Trends in Labor Productivity in the Construction Industry

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Some basic data about the industry

Labor productivity data for construction vs. manufacturing and non-farm industries

Structural problems that underlie continuing low productivity
Percent of firms vs. size of firm, total construction industry, total manufacturing industry, 2009

- **Percent of firms - Construction**
- **Percent of Firms - Manufacturing**

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Percent of Firms - Construction</th>
<th>Percent of Firms - Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>70%</td>
<td>40%</td>
</tr>
<tr>
<td>5-9</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>10-19</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>20-99</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>100-499</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>500+</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Percent of Total Payroll by Type and Size of Firm, 2009

- Percent Payroll cost-All construction
- Percent Payroll cost-Building firms
- Percent Payroll cost-Heavy Civil firms
- Percent Payroll cost-Specialty Trade firms
- Percent Payroll cost-All Manufacturing

Pct of Total Payroll Cost

0.0%  10.0%  20.0%  30.0%  40.0%  50.0%  60.0%  70.0%

0-4  5-9  10-19  20-99  100-499  500+
Maintenance & Repair as Percent of Total Construction Volume, 2007
Hours worked as Percentage of Total Hours, 2007
Employee Compensation as Percent of Value Added
Construction & Manufacturing
1987-2013

Employee compensation as pct VA-Construction
Employee compensation as pct VA-Manufacturing
Output per Hour,
Non Farm Industries
Manufacturing Industry
1947-2015

Cumulative Percent Change

Year


Labor productivity-Non farm, 1947=100

Labor Productivity, Mfg. Industry, 1987=249
Integrated Labor Productivity Index (2009=100)
Construction and Manufacturing Industries
1998-2013
Source: BEA
Construction Labor Productivity, 1964-2012
based on various deflators
1964 = 100
Some Causes of Poor Construction Labor Productivity

Fragmented process for procuring a project
- Design/bid/build still most common form of contracting
- Owner tries (but fails) to insulate themselves from sources of risk
- Poor coordination of design, permitting, and construction and turnover with low quality data

Inefficient use of labor at site
- Many crafts need to be managed (not there when needed, space constraints)
- Materials brought to site, stored, moved, etc.
- Labor works with ‘stick level’ materials rather than assemblies and modules
- Very difficult to take advantage of equipment to replace use of labor at site

Results in delays, conflicts, claims, extra costs – low value for owner
Questions