



Productivity's new frontier

In today's global economy, there appears to be a point at which good old-fashioned productivity and the concomitant reduction in unit labor costs provide little solace to developed countries plagued by unacceptable levels of unemployment. The endless pursuit of low-cost labor has put severe pressure on the USA to target high-technology, knowledge-intensive industry as a way to keep its workers productively and profitably employed. The plan to accomplish this, however, runs contrary to the profit-maximization strategy of today's global companies. The question arises of whether profits through higher productivity in new-age manufacturing will be able to generate sufficient employment to revitalize the American economy.

As the manufacturing sector in the USA went through the "hollowing-out" phase, labor and unions protested loudly that this would certainly lead to a significant loss of jobs and wage erosion. To a degree they were correct, and today manufacturing represents just 10% of the US economy. Unions have also lost leverage in wage negotiations, resulting in a decline in real wages for American workers. To many observers, however, traditional manufacturing jobs needed to give way to higher-technology jobs and value-added manufacturing. The technology and dot.com revolutions made this a realistic goal. Despite the technology bust in the early 1990s and the dot.com bust in the early 2000s, the USA remained confident that American productivity, innovation, and creativity would lead to a revitalized manufacturing sector, more jobs, and higher wages, as well as provide a buffer to cheaper labor overseas.

Fast forward to 2010. Despite respectable productivity growth rates (3.9% for the year ended in June 2010), the country has failed to emerge from its recessionary mentality and high unemployment. Productivity increases, according to many observers, were simply the result of fewer workers doing more. The average workweek is now the longest in four years. This is not atypical during a recovery from a recession, but rather than being temporary, many fear that producing more with an overburdened workforce is becoming the new norm. Faith in high-tech, value-added manufacturing remains,



but this more sophisticated, knowledge-based production has not grown sufficiently to absorb workers cut loose by traditional manufacturing. Statistics tell us that productivity is moving ahead nicely, but the anticipated general improvement in a nation's quality of life (which is why we think so highly of productivity) is lacking, especially for the unemployed. Roughly half of the 15 million unemployed have been without work for more than six months. About 20% of American workers are either unemployed, underemployed, or have stopped looking for work. A record 40.8 million receive government-issued food stamps.

For the optimist there is no shortage of good ideas being floated to take advantage of the country's strong productivity record to bring unemployment down to a historically acceptable level of 4% to 6%. It would not surprise many that the catchwords giving rise to this optimism are innovation and creativity, which in "Washingtonese" translates into "green manufacturing" and "clean energy." A recent poll of CEOs with global operations gave more weight to innovation than the cost of labor as the key to manufacturing growth. In addition to the social good provided by these industries, one would expect job expansion, higher wages, and increased profitability.

The road leading to this economic nirvana, however, faces challenges and stiff competition from like-minded countries. A creative, well-trained, knowledgeable workforce is a key ingredient to

the new economy. This has always been a strength of the USA, but now there is some self-doubt. In a comprehensive article on innovation in *Newsweek* (9 July 2010), the authors cite research showing that innovation and creativity are not a function of IQ but reside in our creativity genes. Tests for creativity (not IQ) can be surprisingly predictive as to whom among the young will shine as innovators as adults. The unsettling news is that American children have scored steadily worse on creativity measurements since 1990, which happens to coincide with the US preoccupation with standardized testing as a means to improve education.

To emerge from the economic doldrums, the USA is betting heavily on electric cars, advanced battery designs, and solar and wind power, among other clean energy industries, and has earmarked roughly US\$70 billion to support clean energy initiatives. One goal is to increase its global market share in high-performance batteries from 2% to 20% by 2012. Groundbreaking in Detroit, Michigan (an area hit hard by the recession), promises state-of-the-art factories employing 2,000 workers producing solar panels and lithium-ion batteries. Credits are being given to consumers who purchase energy-saving products, for example, a US\$7,500 tax credit for buying an electric car. The government has allocated US\$2.4 billion for the electric car industry.


While many Americans feel confident in the promise of green technology, the statistics are not particularly comforting. Of the roughly 85,000 people involved in producing lithium batteries, only about 1,000 are in the USA. Asian companies have approximately 98% of the lithium-ion market. Foxconn, a Chinese supplier of technical ware to multinational companies, employs more workers than the combined workforce of its more famous customers like Apple, Dell, Microsoft, and Intel. As a share of GDP, US public energy R&D lags behind Japan, the Republic of Korea, France, and PR China. R&D spending in the USA as a percentage of sales finds energy last behind the pharmaceutical, aerospace, electronic, and automotive sectors.

Still, optimism reigns as the USA positions itself to serve a world besieged by constant and dramat-

ic technological change. The change is not a step-by-step phenomenon, but a holistic movement in the way we conceptualize, solve problems, and relate to one another. Consider the following changes over the past decade. In 2000, 12 billion e-mail messages and 400,000 text messages were sent. In 2010 (so far), 247 billion e-mail messages and 4.5 billion text messages made their way in cyberspace. There were no iTunes downloads in 2000. There were 10 billion in 2010. Google searches numbered 100 million in 2000 and 2 billion in 2010. Today, American office workers check their e-mail 30 to 40 times an hour. In a single month, a US teenager will send or receive on average over 2,000 text messages. And to keep up with today's deluge of data, supercomputers can process over a quadrillion calculations per second.

According to recent neurological research, these dramatic shifts in how we do business, communicate, and spend our leisure time requires the brain to "rewire." Applying old paradigms for improving productivity in these whirlwind times of change will fall short. As "older" Americans wring their hands over what to do about engaging the 15 million unemployed in productive work, young minds are taking a novel approach toward business creation and practices.

One such entrepreneur, Jason Fried of 37signals, suggests in his book *Rework* (one

of Amazon's top 10 bestsellers) that we begin with a new mindset. The book's chapter headings illustrate his point: Welcome Obscurity, Underdo Your Competition, ASAP Is Poison, Meetings Are Toxic, Focus on What Won't Change, and Send People Home at 5. One may find similar advice from the just released book titled *Marketing Lessons from the Grateful Dead* (a highly profitable American rock group of the 1960s–1990s). Again business is advised to shut out conventional wisdom, be transparent, and be personal and loyal to its audience (customers). This may explain why the hottest new job in corporate America is chief of social media, a job category that was just emerging five years ago. The new Ford Explorer was not introduced at an auto show, but to "Explorer Friends" over Facebook. If your Facebook and Twitter resumes are strong, you may want to apply; there are more social media positions to be filled than qualified applicants. It's the New Economy. It's productivity's new frontier. 

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