



Integrating the Lean Enterprise

- Lean as a Strategy -

Cory R. A. Hallam

October 30, 2002



What is Strategy?

- A strategy is a plan, method, or series of actions designed to achieve a specific goal or effect (Wordsmyth, 2001).



Contextual Description of Strategy (Mintzberg, 1987)

- Military strategy is concerned with drafting the plan of war...shaping the individual campaigns within these plans, and deciding on the individual engagements with the enemy.
- Game Theory strategy involves a complete plan; a plan which specifies what choices (the player) will make in every possible situation.
- Management strategy is a unified, comprehensive, and integrated plan designed to ensure that the basic objectives of the enterprise are achieved.



Strategy and Business (Oster, 1999)

- From a business perspective, strategy begins with the desire of an organization to outperform the market.
- A strategy, in this context, is defined as a set of concrete plans to help the organization accomplish this goal.
- Fundamentally, a strategy is a commitment to undertake one set of actions rather than another, and this commitment necessarily describes the allocation of resources



Strategy and Business (Porter, 1996)

- If there were one ideal position, there would be no need for strategy.
- Strategy is based on making trade-offs in a competitive environment.
- The essence of strategy is thus choosing what to do and what not to do while creating fit among a company's activities.

Two Primary Reasons for a Strategy

- First, if what you do is not unique in some respect and everyone can do it, then you cannot make money at it (Oster, 1999, pp.11).
- Second, no advantage is permanently sustainable in a competitive market thus satisfaction with the status quo is a recipe for failure as competitors will eventually find a means to capture your market share (Hunter, 2000a).

Strategy and Competitive Advantage

- Empirical study of 6771 firms in 40 industries over 25 years was conducted to test whether businesses do sustain competitive advantage, as measured by sustained superior economic performance over time (Wiggins and Ruefli, 2002).
 - Only a small number of firms exhibit superior economic performance.
 - Of those that do exhibit superior economic performance, few sustain it for an extended time period (10 years), while an even rarer few sustain it for multiple decades.
 - Further, the group that makes up the superior performers experiences little composition stability (i.e. the performers change over time).



Strategy and Competitive Advantage

- There are numerous, if not an infinite assortment of strategies available for firms to attempt to gain sustainable competitive advantage.
- The dynamic nature of internal and external factors inherently necessitates the continual evolution and adaptation of strategies to maintain competitive advantage.
- Firms will most likely experience a loss of competitive advantage after a brief period of having a competitive advantage.



Strategy as it Applies to Levels of the Organization

- Hunter summarizes three types of strategy, namely Corporate, Business, and Functional (Hunter, 2000b), but is this the right wording?
- Porter argues that market competition only occurs at the business level (Porter, 1987).



Defining Strategy at Organization Levels (Hunter 2000b, modified by Hallam)

- Corporate Strategy - how to link businesses for greater performance
- Business Strategy - what market to serve and how to serve the market
- Operational strategy - how to structure and organize activities within the organization to achieve business objectives
- Functional strategy - how to structure and execute functional activities to support business operations

Alternate Views on Strategy

- While Hunter's definitions of types of strategy are characterized by what level of the organization they affect (Hunter, 2000b), Mintzberg characterizes strategies based on their execution characteristics (Mintzberg, 1987).
- In the latter case Mintzberg identifies five primary classes of strategy, namely *Plan*, *Ploy*, *Pattern*, *Position*, and *Perspective*.

Ten Schools of Thought on Strategy Formulation (Mintzberg and Lampell, 1999)

- *Design, A Process of Conception*
- *Planning, A formal Process*
- *Positioning, An Analytical Process (Porter's 5 forces).*
- *Entrepreneurial, A visionary Process*
- *Cognitive, A mental Process*
- *Learning, An Emergent Process*
- *Power, A Process of Negotiation*
- *Cultural, A Social Process*
- *Environmental, A Reactive Process*
- *Configuration, A Process of Transformation*



Thinking of Lean Strategically

- Historically, Lean shown to improve the value delivery process in manufacturing by eliminating waste and improving value flow (Ohno, 1988; Womack et al 1990).
- This is in essence a process improvement effort aimed at improving efficiency - better systemic efficiency versus local operation efficiency (Cochran et al, 2000).
- Porter calls this Operational Effectiveness - Performing similar activities better than a rival (Porter, 1996).

Operational Effectiveness

- "Few companies have competed successfully on the basis of operational effectiveness over an extended period, and staying ahead of rivals gets harder every day. The most obvious reason for that is the rapid diffusion of best practices". OE is at the heart of Japanese techniques such as TQM, (add others) which aim to improve activities that rivals also perform. There is potential for rivals to easily copy OE efforts. OE efforts relate to industry "best practices" and result in the adoption of common techniques for activities across the industry, resulting in homogenization and competitive attrition. (Porter, 1996)

Operational Effectiveness and Knowledge Diffusion?

- Diffusion of knowledge argument has two factors
 - ***Transfer of knowledge***: accept that it happens easily with no possibility of extracting economic rents (Nelson, 1959; Arrow, 1962)
 - ***Exploitation of knowledge***: argue that it does not happen easily and is the reason OE can create competitive advantage



Knowledge Exploitation - the Source of Competitive Advantage

- Two reasons
 - Absorptive Capacity - Need to have invested understanding in knowledge in order to exploit it; increased experience with a body of knowledge permits a greater ability to utilize new additions to the body of knowledge (Cohen and Levinthal, 1990)
 - Organizational Behavior Change - Lean is focused on changing the types of interactions, cues, incentives, and activities that people undertake in an organization; Organizational behavior change is hard, especially in mature companies (Robbins, 1998; Schein, 1999).



Organizational Change Ain't Easy

- People do not cling so tightly to culture in a mature organization as they do in a growing one, but the mature company is harder to change because the culture has become more embedded in its structures and routines (Schein, 1999, pp.171).

Resistance to Change

- One of the most documented findings from studies of individual and organizational behavior is that organizations and their members resist change (Robbins, 1998, pp.632)
 - Individual resistance: Habit, Security, Economic Factors, Fear of the Unknown, Selective Information Processing (Robbins, 1998, pp.633-34)
 - Organizational Resistance: Structural inertia, Limited focus of change, group inertia, threat to expertise, threat to established power relationships, threat to established resource allocation (Robbins, 1998, pp.634-636)



Evidence that Lean is Hard to Adopt and Implement

- The soft stuff is the hard stuff (Cool, 2001)
- Time to affect change and see returns on the effort is on the order of 3-7 years (Koenigsaecker, 2001; Cantrell, 1999; Gass, 2002; Shah and Davidz, 2002)
- Maintaining the Lean environment is a continuous battle until it becomes the *modus operandi* of the organization (Koenigsaecker, 2001, Womack and Jones, 1996)

Lean Enterprise as Strategy

- Spans Corporate, Operational and Functional strategies to enable Business Strategy
- Process improvement focus based on operational philosophy, optimization at varying levels
 - Utterback says process innovation is a means to compete, especially in an industry's specific phase (Utterback, 1994).
 - Management must be enterprise-focused with shared logic amongst value chain partners to create greater customer value delivery via the synchronized operations of legally separate companies (Womack and Jones, 1996).
 - Process management is a strategic weapon to achieve superior competitive performance by managing HOW value is delivered to customers, not by who is on the functional organizational chart (Dimencescu et al, 1997).



Competitive Advantage from Lean Strategy

- A company can only outperform its rivals if it can establish a difference that it can preserve. It must create greater value for customers, or create equivalent value at lower cost, or both. Superior profitability arises from the ability to charge higher unit prices for higher value products given a set cost, or sell equivalent value products for the same price even though they are being produced with lower unit costs (Porter, 1996).
- Lean can do this.



The Business Result

- Increased Customer Satisfaction
- Increased Corporate Satisfaction
 - Available Strategic Resources
 - Agility
 - Increased Market Share
 - Strategic Growth Increased Profits
- Increased Shareholder Value



References

- Arrow, K. J. (1962). Economic Welfare and the Allocation of Resources for Invention. The Rate and Direction of Inventive Activity: Economic and Social Factors. R. R. Nelson. Princeton, NJ, National Bureau of Economic Research, Princeton University Press: 609-619
- Cochran, D. S., Y.-S. Kim, et al. (2000). The Alignment of Performance Measurement with the Manufacturing System Design. First International Conference on Axiomatic Design, Massachusetts Institute of Technology.
- Cohen, W. M. and D. A. Levinthal (1990). "Absorptive Capacity: A New Perspective on Learning and Innovation." *Administrative Science Quarterly* 35: 128-152.
- Cool, C. (2001). Journey to A Lean Enterprise, Northrop Grumman Integrated Systems.
- Cooper, R. (1995). *When Lean Enterprises Collide*. Boston, MA, Harvard Business School Press.
- Dimancescu, D., P. Hines, et al. (1997). *The Lean Enterprise: Designing and Managing Strategic Processes for Customer Winning Performance*, American Management Association.
- Hamel, G. (2000). *Leading the Revolution*. Boston, MA, Harvard Business School Press.
- Henderson, B. A. and J. L. Larco (2000). *Lean Transformation: How to Change Your Business into a Lean Enterprise*, The Oaklea Press.
- Hunter, S. (2000a). 15.370 Strategic Management: Summary Thoughts (based on Notes from Prof. M. Cusumano). Cambridge, MA, Massachusetts Institute of Technology.
- Hunter, S. (2000b). 15.370 Some thoughts about "What is Strategy". Cambridge, MA, Massachusetts Institute of Technology.
- Koenigsaecker, G. (2001). Senior Management's Role in Leading Lean Change: Creating Change Dynamics and Organizational Alignment. LEI/U of Michigan 7th Annual Lean Manufacturing Conference, Dearborn, Lean Enterprise Institute.
- Mintzberg, H. (1987). "Strategy Concept I: Five P's for Strategy." *California Management Review* 30(1): 11-24.
- Mintzberg, H. and J. Lampel (1999). "Reflecting on Strategy Process." *Sloan Management Review*(Spring): 21-30.



References

- Murman, E., T. Allen, et al. (2002). *Lean Enterprise Value: Insights from MIT's Lean Aerospace Initiative*, Palgrave Publishers Ltd.
- Murman, E., M. Walton, et al. (2000). *Challenges in the Better, Faster, Cheaper Era of Aeronautical Design, Engineering, and Manufacturing*. Cambridge, Massachusetts Institute of Technology Lean Aerospace Initiative.
- Nelson, R. R. (1959). "The Simple Economics of Basic Scientific Research." Journal of Political Economy **67**(2): 297-306
- Ohno, T. (1988). *Toyota Production System: Beyond Large Scale Production*, Productivity Press.
- Ohno, T. and S. Mito (1988). *Just-In-Time for Today and Tomorrow*, Productivity Press.
- Oster, S. M. (1999). *Modern Competitive Analysis*, Oxford University Press.
- Porter, M. E. (1979). "How Competitive Forces Shape Strategy." *Harvard Business Review* March-April.
- Porter, M. E. (1987). "From Competitive Advantage to Corporate Strategy." *Harvard Business Review* May-June 1987.
- Porter, M. E. (1996). *What is Strategy? On Competition*. Boston, Harvard Business Review.
- Porter, M. E. (1998). *On Competition*, Harvard Business School Press.
- Robbins, S. P. (1998). *Organizational Behavior: Concepts, Controversies, and Applications*, Prentice-Hall International.
- Rouse, W. B. (2001). *Essential Challenges of Strategic Management*, John Wiley and Sons.
- Schein, E. H. (1999). *The Corporate Culture Survival Guide: Sense and Nonsense About corporate Change*. San Francisco, Jossey-Bass Publishers.
- Slywotzky, A. J. (1996). *Value Migration: How to Think Several Moves Ahead of the Competition*, Harvard Business School Press.



References

- Utterback, J. M. (1994). *Mastering the Dynamics of Innovation: How Companies Can Seize Opportunities in the Face of Technological Change*. Boston, Harvard Business School Press.
- Wiggins, R. R. and T. W. Ruefli (2002). "Sustained Competitive Advantage: Temporal Dynamics and the Incidence and Persistence of Superior Economic Performance." *Organization Science* 13(1): 82-105.
- Womack, J. (2001). *Lean Thinking for the Extended Value Stream*. LEI/U of Michigan 7th Annual Lean Manufacturing Conference, Dearborn, Lean Enterprise Institute.
- Womack, J. P. and D. T. Jones (1994). "From Lean Production to the Lean Enterprise." *Harvard Business Review*(March-April): 93-103.
- Womack, J. P. and D. T. Jones (1996). *Lean Thinking: Banish Waste and Create Value in Your Corporation*, Simon and Schuster.
- Womack, J. P., D. T. Jones, et al. (1990). *The Machine That Changed the World: The Story of Lean Production*, Harper Perennial.
- Wordsmyth (2001). *Strategy Definition*, The Wordsmyth Educational Dictionary-Thesaurus (Online).