Human capital theory suggests that training, whether formal or on the job, enhances worker productivity and thus leads to higher wages. Training prepares new workers and enhances the skills of existing workers. More U.S. employees now receive computer-related training from their current employer than any other type of instruction. In contrast, fewer than 10% receive basic skills training, such as elementary reading, writing, and arithmetic.

Training is not without cost, however, in terms of the time that workers would otherwise have spent at their jobs. The value of that time (hourly wage times the number of hours spent in training) varies by industry, with formal training costs per worker the highest in manufacturing and the lowest in retail trade. An additional cost consideration is overhead, as nearly 76% of employees receive their formal training from in-house personnel.

Less training for part-time workers is also consistent with human capital theory. Given the greater uncertainty and short-term nature of part-time positions, corporations are less willing to invest in these positions. (continued on next page)
Human Capital Investment (cont.)

![Percent and Hours Graphs](http://clevelandfed.org/research/trends)

**FORMAL JOB TRAINING: FULL-TIME VERSUS PART-TIME WORKERS**
- While with current employer
- Within the last 12 months

**FORMAL JOB TRAINING: AGE OF WORKERS AND AMOUNT OF TRAINING**
- Received training
- Hours per worker

**FORMAL JOB TRAINING: EDUCATION LEVEL OF WORKERS AND AMOUNT OF TRAINING**
- Received training
- Hours per worker

**Amount of Job Training by Earnings Level**

<table>
<thead>
<tr>
<th>Earnings Quartile</th>
<th>Formal</th>
<th>Informal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>4.1</td>
<td>30.6</td>
<td>34.7</td>
</tr>
<tr>
<td>Second</td>
<td>11.6</td>
<td>30.5</td>
<td>42.1</td>
</tr>
<tr>
<td>Third</td>
<td>15.9</td>
<td>39.6</td>
<td>55.5</td>
</tr>
<tr>
<td>Fourth</td>
<td>22.8</td>
<td>21.1</td>
<td>43.9</td>
</tr>
</tbody>
</table>

a. In the 12 months prior to the survey.
b. May to October 1995.

NOTE: Employees were surveyed from May to October 1995. Survey covers establishments employing 50 or more persons.


Workers because they have a shorter time in which to recoup their costs. Similar patterns emerge when one looks at the demographics of those who receive formal job training. The youngest and oldest employees receive far less training than their middle-aged counterparts. Clearly, the tendency for young people to job-hop and the uncertainty of the new arrangement cause employers to delay the investment process. Similarly, the fact that older workers are nearing the end of their careers impacts the amount of investment allocated.

In much the same way, the marginal benefit to firms of training a well-educated employee is greater than for training someone with a high school diploma or less. Educated workers already have a knowledge base on which to build; therefore, money spent on training activities is likely to yield even greater benefits to the employee and the firm. In addition, these workers require more training just to maintain their given skill level.

Training costs are greater in high-wage industries. Not only is the work time forgone more expensive, but the total hours devoted to training are also higher.