ABSTRACT
With many manufacturers now undergoing a lean transformation, it becomes essential to discover exactly what part lean accounting has played in the changes made. Surprisingly, this is still an emerging concept. Reasons ranged from a lack of understanding to the barrier of company culture. This paper will cut through some of the common misconceptions about lean accounting and demonstrate instead the extensive benefits to be realised from its application.

KEY WORDS: Lean accounting, Lean manufacturing, Value stream

INTRODUCTION
Lean management was first introduced in the United States in the early 1980s, a great deal of literature has been written on the subject. Unfortunately, the popularity of the subject itself may add to some of the confusion. Because the origins of lean management are in the Toyota Production System, referring back to the original work may clear up a lot of misconceptions, particularly when it comes to the issue of capacity utilization.

Lean Accounting evolved from a concern that traditional accounting practices were inadequate and, in fact, a deterrent to the adoption of some of the necessary improvements to manufacturing operations. While manufacturing managers knew that investments in automation and the adoption of lean manufacturing practices were the right things to do, traditional accounting was often an obstacle to such improvements, yielding numbers that only supported investments when they could be justified by reductions in direct labour, with little benefit ascribed to any improvements to quality, flexibility or factory throughput.

KEY FEATURES OF LEAN MANAGEMENT
Lean Accounting is actually the cornerstone of a completely different model of manufacturing management – an entirely different business model. By itself, Lean Accounting has limited value, but as the financial basis for the architecture and application of logistics, quality management, factory operations, marketing and pricing, and other critical business functions, Lean Accounting is extraordinarily powerful.

A core principle of Lean Accounting is that the Value Stream is the only appropriate cost collection entity within the organization, as opposed to traditional accounting’s use of cells, cost or profit centers or departments normally based on smaller, functional groupings of work activity. The core idea behind lean is minimising waste, therefore creating more value for customers with fewer resources.

The value stream is the complete sequence of activities within the organization that operationally links the incoming supply chain with one or more outgoing distribution channels, as well as the complete sequence of associated business activities required to take a customer order from start to finish. Only by assessing financial impact in the Value Stream...
structure can management be assured that a dollar saved at some point in the process did not trigger two dollars to be spent elsewhere.

Lean manufacturing is thus a continuous way of producing what the customer wants, when they want it, at a price they are prepared to pay and using the least amount of resources. There are several potential areas in a production chain, where an organization can eliminate waste by going lean. For example, using production equipment up to the maximum potential can significantly help reduce waste. Similarly, low-cost automation is another area that can cut costs. On the sourcing side, purchasing standard parts and reusing parts by dismantling old machines can also assist in waste reduction. The key features of a lean production system are depicted in the figure below:

**Key features of a lean production system**

- Lean Manufacturing
- Flexible Manufacturing
- Total Quality Management
- Just In Time
- IT - Solutions
- Virtual Integration
- Lean Supply Chain
- Lean Value Chain
- Outsourcing

**Source:** Aranca Research

**IMPORTANCE OF LEAN ACCOUNTING**

There are positive and negative reasons for using Lean Accounting. The positive reasons are detailed below:

- Provide accurate, timely, and understandable information that can be used by managers, sales people, operations leaders, accountants, lean improvement teams and others in order to motivate the lean transformation throughout the organization, and for decision-making leading to increased customer value, growth, profitability, and cash flow.
Lean Accounting is also itself lean. Use lean tools to eliminate waste from the accounting processes while maintaining thorough financial control.

- Fully comply with generally accepted accounting principles (GAAP), external reporting regulations, and internal reporting requirements.
- Support the lean culture by motivating investment in people, providing information that is relevant and actionable, and empowering continuous improvement at every level of the organization.
- At a deeper level Lean Accounting matches the cultural goals of a lean organization.
- The simple and timely information empowers people at all levels of the organization. The financial and performance measurement information is organized around value streams and thereby honors the lean principle of value stream management.
- The emphasis on customer value is also derived from the principles of lean thinking. The way a company accounts and measures its business is deeply rooted in the culture of the organization. Lean Accounting has an important role to play in developing a lean culture within an organization.

WHY IS TRADITIONAL ACCOUNTING NOT NEEDED?
The negative reasons for using Lean Accounting lie with the inadequacy of traditional accounting systems to support a lean culture. Everybody working seriously on the lean transformation of their company eventually bumps up against their accounting systems. Traditional accounting systems (particularly those using standard costing, activity-based costing, or other full absorption methods) are designed to support traditional management methods. As a company moves to lean thinking, many of the fundamentals of its management system change and traditional accounting, control, and measurement methods become unsuitable. Some examples of this are:

- Traditional accounting systems are large, complex processes requiring a great deal of non-value work.
- They provide measurements and reports that motivate large batch production and high inventory levels. These measurements are suitable for mass production-style organizations but actively harmful to companies with lean aspirations.
- The traditional accounting systems have no way to study the financial impact of the lean improvements taking place throughout the company. On the contrary, the financial reports will often show negative results when very good lean change is being made.
- Traditional accounting reports use technical words and methods like "overhead absorption", "gross margin", and many others. Lean company will seek to empower the entire workforce. Clear and understandable reporting is required so that people can readily use the reports for improvement and decision-making.
- Traditional companies use standard product (or service) costs which can be misleading when making decisions related to quoting, profitability, make/buy, sourcing, product rationalization, and so forth. Lean companies seek to have a clearer understanding of the true costs associated with their processes and value streams.

The methods of Lean Accounting are new ideas. They are mostly adaptations of methods that have been used for many years, and have been codified into a Lean Management System designed to support the needs of lean thinking organizations.

CONVERSION TO LEAN ACCOUNTING
The transition from traditional management – from a functional organizational structure and traditional accounting to Value Streams and Lean Accounting – is best viewed as an ongoing
process, rather than a project. The transition from the old structures to the new can be lengthy and difficult. Often firms have expensive, major pieces of equipment, such as paint systems, heat treat equipment or other ‘monument’ equipment that must be shared across two or more Value Streams. Such sharing necessitates continuing to allocate the costs of the equipment until such a time as it can be economically replaced with smaller, dedicated machines in each Value Stream.

Similarly, human resources may need to be shared until sufficient cross training can be accomplished. An example might be a company with one buyer and two schedulers that is converting to three Value Streams. The buyer and schedulers will have to be cross trained into three buyer-schedulers, each handling both the buying and the scheduling in a Value Stream.

Finally, management may choose to limit the resources put into the Value Streams until the Value Stream management has climbed the necessary learning curve and can handle some of the more difficult and critical functions. Examples might include new product development or supplier selection, which management may want to keep out of the Value Streams and in their functional area for a matter of months or even years until the Value Streams can manage them effectively.

While the transition is taking place there will be shared resources and shared people, and a degree of allocation of the expenses to the Value Streams will be necessary. This is entirely normal and reasonable. Each dedicated resource and each expense that can be directly charged to a Value Stream is a step toward greater accuracy. All that is required is a dedication to continually increasing the resources in the organization assigned directly to Value Streams and continually reducing the percentage of expenses allocated and correspondingly increasing the direct expenses to the Value Streams.

COST INFORMATION AND BUSINESS DECISIONS

Lean thinking advocates that the primary purpose of cost information is to obstruct lean thinkers in their quest for the lean enterprise. Their objective is to reform cost information in order to focus it entirely on highlighting the benefits of their lean initiatives and eliminating as many of those non-value adding accountants as possible. From an organization-wide perspective, however, cost information is required as input for a wide variety of business actions and decisions, not just to support lean initiatives.

Pricing Decisions

A lean enterprise also needs to make pricing decisions. Lean accounting believes in charging just the market price. Anyway, cost has nothing to do with price; the market determines the price. Cost has nothing to do with price is correct but it does, however, have everything to do with whether or not a company should want to sell a product or service at the price the market is willing to pay. Lean initiatives will enable the company to be profitable at lower prices, but not at any price.

An organization must carefully manage its “portfolio of business” if it is to be successful in the long-term and must be able to understand how each product, service, customer, and market contributes to its overall portfolio of business. Before accepting any order, even the lean organizations needs be able to answer questions such as: Will this order cover the product’s or service’s “fully-absorbed” cost? If it doesn’t, will it at least cover the incremental costs it causes the organization? If it covers the incremental, but not the fully-absorbed cost, is it still in the company’s best interest to accept the order?
Even though cost does not determine price, cost information, both fully-absorbed and incremental, is critical for intelligent, fact-based pricing decisions. It may only take one bad pricing decision to ruin an otherwise sound company.

**Investment Decisions**
Investment decisions have a long-lasting impact on an organization. Large amounts of money are irreversibly committed to an action because it is deemed a better use of those funds than any alternative action available. The ability to accurately predict the impact on costs of the available uses of investment dollars is critical for an organization’s long-term success. Before committing funds to accomplish an objective, either capital expenditures or expense projects, a company must be able to predict the consequences of its proposed actions. One of those consequences is the change in costs. Will the cost reduce? Will it improve the efficiency?

**Other Decisions and Actions**
Many other decisions and actions require accurate and relevant cost information. Should a process be outsourced? Should we make or buy the product? Would the company better off working overtime or adding another shift? Would it be better to add workers and speed up the line, or work at the current line speed with the current workforce? Fact-based answers to these and many other critical questions must be made available to decision makers if the company is to succeed.

Without accurate and relevant cost information to support these decisions, executives and managers will either be “flying blind” or even worse, be looking at the world through distorted glass.

**LEAN ACCOUNTING IN INDIAN MANUFACTURING SECTOR**
The Indian manufacturing sector is striving for operational excellence. Companies are restructuring operations and adopting world class practices in their bid to expand profits and compete in the global market. Indian manufacturers are adopting these practices in all the fields i.e. laying emphasis on Quality improvements by adopting TQM and saving 15%-20% of cost, Using captive plants to meet a part of their energy requirements, taking initiatives to reduce hazardous emission levels by adopting alternative fuels, use of IT solutions to enhance productivity and efficiency.

Recently, Indian manufacturing companies have been increasingly restructuring operations and implementing world-class practices. The companies range from Bharat Forge, Bajaj and Tata in the auto sector to Larsen & Toubro, and Godrej & Boyce in the specialist engineering space as well as Ballarpur Industries in paper, and others in the pharmaceutical and textile sectors. These practices help companies become globally competitive, especially in sectors such as auto and auto components.

In addition, India’s vast pool of scientific talent helps these companies locally design and procure some of the more expensive inputs. For example, TATA Group leveraged the country’s low-cost engineering skills to develop India’s first indigenously designed, developed and produced car – TATA Indica.

By adopting lean manufacturing practices, Indian companies have been able to significantly cut down costs. For example, Sundaram-Clayton Limited, one of the country’s largest auto component manufacturers, has been able to reduce 2.5–5 per cent of costs and product prices by going lean. Through the adoption of lean manufacturing practices, the company significantly boosted employee productivity and was ranked by Lean Enterprise in the US as one of the leanest companies in the world.
The world’s largest forging factory is based in the industrial city of Pune, Maharashtra (Western India). The state-of-the-art factory belongs to Bharat Forge, which is rapidly placing India on the world map for manufacturing. It has embraced a strategy that includes heavy investment in technology, a scientifically skilled workforce, and aggressive overseas acquisitions. Also, the company recalibrated its business strategy and put an emphasis on streamlining operations to create a leaner and more cost efficient enterprise.

REFERENCES