The Needs for Knowing Controller Requirements
- The average compensation package of an air traffic controller in 2005 exceeded $166,000.
- Controller labor cost increased from $82.98 per flight in FY1998 to $137.81 per flight in FY2006.
- In response to future attrition of controllers and rising demand for air travel, more than 15,000 controllers will be hired and trained over the next decade.

Motivations of Using Ordinal Regression
- Ordinal regression model may be suitable for predicting the probabilities of using 0, 1, 2 and 3+ controllers, given the sector traffic and other characteristics.

Illustrations of Estimation Results

Application of Ordinal Regression
- 20 enroute centers in CONUS are grouped into four partitions, based on operational similarities.

Selected explanatory variables are:
- Flight Counts: max number of flights in a 15-min period
- Sector Area: in units of 2,000 mile²
- Sector Ceiling Altitude: in units of 10,000 ft.
- Area*Altitude: interaction term to better describe the relation between sector area and altitude.

Forecasting Demand of Controllers

* Desired Staffing Range in FAA 2007 Workforce Plan is between 4,761 and 5,840.
** Actual On-Board Staffing as of 09/30/06 is 4,937.