The Global Innovation Economy

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Agenda

- Innovation and Technological Change
- Corporate and Governmental Reactions
Innovation and Technological Change

Invention versus innovation

- **Invention** = A novel idea or concept

- **Innovation** = Application of inventions to fill an unmet market need

- Innovation can be viewed as the application of better solutions that meet new requirements, inarticulated needs, or existing market needs.
  - Wikipedia. September, 2014

- There can be a long time gap between invention and innovation
  - The laser diode was invented in the 1960s
  - The innovation of the compact disc player introduced in the 1980s
  - Sales of laser diodes prior to the CD player were small
  - Sales of laser diodes since the introduction of the CD player were huge

- Inventive breakthroughs yield subsequent marketplace innovations.
Innovation and Technological Change

The Increasing Rate of Innovation

- Viewing technology through consumer products is simple
  - How long is your mobile phone, game system, or tablet “current?”
  - New products are adopted at increasingly faster rates
Innovation and Technological Change

Effect on Businesses

- Technological changes should be viewed in broad perspectives
  - Technology allows new products and services, and new paths to market
  - Products are continually improved and/or replaced
  - New usage patterns emerge, changing the way we use devices

- Traditional businesses are also being changed by technology
  - Point of sale transactions, accounting, banking, and finance
  - Hiring, training, and maintaining staff
  - Supply chain considerations
  - Establishing and maintaining customer relationships

Technological innovation has fundamentally transformed business and will continue to do so at accelerating rates.
Innovation and Technological Change
What do these Changes mean?

- For non-anchored jobs, customers and competitors can be anywhere
  - “Customers anywhere” are an opportunity
  - “Competitors anywhere” are a threat

- Businesses must leverage operational technologies to compete
  - Tools improve productivity, reduce costs and/or increase market knowledge
  - Business moves much faster than in the past

- Businesses have new opportunities to cut costs
  - “Off-shoring” jobs
  - Automation and robotics performing routine or repetitive jobs

- Businesses have opportunities, and the need, to improve products
  - Product cannibalization is now required
  - If a company doesn’t improve or replace its own product, someone else will

- Both the potential risks and rewards for businesses have increased!
Innovation and Technological Change

Businesses are doing more with less

U.S. productivity gains stifle job creation

By Paul Wiseman, The Associated Press
Updated 04/04/2011 11:55:59 PM | 53 | 8

WASHINGTON — The United States is out of step with the rest of the world’s richest industrialized nations: Its economy is growing faster than theirs but creating far fewer jobs.

The reason is that U.S. workers have become so productive that it’s harder for anyone without a job to get one.

Companies are producing and profiting more than when the recession began, despite fewer workers. They’re hiring again, but not fast enough to replace most of the 7.5 million jobs lost since the recession began.

Measured in growth, the American economy has outperformed those of Britain, France, Germany, Italy and Japan — every Group of Seven developed nation except Canada, according to the Associated Press’ new Global Economy Tracker, a quarterly analysis of 22 countries representing more than 80% of global output.
Innovation and Technological Change
Assessing Practical Impacts of these Changes

- For non-anchored jobs, customers and competitors can be anywhere
  - Creative thinking is necessary to gain customers and outmaneuver competitors

- Businesses must leverage operational technologies to compete
  - Companies are adaptively recognizing how to empower their business

- Businesses have new opportunities to cut costs
  - As labor costs rise, all but the most innovative jobs will be automated
  - “Outside the box” thinking to cut costs is continually needed

- Businesses have opportunities, and the need, to improve products
  - Developing new or improved products requires inventive thought

- A recurring theme illustrates those skills needed by future businesses
  - “Creative thinking?”
  - “Adaptively recognize?”
  - “Innovative?”
  - “Outside the box?”
  - “Inventive thought?”

Innovation is the key to future business growth!
Governmental and Corporate Reactions
*The Changing Nature of Innovation*

- Open
- Collaborative
- Multi-disciplinary
- Global
Governmental and Corporate Reactions

Innovation coming from New Forms of Collaboration

innovation: how do companies get ideas?

CEOs: Sources of new ideas and innovation

- Business partners
- Customers
- Consultants
- Competitors
- Associations, trade groups, conference boards
- Academia
- Internet, blogs, bulletin boards
- Sales or service units
- R&D (internal)
- Other
- Employees (general population)

“We have...today a lot more capability and innovation in the [competitive] marketplace...than we [could] try to create on our own.”

Source: IBM Institute for Business Value, CEO Study 2006
Governmental and Corporate Reactions
The Changing IP Landscape: Balanced Innovation

- Proprietary Innovation
- Income and Royalties
- Collaborative Innovation
- Interoperability

A Spectrum of Collaboration and Competition

IP-only Companies
Patent Assignments
Patent Pledges and Commons
Open Source Software & Open Stnds
Governmental and Corporate Reactions
Innovation and IP are Central to Economic Growth & Competition

"We're going to aggressively protect our intellectual property… Our single greatest asset is the innovation and the ingenuity and creativity of the American people… But it’s only a competitive advantage if our companies know that someone else can't just steal that idea."

-U.S. President Barack Obama

"The competition of the future world is a competition for Intellectual Property Rights"

-Former Chinese Premier Wen Jiabao

~80% of the value of modern companies comes from intangible assets

Sources: US Federal Reserve – Nakamura, Ned Davis Research
Governmental and Corporate Reactions
The Changing Business Landscape

- Top CEO business priority: “Growth driven by innovation”

- Increased competition for ideas

- A new IP marketplace and economy is emerging

- IP has become a fundamental strategic issue

- Strong, global intellectual property systems encourage innovation

The new economic environment:
- More volatile
  Deeper/faster cycles, more risk
- More uncertain
  Less predictable
- More complex
  Multi-faceted, interconnected
- Structurally different
  Sustained change
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