A Dynamic Capabilities perspective on Building firm-level Competitiveness

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I. Concepts

II. Further examples and evidence

III. Implications for (strategic) Human Resource Management
NEW FORCES IN A “SEMI-GLOBALIZED” WORLD

Decreased cost & increased speed of information flow

Dispersion in the sources of innovation

Traditional sources of competitive advantage stripped away

Increased ease of organizing / accessing complementary assets and big data sets

Natural time & distance protections eroded; markets more open

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“Innovation is about much more than new products. It is about reinventing business processes and building entirely new markets that meet untapped customer needs.”

- Samuel J. Palmisano, CEO of IBM (Business Week, 4/24/2006, p. 64)

“We must begin the important work of developing a framework capable of analyzing the growth of an economy increasingly dominated by conceptual products.”

- Alan Greenspan, Former US Federal Reserve Chairman
WHAT IS DURABLE FIRM-LEVEL COMPETITIVE ADVANTAGE?

- The ability of a firm to generate “supernormal” profits over the long run.
  - Most advantages are fleeting
  - A few firms change and thrive over the long haul: GE, IBM, 3M, Apple...
- Thesis: dynamic capabilities anchor competitive advantage
THE HARD WORK IN A GLOBALIZED, NETWORKED ECONOMY IS COGNITIVE & INTEGRATIVE

- Knowledge is dispersed
- To be made useful, it must be
  - Located
  - Integrated
- Knowledge integration takes place
  - Within & Across organizations & business units
  - Across disciplines
  - Across cultures

→ Integrative skills are needed throughout the firm but especially in the top management team
WHY ARE KNOWLEDGE ASSETS AND CAPABILITIES STRATEGIC?

- Hard to build and difficult to manage well (markets for know-how are incomplete)
- Legal barriers to imitation
  - Strengthened in some countries and industries, e.g., pharmaceuticals, electronics
  - Undermined in others, e.g., digital music and video
- Harder to buy than other assets
- Foundation for innovation and diversification
Intangible assets contribute the main class of what strategists call VRIN assets

V = Valuable
R = Rare
I = Inimitable
N = Non-substitutable
THE MARKETS FOR INTANGIBLE ASSETS DO NOT FUNCTION LIKE COMMODITY MARKETS

- The market for know-how has characteristics that complicate exchange
  - Property rights poorly defined
  - Utility unclear
  - Few buyers and sellers
  - High transaction costs

- These complications create imperfections which impair imitation, but potentially support quasi rent generation (“strategic value”)

- Strategic value flows because intangibles can undergird semi-permanent “points of difference” between a company and its competitors
THE FIRM ECOSYSTEMS, NOT INDUSTRIES, SHOULD FRAME ANALYSIS OF COMPETITIVE ADVANTAGE

- A business ecosystem contains a number of firms and other institutions that work together to create and sustain new products, and markets

- Co-evolution of the system depends on the technological leadership of one or two firms that provide a platform

- Co-creation and co-evolution are two key characteristics of business ecosystems

- A platform exists when the elements of the ecosystem depend upon common standards

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THE BUILDING AND ORCHESTRATION OF INTANGIBLE ASSETS YIELDS CAPABILITIES
FROM ASSET ACCUMULATION TO DYNAMIC CAPABILITIES: A PARADIGM SHIFT

Old approach

- “Balance sheet” view of assets
- Little emphasis on flexibility as the key to success
- Resources, not capabilities, tend to matter

New approach

- Recognition of “soft” assets
- Heavy emphasis on orchestrating assets for deployment and redeployment

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“There seems to be something wrong with our bloody ships today.”

Admiral John Jellicoe

“The real deficiency, however, was the loss of [Vice Admiral Horatio Lord] Nelson’s touch. It was not the bloody ships that were principally at fault. It was the inadequate doctrine of command and control.”

ORDINARY CAPABILITIES

- Operation, administration and governance
- Routines / standard operating procedures are key to ordinary capabilities
- Ordinary capabilities reflect technical efficiency
- “Best practices” are strong ordinary capabilities
- Imitation by rivals is enabled by
  - More information in the public domain
  - Better business school training
  - Management consultants
DYNAMIC CAPABILITIES

“The ability of an organization and its management to integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece et al., 1997: 516)

High-order capabilities an be thought of as falling in three categories:

**Sensing**
Identification of opportunities & threats at home and abroad

**Seizing**
Mobilization of resources to deliver value and shape markets

**Transforming**
Continuous renewal and periodic major strategic shifts
DYNAMIC VS. ORDINARY CAPABILITIES

**Ordinary Capabilities**
- Technical efficiency in basic business functions
- Operational, administrative, and governance
- Relatively easy; imitable

**Dynamic Capabilities**
- Strategic “fit” over the long run (evolutionary fitness)
- Sensing, seizing, shaping and transforming
- Difficult; inimitable

**Purpose**

**Tripartite schemes**

**Imitability**

Doing things “right”

Doing the “right” things
ORDINARY CAPABILITIES MUST BE DISTINGUISHED FROM DYNAMIC CAPABILITIES; THE LATTER HAVE STRATEGIC SIGNIFICANCE, THE FORMER DO NOT
Ordinary capabilities are widely diffused:

- The operations portion of the automobile business has been thoroughly optimized over many decades, doesn’t vary much from one automobile company to another, and can be managed with a focus on repetitive process. It requires little in the way of creativity, vision or imagination. Almost all car companies do this very well, and there is little or no competitive advantage to be gained by “trying even harder” in procurement, manufacturing or wholesale.

Competitive advantage requires dynamic capabilities:

- Where the real work of making a car company successful suddenly turns complex, and where the winners are separated from the losers, is in the long-cycle product development process, where short-term day-to-day metrics and the tabulation of results are meaningless.

*Bob Lutz, former vice chairman at General Motors*

*Wall Street Journal, June 11, 2011*
“"We had a culture in our forces, of excellence. It was how good can I be at my task? How good can I be at flying an airplane, dropping bombs, locating an enemy target? But that’s not as important as how well those pieces mesh together.”

“The real art is [in] cooperating with civilian agencies, it’s cooperating with conventional forces, it’s tying the pieces together. That’s the art of war, and that’s the hard part.”

-Quotes from General Stanley McChrystal, Foreign Affairs (March/April 2013)
THE DYNAMIC CAPABILITIES FRAMEWORK

- A multidisciplinary framework that draws on numerous fields, including:
  - Business model design
  - Decision analysis
  - Economic analysis
  - Entrepreneurship
  - Finance
  - Knowledge management
  - Leadership
  - Marketing
  - Operations management
  - Organizational Behavior
“A good strategy is a ‘specific’ and ‘coherent’ response to—and approach for overcoming—the obstacles to progress.”

“A bad strategy is a list of blue sky goals or a fluff-and-buzzword infected ‘vision’ everybody is supposed to share.”

- Strategy Kernel (Rumelt, 2009)
"You have to be fast on your feet and adaptive or else a strategy is useless."

RUNNING A BUSINESS IS LIKE A WAR AGAINST INSURGENTS

The “enemy” is:

- Scattered widely
- Highly committed
- Well “armed”

How do you win a war? (General McChrystal)

- “Raid need to be married to a strategy.”
- “Find information, pull it in, empower, use.”
- “Old model: push information up to the top level where all major discussions are made.”
- “New model: the information is shared, and discussions are decentralized.”
“TUNING” AND “PIVOTS”

- Ordinary capabilities involve “tuning the engine”… a process of optimization.

- Dynamic capabilities often involves a change in strategy or in business models. This allows “pivoting”
THE CENTRALITY OF (DYNAMIC) “CAPABILITIES” AND OF LEARNING

Organizational and technological capabilities – lie at the core of corporate success, and learning is at the core of capability building

- Strong ordinary capabilities (operations, administration, governance) are necessary but not sufficient for long-run (financial) success

- Strong dynamic capabilities are both necessary and sufficient for long-run (financial) success
Ordinary capabilities are not usually enough to yield sustained competitive advantage. **Dynamic capabilities coupled with a validated strategy enable an organization to change in a manner that supports evolutionary fitness and sustainable advantage.**
THE UNDERPINNINGS OF CAPABILITIES

- Capabilities are embedded in:
  - Specialized equipment and facilities
  - Processes and routines (collective learning)
  - Skilled personnel, including experts and top managers

- Dynamic capabilities are less routinized than ordinary capabilities
  - Managers must be able to learn, to think creatively and act entrepreneurially
  - High-velocity business environments more likely to demand one-time managerial decisions
THE DEVELOPMENT OF DYNAMIC CAPABILITIES REQUIRES LEARNING

“If the fundamental goal of entrepreneurship is to engage in organization building under conditions of extreme uncertainty, its most vital function is learning. We must learn the truth about which elements of our strategy are working to realize our vision and which are just crazy. We must learn what customers want, not what they say they want or what we think they should want. We must discover whether we are on a path that will lead to growing a sustainable business.”

Eric Ries, The Lean Startup, 2011, p. 38
PROCESSES AND ROUTINES UNDERGIRD ORGANIZATIONAL KNOWLEDGE

- Routine: a repeated action sequence that accomplishes a goal of the company
  - Tendency toward stability/inertia
  - Can adapt under appropriate leadership
  - Examples: new product development, quality control

- “Signature processes” (Gratton & Ghoshal, 2005)
  - Arise from a company’s heritage
  - Are context-specific

  ➔ Signature processes are hard (but not impossible) for rivals to imitate
  Example: Toyota Production System
ENTREPRENEURIAL LEADERSHIP IS A KEY ELEMENT OF DYNAMIC CAPABILITIES

- Entrepreneurial managers
  - excel at interpretation and synthesis
  - foster a culture of learning to build capabilities
  - orchestrate (select, integrate, modify) resources
  - devise business models
  - develop analyses that support strategy formulation
  - adjust strategy implementation
  - keep the organization nimble
SENSING. SEIZING & TRANSFORMING ARE THE PRACTICAL PILLARS OF DYNAMIC CAPABILITIES

Potential Strategic Impacts
- Opportunity Recognition & Creation
  - Sensing
    - Perception and Attention
- Strategic Investment & Business Model Design
  - Seizing
    - Problem Solving and Reasoning
- Asset Alignment & Overcoming Change Resistance
  - Transforming
    - Communication and Social Cognition

Dynamic Managerial Capabilities
- Sample Managerial Cognitive Capabilities
  - Firm Performance

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CAPABILITIES MUST BE BUILT; THEY CANNOT BE BOUGHT

“Apple remains ahead of its rivals in the ability to innovate and “create magic” despite tougher competition in key sectors like smartphones and tablets… Apple still has strong growth opportunities because of its ability to work simultaneously on hardware, software and services… Apple has the ability to innovate in all three of these spheres and create magic… This isn’t something you can just write a check for. This is something you build over decades.”

—Tim Cook, Apple CEO (Taipei Times, February 2013)
DETERMINANTS OF FIRM-LEVEL PERFORMANCE

Level of Profits

Strategy

Dynamic Capabilities

Ordinary Capabilities (Operations, Administration, Governance)

Generic Resources

Human capital

Distinct Resources

Political, economic, social institutions

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FURTHER EXAMPLES AND EVIDENCE
### Agility Drives Growth and Innovation

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<th>Capital Spending</th>
<th>Marketing &amp; Sales</th>
<th>Product Development</th>
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<td><strong>Agility</strong></td>
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<td><strong>Incentives</strong></td>
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<td><strong>Decision Processes</strong></td>
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<td><strong>Risk Appetite</strong></td>
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++ = Strong Effect; + = Weak Effect; Source: McKinsey Investment Processes Survey
Illustrating the Coupling of Strategy & Dynamic Capabilities: Warfare

“You have to be fast on your feet and adaptive or else a strategy is useless.”

*Charles de Gaulle, French general and statesman*

“Strategy without tactics is the slowest route to victory, tactics without strategy is the noise before defeat.”

*Sun Tzu, Ancient Chinese military strategist*
DYNAMIC CAPABILITIES DO NOT DEPEND ONLY ON PROCESS AND ROUTINE

An example from Apple:
“There is no system. That doesn't mean we don't have process… Process makes you more efficient. But innovation comes from people meeting up in the hallways... It's ad hoc meetings of six people called by someone who thinks he has figured out the coolest new thing ever and who wants to know what other people think of his idea. And it comes from saying no to 1,000 things to make sure we don't get on the wrong track or try to do too much.”

- Steve Jobs

→ Leadership counts
BOEING DREAMLINER: A CONTRACTING PROBLEM OR A CAPABILITIES DEFICIT?

**Economic Theory: Control matters**
“Because it had less control over its supply line, Boeing couldn’t adapt as quickly and flexibly to the changes and problems that invariably arose within a project as complex as the Dreamliner, Boeing has taken much of the Dreamliner’s production back in-house.”

- S.Tadelis, WSJ, October 2009

**Capabilities Theory: Know-how matters**
- The Dreamliner debacle was due to the inability of suppliers to master the technology.
- Boeing had not built adequate in-house oversight capabilities
Research finds a strong influence of top management on firm response to changing environments (Rosenbloom, 2000; Tripsas and Gavetti, 2000)

In US firms, the share of return variance attributable to the CEO grew from 10% circa 1970 to 20% or more circa 2000 (Quigley and Hambrick, SMJ forthcoming)
Yum! Brands

Yum! Restaurant International Division

1. Clear Growth Strategy

2. Strong Organizational Capability

3. Significant, Healthy, Growing Franchise Businesses

4. High Return Expansion

Source: Yum! Brands
IMPLICATIONS FOR (STRATEGIC) HUMAN RESOURCE MANAGEMENT
Developing T-Shaped Skills for Current and Future Economy

The skills needed for innovations to solve complex problems that leverage technological advances to create a Smarter Planet are in short supply.

- “T-shaped” skills with **depth** in subject skills and **breadth** in workforce skills:
  - Practical Experience
  - Communications
  - Teaming
  - Management
  - Innovation
  - Entrepreneurship
  - People Management
  - Strategic Planning
  - Problem solving via informatics
  - Problem solving via social networks
  - Flexible, adaptive and entrepreneurial
  - Produced on demand

Business, Technology, and People Skills

Source: “Hype vs. Reality: A.I./Robotics and impact on employability” Roundtable, IBM VP Susan Puglia
Being a renaissance man/woman was relatively easy during the renaissance
  - World stock of knowledge was limited and hence easy to master
  - Being both broad and deep was easy

Being a renaissance intellect is harder today because the world stock of knowledge is greater in both breadth and depth

‘Renaissance wisdom’ is hard to find in the top management team; but it needs to be there
But in today's business world, the manager must be both an intellect (reflective) and a do-er (entrepreneurial/manager).

"Reflecting (sensing) and doing (seizing) and then adapting (transforming) are each challenging; simultaneous performance is necessary, but rare."
T-SHAPED PEOPLE REQUIRED FOR DYNAMIC CAPABILITIES ARE IN SHORT SUPPLY

- Disciplines use distinct and conflicting assumptions and lexicons
- Interdisciplinary work is essential but
  - It is harder to assess
  - It is seldom rewarded in academia
- Faculty find it hard to teach cross-discipline courses because they don’t know how different world-views fit together, leaving managers to learn on the job

→ Disciplinary silos are self-perpetuating
EXPERT TALENT

- **Literati**
  - Fields: arts and letters, economics, business, or law
  - Strength: the synthesis and communication of ideas

- **Numerati**
  - Fields: engineering, mathematics, statistics, physical and life sciences, computer science, or accounting and finance
  - Strength: integrative analysis, especially data-based

- Their skills are in demand, putting a premium on retention efforts
TYPES OF EXPERTS

- I-shaped: Deep knowledge in a single discipline
- A-shaped (or Π-shaped): Deep knowledge in two disciplines
- T-shaped: Deep knowledge in one discipline with a basic understanding of a number of others
  - Understands systemic impact of disciplinary knowledge
  - Understands customer needs
- Remember Bell Labs and their “Systems Engineers”
MANAGING EXPERT TALENT

- Experts expect/require more autonomy than ordinary employees to be creative and productive
- “Light-touch” management supports and guides the work of experts without rigidly controlling it.
- Shallow hierarchies are consistent with strong dynamic capabilities, and are particularly appropriate for experts
- Integration/collaboration amongst experts is required to give “T” (top) performance
IN PARTICULAR, INNOVATION REQUIRES COLLABORATION

- Interaction among people from diverse disciplines or functions is required to solve complex problems
- Collaborative teams can include members from outside the company
- Team goals should be tied to strategy but not rigidly constrained
- Teams should be dissolved when task complete or a dead-end is reached
- Over-use of teams can slow decision making
MANAGING COLLABORATION

- Team leader can foster interaction with joint task-relevant learning activities
- Team leader must encourage consideration of minority opinions
  - Task-related disagreement is healthy, personal disagreements are poisonous
- Team leader must permit experimentation and search, then support promising paths and close down the less promising ones
TEAM LEADERS ORCHESTRATE KNOWLEDGE

- **T-shaped manager** (Hansen and von Oetinger, 2001)
  - Excels at communicating and integrating across disciplines
  - Knows about resources throughout the organization
  - Develops because incentives and formal interactions have been put in place

- **Ideal leader is a “heavyweight”:** credible to the team, powerful in the organization (Clark, Chew, & Fujimoto, 1987)
  - Starts with respect of team members
  - Able to obtain sufficient resources
When breakthroughs are required, a team of “stars” may need to be assembled.

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<th>Traditional Teams</th>
<th>Virtuoso Teams</th>
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<tr>
<td><strong>Membership</strong></td>
<td>Members chosen based on availability</td>
<td>Members chosen based on expertise</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Schedule and budget emphasized</td>
<td>Ideas emphasized</td>
</tr>
<tr>
<td><strong>Stakes</strong></td>
<td>Low/Medium</td>
<td>High</td>
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The top management team is a type of virtuoso team.
DYNAMIC CAPABILITIES IN SERVICES: SENSING

- Building up deep customer knowledge, including institutionalizing feedback
- Building up an understanding of the entire service system, including links to partners and suppliers
- Scanning and exploring new technology sources outside the service system
- Building a structured service development process

Source: adapted from Kindström, Christian Kowalkowski, and Sandberg (2013)
DYNAMIC CAPABILITIES IN SERVICES: SEIZING

- Co-developing service features with customers and partners
- Rapidly delivering new or improved services
- Rolling out new revenue mechanisms based on service value
- Adjusting business model based on feedback and analysis

Source: adapted from Kindström, Christian Kowalkowski, and Sandberg (2013)
DYNAMIC CAPABILITIES IN SERVICES: TRANSFORMING

- Obtaining and integrating complementary assets that could turn into bottlenecks
- Identifying and partnering with external actors required for service delivery
- Adjusting organizational structure to accommodate new service offerings
- Separating from internal activities that do not contribute to building advantage

Source: adapted from Kindström, Christian Kowalkowski, and Sandberg (2013)
Illustrations from Yum! Subsidiaries:

- **KFC Japan**
  Succeeded in the 1970s under **Shin Ohkawara and Loy Weston**, who saw the potential of treating KFC as a fashion statement more than as fast food.

- **KFC China**
  Succeeded in the 1990s **under Sam Su**, who pursued an aggressive store build-out and extensive menu localization.
SUMMARY

- Intangible assets are a vital source of wealth in the world economy
- Ordinary capabilities define “technical fitness” and are not sufficient for long-term advantage
- Dynamic capabilities enable the business enterprise to adapt knowledge in time and space and to respond to (and shape) changes in the business environment
- Dynamic capabilities are rooted in signature processes and entrepreneurial management
- Innovation requires collaboration and T-shaped leaders /”systems engineers”
- Good strategies and T-shaped managers enable dynamic capabilities