

EXERCISE 3

Purpose: To write a SAS program that will fit a **Deterministic Trend/ Deterministic Seasonal Model** to the Plano Sales Tax Revenue data and that will **forecast** sales tax revenue for the Plano City Manager through December of 2006. You are to hand in this exercise in class on **Tuesday, September 27**.

Download the program Plano_Forecast.sas from the class website. You are to use it to answer the following parts of this exercise.

a) As you will recall our discussion in class we are going to be working with the sales tax revenue data straight away and without logarithmic transformation. (As it turns out, a formal statistical analysis of whether we need to take the log of the data or not indicates that we don't need to take the log transformation of the data. Instead we can use the data as is.) Use the Plano_Forecast.sas program to fill in the following blanks.

Months	Monthly Forecast	95% Confidence Interval
Dec. '05	_____	_____
Jan. '06	_____	_____
Feb.	_____	_____
Mar.	_____	_____
Apr.	_____	_____
May	_____	_____
June	_____	_____
July	_____	_____
Aug.	_____	_____
Sep.	_____	_____
Oct.	_____	_____
Nov.	_____	_____
Dec.	_____	_____

b) I want you to complete the following statements for the Plano City Manager.

“Using the Deterministic Trend/Seasonal model (with autocorrelated errors), I am projecting that the Total Sales Tax Revenues for the City of Plano in 2006 will be _____ for 2006. Furthermore, I am projecting that the 2006 revenues will be _____ % higher than they were in 2005.” Show your calculations below.