

# **Lean Accounting, Fat Problem? A Critical Analysis of Lean Accounting's Value**

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*Lean accounting is an accounting system that is designed specifically to facilitate the application of lean manufacturing. It is considered a new tool among the various accounting methods available to management. As a managerial accounting method, the purpose of lean accounting should be to provide valuable, insightful information to management for decision-making. However, lean accounting sometimes fails to serve this ultimate purpose as a managerial accounting alternative. We conduct a case study of Toyota to examine lean accounting's value. The analysis shows that lean accounting tends to be short-term focused, which may jeopardize a company's long-term growth prospective. Lean accounting is also incapable of providing accurate product cost information, and therefore is unable to support a strategic decision-making process. Traditional standard costing and activity-based costing may be superior to lean accounting for long-term planning and decision-making. The potential exists for a dual system with lean accounting for tactical short-term information and either standard costing or activity-based costing for strategic long-term information.*

*Keywords: lean manufacturing, lean accounting, Toyota recall, traditional accounting*

## **INTRODUCTION**

Amid high inflation, rising costs, and intensifying competition, lean manufacturing might seem to be an attractive option to many companies (de Oliveira et al., 2019; Henao et al., 2019). However, the benefits and costs of lean practice have once again become a hot topic among accounting professionals after Toyota announced more recalls. The poster child for the lean manufacturing model, Toyota has been suffering from quality control problems since 2009 on a scale that has never happened before. In most recent years, Toyota had two major recalls that affected more than 2.9 million and 1.5 million vehicles in 2020 and 2021 respectively (Barry, 2020; Hanson, 2021).

Lean accounting is an accounting system that is designed specifically to facilitate the application of lean manufacturing. It measures, targets, and motivates lean practices in a company. Lean manufacturing

is a production practice that requires that expenditure of resources concentrate on value creation for end customers. Any other use of resources is considered wasteful and should be eliminated. Lean accounting is often compared with traditional standard costing methods or activity-based accounting. Its advocates claim lean accounting is superior. They claim that most companies that adopt lean manufacturing will eventually switch from traditional accounting to lean accounting (Cable, 2009). For companies that have chosen the lean practice, it is important for them to adopt lean thinking in their accounting, control, and measurement methodology (Maskell & Kennedy, 2007).

There is a hot debate among accounting professionals, in particular managerial accounting practitioners, regarding the effectiveness of lean accounting, and, therefore, the impact adopting lean accounting has on a company's long-term performance. As Toyota's recalls spread wider, more and more concerns are being exhibited over lean manufacturing and lean accounting practice, which Toyota originated and brought to prominence. The opponents of lean accounting believe that these concerns are legitimate. They argue that traditional standard costing or activity-based accounting is actually superior to lean accounting in some cases. The adoption of lean accounting may backfire as happened with Toyota due to the very nature of lean manufacturing and lean accounting (Wakabayashi, 2010). However, lean advocates find it hard to agree with such a conclusion. They consider the Toyota recalls an engineering problem, rather than a lean problem (Katz, 2010).

The rest of this paper is broken down into four sections. In section 2, a review of the literature on lean accounting is conducted. In section 3, we describe our method of analysis and present the results. Sections 4 and 5 discuss the results and implications.

## **LITERATURE REVIEW**

### **Origin of Lean Accounting**

The term "lean" was first introduced in the book *The Machine That Changed the World* by Womack et al. (1990). The purpose of lean accounting is to support a company which has decided to adopt lean manufacturing practice as a business strategy. It is a system that measures and motivates better business practices in the lean company. Lean manufacturing is considered as being derived mostly from the Toyota Production System (TPS) (Holweg, 2007). Toyota executives credited the inspiration of their lean ideas to visits to Ford Motor Company in the 1920s. Toyota leaders such as Taiichi Ohno and its consultant Shigeo Shingo developed Toyota Production System based on what they learned during their visits. That's probably why many people consider Henry Ford as the father of lean (Mastroianni & Abdelhamid, 2003). Lean manufacturing itself was first developed after World War II by Toyota leaders and adopted widely by manufacturers around the world (Wakabayashi, 2010).

As the lean manufacturing concept was adopted by pioneering American and European companies in the late 1980s, these companies discovered that the adoption of lean manufacturing required lean thinking for every aspect of the company including the financial and management accounting processes. Lean accounting is an accounting system that is designed specifically to facilitate the application of lean manufacturing. Its target measures motivate lean practices in a company (Kennedy & Brewer, 2005).

### **How Does Lean Accounting Work?**

As discussed above, the adoption of lean accounting is due to the information demands from lean manufacturing. The ultimate purpose of lean accounting is to assist in eliminating unnecessary waste, increase available capacity, smooth, and speed up the process, eliminate or decrease errors and defects, and make the manufacturing process clear and understandable. When a company decides to adopt lean accounting, it will not only apply lean accounting methods to the company's accounting, control, and measurement processes, but also make fundamental changes to a company's accounting, control, and measurement processes. Lean accounting advocates claim that this two-aspect application will enable a lean company to motivate lean change and provide information for lean decision-making.

Womack and Jones (1996) enumerated five steps in lean thinking after studying 50 companies worldwide across a variety of industries. First, a company who wants to adopt a lean manufacturing process

must define value in a lean environment. During this step, it is critical to understand who's doing the defining and what they are valuing. Both in the product and service industry, customers are the ones to define what they value. Second, the company must identify the value stream. The value stream should include all the value-added activities that go into delivering specific products and services to customers. Third, the company must make the value stream flow. Employees should be cross-trained to perform the continuous sequenced manufacturing process. Forth, the company must implement a pull system. A pull system enables customer demand to dictate the production level. Finally, the company needs to strive for perfection. This step requires the company to not rely strictly on management-level employees to generate ideas for improvement, but views all employees as intellectual assets capable of improving the flow of value to customers (J. P. Womack & Jones, 1996).

Several benefits associated with lean accounting are claimed by lean advocates. First, a lean accounting system is able to better understand customer value and to correctly assess the financial impact of lean improvement. Second, a lean accounting system is also considered as simple, visual, and low-waste. Third, a lean accounting system is superior to traditional management accounting methods such as standard costing and activity-based costing, since it provides more timely and more easily understood financial reports (Maskell & Baggaley, 2006). However, in practice, lean accounting has not delivered on the promises that its advocates claim. There are serious problems associated with lean practice, which potentially can cause significant negative impacts, such as Toyota's recall problems.

### **Problems Associated With Lean Accounting**

The purpose of a managerial accounting system is to provide insightful information for internal decision-making, not for external reporting (Cokins, 2008). Lean accounting, however, might not provide superior information to standard costing for decision-making purposes in many situations. The benefits of lean accounting may have been exaggerated and the problems may have been ignored by lean advocates during the past several decades. Given Toyota's recall incidents, it is time to review the practice of lean accounting. It might not be as promising as claimed after all. Several problems associated with lean accounting are discussed below:

#### *Short-Term Focused*

In a lean management environment, the decision-making mechanism is usually short-term focused. A steady state is a necessary assumption in a lean practice mechanism. Lean management assumes that most expenses are fixed, and therefore it ignores potential long-term changes (Cokins, 2008). Decisions based on this assumption are thus shortsighted and may not necessarily be in the best interests of companies' long-term well-being. It is very dangerous for a company to adopt a shortsighted accounting system. In a lean accounting system, due to the short-term focus of the lean environment, measurements in the accounting system tend to be short-term as well. If employees and managers are evaluated based on these short-term measures, it is foreseeable that they will pursue short-term benefits over long-term growth opportunities, as agency theory predicts (Jensen & Meckling, 1976, 2019).

The ultimate purpose of any modern corporation is the maximization of firm value, or in other words, to maximize shareholders' wealth. As a firm grows, the owners of the firm may not have sufficient knowledge to manage the firm's operation. Or the ownership, being diffuse, is too costly to bring together to arrive at a generally agreed-upon decision. Thus, it becomes more efficient to hire a professional to make operating decisions on behalf of the owner(s) of the firm. Under this situation, where the ownership is separated from the management, self-interested managers will likely not make decisions based on the best interests of shareholders, when there is a conflict between the manager's interests and shareholders' interests. This is called an agency problem (Jensen & Meckling, 1976, 2019). The same concept will apply between managers and employees, where managers are considered the principles and employees are the agents.

Under the lean management environment, due to the short-term focus, it is highly possible that the lean company's short-term measures vary from long-term benefits. However, since both employees' and

managers' performance evaluations are tied to the short-term lean accounting measurements, they are more likely to ignore the company's long-term growth opportunity and pursue their short-term benefits.

One might argue that not all human beings are self-interested, which is an essential assumption for agency theory (Eisenhardt, 1989). However, even when we assume away the agency problem under lean environment, there are still problems with well-intended employees in the lean mechanism. Besides chasing short-term performance as predicted by agency theory, the involvement of employees in the decision-making process also heightens the problems of lean accounting (Cokins, 2008). Employee involvement is one of the major features in a lean process. However, while employee involvement may lead to some innovative ideas that are helpful in increasing productivity and profit, it may also lead to shortsighted decisions that will eventually harm the company's growth in the future. The majority of employees are only responsible for the day-to-day operations of their own segments of the organization. So, their suggestions are typically very short term. Consequently, employees may prefer a simple accounting method, which is only relevant to their current operations. This will not allow them to consider the big picture of the current overall operation of the company, let alone the future. Therefore, even well-intended employees may not make appropriate decisions in a lean management environment.

#### *Ignore or Distort Product Costing*

Lean accounting applies a very different cost allocation methodology from traditional standard costing and activity-based accounting. The value stream's costs are calculated under lean accounting, while product costs are usually ignored. If product costs are needed under certain circumstances, a very broad average is calculated as unit cost, which does not differentiate costs. In addition, applicable indirect expenses are usually excluded from cost calculation, which distorts the true product costs. Therefore, lean accounting will yield very different cost numbers from the activity-based accounting method (Cokins, 2008).

#### *Disconnect From Supporting Strategic Decisions*

Due to distortion of production cost, lean accounting can provide little information for strategic decision-making. Strategic decision-making heavily relies on fact-based information. Lean accounting cannot provide accurate product cost information, and therefore cannot inform decision makers on the profitability of each product. Consequently, lean accounting may not be very useful in supporting strategic decision-making (Cokins, 2008).

Because of these shortcomings, many accounting professionals question the effectiveness of lean accounting. How effective can lean accounting be in providing insightful information for strategic decision-making if the system cannot really document the true cost and profitability of each product of the company? Therefore, some accounting professionals claim that traditional standard costing is more effective and relevant for strategic decisions (Marie & Rao, 2010).

## **METHODOLOGY**

This paper uses a case study of Toyota to illustrate where lean accounting might go wrong. Toyota has long been used as an example of what's right about lean accounting. Hence, utilizing them as a case for what can go wrong highlights well the other side of the issue.

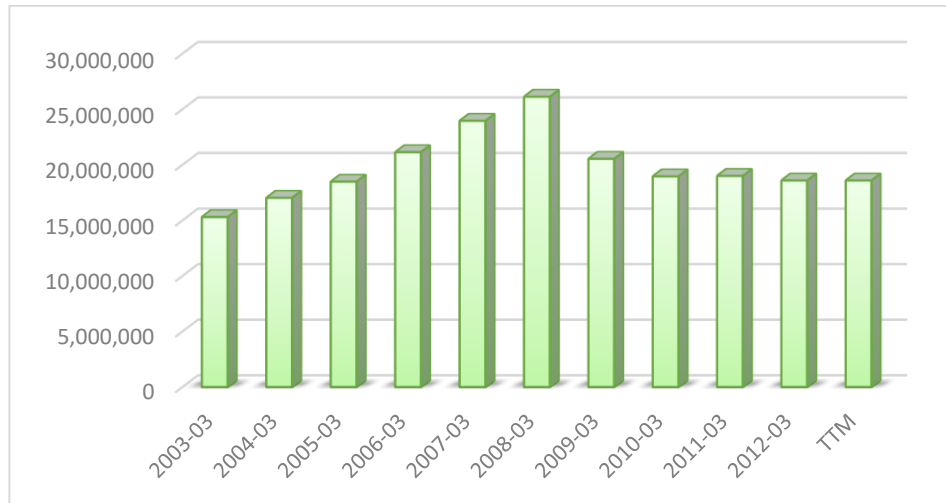
### **A Lesson From Toyota**

In 2009, Toyota announced several recalls that affected more than 7.1 million vehicles due to a potential accelerator issue (Cole, 2011). Toyota, as the pioneer in lean practice, has experienced dramatic losses since this major recall incident in 2009. The shift in Toyota's revenue, net income, and return on assets are presented in Figures 1, 2 and 3. Both Toyota's net income and return on assets dropped significantly from positive to negative numbers in 2009 and has remained at a much lower level since then. Specifically, Toyota's net income dropped from 1,706,627 million JPY in 2008 to -461,011 million JPY in 2009, while its return on assets decreased from 5.27% in 2008 to -1.43% in 2009. Lean opponents believe that,

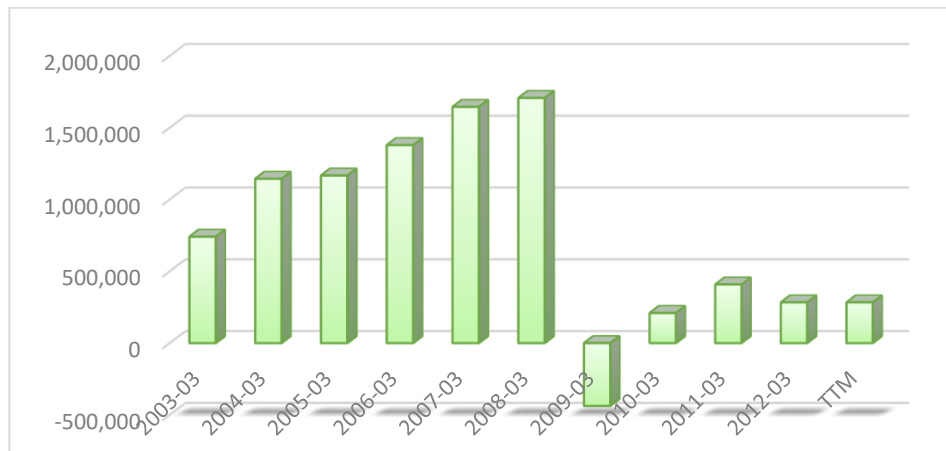
apparently, lean manufacturing and lean accounting have failed to serve the ultimate purpose of reducing cost for Toyota.

However, lean advocates assert that the significant losses Toyota has suffered from its massive recall incident should not be blamed on lean practice or lean accounting. Instead, they consider product engineering and communication issues as the roots of this incident. One focus of lean is continuous improvement. According to the principles of lean, lean does not mean to cut cost, but to eliminate waste. Thus, product recall is not consistent with lean at all (Katz, 2010). Therefore, the Toyota recall incident is not a failure of lean, but a failure of implementing lean properly and consistently (Anonymous, 2010).

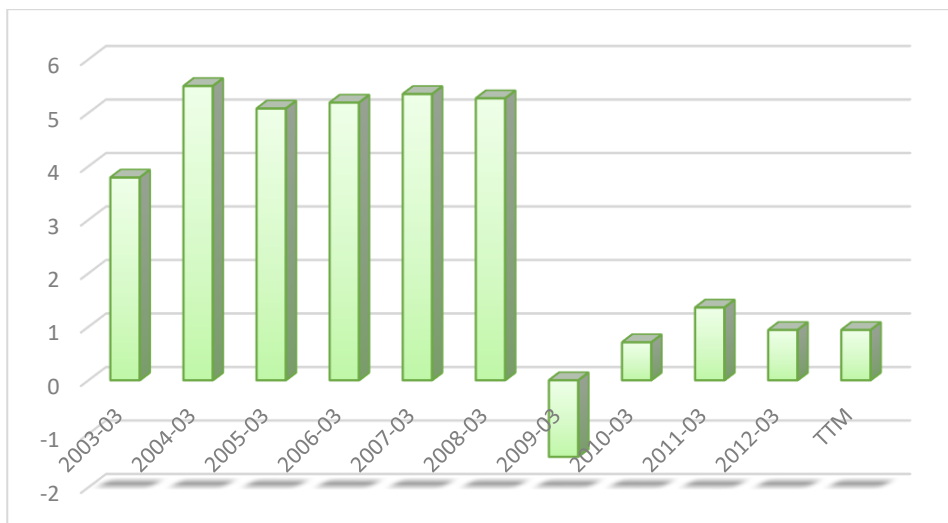
**FIGURE 1  
REVENUE JPY MIL**



**FIGURE 2  
NET INCOME JPY MIL**



**FIGURE 3**  
**RETURN ON ASSETS %**



## DISCUSSION

It's still inclusive whether lean accounting is superior to traditional accounting methods such as standard costing and activity-based costing. Standard costing was sentenced to death by many lean accounting advocates. However, lean accounting opponents declare that standard costing is far from dead, and is actively used by many accounting practitioners today (Marie & Rao, 2010; Wann, 2021). Although lean accounting is claimed to be widely used in the manufacturing industry, strong evidence was found in Dubai that standard costing is still relevant. As indicated by Marie and Rao's research, 77% of the companies in Dubai's industrial sector still use standard costing.

Lean accounting, although associated with problems, still can be beneficial in certain circumstances. Lean accounting provides tactical short-term focused information to monitor waste reduction and valuation creation. Thus, for a firm whose market is in a steady state, the problems of lean accounting would be less critical and the benefits may outweigh the problems. Second, a simple or pure product mix firm would have fewer problems with the product price distortions of lean accounting and would therefore find the information from lean accounting more beneficial. Third, the adoption of a combination of lean accounting with traditional standard costing or activity-based costing will help to resolve the disconnection problem between lean accounting and a firm's strategic decisions.

## CONCLUSION

Lean accounting is an accounting system that is designed specifically to facilitate the application of lean manufacturing. It is considered as a new tool among the various accounting methods available to management. As a managerial accounting method, the purpose of lean accounting should be to provide valuable, insightful information to management for decision-making. However, lean accounting sometimes fails to serve this ultimate purpose as a management accounting alternative. Lean accounting is usually short-term focused, which may jeopardize a company's long-term growth prospective. Lean accounting is also incapable of providing accurate product cost information, and therefore is unable to support a strategic decision-making process.

In summary, lean accounting might not be performing as its advocates claimed. Traditional standard costing and activity-based costing may be superior to lean accounting for long-term planning and decision-

making. The potential exists for a dual system with lean accounting for tactical short-term information and either standard costing or activity-based costing for strategic long-term information.

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