ICT -- Defining a Way Forward:

Building on the Past, Imagining the Future

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ICT4D 2.0: DEFINING A WAY FORWARD
In collaboration with the Global Alliance for ICT and Development (GAID)
Sponsored by Microsoft Corporation
Tarrytown, New York
May 5-6, 2008
Creating Value in A Global Digital Era: Core Issues in Today’s Talk

- The classic policy objective:
  Create (development) and sustain the growth of employment and productivity to assure expanding real incomes of the citizens

- The logic of creating value has changed:
  ICT is a central part of a story of commodities, sweet spots, and services

- Policy strategies must be re-conceived:
  There is an opportunity for radical breakthrough policy
Situating the Current Era: Evolution of 20th Century Competition

- The Emergence of Mass Production and Mass Markets: American Innovation (The Model T Car)
- Lean Production, Diversified Quality Production, and Trade Conflict: Japanese and European Innovation (The Rise of Toyota)
- American Comeback: Wintellism
  - New consumer electronics: From electro-mechanical to digital (From the Walkman to the iPod)
  - Modularization, Supply Chains, and the Entry of Asian Third Tier
- The Emerging Logic of Competition in the 21st Century: The Global and Digital
The Logic of Globalization:
New Players, New Entrants, New Strategies

- **Globalization and Commoditization**
  - The world is round: There are a sequence of national stories, not the end of nations
  - New entrants: new strategies and intensified competition

- **Some Consequences of Globalization**
  - Price pressure for all standard product: Commodities
    - Opportunity for development
    - Challenge for the advanced countries
  - The search for Sweet Spots (market points at which firms, or places, can capture distinctive value not based just on price)
Logics of Digital Technology

- Value in Information: Tools for Thought
  - Information in a Digital Era:
    - Bits- Data- Information - Knowledge- Understanding
  - ICT Tools and digitally expressed information
    Collect, process/analyze, store, transmit, share

- Icons of the Digital Age
  - Semi-conductor
  - Private Networks
  - Internet -- Inter-connection and services

- Two Big Changes
  - Decomposition of production, development, and distribution
  - The Service Transformation
Decomposition and Recombination: A product of IT Tools

- **Decomposition of the Firm** creates diverse markets
  - Manufacturing: Modularization of production, R&D, and distribution
  - Services: Unbundling services

- **Decomposition means Value Networks**
  - More offers from entrants pushes toward commoditization
  - Networks for value generation

- **Recombination**
  - New business models
  - A transformation of services
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 Fourth Service Transformation

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

Aspects of service activities can be converted into:
- Formalizable, codifiable, processes
- Often with clearly defined rules for their execution

IT tools can then be applied to services
- Business processes and transactions
- Sensor networks
- Consumer goods and roles

Services become more:
- Tradable
- Unbundled/modularized
- Footloose
Capturing Value: Creating Enduring advantage

- Automating routine means only temporary advantage

- Enduring Advantage is created by re-conception and re-configuration of services

- Value captured by:
  - Strategy
  - The organization of the firm
  - The effective use of people and their knowledge
Rules and Roles:
Capturing the Value of Information Based Services, or
The Services Transformation as Political Economy

- 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
  - E-government is not just a technical matter.

- Regulation and Re-regulation become development policy
  - Spread of new business practices drives productivity and jobs
  - Development of marketable service tools creates products
  - Generation of new competencies means a base for further growth
**Changed Logic of Business Strategies**

- **Strategy logic changes**
  - Clarity circa 1980: Definable sectors with clear targets for advantage and value

- **Constantly shifting levers of advantage**
  - Internal functions become products
  - Differentiating assets become commodities
  - New strategies and assets alter the value network
New Business Models Appear

- A Central Challenge: Escaping “The Commodity Trap”:
  - Bold innovative strategy
  - What can make a unique Turkish offering.

- New Business Models throughout the economy
  - Transformation of existing offerings (Finance and Media)
  - Creation of new businesses (Google)
  - Blurring of the service/product line
    - The automobile from product to private transportation service
    - Refrigerators and refrigeration
    - Design your own apparel

- Do Decomposition and the Service Transformation open doors for development?
Global Dynamics, ICT, and Development Choices
Two Vantages
on
ICT and Development Choices:

• Growth strategies

• Transitions
Growth Strategies: A Conventional Vantage Constraints and Volatility

The Global Digital economy is fluid and constantly shifting
- The Shifts: Decomposition and The Services Transformation
- National Strategy must adapt:
  - The search for the Sweet Spots of value
  - From clarity of sectors to ambiguity of domains and spaces

- The “Global” can overwhelm policy
  - All places are part of a rapidly transforming global economy
  - Escape is impossible
  - Traditional responses are inadequate
  - But the response is critical
Growth Strategies: An Alternate Vantage Diversity and Opportunity

- Diversity creates multiple viable strategic growth options
  - Modularization in production and the reconfiguration of services generate an array of possibilities.

- No Single Bullet: Governments have mattered in varied ways in many success stories.
  - Consider: Denmark, Finland, Ireland, Israel, Taiwan, Monterrey, Bangalore
  - Since successful strategies vary, then role of policies varies

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

- Build on the Past:
  - Examples
    - Danish Networks
    - Swiss Micro mechanical skills
    - Turkey and the Gap: Textiles, hydro power, and agriculture

- Imagine the Future: Radical Reformulation
  - Expand competencies and infrastructural capacities
    - Examples of Places: Japan, Korea, Ireland, San Diego
  - Turkish/Gap Future -- Organic food products, renewable energy, sustainable/green apparel

- Discover the Unexpected
  - Public Private dialogue
    - Don’t dictate to the private sector
    - Avoid capture by the private sector
  - Diverse Sources of ideas

Zysman, Nielson, Breznitz with Wong. “Building on the Past : Imagining the Future”
Transitions are Never Easy

• The General problem is easy:
  Infrastructure and Rules for a new era.

• The Particular problems are hard:
  Policy choices can determine winners and losers

• Choices imply social and community values
  Property, Equity, Privacy, and Speech as instances
Choices in the Transition:

• Infrastructure:
  – Networks as the New roads and bridges
  – Multiple routes to broadband
    • Allocating frequency and bandwidth
    • Intellectual property

• Rules:
  – New services and adaptations to capture the value
  – Social roles in market organizations: Doctors and taxi-drivers
  – Intellectual property controversies: DRM and Open Source

• Skills and training: What skills are required
  – The new balance of general skills and specialized skills
  – Diverse competencies (product design, production know-how, component innovation, branding, system integration, venture expertise)
ICT Requires Basic Rethinking of Growth and Development

The Logic of Value Creation

Policy approaches and choices