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# TECHNICAL SUPPORT COST RATIOS

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# Technical Support Cost Ratios

Over the past few years, software companies have struggled to keep the cost of telephone-based tech support under control. Thousands of hours of consulting time, conferences, and operations research have been spent on finding ways to deliver support more efficiently, without cutting service quality to a level that might send customers to the competition.

So what has all this effort accomplished?

Sadly, not much. Although individual companies have fine tuned their phone-based support operations, overall industry benchmarks for tech support performance have shown almost no improvement since the last Soft•letter/ASP benchmark survey in 1997 (and the results of the 1997 survey in turn showed minimal change from our first survey in 1993). For most software companies, telephone support remains a painfully expensive service that, even worse, rarely seems to buy customer loyalty or good will.

Clearly, there's no magic bullet for the support cost problem. Better product design may reduce the total demand for support, call center automation can probably improve efficiency and delivery, and more attractive Web support options are bound to lure many users away from the telephone. In the meantime, though, the biggest payback in support process improvement is likely to come from hard work on classic issues of productivity and cost management. And for that purpose, we offer the benchmarks and data in this report as a reference point.

## ■ BENCHMARKS: REVENUE AND EMPLOYMENT RATIOS

For top management, the most important support cost benchmark is usually the ratio of support spending to total company revenues. Unlike call statistics and productivity metrics, the support

<b>Support cost and headcount ratios</b>		
	<b>Support Cost %</b>	<b>Support Employee %</b>
<b>By company size:</b>		
\$100+ million	7.0% (18 responses)	11.0% (18 responses)
\$10+ million	6.0% (19 responses)	15.0% (22 responses)
\$5-\$10 million	15.0% (12 responses)	17.5% (12 responses)
Under \$5 million	20.0% (15 responses)	20.0% (19 responses)
<b>By support organization size:</b>		
30+ employees	8.0% (23 responses)	15.5% (24 responses)
10-29 employees	6.7% (20 responses)	10.0% (21 responses)
1-9 employees	10.0% (27 responses)	10.0% (32 responses)
<b>By price of best-selling product:</b>		
\$10,000+	10.0% (24 responses)	15.0% (24 responses)
\$1,000-\$9,995	12.5% (16 responses)	15.0% (19 responses)
Under \$1,000	5.0% (22 responses)	15.0% (25 responses)
<b>By percentage of fee-based calls:</b>		
75%+ fee-based	10.0% (39 responses)	15.0% (39 responses)
75%+ free	7.0% (25 responses)	15.0% (29 responses)
<b>Median (all respondents)</b>	<b>8.1% (70 responses)</b>	<b>15.0% (77 responses)</b>

cost ratio ties directly to the company's bottom line and allows easy comparisons with other corporate budget items, such as R&D and marketing.

Overall, software companies currently spend a little over 8% (median) of their revenues on tech support, almost exactly the number we reported in our 1997 survey. Not surprisingly, several variables impact this ratio. Small companies typically spend more on support (20% of revenues), in part because their support staffs spend a good deal of time on such non-support tasks as software testing, customer service, documentation, training, and internal MIS functions. Companies with higher-priced products spend a higher percentage of revenues on support (10% of revenues for products priced over \$10,000 compared to 5% for products that sell for under \$1,000). And companies that provide support as part of fee-based programs also spend at higher rates, usually because support is an important profit center.

Another useful top-level benchmark is the ratio of support employees to a company's total headcount. Here, there is much less variation among companies: The overall industry median is 15% of headcount (identical to our 1997 ratio), regardless of product price or the role of fee-based programs. Small companies tend to have higher support employee ratios—again, because their support staffs often handle non-support tasks—but the median ratio for small companies is 20% of headcount, not a dramatic variation from the support staffing levels among their larger counterparts.

**■ BENCHMARKS: LABOR COSTS AND PRODUCTIVITY**

In the aggregate, the support organizations in our current survey database employ 2,923 people, most of whom 2,193 (75%) provide “direct phone or e-mail support” to customers. In small support organizations, the direct support ratio is usually higher because almost all employees spend at least part of their time talking to customers; at the same time, telephone reps are more likely to commit significant time to a variety of non-support projects—typically, 25% of their available time, according to our data. Larger organizations are more likely to have full-time managers and professional specialists for such functions as scheduling, performance analysis, and Web development, so their reps spend a smaller percentage of time on non-support tasks.

**Direct support staff availability**

	<b>Direct Support Staff %</b>	<b>Non-Support Time %</b>
<b>By support organization size:</b>		
30+ employees	79.5% (24 responses)	18.5% (24 responses)
10-29 employees	80.0% (21 responses)	25.0% (20 responses)
1-9 employees	100.0% (33 responses)	25.0% (33 responses)
<b>By price of best-selling product:</b>		
\$10,000+	80.5% (24 responses)	21.0% (23 responses)
\$1,000-\$9,995	82.0% (20 responses)	20.0% (20 responses)
Under \$1,000	97.5% (26 responses)	27.5% (26 responses)
<b>Median (all respondents)</b>	<b>84.5% (78 responses)</b>	<b>21.0% (77 responses)</b>

Since support organizations are mostly staffed by direct support technicians, average employee payroll costs tend to be low. The median cost of monthly salary and benefits for all support employees is currently \$3,214; half of all support employees in our survey are paid between \$3,256 and \$5,667 per month.

In addition, support organizations incur a variety of operating expenses (specifically, “telephones,

facilities, equipment, training, and other overhead”) that typically add another \$1,484 per employee to the company’s monthly costs. As a rough rule of thumb, the ratio of payroll to operating costs seems to be about 2:1. (For a more detailed look at support salaries, see the annual Soft•letter/ASP Tech Support Salary Survey.)

### Monthly payroll and operating costs

	Payroll & Benefits	Operating Costs
<b>By support organization size:</b>		
30+ employees	\$3,625 (23 responses)	\$1,280 (22 responses)
10-29 employees	\$4,000 (18 responses)	\$1,091 (15 responses)
1-9 employees	\$4,642 (32 responses)	\$1,771 (24 responses)
<b>Median (all respondents)</b>	<b>\$3,214 (73 responses)</b>	<b>\$1,484 (62 responses)</b>

One large but often-overlooked part of support overhead is the cost of office space (rent or other facilities cost), which typically costs \$200-\$300 per employee per month. According to our survey data, support organizations allocate an average of 167 sq.ft. of floor space to their employees (68 respondents), roughly equal to a standard 10’x12’ cubicle plus ancillary common space. Support organizations pay median rent of \$16.50 per sq.ft./year for this space; half spend between \$7 and \$30 (46 respondents).

What kind of productivity does this spending on payroll and overhead produce? That continues to be a troublesome and controversial question. Our survey data suggests that the average support employee (including managers and clerical staff) processes a modest 100 calls and 30 e-mails a month, equal to less than six customer transactions per working day. If the total expense of running a support organization is simply divided by the number of calls and e-mails the organization handles, the *theoretical* cost of a customer transaction is a hefty \$36.14.

The good news is that average transaction costs are now about 25% lower than they were three years ago, largely because e-mail has become a more popular medium for delivering support. But at the same time, telephone support productivity hasn’t budged: In 1997, the median number of calls per support employee was 100 a month, and that’s exactly the same number that appears in this year’s survey:

### Monthly customer transactions per support employee

	Calls	E-mail
<b>By support organization size:</b>		
30+ employees	132 (24 responses)	9 (23 responses)
10-29 employees	74 (20 responses)	24 (20 responses)
1-9 employees	88 (33 responses)	57 (32 responses)
<b>By price of best-selling product:</b>		
\$10,000+	53 (21 responses)	13 (22 responses)
\$1,000-\$9,995	149 (20 responses)	22 (20 responses)
Under \$1,000	132 (26 responses)	70 (25 responses)
<b>Median (all respondents)</b>	<b>100 (77 responses)</b>	<b>30 (75 responses)</b>

Not surprisingly, outsourcing has become an increasingly popular alternative to the high cost of in-house support. Three years ago, only a handful of companies had any outsourcing partners; now, 26% of our respondents report that they rely on third-party support firms, usually for

significant volumes of calls (median 15,000 calls per month).

How do outsourcing costs compare to in-house support? That’s partly an apples-to-oranges question, since in-house support groups have to absorb some fixed costs (including research and knowledgebase development) that outsourcers don’t face. Nevertheless, outsourcers do seem to have an economic edge: Our survey data shows that the median cost for an outsourced transaction is currently \$15.38, and a few respondents with high-volume consumer titles report that their outsourced cost per call is as low as \$5-\$6.

■ **BENCHMARKS: CALL STATISTICS**

As common sense suggests, it’s hard to create a cost model for a “standard” tech support call. There are at least three critical variables in the cost equation—the number of calls generated by each copy, the average number of calls necessary to resolve each customer incident, and the average length of each call.

The traditional rule for desktop business applications has been that each copy sold generates about one support call, and our survey data suggests that this number is still on target. In fact, software priced below \$1,000—a category that includes both business and consumer titles—averages only three calls per ten copies, presumably because publishers of mass-market titles now take extra care to make issues like installation and printer configuration as idiot-proof as possible. Higher-priced products produce substantially greater numbers of calls per copy (or per user); for products selling above \$10,000, the number of calls per copy is 5.0.

The greater complexity of high-end products is also reflected in the average number of calls that it takes to resolve a single incident (2.0 calls for products that sell for over \$10,000, 1.1 calls for products under \$1,000). Similarly, high-end products generate longer average call times—up to 15 minutes for the most expensive titles, compared to nine minutes for the least expensive.

Call statistics also vary considerably between companies that provide mostly fee-based support and those that offer mostly free support. Fee-based users typically make many more calls per copy, they need more calls to resolve an incident, and their calls are significantly longer. This may seem counter-intuitive, but it probably just reflects the fact that fee-based programs are far more common for high-end products than for low-cost desktop applications (see Survey Demographics, below).

**Call statistics**

	Calls/Copy	Calls/Incident	Call Length (mins)
<b>By price of best-selling product:</b>			
\$10,000+	5.0 (11 responses)	2.0 (23 responses)	15 (21 responses)
\$1,000-\$9,995	2.0 (9 responses)	1.5 (19 responses)	12 (19 responses)
Under \$1,000	0.3 (15 responses)	1.1 (19 responses)	9 (20 responses)
<b>By fee-based ratio:</b>			
75%+ fee-based	4.5 (19 responses)	2.0 (37 responses)	15 (36 responses)
75%+ free	0.8 (16 responses)	1.3 (29 responses)	10 (29 responses)
<b>Median (all respondents)</b>	<b>2.0 (38 responses)</b>	<b>1.5 (75 responses)</b>	<b>12 (74 responses)</b>

Another important performance benchmark for call centers is how quickly their technicians actually answer incoming calls. Since callers are more likely to be put on hold during periods of peak demand, overall response time can be tricky to measure. “Average” hold time is a notoriously

poor metric that often obscures serious peak-time problems; a support department can't make one group of annoyed customers happier by averaging them with others who get faster service.

Instead, call center analysts now often measure response time in terms of the percentage of calls answered within a specific time period—usually, three to five minutes, which most support customers seem to feel is a reasonable waiting period. By this standard, the overall (self-reported) performance of the companies in our survey is fairly good: 80% of customer calls are answered within five minutes, and 50% within three minutes.

Surprisingly, though, customers who pay the highest software prices and buy fee-based services seem to wait on hold much longer than average: Above the \$10,000 product price point, only 31% of calls are answered within five minutes, compared to 90% or better for lower-cost titles. There's no obvious explanation for this pattern, but apparently the prevailing standard for premium service doesn't include rapid response.

### Response time

	Percent of calls answered within—		
	3 minutes	4 minutes	5 minutes
<b>By price of best-selling product:</b>			
\$10,000+ (17 responses)	20%	27%	31%
\$1,000-\$9,995 (18 responses)	83%	88%	93%
Under \$1,000 (20 responses)	71%	88%	90%
<b>By fee-based ratio:</b>			
75%+ fee-based (32 responses)	24%	48%	70%
75%+ free (24 responses)	84%	90%	95%
<b>Median (63 responses)</b>	<b>50%</b>	<b>70%</b>	<b>80%</b>

### ■ SURVEY DEMOGRAPHICS

Data for the Soft•letter/ ASP Technical Support Cost Ratio Survey was collected from survey questionnaires distributed by mail and e-mail. By the June 30 deadline, a total of 78 usable questionnaires had been collected from companies with the following demographics:

**Company size:** Twenty companies in our sample have annual revenues of under \$5 million, 12 fall in the \$5-\$10 million revenue range, 22 have revenues greater than \$10 million, 18 are above the \$100 million mark, and six provided no revenue data.

**Support organization size:** Although support organizations are people-intensive, the typical department is relatively small; among our respondents, median support headcount is 12 employees. Thirty-four respondents have 1-9 support employees, 20 have 10-29 support employees, and 24 have 30 or more.

**Price of best-selling product:** Product price is often a good indicator of market focus and support requirements. Among our respondents, 26 sell a flagship title with a list price of less than \$1,000, 20 sell products in the \$1,000-\$9,995 range, 24 sell products priced above \$10,000, and eight provided no pricing data. Median price for all "best-selling" products in our sample is \$3,000.

**Fee-based ratio:** Most of the companies in our survey sample provide a mix of both fee-based and free support services. For the sample as a whole, 39 companies report that 75% or more of their calls are covered by some form of fee-based plan, while 30 say that 75% or more of their calls are free.