Manual Arellano and Stephen Bond (1991) "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations," *Review of Economic Studies*, 277-297.

This document describes the dataset AB1991. The data are presented in Excel, Stata and text file formats.

The observations are U.K. companies. There are 1031 observations, 140 companies and 10 variables. The sample period is 1976-1984 and is unbalanced.

Variable definitions are as follows.

year	Year of observation
emp	Employment (number of employees)
wage	Real wage per employee
cap	Gross capital stock
indoutput	Industry output
n	log(emp)
w	log(wage)
k	log(cap)
ys	log(indoutput)
id	Firm identification code

The following description is from the Data Appendix of Arellano-Bond:

(a) Sample

The principal data source used is company accounts from Datastream International which provide accounts records of employment and remuneration (i.e. wage bill) for all U.K. quoted companies from 1976 onwards. We have used a sample of 140 companies with operations mainly in the U.K., whose main activity is manufacturing and for which we have at least 7 continuous observations during the period 1976-1984. Where more than 7 observations are available we have exploited this additional information, so that our sample has the unbalanced structure described in Table A1.

As well as requiring at least 7 continuous observations, companies were excluded from our sample for a number of reasons. We required complete records on a set of accounting variables including gross fixed assets, investment, inventories and sales as well as employment and remuneration. Companies that changed the date of their accounting year end by more than a few days were excluded, so that our data all refer to 12 month periods. We also excluded companies where either employment or one of our constructed measures of real wages, real capital, real inventories or real sales jumped by more than a factor of 3 from one year to the next. This filter will remove both those companies where data has been recorded erroneously and those companies that have experienced major mergers. Finally we restricted our attention to companies that we could allocate to one of 9 broad sub-sectors of manufacturing industry using Datastream's breakdown of total sales by product available from 1980 onwards.

(b) Variables

Employment

Number of U.K. employees (Datastream variable 216)

Real Wage

A measure of average annual remuneration per employee was constructed by dividing U.K. remuneration (Datastream variable 214) by the number of U.K. employees. This was adjusted to take into account changes in average weekly hours worked in manufacturing industries (manual and non-manual employees, 18 years and over, male and female, all occupations-source: Department of Employment Gazette, various issues). A measure of real average hourly remuneration was then obtained by deflating using an implicit value-added price deflator. These implicit price deflators were calculated for each of our sub-sectors of manufacturing industry, using the current price and constant price GDP data published in various Blue Books.

Gross Capital Stock

Denoting the historic cost book value of gross fixed assets (Datastream variable 330) by HCK_t, we obtain an estimate of the inflation-adjusted (or replacement cost) value of gross fixed assets RCK_t using the formula $RCK_t = HCK_t \times P_t)/ P_{t-A})$ where P is a price index for investment goods and A is an estimate of the average age of gross fixed assets. An implicit price deflator for gross fixed investment by manufacturing industry was calculated using the current price and constant price gross fixed investment data published in Economic Trends Annual Supplement (1986, p. 56). For the purpose of this exercise a value of A of 6 years was assumed. Our estimates of the gross capital stock at replacement cost are then expressed in constant prices using our investment goods deflator.

Industry Output

An index of value-added output at constant factor cost was constructed for each of our 9 sub-sectors of manufacturing industry, using data published in the Blue Book (1986, Table 2.4). The 15 sub-sectors of manufacturing for which this data is reported were combined into 9 using the weights given in the Blue Book.