

THE SNAPSHOT® COST STUDY REVEALS TRUE COSTS

By Michael A. Crane, Ph.D.

In today's competitive environment it is increasingly important that a company have a clear picture of its costs of doing business. Such information is critical for assessing product profitability and pricing as well as managing improvements in the business' efficiency or productivity. Most cost accounting systems do not provide sufficient tools for understanding an organization's real costs. This is particularly a problem in the case of indirect costs, and for costs in service organizations, where it is often difficult to allocate properly the costs to the products or functions being supported.

Companies can now obtain the cost information they need by doing a SNAPSHOT® cost sampling study. The approach is essentially to take a picture of the work being performed at randomly sampled points in time, and then to develop that information into a comprehensive analysis of the organization's costs. The SNAPSHOT® study is inexpensive and easy to implement, and it involves minimal disruption to the organization.

HOW A SNAPSHOT® STUDY WORKS

To illustrate the concept, consider the example of XYZ National Bank. Suppose that XYZ employs 1000 window tellers who perform a variety of transactions for a variety of different types of accounts. Suppose XYZ wants to know how much of the teller cost is in support of personal checking accounts. The basic approach is to randomly sample points of time for each teller, and to record whether the teller is handling a personal checking account at those instants in time.

Suppose we find that 26 percent of the tellers are servicing personal checking accounts at their selected points in time. If the sampling was conducted at representative points in time, then we can conclude from this data that tellers spend about 26 percent of their time servicing personal checking accounts.

Now if the total teller-associated expense (for the 1000 tellers) is, say, \$25 million per year, we can estimate that \$6.5 million (26 percent) is for support of personal checking accounts. Further, if XYZ has 520,000 such accounts and handles 4.3 million window transactions annually for such accounts, then we can estimate the cost per account to be \$12.50 per year and the cost per transaction to be \$1.51.

USES OF SNAPSHOT®

As illustrated above, the SNAPSHOT® approach provides valuable information on product costs. It can also be used for analyzing expenses by customer segment, comparing costs for different types of transactions, evaluating the labor content of output so as to determine the amount of resources expended for various work tasks, and analyzing indirect or overhead costs.

SNAPSHOT® is applicable in both manufacturing and service settings. The following examples illustrate the types of questions that can be addressed.

Manufacturer: What is the proper allocation of marketing expense to different product lines?

Air Courier: How does the handling expense per item vary by origin, by destination, by package size, and by service requested.

Automobile Insurer: How does the processing cost per policy vary by size of policy and by new business versus renewal business? What are the most costly steps?

Health Claims Administrator: How is productivity (claims handled per person) impacted by the number and type of medical services per claim, and the demographic characteristics of the claimant?

Stock Broker: What is the average amount of employee work time required to execute "buys" versus "sells".

Customer Service Department: What types of customer inquiries consume the greatest share of resources?

Department Store: What percentage of sales staff time is spent assisting customers versus processing sales versus restocking merchandise?

IMPLEMENTING SNAPSHOT®

The SNAPSHOT® Study is implemented in four steps: design, survey preparation, data collection, and analysis. These are described briefly below.

Design. A good study design forms the foundation for a successful SNAPSHOT® study. First, the objectives of the study are clearly defined, i.e. whether the purpose is product costing, expense allocation, productivity

measurement, and/or activity analysis.

Once the purpose of the study is defined, this determines what data is to be collected from each surveyed employee, including for example product or customer being supported, work task, employee category, etc.

Finally, the mechanics of the sampling are defined. This includes what job categories and what employee groups are to be sampled, the number of observations per employee, the specific schedule for doing the sampling, and the resources required to conduct the sampling.

Survey Preparation. Survey preparation consists of several steps. Forms are provided for recording the information from each surveyed employee. The individuals responsible for collecting the data are identified and notified. Training materials are provided explaining how the data is to be collected. Communications are sent to the staff concerned, explaining the purpose of the study and, in general terms, how the data is going to be collected and used.

The process is then tested in one or more pilot tests, with a small sub-set of employees. The pilot test helps ensure that the survey mechanics are working, that the instructions are clear, and that the data received will provide the information needed to satisfy the study's objectives.

Data Collection. Data is collected in each location by interrupting each employee's work at the scheduled times and determining the work being done at those instants. The necessary information is recorded and coded, and then entered into a database for analysis. Usually, the information can be gathered in a few seconds for each surveyed employee.

Analysis. A database is built with one record for each observation for each surveyed employee, and includes information about what the individual was doing at the moment of the survey, characteristics of the specific product or transaction or customer segment that the work supported, and the job category of the individual.

Once collected, the data is summarized by the various product, work or employee characteristics collected. In developing cost estimates, the employee observations are weighted by the compensation level of the particular job categories, so that total costs will reflect properly the various employee levels. Separate data is collected on overall transaction counts - e.g. the total number of customer accounts by type of account - so that costs per item can be determined.

ADVANTAGES OF SNAPSHOT®

The SNAPSHOT® approach essentially develops a profile of employee time utilization based on observations of the work being performed at randomly sampled instants in time. More traditional methods of evaluating time utilization involve time studies (stopwatch) or employee log-keeping. SNAPSHOT® has several advantages over these other approaches:

- It is very easy and inexpensive to administer.
- It is not intrusive on the employee's work, requiring only a few seconds of time per employee, and the collection of data does not impact or change the work.
- It's accuracy is enhanced by the fact that only "digital" information is captured - i.e. what work is being done at the instant of the survey - rather than attempting to keep track of and accurately measure activities and time intervals over a period of time. It is also more accurate because it does not rely on employee recordkeeping.

In conclusion, the SNAPSHOT® approach is an inexpensive, easy to administer tool for analyzing how people spend their time at work and understanding an organization's cost structure. It provides a wealth of information on the costs of doing business, including costs by product line, for different transaction types, for different customer segments, and for different tasks or components of the process. It helps identify opportunities for expense reduction through automation or workflow improvement, and it provides valuable information to assist in the development of productivity standards. It is useful for analyzing direct labor costs as well as indirect or overhead costs, and is applicable in service as well as manufacturing organizations.

Although SNAPSHOT® is not suitable for every situation, it is a powerful management tool with widespread application. It helps fill a gap left by traditional cost accounting systems by providing expense information needed to manage effectively in today's environment.

For more information about conducting a SNAPSHOT® study in your organization, contact Michael A. Crane, Ph.D., at (510) 527-9575.