

In section II we analyzed the possible effects of pensions on mobility and concluded that an unvested pension would probably reduce the worker's mobility. Here we must attempt to measure the possible aggregate effect. Coverage by pensions has grown rapidly. This means that the number of workers exposed to the demobilizing effects of pensions has increased (table 10, below), but at the same time vesting provisions and substitutes have been introduced into plans as they matured, so the immobilizing effects of many existing plans have been reduced during the period. All this has occurred during a period when the quit rate (Q_t) has declined, but, at the same time, there has been a downtrend in the new hire rate (H_t) and in net accession rate (G_t) or employment growth, and an uptrend in the unemployment rate (U_t) and the layoff rate (L_t). We would expect voluntary mobility to be a function of all these variables. Thus,

$$(Q_t - F(H_t, L_t, G_t, U_t))$$

The new hire rate is related because the greater the number of new hires, the greater the number of short-service employees, and because the mobility of short-service employees is high, this means quits will be high, hence $\frac{\partial Q_t}{\partial H_t} > 0$. Of course, it works the other way, too; a high quit rate means vacancies and these are filled by new hires.

The growth factor (G_t) is important because, for given levels of the other variables, the greater the rate of growth the greater are job opportunities in manufacturing. Hence, $\frac{\partial Q_t}{\partial G_t} > 0$.

The effect of layoffs on quits are obvious enough. Most laid-off workers have low seniority, and these have the highest quit rates, and many who are laid off would have quit anyway. Also, the worker seeing others laid off is also less likely to quit. Hence, $\frac{\partial Q_t}{\partial L_t} < 0$.

The effect of unemployment on the quit rate is the same as that of layoffs, since it is simply a moving average of lagged layoffs, less recalls, new hires, and labor force withdrawals. The unemployment rate is a proxy for the length of the hiring queue and should make $\frac{\partial Q_t}{\partial U_t} < 0$.

It is not possible to get precise estimates because of the multicollinearity of the data and the simultaneous interdependence inherent in quits and new hires, but, it does seem clear that, after variations in the four independent variables are taken into account, there has been a significant downtrend in the manufacturing quit rate (table 7). In each regression of the quit rate on a single variable and trend, the regression coefficients have the theoretically predicted signs and are significant at the 0.05 level (except for employment growth which is not significant). In each case, the inclusion of the trend variable results in a considerable improvement in the adjusted multiple correlation coefficient ($\bar{R}^2$) which measures the percentage of total variance in the quit rate that is associated with variations in the independent variables. When all four independent variables and trend are included in the regression only the new hire rate and trend have highly significant regression coefficients. The adjusted correlation coefficient in this case