On-the-Job Training
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This book develops and empirically tests a model of on-the-job training and investigates the antecedents and consequences of on-the-job training. Who gets training, what types of training are provided, and the effects of education and union status on training are all explored. The impact of on-the-job training for starting wages, hiring practices, and turnover management is discussed. Data from two surveys of employers as well as data from one survey of employees are analyzed. The employer data come from the 1982 Employment Opportunity Pilot project (EOPP) and the 1992 Small Business Administration Survey (SBA), whereas the employee responses come from a survey commissioned by the Upjohn Institute. Relevant comparisons are made to data obtained from the 1976 Panel Study of Income Dynamics, the National Longitudinal Survey of the High School Class of 1972, the National Longitudinal Survey of Youth (a survey of over 12,500 youths ranging in age from 14 to 22 years in 1979), as well as the 1983 and 1991 Current Population Survey.

The 1982 EOPP data resulted from a follow-up survey sponsored by the National Institute of Education and the National Center for Research on Vocational Education where 5,700 employers in 23 sites across the country who originally participated in a Department of Labor Survey in 1980 were quizzed on the training activities of the most recently hired employee. Five questions were asked about the training provided, within the first three months of employment, to the last worker hired in that establishment. The first four questions referred to the number of hours of formal training, informal training by co-workers, informal training by management, number of hours spent by the employee watching others at work, respectively, and the fifth question inquired about the number of weeks it takes for that employee to become fully qualified. This fifth question was similar to the question included in the PSID surveys.

The 1992 SBA database was constructed by stratified sampling of the Comprehensive Business Database with large establishments being over sampled so as to ensure adequate numbers of small and large firms. A total of 3,600 businesses were surveyed by the Survey Research Center at the University of Kentucky. In addition to inquiring about training in the first three months, the SBA data also break the information down by weeks. Instead of the number of weeks required to become fully qualified, the respondents were asked about the extent of off-site training provided in the first three months.

The Upjohn survey of employees was also conducted by the Survey Research Center at the University of Kentucky. Starting with a nationwide random sample of 5,000 establishments, budget constraints, hiring restrictions (the firm should have hired recently), and other factors (disconnected phones, busy signals, etc.) reduced the sample to 1,554 business establishments. Of these 1,554, 541 refused to participate, 255 were unwilling to let the employee participate, 241 had company policy against responding to surveys, and 212 were uncooperative. There were 305 respondents where data from the employer and the new employee were available. On-site formal training, off-site formal training, hours of informal managerial training, hours of informal co-worker training, hours of watching others, and total time in weeks to become fully trained, were assessed.

The book consists of eight chapters. The first chapter is a very short (3 pages) introduction. The second chapter lays out a theoretical model of how training affects starting and subsequent wages, productivity, and turnover. The authors predict that starting wages will be lower
when more training is involved. Alternate models such as the learning/job-matching models and
the incentive-based compensation models are discussed. The third chapter describes the
employer data whereas the fourth analyzes the employer responses. The authors find evidence
of training extending beyond three months and that the incidence of off-site training increases
with workers' tenure. College graduates received more training than high school graduates.
Larger establishments provided more training compared to smaller firms.

The fifth chapter focuses on employee responses. Although the convergence between
employer and employee data were assuring for most of the variables, there were some notable
exceptions. For measures of college attendance, the correlation between the two sources was
only .19! Surprisingly, firms reported more college attendance than the employees themselves.
Significant but low correlations were found for measures of training. The formal training meas-
ures, the informal management training measures, co-worker training, and watching others had
correlations of .40, .18, .38, and .29, respectively. Not surprisingly employers reported more
training than employees.

The effect of training on wages and productivity is addressed in the sixth chapter. Contrary
to the predictions from the theoretical model presented in chapter two, starting wages and
amount of training were not negatively correlated. The authors explain this anomaly by noting
that firms hire higher ability workers for jobs requiring more training. The data analyzed in the
seventh chapter supports this explanation since firms were found to spend more resources in
recruiting for complex jobs. The last chapter presents some policy implications from the data.

On reflecting on the material covered in this book, I was both impressed and disappointed.
I was impressed by the sheer amount of data presented, the meticulous analyses carried out, and
the diligence shown in evaluating alternate explanations. I was disappointed by the serious con-
founds that seem to preclude any definitive policy statements as well as the lack of construct
validity in the measures.

The amount of data collected, analyzed, and presented is to be lauded. The authors also
compare their data with many existing databases. Careful attention is paid to problems of het-
eroskedasticity, truncation of data, triangulating information from different sources, and the
choice of appropriate statistical tests to account for distributional assumptions. In modeling the
effects of training on starting wages, the authors note the possibility of alternative models that
could explain the data (e.g., learning/job-matching models). The short length of the book (about
200 pages) as well as its easy and readable style will be appreciated by all readers, especially
the time-constrained researchers, practitioners, and policy makers.

My major concern was the construct validity of the measures. How valid is it to ask employ-
ers to indicate the number of hours dedicated to training (especially for informal training)? How
many employers will provide truthful reports? This concern is further accentuated when we note
the low correlations between employer and employee reports. Consider an analogy. How con-
fident would we be of the conclusion that all employers are fair and nondiscriminatory based
on responses to a survey of employers conducted by the Equal Opportunity Commission in
which the employers were asked whether they discriminated?

Furthermore, the analyses assume that all training is equivalent. No distinction is made
between socialization training, technical training, mentoring provided, etc. Questions of whether
any needs analyses (person, task, and organizational analyses) were done are ignored. Ample
evidence shows that training for impact (cf. Goldstein, 1993) involves careful needs analyses
and matching the training provided to the ground conditions. The book provides a macro view
of training in the labor market and ignores the not-so-subtle micro differences in the actual
implementation of training in a particular workplace.