

NONPARAMETRIC MODELS BY USING SMOOTHING KERNEL FUNCTION WITH APPLICATION

MONEM A. M & SAMIRA M. S

Al Sulamania University, Collage of Administration and Economic, Sulaymaniyah, Iraq

ABSTRACT

The important issue in the main applications of statistical represented by the distribution and the assumptions for the parent population (from which the sample is drawn) has a specific distribution characteristics to be represented community representation, but in many cases does not know the form of the basis distribution so we needs **statistical techniques** do not depend on the distribution or assumptions about the phenomenon required study (depend on the free distribution for the data), and these methods are the **nonparametric regression methods** that depend directly on the data when estimating equation.

In this research was review some methods in nonparametric regression methods, like the method, (Local polynomial regression) the some methods for estimating the smoothing parameters (with one of these methods have been proposed to find an initial value for the smoothing parameter with Kernel functions) , and then compared the results of the methods mentioned above, among themselves using tests and statistical standards following: (MSE, RMSE , R^2 , R^2_{adj} , and F-statistic). That by application for the real data is the (elements of climate), daily average temperatures for the period from (1/1/2011 to 31/12/2013) registered with the Directorate of Meteorological and Seismology in Sulaimani with different sample sizes

(365, 730,1095), to show which the sample size with climate data and geography is more efficient with simple nonparametric regression model (Local Linear) and multiple regression model (Additive model).To achieve the objective of this study we will using statistical programs through the program (SYSTA- 12).

KEYWORDS: Nonparametric Models by Using Smoothing Kernel Function with Application