The Entrepreneur and the Cloud – Silicon Valley Rejuvenated, Singapore Coming of Age.

transforming the accelerating pace of change from a challenge to an opportunity

Overview - Topics

- Our current context and the big shift
- What it means for SV?
- Cloud Computing as an engine of innovation
- Reflections on Singapore’s Innovation Ecology

Really? How do these topics relate?
Our Context

Is it any surprise many of our current models, forecasts, and assumptions anticipate a “return to normal” after the Great Recession ends? Such cyclical thinking ignores the powerful forces of longer-term, secular change—forces that are increasingly undercutting widely held assumptions about the sources of economic value.

“Normal” may in fact be a thing of the past.

Trends set in motion decades ago are fundamentally altering the global landscape as a new digital infrastructure, built on the sustained exponential pace of performance improvements in computing, storage, and bandwidth, progressively transforms our business environment. This infrastructure consists of institutions, practices and protocols that together organize and deliver the increasing power of digital technology to business and society.
The return on assets (ROA) for U.S. firms has steadily fallen to almost one-quarter of 1965 levels.

Similarly, the ROA performance gap between corporate winners and losers has increased over time, with the “winners” barely maintaining previous performance levels while the losers experience rapid performance deterioration.
U.S. competitive intensity has more than doubled during that same time.

Economy-wide Herfindahl-Hirschman Index (HHI) (1965-2008)

Source: Compustat, Deloitte analysis

Average Lifetime of S&P 500 Companies
However, in those same 40 years, labor productivity has doubled—largely due to advances in technology and business innovation, coupled with open public policy and fierce competition.

The performance paradox: ROA has dropped in the face of increasing labor productivity.
But why is this happening??

20th Century Era Captured by Alfred Chandler

Push Economy

20th century infrastructure
roads/cars/trucks/trains/ships/airplanes

Standard S curve: stable over decades.
(Few real changes in 60+ years)

Scalable Efficiency becomes the goal.

• predictable
• hierarchy
• control
• organizational routines
• minimize variance

S-curve
Organization Architectures leverage the properties of Infrastructure Architectures

stable transportation infrastructures $\Rightarrow$
Chandlerian firms & focus on scalable efficiency

21st C infrastructure drive the exponential advances of computation/storage/bandwidth - causing major jumps/disruptions in infrastructural capabilities.

What does this say about institutional architectures that can leverage this acceleration?

The Big Shift

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<th>Stable Environments</th>
<th>Dynamic Environments</th>
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<td>Institutions driven by scalable efficiency</td>
<td>Institutions driven by scalable peer learning</td>
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</tbody>
</table>

Key is how one participates in knowledge flows especially on edges (firm/industry/region/gen Y,..)
in a rapidly changing world
innovation and agility
must reign supreme

Ah, but then think
ecosystems & platforms!

Cloud Computing
as an innovation platform
And
helping us participate in many
Kinds of flows
Amazon’s Novel Innovation Model

2 pizza team rule and the platform

Amazon’s Cloud and web services (AWS) creates an ecosystem that enables startups to get going fast, CHEAP and scale quickly.

Cost:
- cpu: HP tower 10 cents/hr
- storage: 15 cents/gigabyte/month

And monitor your virtual stack by iPhone
Amazon’s Cloud and web services (AWS) creates an ecosystem that enables startups to get going fast and scale quickly.

Animoto startup – (personal MTVs) went viral one day on Facebook: scaled from 50 servers to 5000 servers in just about a day on the Amazon Cloud

Examples of SaaS services built on AWS, Google AppEngine and Force.com

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<td>Social Applications</td>
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<td>Twilio</td>
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<td>Other: eMail, Portals, Publisher Content, Blogs, etc</td>
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</tbody>
</table>

Telemphony

Content Hosting/Delivery
- digitaria
- melonco
- Zoonl Books
- LSPG.com

Social Applications
- PostRank
- pix
- sharethis

Other Commerce Apps
- Jambu
- playfish
- mediaploy
Example of a service on AWS, drop.io, around which a cloud-based ecosystem has evolved

uSend.io  SaaS created by drop.io
extend
SaaS created by drop.io
extend
uSend.io
extend
Collab.io
extend
DrOpper
extend
Android App built by independent developer
extend
TALKING ANDROID
extend
Adobe AIR-based Desktop App built by independent developer
extend
Key
A - B Means B uses A
uses
SaaS that uses Amazon S3
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SaaS native to AWS
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SaaS that uses Amazon S3, EC2, SimpleDB and SQS
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SaaS native to AWS
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iPhone App built by independent developer
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In each wave – silicon valley/west coast reigns supreme

But also SV reflects the power/agility of ecosystems that comprise many small talent driven, agile firms where the whole is more than the sum of the parts.

Such ecosystem supported by learning with & from each other (peer based learning) & enriched by cloud computing & social media should rule the day.

Singapore’s Interactive Digital Media Program

One of their three chosen domains for building their 21st century economy.

• Biotech
• Cleantech
• IDM
IDM Ecology

FutureScape
- Industry
- University
- Customers
- Future Users

i.JAM
- Industry
- University
- Customers
- Future Users

i.ROCK
- Industry
- University
- Customers
- Future Users

IDM in Education

IDMPO: “Whole of Govt” Approach

Attracting the Best
- Overseas IDM Heavyweights
- Digital Twinning
- International Markets

Content
- World
- Expo
- Design
- Sg
- URA
- SIng
- Health
- NHB
- NLB

Infrastructures

Talent/Entrepreneurship

NGNBN
- Cloud Computing
- Fibre to the Home

i.DA
- Singapore
Thank You

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