Building on the Past, Imagining the Future

John Zysman
Professor, University of California, Berkeley
Co-director, (BRIE)
Berkeley Roundtable on the International Economy

Tokyo: December 2007
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
The Fourth Service Transformation

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

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

- 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

Innovation & Reregulation

Automating the Codifiable: Process and Transaction

Reorganization

Experimenting and Creating

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”