A Regression Analysis of Kodak's Rochester Employment

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1 Introduction

Kodak's Rochester Employment has been decreasing for many years. I decided to investigate the linearity of the decline and the consequences of that linearity.

2 Data

Most of the data was published in the Rochester Democrat and Chronicle at various times. I found other sources for data. All points are attributed in the accompanying data file.

3 Analysis

The regression analysis was performed using the Open Source statistical software package, R. The analysis was performed using a "no-web" file and the R package Sweave processed the the file, analyzing the R code "chunks" and preparing a LaTeX output file which was subsequently processed with pdflatex from the TeXLive 2011 distribution. All of this was controlled with a batch file.

4 Analysis

The regression produced the parameters shown in Table 1 below.

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3635153.3945	81566.6912	44.57	0.0000
x	-1804.5020	40.8405	-44.18	0.0000

Table 1: Summary statistics for the regression model

The regression had an adjusted $R^2 = 0.9859$ and a y-intercept (date of zero employment) of 5-26-2014. A plot of the regression with the 95 % confidence intervals for the regression is shown in Figure 1 below.

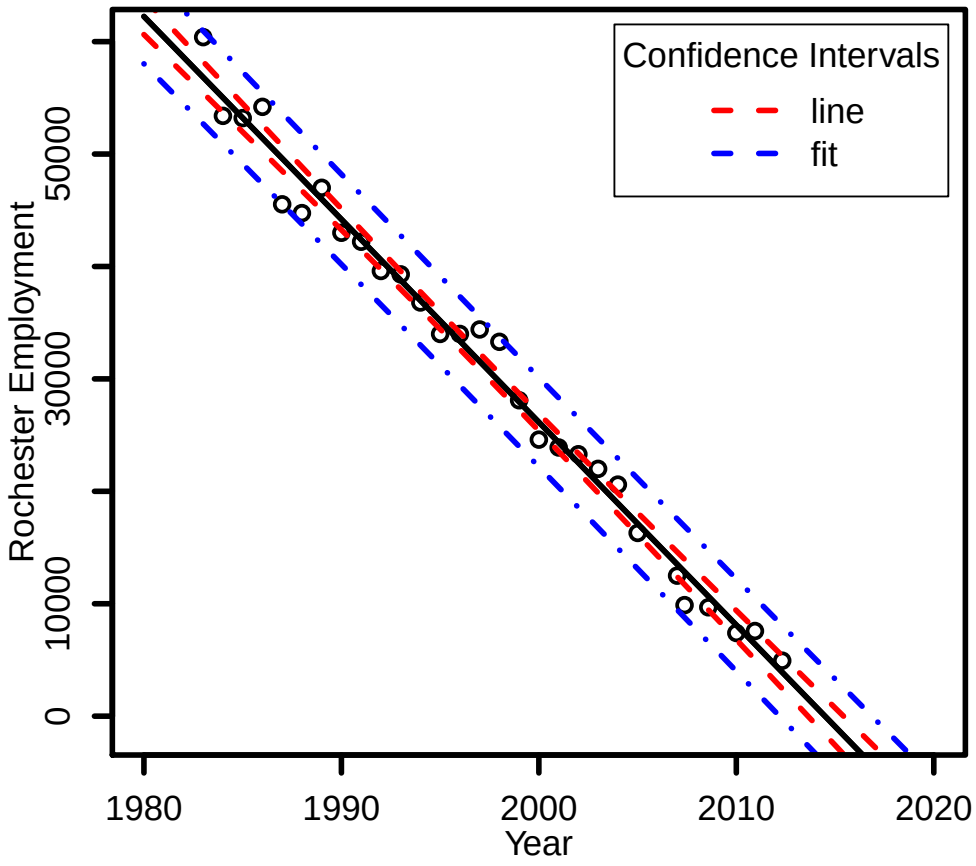

Figure 1: Kodak Rochester employment plot. The y-intercept (date of zero employment) is 5-26-2014. The confidence interval for the line is shown in red; the prediction interval in blue.