-                          R

2020-04-11

Contents

Chapter 1

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(   )

- (, 1 -   , 2 -   )
- (, $y(1)$)
- (, $y(2)$)
- (, $y(3)$)
- (, x_0)
- (, x_1)
- (, x_2)
- (, x_3)
- (, x_4)

y .

1.1

1.   ,   :   ,   ,   ,
    . y,   .
2.   *codes.csv*:
- :   ,
- :
- :   ,
- **hc-a2**:   ,   hc-a2   "Russia with disputed territories"
        Highcharter

                                ?

        -10   .

-10 y.

3.   : $(x_1/(x_3\text{-}x_4))$.

                             "Russia with disputed territories"   Highcharter
(,   ,   ).

                 ,   ,   .

             ,   .   ?

       .   ?

4.   ,   .

              , $y,\ x_0,\ x_1,\ x_2,$
$x_3,\ x_4$ (ggpairs()   GGally).   ,
   .

5. $\overline{x}_{(i)} = (x_{1i}, x_{2i}),$
$$h_i = \overline{x}_{(i)}(X^T X)^{-1}\overline{x}_{(i)}^T \geqslant \tfrac{3}{N}, \qquad X\ \text{-} \qquad ,$$
x_1 x_2.   ,
   ,   .

6.   ,   ,
                   .

7.   .

                   .   .

           (,   ,   ,
).

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     .   :   .
          -                      .   .

8.   ,
        .   ,   .   ,
        .

9. $x_0,\ x_1,\ x_2,\ x_3,\ x_4,$
    .   .

             ,   ,
          :   ,   95%
   .   ,   ,   .
   .

10.   .

Chapter 2

2.1 R Rstudio

R . ("Download R 3.6.3 for Windows"
). , .

RStudio . RStudio - R, .

RStudio: