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## Parity-specific weights for the Austrian Generations and Gender Survey

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# VIENNA INSTITUTE OF DEMOGRAPHY

## *Working Papers*

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*Isabella Buber*

## ***Parity-Specific Weights for the Austrian Generations and Gender Survey***



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## **Abstract**

The „Generations and Gender Survey (GGS)“ is an important data source for studying the dynamics of families and family relationships, it was out in Austria in 2008/09. After adjustment for age, sex, employment status, country of birth and living arrangements, we revealed a bias towards women with higher parities among the cohorts born until the mid-1970s. Since parity is an important aspect for fertility analyses, weights were generated for the female sample that additionally adjust for the cohort-specific parity distribution. In this paper, we describe the original prevailing bias and inform the GGS user about the adjustment with the weights for the Austrian GGS. These weights are provided by VID to the international scientific community and are included in the Austrian GGS dataset.

## **Keywords**

Generations and Gender Survey, Austria, weights, parity distribution

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# Parity-Specific Weights for the Austrian Generations and Gender Survey

Isabella Buber

The Austrian Generations and Gender Survey (GGS) was carried out between September 2008 and March 2009. In total, 5000 respondents (3001 women and 1999 men) aged 18 to 45 were interviewed. Users have to keep in mind that at the reference date 1 June 2008, when the sample was drawn, respondents were aged 18 to 44 years.

Statistics Austria compared the distribution of several sociodemographic characteristics in the raw data with that in the Microcensus 4/2009. Weights provided by Statistics Austria adjust for age, sex, employment status, country of birth and living arrangements. For more information see Statistik Austria (2009) Chapter 2.10. The name of this weight in the final data version is labelled 'gew\_neu'.

A comparison of the parity distribution of female birth cohorts in the Austrian GGS with the data computed by the Vienna Institute of Demography for the *Geburtenbarometer* ('birth barometer') project revealed a bias in the GGS data towards women with higher parities among the cohorts born until the mid-1970s (Figures 1 and 2). *Geburtenbarometer* provides continuous monitoring of period fertility rates in Austria; further information is available at <http://www.oeaw.ac.at/vid/barometer/index.html>.

After adjustment with the weights provided by Statistics Austria, the comparison with *Geburtenbarometer* revealed a lower number of childless women and a higher number of women with three or more children in the older cohorts in the Austrian GGS. Figure 1 shows the cohort parity distribution of female respondents in the Austrian GGS adjusted with the original weights 'gew\_neu' provided by Statistik Austria. Figure 2 depicts the cohort parity distribution according to the Austrian *Geburtenbarometer* (data pertaining to 31 December 2008).

Since parity (number of children ever born to a woman) is an important aspect for fertility analyses, VID has generated weights for the female sample that additionally adjust for the cohort-specific parity distribution according to *Geburtenbarometer* as of 31 December 2008. The name of the weights calculated by VID is 'gew VID'. Figure 3 gives the parity-specific distribution of women in the Austrian GGS adjusted with the VID weight which—as intended—generates a parity-specific distribution for women identical to the one of *Geburtenbarometer* (end 2008).

Users have to keep in mind that the VID weights adjust for five dimensions for male respondents (age, sex, employment status, country of birth, living arrangements; i.e. Statistics Austria weights unchanged), and for six dimensions for female respondents (age, sex, employment status, country of birth, living arrangements, parity).

For female respondents, the weights provided by Statistics Austria reduce the difference in the mean number of children between the raw data of the Austrian GGS on the one hand and *Geburtenbarometer* on the other, especially for younger birth cohorts (1974 to 1978).

Nevertheless, discrepancies for older cohorts remain, which are calibrated with the weight generated by VID (Figure 5).

Since *Geburtenbarometer* data on parity distribution are available for women only, a possible bias in the parity distribution of Austrian males in the GGS survey cannot be detected with the former data. However, we assume that the current adjustment for the living arrangements by Statistics Austria corrects these potential biases to a certain degree (Figure 4). Comparisons for the female data revealed that the inclusion of living arrangements as a weighting criterion significantly improved the fit between the GGS and *Geburtenbarometer* data.

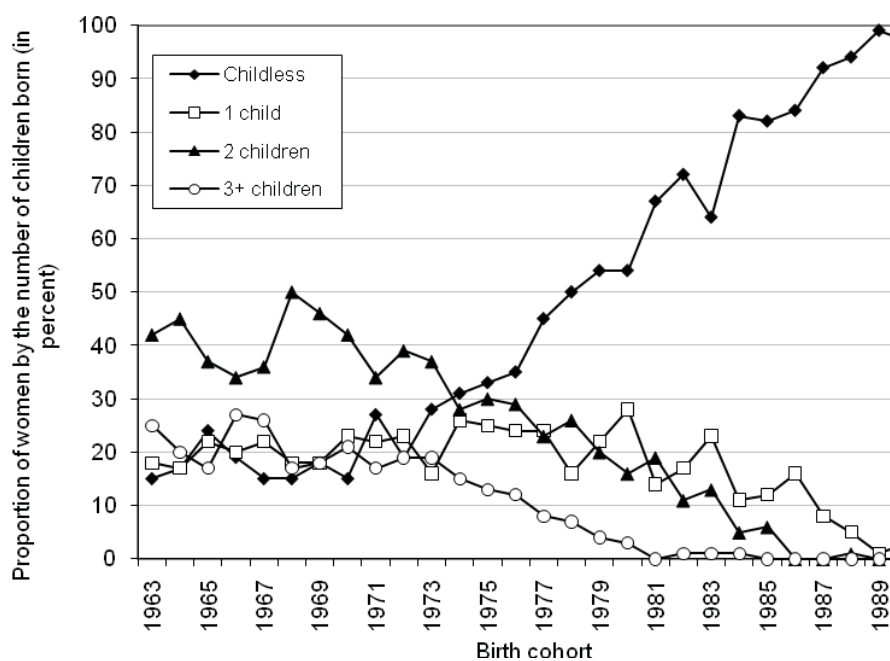
Due to unknown parity distribution of migrant women, *Geburtenbarometer* data are also prone to some estimation errors and therefore are not entirely identical to the ‘true’ parity distribution of the resident female Austrian population. In the absence of alternative data sources, we believe that *Geburtenbarometer* provides most accurate and reliable estimates of the female cohort parity composition for Austria. Unfortunately, while the Austrian *Microcensus*—which constitutes another potentially valuable data source—does ask about the number of children living in the household, it does not regularly collect the number of all children ever born, including those not living in the household.

The country specific homepage of the Austrian GGS is: <http://www.ggp-austria.at>. As by June 2010, the Austrian GGS data are available. Please contact [ggp@oif.ac.at](mailto:ggp@oif.ac.at) for further information.

## References

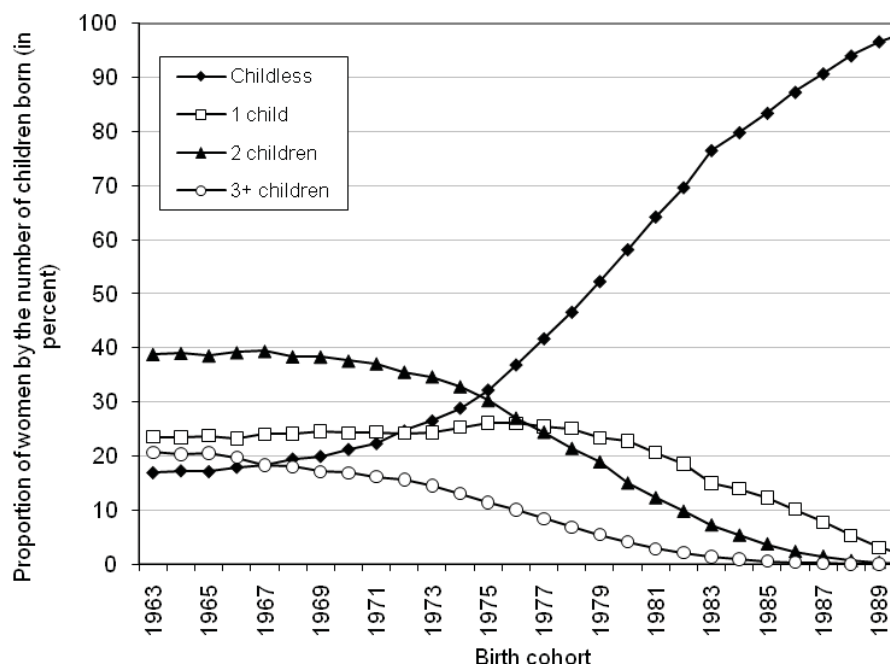
Statistik Austria (2009) Generations and Gender Survey. Familienentwicklung in Österreich. Welle 1 – Generationen und Geschlechterrollen. Endbericht.

Figure 1: Cohort parity distribution of women in the Austrian GGS, adjusted with the weight generated by Statistics Austria



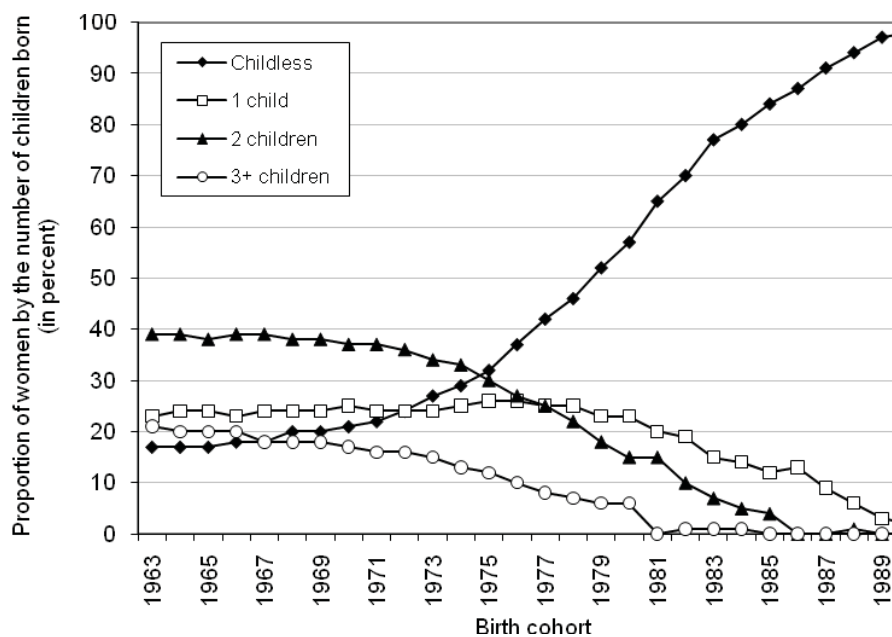
Source: Austrian GGS, weighted with 'gew\_neu'

Figure 2: Cohort parity distribution of Austrian women according to the *Geburtenbarometer*



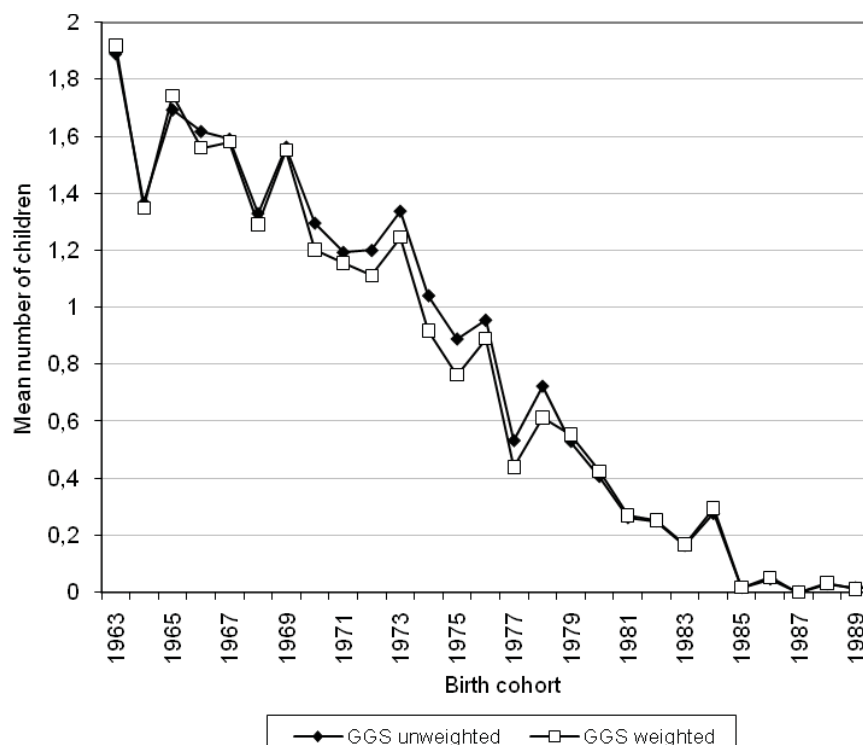
Source: Geburtenbarometer (end 2008), provided by Tomáš Sobotka

Figure 3: Cohort parity distribution of women in the Austrian GGS, adjusted with the weight generated by VID



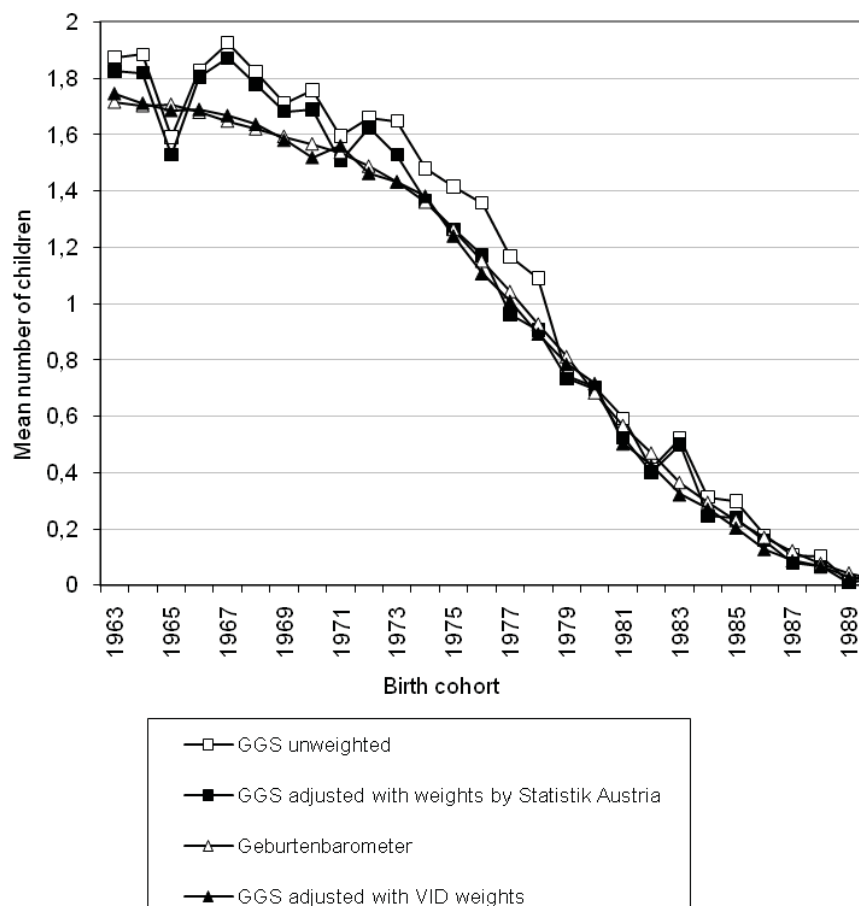
Source: Austrian GGS, weighted with 'gew\_vid'

Figure 4: Mean number of children, men in the Austrian GGS



Source: Austrian GGS, male respondents

Figure 5: Mean number of children among women in Austria: A comparison of Geburtenbarometer with weighted and unweighted GGS data



Source: Austrian GGS, female respondents



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