Abstract

We analyze the pattern of adjustment costs of two Japanese industries with remarkably different growth performances: the stagnant (or "structurally depressive" as was once designated by the Japanese government) textile industry and the dynamic electrical machinery industry, using a translog dynamic factor demand model with adjustment costs. To explicitly take into account the prevalence of long-term employment in Japan, this model treats the number of workers as a quasi-fixed factor, and overtime hours of work per worker as a variable factor. The estimation results obtained for time series data for 1960 - 85 using 3SLS indicate that the pattern of adjustment costs is indeed remarkably different between the two industries. The textile industry shows a significant fixity in capital stock and a very weak fixity in workers. In contrast to this, in the electrical machinery industry workers and capital stock have a similar significant degree of fixity. Overall, when adjusted for different growth rates, adjustment costs have a higher share of the variable cost in the stagnant textile industry (1.7 percent) than in the dynamic electrical machinery industry (0.7 percent), indicating that the adjustment cost is more serious in stagnant industries rather than growing industries. The electrical machinery industry appears to have been able to solve the adjustment problem in the course of its high growth process, while the stagnant textile industry seems to have had difficulty in adjusting quasi fixed inputs, especially capital stock, to its optimum level.