

Benchmark Your Financial Performance

See How Your Structural Engineering Firm Measures Up

By H.E. "Dan" Daniels, Jr.

Each year PSMJ Resources, Inc. produces the design industry's preeminent surveys on financial performance, management salary, fees and pricing, and associated benchmarks for the leaders of A/E/C firms. Survey results, published in the 2005 *PSMJ A/E Financial Performance Survey, 25th Edition*, are used to benchmark the subset of participating design firms that indicate their in-house professional services are engineering (subconsultant). To measure the relative performance of the engineering (subconsultant) firms, the median (50th percentile) results of this subgroup can be benchmarked against the total survey results.

Big Picture Results

The performance of the firms responding to the 2005 PSMJ survey reflects a design industry that has regained positive momentum and shows significant signs of economic health following the economic downturn. The performance of the design profession peaked nearly six years ago, declined for several years, turned around last year, and is continuing to generate very positive results. The survey indicates that:

- Operating profits (before incentive/bonuses and taxes) as a percentage of net revenues improved by 27% above last year's results and achieved a 12.30% performance margin.
- Gross revenues increased 10%, doubling the growth rate achieved last year.
- Backlogs continue to build at higher rates each year (9% this year, 5% last year, and 3% the year before).
- The net multiplier improved to 2.97, reaching a new all-time high.
- The staff growth rate turned positive and indicates a 3.62% increase in staff levels.
- Utilization (chargeability) remains constant at approximately 60%, down from a peak of 62.5% in 2000 and about the same as last year.
- Overhead rates, after reaching a 20-year high last year, finally fell this year to 156.57%.

Benchmarking the Engineering (Subconsultant) Firms

A sophisticated MS Excel spreadsheet, the PSMJ 2005 Financial Performance Benchmark Tool provides instantaneous survey results for 16 key performance indicators. The tool enables financial performance to be measured against different peer groups of firm size, type of service, client type and client marketplace. The performance comparison of the engineering (subconsultant) median results to the overall survey is presented in *Figure 1*.

Benchmark Performance Analysis

Performance of the engineering (subconsultant) firms' median results relative to the overall survey results indicate:

- **Operating profit before bonus/taxes is slightly above the survey median;** however, the firms' contribution from projects (as indicated by the direct labor multiplier achieved) is lower — between the 25th and median percentiles.
- Several **revenue benchmarks reflect strong pricing and financial performance.** Both net revenues per direct labor hour and net revenues per total staff (which is above the 75th percentile) indicate very positive comparison against the overall survey results.
- **Overhead rate (before bonus) is very favorable** with benchmark performance below the 25th percentile. This is supported by higher chargeability performance indicating that engineering (subconsultant) firms have more staff charging to projects and less charging overhead accounts.
- Unfortunately, the **rate of converting outstanding invoices into cash is very poor** relative to the overall survey results. The average collection period for the survey is 68 days (i.e., it takes the typical client about 2 months to pay an invoice). For engineering (subconsultant) firms, the benchmark result is 98 days — over 3 months. This result is very common in this segment of the design industry due to the typical payment terms and conditions for subconsulting firms.

Your Firm = Engineering (Subconsultant) - Median Results

Key Performance Indicators	Your Firm	2005 Benchmark Comparison Group		
		Overall Survey Results		
		25 th Percentile	Median	75 th Percentile
Operating Profit w/o Bonus/Taxes (% of Net Revenues)	12.6%	5.9%	12.3%	18.6%
Net Revenues per Direct Labor Hour	\$77.73	\$67.37	\$75.80	\$84.94
Net Direct Labor Multiplier Achieved	2.87	2.70	2.97	3.20
Net Payroll Multiplier (e.g. Revenue Factor)	1.74	1.62	1.76	1.92
Net Revenues per Total Staff	\$108,881	\$86,440	\$97,761	\$108,055
Overhead Rate (before Incentive/Bonus)	130.4%	134.0%	156.6%	178.7%
Chargeability Ratio (Payroll Dollars)	62.6%	55.5%	59.9%	64.0%
Direct Labor Costs Per Direct Labor Hour	\$27.97	\$23.73	\$26.59	\$29.80
Total Costs per Direct Labor Hour (THC)	\$66.75	\$58.91	\$68.89	\$80.22
Average Collection Period (Days)	98	57	68	87
Work in Progress (e.g. unbilled fees) (Days)	25	17	26	37
Equity per Total Staff	\$21,541	\$13,125	\$18,002	\$24,582
Target Direct Labor Multiplier	3.08	2.98	3.04	3.25
Gross Revenue Change	14%	1%	10%	17%
Backlog Change	15%	-2%	9%	21%
Staff Size Change	4.6%	-0.3%	3.6%	11.5%

Figure 1: 2005 Financial Benchmark Tool PSMJ Resources, Inc.

■ Benchmark Range ■ Very Favorable ■ Very Unfavorable

Your Firm =		2005 Benchmark Comparison Group		
		Engineering (Subconsultant)		
Key Performance Indicators	Your Firm	25th Percentile	Median	75th Percentile
Operating profit w/o Bonus/Taxes (% of Net revenues)		6.6%	12.6%	23.1%
Net Revenues per Direct Labor Hour		\$71.52	\$77.73	\$87.08
Net Direct Labor Multiplier Achieved		2.47	2.87	3.08
Net Payroll Multiplier (e.g. Revenue Factor)		1.56	1.74	1.88
New Revenues per Total Staff		\$91,348	\$108,881	\$115,312
Overhead Rate (before Incentive/Bonus)		122.5%	130.4%	152.1%
Chargeability Ratio (Payroll Dollars)		57.8%	62.6%	69.4%
Direct Labor Costs per Direct Labor Hour		\$24.63	\$27.97	\$34.68
Total Costs per Direct Labor Hour (THC)		\$56.96	\$66.75	\$82.20
Average Collection Period (Days)		80	98	112
Work in Process (e.g. unbilled fees) (Days)		10	25	29
Equity per Total Staff		\$19,876	\$21,541	\$27,924
Target Direct Labor Multiplier		2.92	3.08	3.27
Gross Revenues Change		3%	14%	18%
Backlog Change		4%	15%	20%
Staff Size Change		0.3%	4.6%	9.0%

Figure 2: 2005 Financial Benchmark Tool PSMJ Resources, Inc..

However, that doesn't make the process of giving clients "interest free" loans any easier to swallow.

- Finally, for marketing performance, **the engineering (subconsultant) firms are performing in the median to 75th percentile range.** Growth in both gross revenues and backlog compare favorably to the overall survey results. In addition, firms reported the need to increase their staff size by nearly 5% last year.

Overall, the engineering (subconsulting) firms perform very well against the overall survey results. Strong pricing performance is evident. These firms managed overhead costs well and maximized utilization effectively. Unfortunately, cash flow remains the primary challenge to this group of design firms.

Benchmark Your Firm against the Engineering (Subconsultant) Peer Group

It's very unlikely that your structural engineering firm generates these median results. You can perform your own benchmarking against the results of your subconsultant peer group by completing the "Your Firm" results column in Figure 2. Now you'll know how your own firm performed against its peers. ■

PSMJ Resources, Inc..

PSMJ Resources produces annual surveys on management salaries, financial performance, fees and pricing, and benchmarks for the design firm CEO. Harold E. (Dan) Daniels, Jr., is currently the senior editor and manager of PSMJ Resources' annual A/E surveys on financial performance, fees & pricing, management salary, and others. Dan can be contacted via email at ddaniels@psmj.com; www.psmj.com

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