CHAPTER IX

RESULTS

The exports of wooden furniture appear to increase exponentially over the period of study, from 1982 to 1997, as shown in the graph of exports of wooden furniture in Figure 7. A log transformation was carried out on the dependent and independent variables to express the equation in linear terms (Jaccard et al, 1990). Thus the final multiple regression equation with the best fit is:

\[
\log Y = -16.29 + 1.31 \log X_6 + 7.32 \log X_7 , \quad \text{where}
\]

\[
(4.51) \quad (6.81)
\]

Y = export of wooden furniture

X_6 = supply of raw material

X_7 = index price conversion

The R-squared obtained from this equation is 0.94 at a 0.001 significance level as shown by F-test. This high R-square value implies a good fit between the independent and dependent variables. The independent variables, namely the supply of timber and prices, explain as much as 94% of the variations in furniture exports. The adjusted r-square is 0.93, which indicates that 93% of the variation in the population of Y could be predicted by variation in X.

In this equation, all of the estimated regression coefficients are significant. First, the estimated regression coefficient for Log supply is 1.31 and significant at 0.001 level. The coefficient reflects that every 1% increase in supply results in a 1.31% increase in the value of exports when other independent variables remain constant. The percentage change is also known as elasticity (Tomek and Robinson, 1990) where it generally refers
to the percentage change in Y with respect to X. This elasticity value shows that the relationship between total supply and export value is elastic.

The second variable is a price index that is a conversion of IPI to equivalent Malaysian Ringgits. Exchange rate alone was found to be insignificant; however, when the log function of IPI is multiplied with the exchange rate, this variable becomes the most significant independent variable in the model. The regression coefficient of this variable price is 7.32 and is significant at the 0.001 level. The coefficient indicates the elasticity of a price index for furniture imports, where every 1% increase in index price is associated with a 7.32% increase in the expected value of furniture exports. This elasticity value indicates that the relationship between index price and export of furniture is very elastic.

The correlation coefficient between Log exports and Log supply is 0.85 and between Log export and Log price is 0.92. These coefficient values indicate there is a very strong positive association between the log price index and the log export of furniture. The same relationship also applies to log supply and log export, although the relationship is as strong as when compared with log price. The correlation coefficient between these two independent variables is 0.69.

Using this furniture export model and projecting estimates of independent variables, the exports of wooden furniture from Malaysia are predicted as shown in Table 23. However, due to a high degree economic uncertainty in this region, the projections are made for only three years.