

Proposal for the Project in Time Series Analysis: Prediction of the Swiss rent index, 1993 – 2018

Data :

The data is provided by the Swiss Federal Statistical Office, implying 100 quarterly observations of the Swiss rent index beginning by the 2nd quarter of the year 1993 and ending by the first quarter of the year 2018. The rent index measures the inflation of the rented dwellings in Switzerland. It is the most significant partial index of the Swiss consumer's price index, representing a weighted share of 13% of this index. The data are collected quarterly, based upon a stratified random survey sampling of around 10'000 lessors. The time series' first observation (2nd quarter of the year 1993) will be the reference value which is set to a base index of 100 and represents the weighted average rent at this time in Switzerland (OFS, 2016: p. 20-23).

Objectives:

The main goal of the project is to draw inference from the rent index time series and to predict their future values and a future trend. In order to do that we have first to transform the data in a stationary time series, either by fitting a polynomial trend, either by differencing. Afterwards we are going to fit a model to our data. The model will be used to describe and interpret our data as well as to predict future values.

Authors:

This project will be written by Zully Faralli and Marc Spörri.

References:

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Chevalier, C., Wilhelm, M. (2018). *Lecture Notes in Time Series Analysis*. University of Neuchâtel, Neuchâtel.

Office fédéral de la Statistique (2016). *Indice des prix à la consommation (décembre 2015 = 100)*. Bases méthodologiques, Neuchâtel.