Package Frontiles

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For our illustrations, we consider a univariate data set with one input and one output, reported by Cazals, Florens and Simar (2002) on the delivery activity of the postal services in France. The original data set contains information about 9521 post offices (X_i, Y_i) oberved in 1994, with X_i being the labor cost (measured by the quantity of labor which represents more than 80% of the total cost of the delivery activity) and the output Y_i is defined as the volume of delivered mail (in number of objects). Here, we restrict our illustration to the $n_1 = 4000$ sample points with the smallest inputs X_i.

```
> library(frontiles)
> data(burposte)
> smallest<-sort(burposte$xinput,index.return=TRUE)$ix[1:4000]
> sample.burposte<-burposte[1:9521%in%smallest,]
```

We represent here the scatter plot of the sample firms, where xtab is the vector of input and ytab the vector of output:

References

Daouia, A., Simar, L. 2007. Nonparametric efficiency analysis: A multivariate conditional quantile approach. Journal of Econometrics 140 375-400.
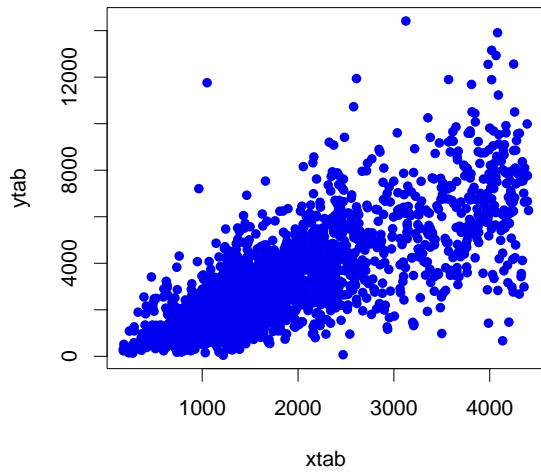
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Figure 1: Representation of the sample points