Mean Age at First Job in Brazil: the case of the metropolitan areas

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This paper analysis the mean age at first job, comparing males and females in six metropolitan areas in Brazil: Belo Horizonte, Sao Paulo, Rio de Janeiro, Recife, Salvador and Porto Alegre. The method applied was the singulate mean age, as reviewed by Wachter (2006). The main goal was to verify the changes during the 1980's, 1990's and 2000's years in the mean age. It was expected an increase in the age at first job, as a result of the delaying in the insertion in the labor market among the youth. Moreover, it was intended to compare the mean age between males and females, especially because of the increase in the women participation in the labor market, the mean age of the first job tends to diminish the differences between the genders.

Key-words: Age Pattern, First Job, Youth and Brazil.

Introduction

It is very hard to calculate the mean age at first job, since we don't have appropriate data for it in Brazil. The longitudinal data is very scarce and usually we have the information about the age that a person has started to work only if s/he is employed at the time of the survey. This kind of data excludes everybody who has already worked and is not working at that time and also people who are going to transition to work but have not. A different kind of data that has already been used is a social mobility and labor market supplemental information about all heads of household and their spouses for 1996 in a National Household Survey. However, selection effect plays an important role in the calculation using this data. Therefore, it is necessary to apply a different technique in order to study this important topic, and this is the goal of this paper: to calculate the mean age at first job using demographic techniques based on synthetic cohort concept. The age at first job is important to know how the transition to adulthood is happening, especially because

there is a belief that the transition to work is very early in Brazil, and contributing to the discussion on development of youth public policies.

Goals

This paper has two main contributions. One it is to analyze the changes in the age pattern of the transition to work, comparing females and males in Brazil in six very different metropolitan regions, using two different demographic techniques. The second is to apply a fertility technique and a mortality technique in a labor market study.

Data Base

The data base used is the Monthly Employment Survey of IBGE in Brazil. It covers six metropolitan areas: Rio de Janeiro (RJ), São Paulo (SP), Porto Alegre (POA), , Belo Horizonte (BH), Recife (RE), and Salvador (SAL). Main characteristics for this study: 1) it is possible to have information about the same individual in a period of one year; 2) there is a question if the individual has already worked in all his/her life.

Methods

Singulate Mean Age

Originally the Singulate Mean Age Method (SMAM) was developed for the nuptiality study in order to calculate the age at the first marriage. However, it is possible to apply the SMAM to study the labor market because both cases have some similarities. Like the first marriage the first job is a unique event in one's life. The assumptions in this case are the same in the nuptiality study: 1) positive ages; 2) once the person has already worked, it is not possible to come back to the status of "have never worked;" although it is possible to become economically inactive; 3) it is necessary to exclude the people who have never worked, in order to deal with whom has already worked. In this paper the age interval considered was from 10 to 64 years old, they are the interval of the actively economic population. The upper limit is very high to consider, but this choice doesn't affect the analysis, because the calculation process only takes account the age interval which has the highest percent of the people who have already worked. This interval

generally is between 25 years and 35 years old. The data used was provided by the question if the person has never worked.

Life Table

Life Tables are largely used to study mortality and calculate the period life expectancy. In this case the decrement is if the youth got a job in the following period. The data used was provide by the possibility of following the person in a period of one year. Therefore the life expectancy correspond to expected years that the youth are expected to stay inactively if he/she experiences the specific set of transition rate. In order to construct the life tables, the age lower limit is 15 years since there is no possibility of having information for children 9 years old in the previous period. There are two arguments that can support this limitation: 1) after the calculation using the singulate mean age we know that the mean age is more than 15 years old, 2) the transition rates are very low for children between 11 and 14 years old.
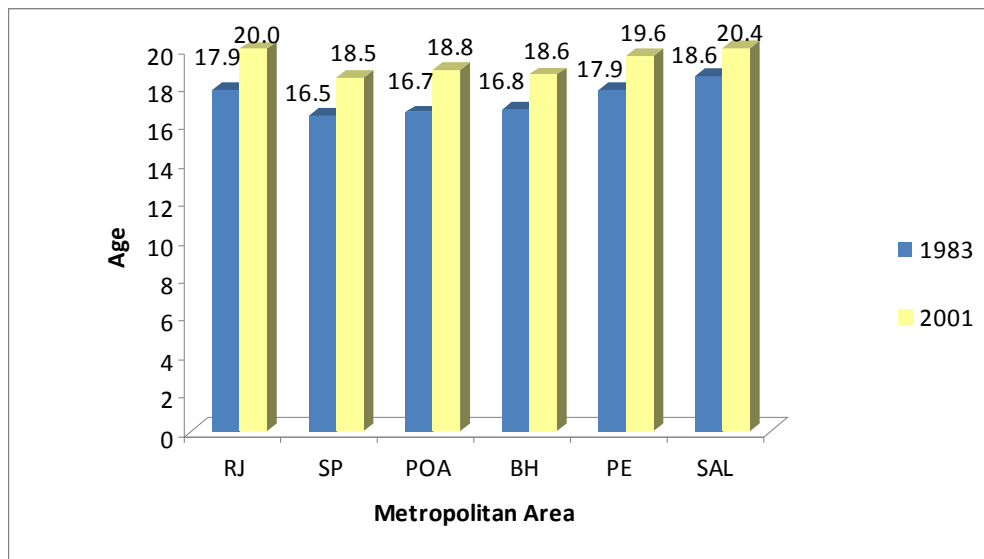
Results

<u>Singulate Mean Age:</u> The mean age for females in the three periods is lower than for males, but the increase in age was higher among males, thus the mean age between the two groups have became closer. The mean age difference between women and men between 1983 and 1992 was 1.44 years.

GRAPH 1 – Mean Age at First Job by Sex – Singulate Mean Method, 1983 and 2001
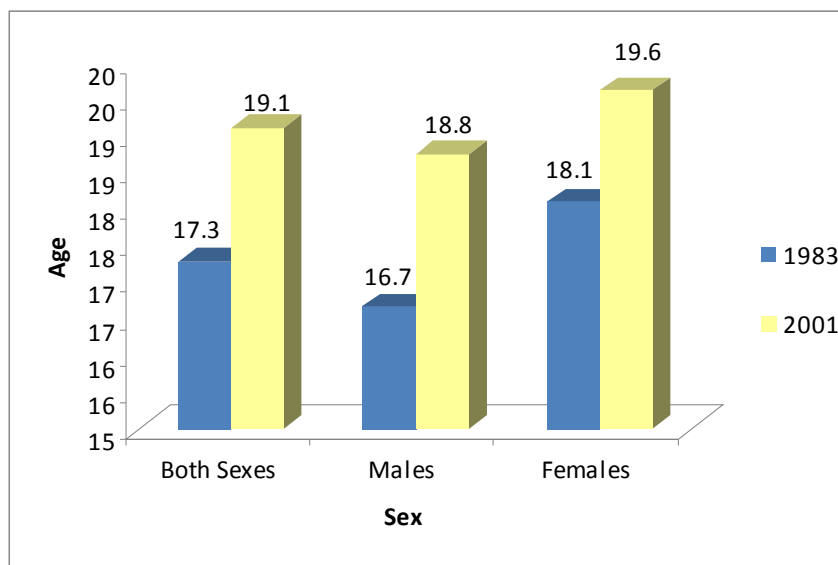
Metropolitan Areas Differences: the mean age in all six metropolitan areas in Brazil is increasing, in average it increased 2 years between 1983 and 2001. All the cities showed the same tendency, although, they are economic different from each other. The most economically dynamic area is the one with the lowest mean age during the three decades, São Paulo. On the other hand, the difference between the smallest mean age and the biggest age decreased over time.

GRAPH 2 – Mean Age at First Job by Metropolitan Region – Singulate Mean Method, 1983 and 2001
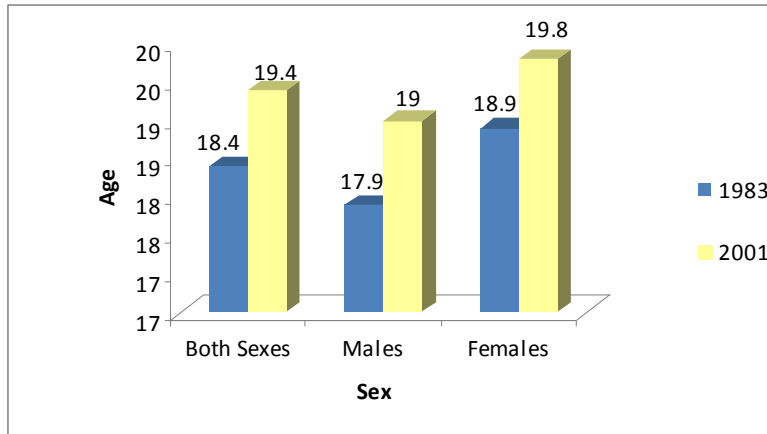

Data Source: PME, 1983, and 2001.

Note: RJ (Rio de Janeiro), SP (Sao Paulo), POA (Porto Alegre), BH (Belo Horizonte), PE (Pernambuco) and SAL (Salvador).

Life Table: the results are very similar, they present the same trend, however the mean age is higher for all groups this can be due to the limitation of the minimum age at 15 years old since the kind of data is different from the one used for the singulate mean age method.

GRAPH 3 – Mean Age at First Job by Sex – Life Table Method, 1983 and 2001.

Data Source: PME, 1983, and 2001.

GRAPH 4 – Mean Age at First Job by Metropolitan Region – Life Table Method, 1983 and 2001
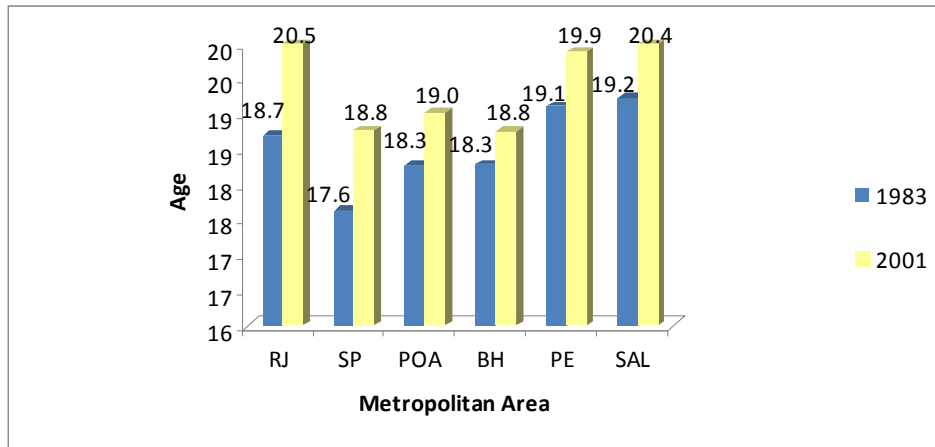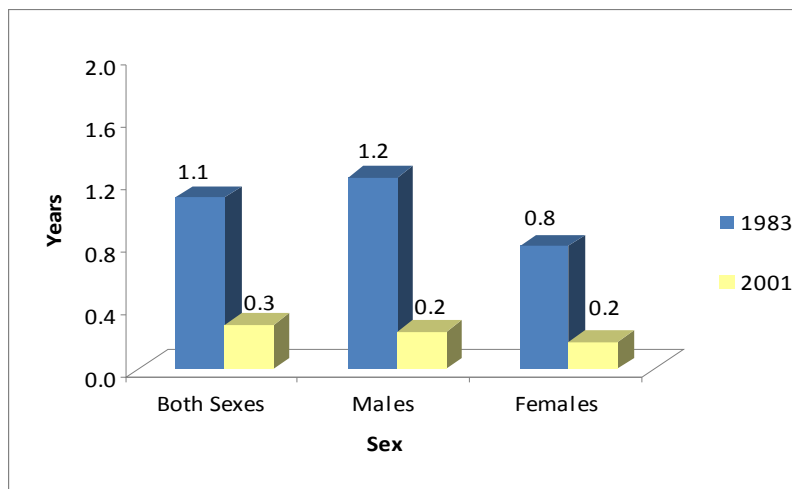

Data Source: PME, 1983, and 2001.

Note: RJ (Rio de Janeiro), SP (Sao Paulo), POA (Porto Alegre), BH (Belo Horizonte), PE (Pernambuco) and SAL (Salvador).

Comparing the results: as highlighted before the mean age calculated by life table method is higher, but the difference decreases in 2001, probably because of the increase in the mean age.
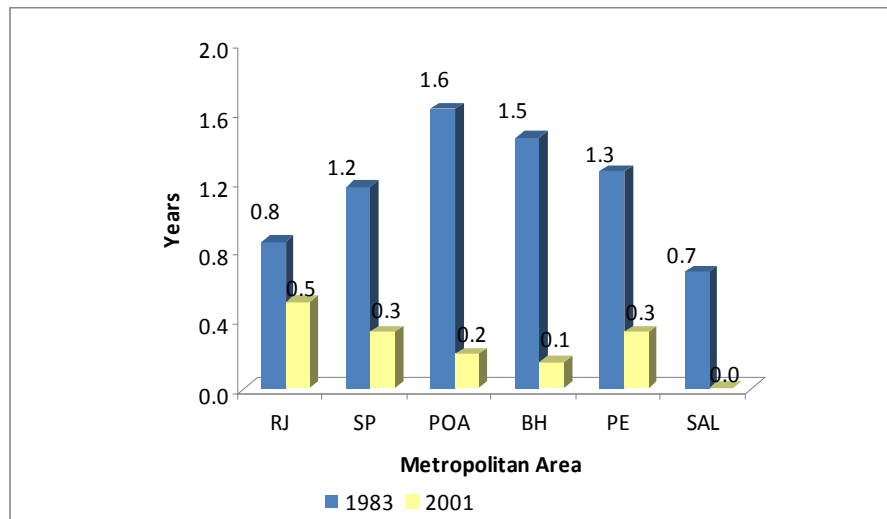
GRAPH 5 – Difference in the Mean age at first job between both methods by Sex – 1983

Data Source: PME, 1983, and 2001.

Note: Difference = Mean age calculated by life table method – Mean age calculated by singulate mean age method

GRAPH 6 – Difference in the Mean age at first job between both methods by Metropolitan Region – 1983 and 2001

Data Source: PME, 1983, and 2001.

Notes: (1) RJ (Rio de Janeiro), SP (Sao Paulo), POA (Porto Alegre), BH (Belo Horizonte), PE (Pernambuco) and SAL (Salvador).

(2) Difference = Mean age calculated by life table method – Mean age calculated by singulate mean age method

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