Context and justification

In Benin, the polygamy recognized in modern legislation with a compromise between traditions that does not provide for a limitation on the number of wives remains widespread, with disparities depending on the place of residence and the regions, as shown by the DHS reports. At the national level, the prevalence of polygamy is 37% in 2012 for women and 20% for men. In rural areas, 41% of women and 25% of men live in polygamous unions, compared to about 26% of women and 13% of men in urban areas. Comparison with previous national surveys shows that the proportion of polygamy has declined significantly, from 50% in 1996 to 46% in 2001 to 43% in 2006 to 37% in 2011. -2012. For men, this proportion increased from 33% to 29% and then to 27% to 20% (INSAE, 2013, p62).

Several processes have been highlighted to explain the prevalence of polygamy in sub-Saharan Africa. Most attempts to explain this practice are based on a rural perception of African societies, in the context of a particular mode of production: a subsistence economy with little mechanization characterized by intensive land use (N. Mondain et al. 2004, p130, V. Hertrich, 2006, p43), in which the role of women as producers of food products is important (P. Antoine, 2002, p.10). Other authors (P. Antoine, 2006. R. Marcoux, 1997 ; A. Diamoutene, 2009, p43) have highlighted the links between polygamy and certain sociodemographic characteristics of individuals such as the region of residence, the place of residence, the sex, age, educational level, occupation, ethnicity and mother tongue. Still others have discussed the role of women in early union, the management of unions by family authorities, the age gap between spouses (T. Locoh and M. Mouvagha-Sow, 2005, p6)

Research questions

- What is causing the decline in the proportion of polygamous workers over the period from 1996 to 2012?
- What are the factors associated with this practice? Are these factors the same in 1996 as in 2012?

1. Methodological aspects

1.1. Data and variables

The data used come from the Demographic and Health Surveys carried out in Benin in 1996; 2006 and 2011-2012. These different surveys collected data on indicators of polygamy. The target population for this study is men aged 15-64 in union and women aged 15-49 in union.

• **Dependent variable**

The dependent variable is the type of union or the situation of a man or a woman in relation to marriage. The categories assigned to this variable are the monogamous union and the polygamous union.

• **Independent variables**

With regard to the work on polygamy in sub-Saharan Africa and the Beninese context, the independent variables used in this study are: the place of residence, the age, the level of education, the main occupation, the preference of the husband in terms of fertility, number of living children, religion, ethnicity and duration of marriage.

1.2. Analysis method

Two methods of analysis were used: simple demographic decomposition and binomial logistic regression.

• *Demographic decomposition:* This method will highlight the sources of the decline in the level of polygamy observed among men and women between 1996-2006 and 2006-2012. Simple decomposition considers two main sources of change: the performance effect that reflects the change in group performance, and the compositional effect that indicates changes in the relative size of groups. The decomposition formula is obtained by expressing national performance as a weighted average of group performance.

$$Y_t = \sum w_{jt} * y_{jt}$$

Y: is the national average of polygamy; w_{jt}: is the proportion of individuals belonging to category j at date t; y_{jt}: is the proportion of polygamous individuals in category j in year t; j: various categories (subpopulation) of the classification variable t: time

The identification of the sources of change of the level of polygamy between two periods is done by simple differentiation:

$$\Delta Y = \underbrace{\sum y_j * \Delta w_j}_{[A]} + \underbrace{\sum w_j * \Delta y_j}_{[B]}$$

[A]: Composition effect and [B] : Performance / behavior effect

• *Logistic regression:*

If P is the probability for a woman or a man to be in a polygamous union, the mathematical formula is as follows**:**

$$\textbf{Logit (P) = Log (P / 1-P) = B}_0 + \textbf{B}_1\textbf{X}_1 + \textbf{B}_2\textbf{X}_2 + \textbf{B}_3\textbf{X}_3 + ... + \textbf{B}_k\textbf{X}_k + \textbf{E}$$
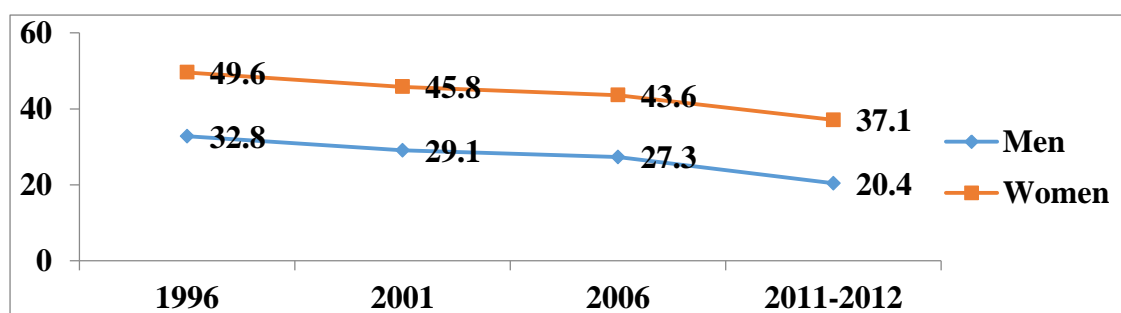
Xj indicates each of the k independent variables; Bj indicates the net effect of Xj on the probability for a woman or a man to be in a polygamous union; E represents prediction error.

2. Results

2.1-Evolution of polygamy from 1996 to 2011/2012 in Benin

Graphic 1 shows that the proportion of polygamists has decreased significantly regardless of the sex of the individuals. This proportion increases among women in union aged 15-49 from 49.6% in 1996 to 45.8% in 2001 to 43.6% in 2006 to 37.1% in 2011-2012. For men, this proportion went from 32.8% to 29.1% and then to 27.3% to be 20.4% in 2011-2012.

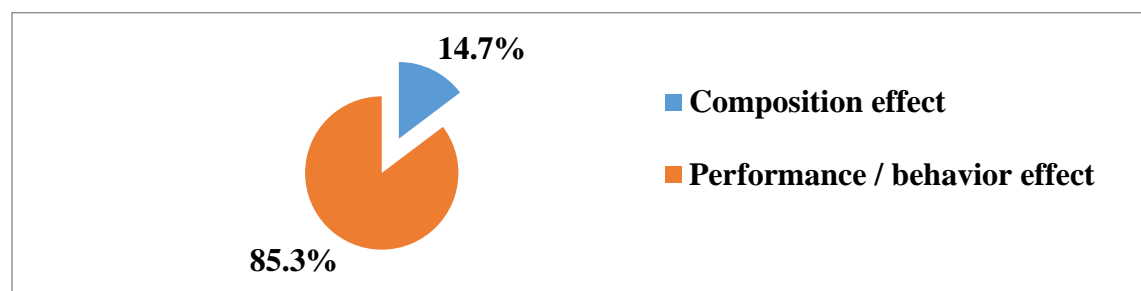**Graphic 1: Proportion of polygamous between 1996 and 2011-2012**

Source: DHS-Benin 1996; 2001; 2006; 2011-2012

2.2- The sources of the decline in the proportion of polygamous men and women

• Decomposition by age group of men in the period 1996-2006 and 2006-2011 / 2012

Over the period 1996-2006, there is a 3.5 percentage point decrease in the proportion of polygamous men. Graphic 2 below shows that the decline in the proportion of polygamous men is largely due to a performance or behavioral effect (91.4%)
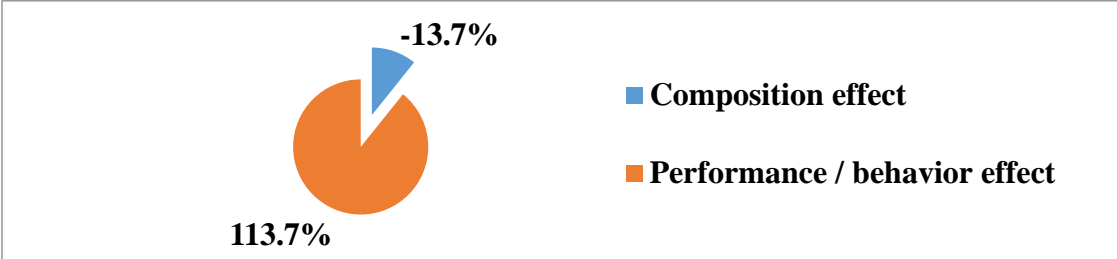
Graphic 2: Decomposition by age group (1996-2006)

Source: DHS-Benin 1996; 2006

Over the period 2006-2011 / 2012, there is a decrease of 6.9 points in the proportion of polygamous men. Graphic 3 below shows that the decline in the proportion of polygamous men is largely due to a performance or behavioral effect (113.8%)

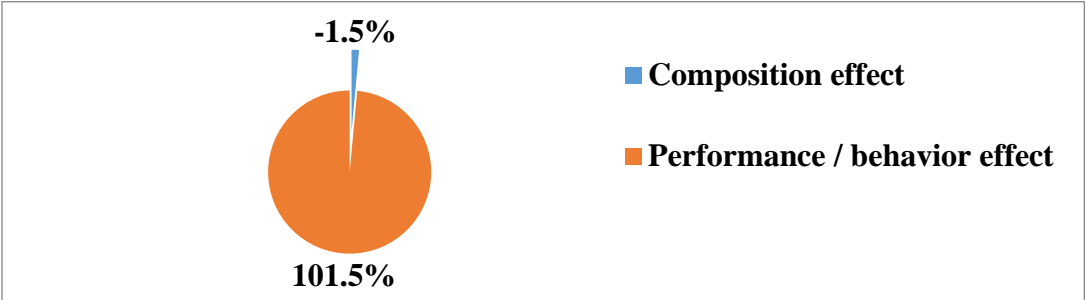**Graphic 3: Decomposition by age group (2006/2001)**

Source: DHS-Benin 2006; 2011/2012

• Decomposition by age group of women, 1996-2006 and 2006-2011

Over the 1996-2006 period, the proportion of polygamous women is decreasing by 7.1 percentage points. Graphic 4 below shows that the decline in the proportion of polygamous men is largely due to a performance or behavioral effect (101.5%)
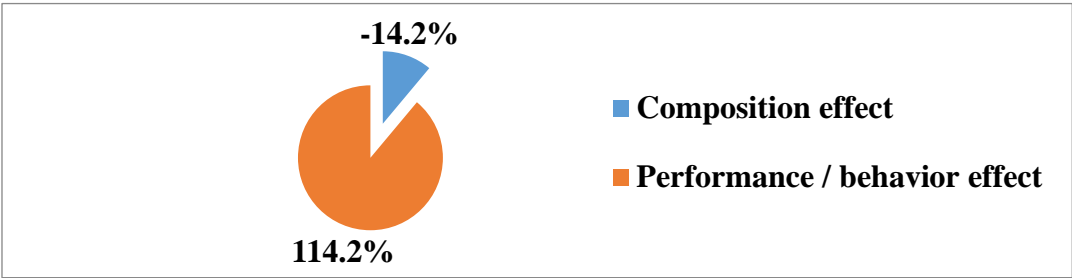
Graphic 4: Decomposition by age group (1996-2006)

DHS-Benin 1996; 2006

Over the period 2006-2011 / 2012, the proportion of polygamous women is decreasing by 5.4 percentage points. Graphic 5 below shows that the decline in the proportion of polygamous men is largely due to a performance or behavioral effect (114.2%)

Graphic 5: Decomposition by age group (2006-2011)

Source: DHS-Benin 2006; 2011/2012

2.3. Factors associated with the decline in the level of polygamy from 1996 to 2011/2012 in Benin

The results show that the factors influencing polygamy differ from year to year for both men and women. From 1996 to 2011/2012, regardless of the sex of the individuals, the age and number of living children are the two factors that explain polygamy.

- **Men**

Analyzes show that the number of living children and the age group influence polygamy in 1996; 2006 and 2011/2012 in men.

It should be noted that the place of residence, the religion, and the level of education influence this phenomenon as well in 2006 as in 2011/2012.

• In general, between 1996 and 2011/2012, there is a significant decrease in the risk of polygamous men with the evolution of the number of living children.

• For the age group, the risk increases with age and decreases over time. Men aged 40-49 years are respectively 1.39 times; 1.33 times and 1.31 times more likely to be polygamous than younger generations in 1996; 2006 and 2011/2012.

• In terms of place of residence, rural men are respectively 1.51 times and 1.24 times more likely to be in a polygamous union than those living in urban areas in 2006 and 2011/2012 respectively.

- **Women**

The results show that some variables significantly influence women's polygamy in 1996; 2006 and 2011/2012. These are religion, ethnicity, educational level, main occupation, husband's preference for fertility and age group. However, it should be noted that the place of residence, the number of living children and the duration of the marriage influence this phenomenon as well in 2006 as in 2011/2012.

• In 2006 and 2011/2012, women residing in rural areas were respectively 1.41 times and 1.30 times more likely to be in a polygamous union than those living in urban areas. This shows a drop in the proportion of polygamous women between this period.

• In terms of educational attainment, women with secondary education or higher are 0.46 times; 0.33 times and 0.31 times less likely to enter a polygamous marriage than their counterparts with no education in 1996; 2006 and 2011/2012.

• The three surveys show that the risk for a woman to be in a polygamous relationship increases with age. The evolution of the three years shows that women aged 25-34 are respectively 1.58 times; 1.52 times and 1.43 times more likely to have co-wives than their counterparts aged 15-24 in 1996; 2006 and 2011/2012. Compared with the same reference group, women aged 35-49 are 2.12 times, respectively; 1,190 times and 2.01 times more risk in 1996; 2006 and 2011/2012.