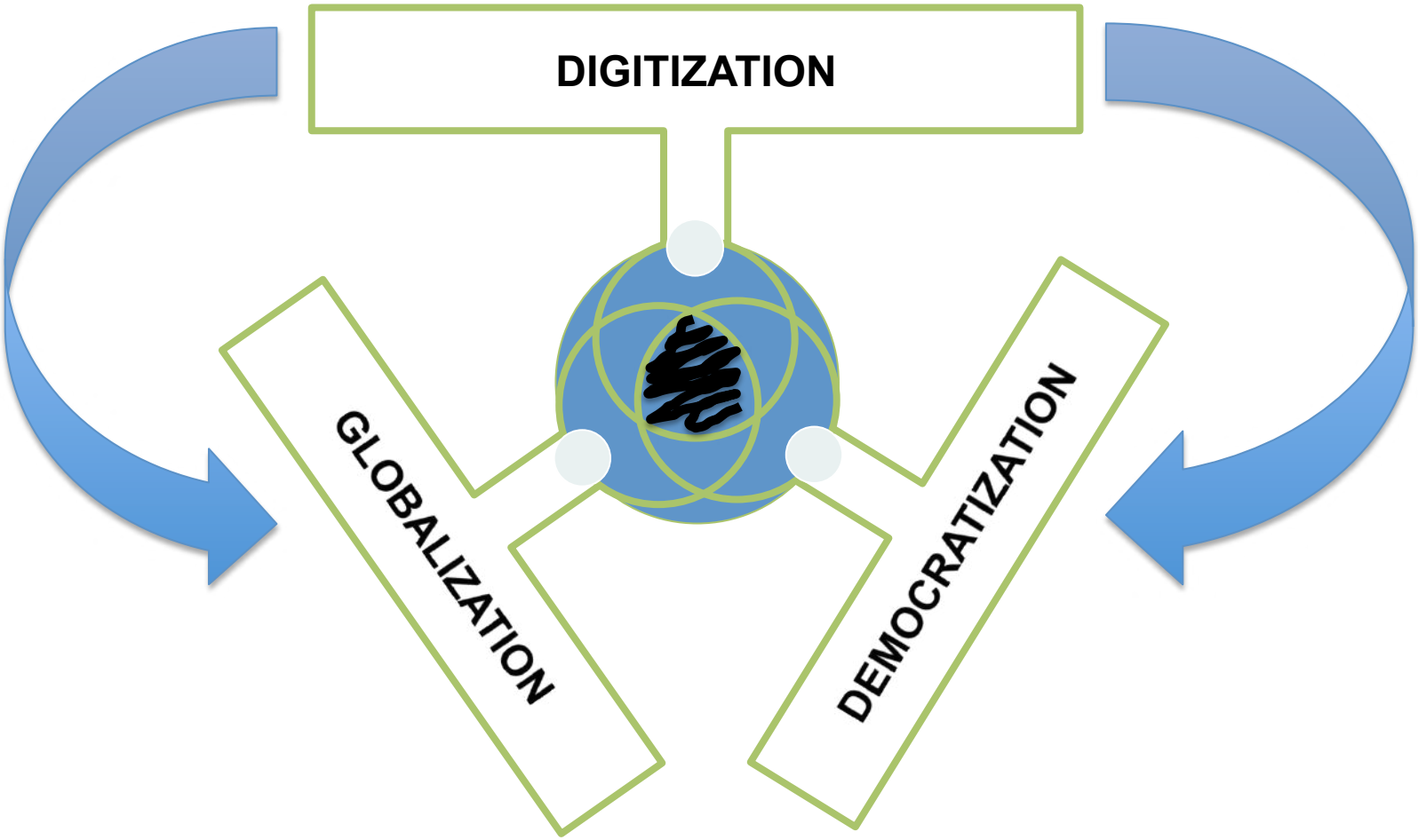
MaRS Discovery District

Global Competitiveness and Innovation Policy

November 2013


Global Innovation Race

3 macro are forces reshaping our world…



…creating a storm of innovation.

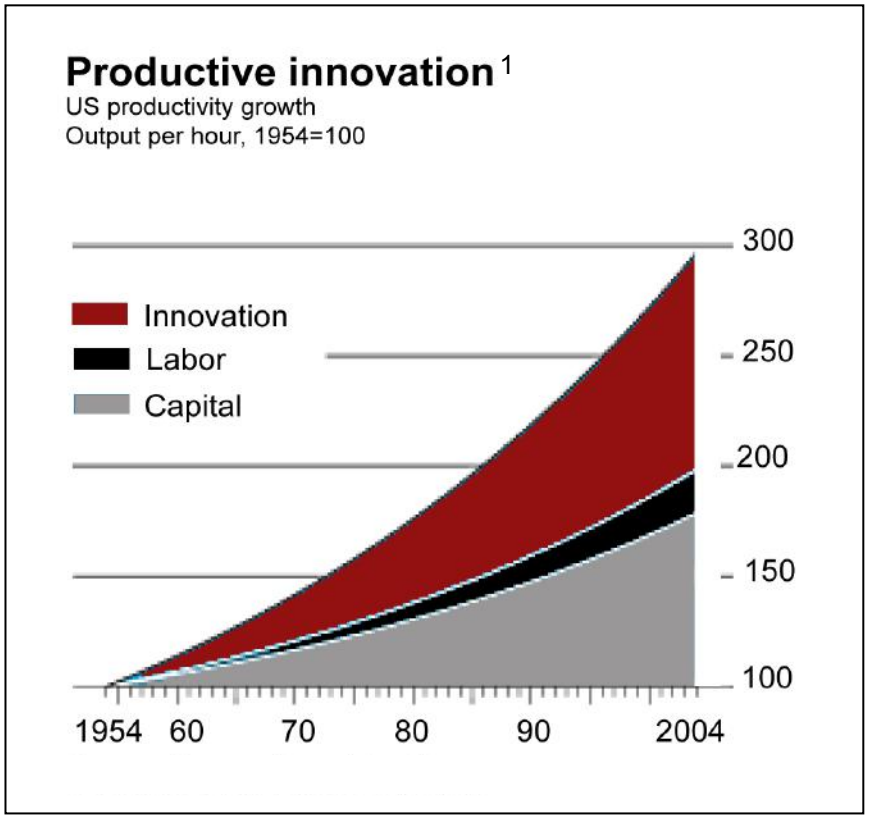
Innovation drives economic and social prosperity

Globally, competition is intense

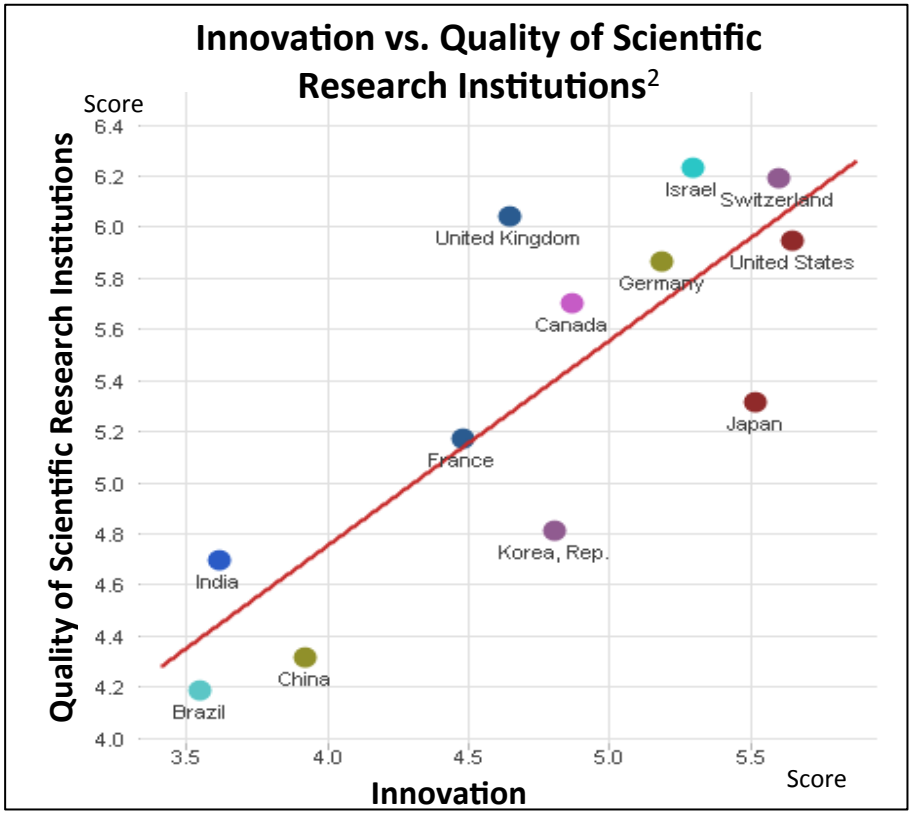
The majority of new jobs in modern economies are created by firms that are less than 5 years old (Kauffman & NESTA)

Innovation and research drive economic growth.

Growth in productivity is increasingly driven by innovation…



…and innovation is strongly linked with top quality scientific research.



Source: 1. Boston Consulting Group, 2. World Economic Forum Global Competitiveness Report, 2010-2011

“We need **new businesses** to unleash new innovations. “

President Barack Obama

Silicon Valley

Kendall Square - Boston

Biopolis - Singapore

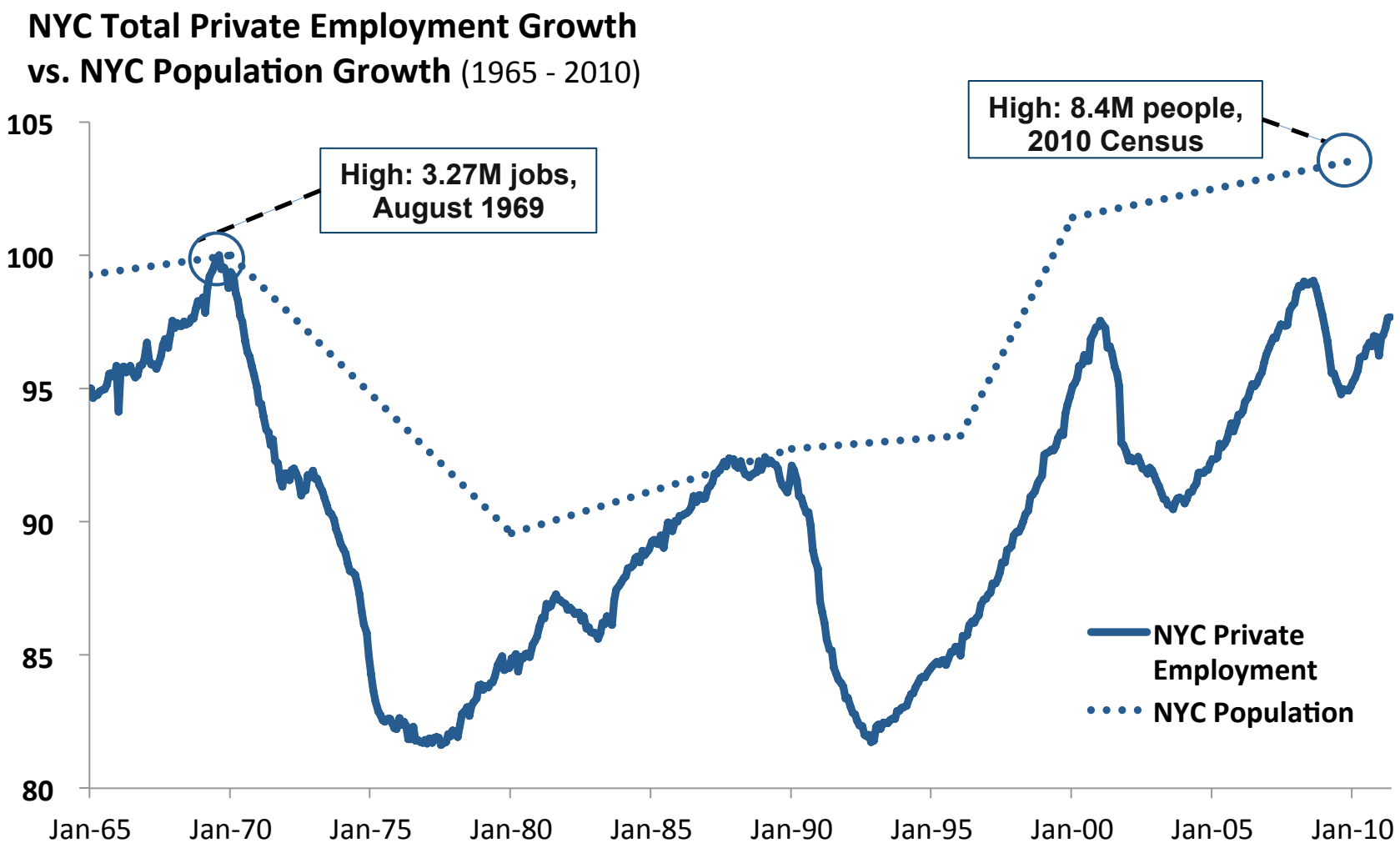
Mission Bay - San Francisco

Karolinska – Stockholm

CASE STUDY: New York City

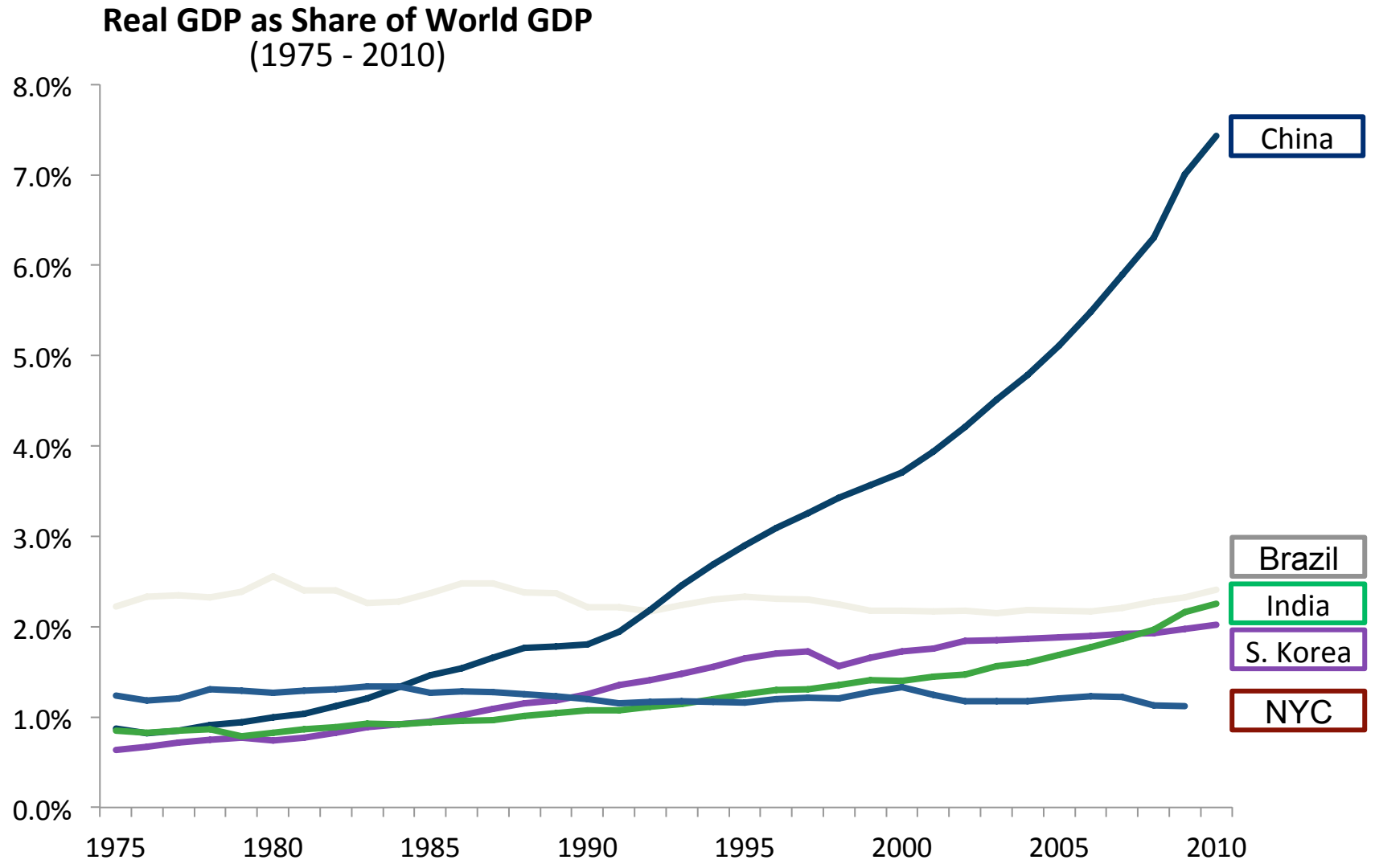
APPLIED SCIENCES NYC

NYC was at an economic inflection point…



Source: NYS Department of Labor, Index year= 1969

…and as cities and countries elsewhere in the world experienced disruptive rates of growth.



Source: USDA Economic Research Service, NYC OMB. Note: NYC 1975-1984 data based on 2000$, all other data based on 2005$

NYC was underweight relative to its enormous economic scale…

Metric	NY Area	Boston Area	SF Bay Area
Size of Economy[1](US)	1st ($1.47 trillion)	6th ($338 billion)	9th ($297 billion)
R&D per capita of Top 100 Engineering Programs[2]	~$7.00	~$87.00	~$44.00
Science & Engineering as % of Workforce[3](US)	3.8% (33rd)	7.4% (6th)	6.9% (8th)
Hi-Tech Payroll as % of Economy [2]	6%	13%	13%

Sources: [1]PriceWaterhouseCoopers 2008,[2] AUTM Survey, 2009 [3] US Bureau of Labor Statistics

Mayor Bloomberg launched *Applied Sciences NYC* in December, 2010.

A global challenge to the Top 100 Graduate Engineering schools in the world

- Land, technical assistance, and $100M of city capital
- Build a new type of tech innovation campus

18 submissions from **27 institutions**, representing:

- 8 countries
- 6 states
- 5 of top 20 U.S. grad. engineering programs
- 11 of top 100 int'l IT & engineering universities.

Academic Respondents:

Five projects, billions of dollars of investment, tens of thousands of jobs…

CORNELL-TECHNION, ROOSEVELT ISLAND

MULTI-DISCIPLINARY HUBS

CUSP, BROOKLYN

URBAN SCIENCES

APPLIED SCIENCES NYC

COLUMBIA UNIVERSITY, MANHATTAN

BIOSCIENCES

CARNEGIE MELLON, BROOKLYN

MEDIA & ENTERTAINMENT


E 72nd St
2nd Ave
5th Ave
E 65th St
E 60th St
E 57th St
1st Avenue
FDR Drive
Roosevelt Island
Vernon Blvd
21st St
Astoria
36th Ave
31st St
E Rd
Sutton Place
Midtown East
3rd Ave
2nd Ave
©2012 Google
Map data ©2012 Google


MaRS

MaRS Global from Canada:

Advice and mentorship, plus access to talent, customers, partners, capital

Publication Productivity

1	Harvard
2	Toronto
3	Michigan
4	São Paulo
5	Johns Hopkins
6	Tokyo
7	Washington
8	UCLA
9	Oxford
10	Stanford

Top Ten Universities Research Productivity, Current Article Performance 2011

Publication counts, all fields.
InCitesTM, Thomson Reuters (2012)

UNIVERSITY OF TORONTO

Phase 1

- 70,000 sq metres
- 100+ Tenants – 70+ startups
- 4:1 Private/Public
- 2,500+ People work at MaRS today

Phase 2

- 72,500 sq metres
- Opens 2014

We can
build
a better future