The days and hours when births are more frequent

Civil registry data for the Sao Paulo state allows us to compare the circumstances of normal births and c-sections.

The following charts use civil registry data from Fundação Seade (Sistema Estadual de Análise de Dados).

It contains a number of variables like date, time and place of births (natural and c-sections) in 2014 in the Sao Paulo state.

Comparing the birth times of children born via c-sections and normal births, we’ll see the following:

**BIRTHS BY WEEKDAY (in relation to each type’s averages)**

Controlling for the effect of each weekday, we have a more detailed picture of the days of the year in which there are more births (in relation to the expected value for that weekday):

**BIRTHS BY DAY OF THE YEAR (in relation to the expected values)**

In this day, for example, there were 428 less births than expected for a Monday.

If we make the same comparison, looking at hours in which births occur, we see the following:

**LEGEND**

- Weekdays
- Saturdays
- Sundays

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NOTES: To control for the effect of the weekdays on c-sections, we applied a linear regression using the total of births in each day as the independent variable and the weekday as the explanatory variable. The residuals of this model was then extracted and visualized in the charts.

Source: Registro Civil - Fundação Seade (Sistema Estadual de Análise de Dados), 2014.