LEAN ACCOUNTING

Lean seeks to deliver accounting information to the customer that is quick and easy to understand and provides the focus to make proper business decisions. Is that possible with the current non-lean accounting approach?

GARY KAPANOWSKI

In their groundbreaking book *Relevance Lost*, Johnson and Kaplan articulate a fundamental issue for accountants: "Corporate management accounting systems are inadequate for today's environment."[1] Providing essential data for management decisions is the key task for any accountant from any era. The direct cost of an element is easy to obtain; applying the indirect cost to a product or service is the longstanding issue. Over the years, there have been many practices and advanced technologies that were acceptable at particular points in time to apply indirect costs — from direct labor allocation to activity-based costing to cell manufacturing (machine time). Each method has its pros and cons, but, as Johnson and Kaplan questioned in their book, have accounting systems improved?

Lean accounting tries to eliminate the issue of applying indirect costs and allows management to make better business decisions. This article will start with the definition of lean. Then, we will focus on lean accounting — its definition, benefits, and implementation.

Definition of lean

The classic definition of lean is the identification, elimination, and reduction of waste, or non-value–added activity within a process, as perceived by the customer.[2] Lean is the dual empowerment of respect for people and continuous improvement in everyday principles and actions, allowing the organization to stay focused on the customer by eliminating waste. This Toyota Way system was originally called the "respect for humanity system," driving people and cultural change toward continuous improvement.[3] The goal of lean, as described by Taiichi Ohno (founder of the Toyota Production System [TPS]), is to look at the time line from the moment the customer submits an order to the point when cash is collected and remove non-value–added waste as needed.[4] Lean uses current resources to improve processes, so you don't have to spend your way toward continuous

GARY KAPANOWSKI, *Certified Lean Six Sigma Master Black Belt and Certified ASQ Bronze professional, is a cost accountant for Moeller Manufacturing, a leading aerospace parts supplier, and Lean Six Sigma Master Black Belt Lecturer at Lawrence Technological University's Professional Development Center. Utilizing experience with metrics and the balanced scorecard, Gary earned the 2006 Financial Executive of the Year award from Robert Half International and the Institute of Management Accountants. His current focus is assisting office workers with simple techniques for adopting lean in the office to eliminate waste.*

KEY LEAN FACT

There is a no layoff policy for improvement. Assign willing workers to a new cost center to identify the cost savings of process improvements, other positions, or a labor pool for *kaizen* events.[5] The assumption is that people will not knowingly work themselves out of a job.

KEY LEAN FACT

The challenge of lean accounting is inventory — reduce, or you're not lean. As the inventory on hand reduces to one or two weeks, the calculation of inventory costs becomes easy. This will reduce audit costs (due to the fewer items to audit), simplify cost detail understanding, and provide organizational focus to reduce costs and eliminate redundant transactions.

improvement. In summary, lean is about involving everyone within the organization in continuous improvement by thinking every day about how to make the process better, cheaper, easier, faster, and safer for the customer.[6] See the first sidebar about lean policy and people.

What is lean accounting?

The basic premise of lean accounting is to reduce waste in the accounting process. If it's difficult for non-accountants to understand the financial statements, then the statements are, by definition, waste and must be eliminated, like defects in a manufacturing environment. The solution is to create financial statements that anyone can understand in order to make effective and efficient business decisions.

How do we know if our financial statements are defective? This is the time to obtain the voice of the customer — talk to the users and see how they utilize the financial data. Do they use programs like Excel to translate the data into their language? Or do they use the data just to meet requirements? Does the financial statement provide the level of accountability and responsibility needed to identify improvements?

To accomplish this task, lean accounting minimizes the segregation of allocated costs and focuses profitability by product group or family rather than individual products. This provides the opportunity to eliminate waste in the organization, which is the goal of lean.[7] Any accounting task that interferes with the process of identifying and eliminating waste is, by nature, waste. One example is labor absorption accounting as it creates excess inventory (push) to what the customer demands (pull).[8] Another example is activity-based accounting, which is expensive to implement and still incorporates the issues of push, rather than pull, systems. Inventory provides the third example because by definition it's waste. As inventory is reduced and turns increase, the capitalization of inventory becomes a non-issue due to the simplified calculation of costs (i.e., inventory duration in weeks versus months). See the sidebar on reducing inventory.

Benefits of lean accounting?

The three main benefits to lean accounting are its simplicity, quick management decision-making, and waste elimination. The simplistic nature of lean accounting is remarkable. By splitting the direct and indirect costs, or the value and non-value–added costs, the organization can determine if value is being created for the customer and by what percentage. Thus, anyone will be able to quickly understand which product families are more profitable than others. There is no distortion of understanding product family cost and margin. This is clear and comprehensible.

Management decision-making is facilitated by a clear understanding of the product family cost structure and contribution margin analysis. By using traditional cost–benefit analysis, management can determine if a new contact can be pursued and at what target cost. This accounts for unused capacity or added capacity required to satisfy the customer's demand. If there is unused capacity, only marginal costs are required for the analysis (essentially treating the unused capacity as zero costs). If more capacity is required, the occupied costs are added

KEY LEAN FACT

Certain U.S. government contracts require specifically assigning both direct and indirect costs to validate the share of cost to commercial and government products. This is an exception to the overall lean accounting concept. The certification of the accounting system is required and may promote more traditional reporting.

EXHIBIT 1 Components of Performance Metrics

COMPONENTS OF PERFORMANCE METRICS	
• Support company strategy.	• Don't measure the people. Measure the process.
• Be few in number.	• Compare actual results to goals.
• Include non-financial data (i.e., stockrooms eliminated).	• Don't combine different measures into a single metric.
• Encourage the right behaviors.	• Be timely.
• Make things simple, visual, and easy to understand.	• Show trend lines (upward is positive).

*These measures are adapted from: Cunningham, J.E., Fiume, O., and Adams, E., *Real Numbers: Management Accounting in a Lean Organization.* (Durham, N.C.: Managing Times Press, 2003).

to the product family for an overall effect on profitability. Without the cost distortions of applied indirect costs, this easy calculation allows organizations to make effective and efficient decisions.

There are many wastes in an organization. The process of accounting is no exception. The overall cost of generating financial statements is astounding, especially if no one can understand the information to make business decisions. Obtaining the number of people involved, costs for the workers, and the number of days required to produce the reports for the financial statements will provide the costs for the reports. But what is the benefit of this cost? Lean seeks to deliver accounting information to the customer that is quick and easy to understand and provides the focus to make proper business decisions. Is that possible with the current non-lean accounting approach?

Lean assesses why the accountant performs each action. Is it of value to the customer? This includes the quantity of journal entries and when they are created. Do 20 percent of the journal entries account for 80 percent of the value? Does everything need to be performed at month-end? Do we need to close the books at all or just quarterly? Can accounting become close to real-time information? The goal is to find what is right for the organization and eliminate any of the rules and traditions that don't satisfy the customer's request. By eliminating the waste in the accounting system, the organization can provide meaningful information for management decision-making in real time.

By reducing the level of allocated costs, the organization increases personal responsibility and accountability. The organization improves results by eliminating waste. (See the lean fact about an exception to lean accounting.) The benefits of using lean accounting principles include:

- can be used by people who are not accountants;
- eliminates complexity in presentation;
- has higher assignable costs and lower allocated costs;
- includes both financial and nonfinancial information;
- motivates the right decisions; and
- complies with generally accepted accounting principles.[9]

How to implement lean accounting

Lean accounting starts with top management focusing the organization in a lean direction. This strategic infusion begins with the lean budget or *hoshin kanri* from the TPS's first principle: Match goals and objectives with tasks throughout the organization. The lean budget collects data, reflects on the economic results of a company's planned

KEY LEAN FACT

When reviewing capital expenses, several questions to consider for a lean process include: Is it flexible for the product family? Will it reduce inventory? Will it easily accommodate product change? Does it meet takt time? Will it improve the inventory level or turn metrics?

EXHIBIT 2 Lean Accounting Metrics

LEAN ACCOUNTING METRICS	
Customer satisfaction and responsiveness	**Cost and productivity**
• Customer satisfaction index (the most appropriate metric to analyze customer satisfaction)	• Productivity growth rate
• Customer return rate	• Constant sales per employee (in dollars)
• Delivery performance (are products delivered on time?)	• Absenteeism (are employees engaged in their work?)
• Late shipments (as measured in dollars and number of parts/customers affected)	
	Safety and ergonomics
Flexibility and responsiveness	• Injuries
• Defects per 1,000 units	• Medical cost per 100 associates
• Performance to takt time	• Lost-time accidents
• Percentage of time each working cell meets takt time	
• Average first-pass yield	**Financial performance**
• Inventory (i.e., of raw material, work in process, and finished goods)	• Operating cost as percent of sales
• Total inventory (days on hand)	• Research and development as percent of sales
• Product development lead time	• New products as percent of sales
	• Capital investment as percent of sales
	• Working capital as a percent of sales

*These metrics are adapted from: Cunningham, J.E., Fiume, O., and Adams, E., *Real Numbers: Management Accounting in a Lean Organization*. (Durham, N.C.: Managing Times Press, 2003).

activities, and focuses on the most relevant information in order to aid timely and accurate planning and decision-making. To increase understanding and communication, the budget process should be carefully considered and aligned with *kaizen* techniques used for brainstorming and team diversity. By assigning one person from accounting to work with various managers, data can be compiled effectively and efficiently to meet budget specifications without waste. This is the origin of understanding the overall organization's process. Product family groups are identified based on like goals, production cycles, and takt times. The demand rate for product families will drive the organization and determine staffing.

Also, by applying this lean principle to the accounting system, the organization can match the cycle time of the product or service to the takt time of the customer, eliminating overproduction and preventing unwanted inventory — all waste to the organization.[10] The process will also attempt to satisfy the continuous flow principle from the TPS to bring financial gains to the organization.[11] Some examples include an increase in cash flow, inventory turn time, revenue, and net income. Lean becomes a growth business model for the organization.

Performance metrics are the next key component for lean accounting. The goal is to eliminate wastes. Each metric requires admitting there are wastes in every process, allows for the identification of waste in the process without blaming the willing worker, and enables the willing worker to eliminate waste. Qualities of a good metric are included in Exhibit 1, and examples of good metrics are listed in Exhibit 2. The presentation of lean metrics, known as a box score, at weekly meetings provides direction for continuous improvement throughout the organization.

The next step is to compile the cost data of product families by direct costs first. This includes labor, material, and anything that is specifically used to create the product or service within the group/family. After compiling the direct cost of the product groups/families, any associated occupancy costs can also be combined. Occupancy costs are any costs, both expense- and capital-related, incurred

EXHIBIT 3 Plain English Financial Statements

Financial Statements	$AMT	Plain English Financial Statements	$AMT	% of product family sales	% of total sales
Sales	$XXX	Product family #1			
COGS	$XXX	Sales	$XXX	%	
Gross margin	$XXX	Direct cost	$XXX	%	
		Occupancy costs	$XXX	%	
SGA costs	$XXX	Contribution margin	$XXX	%	
Other costs	$XXX	Product family #2			
		Sales	$XXX	%	
Net income	$XXX	Direct cost	$XXX	%	
		Occupancy costs	$XXX	%	
		Contribution margin	$XXX	%	
		Total contribution margin	$XXX		%
		Other costs	$XXX		%
		Net income	$XXX		%

NOTE: Total sales and net income are the same in both formats.

to occupy a property; these include rent, taxes, insurance, landscaping, utilities, security, telephony, cabling, computers, furniture, fixtures, and equipment.

The combination of both direct costs and occupancy costs provide the total product group/family cost for the contribution margin. By dividing the cost or margin by the number of units produced, a nondistorted product cost can be identified. All other costs are listed below the contribution margin as unallocated costs for the organization to cover in order to earn a profit. There are no calculations for indirect costs, overhead, or variances.

Plain English financial statements are the core output of lean accounting.[12] These statements utilize the principles of lean accounting to produce easy-to-understand financial statements (see Exhibit 3). See the last key lean fact for some questions to consider. The details for compiling the information include:

- sales;
- accounts payable to provide purchases, services, and supplies;
- wages and salary from payroll;
- depreciation from a fixed asset system; and
- inventory (if counted within a few hours, the perpetual inventory system and all related transactions are eliminated; only one journal entry is needed for labor).

Conclusion

Lean accounting adheres to the goal of the lean organization by reporting waste elimination, using easy-to-understand financial statements to make business decisions, and sustaining continuous improvement initiatives. With the emphasis on management involvement, the main step in the process is to get started and enjoy the journey for profit enhancement. ■

NOTES

[1] Johnson, H.T. and Kaplan, R.S., *Relevance Lost.* (Boston: Harvard Business School Press, 1987).

[2] Womack, J.P. and Jones, D.T., *Lean Thinking: Banish Waste and Create Wealth in Your Corporation.* (New York: Simon & Schuster, 2003).

[3] Liker, J., *The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer.* (New York: McGraw-Hill Education, 2004).

[4] Ohno, T., *Workplace Management.* (New York: Productivity Press, 1988).

[5] Deming, W.E., *Out of the Crisis.* (Cambridge, M.A.: The MIT Press, 2000).

[6] *Op. cit.* note 2.

[7] *Op. cit.* note 2.

[8] *Op. cit.* note 3.

[9] Cunningham, J.E. and Fiume, O., *Real Numbers: Management Accounting in a Lean Organization.* Adams, E. (Ed.), (Durham, N.C.: Managing Times Press, 2003).

[10] *Op. cit.* note 2.

[11] *Op. cit.* note 3.

[12] *Op. cit.* note 9.