

Portugal Fertility Rate based on literacy rate and age

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Portugal fertility survey 1979

- More information
- data source
- data dictionary

File `portugal.RData` on the course web site. Code in `Assignment1.Rmd`

```
head(portugal)
```

```
##   age ageMarried monthsSinceM pregnancies children sons region literacy
## 1  43    22to25         242             3         3    2 1t10k      yes
## 2  32    22to25         124             1         1    0 1t10k      yes
## 3  22    15to18          59             1         1    1 1t10k      yes
## 4  28    22to25          63             1         1    0 1t10k      yes
## 5  30    15to18         169             2         2    2 1t10k      yes
## 6  37    18to20         226             2         2    1 1t10k      yes
```

```
table(portugal$region)
```

```
##
## 1t10k lisbon  porto   20k+ 10-20k
##   3502   470   160   583   433
```

Region is 1t10k rural areas (less than 10,000 people), towns of size 10-20k, 20k+, and the two largest cities (Lisbon and Porto).

The Question:

- How do literacy and age of marriage affect family size?
- After we account for known explanatory variables, how much variation (if any) is there in birth rates?

Notes:

- By European standards Portugal is a poor country, and in 1980 it had the same GDP per capita as Mexico.
- It's well known that families are larger in rural areas (i.e. `region` is a confounder).
- You should proceed as if an expert in this area has told you that you do not need to consider zero-inflation. Zero-inflated models do not fit well to this data, probably because birth rates are lower than Fiji, many zeros are expected, and the likelihood is flat.

Abstract

Introduction

If you were to open the news right now one of the main issues highlighted in current media is the decline in birth rate. Countries such as Korea, Japan and China have begun to realise the very real issue of the declining birth rate in their respective countries. A lot of studies have gone into figuring out the cause for

this and it seems like most point to the fact that with more women enter the work force they are no longer motivated to have children. They also state that the major reason may also be the rising literacy rate. We are going to be investigating this phenomenon.

Methods

Results

Conclusion

Reference

<https://scholarspace.manoa.hawaii.edu/server/api/core/bitstreams/1d4b93bd-9c50-4d84-846d-0ae0880100f1/content> - <https://pubmed.ncbi.nlm.nih.gov/12283968/>