

**Lab 2:** The purpose of this exercise is to construct a price index for computers using hedonic regression techniques. This consists on regressing transaction prices on a number of explanatory variables, each one measuring an important quality characteristic of the product. The data is in CHOW file in a ASCII format. You can read this into GAUSS in the following way: copy the file into the directory you are working. Edit the file and eliminate the labels for the variables, then use the command LOAD (use the online help). The file README .doc gives a short description of the record.

a) Reproduce all the results of Chow's article reported on page 121. Use the OLS command inside GAUSS. Explain in detail which models you are estimating and which restrictions are you testing. The intercept and the year dummy variables are the logarithm of the index price. Take 1960 as a base year (value 1 or 100), take the antilogs and interpret the results.

b) Berndt in his book mentions the following: "Arguments can be made that for purposes of computational accuracy the number of equivalent binary digits per word (the product BINARY\*DIGITS) might be more important than the number of (WORDS) in memory". Exercise: show that in Chow's logarithmic specification of the variable MEM in the hedonic price equation, the logarithms of these two variables are implicitly assumed to have equal slope coefficient estimates. Construct a new separate variable measuring length,  $LENGTH = BINARY * DIGITS$  and do the regression with  $LNLENGTH$  and  $LNWORDS$ . Estimate the regression parameters on a constant term, the respective Dummies,  $LNLENGTH$ ,  $LNWORDS$ , and  $LNACCESS$  using observations from 1960 through 1965 (observations 56 to 137 in the variable order). Test the null hypothesis that coefficient on  $LNLENGTH$  equals that on  $LNWORDS$ , using a reasonable level of significance. Which specification do you prefer, and why?