Covergence Clubs and Regression Trees

0686 - Spatial Economics

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Data Recap

European Regional Database by Cambridge Econometrics

We limit the dataset:

- timeframe 2000-2015
- no Croatia (i.e. two fewer NUTS2 regions)

And use the full set of variables for our 270 regions.

Oh what a merry regression tree

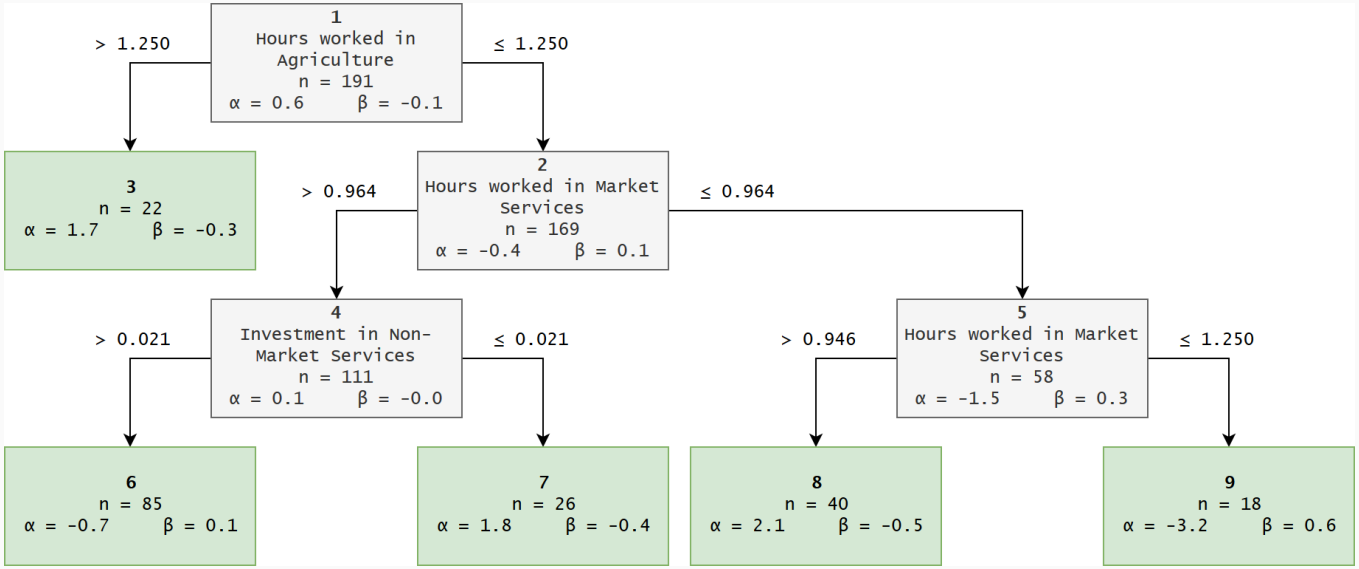
Split observations into clubs:

```
tree <- function(data, split_vars, end_criteria) {
  split <- find_best_split(...)
  if (!end_criteria) {
    return(list(tree(split$data1, ...),
                tree(split$data2, ...)))
  } else { # if(end_criteria)
    return(data)
  }
}
```

Regression Tree

We receive a recursive, tree-like data structure that is:

- hard to deal with (**a lot** of helper functions are necessary)
- nice



Regression Tree

Our results are comparable to partykit (Hothorn and Zeileis 2015).

Still there's the caveat of spatially filtering the data.

Results

- club-plots
- some first LM vs. SAR vs. SEM comparisons

Literatur

Hothorn, Torsten, and Achim Zeileis. 2015. “partykit: A Modular Toolkit for Recursive Partytioning in R.” *Journal of Machine Learning Research* 16: 3905–9. http://jmlr.org/papers/v16/hothorn15a.html.