

## Governing Energy

### Costs and Productivity

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Cost management has been a major requirement for energy firms weathering the current down cycle. What is not discussed as frequently is the requirement to increase productivity as well.

In 2013, Jeffrey R. Immelt, the Chairman and CEO of GE identified four new drivers of productivity:

- How shale is changing the energy debate and the balance of energy power
- Industrial Internet
- Speed and simplification
- Manufacturing excellence<sup>i</sup>

At CERAWeek 2016 (attended by the author), he reiterated these points and added that both costs and productivity together were effectively a two key scenario. Readers will note that we have addressed the Two Key Solution twice before in this blog.<sup>ii</sup>

In that context, the Two Key Scenario is “an example of systemically removed economic actors.”<sup>iii</sup> The model suggests that two separate but equal economic forces are required to work in unison to effect the desired outcome.

According to the United States Department of Labor, Bureau of Labor Statistics (BLS), the annual productivity change in the nonfarm business sector was only 1.2 percent during the period 2007-2015.<sup>iv</sup> However, some argue that this number does not truly reflect productivity enhancements from Information Technology.

Analogous to the current economic environment in the upstream energy sector, some Finnish economists believe the Internet of Things (IoT) can increase productivity by 1.4 percent despite a declining population.<sup>v</sup> This is almost a 120 percent improvement in the BLS productivity growth rate!

As early as late 2014 and throughout much of 2015, this blog addressed the likelihood of a prolonged low commodity price point perhaps enabled by technologies, both production and information technology.<sup>vi</sup> This scenario appears to remained sustained by market forces.

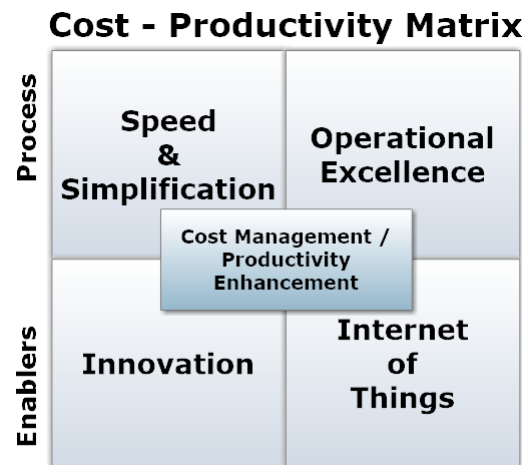
Similar to Taoist concept of Yin Yang, the two halves of Cost Management and Productivity Increase complete the philosophical wholeness necessary to **sustain** today’s organization.<sup>vii</sup> Realizing this management philosophy or model is the real challenge.



If we integrate Cost Management with the four Productivity Drivers, we can visualize the following Cost—Productivity Matrix. Moreover, information technology has long been identified a business *process change agent*.

Likewise, new sources of production such as shale and the extraction technologies developed are the second source of enablement. Finally, innovation is the fuel that energizes even very mature organizations.

New revenue sources are critical to successful cost management and productivity growth. For example, 3M is long known for their innovation and new product development.<sup>viii</sup>



Built on this foundation, management must develop **agile** and **resilient** processes. Organizations are often complex and slow to move; however, behavioral tools exist to simplify decision making processes without losing the fidelity or latency of the economic drivers.

In *The Second Machine Age*, the authors make the case that digital technologies are transforming entire industry (in fact all) sectors.<sup>ix</sup> This rapid explosion of technology will dramatically change the landscape just as the Steam Engine did for the Industrial Revolution. How individuals and organizations adjust or even lead in this environment will determine winners and losers in the economic game.

Disruptive and structural change is happening to the energy industry. To meet these challenges, this broad yet actionable business model that will drive the changes in productivity and cost management necessary in the current economic environment.

Helping to prepare to drive industry and organizational change management has been the hallmark of this blog series. The industry is at an inflection point and perhaps more importantly, the *slope of the change curve* is now steeper.

Individuals and by extension organizations must take dramatic steps to assure economic survival. Strong Cost Management and Productivity Enhancement strategies and associated tactics are demanded. Importantly, behavioral and technical tools are robust, available and inexpensive.

## What is your organization's Yin Yang?

### About the Author

Dr. [Scott M. Shemwell](#) has over 30 years technical and executive management experience primarily in the energy sector. He is the author of six books and has written extensively about the field of Operations Excellence. Shemwell is the Managing Director of The Rapid Response Institute, a firm that focuses on providing its customers with solutions enabling operations excellence and regulatory compliance management. He has studied cultural interactions for more than 30 years—his dissertation; *Cross Cultural Negotiations Between Japanese and American Businessmen: A Systems Analysis (Exploratory Study)* is an early peer reviewed manuscript addressing the systemic structure of social relationships.

### End Notes

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<sup>i</sup> <http://www.gereports.com/post/93426062058/jeffrey-r-immelt-riding-the-productivity-waves-to-growth/>

<sup>ii</sup> Shemwell, Scott M. (2015, April 1). The Two Key Solution. *Governing Energy*. PennEnergy.

<sup>iii</sup> \_\_\_\_\_ (2015, May 18). Bounding the Boundless. *Governing Energy*. PennEnergy.

<sup>iv</sup> [http://www.bls.gov/lpc/special\\_requests/nfbbardata.txt](http://www.bls.gov/lpc/special_requests/nfbbardata.txt)

<sup>v</sup> <http://www.slideshare.net/fullscreen/AlexandriaKrause/the-internet-of-things-productivity-and-employment/7>

<sup>vi</sup> Shemwell, Scott M. (2016). *Governing Energy: Organizational Governance—Issues of the 21st Century* 2014-2015 Edition. Houston: RRI Publications.

<sup>vii</sup> <http://personaltao.com/teachings/questions/what-is-yin-yang/>

<sup>viii</sup> <http://www.bloomberg.com/bw/stories/2006-05-09/3ms-seven-pillars-of-innovation>

<sup>ix</sup> <http://secondmachineage.com/about-2ma/>