

## g.princals

It's R-script to improve aesthetic plotting of princals function of Gifi package

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### Proposal

g.princals is a function designed to address aesthetic issues encountered when using plot.princals of "Gifi" package(3), which exclusively generates plots using a "graphic" package. g.princals leverages the power of the ggplot2 package, renowned for producing high-quality visuals.

### Instruction

"g.princals" replaces the default "plot" function in R, generating customized graphics for customer items.

- x: call a object was generated by princals(dataset).
- plot.dim: Vector with dimensions to be plotted with the default condition being set to c(1, 2).
- var.subset: with the default condition being set to "all"
- max.plot.array: with the default condition being set to 2.
- stepvec: Vector whether step function should be plotted (see details in princals/R Documentation).with the default condition being set to NA.
- col.lines: colour of line. Default condition being set to "black".
- main: Title of picture. Default condition being set to name of princals object.
- show: Options to choose are TRUE,FALSE,T,F,1 and 0. Default condition being set to "1" mean it shows plots.
- save: Options to choose are TRUE,FALSE,T,F,1 and 0. Default condition being set to "1" mean it saves plots.
- name: label or name of princals object. Default condition being set to name of princals object.
- units: unit of width/height in 'mm'
- width: Default condition being set to 250mm.
- height: Default condition being set to 250mm.
- res: resolution of pictures. Default condition being set to 300 pixels.

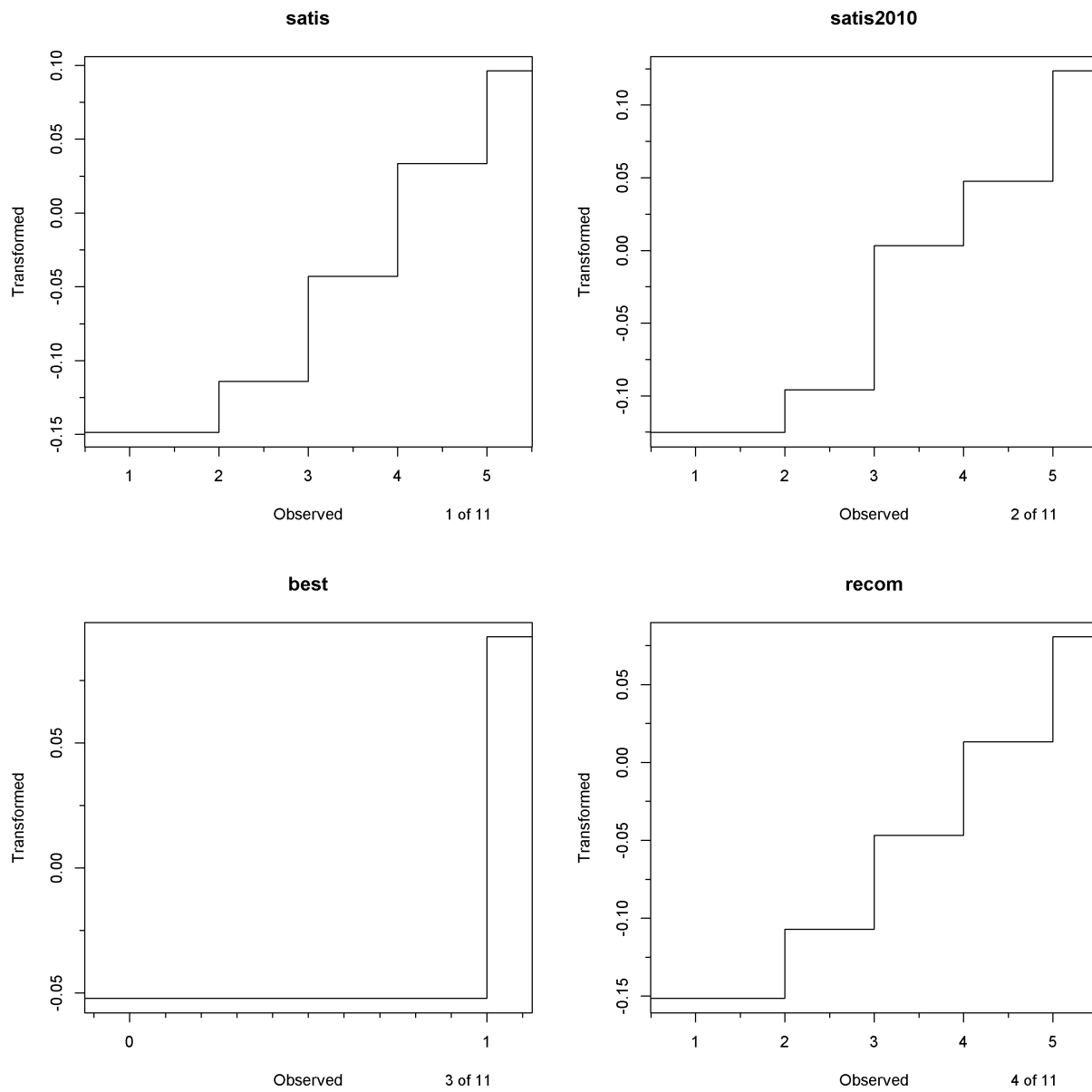
### R code

Finally, it were showed a picture which generated by "g.princals".

```
#####  
setwd("~/file")  
source("https://github.com/jasb3110/g.princals/blob/f286b26f79da57600c3e7f207a6f653f24028a76/g.princals  
ABC6 <- ABC[,6:11]  
fitord <- princals(ABC6,ndim = 6)  
g.princals(fitord,save=0,show=1)#show plots  
g.princals(fitord,save=1,show=0)#save plots in PNG format  
#####
```

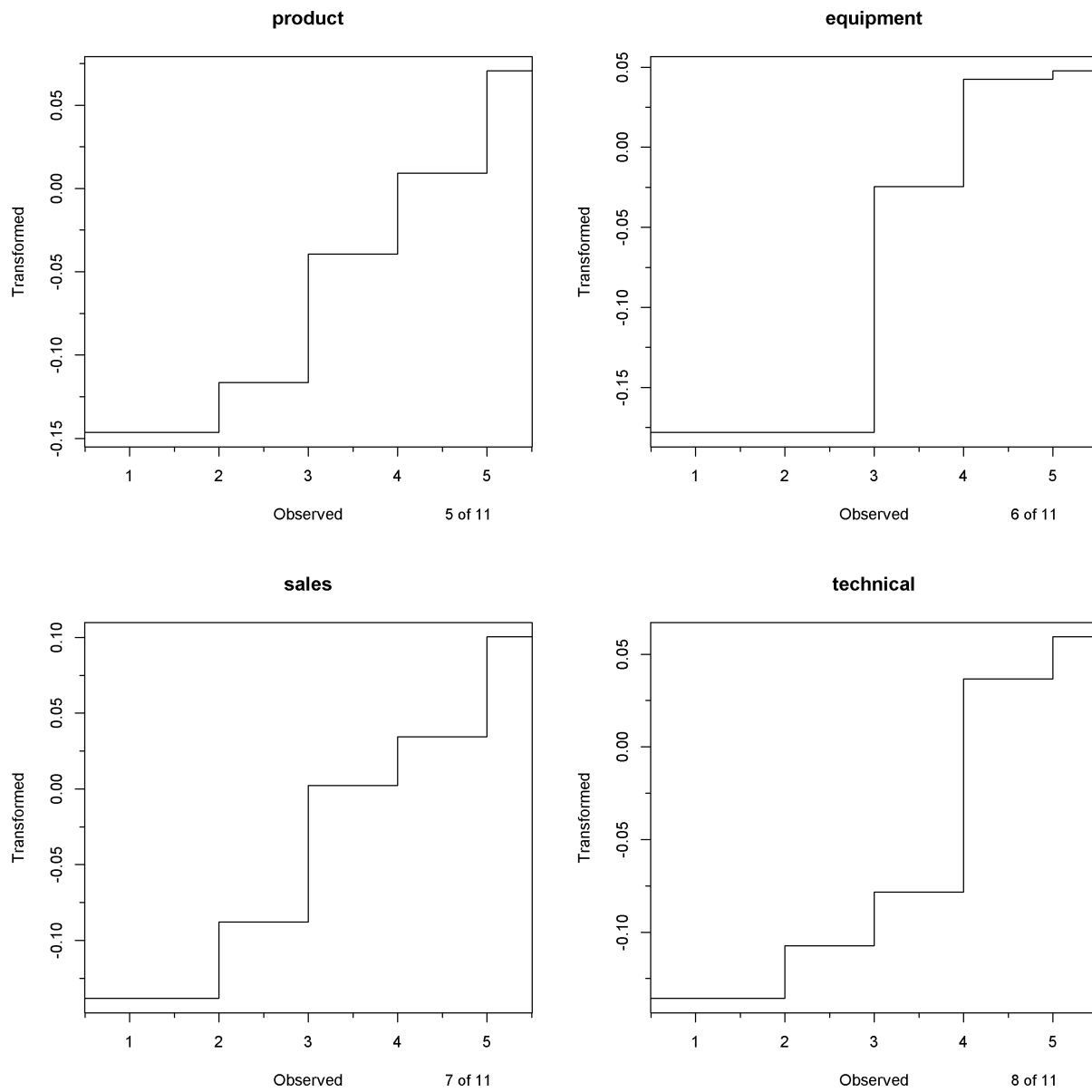
### Output

In this section, an R script and corresponding plots created using the g.princals function are presented.



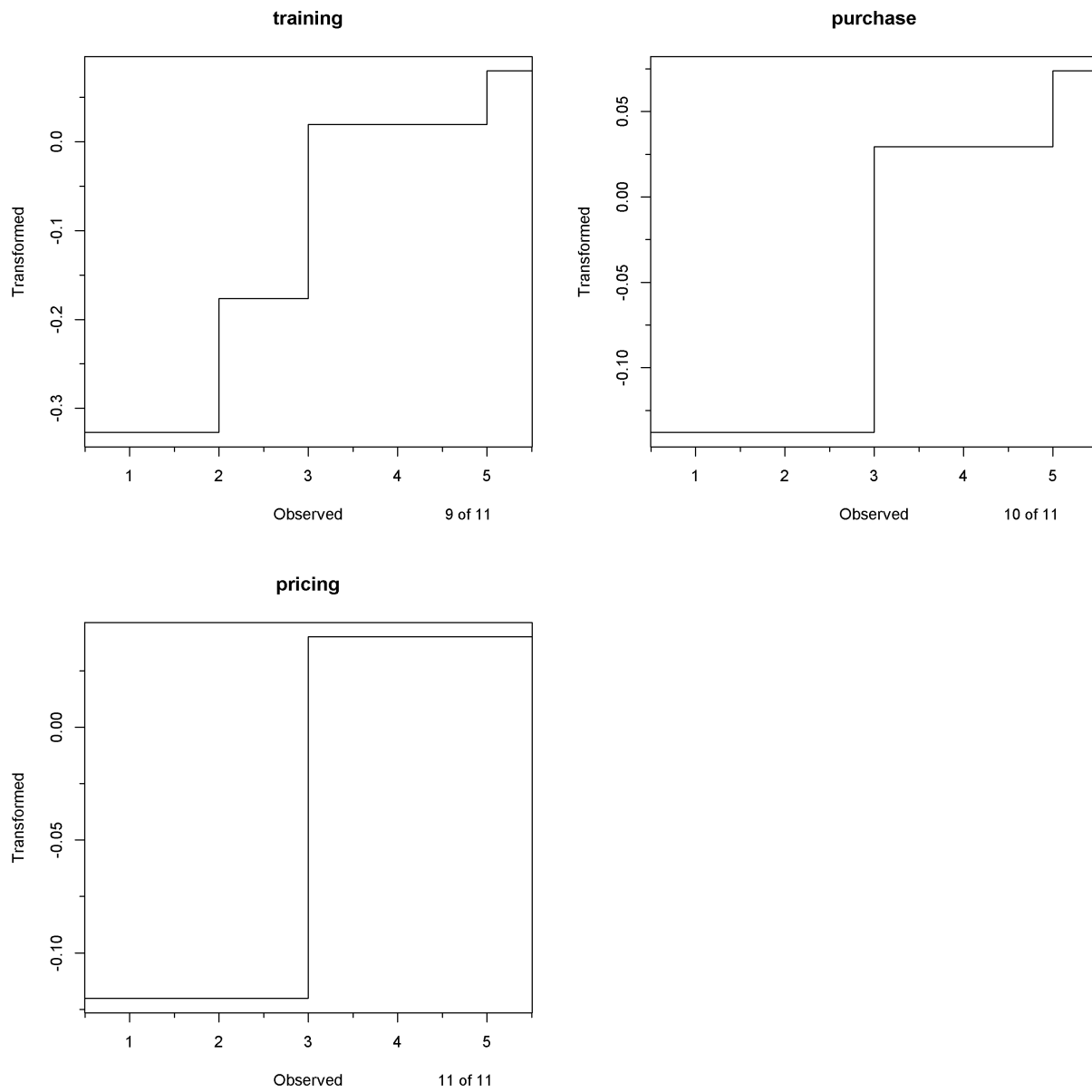
*Picture. Transplots of ABC dataset, just 1 to 4 variables*

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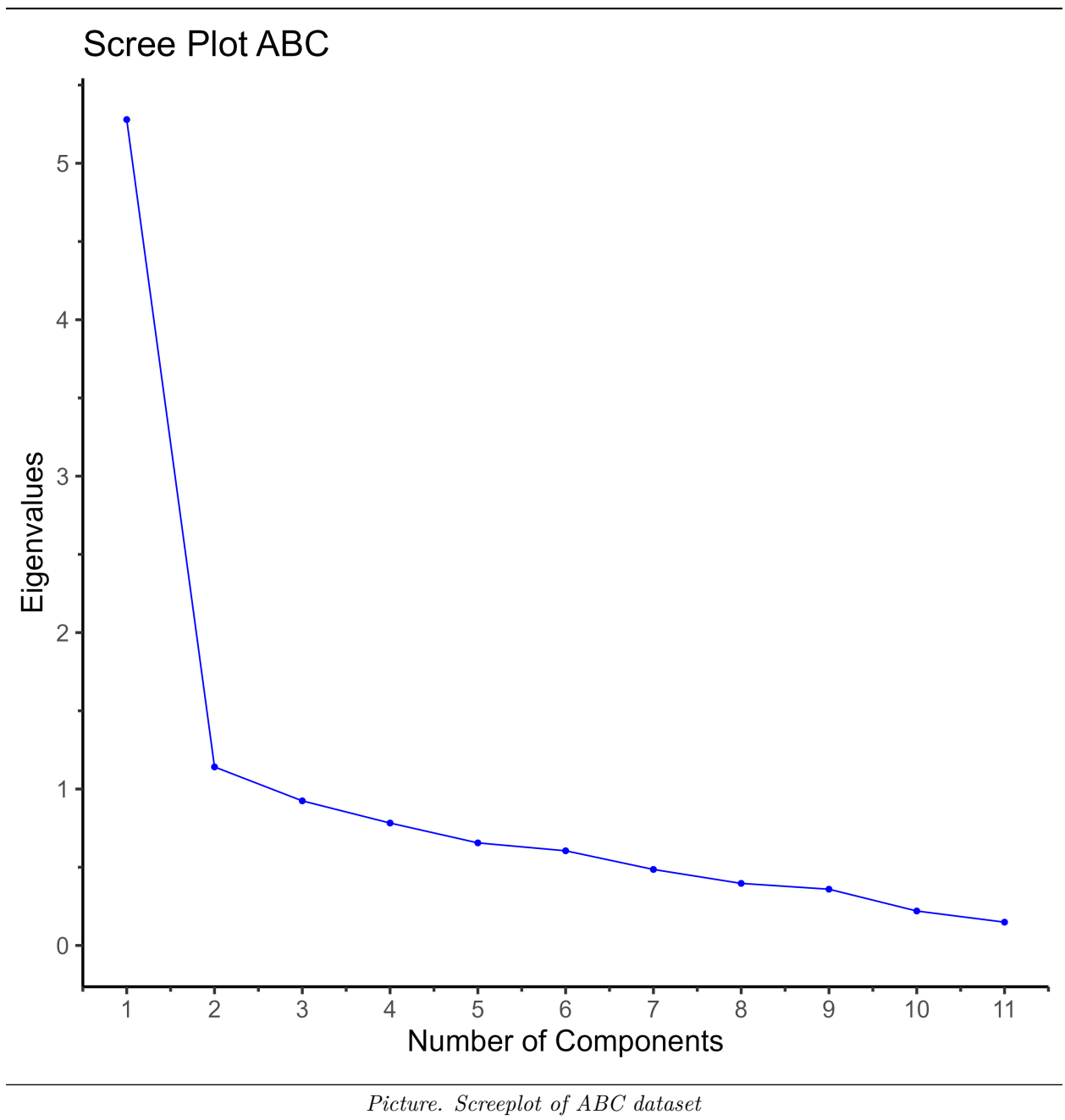
*Picture. Transplots of ABC dataset, just 5 to 8 variables*

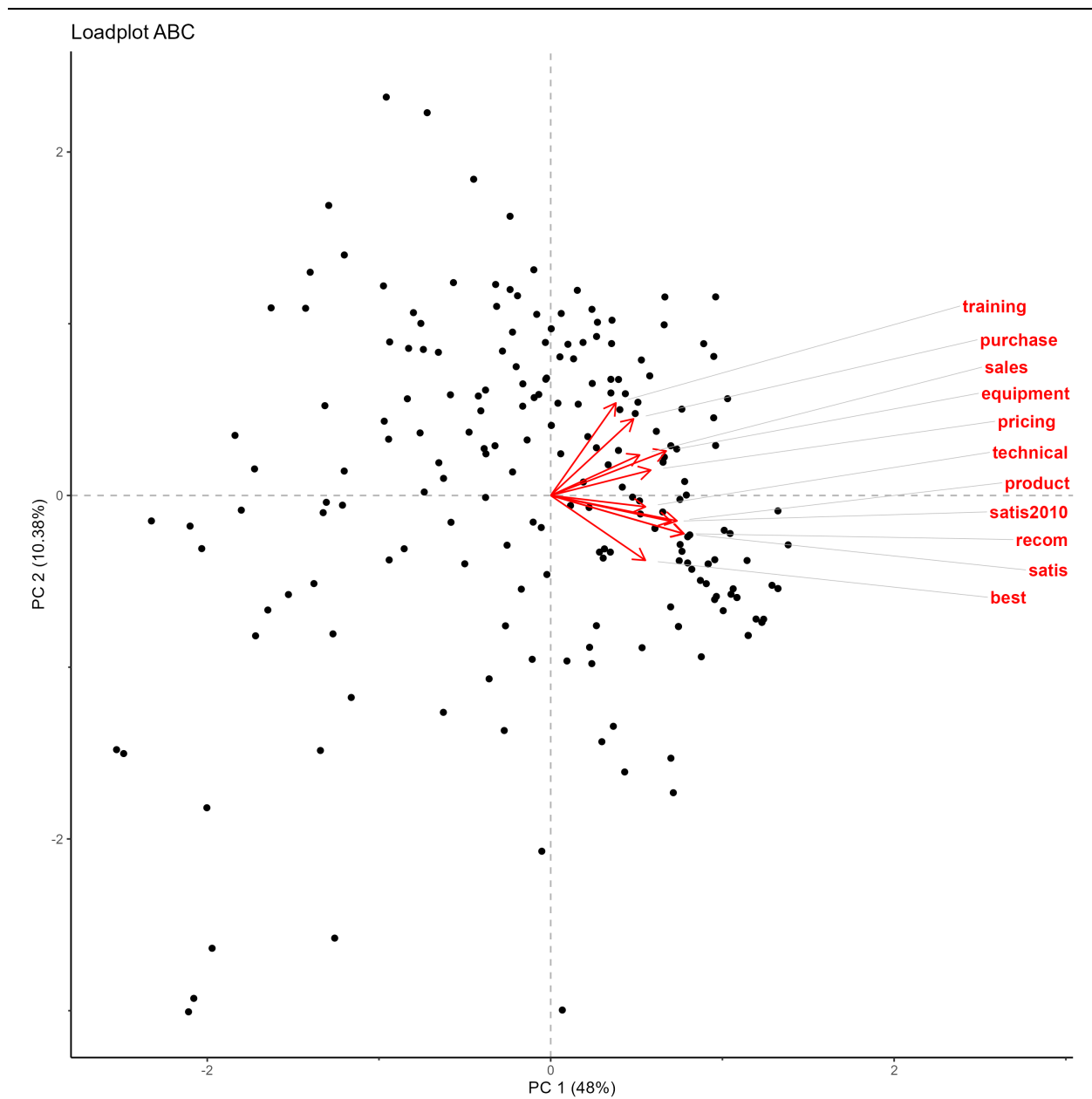
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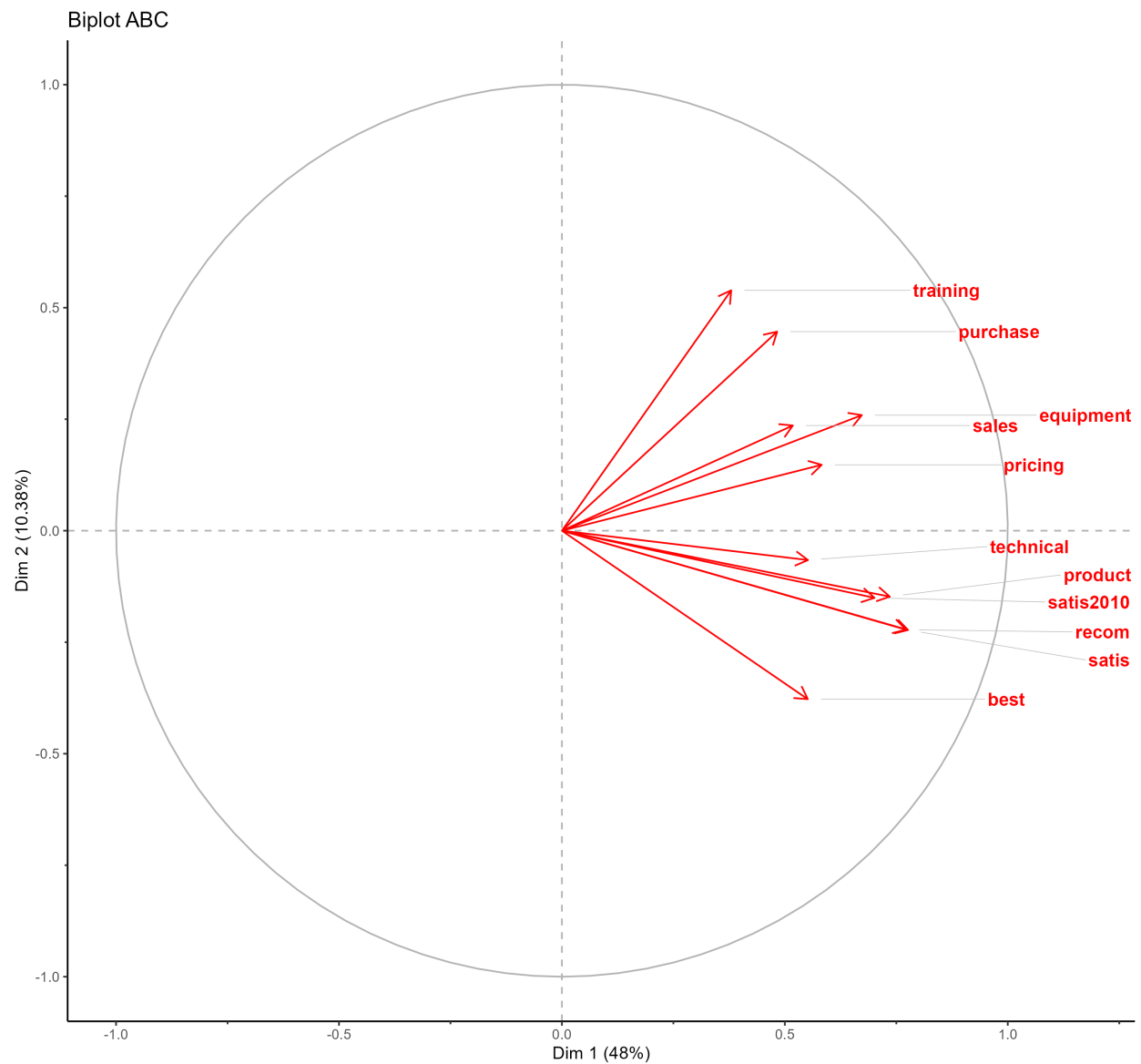
*Picture. Transplots of ABC dataset, just 9 to 11 variables*

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*Picture. Loadplot of ABC dataset*



*Picture. Biplot of ABC dataset*

## Reference

<https://rdr.io/rforge/Gifi/src/R/plot.princals.R>