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Leaning the Wrong Way

By Richard J. Schonberger, University of Washington

What do the following have in common? Albertsons, Kroger, Safeway, Sainsbury's, Supervalu, Tesco, and Winn-Dixie? Yes, they are all major supermarket chains, including the two largest in the United Kingdom—Sainsbury's and Tesco. They are cited here because they represent what turns out to be the worst performing of 34 industry groups in a longitudinal study of "lean-ness," as measured by trends in inventory turnover. That study (Schonberger, 2001) of, to date, 585 prominent companies in 18 countries, draws its data from financial documents and dates back to 1950—depending on years of existence as a publicly held firm and availability of its documents. Findings for the seven grocery chains (the full sample in the study) show long-term worsening inventory turns. Specifically, the downslides, since the latest peak-performing year, span the following number of years: Albertsons 16 years, Kroger 15 years, Safeway 19 years, Sainsbury's 9 years, Supervalu 41 years, Tesco 10 years, and Winn-Dixie 20 years.

This is a highly inventory-intensive, thin-margin business. This is the industry that pioneered bar-code scanning, which captures item sales data sharable nearly in quick time with supply-chain partners. These poor results might be shrugged off as anomalous to a retail trade that has been adding SKU's (stockkeeping units) to its shelves by the thousands. Most other industry groups, however, have had their own troubles in becoming lean.

Take automotive, for example. The cars/light trucks/cycles category ranks 19th out of 34. The 31 manufacturers making up the category divide into 12 that have been improving their inventory turns for at least 10 years, but 19 that have been backsliding.

Database, Calculations, Analysis, and Coding

The database for the leanness/inventory study, which began in 1994, consists of some 30,000 data points: for each of the 585 companies and for each year a cost-of-goods sold (COG) number from the income statement, and a value-of-inventory (I) number from the balance sheet. Fifteen thousand calculations of inventory turns arise from those pairs of numbers ($\text{COG} \div \text{I}$). Sources of the financial data are: Mergent (formerly Moody's) Industrial Manuals, Mergent International Manuals, the Compustat and Edgar electronic databases, hard copy and Web-available annual reports, and data collected by associates in other countries.

The data for each company are plotted and visually inspected for long-term trends. Where there is a clear upward (lean) trend, the annual rate of improvement is calculated. Of the 585 companies—largely manufacturers but also including retail/wholesale/distribution companies—212 have improved their inventory turns by at least 10 of the most recent years, which is the criteria for a grade of A. A B-grade, assigned to 103 of the firms, is for a clear 10-or-more-year improvement trend, but with plateauing or backsliding in the most recent 5 to 7 years. They had a good lean thing going but lost it. Companies with no clear trend at all, 113 of the sample, get a C. D is for companies, numbering 110, that had a fine improvement trend going for 10 or more years but whose turns have slid downward for at least the past 10 years. Presumably, those 110 had been lean pioneers in the 1980s when lean was more generally known as just in time. An F is for the 50 companies with a clear, long (at least 10 and up to 51 years), downward trend.

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is an affiliate professor at the University of Washington and president of Schonberger & Associates, which provides seminars and advisory services to industrial and service organizations worldwide. He is author of over 100 articles and papers, a 12-volume videotape set, and several books including *Let's Fix It! Overcoming the Crisis in Manufacturing: How the World's Leading Manufacturers Were Seduced by Prosperity and Lost Their Way (2001)* and *World Class Manufacturing—The Next Decade: Building Power, Strength, and Value (1996, in seven languages and six printings)*. Schonberger is originator of the now widely used term (and supporting concepts), world class manufacturing. Among his current activities, he is director of an international benchmarking research project called *World Class by Principles (WCP)*, with assisting research partners in leading nations globally.

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Low inventory (high inventory turnover) is seemingly a natural indicator of "lean" in any inventory-dependent business. It is by no means the only, or even the best, measure. Greatest benefits of being lean are from the customer's vantage point: The lean provider is likely to be the quick, flexibly responding, on-time, high quality provider. Unlike those attributes, however, inventory turnover has a standard definition and is publicly available—and serves fairly well as a surrogate for lean.

Surprises

The previously named supermarket chains all rate D's and F's (the F's going to Albertson's and Supervalu). Who else get low grades? Here is a shocker: Toyota, lean manufacturing's originator, is a clear D. Data analysis reveals that in its glory years—late 1970s and into the 1980s, Toyota's inventories turned an awesome 60, 70, and 80 times in some years. A decade later its turnover had fallen to the 20's, and it has dropped steadily since—all the way to 12 in 2001. By all accounts, Toyota's factories are still paragons of lean. But the company as whole is not. In comparison, Ford, General Motors, and pre-acquisition Chrysler are grade-A. All three bottomed out in 1974 at between 4 and 5 inventory turns and have been improving ever since—Chrysler to 10, GM to 13, and Ford to 21. Exhibit 1 shows the down-up trends for the Big Three, along with the annual rate of improvement and number of years of improvement for each.

Another surprise: General Electric, perhaps the world's most admired company of any kind—recently for its six-sigma achievements—gets a gentleman's C. Its inventory turnover, since 1950, ranges between 3 and 6 rather randomly—no recent trend as long as 10 years. In its most recent 7 years, turns have fallen steadily from 5.9 to 4.2. Turnover plots for GE, along with Toyota are given in Exhibit 2.

Issues

Findings from the inventory study raise a variety of issues. For example, are the disappointing inventory trends for such esteemed companies as Toyota and GE harbingers of financial and competitiveness problems? Or is becoming lean simply not

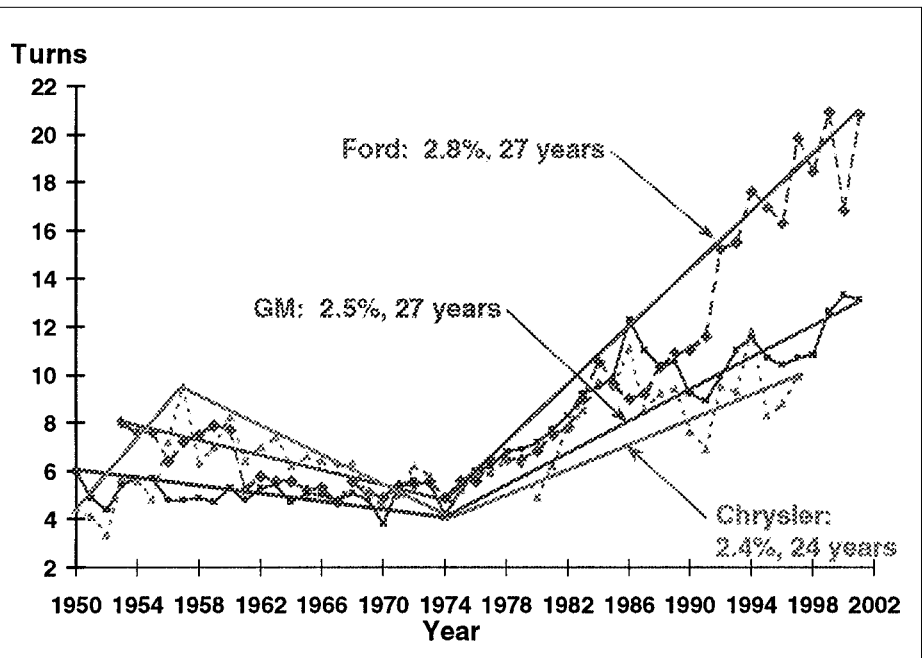


Exhibit 1: Inventory turnovers, annual rate, and number of years of improvement at Ford, GM, and Chrysler.

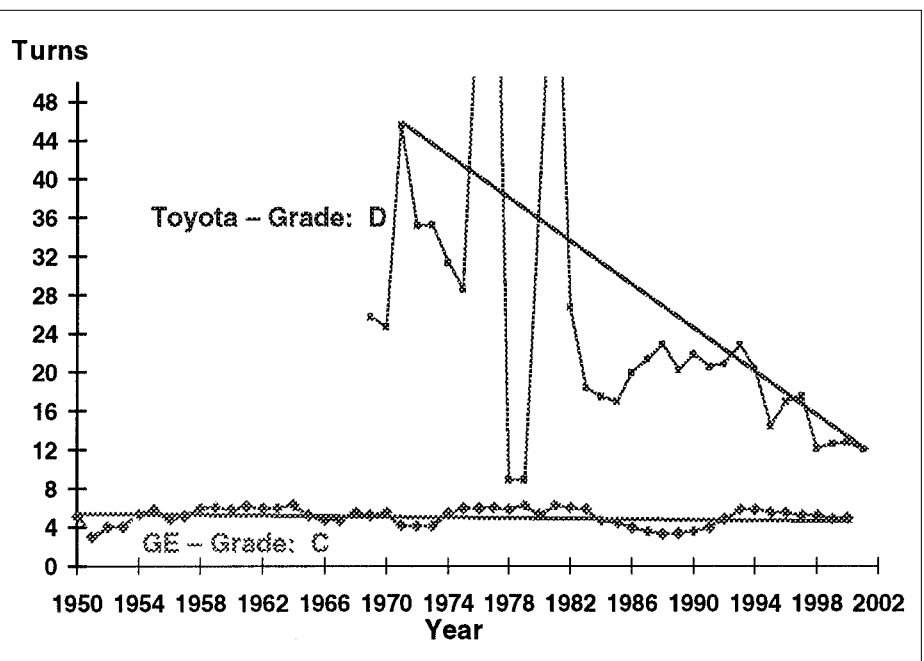


Exhibit 2: Inventory turnovers at GE and Toyota.

that important? (But surely it is important: Shedding inventory generates free cash flow, which some in the investment community watch more carefully than measures of profitability.) Besides such

future-probing questions, we may wonder what explains the dominant pattern of decline—for 64 percent of the companies—and if their weaknesses are still extant. More specifically, why, in the midst of lean,

six sigma, and supply-chain management fervor (to mention only a few performance-improving initiatives), have most companies in the rather elite sample been getting fat rather than lean?

Here are six speculative reasons:

1. Complacency (or, in some cases, hubris)—fallout of the prosperity of the 1990s, and a common trait among people, companies, industries, and nations.
2. Stock-hyping deal making—executives looking past the basics of good process management.
3. Growth and retention of unprofitable customers and product variations—perhaps attributable to insufficient multi-functional analysis of the consequences.
4. Legacies: mega-machines geared for large-lot production, outsized factories that require marathon flow distances, systems that bog down rather than link up

manufacturing and supply chains, and job designs that instill boredom more than inspiring waste-chopping ideas.

5. Retention of command-and-control management that stifles broad involvement.
6. Job-hopping managers and engineers who launch initiatives but do not follow through, and who favor each hot, new management program over proven, build-the-company basics.

Corrective responses include reversing the six points. Complacency and job-hopping surely were on a course of self-correction in the recent mini-recession, but that may be temporary. Attention to “the basics” may be back in style to some degree, especially in the aftermath of the Enron, et al., financial-manipulation scandals. Clearing out the unprofitable, attacking the legacies, tapping company-wide human potential, and maintaining continuity, however, require upgraded awareness and long-

term commitment. Those of us in the education community should bear a share of the blame for past failures. We can help by avoiding our own tendencies to praise companies that launch management programs rather than truly lean results that stick.

Reference

Richard J. Schonberger (2001). *Let's Fix It! Overcoming the Crisis in Manufacturing: How the World's Leading Manufacturers Were Seduced by Prosperity and Lost Their Way*. New York: Free Press/Simon & Schuster. See, especially, Chapters 1 and 2, and Appendix 1. ■

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Alpha Iota Delta

by Joseph L. Katz, Executive Director

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