

# Manufacturing Barometer™

## Operational effectiveness measures in manufacturing

In this special issue, PricewaterhouseCoopers asked a panel of senior executives from large US-based industrial manufacturers about operational effectiveness and cost-reduction programs in their organizations.

### Solid success with low-cost country outsourcing

Outsourcing manufacturing to low-cost countries remains a prevalent cost-reduction strategy among respondents. Fifty-three percent of US-based industrial manufacturers have either undertaken an outsourcing venture in the past two years (46%) or plan to do so within the next 12 months (7%). Forty-one percent reflect no involvement. Outsourcing's appeal is likely a product of its success. Seventy percent of survey participants rated their experiences successful (66%) or extremely successful (4%) and only 26% indicated mixed results. None rated its outsourcing efforts unsuccessful.

### Mixed results on Lean and Six Sigma

While outsourcing is a prevailing strategy for cost savings, Lean and Six Sigma are the focus for operational effectiveness. Seventy-three percent of US manufacturers actively deploy either Lean (44%) or Six Sigma (39%) to their organization's operations. Surprisingly, 22% utilize neither methodology. However, senior executives report there is room for improvement. While 49% are satisfied, stating their programs are effective (44%) or extremely effective (5%), an almost equal number (47%) had mixed reviews.

### Lean progresses to non-manufacturing functions

Meanwhile, of those who employ Lean concepts to their manufacturing operations, one-half are also extending it to other functional areas. Of these, 92% are extending its principles to their supply chain operations, 77% to their engineering function, 69% to their product development processes, and 54% to their customer service area.

Chart 1. Have you outsourced manufacturing to a low-cost country?



Chart 2. How would you rate your outsourcing effort?

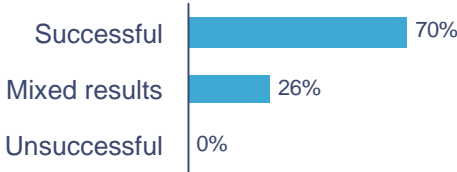


Chart 3. How would you rate your deployment of Lean or Six Sigma?

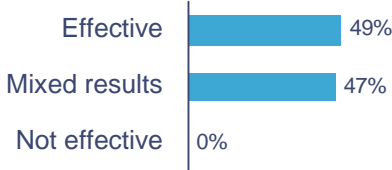
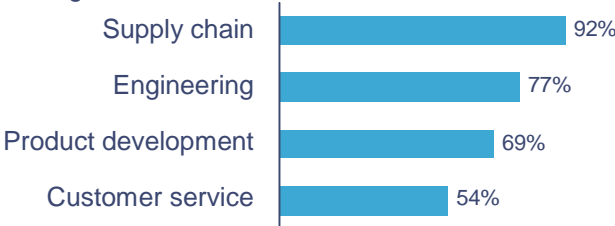


Chart 4. Where have you applied Lean outside of the manufacturing function?



# Operational Effectiveness

## Dissatisfaction with distribution and logistics

Senior executives expressed displeasure with their organizations' distribution network and logistics approach. Thirty-seven percent were satisfied, with 30% reporting their distribution and logistics were effective and 7% reporting theirs were extremely effective. However, a plurality (54%) felt there was room for improvement. Forty-nine percent had mixed reviews and 5% believed theirs were ineffective. In PwC's view, this lack of satisfaction is not surprising. There is a need for distribution networks and logistics strategies to evolve so they support new business models that include global supply chains and outsourced manufacturing.

## Supply chain and risk assessments on the rise

As a result of these perceived gaps, 58% have taken steps to resolve inadequacies within the past 12 months. Forty-eight percent conducted supply chain effectiveness assessments and 39% conducted risk assessments. However, only 27% cited extremely or very effective results, while 65% cited mixed results and 3 percent cited ineffective results. The interesting fact here is that 39% of respondents completed risk assessments, a large number if one considers that as recently as two years ago this practice was not typical.

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Chart 5. How effective is your company's distribution network and logistics approach?

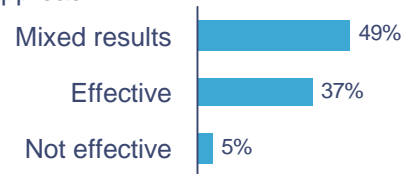
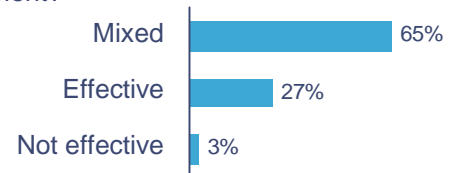


Chart 6. Has your organization undertaken a supply chain effectiveness or risk assessment in the last 12 months?



Chart 7. How effective was your supply chain or risk assessment?



## About the research

The Manufacturing Barometer is one in a series of quarterly business outlook surveys from PricewaterhouseCoopers. The survey provides a view on the 12-month outlook for revenue growth, new investments, new hiring plans, emerging business barriers and more. In addition to the business outlook, we hear from our panelists about special issues they face as the business climate changes. Results of the quarterly business outlook surveys and special issue surveys are available from [www.barometersurveys.com](http://www.barometersurveys.com). To receive our survey results by email, visit: [www.barometersurveys.com/mail](http://www.barometersurveys.com/mail).

## Methodology

PricewaterhouseCoopers' Manufacturing Barometer is a quarterly telephone survey conducted by the independent research firm BSI Global Research Inc. Our regular survey panel consists of senior executives from a geographically balanced sample of large companies in the United States. Ninety-five percent of the panelists hold titles such as president, CEO, CFO, VP of finance, treasurer, controller, internal audit director or other related title.

## Demographics

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Who	Fifty-nine senior executives of US-based, industrial manufacturing organizations
Interview dates	November 5, 2007 to January 15, 2008
Average number of employees	5,457
Average business unit revenues	\$2.54 billion
Average enterprise revenues	\$8.47 billion
Market capitalization	\$10.30 billion

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