

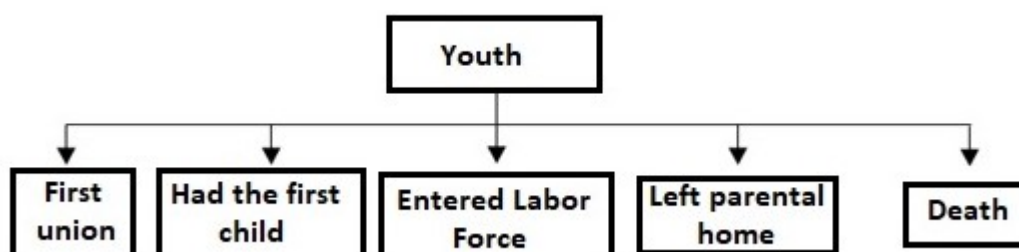
Transition to adulthood in Brazil (1970-2010): explaining the gap between men and women through formal demography

Background

In the social sciences, as Corijn summarizes (2001), the transition to adulthood can be interpreted from several perspectives. The most popular sees the transition to adulthood as the adoption of new roles before the society that characterize the individual as an adult. These new roles are linked to the start of two careers that may occur simultaneously or not: career at work and career in the family. This paper follows from this perspective and is based on the seminal work of Modell, Furstenberg and Hershberg (1976) that define five events as markers of the beginning of adulthood: entry into the job market and definitive exit from the school (motive work); birth of the first child, formation of the first union and leaving the parental home (motive family).

Although the study of youth in Brazil is relatively abundant, there are still few studies that attempt to quantify the phenomenon of transition to adulthood. The lack of research that accurately determines the age at which each transition occurred makes it challenging to replicate studies done for developed countries (Vieira, 2008b). This paper seeks to contribute to the literature of the theme by proposing a methodological solution that will overcome the lack of research in Brazil by allowing the direct extraction of transition rates from cross-section surveys. To illustrate this methodology, we try to estimate the mean age at transition for men and women and the decomposition of the difference between the mean ages. It is based on a multiple-decrement life table framework, where the initial state "youth" is left through the transition to adulthood by the described events or by the non-transition via death. This framework is described in the scheme of figure 1.

Figure 1



Methodology

Based on the questions of the Demographic Census of Brazil, it is possible to estimate the proportion of the population by age (${}_n\delta_x$) in each absorbing state (already participated in the labor market, already united/married, had a child, left home, and adult, if already transitioned to one of these states). Thus, assuming the stability of the transitions, it is possible to estimate the transition rates for the absorbing state by age (${}_n\alpha_x$) as:

$${}_n\alpha_x = {}_n\delta_{x+n} - {}_n\delta_x$$

This equation allows calculating the transition rate for adult life (${}_n\alpha_x$) and the transition rate for each event i (${}_n\alpha_x^i$) (entry into the labor market, formation of the first union, birth of the first child, and exit from parental home), but does not allow direct estimation of the transition rate to adulthood per event (${}^*_n\alpha_x^i$). What this paper proposes is to take the age-specific transition rates to adulthood as total, and use the information on the other specific rates per event to decompose this total proportionally to the value of the rates of each event:

$${}^*_n\alpha_x^i = {}_n\alpha_x^i \cdot \frac{{}_n\alpha_x}{\sum_i {}^*_n\alpha_x^i}$$

The basic intuition behind this proposal is that it is necessary to assign the first transition to each individual who performed more than one of them in the age range. One possible solution is to assign this first transition through a probability: the transition most likely to be the first is the one that is most common in each age range. The methodological proposal seeks to do this at the aggregate level.

Adding the transition rate to adult life with specific mortality rates (${}_n m_x$), it is possible to estimate the total youth exit rate (${}^*_n\alpha_x$):

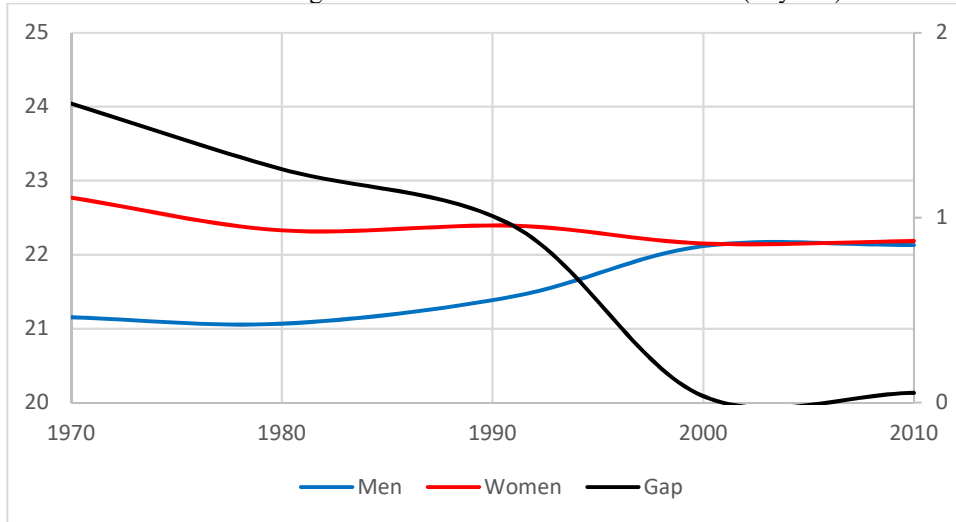
$${}^*_n\alpha_x = {}_n\alpha_x + {}_n m_x$$

With the initial state exit rate, it is possible to estimate the mean age at transition to adulthood using the Life Table methodology (following the steps of Preston *et al*, 2001) and to decompose the mean age differential between men and women following the methodology presented by Arriaga (1984) from the transition rates per event.

Results

The results show a movement of convergence between the mean age at the transition of men and women in Brazil between 1970 and 2010, which appears to be stronger in the 1980s and 1990s.

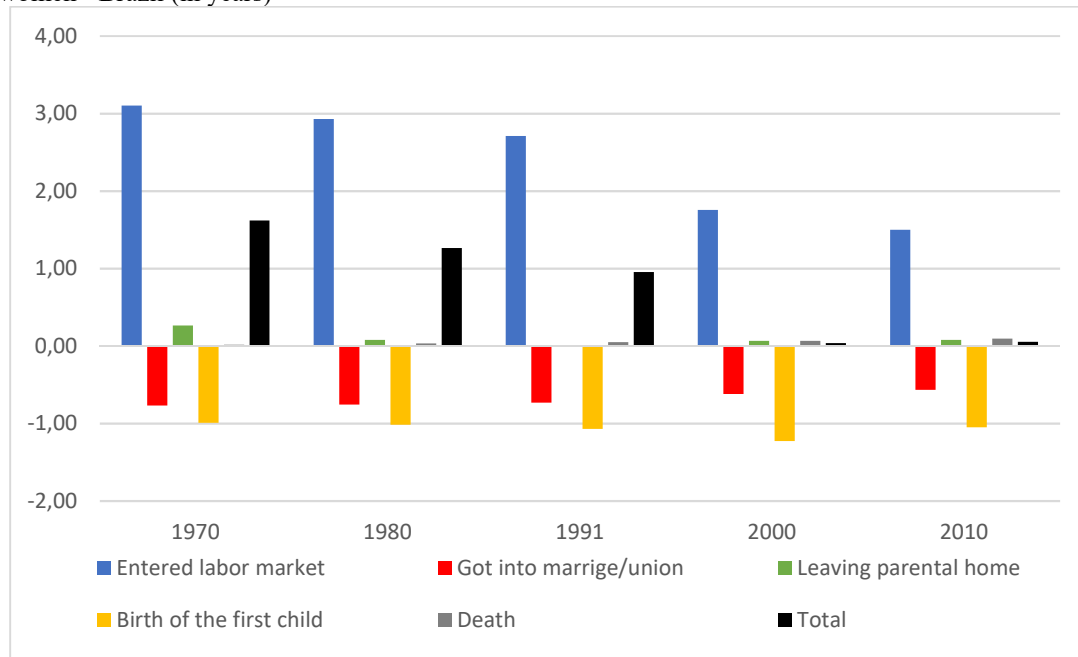
Graph 1 - Evolution of the mean age at the transition to adulthood - Brazil (in years)



Source: Demographic Census of 1970, 1980, 1991, 2000 and 2010 (IBGE).

The decomposition helps to understand the causes of this convergence trajectory.

Graph 2 - Decomposition of the mean age difference to the transition to adulthood between men and women - Brazil (in years)



Source: Demographic Census of 1970, 1980, 1991, 2000 and 2010 (IBGE).

The greater weight of entry into the labor market is justified by the increase in female participation in the labor market, which has worked to reduce the relative participation of the events related to family formation (formation of the first union and birth of the first child) in the transition of women for adulthood. This trend was already outlined by Camarano *et al* (2006). This result can be attributed both to changes in gender equity in the Brazilian labor market over the last 50 years and to factors that have contributed to standardize the mean age at the transition of various population groups, such as the expansion of public education, as argued by Ribeiro (2014) and Vieira (2008a).

The result of the decomposition shows that, depending on entry into the labor market, women would continue to enter later into adulthood than men, but family-related events contribute to lowering the mean age at transition. This phenomenon can be explained by the fact that there are strong legal restrictions on the very young entry into the labor market, but not for the formation of informal unions and teenage pregnancy, which makes the events related to family formation have a mean age lower than the average age of entering the labor market.

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