

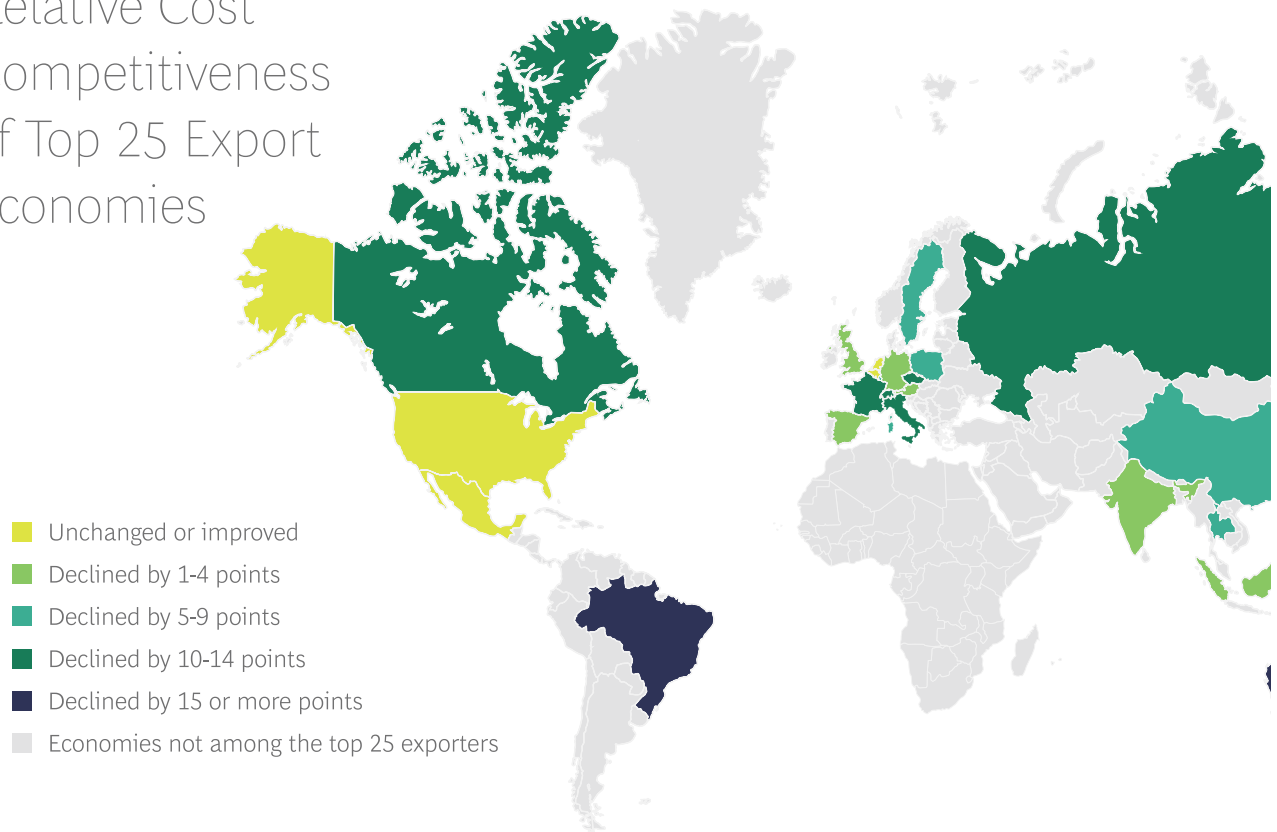
The Shifting Economics of Global Manufacturing

Manufacturing networks need to adapt to internal and external changes to remain competitive. Yet companies tend to shy away from network restructuring for a variety of reasons. It is complex and expensive, and there is often internal resistance. Building the right fact-base and understanding key drivers is necessary for success. For many organizations, the cost of being wrong can be significant. But restructuring, at times, is essential, as evidenced by BCG's [Global Manufacturing Cost-Competitive Index](#). This study looked at the top 25 export economies and revealed shifts in relative costs related to manufacturing wages, labor productivity, energy costs, and exchange rates.

- **Wages.** The range of hourly pay differentials for manufacturing workers remains enormous. But rapidly rising wages have significantly eroded the competitive advantage of a number of major exporters, including China. Although manufacturing wages rose in all 25 exporting countries from 2004 to 2014, the amount by which they rose varied as much as 18 points.
- **Labor Productivity.** Gains in output per manufacturing worker have varied widely over the last decade, and that can explain some of the biggest shifts in total manufacturing costs. Productivity rose by more than 50% in some economies, while shrinking in others. The result is that some economies with low wage rates are not competitive in terms of unit labor costs when wages are adjusted for productivity.
- **Energy Costs.** Prices for natural gas have fallen by as much as 35% since 2004 in North America; by contrast, they have risen by as much as 200% in some economies. The same trend is apparent for the industrial price of electricity, causing major changes in competitiveness in energy-dependent industries.
- **Exchange Rates.** Changing currency values can make an economy's exports more or less expensive in international markets. At the time of our research, currency shifts from 2004 to 2014 had ranged from a nearly 26% devaluation of the Indian rupee against the US dollar, to a 35% increase in the Chinese yuan. However, as a testament to the ongoing shifts in economics of manufacturing, recent significant appreciation of the dollar, most notably against the euro, continues to highlight the importance of this factor to manufacturing competitiveness.

These shifts should drive many companies to rethink decades-old assumptions about sourcing strategies and where to build future production capacity. Organizations need to be more vigilant in their pursuit of network decisions and where to produce, taking a holistic view of the cost structure while recognizing current and future demand. In doing so, they can determine how best to gain efficiencies and regain, or maintain, market competitiveness.

Relative Cost Competitiveness of Top 25 Export Economies



The relative cost competitiveness of the top 25 export economies has shifted dramatically.

How Can You Adapt?

Gone are the days where manufacturing regions are neatly sorted as high cost or low cost, and there is reason to expect continuing volatility as relative costs rise and fall. Manufacturers with global operations can adapt by:

- **Enhancing Productivity.** As wage gaps shrink, it's important to improve the value added by each worker. Assess your manufacturing footprint to look for ways to significantly improve productivity, whether through greater automation or other measures.
- **Accounting for the Full Costs.** Labor and energy costs continue to dominate where-to-manufacture decisions. But logistics, obstacles to efficiencies, and the hidden costs and risks in the global supply chain must also be fully evaluated.
- **Considering the Implications for the Broader Supply Chain.** It's not just the direct costs of where you manufacture. Components and materials must often be sourced from afar before local suppliers can ramp up. Consider the implications of network decisions from an end-to-end supply chain perspective to avoid surprises.
- **Promoting Better Business Environments.** Maintain open communications with relevant regulatory and policymakers in the countries in which you manufacture.

- **Reevaluating the Business Model.** A one-size-fits-all model rarely works in global factories. Adjustments, or segmentation in products and business models, may well be needed from site to site, country to country.

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