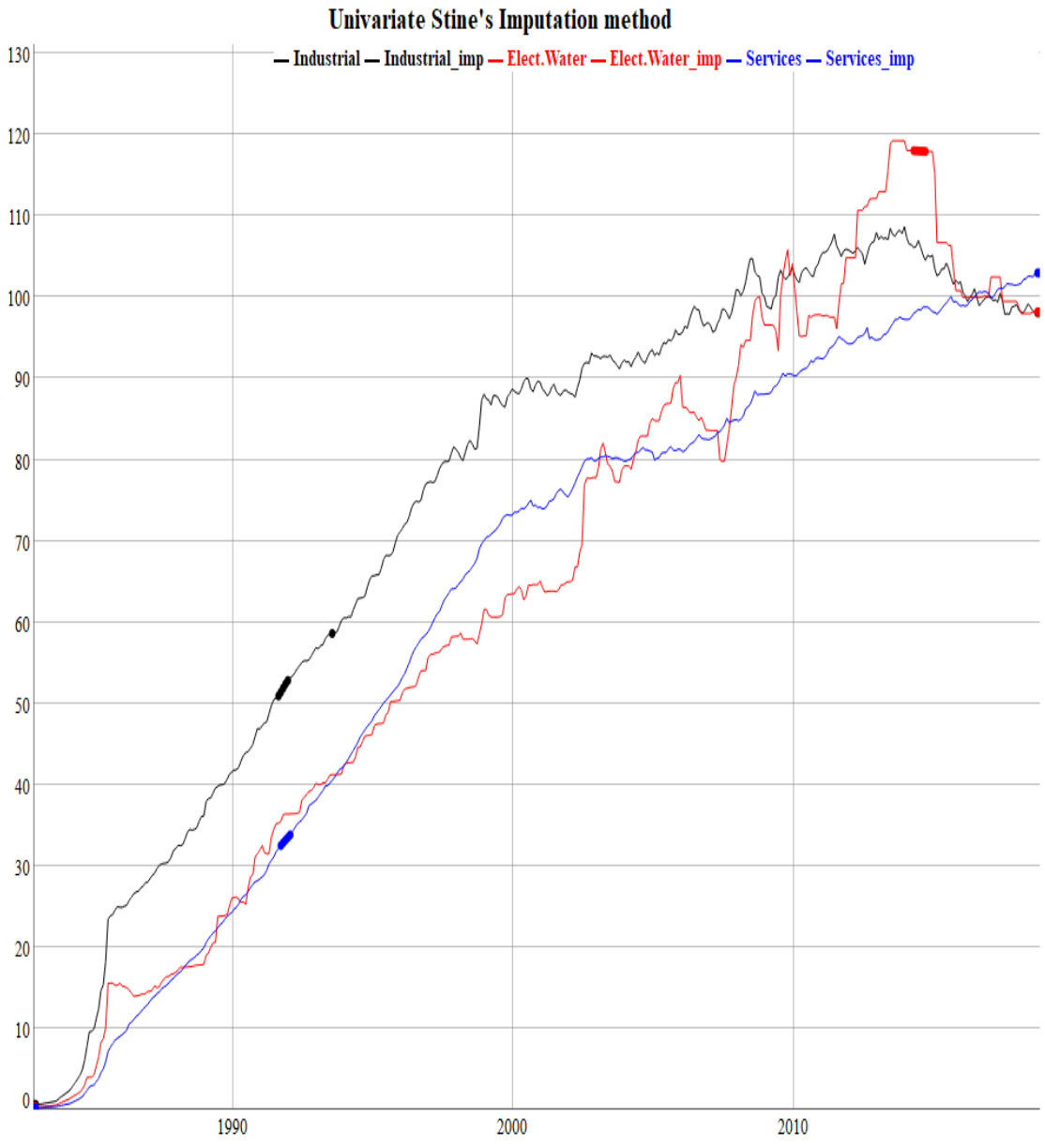
Help on Univariate Stineman's method

The interpolation procedure of Stinenman (1980) has the following properties:
(1) If values of the ordinates of the specified points change monotonically, and the slopes of the line segments joining the points change monotonically, then the interpolating curve and its slope will change monotonically.
(2) If the slopes of the line segments joining the specified points change monotonically, then the slopes of the interpolating curve will change monotonically.
Suppose that the conditions in (1) or (2) are satisfied by a set of points, but a small change in the ordinate or slope at one of the points will result conditions (1) or (2) being not longer satisfied. Then making this small change in the ordinate or slope at a point will cause no more than a small change in the interpolating curve.
Stineman states that: "The complete assurance that the procedure will never generate 'wild' points makes it attractive as a general purpose procedure".

See: Stinemanman, R.W. A Consistently Well Behaved Method of Interpolation. 1980 Creative Comput. 6 54-57

Screen example is depicted below. In all imputation figures, the non-NA observations are the colored lines while the imputed values (Y_{it}^*) are the colored dots.


Univariate Stine's Imputation method
Industrial
Industrial_imp
Elect.Water
Elect.Water_imp
Services
Services_imp
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1990
2000
2010