dead by age 60, as will as many as 6 out of 10 women. At the height of the Rwandan genocide in 1994, the probability of death between 15 and 60 based on prevailing mortality rates was close to 100%, but has since declined to levels more typical of sub-Saharan Africa. The increase in adult mortality in countries with high HIV as mentioned above is notable. So also is the rise in mortality in some central and west African countries which have not been as affected by HIV. In Benin, mortality for both male and female adults has risen at some point in the last 15 years of available data, despite Benin having a relatively low prevalence of HIV among its population (less than 2% over the same time period). Mali, Liberia, and Guinea have also seen rises in adult mortality despite comparably low HIV seroprevalence rates. For some West African populations, mortality rates appear to be lower, notably Senegal and Niger, where the risk of adult death is around 20-25%.

Adult mortality levels in populations of Asia and Latin America are generally lower than in Africa, particularly for women, though Haiti and Cambodia are notable exceptions where mortality risks are comparable to many countries in Africa. In all other developing countries with available sibling history data, the probability of dying between ages 15 and 60 was typically around 10% for women and 20% for men; this is not much higher than 2001 estimated levels for more developed countries such as Argentina, Barbados, Mexico, Puerto Rico, and Venezuela [27].

Comparison of Corrected Sibling Survival to Other Measurements of Mortality

Few countries with complete vital registration systems have included sibling survival data in national surveys. Validation of CSS thus depends on comparisons in those few countries which have vital registration data, demographic surveillance sites, and deaths in the last 12 months collected in national censuses. Even though all of these are likely problematic comparators, Figure 4 compares our estimates to these three types of available data.

While vital registration is typically considered the gold standard for measurement of mortality, data from Peru, Brazil, Guatemala, Dominican Republic, Philippines, and South Africa are likely to be undercounts of national adult mortality rates. Data from the Dominican Republic and Peru are thought to be the particularly incomplete, missing about 50% of adult deaths, while routine systems appear to be capturing the majority of deaths in countries such as Brazil, Guatemala, the

Philippines and South Africa [28]. Figure 4 shows that in Guatemala, CSS estimates and vital registration data are similar for most years, although the CSS captures higher levels of adult mortality in the early 1980s, coincident with the outbreak and intensification of conflict between Rios Montt and leftist guerilla forces. A similar level of concordance is seen for the Philippines. In Brazil, CSS results for females appear to be somewhat lower than for the vital registration, but comparable overall. In Dominican Republic the vital registration rates appear to be implausibly low, especially for males, while the CSS presents more realistic levels. Overall, the levels of mortality suggested by application of our methods are comparable or higher than what is suggested from vital registration systems, which are known to generally undercount deaths in developing countries.

In some countries, Demographic Surveillance Sites (DSS) have been operating that capture vital events that occur in defined populations. While these sentinel sites are quite small (covering populations of 30,000 to one million), and are typically selected expediently rather than randomly, they nonetheless can be a useful source of information on mortality and fertility levels. Where these sites are operative in the countries in our dataset, Figure 4 also shows the implied levels of adult mortality compared with CSS estimates. In most cases (e.g. South Africa, Tanzania, Senegal, Mozambique, Burkina Faso), DSS death rates for most time periods fall within the range of uncertainty suggested by our methods.

Finally, some national censuses collect data on deaths within households. As with vital registration data, censuses have varying levels of completeness, and like sibling history data, household deaths reported in censuses may be underreported [29]. Figure 4 shows that census-based mortality rates in Zimbabwe, Malawi, and Tanzania are remarkably close to the CSS estimates at various time periods, whereas in Mauritania and Ethiopia census data yield dramatically lower levels.

While this is not necessarily validation, the fact that CSS yields estimates that are comparable to those from independent data collection schemes is reassuring.

Mortality Trends

Figure 4 also shows how risks of adult death have changed over the period 1980-2005, encompassing the peak effects of the HIV/AIDS epidemic, particularly in Africa. In some countries, notably Cote d'Ivoire, Cameroon, Kenya, Lesotho, Malawi, and Swaziland, death rates among adults appear to have risen throughout the past two decades or so. In Malawi and Zimbabwe, they have increased 3 to 4 fold since the late 1980's, with CSS showing the full devastation of the epidemic on adult survival. In Kenya, Zambia, Swaziland and Tanzania, death rates have doubled in 20 years, although in Tanzania at least, there are signs that death rates may be stabilizing. In others, particularly Benin, Congo, Ethiopia, and Madagascar, we have identified increases in mortality followed by declines. The effect of the 1994 genocide in Rwanda can be clearly seen, after which death rates dropped to levels similar to neighboring African countries. Haiti, Morocco, and Peru have experienced consistent declines in adult mortality over the past two decades. While it is difficult to interpret short term changes in death rates, except for the genocide in Rwanda, the utility of the method in determining longer term trends in mortality levels is clearly of great public health importance.

A summary appraisal of trends in adult mortality in Africa can be obtained from Figure 5 which shows levels of mortality estimated for various countries around 1990 (1988-1992) and 2000 (1998-2002). For women, the dramatic rise in adult mortality in Zambia is clear, as are the relatively low levels of mortality prevailing around 1990 in countries such as Morocco, Senegal, Benin, Kenya and South Africa. The greater heterogeneity of mortality levels around 2000 can also be seen, largely due to the differential impact of the HIV epidemic. For men, the heterogeneity among countries is greater than for women, even in 1990, potentially reflecting the greater risks they incur from injuries and violence. The impact of the HIV epidemic is also clear from Figure 5, particularly in the Southern African states around 2000.

Discussion

In this paper, we present an improved method for analyzing sibling survival data and demonstrate its application using 85 surveys undertaken in 44 countries. Adult mortality measurement from empirical data will decrease the dependence of the global health community on uncertain predictions from levels of child mortality and provide for better tracking of progress towards major health and development targets.

Collective concerns about the low levels of adult mortality from crude analysis of sibling data [3,6] may have dampened enthusiasm for collecting this type of data in the global health community. We believe that the CSS method provides grounds for renewed optimism in collecting sibling survival data. Our experience argues for all DHS surveys and similarly sized national health surveys to incorporate the sibling history module, as even in middle-income countries this information could be a useful adjunct to analyzing levels and trends in adult mortality from vital registration data, especially, as is likely, where it may only be partially complete. Widespread collection of these data will greatly strengthen our capacity to monitor maternal mortality and the ultimate effect of interventions such as anti-retrovirals in reducing adult mortality.

In addition to expanding the collection of sibling survival data in more surveys, our analysis suggests that the set of respondents who answer the sibling module in a survey should be expanded. By only asking women aged 15-49, the current DHS practice limits our ability to effectively measure mortality in adults over age 50 and for older time periods, especially for more than 15 years prior to the survey. To achieve sufficient numbers at these older ages, we have pooled the data across countries and assumed four constant age patterns. An expanded age range of respondents would allow for the relaxation of this assumption and estimation of more specific and stable age patterns. As is, the precise age patterns of mortality generated from this empirical model, especially above age 50, may not be accurate. Further, if both male and female respondents were to be asked the sibling history module, exploration of sex-specific biases in the recall of births and deaths of sisters and brothers would be possible and would allow for cross-validation. There is some evidence from our analysis that this effect may be significant. With increased concerns about the early impact of the epidemiological transition in many developing countries, expanding the age range of respondents will allow direct measurement of middle-aged mortality in these countries. Given that survey teams in the DHS and other survey programs are already visiting households, expanding the set of respondents who are asked the sibling history module would not imply a substantial marginal cost on survey implementers. Our experience suggests that the information obtained is likely to be well worth the investment.

A key limitation of our analysis is the estimation of the average recall bias across all surveys and the use of this average effect in calculating levels and trends in ${}_{45}q_{15}$. Eight of 20 country-sex-specific estimates of recall bias are statistically significantly different from the average estimate of recall bias. This could affect estimates of trends for these countries and others for which fewer than three surveys are available. In the absence of sufficient overlapping surveys in a country, using the average recall bias estimate is necessary. As more countries accumulate multiple surveys, it will become possible to apply the CSS model on a regional and eventually even country by country basis. Country-specific recall bias parameter values can then be used in generating country-specific levels of adult mortality. As more countries collect sibling survival data, it will also be possible to explore the contextual, linguistic and other cultural factors that might account for variability in recall bias. This type of insight should help to guide further improvements in survey instruments for sibling recall. Experiments are underway to explore alternative wording of the sibling history module in Tanzania, India and the Philippines as part of the Gates Grand Challenges in Global Health initiative [30]. Growing recognition of the potential utility of sibling history data for public health monitoring will hopefully stimulate more research in this area.

The prospect that robust information on the levels and trends in adult mortality can be derived from periodic household surveys in low-income countries may warrant a reconsideration of the priorities for improved assessment of adult mortality. The MOVE group [31] called for an expansion of vital registration systems and the use of sample registration systems in the interim. Those are important initiatives but our findings suggest that it may be as important to more persuasively argue for the inclusion of sibling survival modules in ongoing survey programs. Further work is also needed to explore the feasibility of using new verbal autopsy instruments and analytical methods in conjunction with these modules to ascertain not only death rates, but also causes of death [32,33]. The demand for accountability and the use of pay for performance investments such as GAVI is likely to increase the pressure on countries to mount more frequent household surveys [34]. Maximum use of these opportunities should be made for tracking trends in adult mortality.

Acknowledgements

The authors gratefully acknowledge Mie Inoue and Danzhen You for assistance in obtaining census data, Stanislava Nikolova for assistance with referencing, and research staff at the Institute for Health Metrics and Evaluation for valuable comments on the research.

References

1. Hill K, Trussell J (1977) Further developments in indirect mortality estimation. Population Studies 31: 313-334.

2. Bicego G (1997) Estimating adult mortality rates in the context of the AIDS epidemic in sub-Saharan Africa: analysis of DHS sibling histories. Health Transition Review 7: 7-22.

3. Gakidou E, Hogan M, Lopez AD (2004) Adult mortality: time for a reappraisal. Int J Epidemiol 33: 710-717.

4. Timaeus IM, Jasseh M (2004) Adult mortality in sub-Saharan Africa: evidence from Demographic and Health Surveys. Demography 41: 757-772.

5. Timaeus IM (1998) Impact of the HIV epidemic on mortality in sub-Saharan Africa: evidence from national surveys and censuses. AIDS 12: S15-S27.

6. Stanton C, Abderrahim N, Hill K (2000) An assessment of DHS maternal mortality indicators. Stud Fam Plann 31: 111-123.

7. Gakidou E, King G (2006) Death by survey: estimating adult mortality without selection bias from sibling survival data. Demography 43: 569-585.

8. Bicego G, Ahmad OB (1996) Infant and Child Mortality. DHS Comparative Reports. Calverton, MD, Macro International Inc.

9. Schoumaker B (2004) A personal-periodic approach for birth history analysis. Population 59: 783-796.

10. Schoumaker B (2009) Stalls in fertility transitions in Sub-Saharan Africa: real or spurious? Presented in Human fertility in Africa: Trends in the last decade and prospects for change. International Union for the Scientific Study of Population, Cape Coast, Ghana.

11. Lopez AD, Ahmad OB, Guillot M (2002) World Mortality in 2000: Life tables for 191 countries. Geneva: World Health Organization.

12. United Nations Population Division (2009) World Population Prospects: the 2008 Revision Population Database. Available: http://esa.un.org/unpp/index.asp. Accessed 24 August 2009.

13. UNAIDS (2008) Report on the global HIV/AIDS epidemic 2008. Joint United Nations Programme on HIV/AIDS. Available: http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008_Global_report.asp. Accessed 24 August 2009.

14. Gleditsch NP, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, Håvard Strand (2002) Armed Conflict 1946–2001: A New Dataset. Journal of Peace Research 39: 615-637.

15. Murray CJ, Laakso T, Shibuya K, Hill K, Lopez AD (2007) Can we achieve Millennium Development Goal 4? New analysis of country trends and forecasts of under-5 mortality to 2015. Lancet 370: 1040-1054.

16. National Population Commission (1999) Maternal and child health. In: Nigeria Demographic and Health Survey 1999. Calverton, MD: National Population Commission and ORC/Macro.

17. Gompertz B (1825) On the nature of the function expressive of the law of human mortality, and on a new mode of determining the value of life contingencies. Philosophical Transactions of the Royal Society of London 115: 513-583.

18. Human Mortality Database (2009) Human Mortality Database. University of California, Berkeley; Max Planck Institute for Demographic Research. Available: www.mortality.org. Accessed 24 August 2009.

19. Zaba B, Whiteside A, Boerma JT (2004) Demographic and socioeconomic impact of AIDS: taking stock of the empirical evidence. AIDS 18 Suppl 2: S1-S7.

20. Timaeus IM (1991) Measurement of adult mortality in less developed countries: a comparative review. Popul Index 57: 552-568.

21. Abbott RD (1985) Logistic regression in survival analysis. American Journal of Epidemiology 121: 465-471.

22. Adebayo SB, Fahrmeir L (2005) Analysing child mortality in Nigeria with geoadditive discrete-time survival models. Stat Med 24: 709-728.

23. Efron B (1988) Logistic regression, survival analysis, and the Kaplan-Meier curve. Journal of the American Statistical Association 83: 414-425.

24. Kalbfleisch JD, Prentice RL (1973) Marginal likelihoods based on Cox's regression and life model. Biometrika 60: 267-278.

25. King G, Tomz M, Wittenberg J (2000) Making the most of statistical analyses: improving interpretation and presentation. American Journal of Political Science 341-355.

26. StataCorp LP (2009) Stata/SE 10.1 for Windows. College Station, TX, StataCorp.

27. Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJ (2006) Global and regional burden of disease and risk factors, 2001: systematic analysis of population health data. Lancet 367: 1747-1757.

28. Mathers CD, Fat DM, Inoue M, Rao C, Lopez AD (2005) Counting the dead and what they died from: an assessment of the global status of cause of death data. Bull World Health Organ 83: 171-177.

29. Banister J, Hill K (2004) Mortality in China 1964-2000. Popul Stud (Camb) 58: 55-75.

30. Walgate R (2003) Gates Foundation picks 14 grand challenges for global disease research. Bull World Health Organ 81: 915-916.

31. Lopez AD, AbouZahr C, Shibuya K, Gollogly L (2007) Keeping count: births, deaths, and causes of death. Lancet 370: 1744-1746.

32. Murray CJ, Lopez AD, Feehan DM, Peter ST, Yang G (2007) Validation of the symptom pattern method for analyzing verbal autopsy data. PLoS Med 4: e327.

33. Obermeyer Z, Murray CJ, Gakidou E (2008) Fifty years of violent war deaths from Vietnam to Bosnia: analysis of data from the world health survey programme. BMJ 336: 1482-1486.

34. Lim SS, Stein DB, Charrow A, Murray CJ (2008) Tracking progress towards universal childhood immunisation and the impact of global initiatives: a systematic analysis

of three-dose diphtheria, tetanus, and pertussis immunisation coverage. Lancet 372: 2031-2046.

Appendix 1: Derivation of zero-female-survivor correction

In order to calculate the correction factor to account for the lack of representation of families with no female survivors, we employed the following procedure. We can compute algebraically the undercount of female deaths for sibships of size *k*:

$$D_k^{obs} = \pi_k \cdot N_k \cdot k - \pi_k{}^k \cdot N_k \cdot k$$

where D_k^{obs} is the number of female deaths observed in sibships of size *k* females, π_k is the true percent females dead in sibships of size *k*, and N_k is the total number of sibships of size *k* females. Therefore, in the equation above, $\pi \cdot N_k \cdot k$ is the true number of deaths in sibships of size *k,* and $\pi_k{}^k \cdot N_k \cdot k$ is the number of female deaths in sibships of size *k* females which are not observed because these deaths occur in sibships where all females die.

The observed percent of females who have died in sibships of size *k* females is represented by π_{obs} and is equal to the number of deaths observed in sibships of size *k* divided by the total number of females observed in sibships of size *k* (N_k^{obs} is the total number of sibships of size *k* females which we observe):

$$\pi_{obs} = \frac{D_k^{obs}}{N_k^{obs} * k}$$

Denoting N_k as the total number of sibships of size *k* females, then $N_k^{obs} = N_k - \pi_k{}^k * N_k$.

By substituting for D_k^{obs} and N_k^{obs}, we then arrive at an expression equating the observed percent dead with the true percent dead:

$$\pi_{obs} = \frac{D_k^{obs}}{N_k^{obs} * k} = \frac{\pi * N_k * k - \pi^k * N_k * k}{(N_k - \pi^k * N_k) * k} = \frac{(\pi - \pi^k) N_k * k}{(1 - \pi^k) N_k * k} = \frac{(\pi - \pi^k)}{(1 - \pi^k)}$$

While the mathematical solutions for π are infinite if $k = 1$, they are relatively easy to compute if $k = 2$ or 3. When $k > 3$, the solutions become quite complex. Fortunately, as sibship size increases, the contribution to total sibships of size *k* females of sibships where all females have died becomes substantively insignificant. Therefore, we use the algebraic solutions to correct the percent dead for sibship sizes 2 and 3 and then assume a linear relationship between (corrected) percent dead and sibship size to predict the true percent dead for sibships of only 1 female. In Appendix Figure 1, the uncorrected and corrected percent dead is shown by sibship size for males and females, using an example from the Mali 2005 DHS. Using these corrected percentages and the observed number of deaths for each sibship size, we compute the percent of total female deaths which are not captured due to the zero-surviving-female phenomenon. Finally, we correct our estimates of ${}_{45}q_{15}$ upward by this factor.

Tables

	Model I	Model II	Model III	Model IV
H_0	Single pattern	0-1.9% HIV	War	War
H_1	N/A	2-6.9% HIV	Low tertile 5q0	7+% HIV
H_2	N/A	7-11.9% HIV	Mid tertile 5q0	Low/Mid tertiles 5q0
H_3	N/A	12+% HIV	High tertile 5q0	High tertile 5q0

Table 1: Criteria for classifying country-periods into different age pattern groups

Model	I	II	III	IV
Females				
RMSE of $_nq_x$	0.02877	0.02782	0.02827	0.02795
Rank	4	1	3	2
RMSE of $\ln(_nq_x)$	0.42822	0.40877	0.42013	0.41213
Rank	4	1	3	2
RMSE of $_{45}q_{15}$	0.06604	0.06601	0.06408	0.06471
Rank	4	3	1	2
Males				
RMSE of $_nq_x$	0.04172	0.04084	0.03959	0.03924
Rank	4	3	2	1
RMSE of $\ln(_nq_x)$	0.41721	0.40089	0.40766	0.39821
Rank	4	2	3	1
RMSE of $_{45}q_{15}$	0.09205	0.09175	0.08728	0.08720
Rank	4	3	2	1
Summary rank score	24	13	14	9

Table 2: Model fit results from applying different age pattern groupings to sibling survival data. Root mean squared error (RMSE) of: differences between model-predicted age-specific probabilities of death ($_nq_x$) and observed $_nq_x$, differences in predicted and observed $_nq_x$ in log space, and differences in predicted and observed $_{45}q_{15}$ are shown. Models are ranked for each metric of fit within each sex, with 1 being best. The summary rank score is the sum of the ranks for each metric, across both sexes.

	Females		Males	
Country	**coefficient**	**annual decline**	**coefficient**	**annual decline**
Ethiopia	0.0060	-0.60%	0.0044	-0.44%
Indonesia	-0.0183	1.81%	-0.0205	2.03%
Madagascar	-0.0546	5.31%	-0.0806	7.74%
Malawi	-0.0201	1.99%	-0.0367	3.60%
Mali	0.0083	-0.84%	-0.0151	1.50%
Namibia	-0.0162	1.60%	-0.0195	1.93%
Peru	-0.0226	2.24%	-0.0329	3.24%
Uganda	0.0031	-0.31%	-0.0012	0.12%
Zambia	-0.0293	2.89%	-0.0373	3.66%
Zimbabwe	-0.0203	2.01%	-0.0238	2.35%
All countries	-0.0145	1.44%	-0.0216	2.14%

Table 3: TiPS regression coefficients for countries with 3 or more surveys and annual decline in mortality rates per year prior to the survey attributable to recall bias

Country	Zero-female survivor correction
Benin	2.17%
Bolivia	2.61%
Brazil	1.33%
Burkina Faso	2.75%
Cambodia	3.18%
Cameroon	2.71%
Central African Republic	4.48%
Chad	4.13%
Congo (Rep.)	2.41%
Côte d'Ivoire	2.20%
Democratic Republic of the Congo	1.90%
Dominican Republic	1.88%
Eritrea	4.31%
Ethiopia	3.64%
Gabon	2.26%
Ghana	1.76%
Guatemala	2.00%
Guinea	4.16%
Haiti	2.59%
Indonesia	2.56%
Kenya	1.20%
Lesotho	2.66%
Liberia	1.87%
Madagascar	2.36%
Malawi	2.50%
Mali	3.27%
Mauritania	4.08%
Morocco	1.39%
Mozambique	4.04%
Namibia	2.11%
Nepal	3.59%
Niger	3.15%
Peru	1.34%
Philippines	1.01%
Rwanda	4.06%
Senegal	2.97%
South Africa	3.04%
Sudan	3.01%
Swaziland	2.39%
Togo	2.17%
Uganda	3.03%
United Republic of Tanzania	2.29%
Zambia	2.40%
Zimbabwe	1.46%

Country	Year	Total respondents to sibling history module	Total siblings reported	Alive/dead status unknown (percent of total siblings)	Total deaths	Sex unknown (percent of alive siblings)	Sex unknown (percent of total deaths)
Benin	1996	5,488	36,367	0.27%	7,904	0.27%	2.24%
Benin	2006	17,358	114,112	0.16%	18,279	0.13%	0.45%
Bolivia	1993	8,603	51,703	0.10%	7,842	0.00%	0.88%
Bolivia	2003	17,251	112,001	0.38%	17,541	0.04%	1.10%
Brazil	1996	12,577	87,522	2.51%	11,519	0.03%	7.14%
Burkina Faso	1998	6,427	40,885	0.76%	7,817	0.11%	4.32%
Burkina Faso	2003	12,230	78,494	0.25%	12,908	0.06%	1.92%
Cambodia	2000	15,351	95,593	0.93%	16,292	0.07%	0.07%
Cambodia	2005	16,516	106,595	0.76%	18,708	0.00%	0.00%
Cameroon	1998	5,490	38,420	0.65%	6,895	0.57%	3.13%
Cameroon	2004	10,656	76,151	0.04%	14,403	0.00%	0.07%
Central African Republic	1994	5,884	36,402	0.04%	5,814	0.00%	0.00%
Chad	1996	7,450	48,547	0.17%	9,727	0.05%	0.78%
Chad	2004	6,085	41,932	0.00%	8,835	0.00%	0.00%
Congo (Rep)	2005	7,051	47,843	0.08%	7,665	0.00%	0.03%
Côte d'Ivoire	1994	8,099	52,487	0.01%	7,852	0.00%	0.00%
Côte d'Ivoire	2005	4,891	33,103	0.44%	5,936	0.03%	0.79%
Dem Rep of the Congo	2007	9,472	67,876	0.18%	12,530	0.00%	0.06%
Dominican Republic	2002	11,384	74,643	0.67%	6,814	0.03%	1.19%
Dominican Republic	2007	27,162	163,193	0.71%	14,336	0.03%	0.54%
Eritrea	1995	5,054	32,724	0.10%	6,594	0.11%	0.16%

Appendix Table 1: Characteristics of the sibling history surveys in 85 DHS

Country	Year	Total respondents to sibling history module	Total siblings reported	Alive/dead status unknown (percent of total siblings)	Total deaths	Sex unknown (percent of alive siblings)	Sex unknown (percent of total deaths)
Ethiopia	1992	15,347	107,524	0.54%	25,669	0.03%	0.28%
Ethiopia	1997	13,739	94,664	0.45%	17,661	0.11%	0.07%
Ethiopia	2000	15,347	107,524	0.54%	25,669	0.03%	0.28%
Ethiopia	2005	13,739	94,664	0.45%	17,661	0.11%	0.07%
Gabon	2000	6,183	42,410	0.01%	6,020	0.30%	2.02%
Ghana	2007	10,370	63,728	0.05%	7,193	0.01%	0.23%
Guatemala	1995	12,375	84,202	0.54%	11,990	0.01%	0.39%
Guinea	1999	6,753	39,198	0.19%	7,684	0.06%	0.11%
Guinea	2005	7,619	48,978	0.14%	11,038	0.00%	0.02%
Haiti	2000	10,159	68,682	0.10%	14,601	0.04%	0.10%
Haiti	2005	10,523	71,827	0.06%	14,541	0.00%	0.00%
Indonesia	1994	28,168	162,221	0.09%	22,526	0.02%	1.79%
Indonesia	1997	28,810	157,744	0.06%	15,948	0.00%	0.27%
Indonesia	2002	28,051	157,540	0.08%	14,081	0.00%	0.44%
Indonesia	2007	32,895	176,733	0.05%	17,115	0.03%	0.94%
Kenya	1998	7,872	57,405	0.28%	6,192	0.06%	1.24%
Kenya	2003	8,177	60,066	0.21%	7,698	0.06%	1.05%
Lesotho	2004	6,902	40,632	0.11%	6,633	0.02%	0.32%
Liberia	2006	6,658	37,887	0.42%	3,901	0.03%	0.25%
Madagascar	1992	6,260	46,494	0.11%	6,920	0.00%	0.00%
Madagascar	1997	7,060	51,649	0.40%	6,028	0.04%	1.56%
Madagascar	2003	7,630	51,165	0.18%	3,989	0.19%	0.46%

Appendix Table 1: Characteristics of the sibling history surveys in 85 DHS

Country	Year	Total respondents to sibling history module	Total siblings reported	Alive/dead status unknown (percent of total siblings)	Total deaths	Sex unknown (percent of alive siblings)	Sex unknown (percent of total deaths)
Malawi	1992	4,849	35,018	0.50%	9,190	0.23%	0.87%
Malawi	2000	13,220	92,513	0.02%	22,280	0.04%	0.31%
Malawi	2004	11,290	74,080	0.05%	14,047	0.03%	0.11%
Mali	1995	9,704	63,045	0.01%	13,897	0.00%	0.09%
Mali	2001	12,815	83,365	0.43%	16,140	0.18%	0.44%
Mali	2006	14,118	100,149	0.37%	22,193	0.05%	0.26%
Mauritania	2000	7,728	49,563	0.17%	6,242	0.03%	0.07%
Morocco	1992	9,256	69,757	0.07%	10,665	0.00%	0.01%
Morocco	2003	16,602	124,923	0.08%	18,033	0.01%	0.23%
Mozambique	1997	8,702	50,149	0.01%	8,493	0.00%	0.00%
Mozambique	2003	11,923	74,937	0.33%	13,291	0.02%	0.44%
Namibia	1992	5,421	36,605	0.73%	4,231	0.13%	1.18%
Namibia	2000	6,752	44,527	0.22%	4,830	0.19%	0.42%
Namibia	2006	9,499	60,920	0.33%	7,622	0.05%	0.30%
Nepal	2006	10,639	64,475	0.09%	11,356	0.00%	0.21%
Niger	1992	6,503	43,819	0.09%	10,285	0.02%	0.66%
Niger	2006	8,935	64,183	0.11%	13,526	0.01%	0.05%
Peru	1991	15,882	99,447	0.15%	10,480	0.00%	0.00%
Peru	1996	28,951	197,378	0.67%	28,873	0.04%	2.53%
Peru	2000	27,774	183,986	0.59%	25,290	0.01%	1.63%
Peru	2003	11,441	73,794	0.10%	8,564	0.01%	0.23%

Appendix Table 1: Characteristics of the sibling history surveys in 85 DHS

Country	Year	Total respondents to sibling history module	Total siblings reported	Alive/dead status unknown (percent of total siblings)	Total deaths	Sex unknown (percent of alive siblings)	Sex unknown (percent of total deaths)
Philippines	1993	15,029	102,938	0.25%	8,132	0.02%	0.27%
Philippines	1998	13,978	93,976	0.14%	8,479	0.01%	0.34%
Rwanda	2000	10,415	75,804	1.84%	19,432	0.11%	0.44%
Rwanda	2005	11,184	83,711	1.03%	22,590	0.01%	0.06%
Senegal	1992	6,310	41,913	0.09%	8,160	0.01%	0.27%
Senegal	2005	14,370	100,964	0.16%	15,295	0.02%	0.54%
South Africa	1998	11,718	63,008	1.15%	6,551	0.32%	2.80%
Sudan	1989	5,860	42,570	0.07%	6,855	0.01%	0.00%
Swaziland	2006	4,810	30,489	0.31%	3,984	0.03%	0.34%
Tanzania	1996	8,118	55,931	0.08%	8,539	0.08%	0.35%
Tanzania	2004	10,190	74,273	0.08%	13,175	0.01%	0.12%
Togo	1998	8,569	58,193	0.13%	11,110	0.10%	0.73%
Uganda	1995	7,068	51,196	0.38%	9,621	0.09%	1.14%
Uganda	2000	7,240	54,871	0.94%	11,046	0.12%	0.91%
Uganda	2006	8,518	66,655	1.04%	15,165	0.01%	0.24%
Zambia	1996	8,021	59,231	0.06%	10,075	0.04%	0.15%
Zambia	2001	7,658	55,477	0.10%	9,859	0.02%	0.06%
Zambia	2007	7,141	48,382	0.15%	7,695	0.02%	0.08%
Zimbabwe	1994	6,128	44,649	0.08%	5,780	0.04%	0.48%
Zimbabwe	1999	5,907	40,401	0.28%	4,560	0.03%	0.44%
Zimbabwe	2005	8,661	55,810	0.10%	6,897	0.08%	0.18%

Appendix Table 1: Characteristics of the sibling history surveys in 85 DHS

Model Parameter	Sex	Model	Coefficient	Lower Bound	Upper Bound
age 15	females	1	0.000		
age 20	females	1	0.214	0.179	0.249
age 25	females	1	0.466	0.429	0.503
age 30	females	1	0.645	0.608	0.681
age 35	females	1	0.724	0.682	0.765
age 40	females	1	0.992	0.949	1.035
age 45	females	1	1.251	1.197	1.305
age 50	females	1	1.842	1.779	1.906
age 55	females	1	1.934	1.842	2.026
TiPS	females	1	-0.0142	-0.0189	-0.0095
BEN 1983	females	1	0.000		
BEN 1988	females	1	-0.339	-0.678	0.000
BEN 1993	females	1	-0.474	-0.770	-0.178
BEN 1998	females	1	-0.123	-0.416	0.171
BEN 2003	females	1	-0.118	-0.410	0.173
BFA 1985	females	1	-0.256	-0.655	0.142
BFA 1990	females	1	0.119	-0.199	0.436
BFA 1995	females	1	0.136	-0.158	0.430
BFA 2000	females	1	0.182	-0.124	0.488
BOL 1980	females	1	-0.332	-0.691	0.026
BOL 1985	females	1	-0.324	-0.660	0.012
BOL 1990	females	1	-0.564	-0.863	-0.264
BOL 1995	females	1	-0.510	-0.843	-0.178
BOL 2000	females	1	-0.662	-0.984	-0.341
BRA 1983	females	1	-1.173	-1.526	-0.819
BRA 1988	females	1	-1.305	-1.656	-0.955
BRA 1993	females	1	-1.100	-1.413	-0.788
CAF 1981	females	1	0.378	-0.006	0.762
CAF 1986	females	1	0.490	0.164	0.816
CAF 1991	females	1	0.727	0.424	1.030
CIV 1982	females	1	0.043	-0.301	0.387
CIV 1987	females	1	-0.102	-0.416	0.212
CIV 1992	females	1	0.145	-0.164	0.453
CIV 1997	females	1	0.455	0.080	0.831
CIV 2002	females	1	0.737	0.336	1.139
CMR 1986	females	1	-0.274	-0.666	0.119
CMR 1991	females	1	-0.155	-0.459	0.149
CMR 1996	females	1	0.137	-0.154	0.428
CMR 2001	females	1	0.421	0.134	0.708
COD 1994	females	1	0.506	0.178	0.835
COD 1999	females	1	0.433	0.121	0.744

COD 2004	females	1	0.382	0.056	0.708
COG 1992	females	1	0.510	0.183	0.838
COG 1997	females	1	0.863	0.555	1.170
COG 2002	females	1	0.565	0.254	0.876
DOM 1989	females	1	-0.917	-1.313	-0.521
DOM 1994	females	1	-1.040	-1.346	-0.734
DOM 1999	females	1	-0.974	-1.281	-0.668
DOM 2004	females	1	-0.841	-1.144	-0.538
ERI 1982	females	1	0.607	0.250	0.964
ERI 1987	females	1	0.712	0.382	1.042
ERI 1992	females	1	0.286	-0.088	0.661
ETH 1982	females	1	0.606	0.314	0.897
ETH 1987	females	1	0.616	0.337	0.894
ETH 1992	females	1	0.565	0.287	0.843
ETH 1997	females	1	0.558	0.277	0.839
ETH 2002	females	1	0.511	0.211	0.812
GAB 1987	females	1	-0.367	-0.784	0.049
GAB 1992	females	1	-0.195	-0.562	0.172
GAB 1997	females	1	0.125	-0.193	0.442
GHA 1994	females	1	-0.042	-0.308	0.224
GHA 1999	females	1	0.086	-0.181	0.352
GHA 2004	females	1	0.030	-0.240	0.300
GIN 1987	females	1	0.091	-0.254	0.436
GIN 1992	females	1	0.068	-0.231	0.366
GIN 1997	females	1	0.036	-0.267	0.339
GIN 2002	females	1	0.245	-0.064	0.553
GTM 1982	females	1	-0.539	-0.889	-0.189
GTM 1987	females	1	-0.868	-1.250	-0.486
GTM 1992	females	1	-0.785	-1.105	-0.464
HTI 1987	females	1	0.696	0.387	1.004
HTI 1992	females	1	0.403	0.116	0.690
HTI 1997	females	1	0.299	0.014	0.584
HTI 2002	females	1	0.152	-0.151	0.454
IDN 1984	females	1	-0.829	-1.129	-0.529
IDN 1989	females	1	-0.761	-1.048	-0.473
IDN 1994	females	1	-0.956	-1.238	-0.674
IDN 1999	females	1	-0.808	-1.097	-0.519
IDN 2004	females	1	-0.754	-1.056	-0.452
KEN 1985	females	1	-0.441	-0.802	-0.080
KEN 1990	females	1	-0.277	-0.588	0.034
KEN 1995	females	1	0.241	-0.048	0.529
KEN 2000	females	1	0.607	0.301	0.914
KHM 1987	females	1	-0.247	-0.577	0.082

KHM 1992	females	1	-0.232	-0.526	0.061
KHM 1997	females	1	-0.255	-0.541	0.030
KHM 2002	females	1	-0.264	-0.561	0.033
LBR 1993	females	1	-0.038	-0.452	0.375
LBR 1998	females	1	0.141	-0.266	0.549
LBR 2003	females	1	0.371	0.036	0.706
LSO 1991	females	1	-0.464	-0.858	-0.070
LSO 1996	females	1	0.100	-0.219	0.419
LSO 2001	females	1	1.146	0.856	1.436
MAR 1980	females	1	-0.452	-0.804	-0.099
MAR 1985	females	1	-0.870	-1.193	-0.546
MAR 1990	females	1	-1.078	-1.384	-0.772
MAR 1995	females	1	-1.170	-1.493	-0.848
MAR 2000	females	1	-1.290	-1.602	-0.978
MDG 1980	females	1	-0.142	-0.479	0.195
MDG 1985	females	1	0.273	-0.023	0.569
MDG 1990	females	1	0.114	-0.182	0.410
MDG 1995	females	1	0.052	-0.250	0.355
MDG 2000	females	1	-0.103	-0.441	0.236
MLI 1983	females	1	0.335	0.025	0.645
MLI 1988	females	1	0.117	-0.175	0.409
MLI 1993	females	1	-0.039	-0.323	0.245
MLI 1998	females	1	0.136	-0.152	0.424
MLI 2003	females	1	-0.003	-0.302	0.296
MOZ 1985	females	1	0.240	-0.139	0.618
MOZ 1990	females	1	-0.079	-0.397	0.240
MOZ 1995	females	1	-0.142	-0.460	0.176
MOZ 2000	females	1	0.431	0.128	0.734
MRT 1987	females	1	0.198	-0.219	0.614
MRT 1992	females	1	-0.056	-0.409	0.297
MRT 1997	females	1	-0.160	-0.495	0.174
MWI 1981	females	1	-0.243	-0.633	0.147
MWI 1986	females	1	0.219	-0.087	0.525
MWI 1991	females	1	0.362	0.077	0.646
MWI 1996	females	1	0.932	0.654	1.210
MWI 2001	females	1	1.230	0.947	1.512
NAM 1983	females	1	-0.220	-0.669	0.229
NAM 1988	females	1	-0.310	-0.629	0.009
NAM 1993	females	1	-0.203	-0.512	0.106
NAM 1998	females	1	0.534	0.237	0.830
NAM 2003	females	1	0.874	0.588	1.160
NER 1983	females	1	0.482	0.160	0.805
NER 1988	females	1	0.205	-0.114	0.524

NER 1993	females	1	0.225	-0.103	0.553
NER 1998	females	1	0.128	-0.193	0.448
NER 2003	females	1	-0.014	-0.316	0.287
NPL 1993	females	1	-0.358	-0.700	-0.016
NPL 1998	females	1	-0.659	-1.007	-0.312
NPL 2003	females	1	-0.904	-1.240	-0.568
PER 1980	females	1	-0.374	-0.687	-0.061
PER 1985	females	1	-0.734	-1.016	-0.452
PER 1990	females	1	-0.867	-1.150	-0.585
PER 1995	females	1	-0.932	-1.220	-0.644
PER 2000	females	1	-1.548	-1.870	-1.226
PHL 1980	females	1	-0.945	-1.290	-0.599
PHL 1985	females	1	-0.813	-1.104	-0.521
PHL 1990	females	1	-0.850	-1.144	-0.557
PHL 1995	females	1	-0.960	-1.264	-0.657
RWA 1988	females	1	0.443	0.145	0.740
RWA 1993	females	1	2.277	2.000	2.554
RWA 1998	females	1	0.994	0.713	1.275
RWA 2003	females	1	0.456	0.166	0.746
SDN 1976	females	1	-0.325	-0.591	-0.059
SDN 1981	females	1	-0.355	-0.622	-0.088
SDN 1986	females	1	-0.337	-0.607	-0.067
SEN 1982	females	1	-0.121	-0.477	0.235
SEN 1987	females	1	-0.159	-0.507	0.190
SEN 1992	females	1	-0.363	-0.672	-0.055
SEN 1997	females	1	-0.398	-0.721	-0.076
SEN 2002	females	1	-0.334	-0.632	-0.035
SWZ 1993	females	1	0.036	-0.344	0.416
SWZ 1998	females	1	0.648	0.339	0.956
SWZ 2003	females	1	1.401	1.117	1.686
TCD 1986	females	1	-0.029	-0.369	0.310
TCD 1991	females	1	0.195	-0.113	0.502
TCD 1996	females	1	0.267	-0.036	0.570
TCD 2001	females	1	0.398	0.030	0.766
TGO 1985	females	1	-0.239	-0.595	0.117
TGO 1990	females	1	-0.275	-0.615	0.064
TGO 1995	females	1	-0.147	-0.468	0.174
TZA 1986	females	1	-0.393	-0.746	-0.040
TZA 1991	females	1	0.160	-0.146	0.467
TZA 1996	females	1	0.438	0.139	0.737
TZA 2001	females	1	0.573	0.276	0.870
UGA 1983	females	1	0.224	-0.096	0.545
UGA 1988	females	1	0.410	0.115	0.706

UGA 1993	females	1	0.843	0.565	1.121
UGA 1998	females	1	0.814	0.529	1.100
UGA 2003	females	1	0.799	0.502	1.096
ZAF 1985	females	1	-0.434	-0.792	-0.076
ZAF 1990	females	1	-0.683	-1.017	-0.349
ZAF 1995	females	1	-0.436	-0.748	-0.125
ZMB 1984	females	1	0.335	0.015	0.655
ZMB 1989	females	1	0.574	0.291	0.856
ZMB 1994	females	1	1.109	0.832	1.386
ZMB 1999	females	1	1.275	0.996	1.553
ZMB 2004	females	1	1.296	0.990	1.601
ZWE 1982	females	1	-0.239	-0.591	0.113
ZWE 1987	females	1	-0.745	-1.080	-0.411
ZWE 1992	females	1	0.181	-0.115	0.477
ZWE 1997	females	1	0.778	0.495	1.061
ZWE 2002	females	1	1.314	1.031	1.597

Appendix Table 2a: CSS Model 1 Results (female)

Model Parameter	Sex	Model	Coefficient	Lower Bound	Upper Bound
age 15	males	1	0.000		
age 20	males	1	0.197	0.162	0.232
age 25	males	1	0.406	0.371	0.440
age 30	males	1	0.711	0.677	0.746
age 35	males	1	0.845	0.808	0.882
age 40	males	1	1.104	1.064	1.144
age 45	males	1	1.232	1.186	1.278
age 50	males	1	1.632	1.579	1.686
age 55	males	1	1.755	1.678	1.832
TiPS	males	1	-0.0209	-0.0254	-0.0164
BEN 1983	males	1	0.000		
BEN 1988	males	1	-0.221	-0.529	0.087
BEN 1993	males	1	-0.204	-0.474	0.067
BEN 1998	males	1	0.001	-0.302	0.303
BEN 2003	males	1	-0.024	-0.287	0.239
BFA 1985	males	1	0.086	-0.241	0.414
BFA 1990	males	1	0.149	-0.111	0.410
BFA 1995	males	1	0.152	-0.092	0.395
BFA 2000	males	1	0.216	-0.045	0.478
BOL 1980	males	1	-0.129	-0.425	0.168
BOL 1985	males	1	-0.118	-0.415	0.178
BOL 1990	males	1	-0.369	-0.617	-0.122
BOL 1995	males	1	-0.747	-1.024	-0.469
BOL 2000	males	1	-0.536	-0.795	-0.277
BRA 1983	males	1	-0.578	-0.858	-0.299
BRA 1988	males	1	-0.671	-0.935	-0.407
BRA 1993	males	1	-0.488	-0.731	-0.245
CAF 1981	males	1	0.388	0.044	0.733
CAF 1986	males	1	0.578	0.298	0.857
CAF 1991	males	1	0.630	0.372	0.887
CIV 1982	males	1	-0.261	-0.569	0.048
CIV 1987	males	1	0.030	-0.250	0.311
CIV 1992	males	1	0.263	-0.005	0.531
CIV 1997	males	1	0.381	0.046	0.717
CIV 2002	males	1	0.506	0.193	0.819
CMR 1986	males	1	-0.153	-0.482	0.176
CMR 1991	males	1	-0.067	-0.327	0.192
CMR 1996	males	1	0.046	-0.200	0.291
CMR 2001	males	1	0.265	0.022	0.507
COD 1994	males	1	0.305	0.027	0.582

COD 1999	males	1	0.386	0.105	0.666
COD 2004	males	1	0.322	0.014	0.630
COG 1992	males	1	0.251	-0.036	0.538
COG 1997	males	1	0.787	0.514	1.060
COG 2002	males	1	0.426	0.109	0.743
DOM 1989	males	1	-0.614	-0.942	-0.287
DOM 1994	males	1	-0.771	-1.017	-0.525
DOM 1999	males	1	-0.635	-0.872	-0.399
DOM 2004	males	1	-0.532	-0.779	-0.285
ERI 1982	males	1	1.087	0.814	1.361
ERI 1987	males	1	1.091	0.817	1.365
ERI 1992	males	1	0.324	0.040	0.609
ETH 1982	males	1	0.767	0.522	1.012
ETH 1987	males	1	0.653	0.425	0.881
ETH 1992	males	1	0.598	0.370	0.826
ETH 1997	males	1	0.521	0.289	0.752
ETH 2002	males	1	0.409	0.154	0.664
GAB 1987	males	1	-0.386	-0.784	0.012
GAB 1992	males	1	-0.117	-0.459	0.225
GAB 1997	males	1	-0.025	-0.306	0.257
GHA 1994	males	1	-0.488	-0.703	-0.273
GHA 1999	males	1	-0.193	-0.409	0.023
GHA 2004	males	1	-0.039	-0.258	0.181
GIN 1987	males	1	-0.208	-0.512	0.095
GIN 1992	males	1	-0.114	-0.377	0.148
GIN 1997	males	1	-0.012	-0.273	0.249
GIN 2002	males	1	0.167	-0.104	0.437
GTM 1982	males	1	0.047	-0.242	0.336
GTM 1987	males	1	-0.469	-0.736	-0.202
GTM 1992	males	1	-0.441	-0.715	-0.167
HTI 1987	males	1	0.512	0.165	0.859
HTI 1992	males	1	0.248	0.003	0.492
HTI 1997	males	1	0.138	-0.129	0.405
HTI 2002	males	1	-0.048	-0.323	0.227
IDN 1984	males	1	-0.849	-1.103	-0.596
IDN 1989	males	1	-0.803	-1.042	-0.563
IDN 1994	males	1	-0.814	-1.048	-0.579
IDN 1999	males	1	-0.888	-1.130	-0.646
IDN 2004	males	1	-0.642	-0.889	-0.395
KEN 1985	males	1	-0.479	-0.833	-0.125
KEN 1990	males	1	-0.361	-0.619	-0.104
KEN 1995	males	1	0.029	-0.218	0.277
KEN 2000	males	1	0.259	0.001	0.516

KHM 1987	males	1	0.411	0.150	0.672
KHM 1992	males	1	0.091	-0.149	0.330
KHM 1997	males	1	0.016	-0.224	0.255
KHM 2002	males	1	0.031	-0.211	0.273
LBR 1993	males	1	-0.095	-0.441	0.251
LBR 1998	males	1	0.046	-0.261	0.353
LBR 2003	males	1	0.208	-0.086	0.502
LSO 1991	males	1	0.172	-0.111	0.455
LSO 1996	males	1	0.497	0.238	0.756
LSO 2001	males	1	1.115	0.877	1.353
MAR 1980	males	1	-0.562	-0.849	-0.275
MAR 1985	males	1	-0.969	-1.263	-0.675
MAR 1990	males	1	-1.054	-1.307	-0.801
MAR 1995	males	1	-1.105	-1.377	-0.832
MAR 2000	males	1	-1.265	-1.529	-1.001
MDG 1980	males	1	-0.120	-0.398	0.158
MDG 1985	males	1	0.015	-0.236	0.266
MDG 1990	males	1	-0.035	-0.279	0.210
MDG 1995	males	1	-0.042	-0.305	0.221
MDG 2000	males	1	-0.193	-0.472	0.085
MLI 1983	males	1	0.088	-0.210	0.385
MLI 1988	males	1	-0.109	-0.360	0.143
MLI 1993	males	1	-0.086	-0.329	0.157
MLI 1998	males	1	0.004	-0.236	0.244
MLI 2003	males	1	0.048	-0.216	0.312
MOZ 1985	males	1	-0.003	-0.368	0.363
MOZ 1990	males	1	0.193	-0.085	0.471
MOZ 1995	males	1	0.043	-0.228	0.315
MOZ 2000	males	1	0.413	0.159	0.666
MRT 1987	males	1	-0.278	-0.758	0.203
MRT 1992	males	1	-0.361	-0.668	-0.054
MRT 1997	males	1	-0.416	-0.734	-0.097
MWI 1981	males	1	-0.392	-0.849	0.064
MWI 1986	males	1	-0.088	-0.358	0.181
MWI 1991	males	1	0.306	0.057	0.555
MWI 1996	males	1	0.665	0.434	0.896
MWI 2001	males	1	1.108	0.869	1.347
NAM 1983	males	1	0.339	0.064	0.615
NAM 1988	males	1	0.249	-0.007	0.506
NAM 1993	males	1	0.078	-0.180	0.336
NAM 1998	males	1	0.560	0.324	0.796
NAM 2003	males	1	0.920	0.676	1.165
NER 1983	males	1	0.375	0.073	0.677

NER 1988	males	1	0.080	-0.233	0.392
NER 1993	males	1	-0.218	-0.522	0.085
NER 1998	males	1	-0.348	-0.625	-0.071
NER 2003	males	1	-0.393	-0.663	-0.123
NPL 1993	males	1	-0.545	-0.873	-0.216
NPL 1998	males	1	-0.502	-0.820	-0.185
NPL 2003	males	1	-0.933	-1.261	-0.605
PER 1980	males	1	-0.571	-0.829	-0.313
PER 1985	males	1	-0.574	-0.805	-0.342
PER 1990	males	1	-0.555	-0.783	-0.326
PER 1995	males	1	-0.792	-1.025	-0.559
PER 2000	males	1	-1.098	-1.358	-0.839
PHL 1980	males	1	-0.522	-0.785	-0.259
PHL 1985	males	1	-0.351	-0.585	-0.117
PHL 1990	males	1	-0.519	-0.750	-0.289
PHL 1995	males	1	-0.608	-0.850	-0.367
RWA 1988	males	1	0.404	0.156	0.651
RWA 1993	males	1	2.557	2.332	2.782
RWA 1998	males	1	1.253	1.015	1.490
RWA 2003	males	1	0.454	0.206	0.701
SDN 1976	males	1	-0.210	-0.425	0.005
SDN 1981	males	1	-0.362	-0.578	-0.146
SDN 1986	males	1	-0.467	-0.687	-0.247
SEN 1982	males	1	-0.112	-0.453	0.228
SEN 1987	males	1	-0.203	-0.510	0.103
SEN 1992	males	1	-0.254	-0.520	0.012
SEN 1997	males	1	-0.442	-0.719	-0.164
SEN 2002	males	1	-0.444	-0.703	-0.185
SWZ 1993	males	1	-0.015	-0.357	0.327
SWZ 1998	males	1	0.722	0.449	0.996
SWZ 2003	males	1	1.252	1.013	1.491
TCD 1986	males	1	0.017	-0.296	0.330
TCD 1991	males	1	-0.010	-0.278	0.257
TCD 1996	males	1	0.021	-0.239	0.280
TCD 2001	males	1	0.111	-0.163	0.385
TGO 1985	males	1	-0.225	-0.515	0.066
TGO 1990	males	1	-0.393	-0.687	-0.099
TGO 1995	males	1	-0.131	-0.405	0.142
TZA 1986	males	1	-0.421	-0.747	-0.094
TZA 1991	males	1	0.033	-0.227	0.293
TZA 1996	males	1	0.302	0.050	0.555
TZA 2001	males	1	0.388	0.123	0.652
UGA 1983	males	1	0.300	0.023	0.577

UGA 1988	males	1	0.591	0.347	0.834
UGA 1993	males	1	0.768	0.536	1.001
UGA 1998	males	1	0.755	0.515	0.995
UGA 2003	males	1	0.687	0.438	0.936
ZAF 1985	males	1	0.005	-0.300	0.310
ZAF 1990	males	1	-0.058	-0.322	0.205
ZAF 1995	males	1	0.175	-0.081	0.432
ZMB 1984	males	1	0.172	-0.102	0.445
ZMB 1989	males	1	0.399	0.162	0.636
ZMB 1994	males	1	0.937	0.708	1.165
ZMB 1999	males	1	1.024	0.793	1.256
ZMB 2004	males	1	1.024	0.778	1.270
ZWE 1982	males	1	-0.095	-0.370	0.181
ZWE 1987	males	1	-0.396	-0.665	-0.128
ZWE 1992	males	1	0.005	-0.232	0.243
ZWE 1997	males	1	0.731	0.496	0.966
ZWE 2002	males	1	1.146	0.912	1.379

Appendix Table 2a, continued: CSS Model 1 Results (male)

Model Parameter	Sex	Model	Coefficient	Lower Bound	Upper Bound
0-1.9% HIV, age 15	females	2	0.000		
0-1.9% HIV, age 20	females	2	0.086	0.043	0.130
0-1.9% HIV, age 25	females	2	0.228	0.182	0.273
0-1.9% HIV, age 30	females	2	0.382	0.336	0.428
0-1.9% HIV, age 35	females	2	0.464	0.411	0.516
0-1.9% HIV, age 40	females	2	0.861	0.807	0.915
0-1.9% HIV, age 45	females	2	1.153	1.081	1.224
0-1.9% HIV, age 50	females	2	1.834	1.756	1.912
0-1.9% HIV, age 55	females	2	2.002	1.890	2.114
2-6.9% HIV, age 15	females	2	0.000		
2-6.9% HIV, age 20	females	2	0.482	0.385	0.579
2-6.9% HIV, age 25	females	2	0.863	0.767	0.958
2-6.9% HIV, age 30	females	2	1.038	0.940	1.135
2-6.9% HIV, age 35	females	2	1.123	1.021	1.225
2-6.9% HIV, age 40	females	2	1.211	1.093	1.328
2-6.9% HIV, age 45	females	2	1.379	1.249	1.510
2-6.9% HIV, age 50	females	2	1.957	1.789	2.125
2-6.9% HIV, age 55	females	2	2.067	1.843	2.291
7-11.9% HIV, age 15	females	2	0.000		
7-11.9% HIV, age 20	females	2	0.330	0.234	0.427
7-11.9% HIV, age 25	females	2	0.666	0.563	0.768
7-11.9% HIV, age 30	females	2	0.852	0.754	0.949
7-11.9% HIV, age 35	females	2	0.865	0.751	0.978
7-11.9% HIV, age 40	females	2	0.998	0.881	1.115
7-11.9% HIV, age 45	females	2	1.382	1.236	1.529
7-11.9% HIV, age 50	females	2	1.754	1.560	1.948
7-11.9% HIV, age 55	females	2	1.559	1.243	1.876
12+% HIV, age 15	females	2	0.000		
12+% HIV, age 20	females	2	0.744	0.610	0.878
12+% HIV, age 25	females	2	1.313	1.184	1.442
12+% HIV, age 30	females	2	1.601	1.473	1.729
12+% HIV, age 35	females	2	1.703	1.572	1.835
12+% HIV, age 40	females	2	1.778	1.635	1.922
12+% HIV, age 45	females	2	1.877	1.719	2.035
12+% HIV, age 50	females	2	2.250	2.044	2.457
12+% HIV, age 55	females	2	2.168	1.892	2.444
TiPS	females	2	-0.0142	-0.0189	-0.0095
BEN 1983	females	2	0.000		
BEN 1988	females	2	-0.336	-0.675	0.003
BEN 1993	females	2	-0.479	-0.774	-0.183
BEN 1998	females	2	-0.121	-0.415	0.172

BEN 2003	females	2	-0.119	-0.409	0.172
BFA 1985	females	2	-0.259	-0.657	0.140
BFA 1990	females	2	0.121	-0.196	0.438
BFA 1995	females	2	0.138	-0.156	0.432
BFA 2000	females	2	0.179	-0.127	0.485
BOL 1980	females	2	-0.335	-0.693	0.023
BOL 1985	females	2	-0.321	-0.657	0.015
BOL 1990	females	2	-0.562	-0.862	-0.263
BOL 1995	females	2	-0.508	-0.840	-0.176
BOL 2000	females	2	-0.669	-0.991	-0.348
BRA 1983	females	2	-1.169	-1.522	-0.815
BRA 1988	females	2	-1.302	-1.652	-0.952
BRA 1993	females	2	-1.108	-1.420	-0.796
CAF 1981	females	2	0.370	-0.014	0.754
CAF 1986	females	2	0.492	0.166	0.818
CAF 1991	females	2	0.729	0.426	1.032
CIV 1982	females	2	0.032	-0.312	0.376
CIV 1987	females	2	-0.103	-0.417	0.211
CIV 1992	females	2	0.142	-0.166	0.450
CIV 1997	females	2	0.016	-0.368	0.399
CIV 2002	females	2	0.301	-0.119	0.720
CMR 1986	females	2	-0.278	-0.670	0.114
CMR 1991	females	2	-0.158	-0.461	0.146
CMR 1996	females	2	0.134	-0.157	0.425
CMR 2001	females	2	-0.011	-0.310	0.287
COD 1994	females	2	0.508	0.179	0.836
COD 1999	females	2	0.434	0.122	0.745
COD 2004	females	2	0.376	0.050	0.701
COG 1992	females	2	0.070	-0.263	0.403
COG 1997	females	2	0.416	0.102	0.731
COG 2002	females	2	0.123	-0.202	0.448
DOM 1989	females	2	-0.913	-1.309	-0.517
DOM 1994	females	2	-1.032	-1.338	-0.727
DOM 1999	females	2	-0.975	-1.281	-0.669
DOM 2004	females	2	-0.857	-1.160	-0.554
ERI 1982	females	2	0.611	0.255	0.967
ERI 1987	females	2	0.717	0.388	1.047
ERI 1992	females	2	0.281	-0.093	0.656
ETH 1982	females	2	0.603	0.312	0.895
ETH 1987	females	2	0.612	0.334	0.890
ETH 1992	females	2	0.560	0.282	0.837
ETH 1997	females	2	0.551	0.271	0.832
ETH 2002	females	2	0.077	-0.239	0.393

GAB 1987	females	2	-0.377	-0.794	0.040
GAB 1992	females	2	-0.195	-0.561	0.172
GAB 1997	females	2	0.125	-0.191	0.442
GHA 1994	females	2	-0.042	-0.308	0.223
GHA 1999	females	2	0.087	-0.180	0.353
GHA 2004	females	2	-0.405	-0.688	-0.122
GIN 1987	females	2	0.091	-0.254	0.436
GIN 1992	females	2	0.073	-0.226	0.372
GIN 1997	females	2	0.041	-0.261	0.344
GIN 2002	females	2	0.245	-0.063	0.553
GTM 1982	females	2	-0.539	-0.889	-0.189
GTM 1987	females	2	-0.865	-1.246	-0.483
GTM 1992	females	2	-0.791	-1.111	-0.471
HTI 1987	females	2	0.704	0.396	1.012
HTI 1992	females	2	0.411	0.124	0.698
HTI 1997	females	2	0.300	0.015	0.584
HTI 2002	females	2	-0.280	-0.594	0.033
IDN 1984	females	2	-0.822	-1.122	-0.522
IDN 1989	females	2	-0.748	-1.036	-0.461
IDN 1994	females	2	-0.944	-1.225	-0.662
IDN 1999	females	2	-0.796	-1.085	-0.508
IDN 2004	females	2	-0.754	-1.055	-0.452
KEN 1985	females	2	-0.447	-0.808	-0.086
KEN 1990	females	2	-0.277	-0.588	0.033
KEN 1995	females	2	-0.202	-0.502	0.098
KEN 2000	females	2	0.342	0.025	0.660
KHM 1987	females	2	-0.238	-0.567	0.091
KHM 1992	females	2	-0.219	-0.512	0.074
KHM 1997	females	2	-0.256	-0.541	0.030
KHM 2002	females	2	-0.686	-0.995	-0.378
LBR 1993	females	2	-0.035	-0.448	0.378
LBR 1998	females	2	0.149	-0.259	0.556
LBR 2003	females	2	0.370	0.035	0.705
LSO 1991	females	2	-0.460	-0.854	-0.067
LSO 1996	females	2	-0.341	-0.671	-0.010
LSO 2001	females	2	0.276	-0.037	0.589
MAR 1980	females	2	-0.457	-0.809	-0.104
MAR 1985	females	2	-0.867	-1.190	-0.543
MAR 1990	females	2	-1.072	-1.378	-0.767
MAR 1995	females	2	-1.159	-1.481	-0.836
MAR 2000	females	2	-1.290	-1.603	-0.978
MDG 1980	females	2	-0.149	-0.486	0.188
MDG 1985	females	2	0.274	-0.022	0.570

MDG 1990	females	2	0.117	-0.179	0.412
MDG 1995	females	2	0.057	-0.245	0.359
MDG 2000	females	2	-0.102	-0.441	0.236
MLI 1983	females	2	0.333	0.023	0.643
MLI 1988	females	2	0.122	-0.170	0.414
MLI 1993	females	2	-0.036	-0.319	0.248
MLI 1998	females	2	0.137	-0.151	0.425
MLI 2003	females	2	-0.003	-0.301	0.296
MOZ 1985	females	2	0.239	-0.139	0.618
MOZ 1990	females	2	-0.079	-0.398	0.239
MOZ 1995	females	2	-0.141	-0.458	0.177
MOZ 2000	females	2	-0.012	-0.327	0.302
MRT 1987	females	2	0.191	-0.225	0.607
MRT 1992	females	2	-0.052	-0.405	0.301
MRT 1997	females	2	-0.158	-0.492	0.177
MWI 1981	females	2	-0.240	-0.630	0.149
MWI 1986	females	2	0.217	-0.089	0.523
MWI 1991	females	2	0.357	0.074	0.641
MWI 1996	females	2	0.497	0.208	0.786
MWI 2001	females	2	0.362	0.056	0.669
NAM 1983	females	2	-0.223	-0.671	0.225
NAM 1988	females	2	-0.315	-0.633	0.004
NAM 1993	females	2	-0.206	-0.515	0.102
NAM 1998	females	2	0.092	-0.215	0.400
NAM 2003	females	2	0.613	0.315	0.911
NER 1983	females	2	0.479	0.157	0.801
NER 1988	females	2	0.204	-0.115	0.523
NER 1993	females	2	0.222	-0.106	0.549
NER 1998	females	2	0.131	-0.189	0.452
NER 2003	females	2	-0.012	-0.314	0.289
NPL 1993	females	2	-0.356	-0.697	-0.014
NPL 1998	females	2	-0.657	-1.004	-0.311
NPL 2003	females	2	-0.911	-1.246	-0.576
PER 1980	females	2	-0.377	-0.690	-0.064
PER 1985	females	2	-0.734	-1.015	-0.452
PER 1990	females	2	-0.866	-1.149	-0.584
PER 1995	females	2	-0.934	-1.221	-0.646
PER 2000	females	2	-1.554	-1.876	-1.233
PHL 1985	females	2	-0.810	-1.102	-0.519
PHL 1990	females	2	-0.852	-1.146	-0.559
PHL 1995	females	2	-0.969	-1.272	-0.665
RWA 1988	females	2	0.450	0.153	0.747
RWA 1993	females	2	1.995	1.708	2.282

RWA 1998	females	2	0.723	0.430	1.016
RWA 2003	females	2	0.025	-0.277	0.327
SDN 1976	females	2	-0.333	-0.598	-0.067
SDN 1981	females	2	-0.352	-0.619	-0.085
SDN 1986	females	2	-0.330	-0.599	-0.060
SEN 1982	females	2	-0.119	-0.475	0.237
SEN 1987	females	2	-0.153	-0.502	0.196
SEN 1992	females	2	-0.363	-0.672	-0.055
SEN 1997	females	2	-0.397	-0.719	-0.074
SEN 2002	females	2	-0.340	-0.639	-0.042
SWZ 1993	females	2	0.034	-0.347	0.414
SWZ 1998	females	2	0.208	-0.113	0.528
SWZ 2003	females	2	0.530	0.223	0.838
TCD 1986	females	2	-0.031	-0.370	0.308
TCD 1991	females	2	0.195	-0.112	0.503
TCD 1996	females	2	0.268	-0.035	0.570
TCD 2001	females	2	-0.039	-0.429	0.351
TGO 1985	females	2	-0.244	-0.600	0.111
TGO 1990	females	2	-0.274	-0.614	0.065
TGO 1995	females	2	-0.150	-0.471	0.171
TZA 1986	females	2	-0.395	-0.748	-0.042
TZA 1991	females	2	0.157	-0.149	0.463
TZA 1996	females	2	-0.004	-0.314	0.305
TZA 2001	females	2	0.302	-0.006	0.610
UGA 1983	females	2	0.211	-0.109	0.531
UGA 1988	females	2	-0.028	-0.334	0.278
UGA 1993	females	2	0.564	0.275	0.853
UGA 1998	females	2	-0.069	-0.381	0.243
UGA 2003	females	2	0.534	0.225	0.844
ZAF 1985	females	2	-0.430	-0.787	-0.072
ZAF 1990	females	2	-0.677	-1.011	-0.344
ZAF 1995	females	2	-0.442	-0.753	-0.131
ZMB 1984	females	2	0.329	0.009	0.648
ZMB 1989	females	2	0.570	0.288	0.852
ZMB 1994	females	2	0.670	0.383	0.958
ZMB 1999	females	2	0.397	0.097	0.698
ZMB 2004	females	2	0.406	0.074	0.738
ZWE 1982	females	2	-0.242	-0.594	0.109
ZWE 1987	females	2	-0.745	-1.079	-0.410
ZWE 1992	females	2	-0.259	-0.564	0.046
ZWE 1997	females	2	-0.097	-0.401	0.207
ZWE 2002	females	2	0.441	0.137	0.746

Appendix table 2b: CSS Model 2 results (female)

Model Parameter	Sex	Model	Coefficient	Lower Bound	Upper Bound
0-1.9% HIV, age 15	males	2	0.000		
0-1.9% HIV, age 20	males	2	0.146	0.103	0.188
0-1.9% HIV, age 25	males	2	0.256	0.214	0.298
0-1.9% HIV, age 30	males	2	0.503	0.461	0.546
0-1.9% HIV, age 35	males	2	0.605	0.558	0.652
0-1.9% HIV, age 40	males	2	0.909	0.859	0.959
0-1.9% HIV, age 45	males	2	1.101	1.042	1.160
0-1.9% HIV, age 50	males	2	1.556	1.489	1.624
0-1.9% HIV, age 55	males	2	1.638	1.542	1.733
2-6.9% HIV, age 15	males	2	0.000		
2-6.9% HIV, age 20	males	2	0.278	0.177	0.378
2-6.9% HIV, age 25	males	2	0.706	0.601	0.810
2-6.9% HIV, age 30	males	2	1.135	1.039	1.231
2-6.9% HIV, age 35	males	2	1.297	1.202	1.393
2-6.9% HIV, age 40	males	2	1.531	1.422	1.640
2-6.9% HIV, age 45	males	2	1.534	1.418	1.650
2-6.9% HIV, age 50	males	2	1.941	1.812	2.069
2-6.9% HIV, age 55	males	2	2.147	1.920	2.374
7-11.9% HIV, age 15	males	2	0.000		
7-11.9% HIV, age 20	males	2	0.340	0.254	0.427
7-11.9% HIV, age 25	males	2	0.590	0.506	0.674
7-11.9% HIV, age 30	males	2	0.812	0.724	0.900
7-11.9% HIV, age 35	males	2	0.930	0.835	1.025
7-11.9% HIV, age 40	males	2	1.076	0.970	1.183
7-11.9% HIV, age 45	males	2	1.155	1.037	1.274
7-11.9% HIV, age 50	males	2	1.448	1.284	1.612
7-11.9% HIV, age 55	males	2	1.645	1.393	1.898
12+% HIV, age 15	males	2	0.000		
12+% HIV, age 20	males	2	0.377	0.212	0.542
12+% HIV, age 25	males	2	1.015	0.859	1.171
12+% HIV, age 30	males	2	1.646	1.495	1.798
12+% HIV, age 35	males	2	1.901	1.747	2.055
12+% HIV, age 40	males	2	2.102	1.941	2.264
12+% HIV, age 45	males	2	2.097	1.925	2.269
12+% HIV, age 50	males	2	2.239	2.048	2.429
12+% HIV, age 55	males	2	2.381	2.144	2.618
TiPS	males	2	-0.0215	-0.0260	-0.0170
BEN 1983	males	2	0.000		
BEN 1988	males	2	-0.210	-0.518	0.098
BEN 1993	males	2	-0.195	-0.466	0.075
BEN 1998	males	2	0.011	-0.292	0.313

BEN 2003	males	2	-0.004	-0.267	0.259
BFA 1985	males	2	0.086	-0.242	0.413
BFA 1990	males	2	0.156	-0.105	0.416
BFA 1995	males	2	0.166	-0.078	0.410
BFA 2000	males	2	0.235	-0.027	0.497
BOL 1980	males	2	-0.124	-0.421	0.173
BOL 1985	males	2	-0.104	-0.400	0.193
BOL 1990	males	2	-0.353	-0.600	-0.105
BOL 1995	males	2	-0.729	-1.007	-0.452
BOL 2000	males	2	-0.514	-0.773	-0.255
BRA 1983	males	2	-0.562	-0.841	-0.282
BRA 1988	males	2	-0.647	-0.911	-0.383
BRA 1993	males	2	-0.460	-0.703	-0.217
CAF 1981	males	2	0.380	0.035	0.725
CAF 1986	males	2	0.583	0.303	0.863
CAF 1991	males	2	0.648	0.391	0.906
CIV 1982	males	2	-0.268	-0.576	0.041
CIV 1987	males	2	0.035	-0.246	0.315
CIV 1992	males	2	0.273	0.004	0.541
CIV 1997	males	2	-0.016	-0.363	0.331
CIV 2002	males	2	0.079	-0.241	0.399
CMR 1986	males	2	-0.152	-0.481	0.178
CMR 1991	males	2	-0.060	-0.319	0.200
CMR 1996	males	2	0.059	-0.186	0.305
CMR 2001	males	2	-0.165	-0.421	0.091
COD 1994	males	2	0.313	0.036	0.591
COD 1999	males	2	0.404	0.123	0.684
COD 2004	males	2	0.345	0.038	0.653
COG 1992	males	2	-0.114	-0.413	0.184
COG 1997	males	2	0.385	0.101	0.668
COG 2002	males	2	-0.011	-0.352	0.330
DOM 1989	males	2	-0.597	-0.924	-0.269
DOM 1994	males	2	-0.746	-0.992	-0.501
DOM 1999	males	2	-0.606	-0.843	-0.369
DOM 2004	males	2	-0.502	-0.749	-0.255
ERI 1982	males	2	1.091	0.818	1.364
ERI 1987	males	2	1.102	0.828	1.376
ERI 1992	males	2	0.341	0.057	0.625
ETH 1982	males	2	0.774	0.530	1.019
ETH 1987	males	2	0.663	0.435	0.891
ETH 1992	males	2	0.610	0.381	0.838
ETH 1997	males	2	0.535	0.304	0.766
ETH 2002	males	2	-0.019	-0.289	0.250

GAB 1987	males	2	-0.394	-0.792	0.004
GAB 1992	males	2	-0.111	-0.454	0.231
GAB 1997	males	2	-0.007	-0.288	0.274
GHA 1994	males	2	-0.474	-0.689	-0.259
GHA 1999	males	2	-0.172	-0.388	0.044
GHA 2004	males	2	-0.486	-0.721	-0.251
GIN 1987	males	2	-0.205	-0.508	0.098
GIN 1992	males	2	-0.102	-0.364	0.160
GIN 1997	males	2	0.009	-0.252	0.270
GIN 2002	males	2	0.191	-0.079	0.462
GTM 1982	males	2	0.055	-0.234	0.344
GTM 1987	males	2	-0.452	-0.719	-0.185
GTM 1992	males	2	-0.419	-0.694	-0.145
HTI 1987	males	2	0.522	0.175	0.869
HTI 1992	males	2	0.263	0.019	0.508
HTI 1997	males	2	0.158	-0.109	0.425
HTI 2002	males	2	-0.484	-0.770	-0.198
IDN 1984	males	2	-0.836	-1.090	-0.583
IDN 1989	males	2	-0.779	-1.018	-0.539
IDN 1994	males	2	-0.783	-1.017	-0.549
IDN 1999	males	2	-0.853	-1.095	-0.611
IDN 2004	males	2	-0.606	-0.853	-0.359
KEN 1985	males	2	-0.477	-0.831	-0.123
KEN 1990	males	2	-0.351	-0.609	-0.094
KEN 1995	males	2	-0.398	-0.658	-0.139
KEN 2000	males	2	0.082	-0.185	0.350
KHM 1987	males	2	0.415	0.154	0.676
KHM 1992	males	2	0.108	-0.132	0.348
KHM 1997	males	2	0.039	-0.200	0.279
KHM 2002	males	2	-0.413	-0.668	-0.157
LBR 1993	males	2	-0.087	-0.433	0.258
LBR 1998	males	2	0.064	-0.243	0.370
LBR 2003	males	2	0.231	-0.063	0.525
LSO 1991	males	2	0.188	-0.095	0.470
LSO 1996	males	2	0.073	-0.199	0.345
LSO 2001	males	2	0.250	-0.026	0.526
MAR 1980	males	2	-0.564	-0.851	-0.278
MAR 1985	males	2	-0.957	-1.251	-0.663
MAR 1990	males	2	-1.037	-1.291	-0.784
MAR 1995	males	2	-1.081	-1.353	-0.808
MAR 2000	males	2	-1.236	-1.500	-0.972
MDG 1980	males	2	-0.123	-0.401	0.155
MDG 1985	males	2	0.022	-0.229	0.273

MDG 1990	males	2	-0.020	-0.264	0.225
MDG 1995	males	2	-0.020	-0.283	0.242
MDG 2000	males	2	-0.167	-0.445	0.112
MLI 1983	males	2	0.085	-0.212	0.383
MLI 1988	males	2	-0.101	-0.353	0.151
MLI 1993	males	2	-0.074	-0.317	0.169
MLI 1998	males	2	0.021	-0.219	0.261
MLI 2003	males	2	0.067	-0.197	0.331
MOZ 1985	males	2	-0.001	-0.367	0.366
MOZ 1990	males	2	0.198	-0.079	0.475
MOZ 1995	males	2	0.058	-0.213	0.330
MOZ 2000	males	2	-0.022	-0.288	0.245
MRT 1987	males	2	-0.281	-0.761	0.199
MRT 1992	males	2	-0.351	-0.658	-0.044
MRT 1997	males	2	-0.395	-0.714	-0.077
MWI 1981	males	2	-0.384	-0.840	0.072
MWI 1986	males	2	-0.079	-0.348	0.191
MWI 1991	males	2	0.316	0.067	0.565
MWI 1996	males	2	0.252	0.008	0.495
MWI 2001	males	2	0.274	-0.003	0.550
NAM 1983	males	2	0.345	0.070	0.620
NAM 1988	males	2	0.260	0.004	0.516
NAM 1993	males	2	0.090	-0.168	0.348
NAM 1998	males	2	0.133	-0.116	0.382
NAM 2003	males	2	0.744	0.489	0.998
NER 1983	males	2	0.381	0.079	0.683
NER 1988	males	2	0.095	-0.218	0.408
NER 1993	males	2	-0.211	-0.515	0.093
NER 1998	males	2	-0.333	-0.610	-0.056
NER 2003	males	2	-0.368	-0.638	-0.099
NPL 1993	males	2	-0.534	-0.863	-0.206
NPL 1998	males	2	-0.486	-0.803	-0.168
NPL 2003	males	2	-0.911	-1.239	-0.583
PER 1980	males	2	-0.565	-0.823	-0.307
PER 1985	males	2	-0.562	-0.793	-0.330
PER 1990	males	2	-0.536	-0.765	-0.307
PER 1995	males	2	-0.768	-1.001	-0.536
PER 2000	males	2	-1.073	-1.332	-0.813
PHL 1985	males	2	-0.335	-0.569	-0.102
PHL 1990	males	2	-0.495	-0.725	-0.264
PHL 1995	males	2	-0.579	-0.821	-0.338
RWA 1988	males	2	0.416	0.168	0.663
RWA 1993	males	2	2.359	2.120	2.598

RWA 1998	males	2	1.069	0.821	1.317
RWA 2003	males	2	0.020	-0.242	0.282
SDN 1976	males	2	-0.210	-0.425	0.005
SDN 1981	males	2	-0.349	-0.565	-0.133
SDN 1986	males	2	-0.444	-0.664	-0.225
SEN 1982	males	2	-0.109	-0.450	0.232
SEN 1987	males	2	-0.189	-0.495	0.118
SEN 1992	males	2	-0.244	-0.510	0.022
SEN 1997	males	2	-0.428	-0.706	-0.150
SEN 2002	males	2	-0.425	-0.684	-0.166
SWZ 1993	males	2	-0.006	-0.348	0.336
SWZ 1998	males	2	0.308	0.024	0.592
SWZ 2003	males	2	0.399	0.125	0.674
TCD 1986	males	2	0.016	-0.296	0.329
TCD 1991	males	2	-0.003	-0.271	0.264
TCD 1996	males	2	0.033	-0.227	0.293
TCD 2001	males	2	-0.316	-0.602	-0.029
TGO 1985	males	2	-0.220	-0.510	0.071
TGO 1990	males	2	-0.378	-0.672	-0.084
TGO 1995	males	2	-0.108	-0.382	0.165
TZA 1986	males	2	-0.416	-0.743	-0.090
TZA 1991	males	2	0.043	-0.217	0.303
TZA 1996	males	2	-0.116	-0.381	0.149
TZA 2001	males	2	0.205	-0.070	0.479
UGA 1983	males	2	0.291	0.014	0.568
UGA 1988	males	2	0.210	-0.045	0.465
UGA 1993	males	2	0.571	0.329	0.812
UGA 1998	males	2	-0.080	-0.373	0.213
UGA 2003	males	2	0.507	0.249	0.765
ZAF 1985	males	2	0.021	-0.284	0.326
ZAF 1990	males	2	-0.034	-0.298	0.230
ZAF 1995	males	2	0.204	-0.053	0.461
ZMB 1984	males	2	0.168	-0.105	0.442
ZMB 1989	males	2	0.403	0.166	0.640
ZMB 1994	males	2	0.532	0.291	0.773
ZMB 1999	males	2	0.196	-0.071	0.463
ZMB 2004	males	2	0.154	-0.129	0.438
ZWE 1982	males	2	-0.091	-0.367	0.185
ZWE 1987	males	2	-0.385	-0.653	-0.117
ZWE 1992	males	2	-0.410	-0.660	-0.160
ZWE 1997	males	2	-0.105	-0.376	0.165
ZWE 2002	males	2	0.290	0.018	0.562

Appendix table 2b, continued: CSS Model 2 results (male)

Model Parameter	Sex	Model	Coefficient	Lower Bound	Upper Bound
war, age 15	females	3	0.000		
war, age 20	females	3	0.214	0.138	0.290
war, age 25	females	3	0.406	0.324	0.489
war, age 30	females	3	0.590	0.510	0.670
war, age 35	females	3	0.610	0.517	0.702
war, age 40	females	3	0.798	0.706	0.890
war, age 45	females	3	1.147	1.020	1.274
war, age 50	females	3	1.579	1.406	1.752
war, age 55	females	3	1.834	1.549	2.118
low 5q0, age 15	females	3	0.000		
low 5q0, age 20	females	3	0.239	0.169	0.310
low 5q0, age 25	females	3	0.600	0.528	0.673
low 5q0, age 30	females	3	0.773	0.702	0.845
low 5q0, age 35	females	3	0.933	0.854	1.011
low 5q0, age 40	females	3	1.232	1.152	1.311
low 5q0, age 45	females	3	1.523	1.438	1.607
low 5q0, age 50	females	3	2.232	2.132	2.331
low 5q0, age 55	females	3	2.295	2.164	2.425
mid 5q0, age 15	females	3	0.000		
mid 5q0, age 20	females	3	0.298	0.230	0.366
mid 5q0, age 25	females	3	0.603	0.534	0.671
mid 5q0, age 30	females	3	0.830	0.762	0.898
mid 5q0, age 35	females	3	0.867	0.792	0.942
mid 5q0, age 40	females	3	1.122	1.040	1.204
mid 5q0, age 45	females	3	1.254	1.153	1.356
mid 5q0, age 50	females	3	1.777	1.658	1.895
mid 5q0, age 55	females	3	1.805	1.623	1.988
high 5q0, age 15	females	3	0.000		
high 5q0, age 20	females	3	0.126	0.057	0.195
high 5q0, age 25	females	3	0.269	0.196	0.342
high 5q0, age 30	females	3	0.384	0.310	0.458
high 5q0, age 35	females	3	0.469	0.386	0.552
high 5q0, age 40	females	3	0.766	0.676	0.856
high 5q0, age 45	females	3	1.056	0.910	1.203
high 5q0, age 50	females	3	1.566	1.408	1.724
high 5q0, age 55	females	3	1.634	1.403	1.865
TiPS	females	3	-0.0146	-0.0192	-0.0099
BEN 1983	females	3	0.000		
BEN 1988	females	3	-0.323	-0.662	0.015
BEN 1993	females	3	-0.465	-0.761	-0.170
BEN 1998	females	3	-0.381	-0.684	-0.077

BEN 2003	females	3	-0.375	-0.676	-0.073
BFA 1985	females	3	-0.264	-0.662	0.134
BFA 1990	females	3	0.122	-0.195	0.440
BFA 1995	females	3	0.154	-0.140	0.448
BFA 2000	females	3	0.209	-0.097	0.515
BOL 1980	females	3	-0.336	-0.694	0.023
BOL 1985	females	3	-0.584	-0.928	-0.239
BOL 1990	females	3	-0.821	-1.130	-0.512
BOL 1995	females	3	-0.806	-1.148	-0.463
BOL 2000	females	3	-0.989	-1.320	-0.658
BRA 1983	females	3	-1.449	-1.810	-1.088
BRA 1988	females	3	-1.615	-1.974	-1.256
BRA 1993	females	3	-1.445	-1.767	-1.123
CAF 1981	females	3	0.364	-0.020	0.748
CAF 1986	females	3	0.494	0.169	0.820
CAF 1991	females	3	0.467	0.155	0.780
CIV 1982	females	3	0.029	-0.315	0.373
CIV 1987	females	3	-0.359	-0.682	-0.037
CIV 1992	females	3	-0.110	-0.428	0.207
CIV 1997	females	3	0.202	-0.179	0.583
CIV 2002	females	3	0.482	0.067	0.898
CMR 1986	females	3	-0.526	-0.925	-0.128
CMR 1991	females	3	-0.410	-0.723	-0.098
CMR 1996	females	3	-0.118	-0.418	0.182
CMR 2001	females	3	0.171	-0.126	0.467
COD 1994	females	3	0.507	0.179	0.836
COD 1999	females	3	0.347	0.026	0.668
COD 2004	females	3	0.309	-0.026	0.645
COG 1992	females	3	0.257	-0.077	0.591
COG 1997	females	3	0.771	0.457	1.086
COG 2002	females	3	0.489	0.167	0.811
DOM 1989	females	3	-1.191	-1.593	-0.788
DOM 1994	females	3	-1.333	-1.647	-1.018
DOM 1999	females	3	-1.302	-1.622	-0.982
DOM 2004	females	3	-1.198	-1.512	-0.885
ERI 1982	females	3	0.506	0.142	0.870
ERI 1987	females	3	0.627	0.287	0.967
ERI 1992	females	3	0.217	-0.167	0.602
ETH 1982	females	3	0.614	0.322	0.906
ETH 1987	females	3	0.630	0.352	0.909
ETH 1992	females	3	0.583	0.305	0.861
ETH 1997	females	3	0.307	0.017	0.598
ETH 2002	females	3	0.261	-0.051	0.572

GAB 1987	females	3	-0.614	-1.035	-0.192
GAB 1992	females	3	-0.466	-0.839	-0.093
GAB 1997	females	3	-0.175	-0.501	0.151
GHA 1994	females	3	-0.297	-0.573	-0.021
GHA 1999	females	3	-0.215	-0.493	0.062
GHA 2004	females	3	-0.302	-0.583	-0.022
GIN 1987	females	3	0.090	-0.255	0.435
GIN 1992	females	3	0.080	-0.218	0.379
GIN 1997	females	3	0.064	-0.239	0.367
GIN 2002	females	3	-0.010	-0.327	0.308
GTM 1982	females	3	-0.639	-0.998	-0.281
GTM 1987	females	3	-0.952	-1.342	-0.562
GTM 1992	females	3	-1.109	-1.439	-0.778
HTI 1987	females	3	0.703	0.395	1.012
HTI 1992	females	3	0.141	-0.155	0.437
HTI 1997	females	3	0.042	-0.250	0.334
HTI 2002	females	3	-0.169	-0.480	0.143
IDN 1984	females	3	-1.090	-1.398	-0.781
IDN 1989	females	3	-1.056	-1.353	-0.758
IDN 1994	females	3	-1.268	-1.561	-0.976
IDN 1999	females	3	-1.135	-1.434	-0.836
IDN 2004	females	3	-1.108	-1.420	-0.796
KEN 1985	females	3	-0.695	-1.064	-0.326
KEN 1990	females	3	-0.551	-0.870	-0.232
KEN 1995	females	3	-0.062	-0.360	0.235
KEN 2000	females	3	0.287	-0.028	0.601
KHM 1987	females	3	-0.342	-0.681	-0.004
KHM 1992	females	3	-0.314	-0.618	-0.010
KHM 1997	females	3	-0.320	-0.617	-0.023
KHM 2002	females	3	-0.607	-0.913	-0.301
LBR 1993	females	3	-0.141	-0.561	0.279
LBR 1998	females	3	0.054	-0.361	0.468
LBR 2003	females	3	0.300	-0.046	0.645
LSO 1991	females	3	-0.739	-1.139	-0.338
LSO 1996	females	3	-0.204	-0.532	0.124
LSO 2001	females	3	0.815	0.516	1.115
MAR 1980	females	3	-0.704	-1.064	-0.345
MAR 1985	females	3	-1.130	-1.462	-0.798
MAR 1990	females	3	-1.364	-1.679	-1.048
MAR 1995	females	3	-1.462	-1.794	-1.131
MAR 2000	females	3	-1.618	-1.941	-1.296
MDG 1980	females	3	-0.152	-0.489	0.186
MDG 1985	females	3	0.279	-0.017	0.574

MDG 1990	females	3	-0.145	-0.450	0.160
MDG 1995	females	3	-0.209	-0.520	0.103
MDG 2000	females	3	-0.359	-0.706	-0.012
MLI 1983	females	3	0.328	0.018	0.638
MLI 1988	females	3	0.123	-0.168	0.415
MLI 1993	females	3	-0.026	-0.309	0.258
MLI 1998	females	3	0.156	-0.131	0.443
MLI 2003	females	3	0.021	-0.278	0.320
MOZ 1985	females	3	0.136	-0.252	0.524
MOZ 1990	females	3	-0.176	-0.498	0.147
MOZ 1995	females	3	-0.227	-0.556	0.102
MOZ 2000	females	3	0.457	0.155	0.760
MRT 1987	females	3	-0.054	-0.476	0.367
MRT 1992	females	3	-0.317	-0.677	0.044
MRT 1997	females	3	-0.419	-0.761	-0.078
MWI 1981	females	3	-0.237	-0.626	0.152
MWI 1986	females	3	0.227	-0.079	0.533
MWI 1991	females	3	0.370	0.087	0.654
MWI 1996	females	3	0.947	0.669	1.225
MWI 2001	females	3	0.979	0.687	1.271
NAM 1983	females	3	-0.493	-0.949	-0.038
NAM 1988	females	3	-0.600	-0.927	-0.273
NAM 1993	females	3	-0.492	-0.809	-0.174
NAM 1998	females	3	0.224	-0.081	0.529
NAM 2003	females	3	0.547	0.252	0.843
NER 1983	females	3	0.485	0.163	0.807
NER 1988	females	3	0.227	-0.091	0.546
NER 1993	females	3	0.228	-0.100	0.555
NER 1998	females	3	0.138	-0.183	0.459
NER 2003	females	3	0.013	-0.288	0.315
NPL 1993	females	3	-0.615	-0.965	-0.264
NPL 1998	females	3	-0.957	-1.313	-0.602
NPL 2003	females	3	-1.233	-1.577	-0.889
PER 1980	females	3	-0.628	-0.949	-0.307
PER 1985	females	3	-1.014	-1.306	-0.722
PER 1990	females	3	-1.166	-1.459	-0.873
PER 1995	females	3	-1.252	-1.550	-0.954
PER 2000	females	3	-1.886	-2.218	-1.555
PHL 1985	females	3	-1.101	-1.402	-0.799
PHL 1990	females	3	-1.172	-1.476	-0.868
PHL 1995	females	3	-1.300	-1.613	-0.988
RWA 1988	females	3	0.450	0.153	0.748
RWA 1993	females	3	2.187	1.902	2.473

RWA 1998	females	3	0.917	0.625	1.208
RWA 2003	females	3	0.387	0.088	0.687
SDN 1976	females	3	-0.577	-0.852	-0.301
SDN 1981	females	3	-0.615	-0.891	-0.338
SDN 1986	females	3	-0.599	-0.879	-0.319
SEN 1982	females	3	-0.120	-0.475	0.236
SEN 1987	females	3	-0.139	-0.488	0.210
SEN 1992	females	3	-0.620	-0.938	-0.302
SEN 1997	females	3	-0.657	-0.989	-0.325
SEN 2002	females	3	-0.585	-0.892	-0.277
SWZ 1993	females	3	-0.234	-0.621	0.152
SWZ 1998	females	3	0.350	0.032	0.668
SWZ 2003	females	3	1.081	0.786	1.376
TCD 1986	females	3	-0.133	-0.482	0.215
TCD 1991	females	3	0.100	-0.218	0.418
TCD 1996	females	3	0.180	-0.132	0.493
TCD 2001	females	3	0.420	0.053	0.788
TGO 1985	females	3	-0.492	-0.855	-0.128
TGO 1990	females	3	-0.532	-0.880	-0.184
TGO 1995	females	3	-0.401	-0.730	-0.071
TZA 1986	females	3	-0.649	-1.010	-0.288
TZA 1991	females	3	-0.095	-0.409	0.220
TZA 1996	females	3	0.182	-0.126	0.489
TZA 2001	females	3	0.317	0.011	0.623
UGA 1983	females	3	0.115	-0.213	0.443
UGA 1988	females	3	0.311	0.007	0.615
UGA 1993	females	3	0.751	0.464	1.039
UGA 1998	females	3	0.557	0.261	0.853
UGA 2003	females	3	0.547	0.240	0.853
ZAF 1985	females	3	-0.709	-1.074	-0.343
ZAF 1990	females	3	-0.989	-1.331	-0.646
ZAF 1995	females	3	-0.776	-1.097	-0.455
ZMB 1984	females	3	0.082	-0.245	0.409
ZMB 1989	females	3	0.319	0.027	0.610
ZMB 1994	females	3	0.854	0.568	1.140
ZMB 1999	females	3	1.019	0.732	1.306
ZMB 2004	females	3	1.041	0.727	1.356
ZWE 1982	females	3	-0.499	-0.859	-0.139
ZWE 1987	females	3	-1.024	-1.368	-0.680
ZWE 1992	females	3	-0.112	-0.415	0.192
ZWE 1997	females	3	0.475	0.182	0.768
ZWE 2002	females	3	0.995	0.703	1.287

Appendix table 2c: CSS Model 3 results (female)

Model Parameter	Sex	Model	Coefficient	Lower Bound	Upper Bound
war, age 15	males	3	0.000		
war, age 20	males	3	0.283	0.216	0.349
war, age 25	males	3	0.426	0.357	0.496
war, age 30	males	3	0.588	0.517	0.659
war, age 35	males	3	0.698	0.622	0.775
war, age 40	males	3	0.831	0.743	0.919
war, age 45	males	3	0.927	0.825	1.029
war, age 50	males	3	1.282	1.133	1.432
war, age 55	males	3	1.262	1.035	1.490
low 5q0, age 15	males	3	0.000		
low 5q0, age 20	males	3	0.245	0.176	0.313
low 5q0, age 25	males	3	0.460	0.393	0.528
low 5q0, age 30	males	3	0.774	0.710	0.838
low 5q0, age 35	males	3	0.957	0.890	1.024
low 5q0, age 40	males	3	1.253	1.182	1.325
low 5q0, age 45	males	3	1.451	1.377	1.525
low 5q0, age 50	males	3	1.861	1.775	1.948
low 5q0, age 55	males	3	2.029	1.920	2.138
mid 5q0, age 15	males	3	0.000		
mid 5q0, age 20	males	3	0.123	0.056	0.190
mid 5q0, age 25	males	3	0.483	0.413	0.553
mid 5q0, age 30	males	3	0.882	0.812	0.951
mid 5q0, age 35	males	3	1.047	0.969	1.125
mid 5q0, age 40	males	3	1.307	1.229	1.386
mid 5q0, age 45	males	3	1.397	1.297	1.497
mid 5q0, age 50	males	3	1.757	1.658	1.855
mid 5q0, age 55	males	3	1.787	1.621	1.952
high 5q0, age 15	males	3	0.000		
high 5q0, age 20	males	3	0.144	0.068	0.219
high 5q0, age 25	males	3	0.264	0.192	0.335
high 5q0, age 30	males	3	0.613	0.541	0.686
high 5q0, age 35	males	3	0.648	0.569	0.727
high 5q0, age 40	males	3	0.954	0.869	1.040
high 5q0, age 45	males	3	0.987	0.882	1.092
high 5q0, age 50	males	3	1.399	1.273	1.526
high 5q0, age 55	males	3	1.548	1.355	1.741
TiPS	males	3	-0.0212	-0.0257	-0.0167
BEN 1983	males	3	0.000		
BEN 1988	males	3	-0.207	-0.515	0.101
BEN 1993	males	3	-0.194	-0.464	0.077
BEN 1998	males	3	-0.193	-0.503	0.116

BEN 2003	males	3	-0.236	-0.509	0.036
BFA 1985	males	3	0.084	-0.245	0.412
BFA 1990	males	3	0.152	-0.109	0.413
BFA 1995	males	3	0.168	-0.076	0.411
BFA 2000	males	3	0.243	-0.019	0.506
BOL 1980	males	3	-0.127	-0.424	0.170
BOL 1985	males	3	-0.318	-0.625	-0.012
BOL 1990	males	3	-0.572	-0.830	-0.314
BOL 1995	males	3	-0.939	-1.226	-0.652
BOL 2000	males	3	-0.750	-1.020	-0.480
BRA 1983	males	3	-0.760	-1.047	-0.472
BRA 1988	males	3	-0.873	-1.146	-0.600
BRA 1993	males	3	-0.712	-0.966	-0.458
CAF 1981	males	3	0.377	0.032	0.721
CAF 1986	males	3	0.579	0.298	0.859
CAF 1991	males	3	0.423	0.155	0.690
CIV 1982	males	3	-0.269	-0.577	0.040
CIV 1987	males	3	-0.157	-0.446	0.131
CIV 1992	males	3	0.068	-0.208	0.344
CIV 1997	males	3	0.192	-0.151	0.535
CIV 2002	males	3	0.298	-0.021	0.617
CMR 1986	males	3	-0.332	-0.669	0.005
CMR 1991	males	3	-0.256	-0.525	0.013
CMR 1996	males	3	-0.157	-0.413	0.098
CMR 2001	males	3	0.054	-0.200	0.307
COD 1994	males	3	0.308	0.030	0.585
COD 1999	males	3	0.370	0.081	0.659
COD 2004	males	3	0.340	0.023	0.657
COG 1992	males	3	0.090	-0.205	0.384
COG 1997	males	3	0.750	0.470	1.031
COG 2002	males	3	0.423	0.095	0.750
DOM 1989	males	3	-0.794	-1.131	-0.458
DOM 1994	males	3	-0.962	-1.218	-0.706
DOM 1999	males	3	-0.850	-1.098	-0.603
DOM 2004	males	3	-0.767	-1.026	-0.509
ERI 1982	males	3	1.038	0.759	1.318
ERI 1987	males	3	1.070	0.789	1.351
ERI 1992	males	3	0.336	0.044	0.629
ETH 1982	males	3	0.776	0.531	1.021
ETH 1987	males	3	0.668	0.439	0.896
ETH 1992	males	3	0.617	0.388	0.846
ETH 1997	males	3	0.314	0.072	0.555
ETH 2002	males	3	0.199	-0.066	0.465

GAB 1987	males	3	-0.542	-0.945	-0.140
GAB 1992	males	3	-0.290	-0.638	0.058
GAB 1997	males	3	-0.216	-0.505	0.074
GHA 1994	males	3	-0.681	-0.907	-0.455
GHA 1999	males	3	-0.389	-0.617	-0.162
GHA 2004	males	3	-0.256	-0.487	-0.025
GIN 1987	males	3	-0.209	-0.512	0.095
GIN 1992	males	3	-0.103	-0.366	0.159
GIN 1997	males	3	0.013	-0.248	0.275
GIN 2002	males	3	-0.055	-0.337	0.227
GTM 1982	males	3	0.003	-0.294	0.300
GTM 1987	males	3	-0.483	-0.759	-0.208
GTM 1992	males	3	-0.649	-0.933	-0.366
HTI 1987	males	3	0.515	0.167	0.864
HTI 1992	males	3	0.050	-0.203	0.304
HTI 1997	males	3	-0.076	-0.353	0.201
HTI 2002	males	3	-0.253	-0.536	0.030
IDN 1984	males	3	-1.040	-1.304	-0.777
IDN 1989	males	3	-0.994	-1.243	-0.744
IDN 1994	males	3	-1.015	-1.261	-0.769
IDN 1999	males	3	-1.102	-1.355	-0.848
IDN 2004	males	3	-0.874	-1.131	-0.616
KEN 1985	males	3	-0.643	-1.006	-0.280
KEN 1990	males	3	-0.539	-0.805	-0.273
KEN 1995	males	3	-0.167	-0.424	0.089
KEN 2000	males	3	0.051	-0.216	0.318
KHM 1987	males	3	0.364	0.094	0.634
KHM 1992	males	3	0.067	-0.184	0.318
KHM 1997	males	3	0.028	-0.221	0.277
KHM 2002	males	3	-0.182	-0.434	0.070
LBR 1993	males	3	-0.145	-0.498	0.207
LBR 1998	males	3	0.026	-0.288	0.341
LBR 2003	males	3	0.224	-0.078	0.527
LSO 1991	males	3	-0.010	-0.300	0.280
LSO 1996	males	3	0.299	0.030	0.567
LSO 2001	males	3	0.901	0.653	1.149
MAR 1980	males	3	-0.734	-1.029	-0.439
MAR 1985	males	3	-1.164	-1.467	-0.861
MAR 1990	males	3	-1.237	-1.500	-0.974
MAR 1995	males	3	-1.290	-1.572	-1.008
MAR 2000	males	3	-1.476	-1.750	-1.202
MDG 1980	males	3	-0.126	-0.404	0.152
MDG 1985	males	3	0.019	-0.232	0.270

MDG 1990	males	3	-0.234	-0.490	0.022
MDG 1995	males	3	-0.252	-0.526	0.021
MDG 2000	males	3	-0.417	-0.705	-0.128
MLI 1983	males	3	0.080	-0.218	0.377
MLI 1988	males	3	-0.106	-0.358	0.146
MLI 1993	males	3	-0.076	-0.319	0.167
MLI 1998	males	3	0.023	-0.217	0.264
MLI 2003	males	3	0.073	-0.191	0.338
MOZ 1985	males	3	-0.059	-0.433	0.316
MOZ 1990	males	3	0.147	-0.136	0.431
MOZ 1995	males	3	0.023	-0.263	0.308
MOZ 2000	males	3	0.438	0.184	0.692
MRT 1987	males	3	-0.447	-0.932	0.037
MRT 1992	males	3	-0.553	-0.869	-0.238
MRT 1997	males	3	-0.629	-0.956	-0.302
MWI 1981	males	3	-0.388	-0.844	0.068
MWI 1986	males	3	-0.081	-0.350	0.189
MWI 1991	males	3	0.316	0.067	0.565
MWI 1996	males	3	0.683	0.452	0.915
MWI 2001	males	3	0.901	0.651	1.150
NAM 1983	males	3	0.163	-0.121	0.446
NAM 1988	males	3	0.062	-0.203	0.327
NAM 1993	males	3	-0.108	-0.373	0.158
NAM 1998	males	3	0.361	0.115	0.606
NAM 2003	males	3	0.711	0.458	0.965
NER 1983	males	3	0.382	0.080	0.685
NER 1988	males	3	0.104	-0.209	0.417
NER 1993	males	3	-0.213	-0.517	0.091
NER 1998	males	3	-0.336	-0.613	-0.059
NER 2003	males	3	-0.363	-0.633	-0.092
NPL 1993	males	3	-0.733	-1.069	-0.398
NPL 1998	males	3	-0.696	-1.021	-0.371
NPL 2003	males	3	-1.147	-1.482	-0.811
PER 1980	males	3	-0.755	-1.023	-0.488
PER 1985	males	3	-0.757	-0.999	-0.515
PER 1990	males	3	-0.749	-0.988	-0.509
PER 1995	males	3	-1.000	-1.244	-0.755
PER 2000	males	3	-1.319	-1.589	-1.048
PHL 1985	males	3	-0.536	-0.779	-0.292
PHL 1990	males	3	-0.725	-0.966	-0.484
PHL 1995	males	3	-0.827	-1.080	-0.575
RWA 1988	males	3	0.408	0.160	0.655
RWA 1993	males	3	2.527	2.291	2.764

RWA 1998	males	3	1.250	1.004	1.497
RWA 2003	males	3	0.469	0.209	0.728
SDN 1976	males	3	-0.383	-0.608	-0.157
SDN 1981	males	3	-0.558	-0.786	-0.331
SDN 1986	males	3	-0.683	-0.915	-0.452
SEN 1982	males	3	-0.112	-0.453	0.229
SEN 1987	males	3	-0.187	-0.494	0.119
SEN 1992	males	3	-0.445	-0.720	-0.169
SEN 1997	males	3	-0.641	-0.927	-0.356
SEN 2002	males	3	-0.660	-0.928	-0.391
SWZ 1993	males	3	-0.189	-0.538	0.160
SWZ 1998	males	3	0.533	0.251	0.815
SWZ 2003	males	3	1.047	0.799	1.296
TCD 1986	males	3	-0.041	-0.361	0.278
TCD 1991	males	3	-0.051	-0.327	0.225
TCD 1996	males	3	-0.003	-0.272	0.266
TCD 2001	males	3	0.134	-0.140	0.408
TGO 1985	males	3	-0.406	-0.706	-0.106
TGO 1990	males	3	-0.594	-0.898	-0.291
TGO 1995	males	3	-0.350	-0.634	-0.066
TZA 1986	males	3	-0.603	-0.936	-0.270
TZA 1991	males	3	-0.160	-0.429	0.108
TZA 1996	males	3	0.099	-0.162	0.360
TZA 2001	males	3	0.171	-0.103	0.445
UGA 1983	males	3	0.235	-0.050	0.519
UGA 1988	males	3	0.542	0.291	0.794
UGA 1993	males	3	0.739	0.497	0.980
UGA 1998	males	3	0.549	0.296	0.802
UGA 2003	males	3	0.471	0.211	0.731
ZAF 1985	males	3	-0.173	-0.485	0.138
ZAF 1990	males	3	-0.257	-0.529	0.016
ZAF 1995	males	3	-0.047	-0.314	0.220
ZMB 1984	males	3	0.001	-0.281	0.283
ZMB 1989	males	3	0.214	-0.033	0.460
ZMB 1994	males	3	0.741	0.503	0.980
ZMB 1999	males	3	0.820	0.579	1.061
ZMB 2004	males	3	0.808	0.552	1.064
ZWE 1982	males	3	-0.263	-0.547	0.020
ZWE 1987	males	3	-0.577	-0.853	-0.300
ZWE 1992	males	3	-0.185	-0.432	0.062
ZWE 1997	males	3	0.535	0.290	0.779
ZWE 2002	males	3	0.941	0.696	1.185

Appendix table 2c, continued: CSS Model 3 results (male)

Model Parameter	Sex	Model	Coefficient	Lower Bound	Upper Bound
war, age 15	females	4	0.000		
war, age 20	females	4	0.214	0.138	0.290
war, age 25	females	4	0.406	0.324	0.489
war, age 30	females	4	0.590	0.510	0.670
war, age 35	females	4	0.610	0.517	0.703
war, age 40	females	4	0.798	0.706	0.890
war, age 45	females	4	1.147	1.020	1.274
war, age 50	females	4	1.579	1.406	1.752
war, age 55	females	4	1.834	1.549	2.118
7+% HIV, age 15	females	4	0.000		
7+% HIV, age 20	females	4	0.695	0.578	0.812
7+% HIV, age 25	females	4	1.265	1.152	1.378
7+% HIV, age 30	females	4	1.574	1.462	1.686
7+% HIV, age 35	females	4	1.639	1.526	1.753
7+% HIV, age 40	females	4	1.697	1.573	1.821
7+% HIV, age 45	females	4	1.860	1.724	1.997
7+% HIV, age 50	females	4	2.255	2.084	2.426
7+% HIV, age 55	females	4	2.131	1.893	2.368
low 5q0, age 15	females	4	0.000		
low 5q0, age 20	females	4	0.189	0.135	0.243
low 5q0, age 25	females	4	0.441	0.384	0.498
low 5q0, age 30	females	4	0.602	0.546	0.657
low 5q0, age 35	females	4	0.702	0.636	0.767
low 5q0, age 40	females	4	1.062	0.996	1.128
low 5q0, age 45	females	4	1.306	1.227	1.384
low 5q0, age 50	females	4	2.030	1.945	2.116
low 5q0, age 55	females	4	2.145	2.027	2.264
high 5q0, age 15	females	4	0.000		
high 5q0, age 20	females	4	0.126	0.057	0.195
high 5q0, age 25	females	4	0.269	0.196	0.342
high 5q0, age 30	females	4	0.384	0.310	0.458
high 5q0, age 35	females	4	0.469	0.386	0.552
high 5q0, age 40	females	4	0.766	0.676	0.856
high 5q0, age 45	females	4	1.056	0.910	1.203
high 5q0, age 50	females	4	1.566	1.408	1.725
high 5q0, age 55	females	4	1.634	1.403	1.865
TiPS	females	4	-0.0145	-0.0192	-0.0098
BEN 1983	females	4	0.000		
BEN 1988	females	4	-0.323	-0.662	0.016
BEN 1993	females	4	-0.465	-0.761	-0.169
BEN 1998	females	4	-0.270	-0.572	0.031

BEN 2003	females	4	-0.282	-0.581	0.017
BFA 1985	females	4	-0.264	-0.662	0.135
BFA 1990	females	4	0.122	-0.195	0.440
BFA 1995	females	4	0.154	-0.140	0.448
BFA 2000	females	4	0.209	-0.097	0.515
BOL 1980	females	4	-0.336	-0.694	0.023
BOL 1985	females	4	-0.473	-0.815	-0.130
BOL 1990	females	4	-0.715	-1.022	-0.408
BOL 1995	females	4	-0.664	-1.004	-0.324
BOL 2000	females	4	-0.834	-1.163	-0.505
BRA 1983	females	4	-1.317	-1.676	-0.957
BRA 1988	females	4	-1.466	-1.823	-1.109
BRA 1993	females	4	-1.280	-1.600	-0.961
CAF 1981	females	4	0.364	-0.020	0.748
CAF 1986	females	4	0.495	0.169	0.820
CAF 1991	females	4	0.571	0.260	0.881
CIV 1982	females	4	0.029	-0.315	0.373
CIV 1987	females	4	-0.249	-0.569	0.072
CIV 1992	females	4	-0.010	-0.326	0.306
CIV 1997	females	4	0.303	-0.080	0.687
CIV 2002	females	4	0.575	0.164	0.987
CMR 1986	females	4	-0.415	-0.812	-0.018
CMR 1991	females	4	-0.300	-0.611	0.010
CMR 1996	females	4	-0.019	-0.318	0.279
CMR 2001	females	4	0.255	-0.040	0.550
COD 1994	females	4	0.507	0.179	0.836
COD 1999	females	4	0.347	0.026	0.668
COD 2004	females	4	0.310	-0.026	0.645
COG 1992	females	4	0.374	0.040	0.707
COG 1997	females	4	0.771	0.457	1.086
COG 2002	females	4	0.489	0.168	0.811
DOM 1989	females	4	-1.060	-1.461	-0.659
DOM 1994	females	4	-1.190	-1.503	-0.877
DOM 1999	females	4	-1.144	-1.460	-0.828
DOM 2004	females	4	-1.030	-1.341	-0.719
ERI 1982	females	4	0.506	0.142	0.870
ERI 1987	females	4	0.627	0.287	0.968
ERI 1992	females	4	0.218	-0.167	0.602
ETH 1982	females	4	0.614	0.322	0.906
ETH 1987	females	4	0.630	0.352	0.909
ETH 1992	females	4	0.583	0.305	0.861
ETH 1997	females	4	0.394	0.106	0.683
ETH 2002	females	4	0.344	0.035	0.654

GAB 1987	females	4	-0.505	-0.926	-0.084
GAB 1992	females	4	-0.339	-0.711	0.033
GAB 1997	females	4	-0.032	-0.356	0.292
GHA 1994	females	4	-0.186	-0.460	0.088
GHA 1999	females	4	-0.072	-0.347	0.204
GHA 2004	females	4	-0.144	-0.423	0.134
GIN 1987	females	4	0.090	-0.255	0.435
GIN 1992	females	4	0.080	-0.218	0.379
GIN 1997	females	4	0.064	-0.239	0.367
GIN 2002	females	4	0.076	-0.240	0.391
GTM 1982	females	4	-0.639	-0.998	-0.281
GTM 1987	females	4	-0.952	-1.341	-0.562
GTM 1992	females	4	-0.955	-1.283	-0.627
HTI 1987	females	4	0.703	0.395	1.012
HTI 1992	females	4	0.259	-0.035	0.553
HTI 1997	females	4	0.138	-0.153	0.429
HTI 2002	females	4	-0.017	-0.326	0.293
IDN 1984	females	4	-0.969	-1.276	-0.662
IDN 1989	females	4	-0.911	-1.206	-0.615
IDN 1994	females	4	-1.113	-1.404	-0.823
IDN 1999	females	4	-0.973	-1.269	-0.676
IDN 2004	females	4	-0.935	-1.245	-0.625
KEN 1985	females	4	-0.580	-0.947	-0.213
KEN 1990	females	4	-0.422	-0.740	-0.105
KEN 1995	females	4	0.082	-0.214	0.378
KEN 2000	females	4	-0.227	-0.553	0.098
KHM 1987	females	4	-0.342	-0.681	-0.004
KHM 1992	females	4	-0.314	-0.618	-0.010
KHM 1997	females	4	-0.320	-0.617	-0.023
KHM 2002	females	4	-0.446	-0.751	-0.142
LBR 1993	females	4	-0.141	-0.561	0.279
LBR 1998	females	4	0.054	-0.360	0.468
LBR 2003	females	4	0.300	-0.045	0.646
LSO 1991	females	4	-0.607	-1.006	-0.208
LSO 1996	females	4	-0.059	-0.385	0.267
LSO 2001	females	4	0.324	0.014	0.635
MAR 1980	females	4	-0.591	-0.949	-0.232
MAR 1985	females	4	-1.019	-1.350	-0.688
MAR 1990	females	4	-1.226	-1.539	-0.913
MAR 1995	females	4	-1.319	-1.648	-0.990
MAR 2000	females	4	-1.460	-1.779	-1.140
MDG 1980	females	4	-0.152	-0.489	0.186
MDG 1985	females	4	0.279	-0.017	0.575

MDG 1990	females	4	-0.035	-0.338	0.268
MDG 1995	females	4	-0.102	-0.412	0.207
MDG 2000	females	4	-0.269	-0.614	0.076
MLI 1983	females	4	0.328	0.018	0.638
MLI 1988	females	4	0.123	-0.168	0.415
MLI 1993	females	4	-0.026	-0.309	0.258
MLI 1998	females	4	0.156	-0.131	0.444
MLI 2003	females	4	0.021	-0.278	0.320
MOZ 1985	females	4	0.136	-0.252	0.524
MOZ 1990	females	4	-0.176	-0.498	0.147
MOZ 1995	females	4	-0.227	-0.556	0.103
MOZ 2000	females	4	0.458	0.155	0.760
MRT 1987	females	4	0.062	-0.358	0.483
MRT 1992	females	4	-0.199	-0.558	0.161
MRT 1997	females	4	-0.318	-0.658	0.023
MWI 1981	females	4	-0.237	-0.626	0.152
MWI 1986	females	4	0.227	-0.079	0.533
MWI 1991	females	4	0.371	0.087	0.654
MWI 1996	females	4	0.947	0.670	1.225
MWI 2001	females	4	0.410	0.106	0.714
NAM 1983	females	4	-0.366	-0.820	0.088
NAM 1988	females	4	-0.464	-0.790	-0.139
NAM 1993	females	4	-0.356	-0.672	-0.040
NAM 1998	females	4	0.371	0.068	0.674
NAM 2003	females	4	0.037	-0.269	0.343
NER 1983	females	4	0.485	0.163	0.807
NER 1988	females	4	0.228	-0.091	0.546
NER 1993	females	4	0.228	-0.100	0.555
NER 1998	females	4	0.138	-0.183	0.459
NER 2003	females	4	0.014	-0.288	0.315
NPL 1993	females	4	-0.500	-0.850	-0.151
NPL 1998	females	4	-0.815	-1.168	-0.461
NPL 2003	females	4	-1.077	-1.418	-0.735
PER 1980	females	4	-0.516	-0.836	-0.197
PER 1985	females	4	-0.882	-1.171	-0.592
PER 1990	females	4	-1.023	-1.314	-0.733
PER 1995	females	4	-1.099	-1.395	-0.803
PER 2000	females	4	-1.725	-2.054	-1.396
PHL 1985	females	4	-0.963	-1.262	-0.664
PHL 1990	females	4	-1.018	-1.320	-0.717
PHL 1995	females	4	-1.139	-1.450	-0.828
RWA 1988	females	4	0.450	0.153	0.748
RWA 1993	females	4	2.187	1.902	2.473

RWA 1998	females	4	0.917	0.625	1.209
RWA 2003	females	4	0.388	0.088	0.687
SDN 1976	females	4	-0.461	-0.734	-0.187
SDN 1981	females	4	-0.500	-0.775	-0.225
SDN 1986	females	4	-0.495	-0.773	-0.217
SEN 1982	females	4	-0.120	-0.475	0.236
SEN 1987	females	4	-0.139	-0.487	0.210
SEN 1992	females	4	-0.508	-0.824	-0.192
SEN 1997	females	4	-0.549	-0.879	-0.219
SEN 2002	females	4	-0.502	-0.808	-0.196
SWZ 1993	females	4	-0.108	-0.494	0.278
SWZ 1998	females	4	0.490	0.174	0.806
SWZ 2003	females	4	0.578	0.273	0.884
TCD 1986	females	4	-0.133	-0.482	0.215
TCD 1991	females	4	0.100	-0.218	0.418
TCD 1996	females	4	0.180	-0.132	0.493
TCD 2001	females	4	0.421	0.053	0.789
TGO 1985	females	4	-0.380	-0.742	-0.019
TGO 1990	females	4	-0.428	-0.774	-0.082
TGO 1995	females	4	-0.315	-0.643	0.012
TZA 1986	females	4	-0.536	-0.895	-0.176
TZA 1991	females	4	0.012	-0.301	0.325
TZA 1996	females	4	0.284	-0.022	0.590
TZA 2001	females	4	-0.267	-0.584	0.050
UGA 1983	females	4	0.115	-0.213	0.443
UGA 1988	females	4	0.311	0.007	0.615
UGA 1993	females	4	0.752	0.464	1.039
UGA 1998	females	4	-0.020	-0.330	0.290
UGA 2003	females	4	-0.039	-0.358	0.280
ZAF 1985	females	4	-0.577	-0.941	-0.214
ZAF 1990	females	4	-0.840	-1.181	-0.500
ZAF 1995	females	4	-0.613	-0.932	-0.295
ZMB 1984	females	4	0.197	-0.129	0.523
ZMB 1989	females	4	0.428	0.139	0.718
ZMB 1994	females	4	0.957	0.673	1.241
ZMB 1999	females	4	0.446	0.148	0.744
ZMB 2004	females	4	0.454	0.126	0.783
ZWE 1982	females	4	-0.379	-0.737	-0.021
ZWE 1987	females	4	-0.893	-1.234	-0.551
ZWE 1992	females	4	0.027	-0.276	0.330
ZWE 1997	females	4	-0.048	-0.351	0.255
ZWE 2002	females	4	0.489	0.186	0.792

Appendix table 2d: CSS Model 4 results (female)

Model Parameter	Sex	Model	Coefficient	Lower Bound	Upper Bound
war, age 15	males	4	0.000		
war, age 20	males	4	0.283	0.216	0.349
war, age 25	males	4	0.426	0.357	0.496
war, age 30	males	4	0.588	0.516	0.659
war, age 35	males	4	0.698	0.622	0.774
war, age 40	males	4	0.831	0.742	0.919
war, age 45	males	4	0.927	0.824	1.029
war, age 50	males	4	1.282	1.132	1.431
war, age 55	males	4	1.262	1.034	1.490
7+% HIV, age 15	males	4	0.000		
7+% HIV, age 20	males	4	0.394	0.252	0.536
7+% HIV, age 25	males	4	1.007	0.875	1.139
7+% HIV, age 30	males	4	1.637	1.507	1.767
7+% HIV, age 35	males	4	1.875	1.744	2.006
7+% HIV, age 40	males	4	2.108	1.970	2.246
7+% HIV, age 45	males	4	2.075	1.931	2.220
7+% HIV, age 50	males	4	2.288	2.126	2.449
7+% HIV, age 55	males	4	2.497	2.296	2.697
low 5q0, age 15	males	4	0.000		
low 5q0, age 20	males	4	0.164	0.111	0.216
low 5q0, age 25	males	4	0.387	0.334	0.441
low 5q0, age 30	males	4	0.662	0.611	0.713
low 5q0, age 35	males	4	0.809	0.754	0.865
low 5q0, age 40	males	4	1.104	1.045	1.162
low 5q0, age 45	males	4	1.314	1.246	1.381
low 5q0, age 50	males	4	1.757	1.684	1.829
low 5q0, age 55	males	4	1.854	1.751	1.958
high 5q0, age 15	males	4	0.000		
high 5q0, age 20	males	4	0.143	0.068	0.219
high 5q0, age 25	males	4	0.264	0.192	0.335
high 5q0, age 30	males	4	0.613	0.540	0.686
high 5q0, age 35	males	4	0.647	0.569	0.726
high 5q0, age 40	males	4	0.954	0.868	1.040
high 5q0, age 45	males	4	0.987	0.882	1.092
high 5q0, age 50	males	4	1.399	1.272	1.525
high 5q0, age 55	males	4	1.547	1.354	1.741
TiPS	males	4	-0.0216	-0.0261	-0.0171
BEN 1983	males	4	0.000		
BEN 1988	males	4	-0.209	-0.517	0.099
BEN 1993	males	4	-0.195	-0.466	0.076
BEN 1998	males	4	-0.089	-0.398	0.219

BEN 2003	males	4	-0.125	-0.395	0.146
BFA 1985	males	4	0.084	-0.245	0.412
BFA 1990	males	4	0.151	-0.110	0.412
BFA 1995	males	4	0.165	-0.079	0.409
BFA 2000	males	4	0.239	-0.023	0.502
BOL 1980	males	4	-0.127	-0.424	0.170
BOL 1985	males	4	-0.209	-0.512	0.095
BOL 1990	males	4	-0.462	-0.717	-0.207
BOL 1995	males	4	-0.841	-1.126	-0.557
BOL 2000	males	4	-0.644	-0.911	-0.377
BRA 1983	males	4	-0.665	-0.951	-0.379
BRA 1988	males	4	-0.770	-1.041	-0.499
BRA 1993	males	4	-0.601	-0.852	-0.350
CAF 1981	males	4	0.377	0.032	0.721
CAF 1986	males	4	0.576	0.296	0.857
CAF 1991	males	4	0.536	0.271	0.801
CIV 1982	males	4	-0.269	-0.578	0.039
CIV 1987	males	4	-0.059	-0.346	0.228
CIV 1992	males	4	0.168	-0.105	0.442
CIV 1997	males	4	0.290	-0.053	0.633
CIV 2002	males	4	0.409	0.092	0.725
CMR 1986	males	4	-0.239	-0.573	0.095
CMR 1991	males	4	-0.155	-0.421	0.112
CMR 1996	males	4	-0.050	-0.303	0.203
CMR 2001	males	4	0.161	-0.090	0.412
COD 1994	males	4	0.308	0.030	0.585
COD 1999	males	4	0.368	0.078	0.657
COD 2004	males	4	0.336	0.019	0.653
COG 1992	males	4	0.171	-0.122	0.464
COG 1997	males	4	0.748	0.468	1.029
COG 2002	males	4	0.419	0.091	0.746
DOM 1989	males	4	-0.699	-1.033	-0.365
DOM 1994	males	4	-0.861	-1.115	-0.608
DOM 1999	males	4	-0.741	-0.986	-0.496
DOM 2004	males	4	-0.652	-0.908	-0.396
ERI 1982	males	4	1.038	0.759	1.317
ERI 1987	males	4	1.068	0.787	1.349
ERI 1992	males	4	0.332	0.040	0.625
ETH 1982	males	4	0.775	0.530	1.020
ETH 1987	males	4	0.666	0.438	0.895
ETH 1992	males	4	0.615	0.386	0.843
ETH 1997	males	4	0.418	0.179	0.657
ETH 2002	males	4	0.304	0.042	0.567

GAB 1987	males	4	-0.466	-0.867	-0.064
GAB 1992	males	4	-0.203	-0.550	0.144
GAB 1997	males	4	-0.120	-0.408	0.168
GHA 1994	males	4	-0.573	-0.796	-0.350
GHA 1999	males	4	-0.289	-0.514	-0.064
GHA 2004	males	4	-0.149	-0.377	0.080
GIN 1987	males	4	-0.209	-0.512	0.094
GIN 1992	males	4	-0.104	-0.367	0.158
GIN 1997	males	4	0.010	-0.251	0.272
GIN 2002	males	4	0.061	-0.218	0.339
GTM 1982	males	4	0.003	-0.294	0.300
GTM 1987	males	4	-0.485	-0.761	-0.210
GTM 1992	males	4	-0.545	-0.827	-0.264
HTI 1987	males	4	0.515	0.167	0.864
HTI 1992	males	4	0.162	-0.089	0.412
HTI 1997	males	4	0.039	-0.235	0.313
HTI 2002	males	4	-0.151	-0.432	0.130
IDN 1984	males	4	-0.934	-1.194	-0.673
IDN 1989	males	4	-0.894	-1.141	-0.646
IDN 1994	males	4	-0.910	-1.153	-0.667
IDN 1999	males	4	-0.991	-1.242	-0.740
IDN 2004	males	4	-0.758	-1.013	-0.503
KEN 1985	males	4	-0.559	-0.920	-0.199
KEN 1990	males	4	-0.448	-0.713	-0.184
KEN 1995	males	4	-0.068	-0.323	0.186
KEN 2000	males	4	-0.596	-0.883	-0.310
KHM 1987	males	4	0.364	0.094	0.634
KHM 1992	males	4	0.066	-0.185	0.317
KHM 1997	males	4	0.025	-0.224	0.274
KHM 2002	males	4	-0.076	-0.326	0.173
LBR 1993	males	4	-0.146	-0.498	0.207
LBR 1998	males	4	0.024	-0.290	0.338
LBR 2003	males	4	0.220	-0.082	0.523
LSO 1991	males	4	0.085	-0.204	0.374
LSO 1996	males	4	0.398	0.132	0.665
LSO 2001	males	4	0.265	-0.004	0.535
MAR 1980	males	4	-0.644	-0.937	-0.351
MAR 1985	males	4	-1.059	-1.359	-0.758
MAR 1990	males	4	-1.143	-1.404	-0.882
MAR 1995	males	4	-1.192	-1.472	-0.912
MAR 2000	males	4	-1.369	-1.641	-1.097
MDG 1980	males	4	-0.126	-0.404	0.152
MDG 1985	males	4	0.017	-0.234	0.269

MDG 1990	males	4	-0.124	-0.377	0.129
MDG 1995	males	4	-0.134	-0.405	0.136
MDG 2000	males	4	-0.296	-0.582	-0.010
MLI 1983	males	4	0.079	-0.219	0.377
MLI 1988	males	4	-0.107	-0.359	0.145
MLI 1993	males	4	-0.078	-0.321	0.165
MLI 1998	males	4	0.020	-0.220	0.261
MLI 2003	males	4	0.069	-0.195	0.334
MOZ 1985	males	4	-0.059	-0.434	0.316
MOZ 1990	males	4	0.146	-0.137	0.429
MOZ 1995	males	4	0.020	-0.266	0.305
MOZ 2000	males	4	0.434	0.180	0.688
MRT 1987	males	4	-0.359	-0.842	0.125
MRT 1992	males	4	-0.449	-0.762	-0.136
MRT 1997	males	4	-0.514	-0.839	-0.190
MWI 1981	males	4	-0.389	-0.845	0.067
MWI 1986	males	4	-0.082	-0.351	0.188
MWI 1991	males	4	0.315	0.066	0.564
MWI 1996	males	4	0.680	0.449	0.912
MWI 2001	males	4	0.291	0.020	0.561
NAM 1983	males	4	0.251	-0.030	0.533
NAM 1988	males	4	0.155	-0.108	0.418
NAM 1993	males	4	-0.014	-0.279	0.250
NAM 1998	males	4	0.461	0.217	0.704
NAM 2003	males	4	0.065	-0.209	0.339
NER 1983	males	4	0.381	0.079	0.683
NER 1988	males	4	0.100	-0.213	0.414
NER 1993	males	4	-0.214	-0.518	0.090
NER 1998	males	4	-0.338	-0.615	-0.061
NER 2003	males	4	-0.367	-0.637	-0.096
NPL 1993	males	4	-0.629	-0.963	-0.296
NPL 1998	males	4	-0.598	-0.921	-0.275
NPL 2003	males	4	-1.042	-1.375	-0.708
PER 1980	males	4	-0.657	-0.922	-0.392
PER 1985	males	4	-0.663	-0.903	-0.424
PER 1990	males	4	-0.650	-0.887	-0.413
PER 1995	males	4	-0.896	-1.137	-0.654
PER 2000	males	4	-1.210	-1.478	-0.942
PHL 1985	males	4	-0.441	-0.682	-0.199
PHL 1990	males	4	-0.621	-0.860	-0.382
PHL 1995	males	4	-0.718	-0.968	-0.468
RWA 1988	males	4	0.407	0.160	0.655
RWA 1993	males	4	2.526	2.290	2.762

RWA 1998	males	4	1.247	1.000	1.494
RWA 2003	males	4	0.464	0.205	0.724
SDN 1976	males	4	-0.291	-0.514	-0.068
SDN 1981	males	4	-0.451	-0.675	-0.226
SDN 1986	males	4	-0.567	-0.796	-0.339
SEN 1982	males	4	-0.113	-0.454	0.228
SEN 1987	males	4	-0.191	-0.497	0.116
SEN 1992	males	4	-0.340	-0.613	-0.067
SEN 1997	males	4	-0.531	-0.815	-0.248
SEN 2002	males	4	-0.548	-0.814	-0.282
SWZ 1993	males	4	-0.100	-0.447	0.248
SWZ 1998	males	4	0.628	0.348	0.908
SWZ 2003	males	4	0.416	0.148	0.684
TCD 1986	males	4	-0.043	-0.362	0.277
TCD 1991	males	4	-0.053	-0.329	0.223
TCD 1996	males	4	-0.006	-0.276	0.263
TCD 2001	males	4	0.130	-0.144	0.404
TGO 1985	males	4	-0.308	-0.605	-0.011
TGO 1990	males	4	-0.486	-0.787	-0.185
TGO 1995	males	4	-0.236	-0.517	0.045
TZA 1986	males	4	-0.506	-0.837	-0.175
TZA 1991	males	4	-0.056	-0.323	0.210
TZA 1996	males	4	0.208	-0.051	0.468
TZA 2001	males	4	-0.462	-0.756	-0.169
UGA 1983	males	4	0.234	-0.050	0.519
UGA 1988	males	4	0.541	0.289	0.792
UGA 1993	males	4	0.736	0.495	0.978
UGA 1998	males	4	-0.061	-0.344	0.222
UGA 2003	males	4	-0.162	-0.445	0.120
ZAF 1985	males	4	-0.079	-0.390	0.231
ZAF 1990	males	4	-0.155	-0.425	0.116
ZAF 1995	males	4	0.064	-0.201	0.328
ZMB 1984	males	4	0.091	-0.189	0.371
ZMB 1989	males	4	0.312	0.068	0.557
ZMB 1994	males	4	0.845	0.609	1.082
ZMB 1999	males	4	0.215	-0.046	0.476
ZMB 2004	males	4	0.173	-0.103	0.450
ZWE 1982	males	4	-0.178	-0.460	0.104
ZWE 1987	males	4	-0.485	-0.760	-0.210
ZWE 1992	males	4	-0.089	-0.334	0.156
ZWE 1997	males	4	-0.087	-0.351	0.177
ZWE 2002	males	4	0.307	0.041	0.572

Appendix table 2d, continued: CSS Model 4 results (male)

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	BEN	Benin	1983	1	0.259	0.201	0.320
females	BEN	Benin	1983	2	0.280	0.222	0.344
females	BEN	Benin	1983	3	0.242	0.187	0.302
females	BEN	Benin	1983	4	0.240	0.187	0.303
females	BEN	Benin	1988	1	0.191	0.155	0.231
females	BEN	Benin	1988	2	0.209	0.171	0.252
females	BEN	Benin	1988	3	0.180	0.144	0.221
females	BEN	Benin	1988	4	0.181	0.146	0.221
females	BEN	Benin	1993	1	0.169	0.149	0.188
females	BEN	Benin	1993	2	0.184	0.162	0.207
females	BEN	Benin	1993	3	0.158	0.138	0.180
females	BEN	Benin	1993	4	0.158	0.139	0.179
females	BEN	Benin	1998	1	0.231	0.207	0.259
females	BEN	Benin	1998	2	0.251	0.225	0.284
females	BEN	Benin	1998	3	0.213	0.188	0.239
females	BEN	Benin	1998	4	0.255	0.230	0.285
females	BEN	Benin	2003	1	0.232	0.210	0.255
females	BEN	Benin	2003	2	0.252	0.228	0.280
females	BEN	Benin	2003	3	0.214	0.191	0.238
females	BEN	Benin	2003	4	0.252	0.228	0.279
females	BFA	Burkina Faso	1985	1	0.207	0.157	0.272
females	BFA	Burkina Faso	1985	2	0.226	0.171	0.295
females	BFA	Burkina Faso	1985	3	0.192	0.143	0.256
females	BFA	Burkina Faso	1985	4	0.191	0.141	0.250
females	BFA	Burkina Faso	1990	1	0.286	0.248	0.330
females	BFA	Burkina Faso	1990	2	0.311	0.265	0.361
females	BFA	Burkina Faso	1990	3	0.268	0.228	0.312
females	BFA	Burkina Faso	1990	4	0.269	0.229	0.314
females	BFA	Burkina Faso	1995	1	0.289	0.259	0.319

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	BFA	Burkina Faso	1995	2	0.314	0.282	0.348
females	BFA	Burkina Faso	1995	3	0.275	0.244	0.309
females	BFA	Burkina Faso	1995	4	0.275	0.245	0.310
females	BFA	Burkina Faso	2000	1	0.301	0.264	0.335
females	BFA	Burkina Faso	2000	2	0.325	0.286	0.365
females	BFA	Burkina Faso	2000	3	0.288	0.251	0.326
females	BFA	Burkina Faso	2000	4	0.287	0.253	0.327
females	BOL	Bolivia	1980	1	0.194	0.156	0.239
females	BOL	Bolivia	1980	2	0.211	0.167	0.261
females	BOL	Bolivia	1980	3	0.180	0.143	0.225
females	BOL	Bolivia	1980	4	0.178	0.140	0.224
females	BOL	Bolivia	1985	1	0.195	0.162	0.234
females	BOL	Bolivia	1985	2	0.211	0.175	0.251
females	BOL	Bolivia	1985	3	0.179	0.144	0.217
females	BOL	Bolivia	1985	4	0.216	0.179	0.260
females	BOL	Bolivia	1990	1	0.157	0.137	0.177
females	BOL	Bolivia	1990	2	0.171	0.151	0.196
females	BOL	Bolivia	1990	3	0.143	0.125	0.165
females	BOL	Bolivia	1990	4	0.174	0.153	0.197
females	BOL	Bolivia	1995	1	0.165	0.137	0.199
females	BOL	Bolivia	1995	2	0.180	0.148	0.215
females	BOL	Bolivia	1995	3	0.187	0.157	0.226
females	BOL	Bolivia	1995	4	0.181	0.149	0.219
females	BOL	Bolivia	2000	1	0.143	0.120	0.167
females	BOL	Bolivia	2000	2	0.155	0.131	0.182
females	BOL	Bolivia	2000	3	0.159	0.135	0.185
females	BOL	Bolivia	2000	4	0.156	0.131	0.184
females	BRA	Brazil	1983	1	0.088	0.069	0.110
females	BRA	Brazil	1983	2	0.097	0.077	0.121

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	BRA	Brazil	1983	3	0.102	0.081	0.128
females	BRA	Brazil	1983	4	0.098	0.077	0.124
females	BRA	Brazil	1988	1	0.078	0.062	0.097
females	BRA	Brazil	1988	2	0.085	0.067	0.105
females	BRA	Brazil	1988	3	0.087	0.070	0.108
females	BRA	Brazil	1988	4	0.085	0.068	0.105
females	BRA	Brazil	1993	1	0.094	0.080	0.109
females	BRA	Brazil	1993	2	0.102	0.088	0.119
females	BRA	Brazil	1993	3	0.102	0.087	0.119
females	BRA	Brazil	1993	4	0.101	0.087	0.117
females	CAF	Central African Republic	1981	1	0.362	0.283	0.453
females	CAF	Central African Republic	1981	2	0.385	0.305	0.480
females	CAF	Central African Republic	1981	3	0.335	0.264	0.419
females	CAF	Central African Republic	1981	4	0.335	0.263	0.426
females	CAF	Central African Republic	1986	1	0.395	0.340	0.452
females	CAF	Central African Republic	1986	2	0.424	0.366	0.486
females	CAF	Central African Republic	1986	3	0.371	0.312	0.431
females	CAF	Central African Republic	1986	4	0.369	0.316	0.423
females	CAF	Central African Republic	1991	1	0.470	0.423	0.521
females	CAF	Central African Republic	1991	2	0.504	0.452	0.555
females	CAF	Central African Republic	1991	3	0.438	0.391	0.483
females	CAF	Central African Republic	1991	4	0.506	0.455	0.561
females	CIV	Côte d'Ivoire	1982	1	0.268	0.219	0.320
females	CIV	Côte d'Ivoire	1982	2	0.288	0.234	0.344
females	CIV	Côte d'Ivoire	1982	3	0.248	0.203	0.303
females	CIV	Côte d'Ivoire	1982	4	0.246	0.199	0.299
females	CIV	Côte d'Ivoire	1987	1	0.236	0.203	0.273
females	CIV	Côte d'Ivoire	1987	2	0.257	0.220	0.294
females	CIV	Côte d'Ivoire	1987	3	0.217	0.184	0.250

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	CIV	Côte d'Ivoire	1987	4	0.260	0.223	0.301
females	CIV	Côte d'Ivoire	1992	1	0.290	0.256	0.327
females	CIV	Côte d'Ivoire	1992	2	0.314	0.275	0.359
females	CIV	Côte d'Ivoire	1992	3	0.269	0.233	0.308
females	CIV	Côte d'Ivoire	1992	4	0.318	0.278	0.357
females	CIV	Côte d'Ivoire	1997	1	0.375	0.305	0.455
females	CIV	Côte d'Ivoire	1997	2	0.353	0.284	0.438
females	CIV	Côte d'Ivoire	1997	3	0.350	0.278	0.423
females	CIV	Côte d'Ivoire	1997	4	0.408	0.323	0.497
females	CIV	Côte d'Ivoire	2002	1	0.464	0.370	0.574
females	CIV	Côte d'Ivoire	2002	2	0.439	0.346	0.540
females	CIV	Côte d'Ivoire	2002	3	0.434	0.351	0.531
females	CIV	Côte d'Ivoire	2002	4	0.499	0.404	0.602
females	CMR	Cameroon	1986	1	0.206	0.160	0.261
females	CMR	Cameroon	1986	2	0.223	0.172	0.287
females	CMR	Cameroon	1986	3	0.189	0.141	0.249
females	CMR	Cameroon	1986	4	0.227	0.176	0.292
females	CMR	Cameroon	1991	1	0.226	0.198	0.256
females	CMR	Cameroon	1991	2	0.246	0.212	0.282
females	CMR	Cameroon	1991	3	0.208	0.181	0.238
females	CMR	Cameroon	1991	4	0.250	0.219	0.283
females	CMR	Cameroon	1996	1	0.290	0.262	0.319
females	CMR	Cameroon	1996	2	0.314	0.282	0.346
females	CMR	Cameroon	1996	3	0.269	0.239	0.299
females	CMR	Cameroon	1996	4	0.317	0.287	0.351
females	CMR	Cameroon	2001	1	0.366	0.338	0.399
females	CMR	Cameroon	2001	2	0.345	0.315	0.377
females	CMR	Cameroon	2001	3	0.341	0.313	0.373
females	CMR	Cameroon	2001	4	0.395	0.364	0.426

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	COD	Dem Rep of the Congo	1994	1	0.388	0.330	0.454
females	COD	Dem Rep of the Congo	1994	2	0.419	0.358	0.484
females	COD	Dem Rep of the Congo	1994	3	0.364	0.308	0.427
females	COD	Dem Rep of the Congo	1994	4	0.366	0.309	0.425
females	COD	Dem Rep of the Congo	1999	1	0.366	0.323	0.419
females	COD	Dem Rep of the Congo	1999	2	0.396	0.345	0.450
females	COD	Dem Rep of the Congo	1999	3	0.350	0.299	0.403
females	COD	Dem Rep of the Congo	1999	4	0.350	0.301	0.404
females	COD	Dem Rep of the Congo	2004	1	0.352	0.303	0.406
females	COD	Dem Rep of the Congo	2004	2	0.377	0.325	0.434
females	COD	Dem Rep of the Congo	2004	3	0.340	0.287	0.394
females	COD	Dem Rep of the Congo	2004	4	0.339	0.285	0.397
females	COG	Congo (Rep.)	1992	1	0.392	0.334	0.453
females	COG	Congo (Rep.)	1992	2	0.367	0.311	0.430
females	COG	Congo (Rep.)	1992	3	0.450	0.382	0.522
females	COG	Congo (Rep.)	1992	4	0.430	0.367	0.492
females	COG	Congo (Rep.)	1997	1	0.506	0.453	0.562
females	COG	Congo (Rep.)	1997	2	0.476	0.420	0.537
females	COG	Congo (Rep.)	1997	3	0.483	0.426	0.548
females	COG	Congo (Rep.)	1997	4	0.483	0.422	0.545
females	COG	Congo (Rep.)	2002	1	0.407	0.362	0.457
females	COG	Congo (Rep.)	2002	2	0.383	0.336	0.435
females	COG	Congo (Rep.)	2002	3	0.393	0.346	0.446
females	COG	Congo (Rep.)	2002	4	0.392	0.341	0.444
females	DOM	Dominican Republic	1989	1	0.114	0.084	0.149
females	DOM	Dominican Republic	1989	2	0.124	0.092	0.162
females	DOM	Dominican Republic	1989	3	0.131	0.100	0.170
females	DOM	Dominican Republic	1989	4	0.126	0.093	0.166
females	DOM	Dominican Republic	1994	1	0.099	0.085	0.114

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	DOM	Dominican Republic	1994	2	0.110	0.094	0.127
females	DOM	Dominican Republic	1994	3	0.114	0.098	0.133
females	DOM	Dominican Republic	1994	4	0.111	0.095	0.129
females	DOM	Dominican Republic	1999	1	0.106	0.090	0.122
females	DOM	Dominican Republic	1999	2	0.116	0.101	0.133
females	DOM	Dominican Republic	1999	3	0.118	0.101	0.135
females	DOM	Dominican Republic	1999	4	0.116	0.101	0.134
females	DOM	Dominican Republic	2004	1	0.120	0.104	0.135
females	DOM	Dominican Republic	2004	2	0.129	0.113	0.149
females	DOM	Dominican Republic	2004	3	0.129	0.113	0.145
females	DOM	Dominican Republic	2004	4	0.129	0.113	0.146
females	ERI	Eritrea	1982	1	0.431	0.355	0.516
females	ERI	Eritrea	1982	2	0.462	0.381	0.548
females	ERI	Eritrea	1982	3	0.405	0.324	0.484
females	ERI	Eritrea	1982	4	0.405	0.332	0.488
females	ERI	Eritrea	1987	1	0.466	0.400	0.531
females	ERI	Eritrea	1987	2	0.499	0.434	0.566
females	ERI	Eritrea	1987	3	0.445	0.374	0.521
females	ERI	Eritrea	1987	4	0.443	0.381	0.513
females	ERI	Eritrea	1992	1	0.335	0.269	0.411
females	ERI	Eritrea	1992	2	0.358	0.289	0.437
females	ERI	Eritrea	1992	3	0.321	0.254	0.395
females	ERI	Eritrea	1992	4	0.322	0.255	0.399
females	ETH	Ethiopia	1982	1	0.425	0.386	0.464
females	ETH	Ethiopia	1982	2	0.457	0.414	0.500
females	ETH	Ethiopia	1982	3	0.403	0.361	0.450
females	ETH	Ethiopia	1982	4	0.402	0.360	0.444
females	ETH	Ethiopia	1987	1	0.429	0.398	0.460
females	ETH	Ethiopia	1987	2	0.459	0.429	0.490

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	ETH	Ethiopia	1987	3	0.408	0.377	0.441
females	ETH	Ethiopia	1987	4	0.407	0.375	0.437
females	ETH	Ethiopia	1992	1	0.413	0.387	0.439
females	ETH	Ethiopia	1992	2	0.442	0.414	0.470
females	ETH	Ethiopia	1992	3	0.393	0.364	0.423
females	ETH	Ethiopia	1992	4	0.392	0.363	0.421
females	ETH	Ethiopia	1997	1	0.410	0.385	0.435
females	ETH	Ethiopia	1997	2	0.439	0.410	0.468
females	ETH	Ethiopia	1997	3	0.383	0.357	0.413
females	ETH	Ethiopia	1997	4	0.442	0.415	0.472
females	ETH	Ethiopia	2002	1	0.396	0.361	0.438
females	ETH	Ethiopia	2002	2	0.375	0.334	0.419
females	ETH	Ethiopia	2002	3	0.370	0.334	0.412
females	ETH	Ethiopia	2002	4	0.426	0.384	0.469
females	GAB	Gabon	1987	1	0.187	0.133	0.245
females	GAB	Gabon	1987	2	0.203	0.150	0.267
females	GAB	Gabon	1987	3	0.222	0.163	0.295
females	GAB	Gabon	1987	4	0.210	0.153	0.276
females	GAB	Gabon	1992	1	0.216	0.170	0.268
females	GAB	Gabon	1992	2	0.239	0.192	0.295
females	GAB	Gabon	1992	3	0.254	0.203	0.314
females	GAB	Gabon	1992	4	0.243	0.195	0.301
females	GAB	Gabon	1997	1	0.285	0.247	0.328
females	GAB	Gabon	1997	2	0.311	0.270	0.355
females	GAB	Gabon	1997	3	0.320	0.276	0.366
females	GAB	Gabon	1997	4	0.313	0.272	0.358
females	GHA	Ghana	1994	1	0.247	0.235	0.260
females	GHA	Ghana	1994	2	0.268	0.255	0.281
females	GHA	Ghana	1994	3	0.228	0.215	0.242

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	GHA	Ghana	1994	4	0.273	0.259	0.289
females	GHA	Ghana	1999	1	0.275	0.266	0.284
females	GHA	Ghana	1999	2	0.299	0.289	0.309
females	GHA	Ghana	1999	3	0.308	0.296	0.321
females	GHA	Ghana	1999	4	0.301	0.289	0.312
females	GHA	Ghana	2004	1	0.262	0.257	0.268
females	GHA	Ghana	2004	2	0.246	0.236	0.257
females	GHA	Ghana	2004	3	0.286	0.278	0.296
females	GHA	Ghana	2004	4	0.283	0.275	0.291
females	GIN	Guinea	1987	1	0.284	0.232	0.342
females	GIN	Guinea	1987	2	0.308	0.252	0.371
females	GIN	Guinea	1987	3	0.265	0.214	0.320
females	GIN	Guinea	1987	4	0.264	0.215	0.321
females	GIN	Guinea	1992	1	0.278	0.245	0.313
females	GIN	Guinea	1992	2	0.302	0.268	0.339
females	GIN	Guinea	1992	3	0.262	0.230	0.296
females	GIN	Guinea	1992	4	0.261	0.230	0.298
females	GIN	Guinea	1997	1	0.270	0.237	0.307
females	GIN	Guinea	1997	2	0.295	0.260	0.332
females	GIN	Guinea	1997	3	0.258	0.226	0.296
females	GIN	Guinea	1997	4	0.257	0.225	0.289
females	GIN	Guinea	2002	1	0.323	0.285	0.365
females	GIN	Guinea	2002	2	0.348	0.307	0.389
females	GIN	Guinea	2002	3	0.298	0.260	0.338
females	GIN	Guinea	2002	4	0.348	0.307	0.392
females	GTM	Guatemala	1982	1	0.160	0.127	0.197
females	GTM	Guatemala	1982	2	0.174	0.138	0.215
females	GTM	Guatemala	1982	3	0.150	0.119	0.186
females	GTM	Guatemala	1982	4	0.148	0.115	0.184

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	GTM	Guatemala	1987	1	0.118	0.090	0.149
females	GTM	Guatemala	1987	2	0.130	0.097	0.167
females	GTM	Guatemala	1987	3	0.111	0.083	0.147
females	GTM	Guatemala	1987	4	0.112	0.084	0.148
females	GTM	Guatemala	1992	1	0.126	0.107	0.147
females	GTM	Guatemala	1992	2	0.138	0.116	0.162
females	GTM	Guatemala	1992	3	0.141	0.120	0.164
females	GTM	Guatemala	1992	4	0.139	0.118	0.162
females	HTI	Haiti	1987	1	0.451	0.391	0.509
females	HTI	Haiti	1987	2	0.486	0.429	0.548
females	HTI	Haiti	1987	3	0.427	0.376	0.484
females	HTI	Haiti	1987	4	0.425	0.370	0.484
females	HTI	Haiti	1992	1	0.361	0.328	0.398
females	HTI	Haiti	1992	2	0.391	0.354	0.429
females	HTI	Haiti	1992	3	0.333	0.301	0.370
females	HTI	Haiti	1992	4	0.395	0.358	0.433
females	HTI	Haiti	1997	1	0.331	0.304	0.357
females	HTI	Haiti	1997	2	0.358	0.331	0.385
females	HTI	Haiti	1997	3	0.306	0.281	0.336
females	HTI	Haiti	1997	4	0.360	0.332	0.390
females	HTI	Haiti	2002	1	0.293	0.259	0.328
females	HTI	Haiti	2002	2	0.277	0.242	0.315
females	HTI	Haiti	2002	3	0.322	0.286	0.359
females	HTI	Haiti	2002	4	0.317	0.281	0.356
females	IDN	Indonesia	1984	1	0.122	0.106	0.140
females	IDN	Indonesia	1984	2	0.135	0.117	0.154
females	IDN	Indonesia	1984	3	0.111	0.096	0.129
females	IDN	Indonesia	1984	4	0.137	0.120	0.158
females	IDN	Indonesia	1989	1	0.130	0.116	0.145

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	IDN	Indonesia	1989	2	0.144	0.129	0.161
females	IDN	Indonesia	1989	3	0.148	0.132	0.166
females	IDN	Indonesia	1989	4	0.144	0.128	0.161
females	IDN	Indonesia	1994	1	0.108	0.098	0.118
females	IDN	Indonesia	1994	2	0.120	0.108	0.132
females	IDN	Indonesia	1994	3	0.122	0.110	0.133
females	IDN	Indonesia	1994	4	0.120	0.109	0.131
females	IDN	Indonesia	1999	1	0.125	0.111	0.139
females	IDN	Indonesia	1999	2	0.138	0.124	0.154
females	IDN	Indonesia	1999	3	0.138	0.124	0.153
females	IDN	Indonesia	1999	4	0.136	0.122	0.151
females	IDN	Indonesia	2004	1	0.131	0.114	0.150
females	IDN	Indonesia	2004	2	0.144	0.125	0.164
females	IDN	Indonesia	2004	3	0.141	0.123	0.160
females	IDN	Indonesia	2004	4	0.141	0.124	0.161
females	KEN	Kenya	1985	1	0.174	0.138	0.219
females	KEN	Kenya	1985	2	0.188	0.147	0.234
females	KEN	Kenya	1985	3	0.205	0.163	0.255
females	KEN	Kenya	1985	4	0.194	0.154	0.237
females	KEN	Kenya	1990	1	0.200	0.171	0.229
females	KEN	Kenya	1990	2	0.218	0.187	0.251
females	KEN	Kenya	1990	3	0.231	0.199	0.267
females	KEN	Kenya	1990	4	0.221	0.189	0.255
females	KEN	Kenya	1995	1	0.312	0.283	0.339
females	KEN	Kenya	1995	2	0.291	0.262	0.321
females	KEN	Kenya	1995	3	0.346	0.316	0.378
females	KEN	Kenya	1995	4	0.339	0.309	0.371
females	KEN	Kenya	2000	1	0.416	0.373	0.463
females	KEN	Kenya	2000	2	0.373	0.326	0.425

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	KEN	Kenya	2000	3	0.453	0.405	0.500
females	KEN	Kenya	2000	4	0.372	0.327	0.423
females	KHM	Cambodia	1987	1	0.211	0.174	0.251
females	KHM	Cambodia	1987	2	0.230	0.193	0.272
females	KHM	Cambodia	1987	3	0.197	0.161	0.238
females	KHM	Cambodia	1987	4	0.196	0.158	0.238
females	KHM	Cambodia	1992	1	0.213	0.189	0.239
females	KHM	Cambodia	1992	2	0.234	0.208	0.261
females	KHM	Cambodia	1992	3	0.202	0.174	0.228
females	KHM	Cambodia	1992	4	0.201	0.172	0.231
females	KHM	Cambodia	1997	1	0.207	0.190	0.226
females	KHM	Cambodia	1997	2	0.226	0.206	0.248
females	KHM	Cambodia	1997	3	0.200	0.179	0.223
females	KHM	Cambodia	1997	4	0.200	0.177	0.225
females	KHM	Cambodia	2002	1	0.205	0.183	0.228
females	KHM	Cambodia	2002	2	0.195	0.171	0.221
females	KHM	Cambodia	2002	3	0.224	0.199	0.251
females	KHM	Cambodia	2002	4	0.222	0.196	0.246
females	LBR	Liberia	1993	1	0.249	0.182	0.327
females	LBR	Liberia	1993	2	0.273	0.201	0.348
females	LBR	Liberia	1993	3	0.235	0.173	0.309
females	LBR	Liberia	1993	4	0.233	0.172	0.308
females	LBR	Liberia	1998	1	0.292	0.222	0.372
females	LBR	Liberia	1998	2	0.317	0.242	0.401
females	LBR	Liberia	1998	3	0.277	0.210	0.354
females	LBR	Liberia	1998	4	0.276	0.205	0.354
females	LBR	Liberia	2003	1	0.349	0.298	0.408
females	LBR	Liberia	2003	2	0.376	0.313	0.440
females	LBR	Liberia	2003	3	0.337	0.284	0.395

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	LBR	Liberia	2003	4	0.337	0.281	0.399
females	LSO	Lesotho	1991	1	0.173	0.131	0.224
females	LSO	Lesotho	1991	2	0.189	0.142	0.245
females	LSO	Lesotho	1991	3	0.200	0.150	0.258
females	LSO	Lesotho	1991	4	0.192	0.143	0.247
females	LSO	Lesotho	1996	1	0.280	0.240	0.323
females	LSO	Lesotho	1996	2	0.263	0.225	0.307
females	LSO	Lesotho	1996	3	0.313	0.271	0.360
females	LSO	Lesotho	1996	4	0.307	0.264	0.357
females	LSO	Lesotho	2001	1	0.608	0.571	0.650
females	LSO	Lesotho	2001	2	0.559	0.519	0.601
females	LSO	Lesotho	2001	3	0.647	0.606	0.689
females	LSO	Lesotho	2001	4	0.562	0.516	0.606
females	MAR	Morocco	1980	1	0.172	0.139	0.212
females	MAR	Morocco	1980	2	0.187	0.149	0.228
females	MAR	Morocco	1980	3	0.158	0.128	0.193
females	MAR	Morocco	1980	4	0.192	0.152	0.237
females	MAR	Morocco	1985	1	0.117	0.098	0.136
females	MAR	Morocco	1985	2	0.127	0.107	0.151
females	MAR	Morocco	1985	3	0.106	0.088	0.126
females	MAR	Morocco	1985	4	0.130	0.107	0.155
females	MAR	Morocco	1990	1	0.095	0.081	0.110
females	MAR	Morocco	1990	2	0.105	0.090	0.121
females	MAR	Morocco	1990	3	0.110	0.095	0.128
females	MAR	Morocco	1990	4	0.107	0.092	0.123
females	MAR	Morocco	1995	1	0.088	0.073	0.104
females	MAR	Morocco	1995	2	0.097	0.081	0.116
females	MAR	Morocco	1995	3	0.100	0.084	0.119
females	MAR	Morocco	1995	4	0.098	0.081	0.116

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	MAR	Morocco	2000	1	0.078	0.067	0.091
females	MAR	Morocco	2000	2	0.086	0.073	0.099
females	MAR	Morocco	2000	3	0.086	0.074	0.100
females	MAR	Morocco	2000	4	0.086	0.073	0.099
females	MDG	Madagascar	1980	1	0.229	0.191	0.276
females	MDG	Madagascar	1980	2	0.249	0.203	0.295
females	MDG	Madagascar	1980	3	0.211	0.172	0.256
females	MDG	Madagascar	1980	4	0.211	0.174	0.256
females	MDG	Madagascar	1985	1	0.324	0.290	0.365
females	MDG	Madagascar	1985	2	0.350	0.312	0.391
females	MDG	Madagascar	1985	3	0.305	0.266	0.341
females	MDG	Madagascar	1985	4	0.305	0.268	0.344
females	MDG	Madagascar	1990	1	0.284	0.253	0.319
females	MDG	Madagascar	1990	2	0.309	0.276	0.346
females	MDG	Madagascar	1990	3	0.262	0.233	0.294
females	MDG	Madagascar	1990	4	0.312	0.280	0.348
females	MDG	Madagascar	1995	1	0.269	0.240	0.299
females	MDG	Madagascar	1995	2	0.293	0.259	0.330
females	MDG	Madagascar	1995	3	0.247	0.219	0.278
females	MDG	Madagascar	1995	4	0.296	0.263	0.331
females	MDG	Madagascar	2000	1	0.235	0.194	0.284
females	MDG	Madagascar	2000	2	0.257	0.216	0.304
females	MDG	Madagascar	2000	3	0.217	0.180	0.257
females	MDG	Madagascar	2000	4	0.257	0.216	0.308
females	MLI	Mali	1983	1	0.344	0.299	0.391
females	MLI	Mali	1983	2	0.370	0.320	0.423
females	MLI	Mali	1983	3	0.321	0.277	0.367
females	MLI	Mali	1983	4	0.321	0.276	0.371
females	MLI	Mali	1988	1	0.287	0.258	0.318

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	MLI	Mali	1988	2	0.313	0.280	0.348
females	MLI	Mali	1988	3	0.270	0.237	0.303
females	MLI	Mali	1988	4	0.270	0.239	0.305
females	MLI	Mali	1993	1	0.252	0.230	0.274
females	MLI	Mali	1993	2	0.274	0.251	0.298
females	MLI	Mali	1993	3	0.237	0.213	0.262
females	MLI	Mali	1993	4	0.237	0.213	0.263
females	MLI	Mali	1998	1	0.292	0.265	0.317
females	MLI	Mali	1998	2	0.316	0.290	0.347
females	MLI	Mali	1998	3	0.277	0.247	0.306
females	MLI	Mali	1998	4	0.277	0.250	0.308
females	MLI	Mali	2003	1	0.259	0.231	0.290
females	MLI	Mali	2003	2	0.282	0.251	0.315
females	MLI	Mali	2003	3	0.246	0.218	0.278
females	MLI	Mali	2003	4	0.246	0.218	0.277
females	MOZ	Mozambique	1985	1	0.321	0.253	0.400
females	MOZ	Mozambique	1985	2	0.348	0.274	0.424
females	MOZ	Mozambique	1985	3	0.301	0.240	0.378
females	MOZ	Mozambique	1985	4	0.302	0.236	0.376
females	MOZ	Mozambique	1990	1	0.246	0.208	0.285
females	MOZ	Mozambique	1990	2	0.267	0.226	0.310
females	MOZ	Mozambique	1990	3	0.230	0.195	0.272
females	MOZ	Mozambique	1990	4	0.229	0.188	0.275
females	MOZ	Mozambique	1995	1	0.232	0.199	0.268
females	MOZ	Mozambique	1995	2	0.253	0.217	0.293
females	MOZ	Mozambique	1995	3	0.220	0.187	0.260
females	MOZ	Mozambique	1995	4	0.220	0.187	0.257
females	MOZ	Mozambique	2000	1	0.373	0.331	0.413
females	MOZ	Mozambique	2000	2	0.349	0.305	0.392

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	MOZ	Mozambique	2000	3	0.359	0.316	0.407
females	MOZ	Mozambique	2000	4	0.358	0.315	0.403
females	MRT	Mauritania	1987	1	0.312	0.240	0.394
females	MRT	Mauritania	1987	2	0.335	0.252	0.428
females	MRT	Mauritania	1987	3	0.288	0.213	0.372
females	MRT	Mauritania	1987	4	0.344	0.259	0.441
females	MRT	Mauritania	1992	1	0.250	0.201	0.305
females	MRT	Mauritania	1992	2	0.273	0.221	0.332
females	MRT	Mauritania	1992	3	0.230	0.187	0.279
females	MRT	Mauritania	1992	4	0.278	0.227	0.341
females	MRT	Mauritania	1997	1	0.228	0.192	0.269
females	MRT	Mauritania	1997	2	0.249	0.208	0.295
females	MRT	Mauritania	1997	3	0.211	0.175	0.249
females	MRT	Mauritania	1997	4	0.249	0.208	0.296
females	MWI	Malawi	1981	1	0.208	0.162	0.267
females	MWI	Malawi	1981	2	0.229	0.176	0.294
females	MWI	Malawi	1981	3	0.197	0.153	0.248
females	MWI	Malawi	1981	4	0.196	0.150	0.248
females	MWI	Malawi	1986	1	0.310	0.271	0.352
females	MWI	Malawi	1986	2	0.335	0.294	0.383
females	MWI	Malawi	1986	3	0.291	0.249	0.332
females	MWI	Malawi	1986	4	0.292	0.252	0.333
females	MWI	Malawi	1991	1	0.348	0.318	0.377
females	MWI	Malawi	1991	2	0.375	0.343	0.406
females	MWI	Malawi	1991	3	0.328	0.296	0.362
females	MWI	Malawi	1991	4	0.328	0.298	0.362
females	MWI	Malawi	1996	1	0.531	0.503	0.559
females	MWI	Malawi	1996	2	0.504	0.469	0.538
females	MWI	Malawi	1996	3	0.507	0.472	0.540

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	MWI	Malawi	1996	4	0.507	0.474	0.541
females	MWI	Malawi	2001	1	0.639	0.606	0.674
females	MWI	Malawi	2001	2	0.588	0.550	0.624
females	MWI	Malawi	2001	3	0.608	0.571	0.641
females	MWI	Malawi	2001	4	0.591	0.557	0.627
females	NAM	Namibia	1983	1	0.215	0.153	0.287
females	NAM	Namibia	1983	2	0.231	0.167	0.316
females	NAM	Namibia	1983	3	0.247	0.174	0.331
females	NAM	Namibia	1983	4	0.239	0.171	0.319
females	NAM	Namibia	1988	1	0.196	0.168	0.229
females	NAM	Namibia	1988	2	0.213	0.183	0.252
females	NAM	Namibia	1988	3	0.223	0.190	0.262
females	NAM	Namibia	1988	4	0.216	0.185	0.253
females	NAM	Namibia	1993	1	0.215	0.186	0.248
females	NAM	Namibia	1993	2	0.234	0.205	0.267
females	NAM	Namibia	1993	3	0.245	0.210	0.283
females	NAM	Namibia	1993	4	0.237	0.207	0.274
females	NAM	Namibia	1998	1	0.397	0.358	0.434
females	NAM	Namibia	1998	2	0.373	0.335	0.416
females	NAM	Namibia	1998	3	0.437	0.398	0.482
females	NAM	Namibia	1998	4	0.427	0.385	0.470
females	NAM	Namibia	2003	1	0.509	0.475	0.544
females	NAM	Namibia	2003	2	0.462	0.426	0.501
females	NAM	Namibia	2003	3	0.548	0.514	0.583
females	NAM	Namibia	2003	4	0.459	0.425	0.496
females	NER	Niger	1983	1	0.386	0.326	0.441
females	NER	Niger	1983	2	0.415	0.361	0.477
females	NER	Niger	1983	3	0.363	0.311	0.423
females	NER	Niger	1983	4	0.365	0.313	0.425

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	NER	Niger	1988	1	0.309	0.267	0.357
females	NER	Niger	1988	2	0.334	0.287	0.384
females	NER	Niger	1988	3	0.295	0.253	0.343
females	NER	Niger	1988	4	0.294	0.251	0.339
females	NER	Niger	1993	1	0.314	0.263	0.372
females	NER	Niger	1993	2	0.338	0.288	0.393
females	NER	Niger	1993	3	0.294	0.246	0.351
females	NER	Niger	1993	4	0.294	0.246	0.346
females	NER	Niger	1998	1	0.291	0.247	0.337
females	NER	Niger	1998	2	0.314	0.268	0.362
females	NER	Niger	1998	3	0.273	0.233	0.321
females	NER	Niger	1998	4	0.272	0.229	0.321
females	NER	Niger	2003	1	0.256	0.225	0.284
females	NER	Niger	2003	2	0.279	0.247	0.312
females	NER	Niger	2003	3	0.245	0.216	0.277
females	NER	Niger	2003	4	0.245	0.214	0.279
females	NPL	Nepal	1993	1	0.192	0.155	0.231
females	NPL	Nepal	1993	2	0.208	0.168	0.253
females	NPL	Nepal	1993	3	0.175	0.143	0.212
females	NPL	Nepal	1993	4	0.212	0.174	0.257
females	NPL	Nepal	1998	1	0.145	0.117	0.178
females	NPL	Nepal	1998	2	0.158	0.128	0.194
females	NPL	Nepal	1998	3	0.165	0.135	0.203
females	NPL	Nepal	1998	4	0.160	0.130	0.192
females	NPL	Nepal	2003	1	0.115	0.094	0.137
females	NPL	Nepal	2003	2	0.125	0.103	0.152
females	NPL	Nepal	2003	3	0.128	0.104	0.153
females	NPL	Nepal	2003	4	0.126	0.103	0.152
females	PER	Peru	1980	1	0.184	0.158	0.215

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	PER	Peru	1980	2	0.200	0.171	0.234
females	PER	Peru	1980	3	0.169	0.142	0.200
females	PER	Peru	1980	4	0.204	0.174	0.237
females	PER	Peru	1985	1	0.132	0.120	0.145
females	PER	Peru	1985	2	0.144	0.131	0.159
females	PER	Peru	1985	3	0.152	0.137	0.168
females	PER	Peru	1985	4	0.146	0.132	0.161
females	PER	Peru	1990	1	0.116	0.107	0.127
females	PER	Peru	1990	2	0.128	0.116	0.140
females	PER	Peru	1990	3	0.133	0.120	0.146
females	PER	Peru	1990	4	0.129	0.117	0.141
females	PER	Peru	1995	1	0.110	0.099	0.121
females	PER	Peru	1995	2	0.120	0.108	0.132
females	PER	Peru	1995	3	0.122	0.110	0.136
females	PER	Peru	1995	4	0.120	0.107	0.133
females	PER	Peru	2000	1	0.061	0.051	0.072
females	PER	Peru	2000	2	0.067	0.056	0.079
females	PER	Peru	2000	3	0.067	0.056	0.078
females	PER	Peru	2000	4	0.066	0.055	0.078
females	PHL	Philippines	1985	1	0.122	0.108	0.137
females	PHL	Philippines	1985	2	0.134	0.119	0.150
females	PHL	Philippines	1985	3	0.140	0.124	0.158
females	PHL	Philippines	1985	4	0.135	0.120	0.152
females	PHL	Philippines	1990	1	0.118	0.105	0.131
females	PHL	Philippines	1990	2	0.129	0.115	0.145
females	PHL	Philippines	1990	3	0.131	0.116	0.148
females	PHL	Philippines	1990	4	0.129	0.115	0.144
females	PHL	Philippines	1995	1	0.106	0.093	0.122
females	PHL	Philippines	1995	2	0.116	0.102	0.131

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	PHL	Philippines	1995	3	0.117	0.102	0.132
females	PHL	Philippines	1995	4	0.115	0.100	0.132
females	RWA	Rwanda	1988	1	0.378	0.337	0.418
females	RWA	Rwanda	1988	2	0.407	0.361	0.458
females	RWA	Rwanda	1988	3	0.355	0.315	0.403
females	RWA	Rwanda	1988	4	0.355	0.314	0.402
females	RWA	Rwanda	1993	1	0.971	0.952	0.988
females	RWA	Rwanda	1993	2	0.940	0.910	0.965
females	RWA	Rwanda	1993	3	0.959	0.934	0.981
females	RWA	Rwanda	1993	4	0.959	0.931	0.983
females	RWA	Rwanda	1998	1	0.562	0.528	0.597
females	RWA	Rwanda	1998	2	0.510	0.471	0.549
females	RWA	Rwanda	1998	3	0.544	0.505	0.585
females	RWA	Rwanda	1998	4	0.543	0.502	0.585
females	RWA	Rwanda	2003	1	0.380	0.347	0.414
females	RWA	Rwanda	2003	2	0.360	0.327	0.394
females	RWA	Rwanda	2003	3	0.369	0.330	0.406
females	RWA	Rwanda	2003	4	0.368	0.330	0.406
females	SDN	Sudan	1976	1	0.195	0.185	0.206
females	SDN	Sudan	1976	2	0.211	0.200	0.221
females	SDN	Sudan	1976	3	0.180	0.169	0.192
females	SDN	Sudan	1976	4	0.218	0.206	0.232
females	SDN	Sudan	1981	1	0.189	0.183	0.197
females	SDN	Sudan	1981	2	0.207	0.199	0.215
females	SDN	Sudan	1981	3	0.174	0.165	0.182
females	SDN	Sudan	1981	4	0.211	0.202	0.220
females	SDN	Sudan	1986	1	0.192	0.188	0.197
females	SDN	Sudan	1986	2	0.211	0.205	0.218
females	SDN	Sudan	1986	3	0.176	0.169	0.183

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	SDN	Sudan	1986	4	0.211	0.204	0.218
females	SEN	Senegal	1982	1	0.234	0.188	0.293
females	SEN	Senegal	1982	2	0.254	0.204	0.310
females	SEN	Senegal	1982	3	0.219	0.175	0.271
females	SEN	Senegal	1982	4	0.220	0.171	0.272
females	SEN	Senegal	1987	1	0.227	0.184	0.278
females	SEN	Senegal	1987	2	0.247	0.202	0.298
females	SEN	Senegal	1987	3	0.213	0.173	0.259
females	SEN	Senegal	1987	4	0.215	0.175	0.262
females	SEN	Senegal	1992	1	0.188	0.162	0.216
females	SEN	Senegal	1992	2	0.206	0.179	0.240
females	SEN	Senegal	1992	3	0.173	0.149	0.202
females	SEN	Senegal	1992	4	0.210	0.179	0.242
females	SEN	Senegal	1997	1	0.183	0.155	0.214
females	SEN	Senegal	1997	2	0.199	0.166	0.232
females	SEN	Senegal	1997	3	0.168	0.140	0.197
females	SEN	Senegal	1997	4	0.202	0.171	0.238
females	SEN	Senegal	2002	1	0.193	0.171	0.216
females	SEN	Senegal	2002	2	0.210	0.187	0.238
females	SEN	Senegal	2002	3	0.178	0.157	0.201
females	SEN	Senegal	2002	4	0.210	0.186	0.235
females	SWZ	Swaziland	1993	1	0.268	0.205	0.335
females	SWZ	Swaziland	1993	2	0.289	0.228	0.358
females	SWZ	Swaziland	1993	3	0.306	0.239	0.380
females	SWZ	Swaziland	1993	4	0.296	0.230	0.369
females	SWZ	Swaziland	1998	1	0.434	0.383	0.484
females	SWZ	Swaziland	1998	2	0.409	0.357	0.463
females	SWZ	Swaziland	1998	3	0.480	0.425	0.531
females	SWZ	Swaziland	1998	4	0.467	0.414	0.520

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	SWZ	Swaziland	2003	1	0.701	0.667	0.736
females	SWZ	Swaziland	2003	2	0.650	0.612	0.689
females	SWZ	Swaziland	2003	3	0.744	0.708	0.777
females	SWZ	Swaziland	2003	4	0.653	0.619	0.693
females	TCD	Chad	1986	1	0.256	0.211	0.307
females	TCD	Chad	1986	2	0.278	0.228	0.329
females	TCD	Chad	1986	3	0.240	0.198	0.289
females	TCD	Chad	1986	4	0.239	0.194	0.289
females	TCD	Chad	1991	1	0.308	0.271	0.349
females	TCD	Chad	1991	2	0.335	0.291	0.381
females	TCD	Chad	1991	3	0.292	0.251	0.335
females	TCD	Chad	1991	4	0.291	0.250	0.336
females	TCD	Chad	1996	1	0.329	0.292	0.370
females	TCD	Chad	1996	2	0.354	0.315	0.397
females	TCD	Chad	1996	3	0.312	0.271	0.354
females	TCD	Chad	1996	4	0.311	0.272	0.354
females	TCD	Chad	2001	1	0.364	0.297	0.437
females	TCD	Chad	2001	2	0.342	0.279	0.417
females	TCD	Chad	2001	3	0.348	0.283	0.428
females	TCD	Chad	2001	4	0.349	0.283	0.424
females	TGO	Togo	1985	1	0.210	0.168	0.255
females	TGO	Togo	1985	2	0.226	0.181	0.278
females	TGO	Togo	1985	3	0.194	0.154	0.242
females	TGO	Togo	1985	4	0.233	0.188	0.285
females	TGO	Togo	1990	1	0.203	0.166	0.244
females	TGO	Togo	1990	2	0.222	0.183	0.266
females	TGO	Togo	1990	3	0.186	0.153	0.225
females	TGO	Togo	1990	4	0.223	0.181	0.269
females	TGO	Togo	1995	1	0.226	0.193	0.263

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	TGO	Togo	1995	2	0.246	0.209	0.286
females	TGO	Togo	1995	3	0.209	0.179	0.247
females	TGO	Togo	1995	4	0.246	0.211	0.286
females	TZA	United Republic of Tanzania	1986	1	0.183	0.148	0.224
females	TZA	United Republic of Tanzania	1986	2	0.199	0.163	0.242
females	TZA	United Republic of Tanzania	1986	3	0.167	0.134	0.206
females	TZA	United Republic of Tanzania	1986	4	0.204	0.164	0.248
females	TZA	United Republic of Tanzania	1991	1	0.295	0.260	0.336
females	TZA	United Republic of Tanzania	1991	2	0.318	0.281	0.360
females	TZA	United Republic of Tanzania	1991	3	0.273	0.237	0.313
females	TZA	United Republic of Tanzania	1991	4	0.324	0.285	0.371
females	TZA	United Republic of Tanzania	1996	1	0.370	0.330	0.410
females	TZA	United Republic of Tanzania	1996	2	0.345	0.306	0.387
females	TZA	United Republic of Tanzania	1996	3	0.344	0.306	0.387
females	TZA	United Republic of Tanzania	1996	4	0.401	0.360	0.449
females	TZA	United Republic of Tanzania	2001	1	0.409	0.369	0.451
females	TZA	United Republic of Tanzania	2001	2	0.365	0.324	0.408
females	TZA	United Republic of Tanzania	2001	3	0.382	0.343	0.421
females	TZA	United Republic of Tanzania	2001	4	0.365	0.327	0.406
females	UGA	Uganda	1983	1	0.314	0.266	0.365
females	UGA	Uganda	1983	2	0.335	0.284	0.389
females	UGA	Uganda	1983	3	0.292	0.246	0.345
females	UGA	Uganda	1983	4	0.291	0.242	0.345
females	UGA	Uganda	1988	1	0.363	0.325	0.404
females	UGA	Uganda	1988	2	0.342	0.304	0.384
females	UGA	Uganda	1988	3	0.343	0.303	0.390
females	UGA	Uganda	1988	4	0.343	0.300	0.388
females	UGA	Uganda	1993	1	0.503	0.473	0.532
females	UGA	Uganda	1993	2	0.450	0.414	0.487

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	UGA	Uganda	1993	3	0.480	0.442	0.520
females	UGA	Uganda	1993	4	0.479	0.440	0.519
females	UGA	Uganda	1998	1	0.492	0.458	0.528
females	UGA	Uganda	1998	2	0.439	0.407	0.477
females	UGA	Uganda	1998	3	0.461	0.426	0.493
females	UGA	Uganda	1998	4	0.444	0.410	0.477
females	UGA	Uganda	2003	1	0.488	0.447	0.527
females	UGA	Uganda	2003	2	0.439	0.392	0.487
females	UGA	Uganda	2003	3	0.456	0.413	0.497
females	UGA	Uganda	2003	4	0.438	0.394	0.486
females	ZAF	South Africa	1985	1	0.177	0.141	0.219
females	ZAF	South Africa	1985	2	0.195	0.152	0.241
females	ZAF	South Africa	1985	3	0.205	0.164	0.253
females	ZAF	South Africa	1985	4	0.197	0.158	0.243
females	ZAF	South Africa	1990	1	0.141	0.116	0.170
females	ZAF	South Africa	1990	2	0.156	0.128	0.187
females	ZAF	South Africa	1990	3	0.159	0.131	0.191
females	ZAF	South Africa	1990	4	0.156	0.130	0.188
females	ZAF	South Africa	1995	1	0.177	0.153	0.203
females	ZAF	South Africa	1995	2	0.191	0.166	0.222
females	ZAF	South Africa	1995	3	0.192	0.165	0.220
females	ZAF	South Africa	1995	4	0.190	0.164	0.219
females	ZMB	Zambia	1984	1	0.341	0.292	0.393
females	ZMB	Zambia	1984	2	0.366	0.315	0.422
females	ZMB	Zambia	1984	3	0.317	0.271	0.369
females	ZMB	Zambia	1984	4	0.376	0.323	0.434
females	ZMB	Zambia	1989	1	0.411	0.378	0.446
females	ZMB	Zambia	1989	2	0.440	0.407	0.474
females	ZMB	Zambia	1989	3	0.383	0.348	0.418

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	ZMB	Zambia	1989	4	0.447	0.413	0.484
females	ZMB	Zambia	1994	1	0.595	0.565	0.624
females	ZMB	Zambia	1994	2	0.565	0.532	0.599
females	ZMB	Zambia	1994	3	0.561	0.528	0.594
females	ZMB	Zambia	1994	4	0.636	0.605	0.668
females	ZMB	Zambia	1999	1	0.655	0.626	0.683
females	ZMB	Zambia	1999	2	0.601	0.569	0.633
females	ZMB	Zambia	1999	3	0.622	0.588	0.653
females	ZMB	Zambia	1999	4	0.605	0.574	0.638
females	ZMB	Zambia	2004	1	0.665	0.612	0.720
females	ZMB	Zambia	2004	2	0.603	0.546	0.664
females	ZMB	Zambia	2004	3	0.632	0.572	0.689
females	ZMB	Zambia	2004	4	0.608	0.552	0.667
females	ZWE	Zimbabwe	1982	1	0.209	0.167	0.257
females	ZWE	Zimbabwe	1982	2	0.225	0.179	0.271
females	ZWE	Zimbabwe	1982	3	0.242	0.194	0.294
females	ZWE	Zimbabwe	1982	4	0.231	0.184	0.285
females	ZWE	Zimbabwe	1987	1	0.132	0.109	0.159
females	ZWE	Zimbabwe	1987	2	0.143	0.118	0.175
females	ZWE	Zimbabwe	1987	3	0.152	0.124	0.183
females	ZWE	Zimbabwe	1987	4	0.146	0.120	0.177
females	ZWE	Zimbabwe	1992	1	0.298	0.268	0.327
females	ZWE	Zimbabwe	1992	2	0.278	0.247	0.311
females	ZWE	Zimbabwe	1992	3	0.335	0.299	0.370
females	ZWE	Zimbabwe	1992	4	0.326	0.290	0.361
females	ZWE	Zimbabwe	1997	1	0.471	0.438	0.506
females	ZWE	Zimbabwe	1997	2	0.425	0.391	0.461
females	ZWE	Zimbabwe	1997	3	0.518	0.480	0.557
females	ZWE	Zimbabwe	1997	4	0.428	0.393	0.460

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
females	ZWE	Zimbabwe	2002	1	0.664	0.633	0.694
females	ZWE	Zimbabwe	2002	2	0.611	0.576	0.647
females	ZWE	Zimbabwe	2002	3	0.706	0.675	0.738
females	ZWE	Zimbabwe	2002	4	0.615	0.579	0.648
males	BEN	Benin	1983	1	0.379	0.314	0.452
males	BEN	Benin	1983	2	0.375	0.309	0.443
males	BEN	Benin	1983	3	0.355	0.292	0.422
males	BEN	Benin	1983	4	0.357	0.295	0.424
males	BEN	Benin	1988	1	0.317	0.261	0.377
males	BEN	Benin	1988	2	0.316	0.259	0.377
males	BEN	Benin	1988	3	0.300	0.247	0.359
males	BEN	Benin	1988	4	0.302	0.251	0.363
males	BEN	Benin	1993	1	0.320	0.276	0.368
males	BEN	Benin	1993	2	0.320	0.281	0.362
males	BEN	Benin	1993	3	0.304	0.262	0.349
males	BEN	Benin	1993	4	0.304	0.264	0.345
males	BEN	Benin	1998	1	0.377	0.317	0.442
males	BEN	Benin	1998	2	0.378	0.320	0.438
males	BEN	Benin	1998	3	0.386	0.324	0.452
males	BEN	Benin	1998	4	0.397	0.340	0.463
males	BEN	Benin	2003	1	0.369	0.329	0.411
males	BEN	Benin	2003	2	0.373	0.335	0.415
males	BEN	Benin	2003	3	0.371	0.329	0.413
males	BEN	Benin	2003	4	0.385	0.344	0.428
males	BFA	Burkina Faso	1985	1	0.404	0.331	0.484
males	BFA	Burkina Faso	1985	2	0.399	0.327	0.472
males	BFA	Burkina Faso	1985	3	0.380	0.304	0.458
males	BFA	Burkina Faso	1985	4	0.380	0.307	0.456
males	BFA	Burkina Faso	1990	1	0.422	0.377	0.474

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	BFA	Burkina Faso	1990	2	0.421	0.374	0.472
males	BFA	Burkina Faso	1990	3	0.399	0.351	0.451
males	BFA	Burkina Faso	1990	4	0.400	0.352	0.453
males	BFA	Burkina Faso	1995	1	0.423	0.387	0.459
males	BFA	Burkina Faso	1995	2	0.424	0.389	0.462
males	BFA	Burkina Faso	1995	3	0.404	0.368	0.443
males	BFA	Burkina Faso	1995	4	0.405	0.371	0.441
males	BFA	Burkina Faso	2000	1	0.442	0.399	0.491
males	BFA	Burkina Faso	2000	2	0.447	0.400	0.494
males	BFA	Burkina Faso	2000	3	0.428	0.382	0.479
males	BFA	Burkina Faso	2000	4	0.428	0.383	0.478
males	BOL	Bolivia	1980	1	0.343	0.285	0.401
males	BOL	Bolivia	1980	2	0.340	0.282	0.402
males	BOL	Bolivia	1980	3	0.321	0.268	0.377
males	BOL	Bolivia	1980	4	0.322	0.271	0.378
males	BOL	Bolivia	1985	1	0.344	0.292	0.402
males	BOL	Bolivia	1985	2	0.344	0.290	0.405
males	BOL	Bolivia	1985	3	0.348	0.296	0.406
males	BOL	Bolivia	1985	4	0.361	0.309	0.422
males	BOL	Bolivia	1990	1	0.279	0.252	0.311
males	BOL	Bolivia	1990	2	0.281	0.252	0.311
males	BOL	Bolivia	1990	3	0.282	0.254	0.315
males	BOL	Bolivia	1990	4	0.295	0.264	0.327
males	BOL	Bolivia	1995	1	0.201	0.171	0.233
males	BOL	Bolivia	1995	2	0.203	0.172	0.239
males	BOL	Bolivia	1995	3	0.218	0.187	0.255
males	BOL	Bolivia	1995	4	0.213	0.182	0.246
males	BOL	Bolivia	2000	1	0.242	0.214	0.270
males	BOL	Bolivia	2000	2	0.245	0.216	0.274

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	BOL	Bolivia	2000	3	0.256	0.226	0.289
males	BOL	Bolivia	2000	4	0.252	0.222	0.285
males	BRA	Brazil	1983	1	0.234	0.197	0.275
males	BRA	Brazil	1983	2	0.236	0.200	0.274
males	BRA	Brazil	1983	3	0.254	0.211	0.298
males	BRA	Brazil	1983	4	0.248	0.207	0.289
males	BRA	Brazil	1988	1	0.216	0.188	0.247
males	BRA	Brazil	1988	2	0.219	0.190	0.250
males	BRA	Brazil	1988	3	0.231	0.201	0.265
males	BRA	Brazil	1988	4	0.227	0.197	0.258
males	BRA	Brazil	1993	1	0.252	0.230	0.273
males	BRA	Brazil	1993	2	0.256	0.235	0.279
males	BRA	Brazil	1993	3	0.265	0.241	0.290
males	BRA	Brazil	1993	4	0.262	0.238	0.287
males	CAF	Central African Republic	1981	1	0.499	0.414	0.601
males	CAF	Central African Republic	1981	2	0.494	0.404	0.587
males	CAF	Central African Republic	1981	3	0.472	0.379	0.570
males	CAF	Central African Republic	1981	4	0.474	0.388	0.568
males	CAF	Central African Republic	1986	1	0.564	0.499	0.628
males	CAF	Central African Republic	1986	2	0.565	0.503	0.635
males	CAF	Central African Republic	1986	3	0.539	0.477	0.606
males	CAF	Central African Republic	1986	4	0.542	0.477	0.606
males	CAF	Central African Republic	1991	1	0.583	0.537	0.633
males	CAF	Central African Republic	1991	2	0.589	0.539	0.640
males	CAF	Central African Republic	1991	3	0.588	0.539	0.640
males	CAF	Central African Republic	1991	4	0.609	0.560	0.657
males	CIV	Côte d'Ivoire	1982	1	0.306	0.251	0.364
males	CIV	Côte d'Ivoire	1982	2	0.302	0.249	0.361
males	CIV	Côte d'Ivoire	1982	3	0.286	0.237	0.343

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	CIV	Côte d'Ivoire	1982	4	0.288	0.235	0.347
males	CIV	Côte d'Ivoire	1987	1	0.387	0.338	0.445
males	CIV	Côte d'Ivoire	1987	2	0.385	0.332	0.437
males	CIV	Côte d'Ivoire	1987	3	0.394	0.340	0.456
males	CIV	Côte d'Ivoire	1987	4	0.407	0.355	0.465
males	CIV	Côte d'Ivoire	1992	1	0.458	0.407	0.511
males	CIV	Côte d'Ivoire	1992	2	0.458	0.407	0.510
males	CIV	Côte d'Ivoire	1992	3	0.465	0.413	0.519
males	CIV	Côte d'Ivoire	1992	4	0.478	0.428	0.527
males	CIV	Côte d'Ivoire	1997	1	0.500	0.418	0.590
males	CIV	Côte d'Ivoire	1997	2	0.524	0.439	0.615
males	CIV	Côte d'Ivoire	1997	3	0.507	0.426	0.592
males	CIV	Côte d'Ivoire	1997	4	0.519	0.436	0.614
males	CIV	Côte d'Ivoire	2002	1	0.541	0.465	0.616
males	CIV	Côte d'Ivoire	2002	2	0.554	0.465	0.642
males	CIV	Côte d'Ivoire	2002	3	0.544	0.469	0.623
males	CIV	Côte d'Ivoire	2002	4	0.563	0.486	0.646
males	CMR	Cameroon	1986	1	0.335	0.269	0.405
males	CMR	Cameroon	1986	2	0.334	0.269	0.402
males	CMR	Cameroon	1986	3	0.345	0.279	0.419
males	CMR	Cameroon	1986	4	0.354	0.288	0.427
males	CMR	Cameroon	1991	1	0.358	0.315	0.405
males	CMR	Cameroon	1991	2	0.357	0.315	0.402
males	CMR	Cameroon	1991	3	0.364	0.322	0.410
males	CMR	Cameroon	1991	4	0.377	0.333	0.421
males	CMR	Cameroon	1996	1	0.389	0.356	0.424
males	CMR	Cameroon	1996	2	0.391	0.353	0.427
males	CMR	Cameroon	1996	3	0.393	0.360	0.430
males	CMR	Cameroon	1996	4	0.408	0.372	0.443

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	CMR	Cameroon	2001	1	0.458	0.424	0.494
males	CMR	Cameroon	2001	2	0.471	0.434	0.509
males	CMR	Cameroon	2001	3	0.460	0.424	0.496
males	CMR	Cameroon	2001	4	0.477	0.442	0.513
males	COD	Dem Rep of the Congo	1994	1	0.471	0.410	0.537
males	COD	Dem Rep of the Congo	1994	2	0.474	0.413	0.534
males	COD	Dem Rep of the Congo	1994	3	0.448	0.384	0.508
males	COD	Dem Rep of the Congo	1994	4	0.450	0.386	0.516
males	COD	Dem Rep of the Congo	1999	1	0.500	0.441	0.562
males	COD	Dem Rep of the Congo	1999	2	0.505	0.445	0.571
males	COD	Dem Rep of the Congo	1999	3	0.442	0.386	0.502
males	COD	Dem Rep of the Congo	1999	4	0.443	0.386	0.505
males	COD	Dem Rep of the Congo	2004	1	0.478	0.411	0.550
males	COD	Dem Rep of the Congo	2004	2	0.482	0.414	0.557
males	COD	Dem Rep of the Congo	2004	3	0.432	0.365	0.505
males	COD	Dem Rep of the Congo	2004	4	0.433	0.364	0.509
males	COG	Congo (Rep.)	1992	1	0.455	0.394	0.517
males	COG	Congo (Rep.)	1992	2	0.490	0.418	0.564
males	COG	Congo (Rep.)	1992	3	0.493	0.425	0.563
males	COG	Congo (Rep.)	1992	4	0.480	0.416	0.548
males	COG	Congo (Rep.)	1997	1	0.641	0.579	0.707
males	COG	Congo (Rep.)	1997	2	0.664	0.596	0.729
males	COG	Congo (Rep.)	1997	3	0.573	0.506	0.638
males	COG	Congo (Rep.)	1997	4	0.577	0.515	0.644
males	COG	Congo (Rep.)	2002	1	0.514	0.437	0.596
males	COG	Congo (Rep.)	2002	2	0.525	0.441	0.610
males	COG	Congo (Rep.)	2002	3	0.460	0.392	0.536
males	COG	Congo (Rep.)	2002	4	0.461	0.390	0.537
males	DOM	Dominican Republic	1989	1	0.227	0.185	0.280

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	DOM	Dominican Republic	1989	2	0.229	0.181	0.285
males	DOM	Dominican Republic	1989	3	0.249	0.199	0.306
males	DOM	Dominican Republic	1989	4	0.242	0.193	0.299
males	DOM	Dominican Republic	1994	1	0.196	0.174	0.218
males	DOM	Dominican Republic	1994	2	0.200	0.178	0.222
males	DOM	Dominican Republic	1994	3	0.213	0.190	0.238
males	DOM	Dominican Republic	1994	4	0.209	0.185	0.236
males	DOM	Dominican Republic	1999	1	0.222	0.203	0.241
males	DOM	Dominican Republic	1999	2	0.226	0.207	0.247
males	DOM	Dominican Republic	1999	3	0.235	0.216	0.257
males	DOM	Dominican Republic	1999	4	0.232	0.213	0.253
males	DOM	Dominican Republic	2004	1	0.242	0.217	0.267
males	DOM	Dominican Republic	2004	2	0.247	0.223	0.271
males	DOM	Dominican Republic	2004	3	0.253	0.227	0.281
males	DOM	Dominican Republic	2004	4	0.250	0.227	0.276
males	ERI	Eritrea	1982	1	0.747	0.682	0.807
males	ERI	Eritrea	1982	2	0.747	0.689	0.809
males	ERI	Eritrea	1982	3	0.677	0.613	0.742
males	ERI	Eritrea	1982	4	0.677	0.615	0.742
males	ERI	Eritrea	1987	1	0.750	0.693	0.806
males	ERI	Eritrea	1987	2	0.751	0.688	0.807
males	ERI	Eritrea	1987	3	0.687	0.625	0.745
males	ERI	Eritrea	1987	4	0.689	0.627	0.751
males	ERI	Eritrea	1992	1	0.477	0.416	0.543
males	ERI	Eritrea	1992	2	0.479	0.423	0.545
males	ERI	Eritrea	1992	3	0.433	0.375	0.497
males	ERI	Eritrea	1992	4	0.432	0.378	0.490
males	ETH	Ethiopia	1982	1	0.635	0.590	0.680
males	ETH	Ethiopia	1982	2	0.635	0.590	0.681

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	ETH	Ethiopia	1982	3	0.611	0.558	0.660
males	ETH	Ethiopia	1982	4	0.613	0.562	0.661
males	ETH	Ethiopia	1987	1	0.593	0.564	0.626
males	ETH	Ethiopia	1987	2	0.594	0.566	0.622
males	ETH	Ethiopia	1987	3	0.572	0.539	0.603
males	ETH	Ethiopia	1987	4	0.574	0.545	0.604
males	ETH	Ethiopia	1992	1	0.573	0.545	0.599
males	ETH	Ethiopia	1992	2	0.575	0.548	0.602
males	ETH	Ethiopia	1992	3	0.554	0.522	0.585
males	ETH	Ethiopia	1992	4	0.555	0.526	0.586
males	ETH	Ethiopia	1997	1	0.545	0.520	0.572
males	ETH	Ethiopia	1997	2	0.548	0.522	0.578
males	ETH	Ethiopia	1997	3	0.550	0.521	0.577
males	ETH	Ethiopia	1997	4	0.565	0.537	0.595
males	ETH	Ethiopia	2002	1	0.507	0.465	0.550
males	ETH	Ethiopia	2002	2	0.519	0.472	0.566
males	ETH	Ethiopia	2002	3	0.510	0.466	0.556
males	ETH	Ethiopia	2002	4	0.524	0.478	0.570
males	GAB	Gabon	1987	1	0.278	0.207	0.357
males	GAB	Gabon	1987	2	0.275	0.204	0.361
males	GAB	Gabon	1987	3	0.310	0.235	0.399
males	GAB	Gabon	1987	4	0.297	0.224	0.383
males	GAB	Gabon	1992	1	0.342	0.269	0.423
males	GAB	Gabon	1992	2	0.344	0.278	0.422
males	GAB	Gabon	1992	3	0.376	0.303	0.456
males	GAB	Gabon	1992	4	0.365	0.290	0.453
males	GAB	Gabon	1997	1	0.370	0.322	0.419
males	GAB	Gabon	1997	2	0.372	0.322	0.427
males	GAB	Gabon	1997	3	0.397	0.346	0.453

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	GAB	Gabon	1997	4	0.387	0.336	0.441
males	GHA	Ghana	1994	1	0.252	0.241	0.264
males	GHA	Ghana	1994	2	0.253	0.241	0.265
males	GHA	Ghana	1994	3	0.257	0.243	0.270
males	GHA	Ghana	1994	4	0.268	0.255	0.282
males	GHA	Ghana	1999	1	0.322	0.314	0.331
males	GHA	Ghana	1999	2	0.326	0.316	0.335
males	GHA	Ghana	1999	3	0.345	0.335	0.356
males	GHA	Ghana	1999	4	0.339	0.329	0.349
males	GHA	Ghana	2004	1	0.365	0.360	0.369
males	GHA	Ghana	2004	2	0.370	0.358	0.385
males	GHA	Ghana	2004	3	0.384	0.376	0.391
males	GHA	Ghana	2004	4	0.379	0.372	0.386
males	GIN	Guinea	1987	1	0.321	0.271	0.381
males	GIN	Guinea	1987	2	0.318	0.264	0.379
males	GIN	Guinea	1987	3	0.299	0.244	0.357
males	GIN	Guinea	1987	4	0.301	0.249	0.363
males	GIN	Guinea	1992	1	0.345	0.304	0.390
males	GIN	Guinea	1992	2	0.345	0.303	0.388
males	GIN	Guinea	1992	3	0.327	0.288	0.372
males	GIN	Guinea	1992	4	0.327	0.286	0.371
males	GIN	Guinea	1997	1	0.373	0.335	0.418
males	GIN	Guinea	1997	2	0.376	0.336	0.416
males	GIN	Guinea	1997	3	0.359	0.318	0.403
males	GIN	Guinea	1997	4	0.359	0.318	0.406
males	GIN	Guinea	2002	1	0.428	0.378	0.479
males	GIN	Guinea	2002	2	0.432	0.387	0.485
males	GIN	Guinea	2002	3	0.426	0.375	0.478
males	GIN	Guinea	2002	4	0.443	0.392	0.496

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	GTM	Guatemala	1982	1	0.391	0.336	0.450
males	GTM	Guatemala	1982	2	0.390	0.329	0.452
males	GTM	Guatemala	1982	3	0.333	0.284	0.385
males	GTM	Guatemala	1982	4	0.336	0.283	0.394
males	GTM	Guatemala	1987	1	0.257	0.222	0.296
males	GTM	Guatemala	1987	2	0.259	0.226	0.296
males	GTM	Guatemala	1987	3	0.222	0.191	0.258
males	GTM	Guatemala	1987	4	0.222	0.190	0.255
males	GTM	Guatemala	1992	1	0.263	0.227	0.301
males	GTM	Guatemala	1992	2	0.266	0.230	0.305
males	GTM	Guatemala	1992	3	0.280	0.242	0.318
males	GTM	Guatemala	1992	4	0.275	0.237	0.314
males	HTI	Haiti	1987	1	0.542	0.441	0.644
males	HTI	Haiti	1987	2	0.544	0.451	0.637
males	HTI	Haiti	1987	3	0.518	0.427	0.614
males	HTI	Haiti	1987	4	0.519	0.418	0.620
males	HTI	Haiti	1992	1	0.454	0.416	0.496
males	HTI	Haiti	1992	2	0.457	0.414	0.498
males	HTI	Haiti	1992	3	0.458	0.418	0.502
males	HTI	Haiti	1992	4	0.476	0.437	0.516
males	HTI	Haiti	1997	1	0.417	0.371	0.468
males	HTI	Haiti	1997	2	0.421	0.374	0.470
males	HTI	Haiti	1997	3	0.418	0.371	0.471
males	HTI	Haiti	1997	4	0.436	0.390	0.490
males	HTI	Haiti	2002	1	0.363	0.317	0.410
males	HTI	Haiti	2002	2	0.371	0.322	0.426
males	HTI	Haiti	2002	3	0.385	0.335	0.434
males	HTI	Haiti	2002	4	0.378	0.333	0.428
males	IDN	Indonesia	1984	1	0.184	0.160	0.208

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	IDN	Indonesia	1984	2	0.184	0.162	0.208
males	IDN	Indonesia	1984	3	0.187	0.163	0.213
males	IDN	Indonesia	1984	4	0.197	0.173	0.221
males	IDN	Indonesia	1989	1	0.191	0.173	0.210
males	IDN	Indonesia	1989	2	0.194	0.175	0.213
males	IDN	Indonesia	1989	3	0.207	0.187	0.227
males	IDN	Indonesia	1989	4	0.203	0.184	0.225
males	IDN	Indonesia	1994	1	0.189	0.173	0.205
males	IDN	Indonesia	1994	2	0.193	0.177	0.210
males	IDN	Indonesia	1994	3	0.203	0.185	0.222
males	IDN	Indonesia	1994	4	0.201	0.184	0.219
males	IDN	Indonesia	1999	1	0.177	0.160	0.195
males	IDN	Indonesia	1999	2	0.182	0.164	0.199
males	IDN	Indonesia	1999	3	0.188	0.171	0.207
males	IDN	Indonesia	1999	4	0.186	0.169	0.205
males	IDN	Indonesia	2004	1	0.220	0.199	0.241
males	IDN	Indonesia	2004	2	0.226	0.206	0.249
males	IDN	Indonesia	2004	3	0.230	0.207	0.253
males	IDN	Indonesia	2004	4	0.229	0.207	0.254
males	KEN	Kenya	1985	1	0.256	0.195	0.322
males	KEN	Kenya	1985	2	0.253	0.196	0.318
males	KEN	Kenya	1985	3	0.283	0.218	0.354
males	KEN	Kenya	1985	4	0.274	0.214	0.348
males	KEN	Kenya	1990	1	0.282	0.249	0.317
males	KEN	Kenya	1990	2	0.282	0.247	0.318
males	KEN	Kenya	1990	3	0.306	0.270	0.345
males	KEN	Kenya	1990	4	0.299	0.263	0.338
males	KEN	Kenya	1995	1	0.385	0.351	0.421
males	KEN	Kenya	1995	2	0.396	0.358	0.433

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	KEN	Kenya	1995	3	0.410	0.375	0.448
males	KEN	Kenya	1995	4	0.403	0.367	0.440
males	KEN	Kenya	2000	1	0.456	0.414	0.504
males	KEN	Kenya	2000	2	0.429	0.383	0.473
males	KEN	Kenya	2000	3	0.481	0.430	0.528
males	KEN	Kenya	2000	4	0.465	0.418	0.513
males	KHM	Cambodia	1987	1	0.509	0.456	0.565
males	KHM	Cambodia	1987	2	0.506	0.451	0.562
males	KHM	Cambodia	1987	3	0.441	0.388	0.499
males	KHM	Cambodia	1987	4	0.441	0.390	0.496
males	KHM	Cambodia	1992	1	0.404	0.372	0.440
males	KHM	Cambodia	1992	2	0.406	0.373	0.440
males	KHM	Cambodia	1992	3	0.351	0.317	0.385
males	KHM	Cambodia	1992	4	0.352	0.320	0.386
males	KHM	Cambodia	1997	1	0.380	0.354	0.409
males	KHM	Cambodia	1997	2	0.385	0.356	0.414
males	KHM	Cambodia	1997	3	0.341	0.312	0.373
males	KHM	Cambodia	1997	4	0.340	0.313	0.370
males	KHM	Cambodia	2002	1	0.385	0.355	0.414
males	KHM	Cambodia	2002	2	0.391	0.358	0.425
males	KHM	Cambodia	2002	3	0.406	0.373	0.438
males	KHM	Cambodia	2002	4	0.399	0.369	0.433
males	LBR	Liberia	1993	1	0.352	0.280	0.432
males	LBR	Liberia	1993	2	0.347	0.276	0.427
males	LBR	Liberia	1993	3	0.297	0.235	0.368
males	LBR	Liberia	1993	4	0.299	0.233	0.380
males	LBR	Liberia	1998	1	0.392	0.329	0.459
males	LBR	Liberia	1998	2	0.394	0.330	0.461
males	LBR	Liberia	1998	3	0.341	0.282	0.398

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	LBR	Liberia	1998	4	0.341	0.284	0.407
males	LBR	Liberia	2003	1	0.440	0.377	0.504
males	LBR	Liberia	2003	2	0.445	0.385	0.509
males	LBR	Liberia	2003	3	0.398	0.338	0.460
males	LBR	Liberia	2003	4	0.397	0.339	0.457
males	LSO	Lesotho	1991	1	0.429	0.373	0.491
males	LSO	Lesotho	1991	2	0.431	0.373	0.493
males	LSO	Lesotho	1991	3	0.460	0.396	0.524
males	LSO	Lesotho	1991	4	0.452	0.388	0.515
males	LSO	Lesotho	1996	1	0.539	0.487	0.590
males	LSO	Lesotho	1996	2	0.553	0.498	0.607
males	LSO	Lesotho	1996	3	0.567	0.512	0.619
males	LSO	Lesotho	1996	4	0.558	0.508	0.605
males	LSO	Lesotho	2001	1	0.757	0.727	0.787
males	LSO	Lesotho	2001	2	0.759	0.725	0.793
males	LSO	Lesotho	2001	3	0.779	0.747	0.810
males	LSO	Lesotho	2001	4	0.768	0.735	0.799
males	MAR	Morocco	1980	1	0.237	0.197	0.278
males	MAR	Morocco	1980	2	0.234	0.196	0.275
males	MAR	Morocco	1980	3	0.245	0.205	0.291
males	MAR	Morocco	1980	4	0.254	0.215	0.298
males	MAR	Morocco	1985	1	0.165	0.136	0.197
males	MAR	Morocco	1985	2	0.166	0.138	0.196
males	MAR	Morocco	1985	3	0.168	0.139	0.201
males	MAR	Morocco	1985	4	0.176	0.144	0.209
males	MAR	Morocco	1990	1	0.152	0.135	0.173
males	MAR	Morocco	1990	2	0.154	0.136	0.173
males	MAR	Morocco	1990	3	0.166	0.146	0.187
males	MAR	Morocco	1990	4	0.163	0.144	0.186

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	MAR	Morocco	1995	1	0.146	0.125	0.170
males	MAR	Morocco	1995	2	0.147	0.126	0.170
males	MAR	Morocco	1995	3	0.159	0.136	0.186
males	MAR	Morocco	1995	4	0.156	0.133	0.181
males	MAR	Morocco	2000	1	0.126	0.110	0.145
males	MAR	Morocco	2000	2	0.128	0.111	0.147
males	MAR	Morocco	2000	3	0.134	0.117	0.151
males	MAR	Morocco	2000	4	0.132	0.115	0.150
males	MDG	Madagascar	1980	1	0.343	0.291	0.395
males	MDG	Madagascar	1980	2	0.340	0.293	0.390
males	MDG	Madagascar	1980	3	0.320	0.273	0.371
males	MDG	Madagascar	1980	4	0.323	0.275	0.376
males	MDG	Madagascar	1985	1	0.380	0.342	0.421
males	MDG	Madagascar	1985	2	0.381	0.342	0.425
males	MDG	Madagascar	1985	3	0.359	0.320	0.402
males	MDG	Madagascar	1985	4	0.361	0.319	0.402
males	MDG	Madagascar	1990	1	0.366	0.335	0.400
males	MDG	Madagascar	1990	2	0.368	0.336	0.405
males	MDG	Madagascar	1990	3	0.370	0.335	0.405
males	MDG	Madagascar	1990	4	0.387	0.354	0.423
males	MDG	Madagascar	1995	1	0.364	0.324	0.409
males	MDG	Madagascar	1995	2	0.369	0.329	0.410
males	MDG	Madagascar	1995	3	0.366	0.325	0.414
males	MDG	Madagascar	1995	4	0.384	0.341	0.429
males	MDG	Madagascar	2000	1	0.323	0.281	0.368
males	MDG	Madagascar	2000	2	0.329	0.286	0.376
males	MDG	Madagascar	2000	3	0.321	0.276	0.371
males	MDG	Madagascar	2000	4	0.338	0.294	0.383
males	MLI	Mali	1983	1	0.403	0.344	0.468

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	MLI	Mali	1983	2	0.400	0.339	0.465
males	MLI	Mali	1983	3	0.377	0.316	0.444
males	MLI	Mali	1983	4	0.381	0.321	0.447
males	MLI	Mali	1988	1	0.346	0.312	0.381
males	MLI	Mali	1988	2	0.347	0.310	0.385
males	MLI	Mali	1988	3	0.326	0.287	0.369
males	MLI	Mali	1988	4	0.327	0.290	0.366
males	MLI	Mali	1993	1	0.353	0.320	0.388
males	MLI	Mali	1993	2	0.352	0.320	0.386
males	MLI	Mali	1993	3	0.334	0.302	0.367
males	MLI	Mali	1993	4	0.335	0.303	0.368
males	MLI	Mali	1998	1	0.377	0.348	0.409
males	MLI	Mali	1998	2	0.380	0.351	0.414
males	MLI	Mali	1998	3	0.361	0.330	0.397
males	MLI	Mali	1998	4	0.362	0.331	0.396
males	MLI	Mali	2003	1	0.391	0.345	0.437
males	MLI	Mali	2003	2	0.394	0.353	0.441
males	MLI	Mali	2003	3	0.376	0.332	0.422
males	MLI	Mali	2003	4	0.375	0.332	0.424
males	MOZ	Mozambique	1985	1	0.378	0.291	0.471
males	MOZ	Mozambique	1985	2	0.375	0.291	0.458
males	MOZ	Mozambique	1985	3	0.316	0.243	0.399
males	MOZ	Mozambique	1985	4	0.319	0.250	0.406
males	MOZ	Mozambique	1990	1	0.435	0.380	0.494
males	MOZ	Mozambique	1990	2	0.433	0.377	0.492
males	MOZ	Mozambique	1990	3	0.375	0.321	0.429
males	MOZ	Mozambique	1990	4	0.375	0.323	0.430
males	MOZ	Mozambique	1995	1	0.390	0.342	0.440
males	MOZ	Mozambique	1995	2	0.392	0.345	0.445

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	MOZ	Mozambique	1995	3	0.339	0.295	0.385
males	MOZ	Mozambique	1995	4	0.340	0.298	0.385
males	MOZ	Mozambique	2000	1	0.508	0.461	0.555
males	MOZ	Mozambique	2000	2	0.519	0.471	0.563
males	MOZ	Mozambique	2000	3	0.492	0.447	0.540
males	MOZ	Mozambique	2000	4	0.491	0.449	0.537
males	MRT	Mauritania	1987	1	0.306	0.210	0.422
males	MRT	Mauritania	1987	2	0.301	0.207	0.410
males	MRT	Mauritania	1987	3	0.315	0.220	0.431
males	MRT	Mauritania	1987	4	0.328	0.227	0.449
males	MRT	Mauritania	1992	1	0.282	0.231	0.336
males	MRT	Mauritania	1992	2	0.282	0.233	0.340
males	MRT	Mauritania	1992	3	0.287	0.233	0.343
males	MRT	Mauritania	1992	4	0.299	0.248	0.356
males	MRT	Mauritania	1997	1	0.269	0.217	0.326
males	MRT	Mauritania	1997	2	0.272	0.223	0.328
males	MRT	Mauritania	1997	3	0.270	0.219	0.332
males	MRT	Mauritania	1997	4	0.285	0.233	0.345
males	MWI	Malawi	1981	1	0.277	0.189	0.383
males	MWI	Malawi	1981	2	0.275	0.188	0.378
males	MWI	Malawi	1981	3	0.260	0.181	0.363
males	MWI	Malawi	1981	4	0.262	0.181	0.362
males	MWI	Malawi	1986	1	0.353	0.307	0.404
males	MWI	Malawi	1986	2	0.352	0.306	0.400
males	MWI	Malawi	1986	3	0.332	0.287	0.379
males	MWI	Malawi	1986	4	0.333	0.287	0.381
males	MWI	Malawi	1991	1	0.473	0.428	0.517
males	MWI	Malawi	1991	2	0.473	0.430	0.517
males	MWI	Malawi	1991	3	0.451	0.404	0.496

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	MWI	Malawi	1991	4	0.453	0.406	0.499
males	MWI	Malawi	1996	1	0.598	0.568	0.624
males	MWI	Malawi	1996	2	0.617	0.585	0.652
males	MWI	Malawi	1996	3	0.578	0.544	0.610
males	MWI	Malawi	1996	4	0.578	0.548	0.610
males	MWI	Malawi	2001	1	0.756	0.724	0.787
males	MWI	Malawi	2001	2	0.767	0.733	0.801
males	MWI	Malawi	2001	3	0.758	0.723	0.790
males	MWI	Malawi	2001	4	0.775	0.741	0.807
males	NAM	Namibia	1983	1	0.485	0.427	0.542
males	NAM	Namibia	1983	2	0.484	0.426	0.547
males	NAM	Namibia	1983	3	0.519	0.456	0.586
males	NAM	Namibia	1983	4	0.508	0.444	0.568
males	NAM	Namibia	1988	1	0.453	0.408	0.503
males	NAM	Namibia	1988	2	0.455	0.406	0.502
males	NAM	Namibia	1988	3	0.485	0.438	0.534
males	NAM	Namibia	1988	4	0.475	0.433	0.522
males	NAM	Namibia	1993	1	0.401	0.359	0.447
males	NAM	Namibia	1993	2	0.401	0.358	0.447
males	NAM	Namibia	1993	3	0.429	0.386	0.477
males	NAM	Namibia	1993	4	0.421	0.376	0.468
males	NAM	Namibia	1998	1	0.560	0.525	0.593
males	NAM	Namibia	1998	2	0.575	0.538	0.611
males	NAM	Namibia	1998	3	0.590	0.556	0.624
males	NAM	Namibia	1998	4	0.581	0.548	0.614
males	NAM	Namibia	2003	1	0.691	0.653	0.729
males	NAM	Namibia	2003	2	0.658	0.617	0.699
males	NAM	Namibia	2003	3	0.715	0.676	0.753
males	NAM	Namibia	2003	4	0.699	0.660	0.737

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	NER	Niger	1983	1	0.496	0.428	0.568
males	NER	Niger	1983	2	0.492	0.418	0.568
males	NER	Niger	1983	3	0.473	0.404	0.546
males	NER	Niger	1983	4	0.474	0.404	0.544
males	NER	Niger	1988	1	0.402	0.336	0.469
males	NER	Niger	1988	2	0.402	0.336	0.475
males	NER	Niger	1988	3	0.385	0.323	0.455
males	NER	Niger	1988	4	0.387	0.323	0.458
males	NER	Niger	1993	1	0.318	0.263	0.380
males	NER	Niger	1993	2	0.317	0.265	0.378
males	NER	Niger	1993	3	0.298	0.248	0.354
males	NER	Niger	1993	4	0.301	0.248	0.358
males	NER	Niger	1998	1	0.285	0.246	0.327
males	NER	Niger	1998	2	0.287	0.248	0.333
males	NER	Niger	1998	3	0.270	0.233	0.313
males	NER	Niger	1998	4	0.269	0.231	0.312
males	NER	Niger	2003	1	0.273	0.236	0.312
males	NER	Niger	2003	2	0.279	0.245	0.316
males	NER	Niger	2003	3	0.264	0.230	0.304
males	NER	Niger	2003	4	0.264	0.227	0.303
males	NPL	Nepal	1993	1	0.241	0.192	0.298
males	NPL	Nepal	1993	2	0.241	0.194	0.295
males	NPL	Nepal	1993	3	0.248	0.199	0.304
males	NPL	Nepal	1993	4	0.256	0.206	0.315
males	NPL	Nepal	1998	1	0.251	0.203	0.304
males	NPL	Nepal	1998	2	0.250	0.202	0.307
males	NPL	Nepal	1998	3	0.269	0.221	0.325
males	NPL	Nepal	1998	4	0.264	0.217	0.321
males	NPL	Nepal	2003	1	0.170	0.136	0.212

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	NPL	Nepal	2003	2	0.173	0.135	0.218
males	NPL	Nepal	2003	3	0.182	0.144	0.227
males	NPL	Nepal	2003	4	0.178	0.143	0.220
males	PER	Peru	1980	1	0.235	0.205	0.269
males	PER	Peru	1980	2	0.235	0.205	0.266
males	PER	Peru	1980	3	0.241	0.212	0.273
males	PER	Peru	1980	4	0.250	0.218	0.284
males	PER	Peru	1985	1	0.234	0.215	0.255
males	PER	Peru	1985	2	0.235	0.217	0.256
males	PER	Peru	1985	3	0.254	0.235	0.274
males	PER	Peru	1985	4	0.248	0.228	0.271
males	PER	Peru	1990	1	0.238	0.223	0.254
males	PER	Peru	1990	2	0.240	0.224	0.257
males	PER	Peru	1990	3	0.257	0.240	0.275
males	PER	Peru	1990	4	0.251	0.234	0.269
males	PER	Peru	1995	1	0.193	0.179	0.208
males	PER	Peru	1995	2	0.196	0.180	0.212
males	PER	Peru	1995	3	0.206	0.190	0.222
males	PER	Peru	1995	4	0.202	0.187	0.219
males	PER	Peru	2000	1	0.147	0.129	0.167
males	PER	Peru	2000	2	0.149	0.131	0.169
males	PER	Peru	2000	3	0.155	0.136	0.176
males	PER	Peru	2000	4	0.153	0.135	0.174
males	PHL	Philippines	1985	1	0.283	0.261	0.308
males	PHL	Philippines	1985	2	0.285	0.262	0.310
males	PHL	Philippines	1985	3	0.307	0.283	0.331
males	PHL	Philippines	1985	4	0.300	0.275	0.325
males	PHL	Philippines	1990	1	0.245	0.230	0.263
males	PHL	Philippines	1990	2	0.249	0.233	0.266

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	PHL	Philippines	1990	3	0.261	0.243	0.280
males	PHL	Philippines	1990	4	0.258	0.239	0.277
males	PHL	Philippines	1995	1	0.227	0.208	0.248
males	PHL	Philippines	1995	2	0.232	0.212	0.252
males	PHL	Philippines	1995	3	0.240	0.219	0.262
males	PHL	Philippines	1995	4	0.236	0.215	0.258
males	RWA	Rwanda	1988	1	0.504	0.457	0.551
males	RWA	Rwanda	1988	2	0.507	0.461	0.554
males	RWA	Rwanda	1988	3	0.481	0.430	0.531
males	RWA	Rwanda	1988	4	0.483	0.436	0.533
males	RWA	Rwanda	1993	1	0.996	0.995	0.998
males	RWA	Rwanda	1993	2	0.994	0.991	0.996
males	RWA	Rwanda	1993	3	0.991	0.988	0.994
males	RWA	Rwanda	1993	4	0.992	0.988	0.995
males	RWA	Rwanda	1998	1	0.803	0.773	0.833
males	RWA	Rwanda	1998	2	0.773	0.738	0.807
males	RWA	Rwanda	1998	3	0.750	0.715	0.783
males	RWA	Rwanda	1998	4	0.752	0.719	0.785
males	RWA	Rwanda	2003	1	0.522	0.482	0.558
males	RWA	Rwanda	2003	2	0.534	0.490	0.580
males	RWA	Rwanda	2003	3	0.475	0.434	0.517
males	RWA	Rwanda	2003	4	0.475	0.434	0.519
males	SDN	Sudan	1976	1	0.318	0.304	0.332
males	SDN	Sudan	1976	2	0.316	0.301	0.330
males	SDN	Sudan	1976	3	0.329	0.312	0.346
males	SDN	Sudan	1976	4	0.339	0.323	0.355
males	SDN	Sudan	1981	1	0.280	0.273	0.288
males	SDN	Sudan	1981	2	0.282	0.273	0.290
males	SDN	Sudan	1981	3	0.285	0.274	0.296

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	SDN	Sudan	1981	4	0.297	0.287	0.306
males	SDN	Sudan	1986	1	0.256	0.252	0.260
males	SDN	Sudan	1986	2	0.260	0.255	0.265
males	SDN	Sudan	1986	3	0.257	0.249	0.265
males	SDN	Sudan	1986	4	0.269	0.264	0.276
males	SEN	Senegal	1982	1	0.345	0.274	0.424
males	SEN	Senegal	1982	2	0.345	0.274	0.427
males	SEN	Senegal	1982	3	0.325	0.262	0.405
males	SEN	Senegal	1982	4	0.327	0.259	0.406
males	SEN	Senegal	1987	1	0.320	0.266	0.379
males	SEN	Senegal	1987	2	0.323	0.269	0.385
males	SEN	Senegal	1987	3	0.306	0.252	0.371
males	SEN	Senegal	1987	4	0.305	0.256	0.364
males	SEN	Senegal	1992	1	0.307	0.270	0.349
males	SEN	Senegal	1992	2	0.308	0.267	0.351
males	SEN	Senegal	1992	3	0.312	0.273	0.357
males	SEN	Senegal	1992	4	0.326	0.285	0.370
males	SEN	Senegal	1997	1	0.263	0.225	0.303
males	SEN	Senegal	1997	2	0.264	0.226	0.307
males	SEN	Senegal	1997	3	0.267	0.227	0.311
males	SEN	Senegal	1997	4	0.277	0.236	0.323
males	SEN	Senegal	2002	1	0.262	0.233	0.293
males	SEN	Senegal	2002	2	0.265	0.235	0.298
males	SEN	Senegal	2002	3	0.263	0.232	0.295
males	SEN	Senegal	2002	4	0.274	0.243	0.304
males	SWZ	Swaziland	1993	1	0.373	0.305	0.452
males	SWZ	Swaziland	1993	2	0.372	0.295	0.456
males	SWZ	Swaziland	1993	3	0.403	0.324	0.488
males	SWZ	Swaziland	1993	4	0.395	0.313	0.488

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	SWZ	Swaziland	1998	1	0.616	0.554	0.677
males	SWZ	Swaziland	1998	2	0.637	0.577	0.704
males	SWZ	Swaziland	1998	3	0.651	0.590	0.714
males	SWZ	Swaziland	1998	4	0.640	0.581	0.699
males	SWZ	Swaziland	2003	1	0.802	0.773	0.832
males	SWZ	Swaziland	2003	2	0.808	0.775	0.839
males	SWZ	Swaziland	2003	3	0.825	0.795	0.853
males	SWZ	Swaziland	2003	4	0.815	0.783	0.846
males	TCD	Chad	1986	1	0.383	0.321	0.448
males	TCD	Chad	1986	2	0.382	0.319	0.453
males	TCD	Chad	1986	3	0.321	0.268	0.383
males	TCD	Chad	1986	4	0.323	0.265	0.386
males	TCD	Chad	1991	1	0.374	0.329	0.424
males	TCD	Chad	1991	2	0.374	0.327	0.419
males	TCD	Chad	1991	3	0.319	0.278	0.365
males	TCD	Chad	1991	4	0.319	0.279	0.365
males	TCD	Chad	1996	1	0.384	0.344	0.426
males	TCD	Chad	1996	2	0.384	0.344	0.432
males	TCD	Chad	1996	3	0.331	0.293	0.373
males	TCD	Chad	1996	4	0.333	0.293	0.374
males	TCD	Chad	2001	1	0.408	0.358	0.464
males	TCD	Chad	2001	2	0.422	0.367	0.479
males	TCD	Chad	2001	3	0.394	0.346	0.444
males	TCD	Chad	2001	4	0.394	0.346	0.440
males	TGO	Togo	1985	1	0.315	0.265	0.375
males	TGO	Togo	1985	2	0.314	0.263	0.372
males	TGO	Togo	1985	3	0.323	0.273	0.380
males	TGO	Togo	1985	4	0.336	0.287	0.398
males	TGO	Togo	1990	1	0.275	0.229	0.323

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	TGO	Togo	1990	2	0.277	0.233	0.326
males	TGO	Togo	1990	3	0.277	0.231	0.326
males	TGO	Togo	1990	4	0.292	0.241	0.344
males	TGO	Togo	1995	1	0.339	0.294	0.389
males	TGO	Togo	1995	2	0.343	0.299	0.389
males	TGO	Togo	1995	3	0.338	0.294	0.384
males	TGO	Togo	1995	4	0.353	0.309	0.397
males	TZA	United Republic of Tanzania	1986	1	0.267	0.216	0.325
males	TZA	United Republic of Tanzania	1986	2	0.267	0.213	0.332
males	TZA	United Republic of Tanzania	1986	3	0.276	0.223	0.335
males	TZA	United Republic of Tanzania	1986	4	0.286	0.229	0.352
males	TZA	United Republic of Tanzania	1991	1	0.385	0.343	0.431
males	TZA	United Republic of Tanzania	1991	2	0.387	0.347	0.433
males	TZA	United Republic of Tanzania	1991	3	0.394	0.350	0.439
males	TZA	United Republic of Tanzania	1991	4	0.407	0.361	0.452
males	TZA	United Republic of Tanzania	1996	1	0.471	0.429	0.513
males	TZA	United Republic of Tanzania	1996	2	0.487	0.442	0.535
males	TZA	United Republic of Tanzania	1996	3	0.475	0.430	0.519
males	TZA	United Republic of Tanzania	1996	4	0.492	0.449	0.535
males	TZA	United Republic of Tanzania	2001	1	0.500	0.450	0.551
males	TZA	United Republic of Tanzania	2001	2	0.468	0.417	0.525
males	TZA	United Republic of Tanzania	2001	3	0.499	0.449	0.552
males	TZA	United Republic of Tanzania	2001	4	0.511	0.458	0.568
males	UGA	Uganda	1983	1	0.472	0.414	0.533
males	UGA	Uganda	1983	2	0.465	0.406	0.525
males	UGA	Uganda	1983	3	0.400	0.345	0.456
males	UGA	Uganda	1983	4	0.403	0.345	0.460
males	UGA	Uganda	1988	1	0.572	0.531	0.615
males	UGA	Uganda	1988	2	0.601	0.554	0.649

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	UGA	Uganda	1988	3	0.501	0.459	0.543
males	UGA	Uganda	1988	4	0.501	0.459	0.545
males	UGA	Uganda	1993	1	0.635	0.604	0.666
males	UGA	Uganda	1993	2	0.596	0.557	0.637
males	UGA	Uganda	1993	3	0.569	0.535	0.604
males	UGA	Uganda	1993	4	0.570	0.534	0.606
males	UGA	Uganda	1998	1	0.630	0.595	0.668
males	UGA	Uganda	1998	2	0.643	0.605	0.682
males	UGA	Uganda	1998	3	0.635	0.596	0.673
males	UGA	Uganda	1998	4	0.653	0.614	0.694
males	UGA	Uganda	2003	1	0.606	0.564	0.647
males	UGA	Uganda	2003	2	0.572	0.528	0.618
males	UGA	Uganda	2003	3	0.606	0.564	0.647
males	UGA	Uganda	2003	4	0.616	0.571	0.661
males	ZAF	South Africa	1985	1	0.381	0.321	0.445
males	ZAF	South Africa	1985	2	0.382	0.320	0.448
males	ZAF	South Africa	1985	3	0.410	0.342	0.477
males	ZAF	South Africa	1985	4	0.402	0.342	0.471
males	ZAF	South Africa	1990	1	0.360	0.314	0.409
males	ZAF	South Africa	1990	2	0.366	0.324	0.415
males	ZAF	South Africa	1990	3	0.384	0.338	0.431
males	ZAF	South Africa	1990	4	0.377	0.333	0.422
males	ZAF	South Africa	1995	1	0.432	0.390	0.475
males	ZAF	South Africa	1995	2	0.436	0.393	0.483
males	ZAF	South Africa	1995	3	0.449	0.405	0.492
males	ZAF	South Africa	1995	4	0.444	0.402	0.489
males	ZMB	Zambia	1984	1	0.428	0.378	0.486
males	ZMB	Zambia	1984	2	0.425	0.368	0.483
males	ZMB	Zambia	1984	3	0.443	0.389	0.502

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	ZMB	Zambia	1984	4	0.453	0.396	0.515
males	ZMB	Zambia	1989	1	0.504	0.468	0.541
males	ZMB	Zambia	1989	2	0.502	0.467	0.538
males	ZMB	Zambia	1989	3	0.514	0.477	0.552
males	ZMB	Zambia	1989	4	0.529	0.490	0.567
males	ZMB	Zambia	1994	1	0.696	0.671	0.722
males	ZMB	Zambia	1994	2	0.717	0.686	0.750
males	ZMB	Zambia	1994	3	0.704	0.674	0.733
males	ZMB	Zambia	1994	4	0.719	0.690	0.749
males	ZMB	Zambia	1999	1	0.726	0.699	0.755
males	ZMB	Zambia	1999	2	0.740	0.708	0.774
males	ZMB	Zambia	1999	3	0.730	0.701	0.761
males	ZMB	Zambia	1999	4	0.751	0.717	0.781
males	ZMB	Zambia	2004	1	0.724	0.683	0.761
males	ZMB	Zambia	2004	2	0.726	0.685	0.767
males	ZMB	Zambia	2004	3	0.726	0.682	0.768
males	ZMB	Zambia	2004	4	0.737	0.694	0.777
males	ZWE	Zimbabwe	1982	1	0.349	0.300	0.401
males	ZWE	Zimbabwe	1982	2	0.348	0.296	0.396
males	ZWE	Zimbabwe	1982	3	0.382	0.330	0.441
males	ZWE	Zimbabwe	1982	4	0.371	0.321	0.427
males	ZWE	Zimbabwe	1987	1	0.273	0.238	0.311
males	ZWE	Zimbabwe	1987	2	0.273	0.235	0.315
males	ZWE	Zimbabwe	1987	3	0.297	0.258	0.342
males	ZWE	Zimbabwe	1987	4	0.289	0.252	0.332
males	ZWE	Zimbabwe	1992	1	0.377	0.347	0.409
males	ZWE	Zimbabwe	1992	2	0.393	0.357	0.426
males	ZWE	Zimbabwe	1992	3	0.405	0.376	0.436
males	ZWE	Zimbabwe	1992	4	0.397	0.365	0.427

Sex	ISO	Country	Year	Model	45q15	Lower bound	Upper bound
males	ZWE	Zimbabwe	1997	1	0.622	0.587	0.655
males	ZWE	Zimbabwe	1997	2	0.634	0.598	0.670
males	ZWE	Zimbabwe	1997	3	0.653	0.622	0.684
males	ZWE	Zimbabwe	1997	4	0.645	0.610	0.678
males	ZWE	Zimbabwe	2002	1	0.767	0.741	0.795
males	ZWE	Zimbabwe	2002	2	0.772	0.744	0.802
males	ZWE	Zimbabwe	2002	3	0.792	0.765	0.818
males	ZWE	Zimbabwe	2002	4	0.781	0.752	0.809

Appendix table 3: Estimated 45q15 and 95% uncertainty intervals for all country-periods, Models 1-4

Figure Legends:

Figure 1: Age patterns from all four models. Model 1 groups country-periods into a single age pattern. Model 2 groups country-periods according to level of HIV sero-prevalence. Model 3 groups country-periods by history of war and levels of 5q0, and Model 4 is a hybrid model containing one group of country-periods with history of war, one group with high levels (7+%) of HIV seroprevalence, and two groups based on 5q0 levels, low and high.

Figure 2: A step-by-step look at each of the adjustments in the Corrected Sibling Survival (CSS) Method: the effects on mortality estimates of the Gakidou-King survival bias adjustment, adjusting for recall, and the zero-female-survivor correction.

Figure 3: Country-specific estimates of recall bias as measured by the TiPS coefficient compared to the overall estimate from CSS model (red line)

Figure 4: Estimates of 45q15 from the CSS method compared to estimates generated from vital registration, demographic surveillance sites, and census household death estimates in countries for which these comparison estimates are available.

Figure 5: CSS-generated estimates of 45q15 for African countries with DHS data, 1990 and 2000

Appendix figure 1: The relationship between percent dead and sibship size for males and females, using an example from the Mali 2006 DHS. The percent dead for females has been corrected in sibship sizes 1, 2, and 3 to account for the increased occurrence of zero-female-survivors in these sibships.

Appendix Figure 2: Estimates of 45q15 from the CSS method for all 44 countries where sibling history surveys are available in the Demographic and Health Surveys

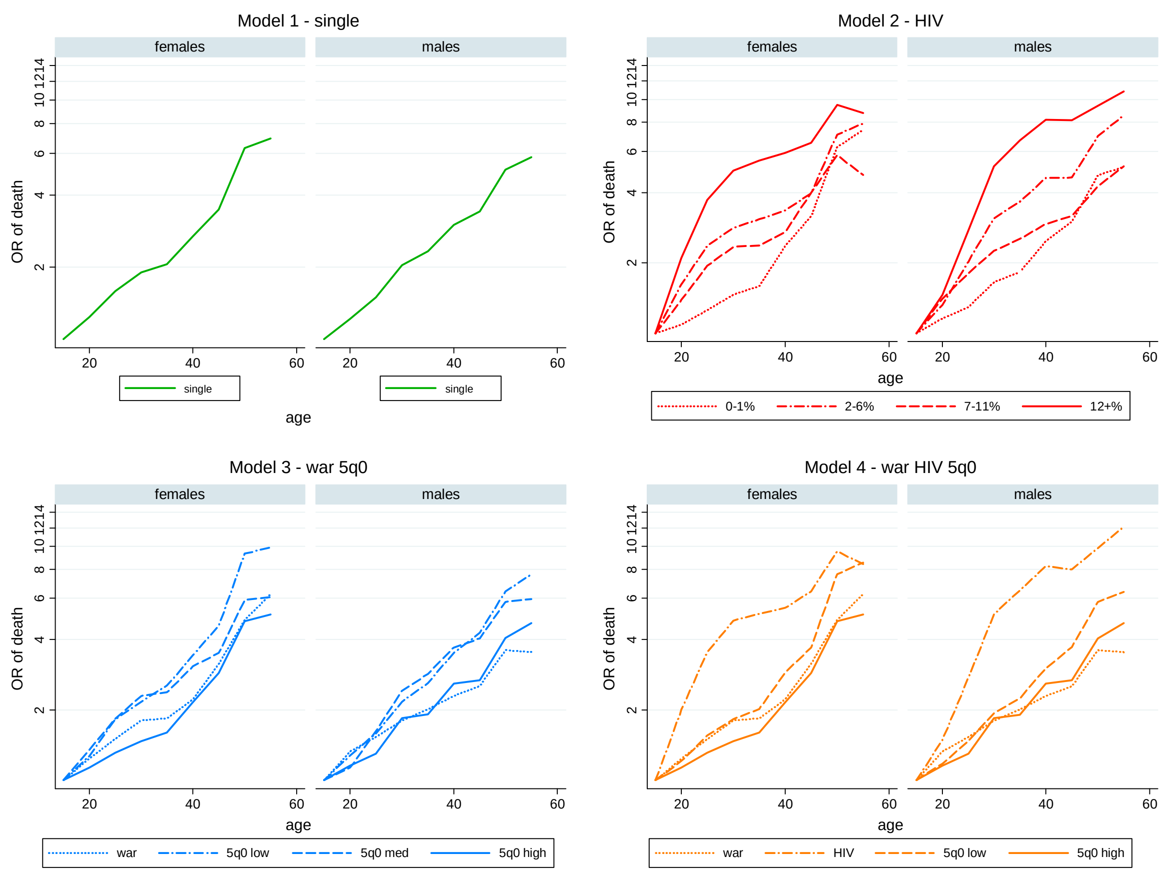

Model 1 - single
females
males
OR of death
2
4
6
8
10 12 14
20
40
60
single
age
Model 2 - HIV
0-1%
2-6%
7-11%
12+%
Model 3 - war 5q0
war
5q0 low
5q0 med
5q0 high
Model 4 - war HIV 5q0
HIV

Figure 1

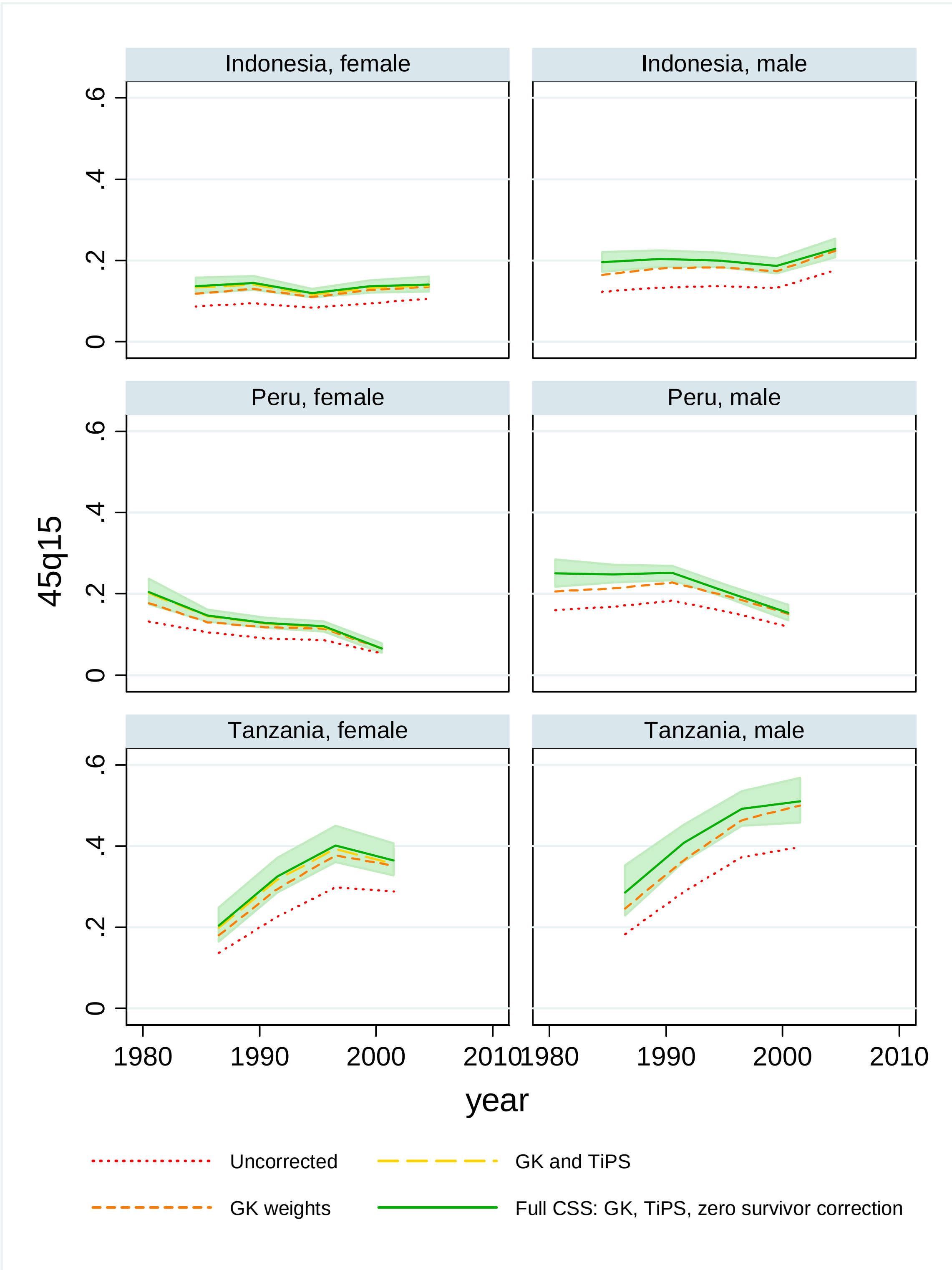

Indonesia, female
Indonesia, male
Peru, female
Peru, male
Tanzania, female
Tanzania, male
45q15
0
.2
.4
.6
1980
1990
2000
2010
year
Uncorrected
GK and TiPS
GK weights
Full CSS: GK, TiPS, zero survivor correction

Figure 2a

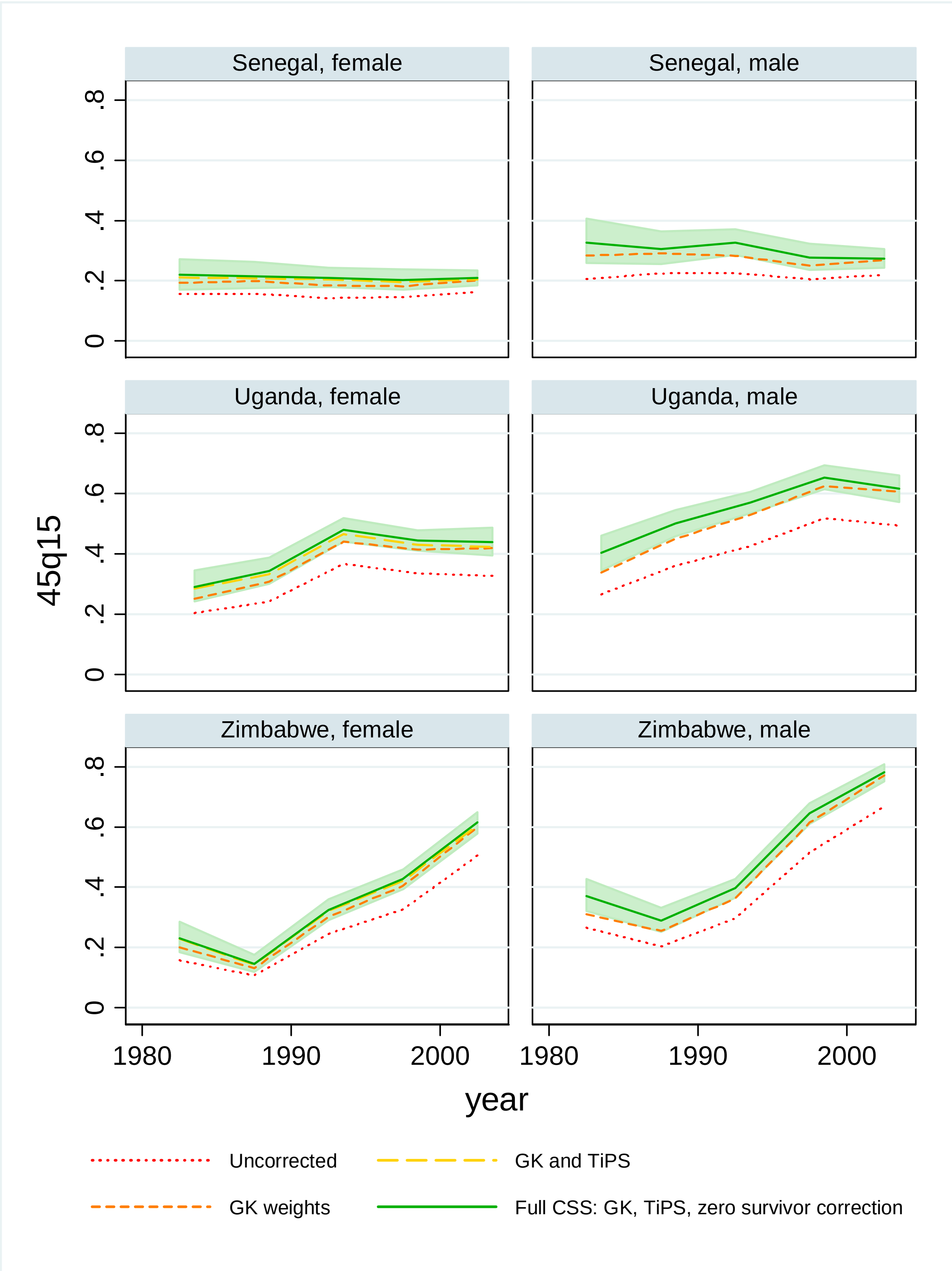

Senegal, female
Senegal, male
Uganda, female
Uganda, male
Zimbabwe, female
Zimbabwe, male
45q15
0
.2
.4
.6
.8
1980
1990
2000
year
Uncorrected
GK and TiPS
GK weights
Full CSS: GK, TiPS, zero survivor correction

Figure 2b

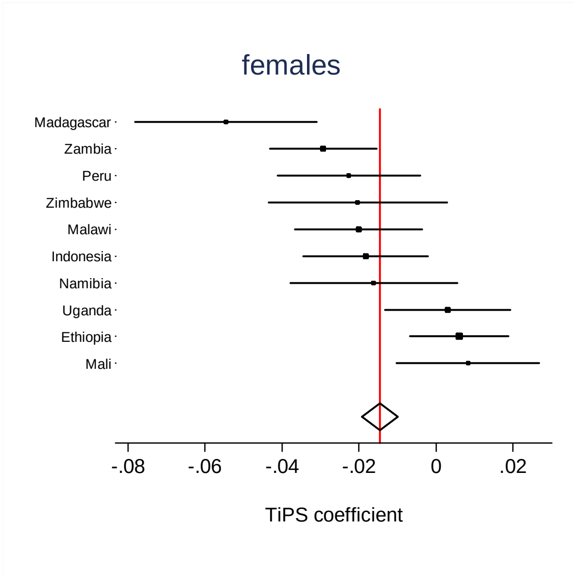


Figure 3a

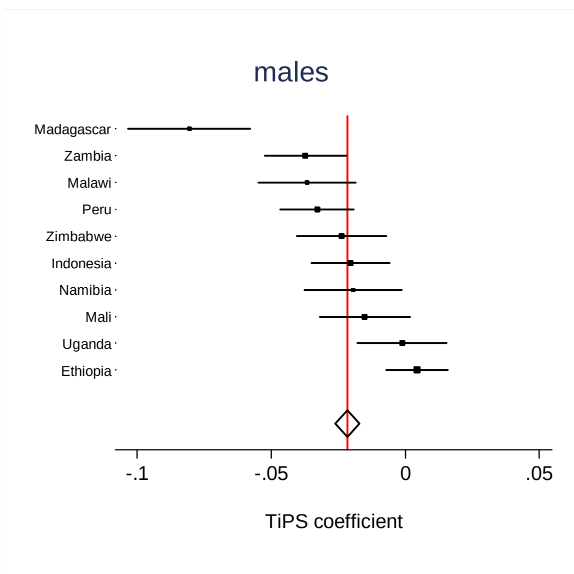


Figure 3b

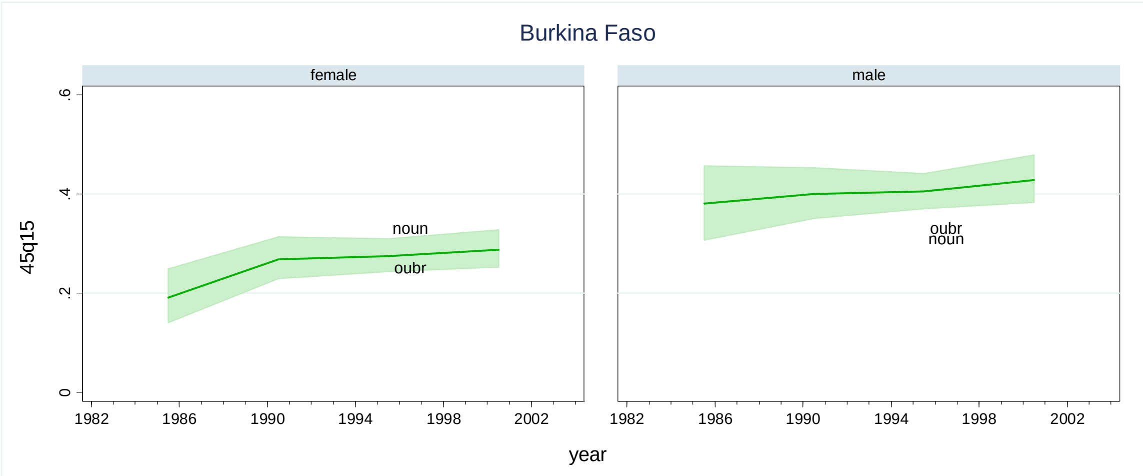


Figure 4 BFA

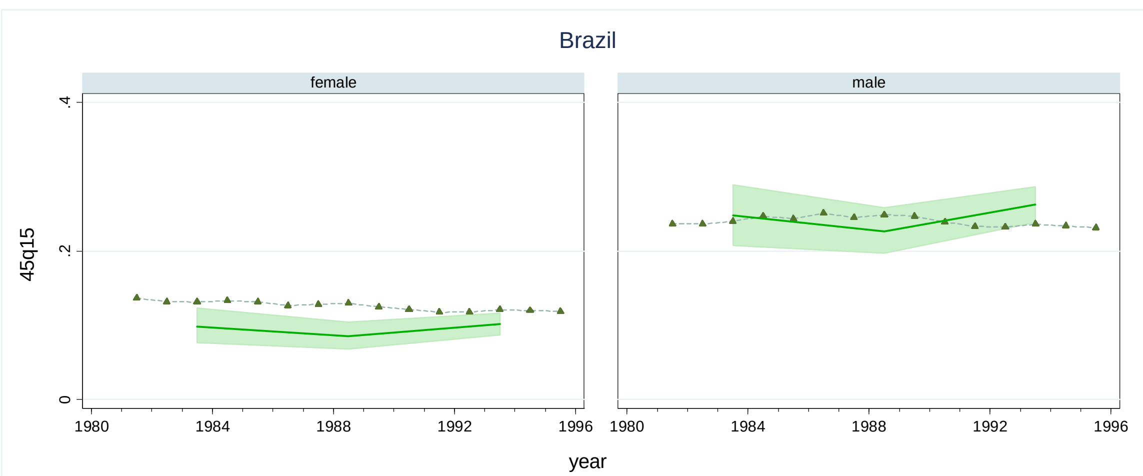


Figure 4 BRA

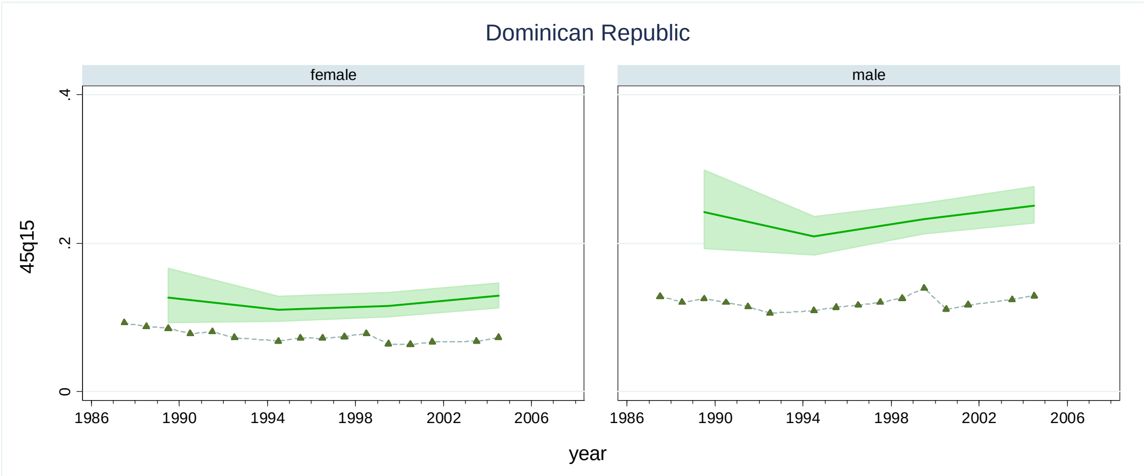


Figure 4 DOM

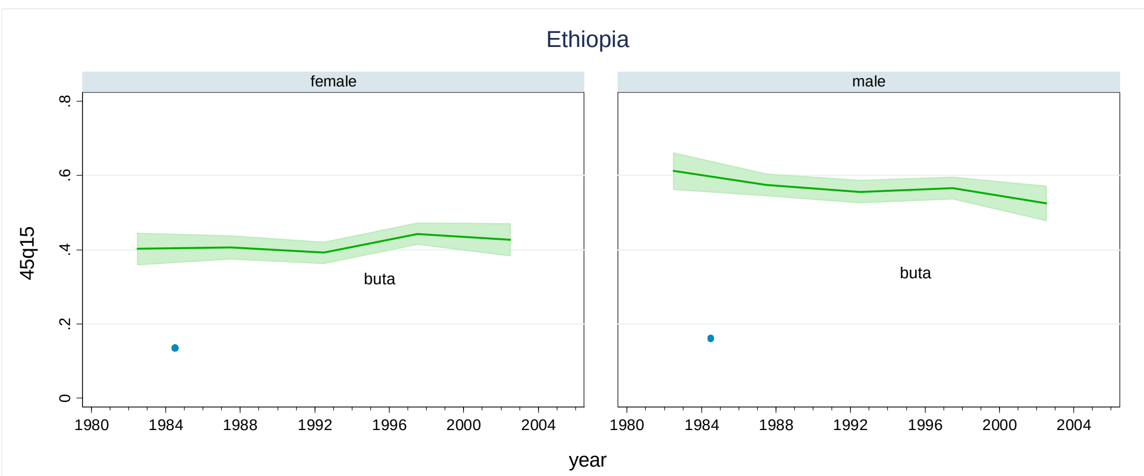


Figure 4 ETH

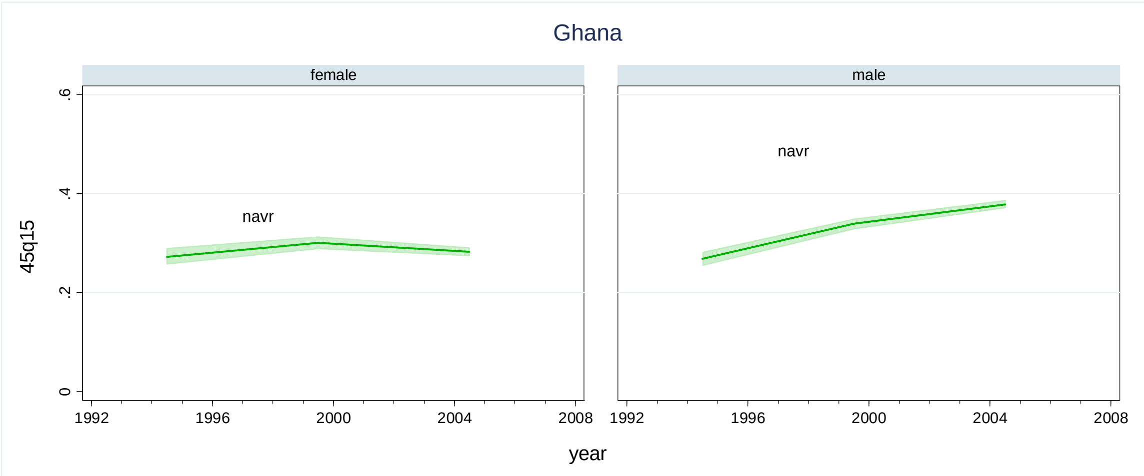


Figure 4 GHA

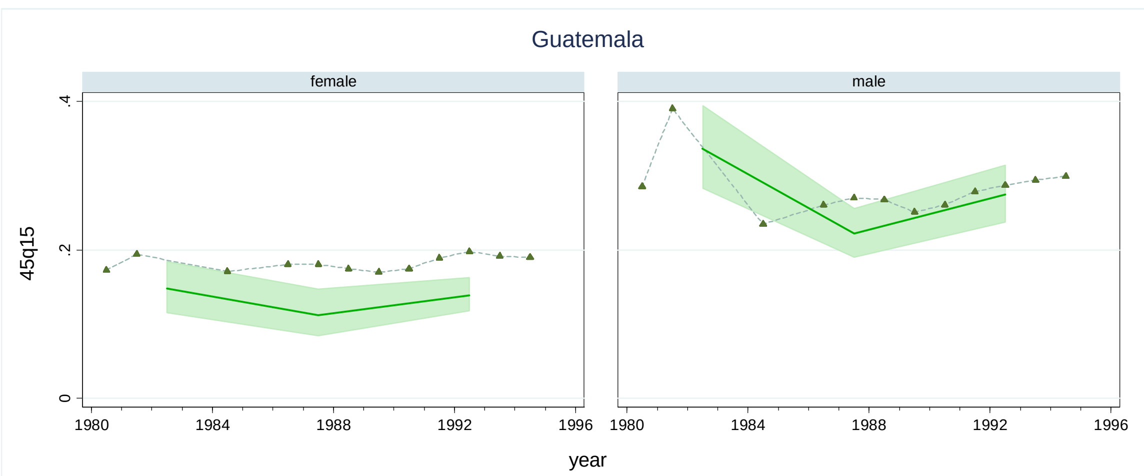


Figure 4 GTM

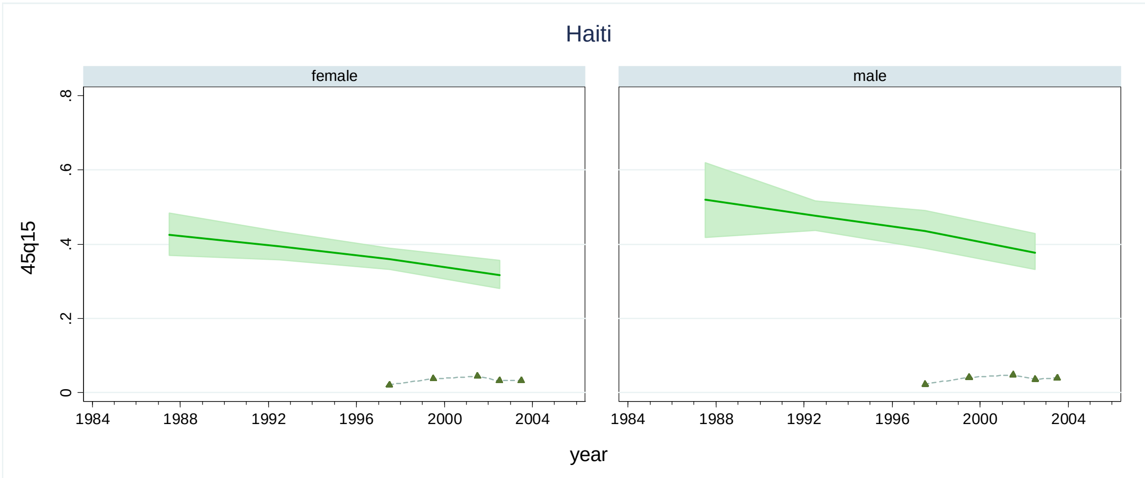


Figure 4 HTI

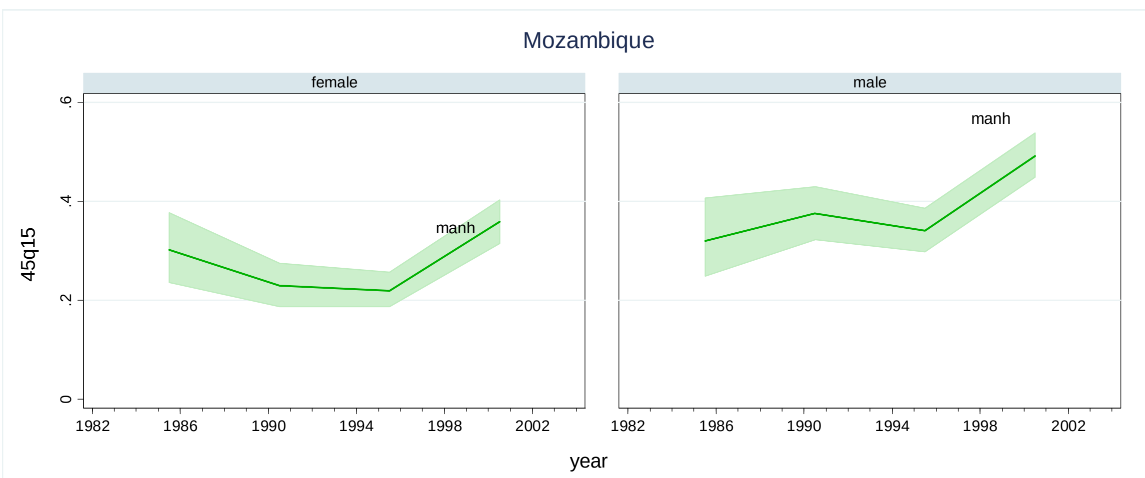


Figure 4 MOZ

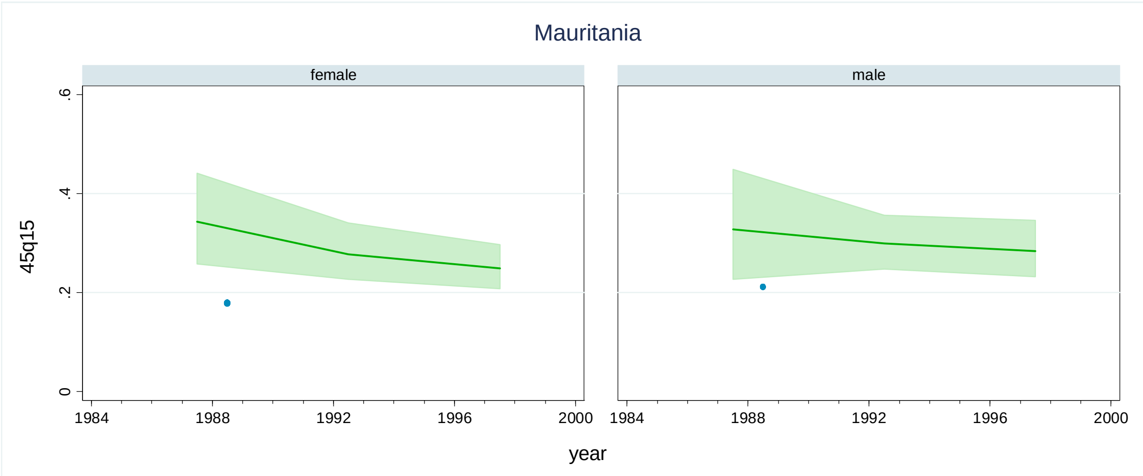


Figure 4 MRT

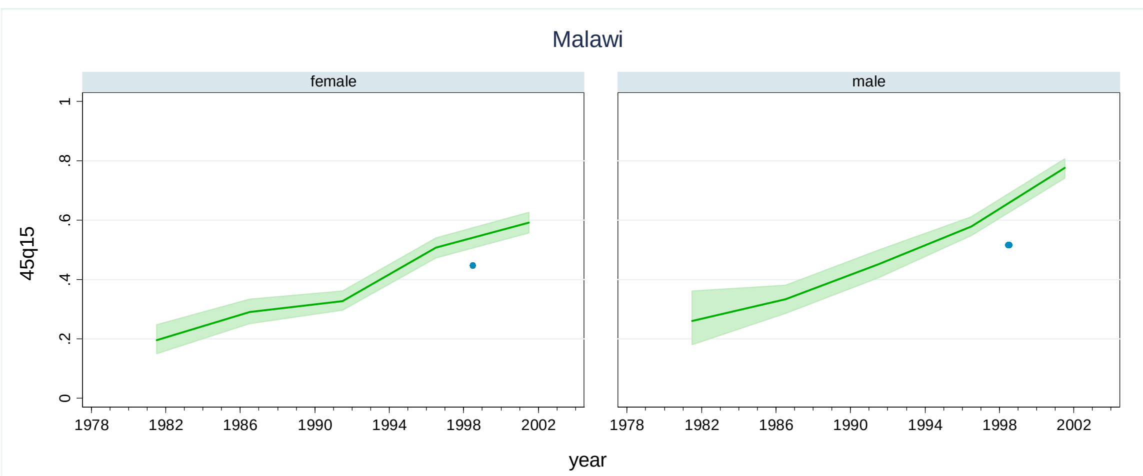


Figure 4 MWI

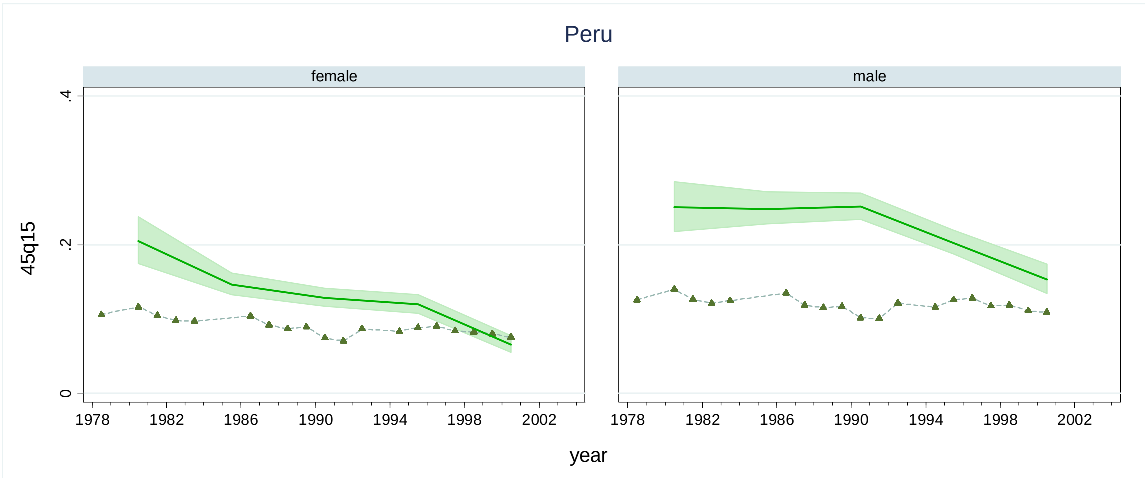


Figure 4 PER

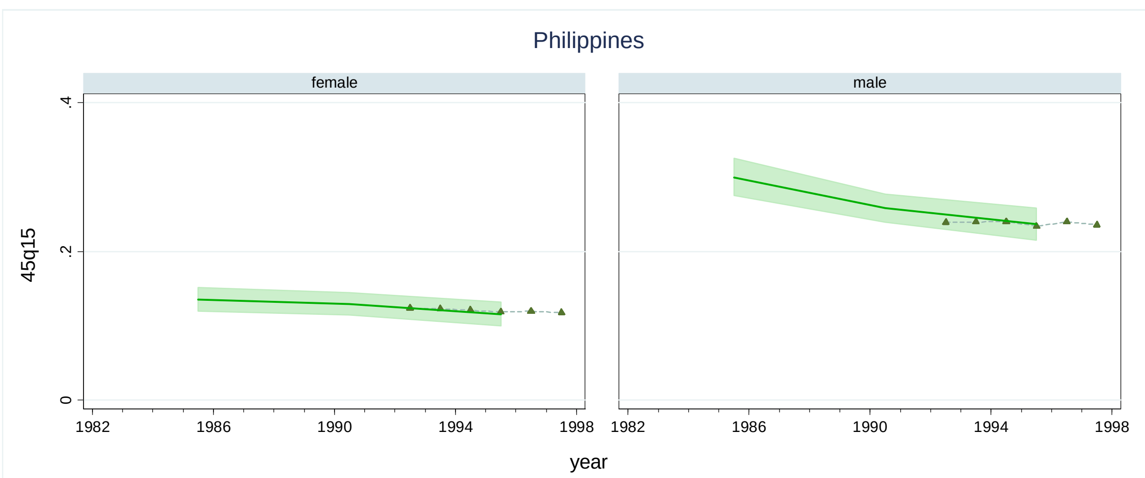


Figure 4 PHL

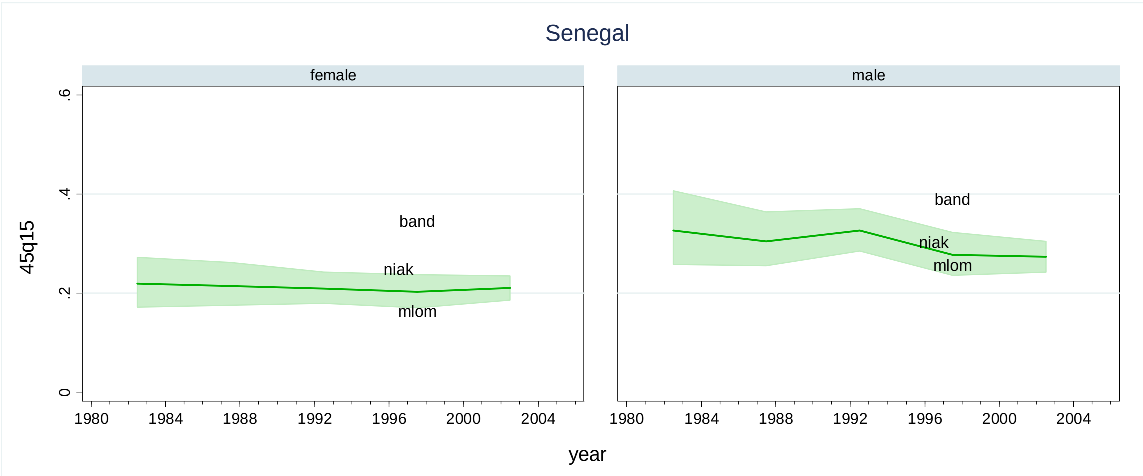


Figure 4 SEN

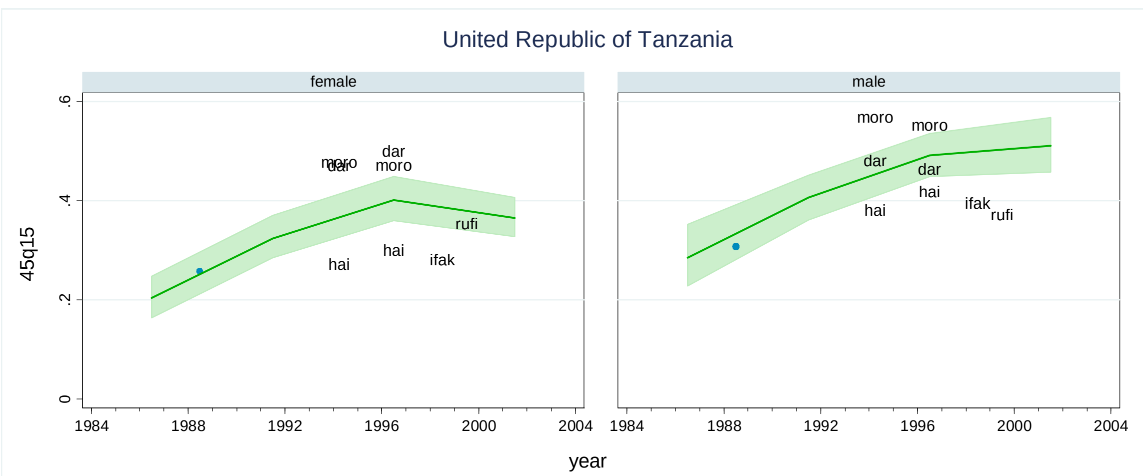


Figure 4 TZA

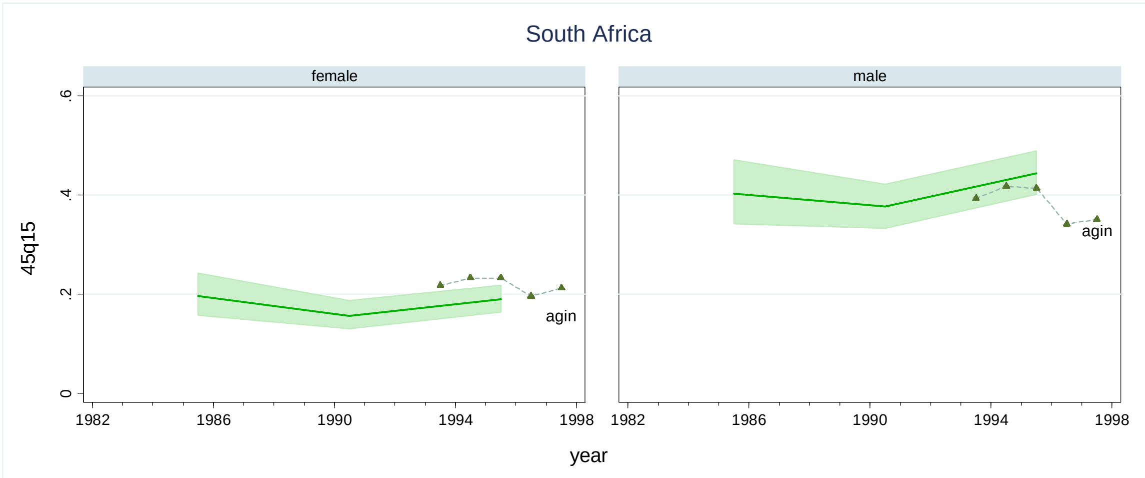


Figure 4 ZAF

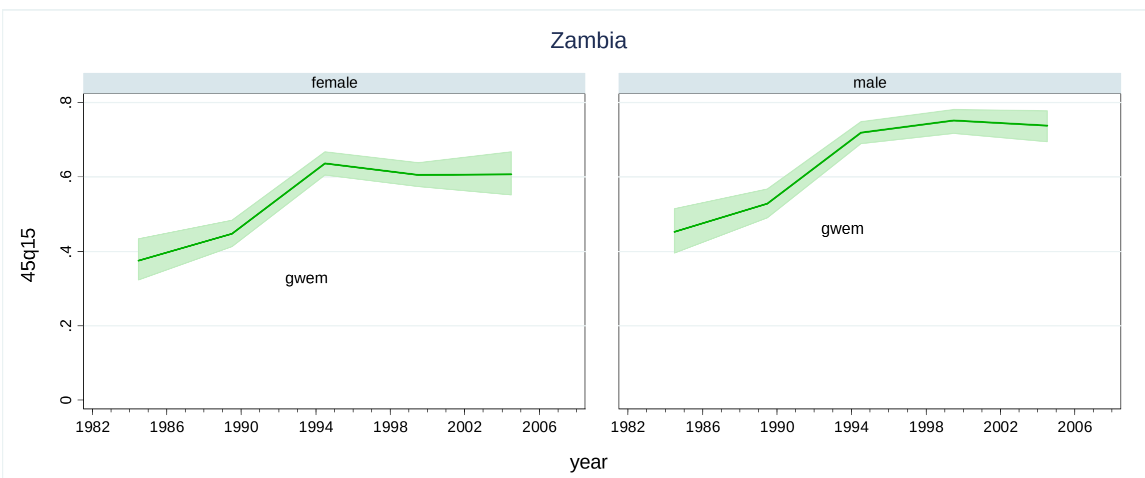


Figure 4 ZMB

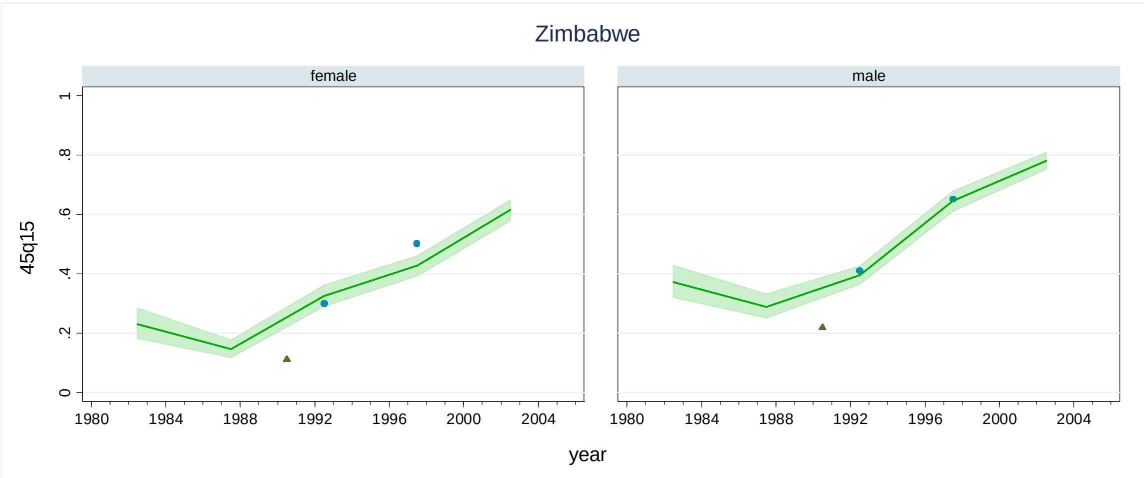


Figure 4 ZWE

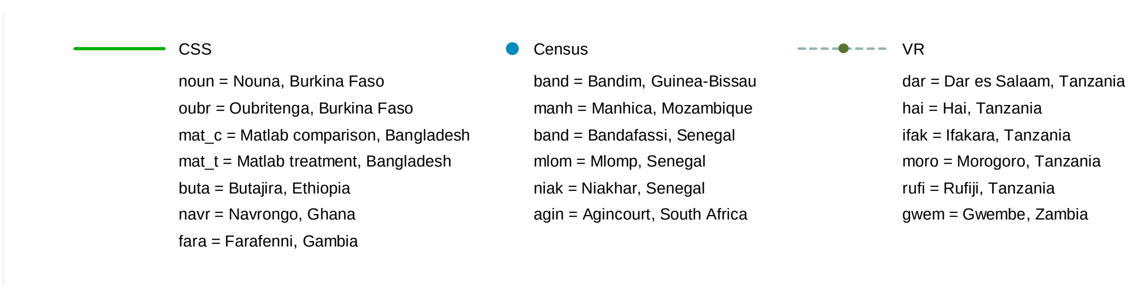


Figure 4 legend

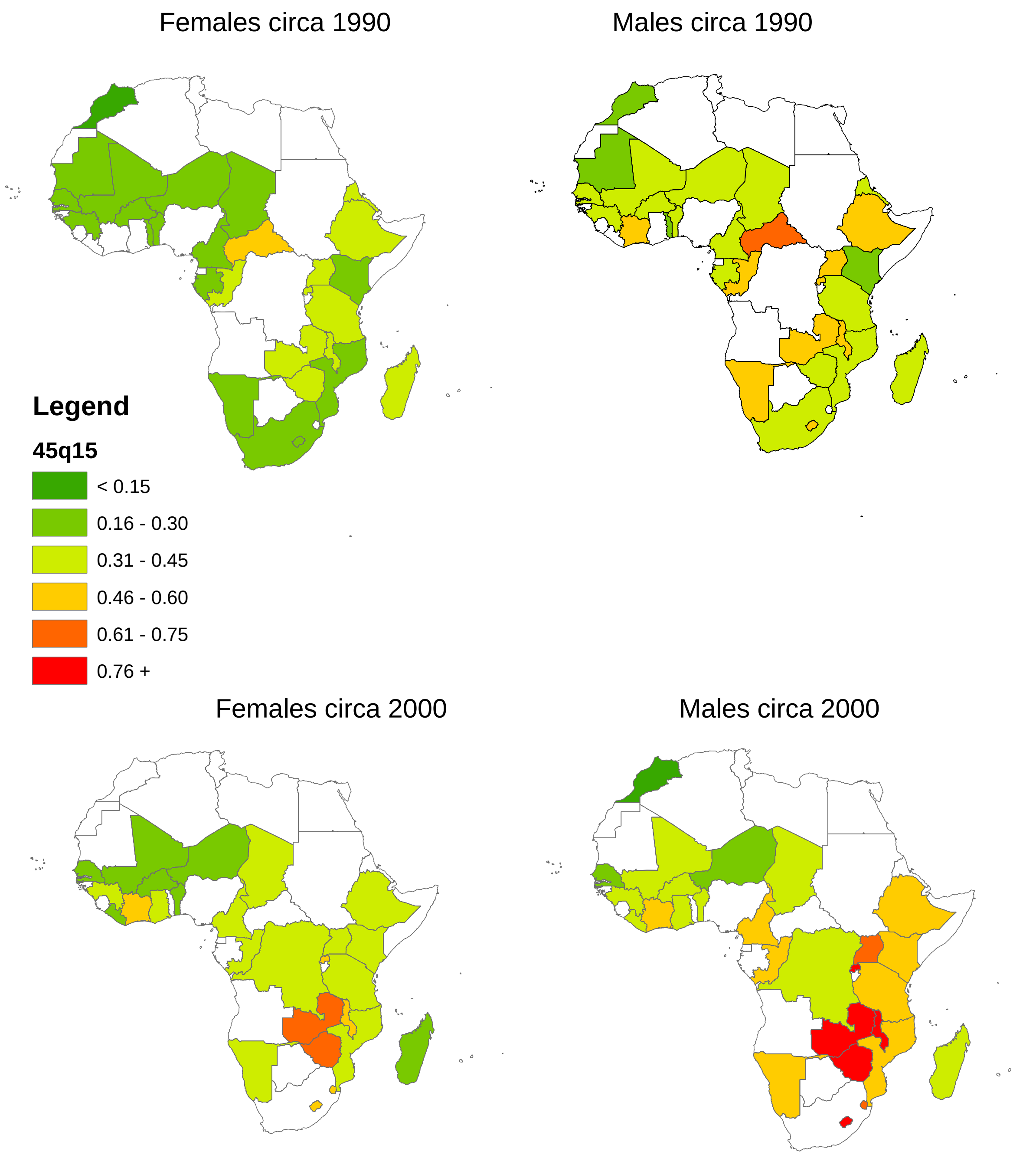
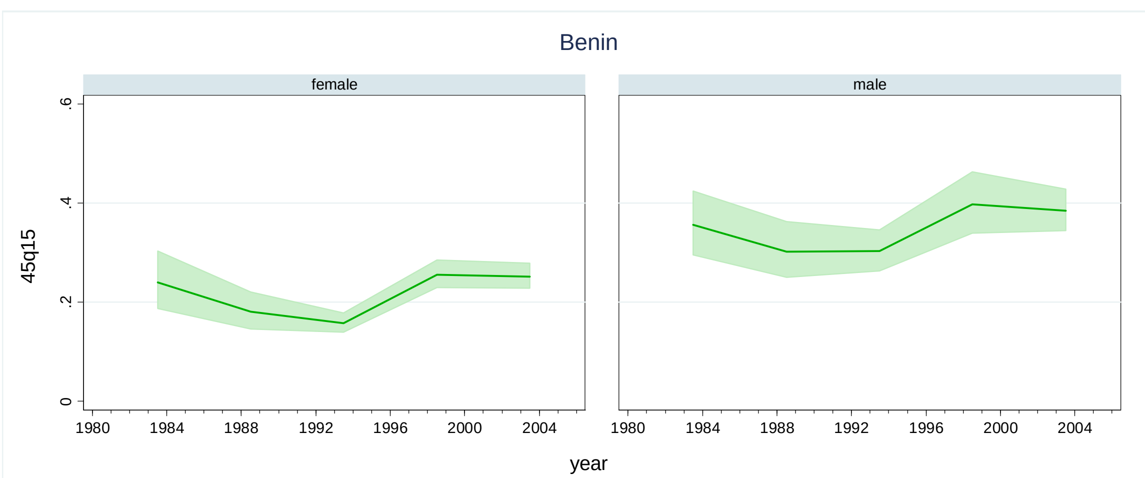
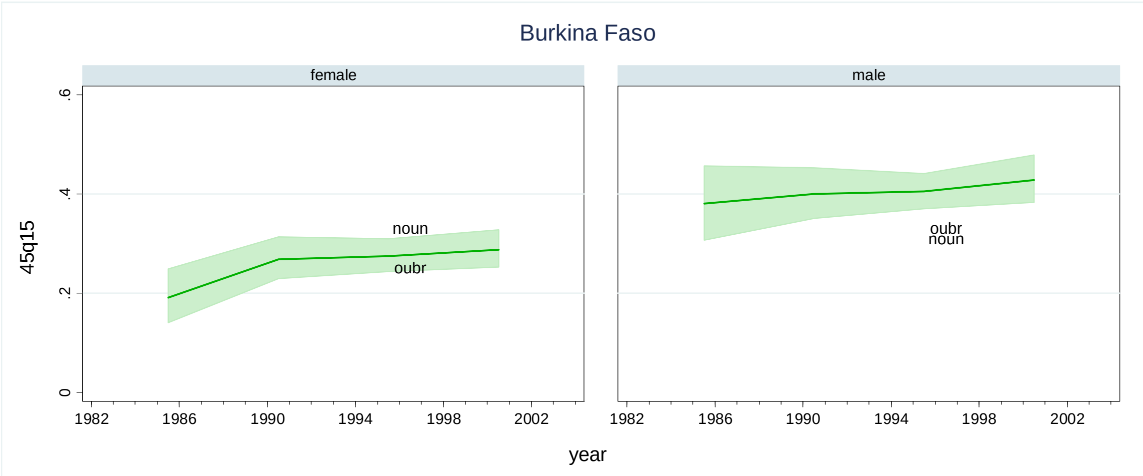

Females circa 1990
Males circa 1990
Legend
45q15
< 0.15
0.16 - 0.30
0.31 - 0.45
0.46 - 0.60
0.61 - 0.75
0.76 +
Females circa 2000
Males circa 2000

Figure 5

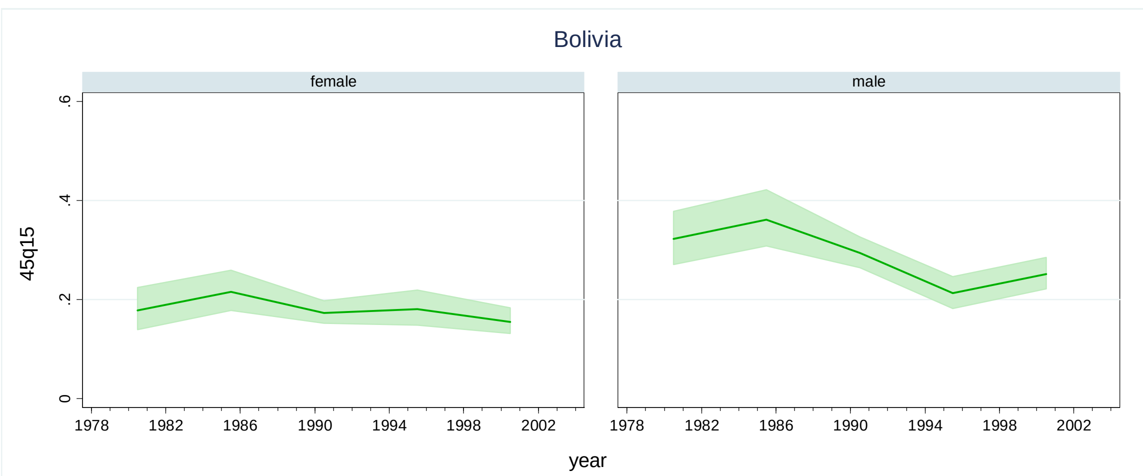
Appendix Figure 1



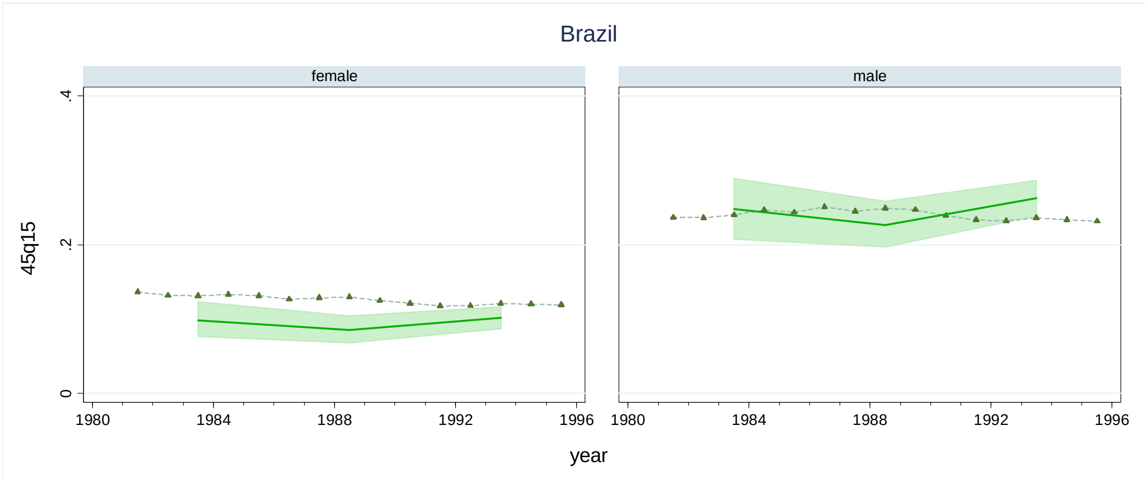
Appendix Figure 2 BEN



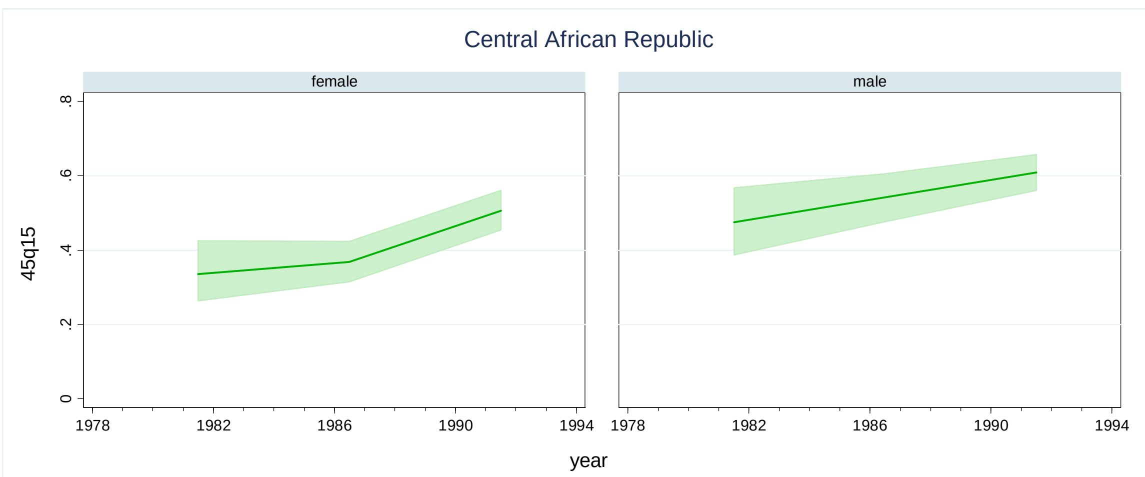
Appendix Figure 2 BFA



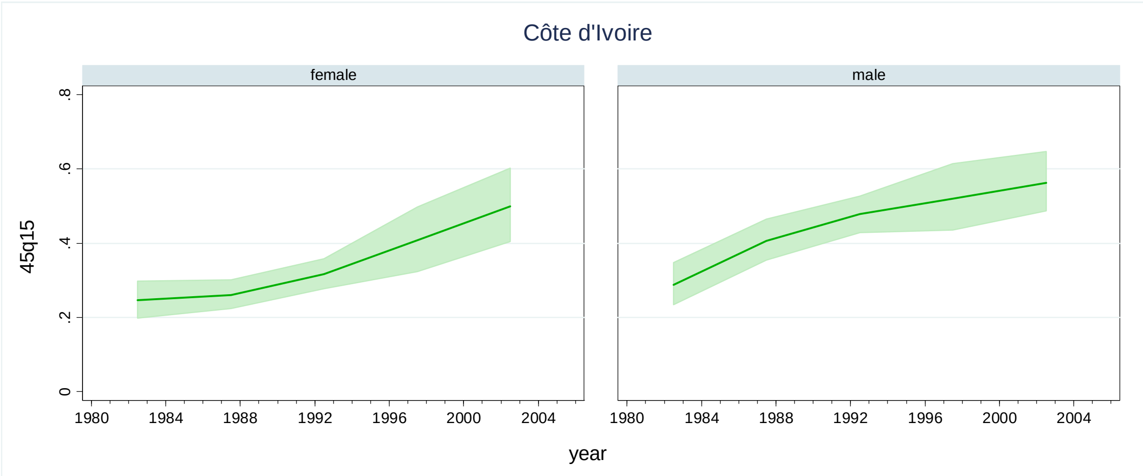
Appendix Figure 2 BOL



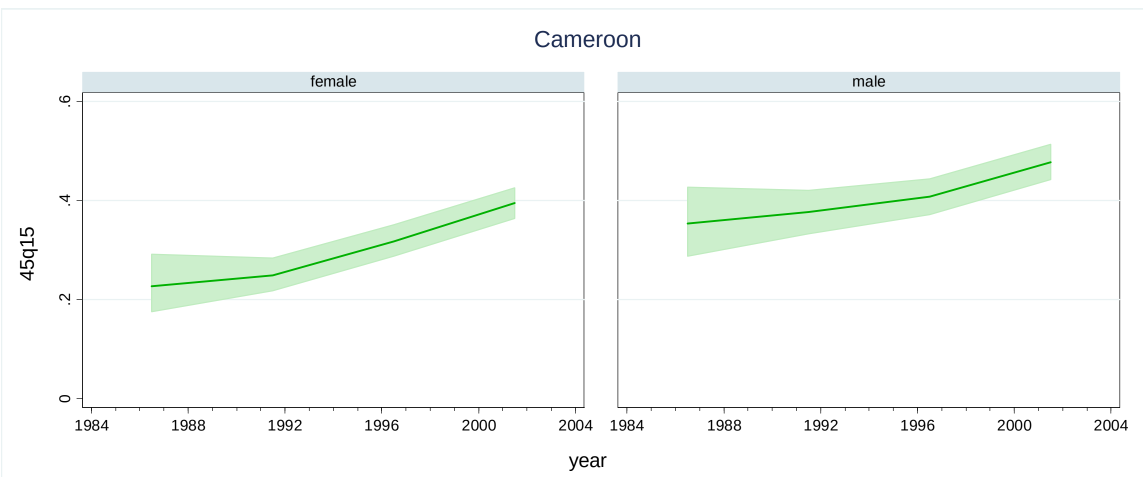
Appendix Figure 2 BRA



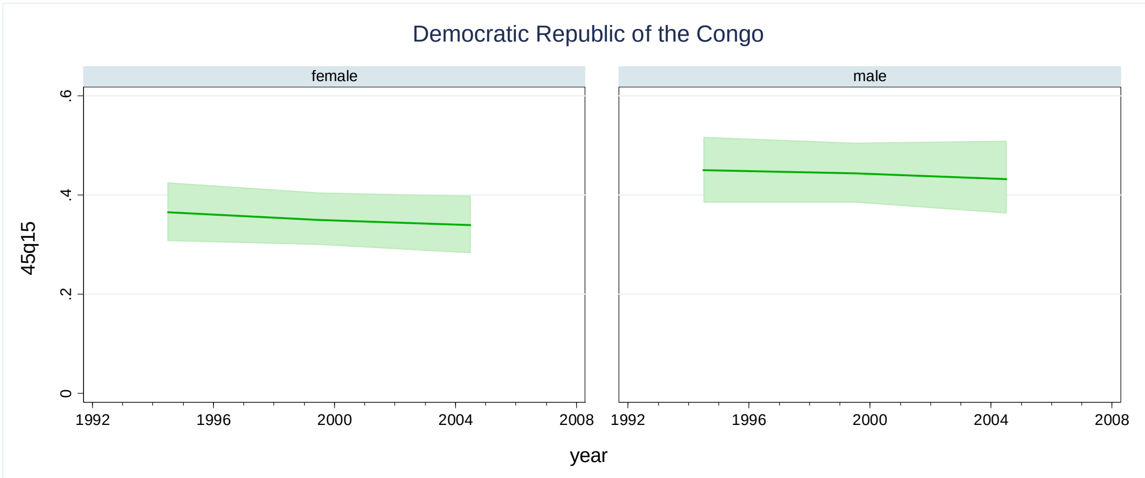
Appendix Figure 2 CAF



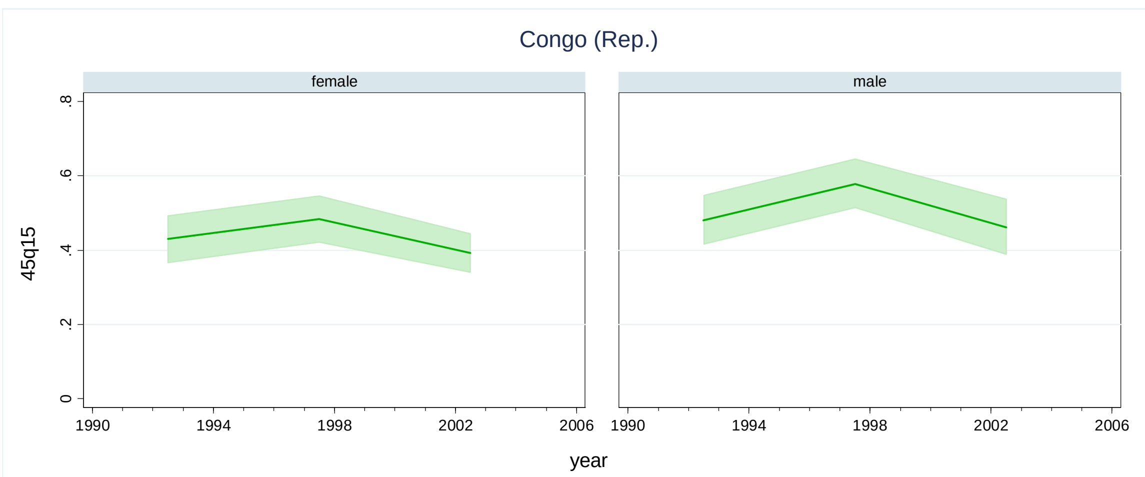
Appendix Figure 2 CIV



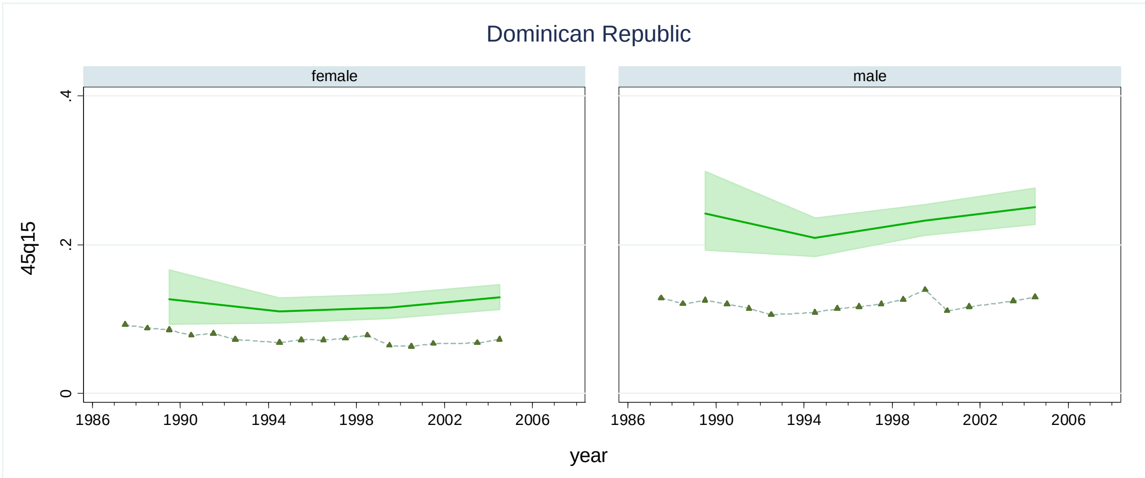
Appendix Figure 2 CMR



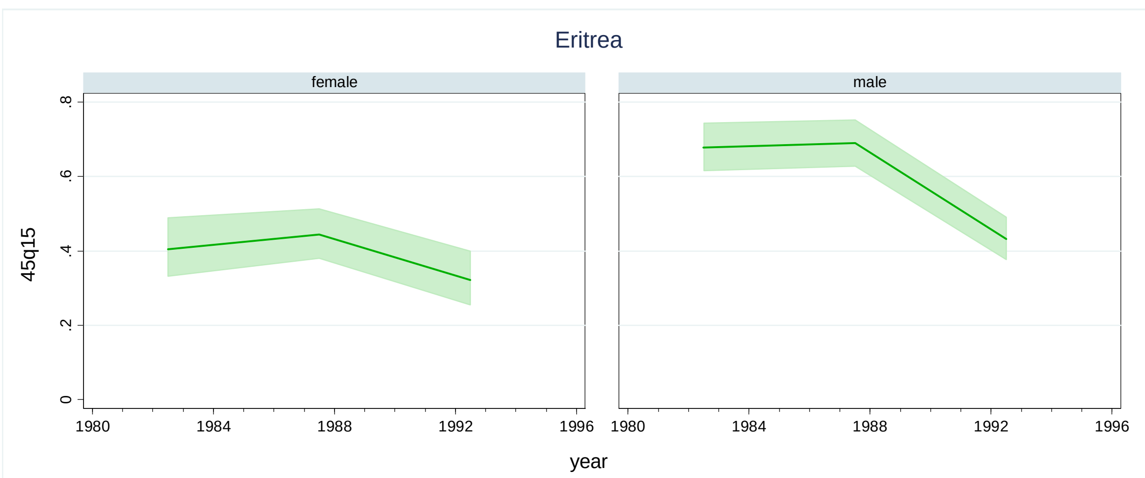
Appendix Figure 2 COD



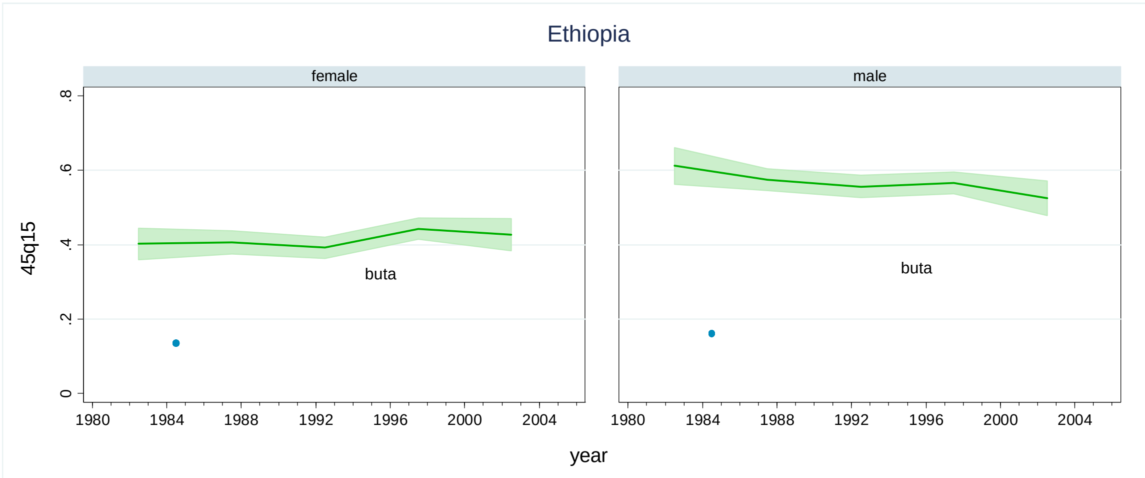
Appendix Figure 2 COG



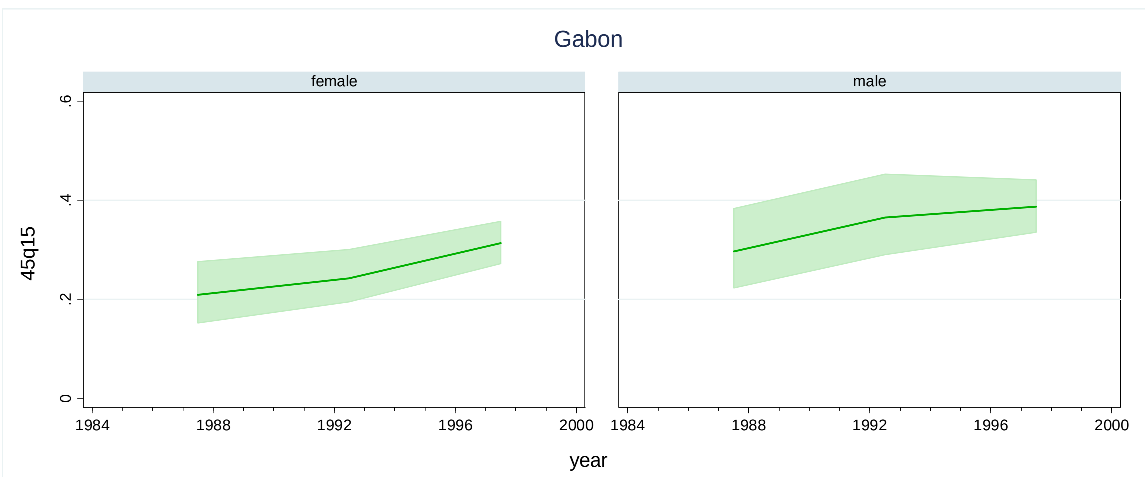
Appendix Figure 2 DOM



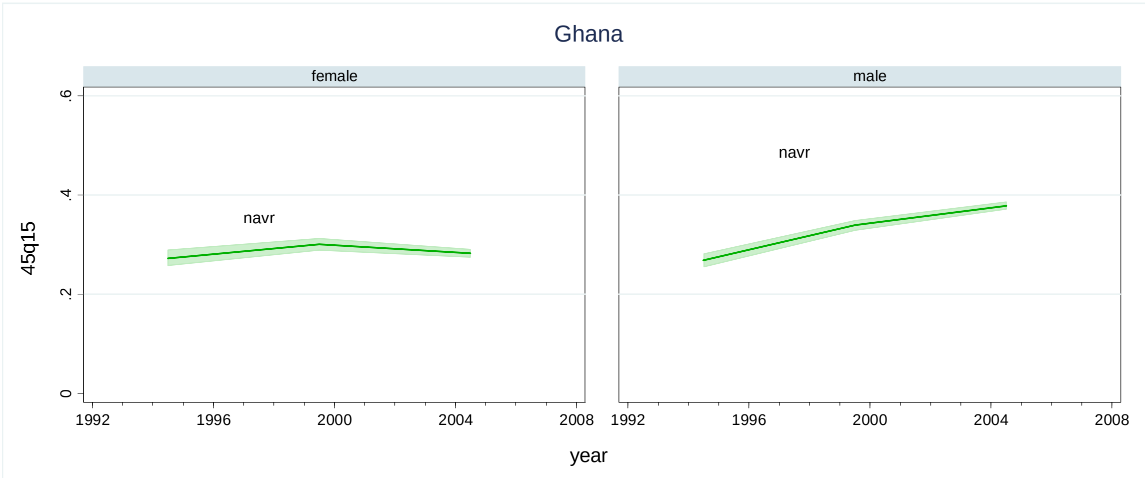
Appendix Figure 2 ERI



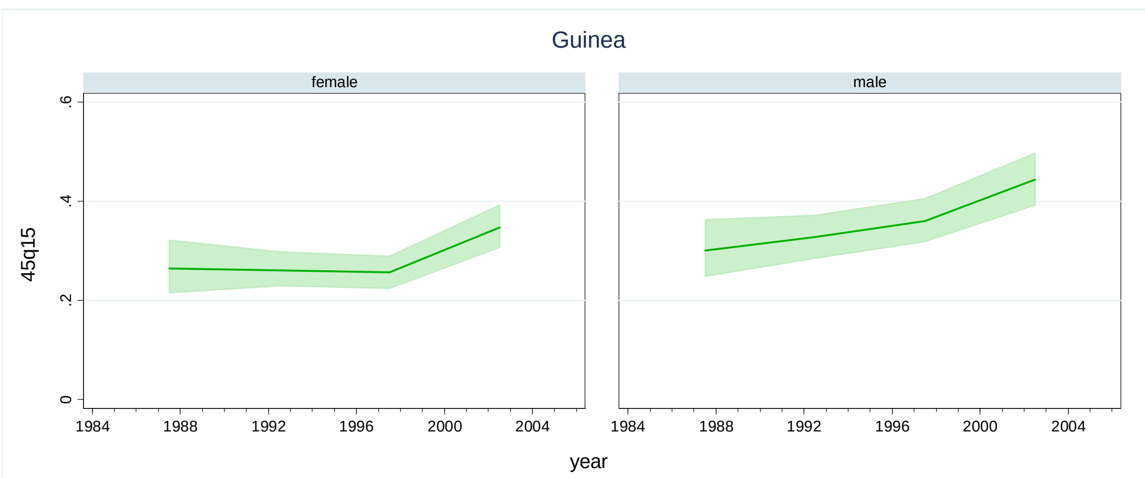
Appendix Figure 2 ETH



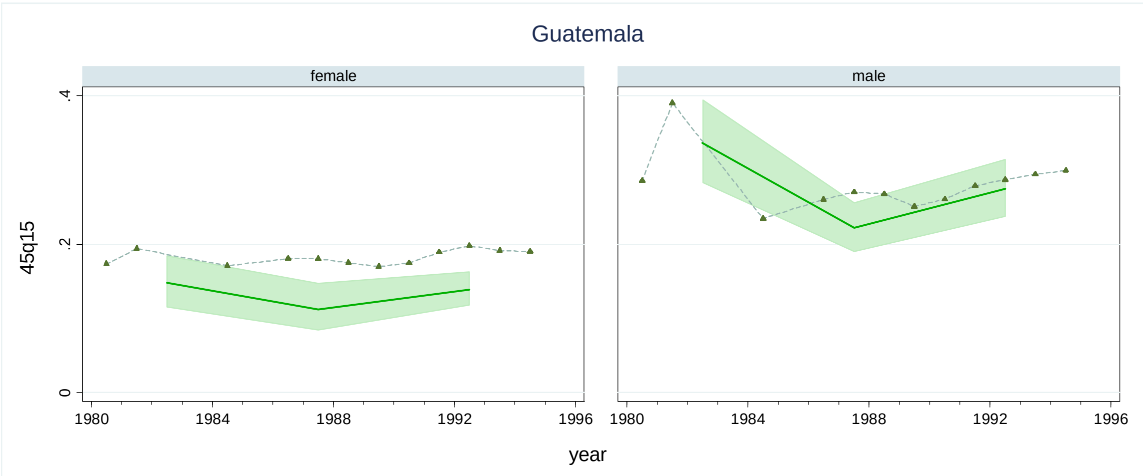
Appendix Figure 2 GAB



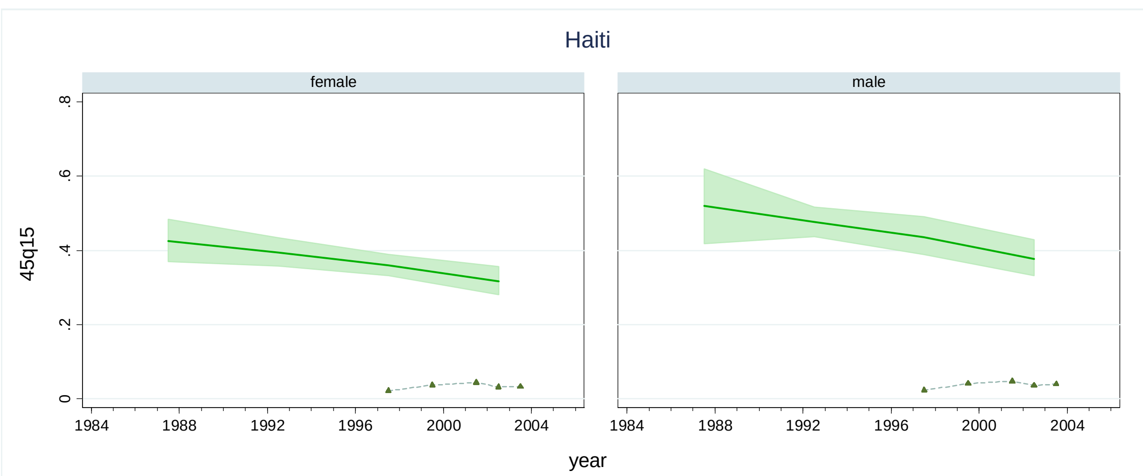
Appendix Figure 2 GHA



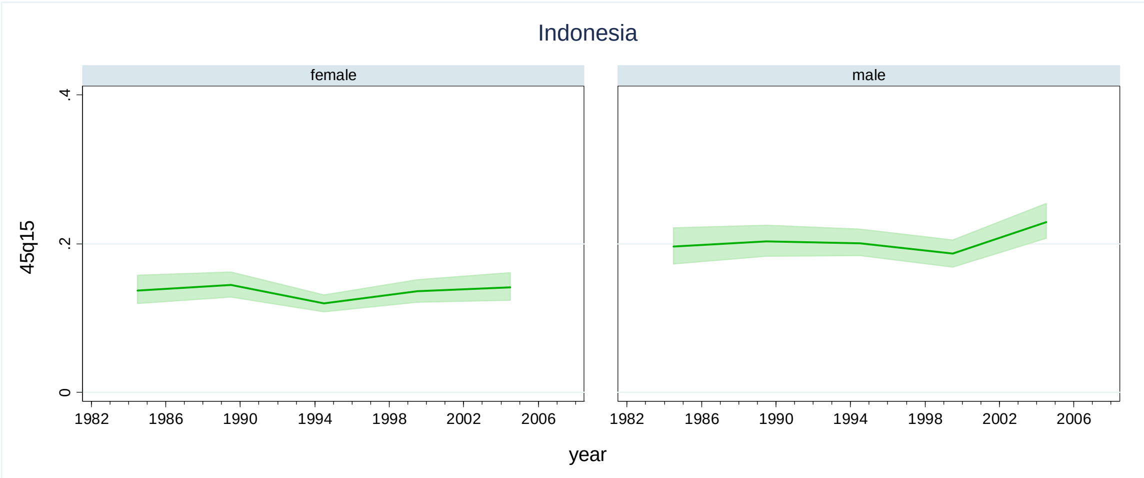
Appendix Figure 2 GIN



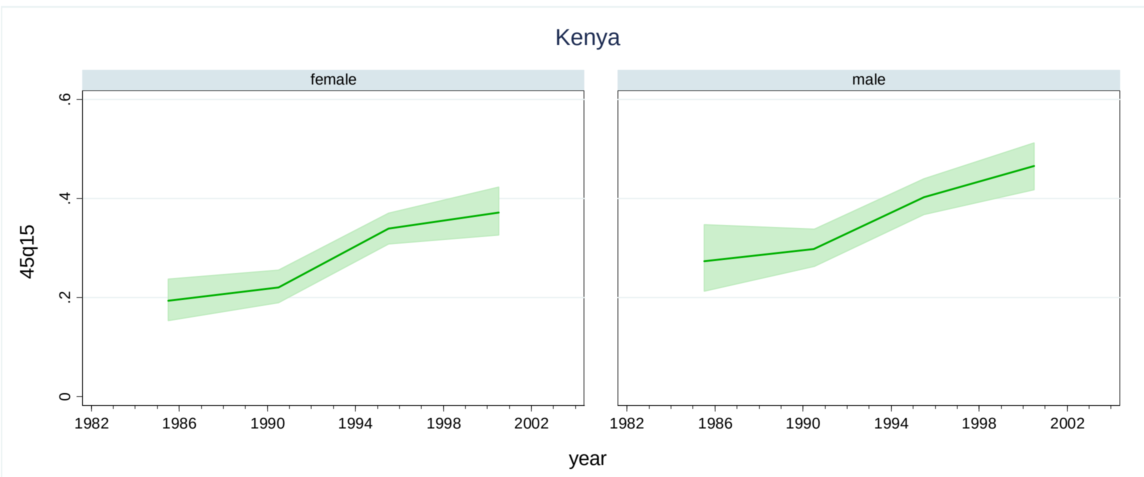
Appendix Figure 2 GTM



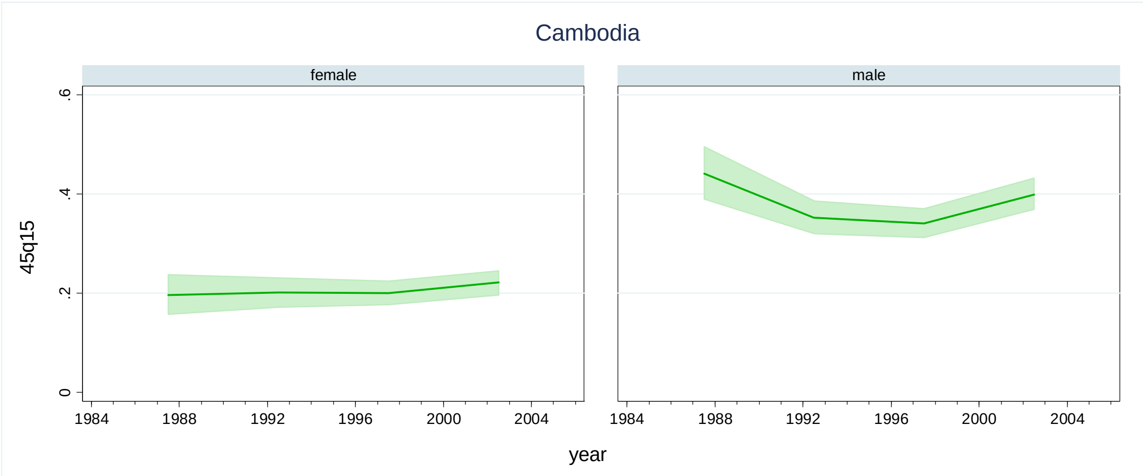
Appendix Figure 2 HTI



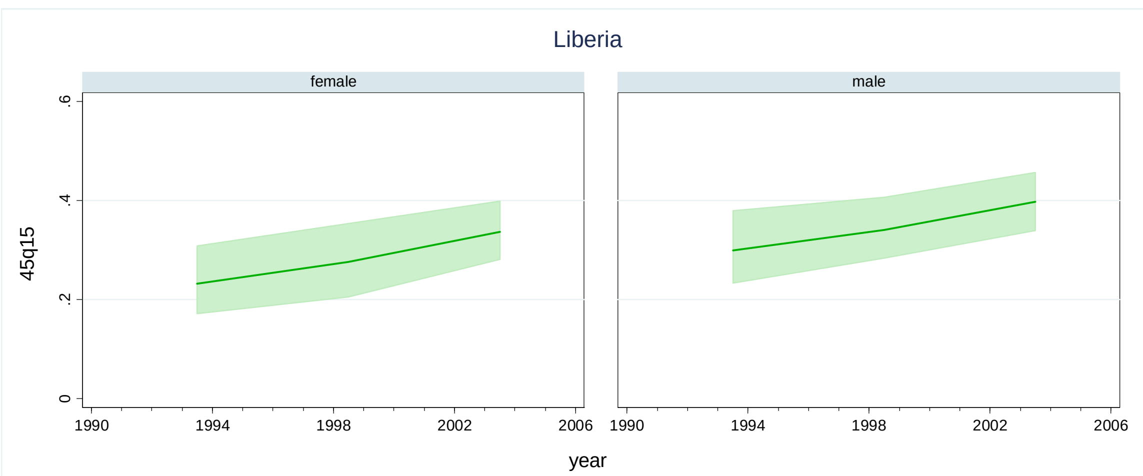
Appendix Figure 2 IDN



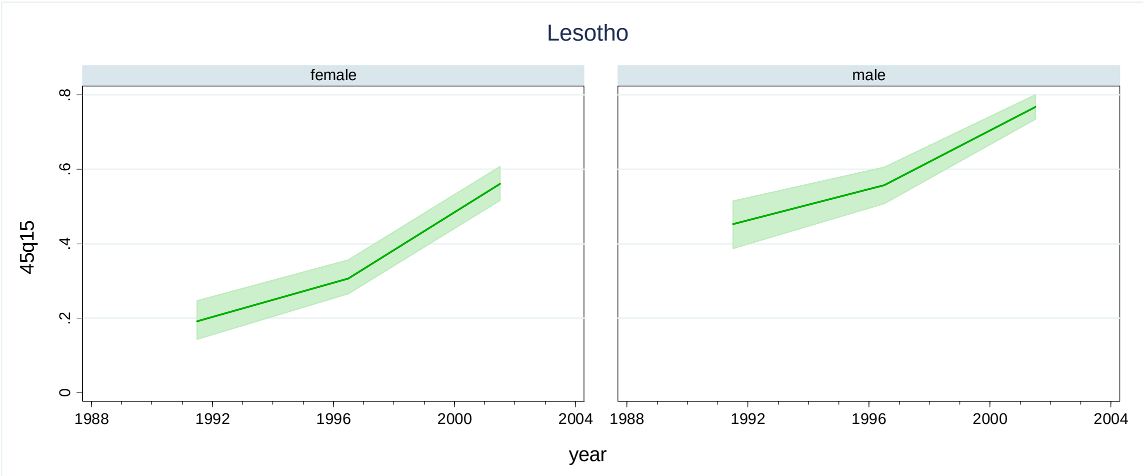
Appendix Figure 2 KEN



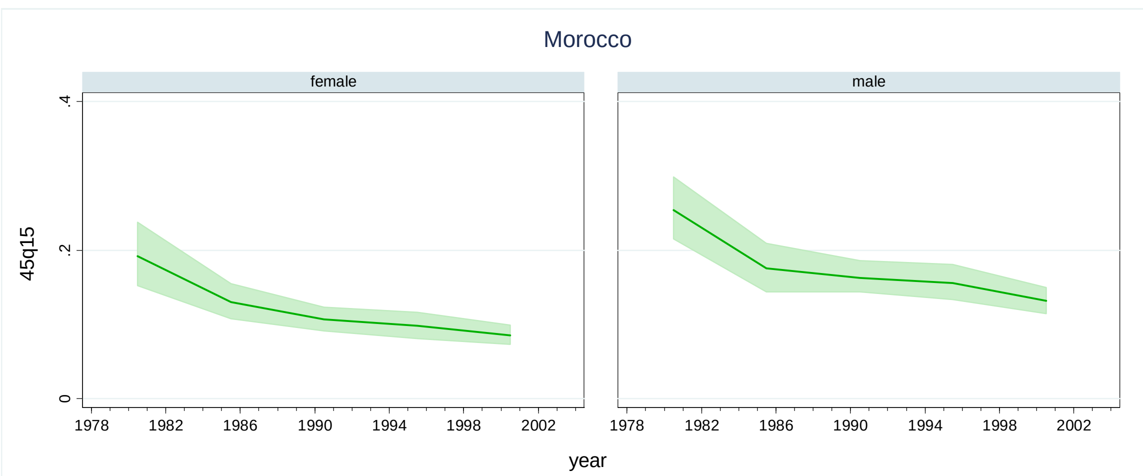
Appendix Figure 2 KHM



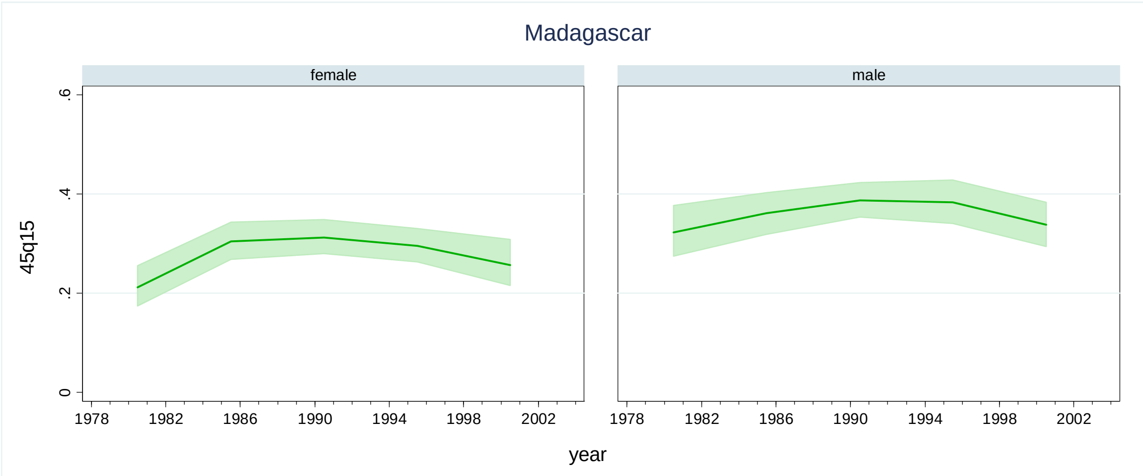
Appendix Figure 2 LBR



Appendix Figure 2 LSO

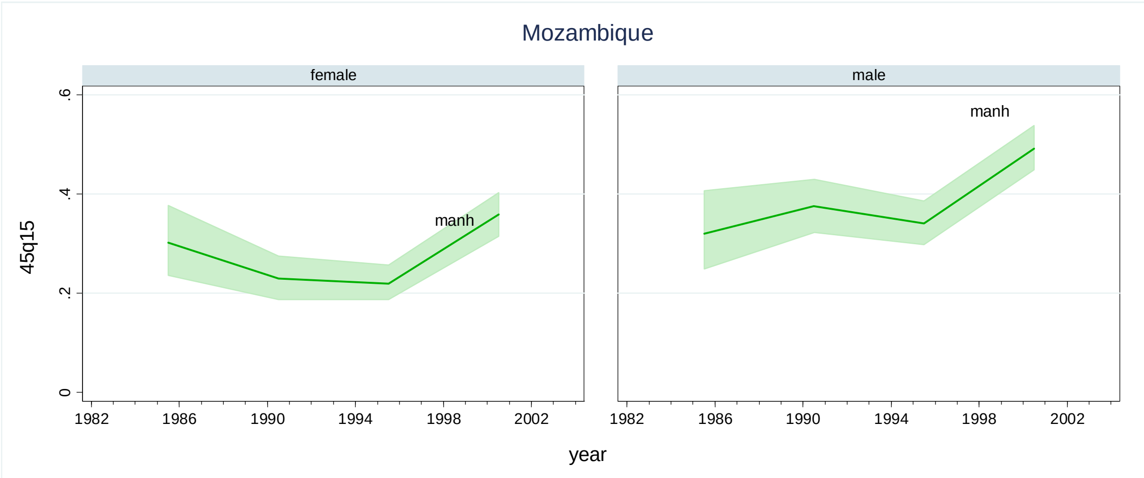


Appendix Figure 2 MAR

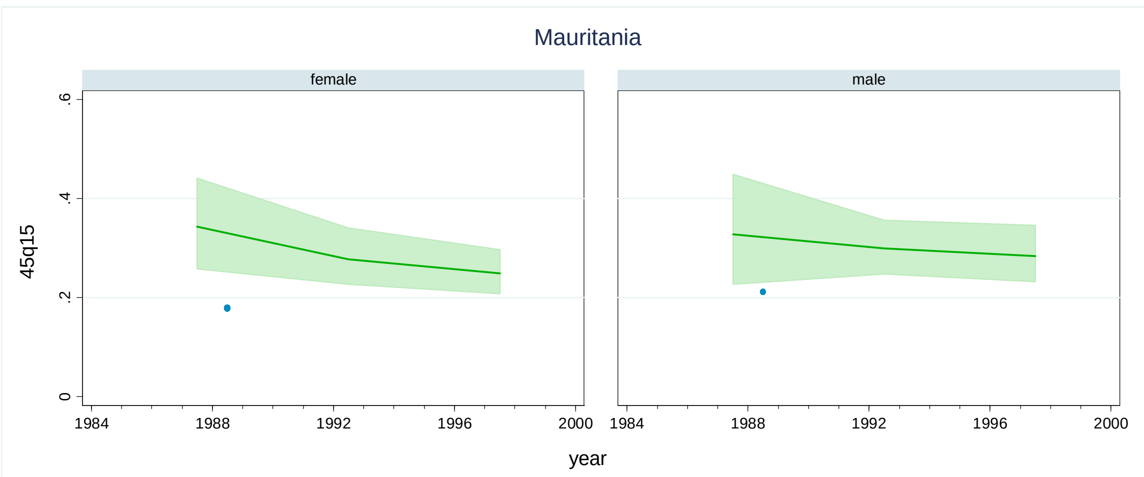


Appendix Figure 2 MDG

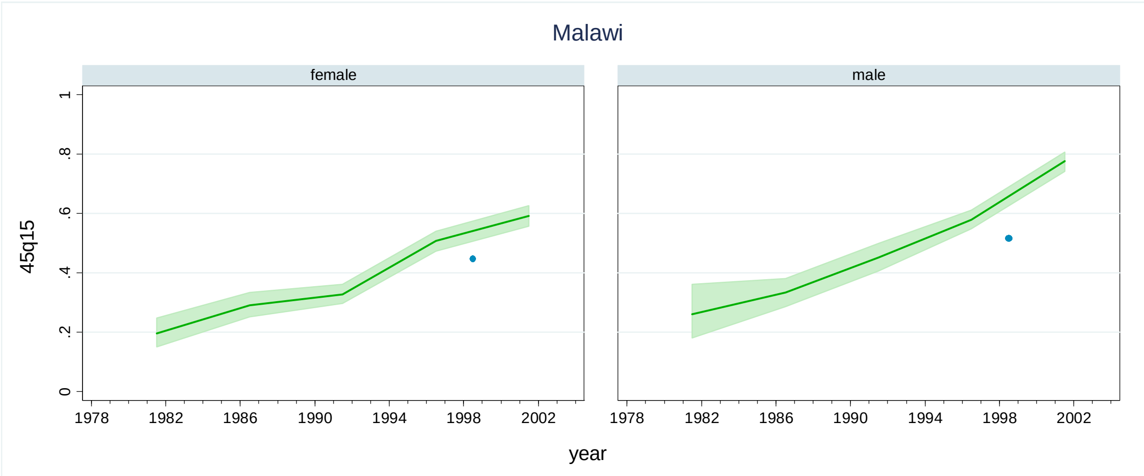
Appendix Figure 2 MLI



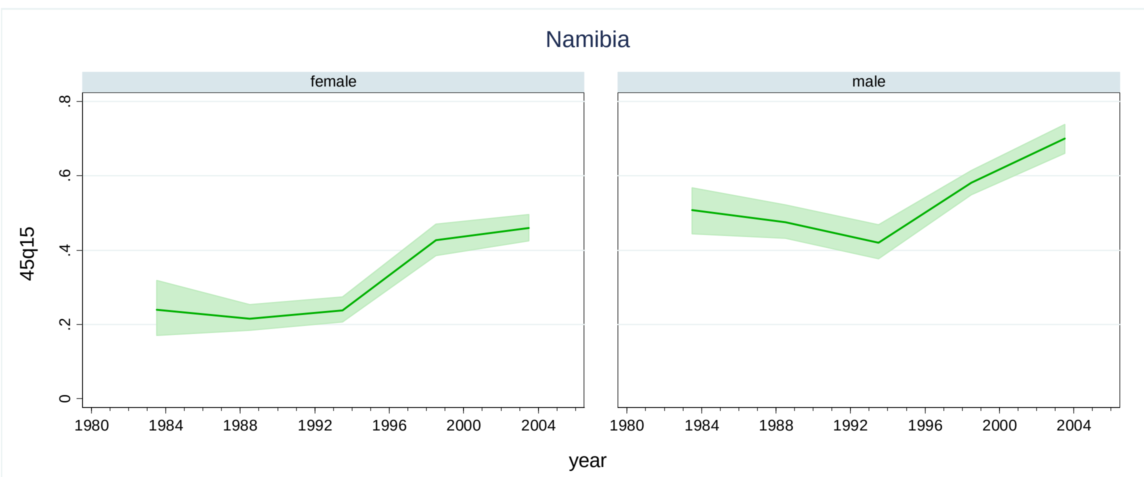
Appendix Figure 2 MOZ



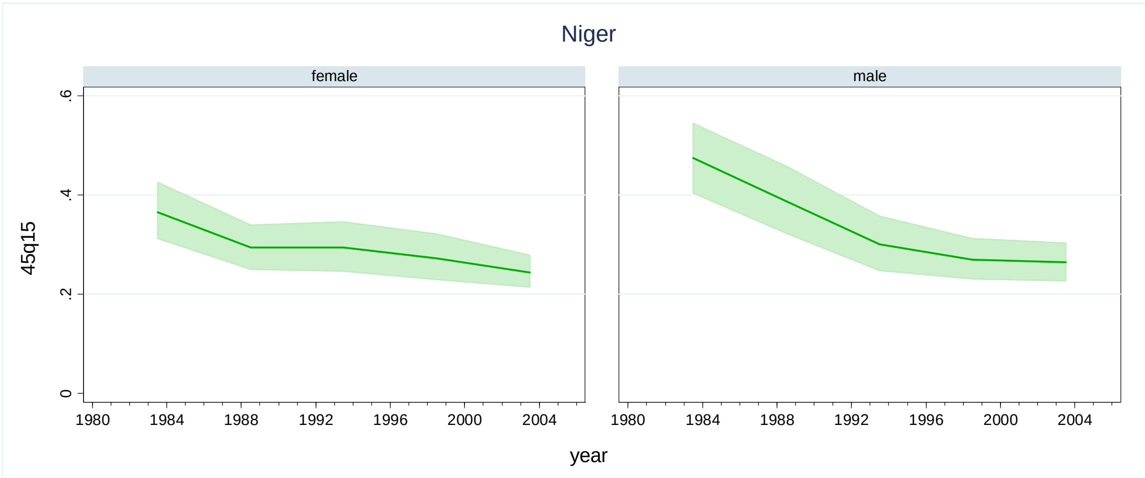
Appendix Figure 2 MRT



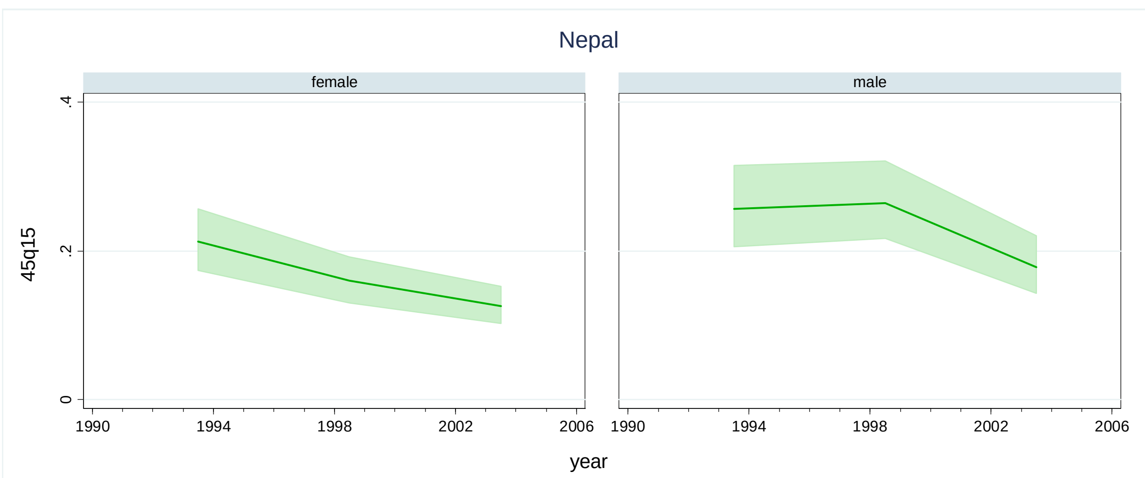
Appendix Figure 2 MWI



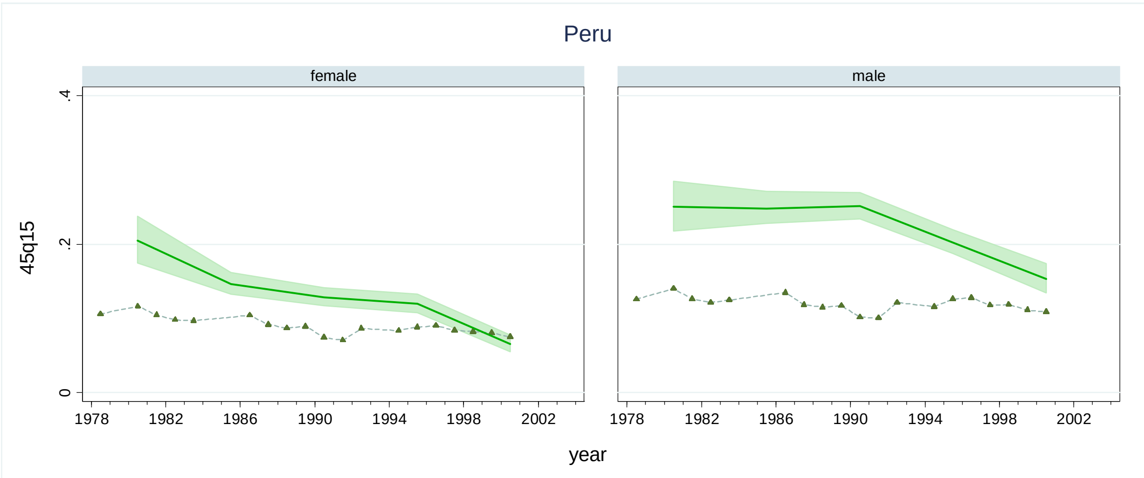
Appendix Figure 2 NAM



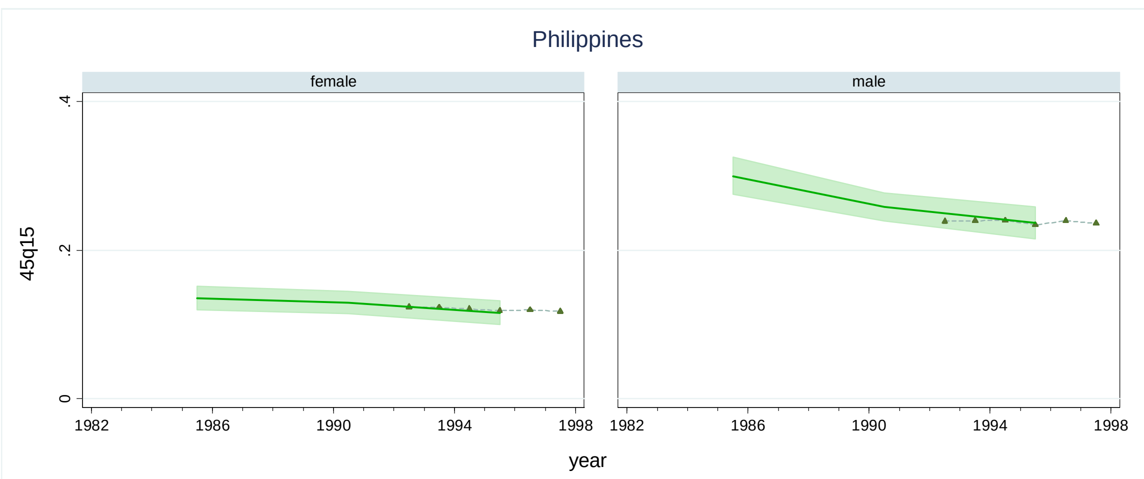
Appendix Figure 2 NER



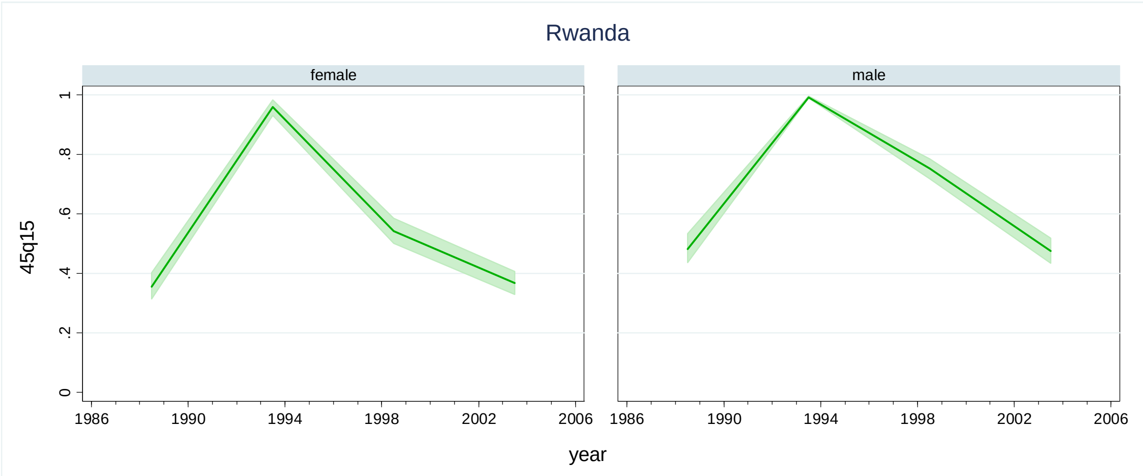
Appendix Figure 2 NPL



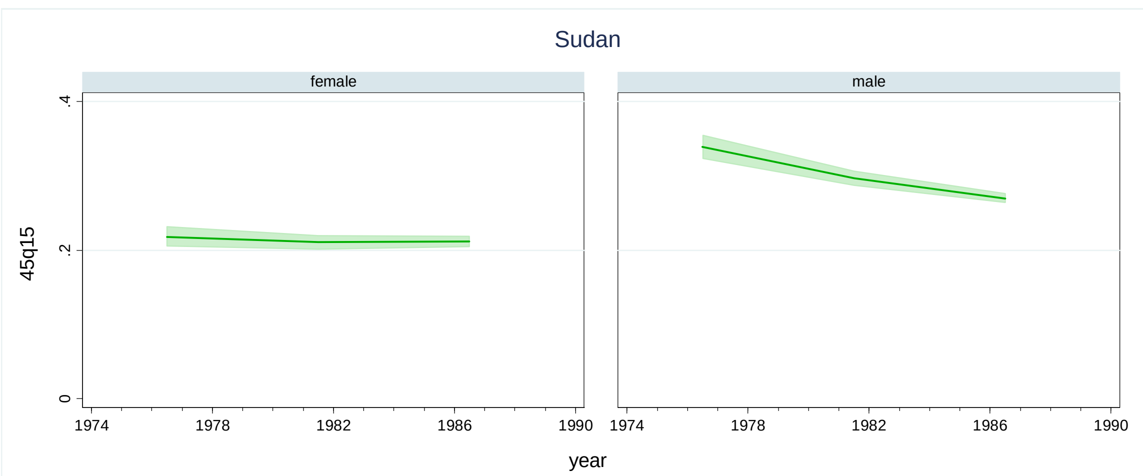
Appendix Figure 2 PER



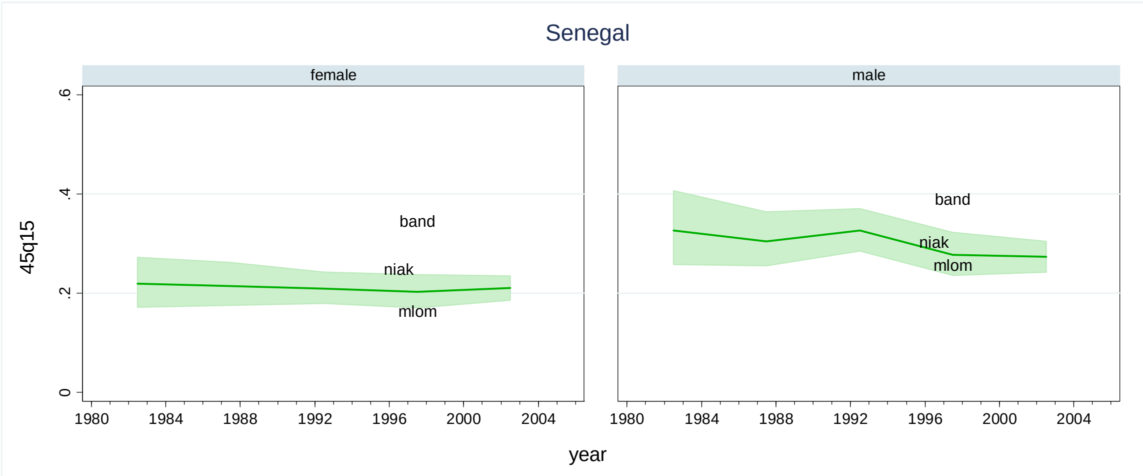
Appendix Figure 2 PHL



Appendix Figure 2 RWA

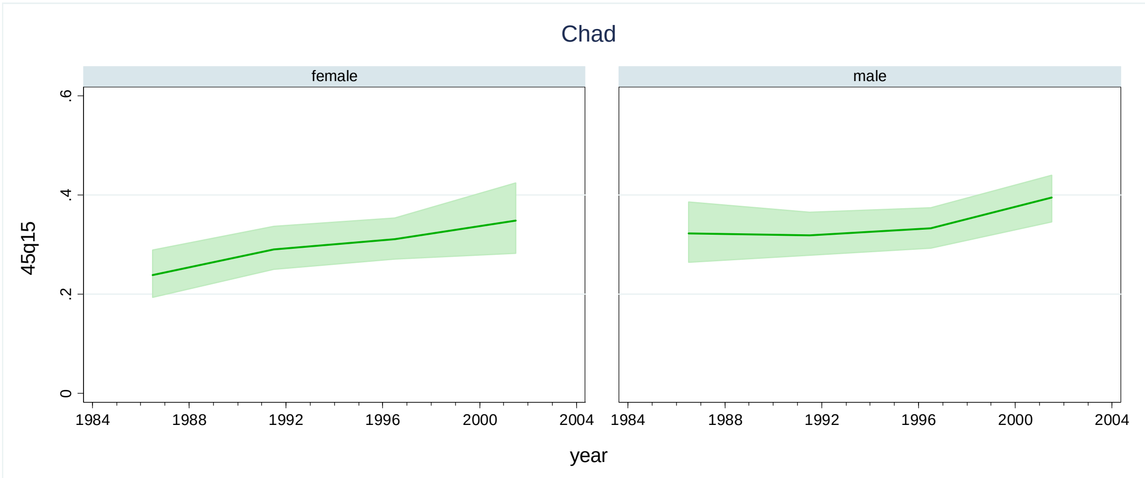


Appendix Figure 2 SDN

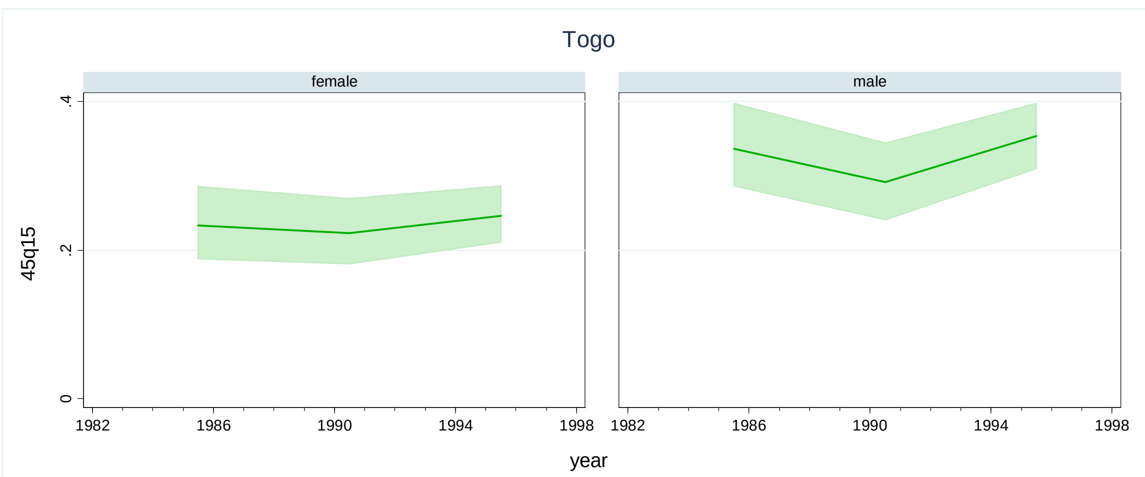


Appendix Figure 2 SEN

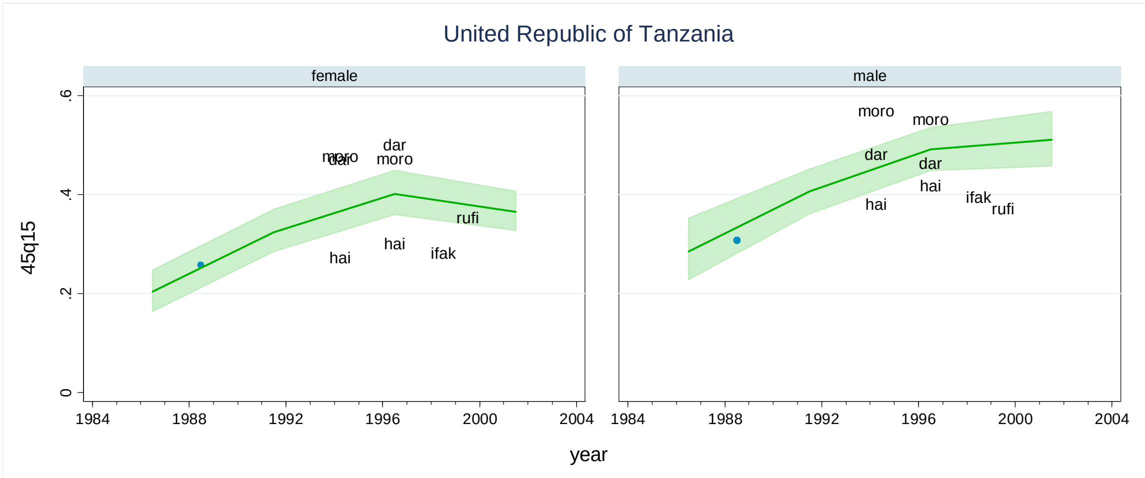
Appendix Figure 2 SWZ



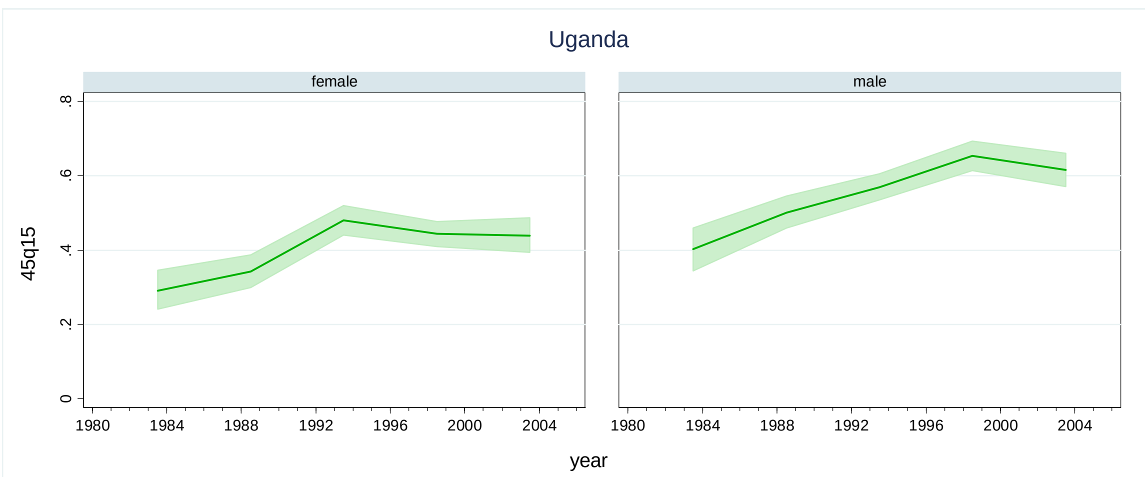
Appendix Figure 2 TCD



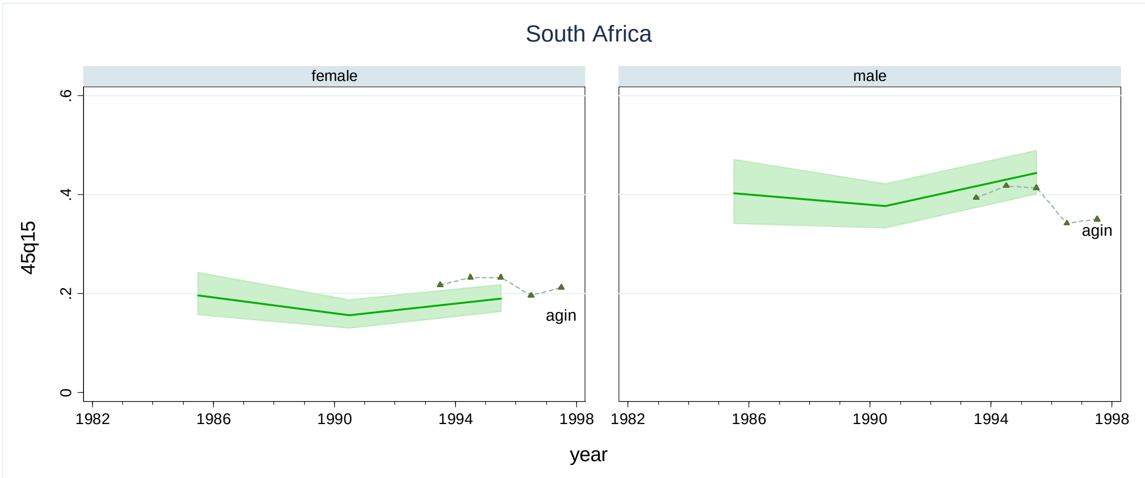
Appendix Figure 2 TGO



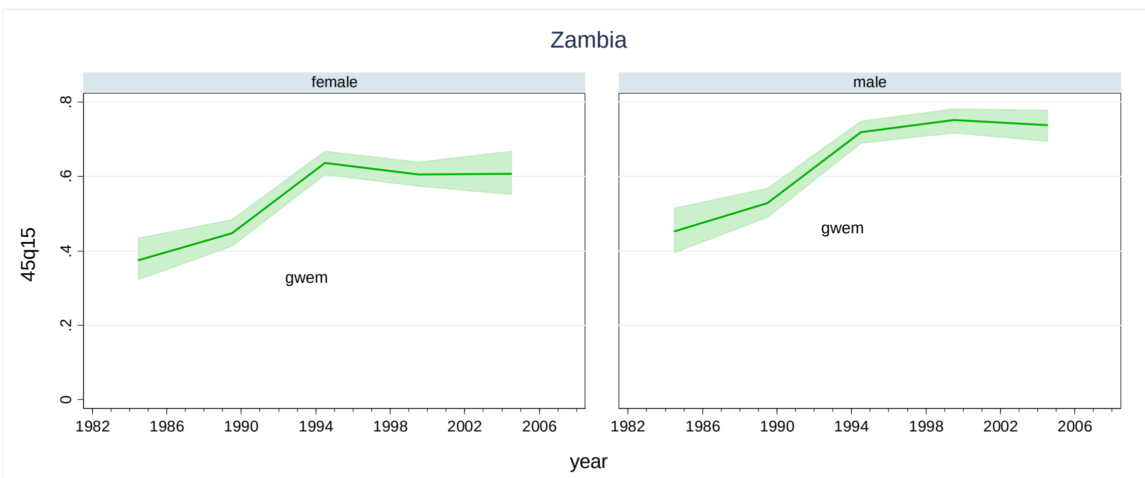
Appendix Figure 2 TZA



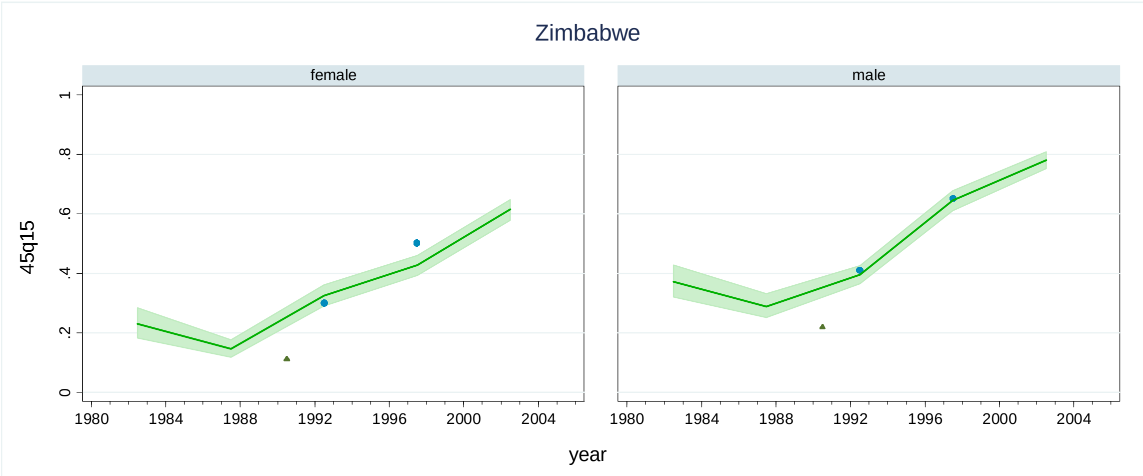
Appendix Figure 2 UGA



Appendix Figure 2 ZAF



Appendix Figure 2 ZMB



Appendix Figure 2 ZWE