



Building on the Past, Imagining the Future

John Zysman

Professor, University of California, Berkeley

Co-director, (BRIE)

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Radically Changing Global Economy

- Shifts in Financial Markets
 - Dollar crisis
 - Sovereign wealth suggest roles of new players
- The Titans and others: significant new comers
 - New Leading Edge Markets
 - New Technology Players
- Beyond the End of History : A shift in the politics
 - Authoritarian capitalists
 - Capitalist socialists
- Climate change to boot
 - Consequences
 - Adaptations
- Recasting the Structures of Governance

The Problem of Growth Remains: Creating Value in A Global Digital Era

Core Issues in Today's Talk

- The classic policy objective remains:
Sustain the growth of employment and productivity to assure expanding real incomes of the citizens.
- The logic of creating value has changed:
Commodities and Sweet Spots
- Policy strategies must be re-conceived

Situating the Current Era:

Evolution of 20th Century Competition

- The Emergence of Mass Production and Mass Markets: American Innovation
- Lean Production, Diversified Quality Production, and Trade Conflict: Japanese and European Innovation
- American Comeback, Modularization, Supply Chains, and the Entry of Asian Third Tier
 - New consumer electronics: From electro-mechanical to digital
 - Wintelism:
 - Component, modular, driven competition
 - Modularity facilitates outsourcing
 - Cross national production networks and supply chains
 - The expansion of global finance and FDI
- The Emerging Logic of Competition in the 21st Century: The Global and Digital

Changed Logic of Value Creation

- The Global and the Digital Combine:
 - The Digital: New tools, products and services
 - The Global: New Players, new entrants new strategies

- Globalization and Commoditization
 - The World is Round (Christopher Columbus was right)
 - There are sequence of national stories, not the end of nations
 - New entrants: new strategies and intensified competition

- The Big Changes in the logic of value creation
 - Decomposition -- development, production, distribution
 - Price pressure for all standard product: commodities
 - The search for “Sweet Spots” of advantage and profit
 - Shifting levers of advantage

Shifting Levers of Advantage:

Decomposition, Commodification, and Value networks

- Decomposition
 - Modularization of production, R&D, and distribution
 - Unbundling services

- Value networks
 - Dispersion, commodification, and recombination
 - More offers from entrants pushes toward commodification
 - New strategies continually change the business problems
 - Diverse competencies underpin each market offer:
 - Constantly shifting levers of advantage
 - Internal functions become products
 - Differentiating assets become commodities
 - New strategies and capacities alter the value chain

- The Services Transformation

Service Economy or Services Transformation?

Reframing the Service Debate

- The issue is not the service economy:
 - Not the growth in the quantity or the value of the activities we label as services: the numbers are really a catch all
 - Not a shift from agriculture to industry to service
- The issue is the algorithmic revolution:
 - The algorithmic revolution: a *services transformation* driven by the application of rule based Information Technology tools
 - The evolution of business models

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The Fourth Service Transformation

- The Accounting Error: Outsourcing
- Changes in Consumption Patterns
- Outsourcing Household Work
- *The Algorithmic Transformation*

Zysman, John. "The 4th Service Transformation: The Algorithmic Revolution," BRIE Working Paper #171 (Berkeley: BRIE, 2006). A version of this article appears in the CACM Special Issue on Services Sciences, available July 2006.

The New Competitive Logic and The Services Transformation

- The Algorithmic Revolution:
 - a *services transformation* driven by the application of rule based Information Technology tools
 - Aspects of service activities with defined rules can be converted into formalizable, codifiable, computable processes
- IT Tools can then be applied to services
 - Business processes and transactions
 - Sensor networks
 - Consumers goods
 - Pure information services
- Creating Enduring Advantage
 - Not created from automating the routine, or cost alone
 - Is created by the re-conception and re-configuration of services

New Strategies / New Business Models

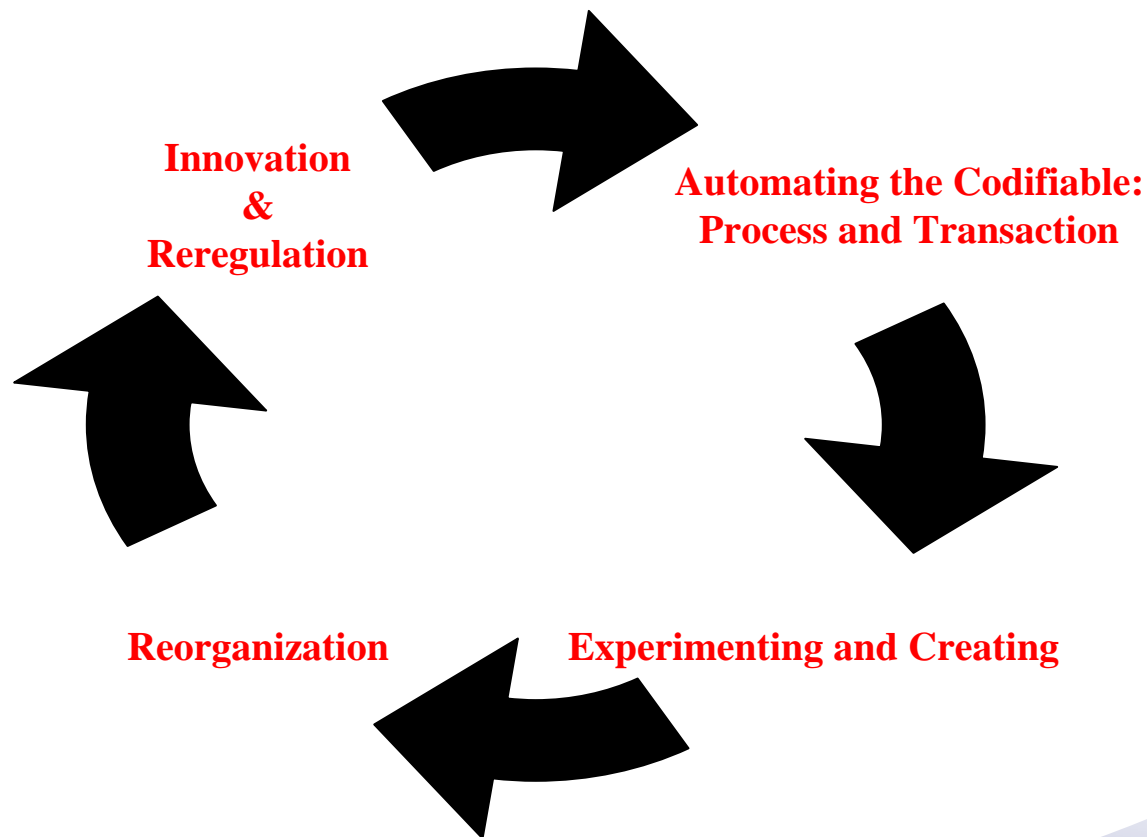
- Strategy logic changes
 - Clarity circa 1980: Definable sectors with clear targets for advantage and value
 - Ambiguity circa 2007 – Sweet Spots, spaces, and domains.
- Escaping “The Commodity Trap”: Bold innovative strategy
- New Business Models throughout the economy
 - Transformation of existing offerings (Finance and Media)
 - Creation of new businesses (Google)
 - Blurring of the service/product line
 - Change in product offerings

Service Strategy Options Evolve with ICT Tools and Platforms

The ICT Transformation

- The Data Network Stack
 - The layers
 - Application
 - Control
 - Infrastructure
 - Infrastructure and Policy
 - Policy freed the control layer
 - Policy sets terms of network development
- The Service Tools Stack
 - Market dynamics and possibilities
- Tools Standards:
 - Central to evolving applications

Network Innovation and Business Experimentation



Rules and Roles: Capturing the Value of Information Based Services

- Services are embedded in social and political institutions
 - Health Services: Citizens and Communities
 - Accounting: Corporate Governance Rules
- Transforming Services is a political fight: re-regulation
 - Re-regulation not deregulation is the reality
- Regulation and Re-regulation become development policy
 - Spread of new business practices drives productivity and jobs
 - Development of marketable tools creates products
 - Generation of new competencies means a base for further growth

National Innovation in Global Markets

- Domestic Markets and International Competition
 - CAN provide environment for innovation and experimentation that creates the basis for advantage in global markets
 - Production innovation: Toyota and autos production - production innovation
 - Product Innovation: Sony Walk Man, product innovation and standards fight within Japan
 - But domestic markets can be a trap
- The National Market in the Digital Era
 - Networks shaped by national policy
 - Leadership on the network facilitates experimentation and user led growth
 - Business Experimentation
 - Consumer Experimentation
 - User experimentation
 - Services always have a national element to the story
 - Services are embedded in social structure and regulation
- How will global competition be shaped in the next cycles.
 - Will National Network Build-out create advantage in services?
 - Will national service environment create advantage and induce service innovation

The Policy Problem:

Places must adapt as well as companies

- Traditional Targets dissolve:
 - The firm disperses and seeks sweet spots
 - The sector dissolves
- Diverse Competencies
 - Product design
 - Production know-how
 - Component innovation
 - Branding
 - System integration
 - Venture expertise
- Can competencies be developed, deployed, and redeployed?
 - Mobile Assets are essential and vulnerable

A first vantage on policy:

Volatility and Constraint

- The Global Digital economy is fluid
 - The Shifts: Decomposition and The Services Transformation
 - Corporate Strategy:
 - The search for the Sweet Spots of value
 - From clarity of sectors to ambiguity of domains and spaces
- The “Global” can overwhelm you
 - All regions are part of a rapidly transforming global economy
 - Escape is impossible
 - The response is critical

A Second Vantage on Policy: **Diversity and Opportunity**

- Diversity creates multiple viable strategic growth options
 - Modularization in production and the reconfiguration of services generate an array of possibilities.
 - The differences between service and manufacturing matter to evolving growth and development strategies.
- No Single Bullet: Governments have mattered in varied ways in many success stories.
 - Consider: Denmark, Finland, Ireland, Israel, Taiwan, Monterrey, Bangalore
 - If successful strategies vary, then role and policies are likely to vary
- Objective: Be the value added focal point in fluid global economy
 - No magic formula: But many options
 - The strategic question: How to situate the region and define the options
 - The tactical question: How to configure policy responses to the strategic objectives

Build on the Past, Imagine the Future, Discover the Unexpected

- Build on the Past:
 - Existing Resources
 - Community Competencies
 - Clusters of firms
 - Examples
 - Danish Networks
 - Swiss Micro mechanical skills
- Imagine the Future: Radical Reformulation
 - Expanding the competencies and infrastructural capacities
 - Examples: Japan, Korea, Ireland, San Diego
- Discover the Unexpected
 - Public Private dialogue
 - Where the possibilities of government action and private vision intersect
 - Exploring the competencies the country or region has and can create
 - Diverse Sources of ideas
 - Comparing policy strategies: The Innovation Alliance
 - Business strategy debates
 - Avoiding the Fads: Encouraging: rethinking of production and off-shoring

Zysman, Nielson, Breznitz with Wong. "Building on the Past : Imagining the Future"

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University of California, Berkeley, 2007. http://brie.berkeley.edu/publications/working_papers.html