

Using the web application to estimate conditional percentiles.

We developed a website, <https://bsherwood.shinyapps.io/quantEst/>, to implement the method proposed in our paper. Users can upload data, select a model and then download the conditional model estimates. Figure 1 is a screen shot of the left panel of the website. The website supports the following applications:

- Uploading data
 - Use **Select text file** to upload data to the website.
 - Check **header** if the first row of the data contains variable names.
 - Use the **Separator** buttons to choose how files are separated: comma, tab or semicolon.
 - Excel files can be exported as comma separated files by choosing the save as option in Excel.
- Model Building
 - Choose the variable to model using **Select Response**.
 - Select a single or multiple predictors using the **Predictors** dropdown.
 - **Grid for quantile estimation** allows you to define how close a percentile estimate you want. For instance choosing .01 will give you estimate of $< .01, .01, .02, \dots, .98, .99$. Choosing .05 will give estimates of $< .05, .05, .10, \dots, .90, .95$.
- Clicking on **Download Model Data with Quantile Estimates** will download a csv file with the model data and conditional quantile (percentile) estimates.

On the right side of the website there are two tabs: **Coefficient Plots** and **Show Quantile Estimates**. Clicking on **Coefficient Plots** provides plots of how the slopes change with the target quantile. Examples of the plots are shown in figure 2. **Show Quantile Estimates** provides the first 6 rows of the data you would receive by clicking on **Download Model Data With Quantile Estimates**. An example is provided in figure 3.

Quantile Regression

Select text file

Choose File test_data.csv

Upload complete

Header

Separator

Comma

Tab

Semicolon

Select Response

y

Predictors

x1 x2

Grid for quantile Estimation

0.01

 Download Model Data With Quantile Estimates

Figure 1: Left Panel

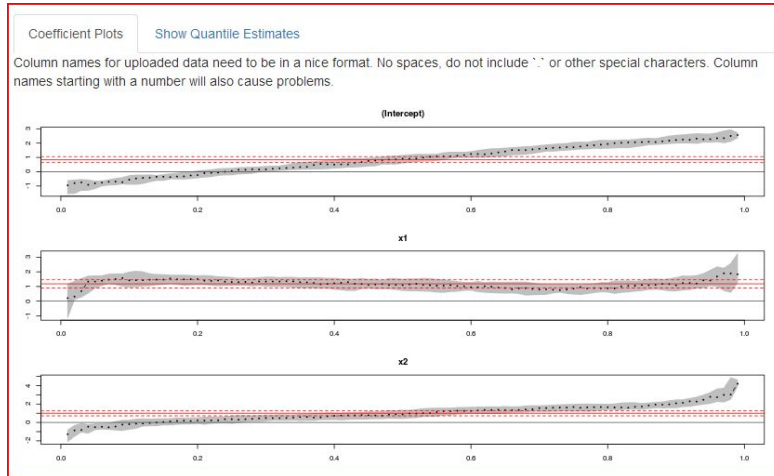


Figure 2: Coefficient Plots

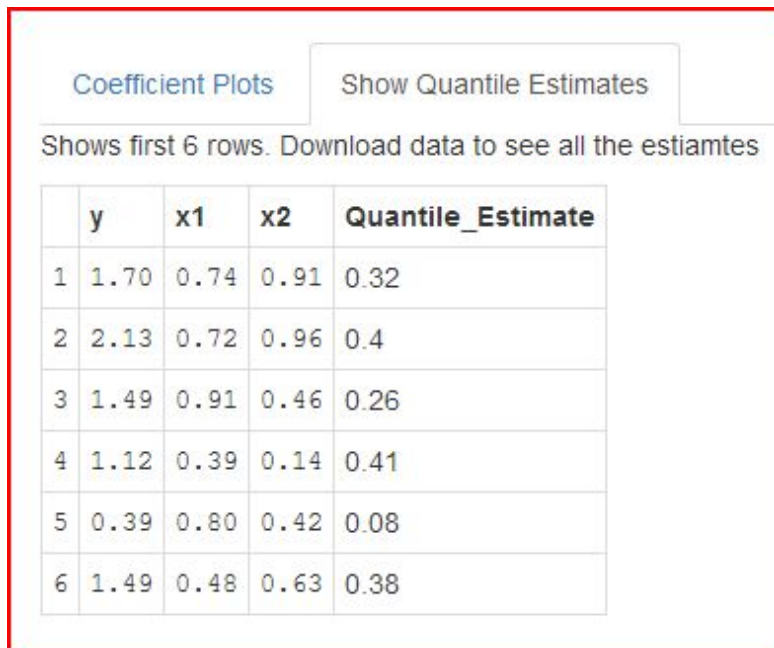


Figure 3: Coefficient Plots