

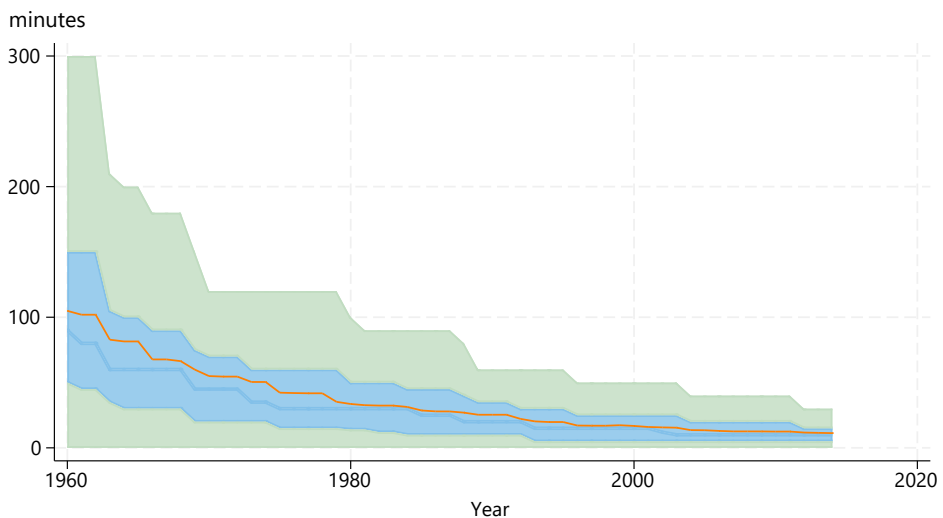
Online Appendix

Migration and the Life Course in the Context of Social Change^{*}

Katharina Klaunig, Barbara Entwisle

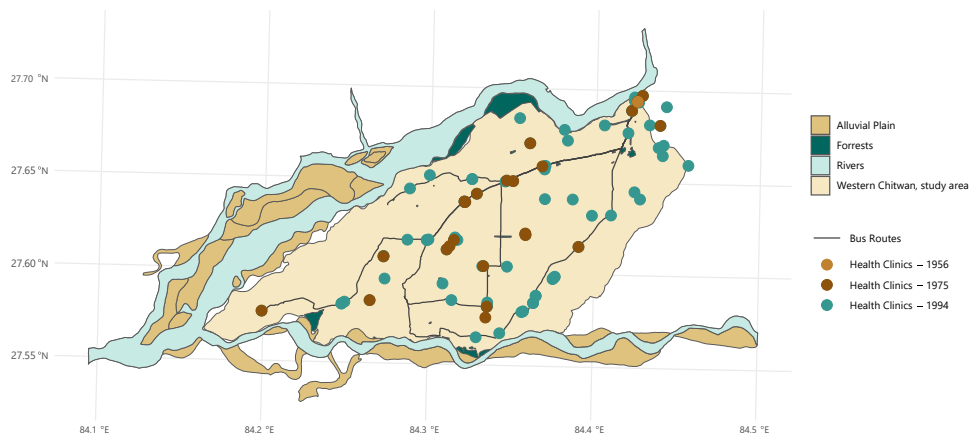
A1 Variation in access to a service

Fig. A1: Yearly interquartile range, minutes by foot to nearest health service



Source: Own calculation based on the Chitwan Valley Family Study Neighborhood History Calendars

^{*} This Online Appendix contains additional information regarding the article:
<https://www.comparativepopulationstudies.de/index.php/CPoS/article/view/765/475>

Fig. A2: Map of the Chitwan Valley Family Study Area

Source: Authors' own depiction, using data from the Chitwan Valley Family Study

A2 Who is missing?

In the main text (Section 4), we noted that we do not capture people who depart due to moving away or dying before being age-eligible for life history calendar data collection. These are not the only individuals missing.

In aiming to examine people with complete sequences from birth to age 34 up through 2021, we exclude many individuals. First, we exclude individuals who did not complete a Life History Calendar (LHC). Those born in 1996, at the start of the Household Registry, would be 25 in 2021. Therefore, in examining birth to age 34, for age-related reasons, everyone should have completed an LHC. For those entering the household registry at an age other than birth, we do not have their information prior to entrance into the household registry and therefore cannot capture it. Thus, we are missing information on movement prior to entrance for these individuals.

Second, we exclude people who are not 34 by the latest calendar year observed, 2021. This is why our latest birth year is 1987. Someone who is 15 years old, the minimum age to be eligible to complete a LHC, in 2012, the last possible year they could have been captured by the LHC, would be 24 in 2021. Therefore, individuals must have been at least age 25 in 2012 to be captured.

Third, we exclude individuals who completed a LHC before the age of 34, but who left the Chitwan sample before age 34, because we are missing complete information on all ages (0-34) from them. Furthermore, among the younger cohorts who could have been captured post-departure through the Household Registry, we exclude those who left Chitwan before age 34 and did not remain tied to households in a manner that would keep them in the household registry.

Therefore, our age condition to be a part of the analytic sample contributes to limitations of who we can capture, beyond needing to have experienced enough years of life. Because we are interested in migration, and departing a place is a

reason for attrition, this is important to note. This is potentially an issue because migrations are common in young adulthood, especially in relation to markers of transition to adulthood such as marriage, education, working, and establishing new households. Our focus on ages 0-34 captures moves in both childhood and young adulthood. However, this same focus produces challenges in capturing movers. Nonetheless, the strength of the data, by combining two waves of retrospective data with prospective data, allows us to capture many moves in relation to place.

Our analytic sample contains 6,746 people. This is 62.4 percent of everyone who completed a Life History Calendar (10,806 people). We require individuals to have a minimum age of observation of 0. This excludes 213 people (2 percent) who have a minimum age above 0. We also limit the sample to those born in 1987 or before, so that they are old enough to be 34 by the end of the years of data that we have. This excludes 1,467 people (13.6 percent). 1,832 individuals are further excluded because their observed residency history ends before age 34 (17 percent). Another 548 individuals (5.1 percent) were excluded due to incompleteness in their migration sequence between age 0 and age 34.

Table A1 shows how missingness due to departure prior to age 34 or arrivals after the 2008-12 LHC data collection period (who would have been age-eligible) impacted our analytic sample and how missingness varies across cohort and sex. Sequence density plots further illustrate residency before individuals depart Chitwan.

From Figure A3 we see, as we look down the columns, that more recent cohorts have greater proportions of missing data at earlier ages (potentially due to departures). This is in large part due to the timing of data collection in relation to age. During the first wave of data collection for the life history calendar, 1996, individuals in the 1960-69 birth cohort were between 27 and 36; those in the 1970-79 birth cohort were between 17 and 26; and the 1980-87 birth cohort was between 9 and 16 years old. The data being collected when individuals are older means a greater potential to miss departures prior to that age, because they left before completing an LHC. This is also why the data does not capture such departures (to

Tab. A1: Attrition of males and females, due to age-related conditions of the analytic sample, who completed at least one Life History Calendar

Birth Cohort	Total possible		Total missing due to departure		% attrition, by cohort
	males	females	males	females	
Born before 1950	398	382	0	0	0
Born 1950-59	600	561	0	0	0
Born 1960-69	956	820	65	46	6.25
Born 1970-79	1,510	1,494	423	530	31.72
Born 1980-87	1,051	1,354	287	481	31.93
Total	4,515	4,611	775	1,057	20.07

Source: Authors' own calculation based on the Chitwan Valley Family Study Life History Calendars

the extent that individuals do not return to Chitwan) in the oldest two cohorts (born before 1950 and born 1950-59), and why we only have this information for the three youngest cohorts.

Finally, we consider which individuals were excluded from the analytic sample due to missing the completion of a Life History Calendar given their age-related movement patterns *into* Chitwan. We do so by examining entrance into the Household Registry. 58,523 individuals are in the Household Registry and did not complete a Life History Calendar. We reduce our focus even further to consider who was missed because of the timing of data collection for the LHC. Of these individuals who did not complete a LHC, 8,287 (14.2 percent) were resident in Chitwan for at least 6 continuous months, entered the Household Registry before or at age 34, were born in 1987 or before (over 50 percent were born after 1987), and did not complete a Life History Calendar. All person-years after age 34 were also excluded.

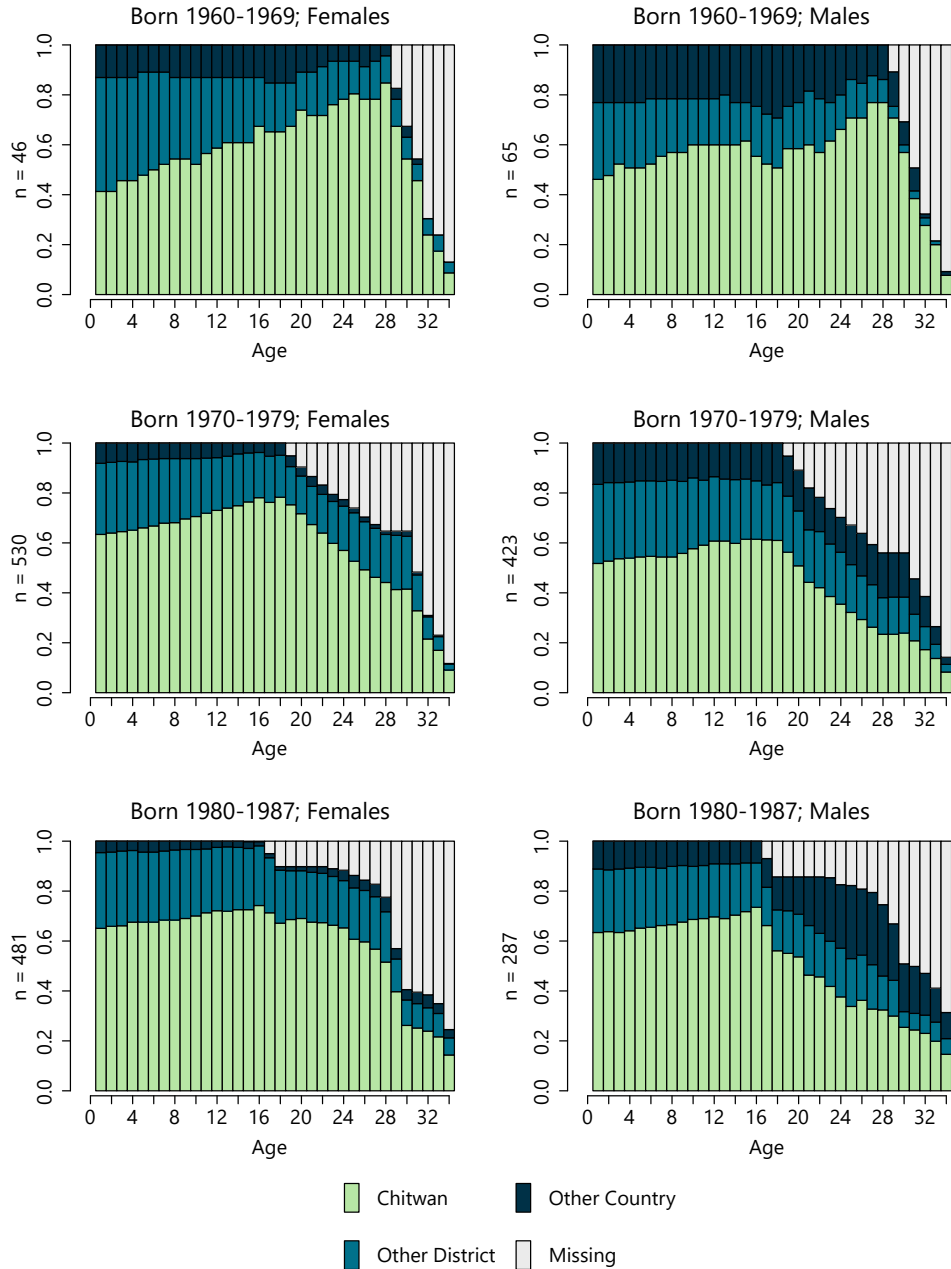
Note that this does not mean that we have yearly information for them from age at entrance until age 34, just that they were continuously resident for at least 6 months at any given point. This missing information on residency is noted in Figure A4. The sequence density plots in Figure A4 show reasons why we might not see the residency of individuals, along with their residency if we do see it, for individuals who met the criteria described above. The comings and goings captured in the prospective data pick up people with shorter stays in Chitwan, hence an overall greater number of departures or missingness for certain ages. Figure A4, like Figure A3, captures the age-related impacts of the timing of data collection.

Tab. A2: Males and females who were not captured in the Life History Calendar but were resident in Chitwan

Birth cohort	Total possible males	Total possible females
Born before 1950	0	0
Born 1950-59	0	0
Born 1960-69	136	211
Born 1970-79	1,279	1,249
Born 1980-87	3,101	2,311
Total	3,771	4,516

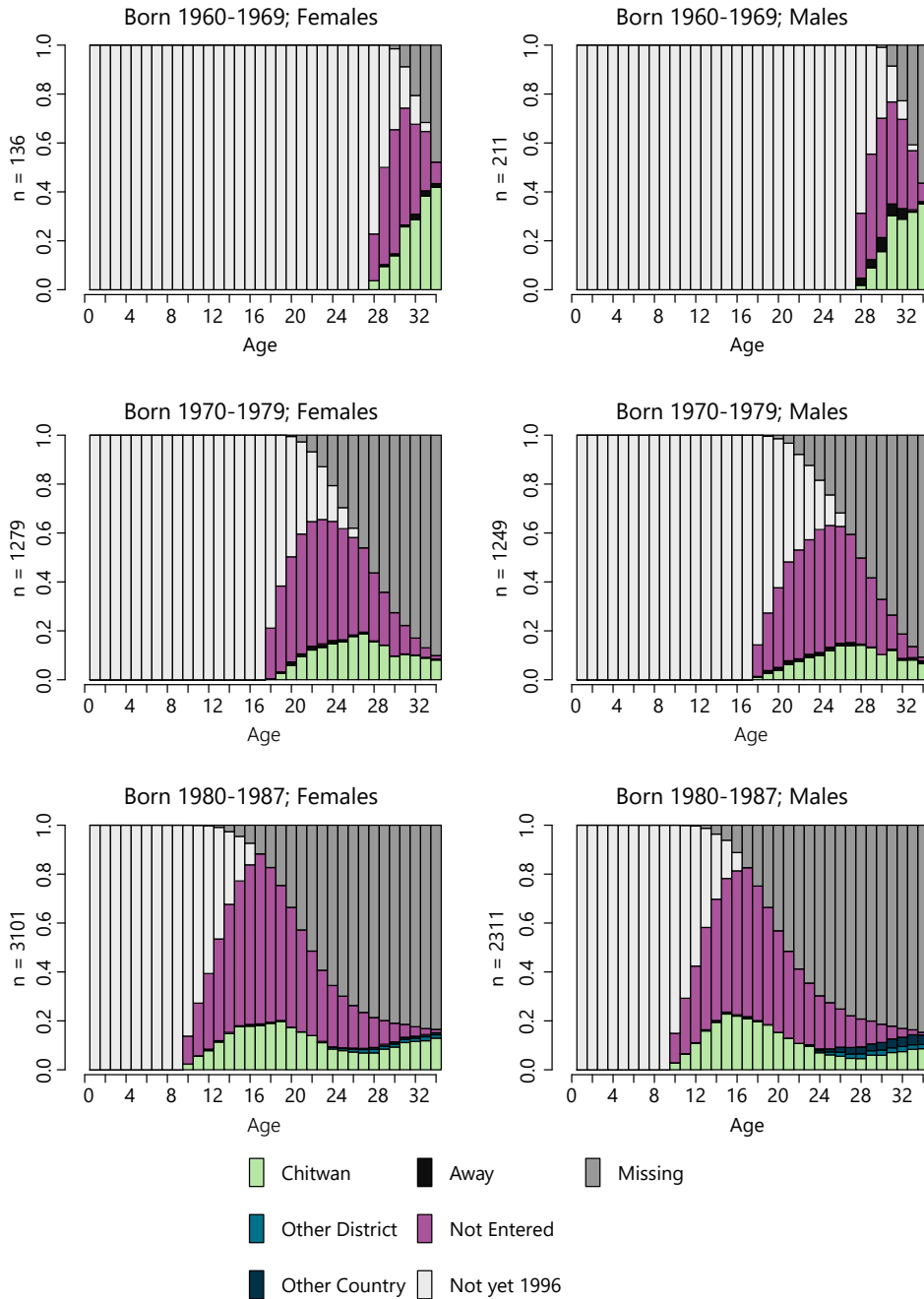
Source: Authors' own calculation based on the Chitwan Valley Family Study Household Registry

Fig. A3: Sequence density plot, missing before age 34



Source: Authors' own calculation based on the Chitwan Valley Family Study Life History Calendars

Fig. A4: Sequence density plot, missing before entrance into the Household Registry



Source: Authors' own calculation based on the Chitwan Valley Family Study Household Registry

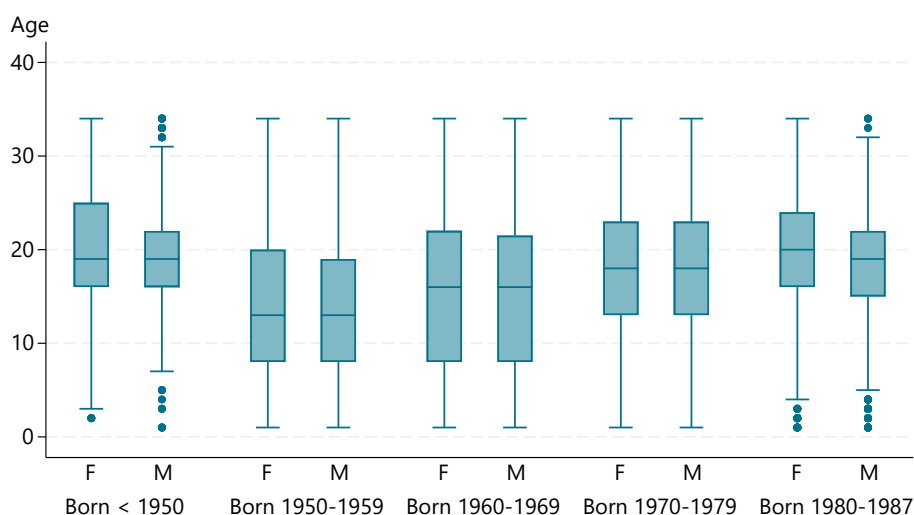
A3 Age at migration

Figures A5, A6, and A7 highlight the age of first migration and the age-specific migration rates for everyone in our analytic sample. Figure A5 shows a tightening of the ages at first migration for the youngest cohorts. Males and females have relatively similar averages for age at first migration, though for the youngest cohort, females tend to migrate slightly later than males. On average, age at first migration happens between age 15 to age 20.

With regards to age-specific migration rates, for females, similar patterns across cohorts are apparent, except for the youngest cohort. The youngest cohort migrated at later ages. The oldest cohort also slightly deviates, reflecting their moves into Chitwan in childhood. For males, the age-specific rates show an increase in migration starting around age 15 for all cohorts. In adolescence and early adulthood, the youngest three cohorts show more migration than prior cohorts do.

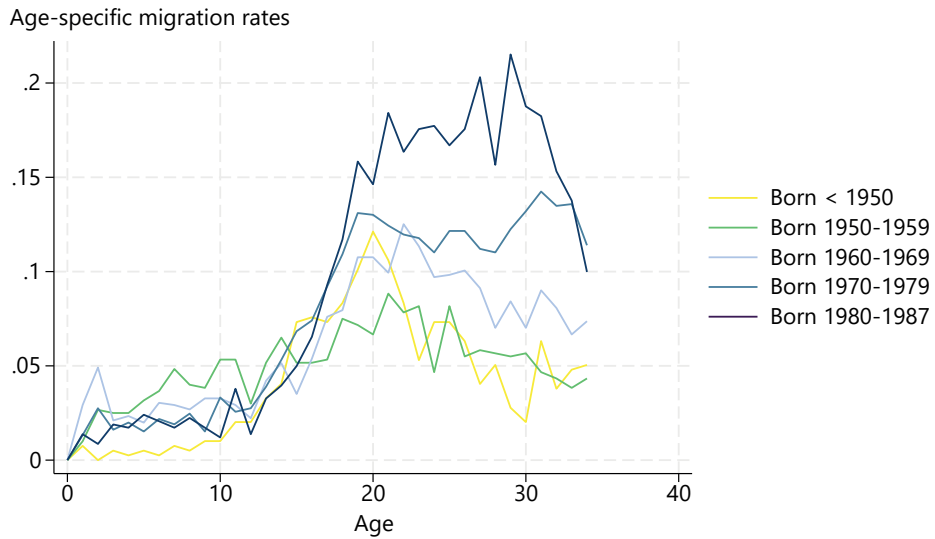
The study area is the Chitwan Valley in Nepal. To the West and South, it is bordered by rivers and forests. In the South, it borders India. The dots show the location of health clinics at three different times, from the earliest date to the latest date of data collection. At first, there was only one clinic in the study area. Over time, more clinics were built around road and bus networks and then spread out further.

Fig. A5: Age at first migration if ever migrated



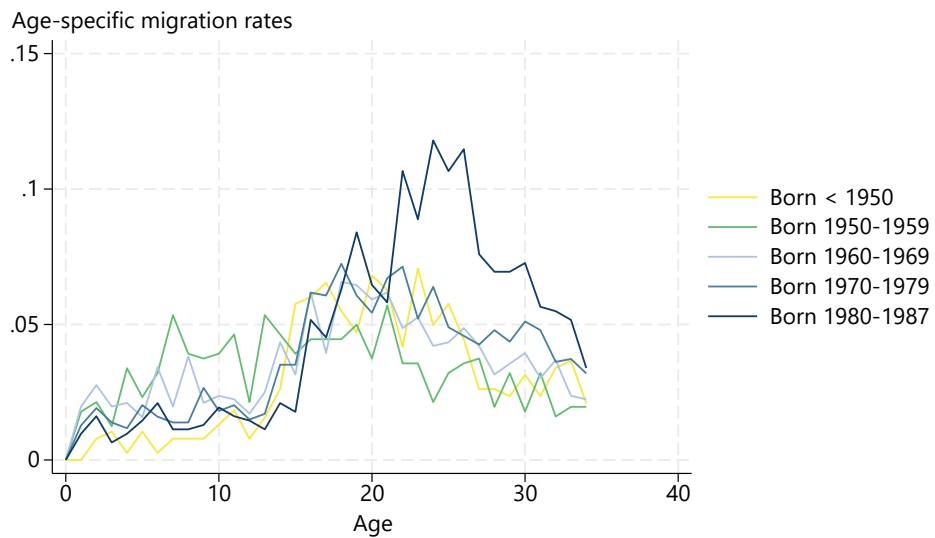
Source: Authors' own calculations

Fig. A6: Age specific migration rates by cohort – males



Source: Authors' own calculations

Fig. A7: Age specific migration rates by cohort – females



Source: Authors' own calculations

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