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SEASONALITY OF MARRIAGES AND BIRTHS IN TWO PORTUGUESE DISTRICTS

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RESUMO. Sazonalidade de Nascimento e Casamentos em dois Distritos Portugueses: Neste trabalho foi estudada a distribuição mensal de casamentos e nascimentos, nos distritos de Évora e Castelo Branco, entre 1913 e 1986. A principal actividade económica em ambos os distritos é a agricultura. Os dados foram analisados comparando as frequências mensais por quinquénio com uma distribuição uniforme. As tradições rurais, os trabalhos agrícolas e o calendário religioso parecem ser os factores que melhor explicam os padrões sazonais. Contudo, após a década de sessenta, o movimento sazonal foi deslocado devido provavelmente à emigração, a alterações nos ritmos de trabalho e ao controlo da natalidade.

Palavras-chave: nascimentos, casamentos, sazonalidade, Évora, Castelo Branco.

ABSTRACT. The monthly distribution of marriages and live births, registered in Évora and Castelo Branco, between 1913 and 1986, were studied in five year periods. The main activity in both districts is agriculture. The data were analyzed by comparing the frequencies obtained from the records with the frequencies that would be expected by a homogeneous distribution of marriages and births. We conclude that the seasonal distribution is associated with the annual agricultural cycle, rural traditions and religious practices. However, we show that, since the seventies, a shift in the annual timing of marriages and births has taken place, probably due to emigration, birth planning and changes in labor rhythms.

Key Words: births, marriages, seasonality, Évora, Castelo Branco.

INTRODUCTION

Seasonal variation in births and marriages has been studied in several countries, but little is known about this subject in Portugal. The rhythmicity of those events has been recognized as an ecological response to social, cultural and natural factors.

The seasonality in homogeneous societies included in restricted geographical areas allows to examine a wide range of environmental variables such as climate, food supply, work rhythms, social classes and cultural events (Malina & Himes, 1977; Pasternak, 1978; Mosher, 1979; Condon & Scaglione, 1982; Leslie & Fry, 1989). In the present research, based upon large series of births and marriages for two administrative areas with heterogeneous environments and populations, a similar approach wasn't possible.

The goal of this study was to verify if the monthly distribution of marriages and births between 1913 and 1986, in each district, deviated significantly from randomness and, if so, to identify the major environmental factors.

MATERIAL AND METHODS

Évora and Castelo Branco are two inland portuguese districts (Fig. 1). Far from the atlantic influences, the climate in both districts is similar. Their major economic activity is agriculture. In the last few years and despite of some improvements, this activity became an unattractive one mainly for young people.

Each district is characterized by a different type of agriculture. In Évora the main type of agriculture is the unirrigated one (rye, barley, wheat) in a latifundium system. However in the last few years, the vine culture became a very important activity.

In Castelo Branco, the majority of the cultivated areas is smaller and with diversified cultures (fruits, vegetables, potatoes, wine, olive oil).

Both regions showed a decrease in the number of marriages since the sixties (fig 2). Among other factors, this decrease is due to emigration and rural exodus to the urban centers located in the littoral. The migratory flow to foreign countries was more pronounced in Castelo Branco than in Évora. Probably this difference is responsible for the more pronounced decrease of the births number in Castelo Branco district (Fig. 2).

All the data were obtained from the records of «Instituto Nacional de Estatística». The numbers of marriages and births were grouped in five years periods. The occurrence of seasonality was defined by comparing the obtained frequencies with the expected frequencies using the Chi-square test as advised by O'Brien & Holbert (1987).

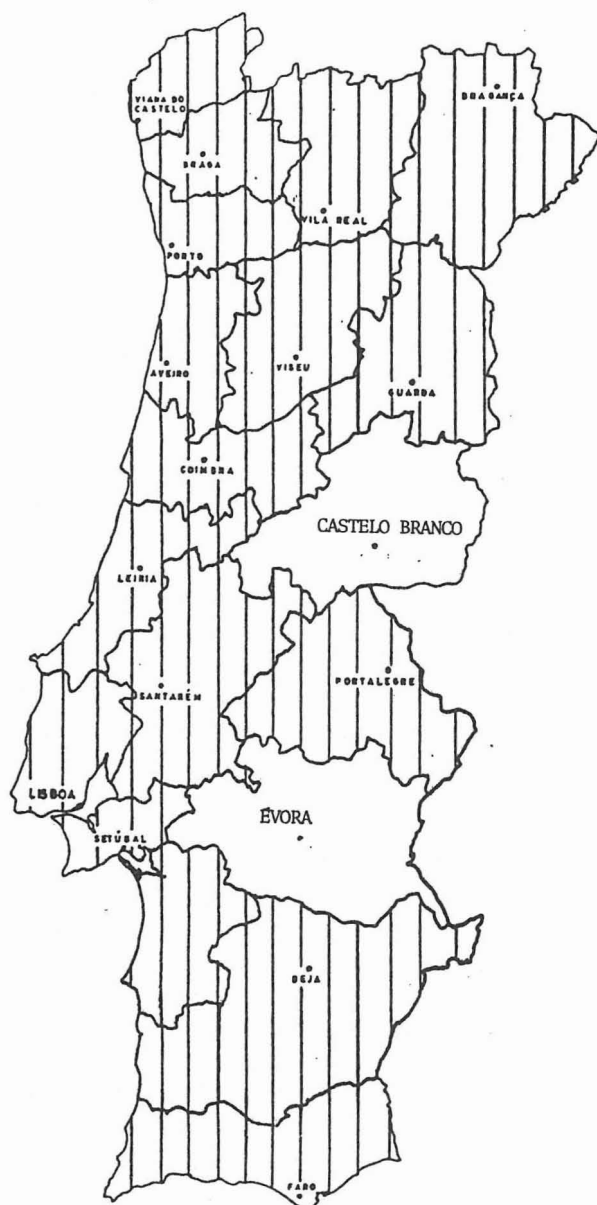


Fig. 1. Map of Portugal with the location of Évora and Castelo Branco districts.

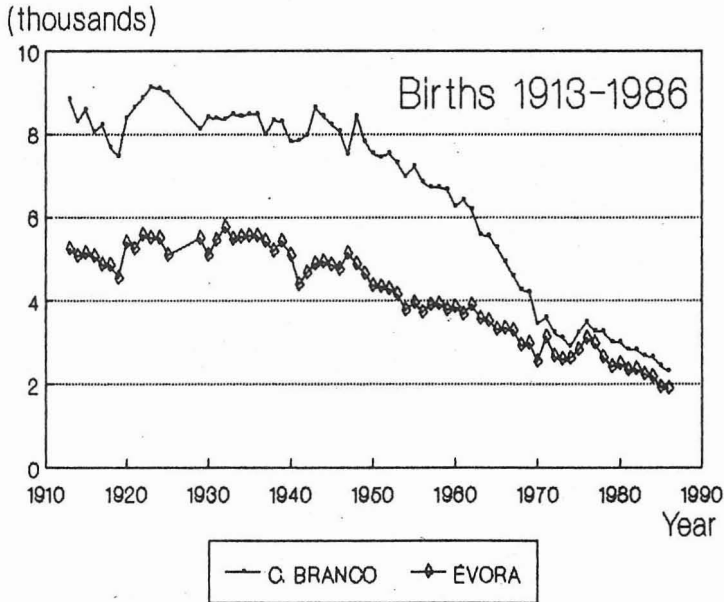
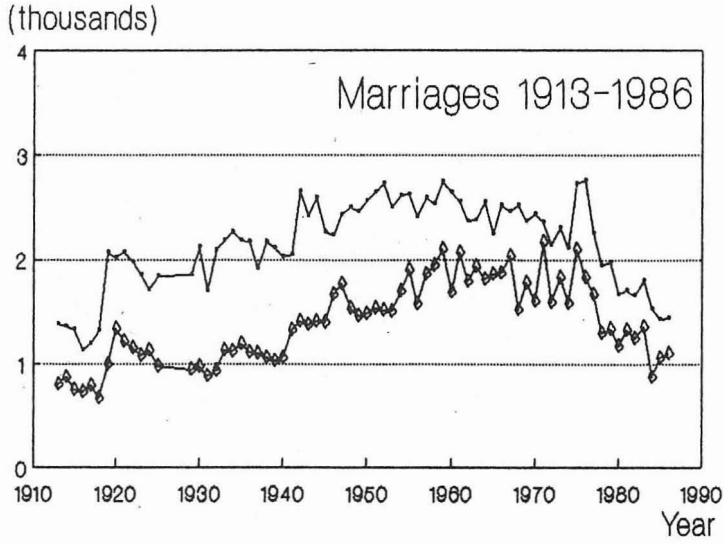


Fig. 2. Number of marriages and births between 1913 to 1986, in both districts.

RESULTS AND DISCUSSION

In the studied time interval and for all five years periods, both districts showed a significant seasonal variation of the marriages number and of the births number.

Marriages

In both districts, two major seasonal patterns were found. In Castelo Branco between 1913 and 1969, marriages occurred mainly in winter and autumn months (Fig. 3). Since the seventies, the highest frequencies of marriages were recorded in the summer.

In Évora, September and October presented higher frequencies until the end of the sixties. After this period, a shift in the monthly marriages distribution towards the mid summer months took place.

A similar shift in the seasonality of marriages was found for the french population by Sardon (1988a). This author verified that the marriages took place mainly in winter months until the first decades of this century. After that, summer months showed higher frequencies of marriages.

Two major factors may have conditioned the observed monthly distribution of marriages in the period prior to the seventies: the annual agricultural cycle and religious practices. In this period, weddings mainly occurred after or before the harvest season which demanded an intensive labor. On the other hand, the Roman Catholic Church, which presided the majority of the marriages, influenced the marriage timing because of the established prohibitory periods: the Quadragesima, in March, and the Advent, in December. These months showed the lowest frequencies of marriages.

The shift in the seasonal pattern recorded since the seventies was probably related with the increasing urbanization and industrialization. Highest frequencies of marriages coincided with the holidays periods: summer and Christmas. The influence of emigration is very noticeable in Castelo Branco. August was the month that emigrants come back for holidays and their relatives profit this occasion for the realization of marriages.

Births

As happened with marriages, the beginning of the seventies marked the appearing of a new monthly distribution of births (Fig. 4).

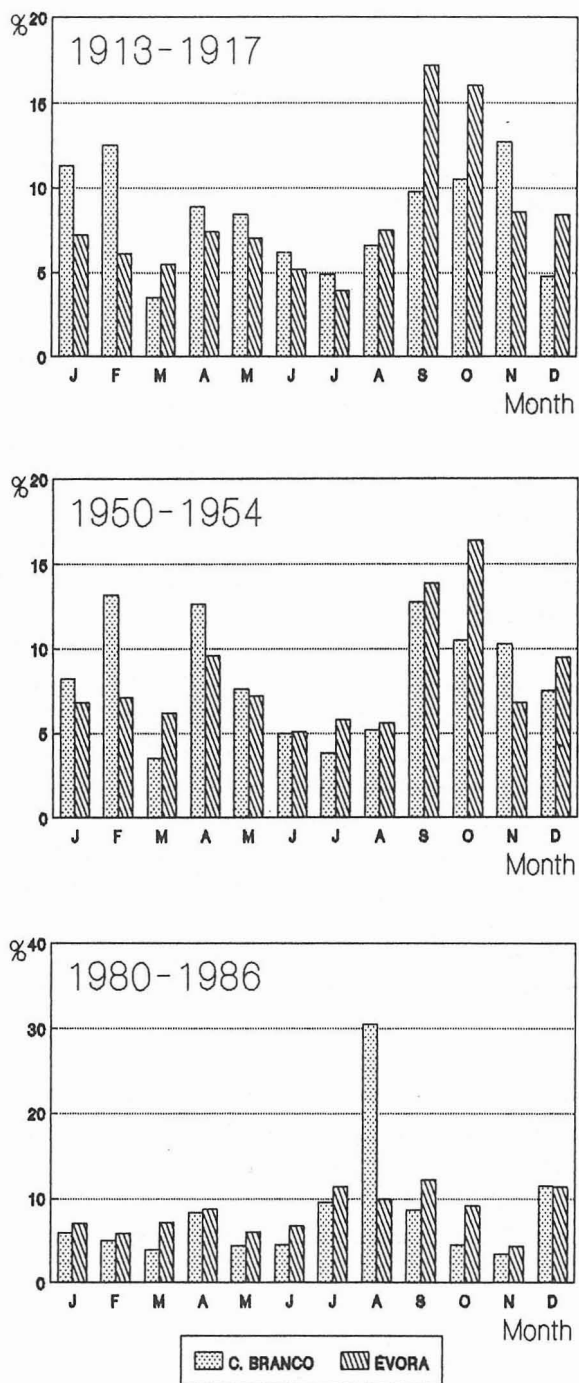


Fig. 3. Monthly distribution of marriage frequencies during three periods, in both districts.

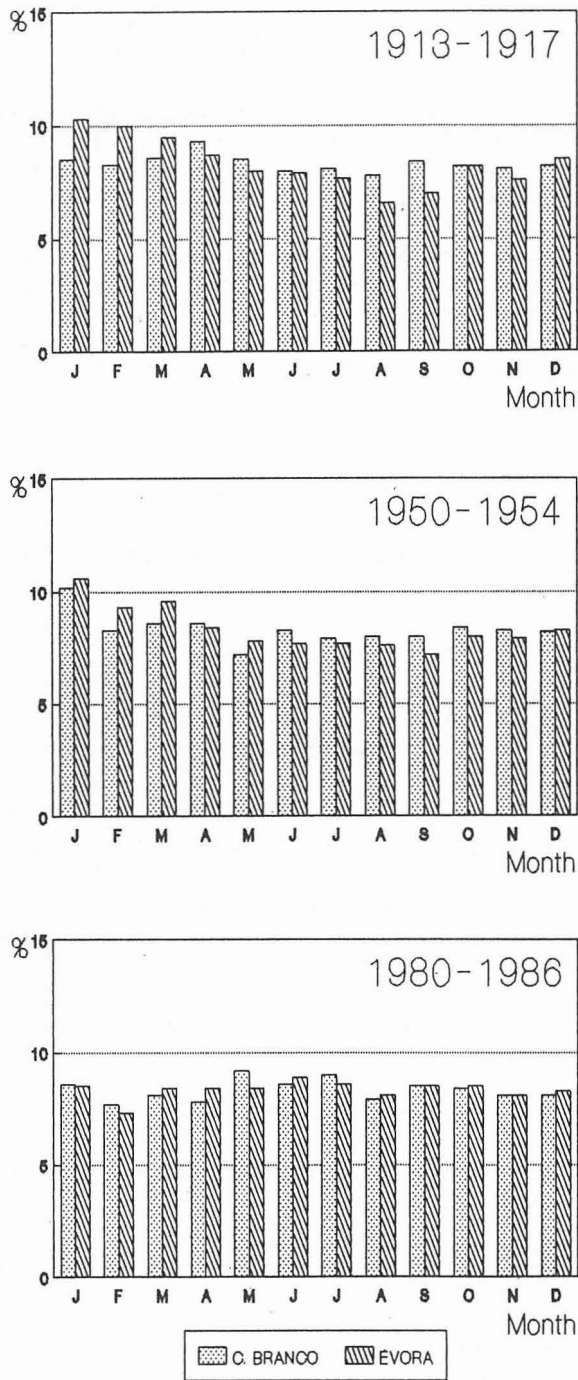


Fig. 4. Monthly distribution of birth frequencies during three periods, in both districts.

Before the seventies, in both districts, the months during which a greater number of births took place were winter and early spring ones. Thus conceptions took place mainly in spring and early summer.

Although conception timing is influenced by physiological and bioclimatic factors, labour and cultural patterns have been focused as the most important ones conditioning the seasonality of births (Bernis et al., 1978; Bailo et al., 1987; Sardon, 1988b). Cowgil (1966) verified that several european countries showed, until the sixties, higher frequencies of births in the late winter and early spring than countries belonging to other continents.

In the following period, the higher percentage of births occurred during the late spring and summer months. The increasing proportions of workers in industry and service sectors might be related with the observed shift in birth seasonality. Thus parents prefer to have their children during the holidays period. This birth planning is a proposed explanation for the similar seasonality patterns found in several european countries in the last decades (Prioux, 1976; Sardon, 1988b).

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