

University prestige, performance evaluation and promotion: Estimating the employer learning model using personnel datasets*

Shota Araki[†]
Daiji Kawaguchi[‡]
Yuki Onozuka[§]

December 15, 2014

Abstract

The employer learning model postulates that employers form prior employees' ability distribution from educational credential and update its distribution by observing workers' performance on the jobs. This paper estimate the employer learning model for university graduate white collar workers using personnel datasets from two large manufacturers that contain rich set of information including the name of university a worker graduated, annual performance evaluation, position in the promotion ladder and wage. The estimates indicate that employers learn workers' ability relatively quickly through observing performances on the job. The initial expectation errors on ability decline by half in about 3 years in both Companies A and B. Companies promote elite school graduates quickly mainly because they tend to perform better on the job.

JEL Classification: J46

Keywords: Bayesian learning, promotion, personnel data, internal labor market.

*This paper is a part of the research program, "Economic analysis of human resource allocation mechanisms within the firm: Insider econometrics using HR data," of the Research Institute of Economy, Trade and Industry (RIETI). We appreciate two anonymous companies for providing their personnel records and Works Applications Inc. for providing technical assistance. We appreciate comments we received from Takao Kato, Katsuyuki Kubo, Hideo Owan, Katsuya Takii, Fabian Lange, Edward Lazear, Alister Munro, Michael Waldman, Kengo Yasui, Shintaro Yamaguchi and seminar participants at University of Tokyo, RIETI, Waseda University, Academia Sinica, Aarhus University, Kansai Labor Workshop and GRIPS.

[†]Hitotsubashi University and RIETI, ed112001@g.hit-u.ac.jp

[‡]Hitotsubashi University, RIETI and IZA, kawaguch@econ.hit-u.ac.jp

[§]Hitotsubashi University and University of Western Ontario, ed122003@g.hit-u.ac.jp