CHAPTER 6 - Competitive strategies

Contents

CHAPTER 6 - Competitive strategies 2

6.7 Lean accounting 2

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Active reading. Think about the practical implications of lean accounting. It is a system that accompanies lean manufacturing. Note the focus on capacity usage and the potential link to the value creation system. Also, note the requirement for the collection and reporting of nonfinancial information.

Lean accounting is proposed as the accounting system of organizations that adopt a lean manufacturing approach. Although the principles of lean can be applied to any function, production process, or service delivery, it tends to be thought of as mostly associated with manufacturing. A fundamental principle of lean is that it helps employees to learn how to use an organization's times and resources better to deliver value to the customer. It is a long-term strategy of continuous improvement.

In lean manufacturing, the process is set out in sequence and groups of activities so that employees perform operations in work cells or groups. Employees are encouraged to cross-train so that they undertake a series of tasks to complete a process in situ rather than undertaking a small element of a process where, under the old systems, a product passes through a series of departments, each undertaking a small task. Inventory of raw materials and components is reduced to a minimum, and just-in-time delivery is demanded of the suppliers, requiring close cooperation within the supply chain.

A primary objective is to eliminate wastage in the process as this wastes time and money. For example, reworking a product takes time, and if this is reduced, it not only saves time, it frees the capacity to produce good products. It is a customer-focused demand-pull system so that instead of manufacturing for stock, manufacturing occurs in response to customer orders. If flows through the process can be improved, inventory reduced, and on-time delivery met, revenue growth should follow. It is argued that improved productivity means improved cost control and improved capacity (Maskell and Baggaley, 2006).

Lean manufacturing embraces similar principles to those put forward in the ISO 9001:2000 quality standard. The international quality standard incorporates the principles of customer focus, leadership, involvement of people, process approach (managing related activities and resources as integrated systems), systems approach to management (managing groups of related processes as integrated systems), continual improvement, factual approach to decisions, and mutually beneficial supplier relations. All of these can be seen to be embedded within lean.

A problem with traditional accounting systems is that it can encourage production to keep average costs low. If there are high fixed costs, one way to reduce the average cost or overhead recovery is to produce more products. This action can encourage high inventory levels, which ties up space and capital.

Organizations using lean manufacturing also found that using a standard costing system did not work so well as a tool for the management of costs. Standard costing systems establish a standard cost for each product and use this to calculate a range of variances from actual costs that allows managers to see where and why deviations from standard occur and thus to take corrective action. Traditional costing systems are based around allocating costs to departments and allocating costs to products. Lean focuses on creating value streams that do not necessarily fall neatly within departments but follow a process of creating value through the system. Therefore, many of the variances calculated from standard costing do not mean anything.

A value stream is the sequence of activities from order receipt to shipment that is necessary to create the product to ship to the customer. Proponents of lean accounting (for example, Cunningham and Fiume, 2003; Kennedy and Brewer, 2005; Maskell and Baggaley, 2006; Searcy, 2009) argue that the accounting system should be based on the value streams as these are the profit centers. Profit is generated by improving flows, reducing inventory, and overheads through value streams. The costs recorded against the value streams are the direct costs that relate to each value stream. Corporate overheads are reported below the line, which can make it difficult to price products and identify product profitability due to the full product cost not being calculated (Kroll, 2004). However, market pricing can be used as a guide to pricing, and target costing (section 7.8) used to assist in the design of the product.

Reporting of the revenues and costs is done via an income statement for each value stream. The principle of simplifying the reporting of performance tries to make it more understandable for managers. Often, under systems of standard costing, some of the overhead variances were difficult for managers to understand and, more importantly, to know what to do in response to variances. Under lean accounting, a box score is created for each value stream, which can be produced weekly, monthly, quarterly, or at whatever frequency is desirable. The box score focuses on three elements — operating performance measures, capacity usage, and the income statement. It is designed to be a single page report. Table 6.18 shows an example based on versions suggested by Searcy (2009), Cunningham and Fiume (2003), and Maskell and Baggaley (2006).

The example incorporates several ideas but in practice would be drawn up with the aid of the managers that would use the report. Columns could simply show period comparisons; however, the example shows how it can be used as a motivational tool to encourage continuous improvement. The actual change column included would show the improvement since the last reporting period. Managers could use this information to identify the reasons for the change and strive to make continuous improvements in all areas. The financial measures do not include a budget column for comparison as the principle is to improve continually on past performance. The revenue and costs directly reflect the activity of fulfilling customer orders. The capacity measure helps to manage the level of resources required to meet orders.

The capacity represents the total time available in the period. Non-productive time represents activities that do not add value such as changeovers, scrap or rework, downtime, maintenance, inspections, administration time, and so on. These could be reported in more detail as part of a "cost of quality report" discussed in section 6.8. The available capacity is 100% minus the productive and the non-productive time. It is considered normal to operate with available capacity at around 15-20%. This provides some flexibility to cope with sudden increases in demand, but the non-productive time should be kept to a minimum.

Table 6.18 – Box score for lean manufacturing

Box score for value stream A			
	Target improvement	**Current state**	**Actual change**
Operational measures			
Units (or Sales) per person			
Number of stock outs			
First time through (i.e., no rework required) %			
On-time shipments %			
Dock to dock days (order to shipment)			
Average cost per unit (or sale)			
Capacity measure			
Productivity %			
Non-productive time %			
Availability %			
Financial measures	**Last period**	**This period**	**Change**
Net revenue			
Material costs			
Employee costs			
Machine costs			
Utilities			
Facility – occupancy costs			
Shipment costs			
Total costs			
Value stream gross profit			
Gross profit %			
Inventory value			

Note that the income statement stops at a bottom line of gross profit as other corporate overheads are not part of the value stream but facilitate the operation of the whole organization. The objective is to charge only those costs that are causally related to the value stream, that is, those costs that are controllable by the managers concerned with the value stream. This format aids the ownership of the statement by the managers.

Supporters of lean accounting argue that a benefit of this style of accounting is that it encourages continuous improvement and better management of resources. Changes in the operations and reduction in inventory levels can be directly reflected in reporting statements and hence lead to better-informed decisions by managers who receive reports in a format that they can understand.

It does, however, require some changes to the accounting system. During the process of changing to lean accounting, reports can show some adverse positions, notably as inventory levels are reduced due to sales being satisfied from existing stock rather than being produced in real-time. This reporting can cause concern among managers but, if persevered with, the benefits can be seen to filter through as the manufacturing process becomes genuinely lean. Much of the information required for lean accounting is now collected via enterprise resource planning (ERP) systems used by many manufacturing companies.

Learning activity. Think about techniques such as customer profitability, activity-based costing, and lean accounting. Do you think there would be similar challenges involved in implementing these techniques? Are there any common factors between the techniques with which a traditional accounting system might find it difficult to cope?