



Doing Well by Doing Good®

David Gong

**Managing Director, Terraza Venture
Venture Partner, Tsing Capital**

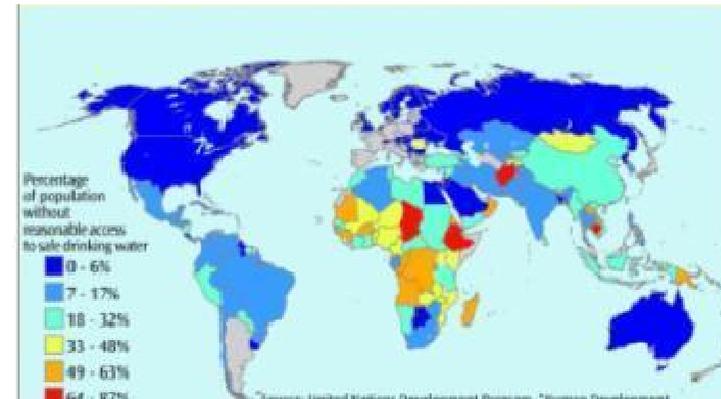
Why the World Needs Clean Economy

Environmental Degradation



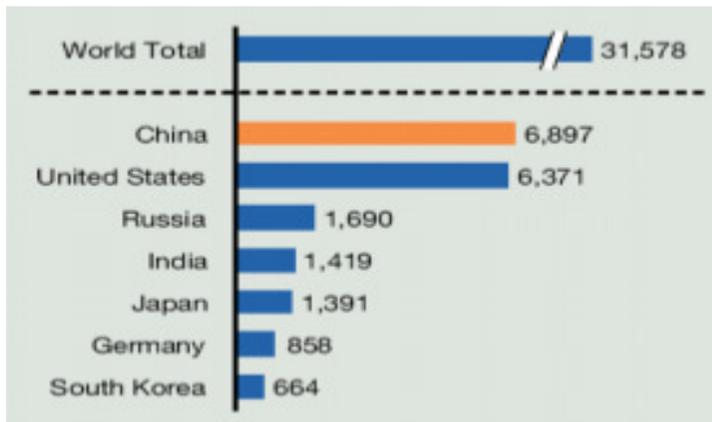
Source: "Pollution in China", Lu Guang

People Without Safe Drinking Water



Source: Earth Presentation, Global Education Project

CO₂ Emissions (megatons per year)



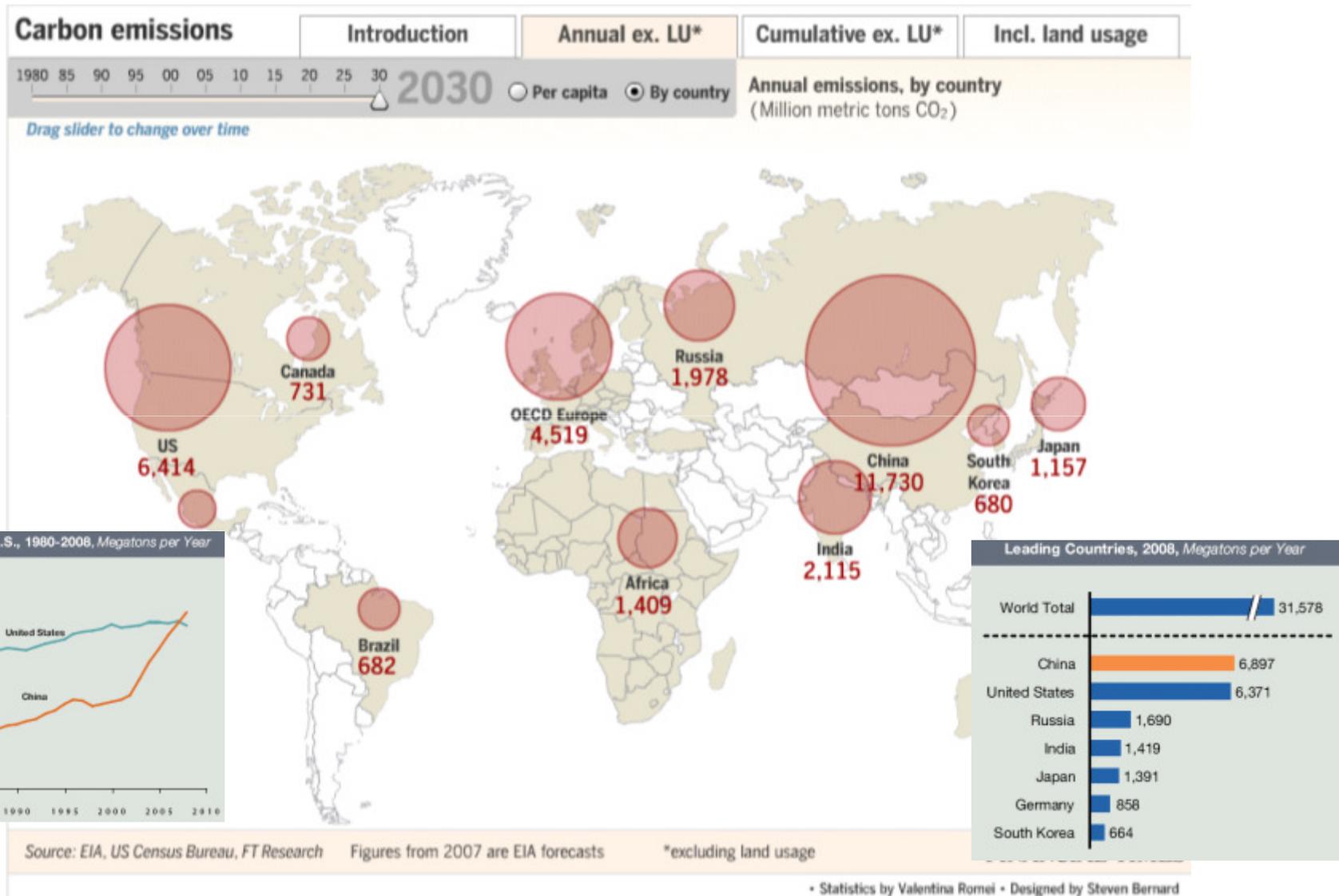
Source: BP Statistical Review of World Energy, June 2009

Rising Global Energy Demand

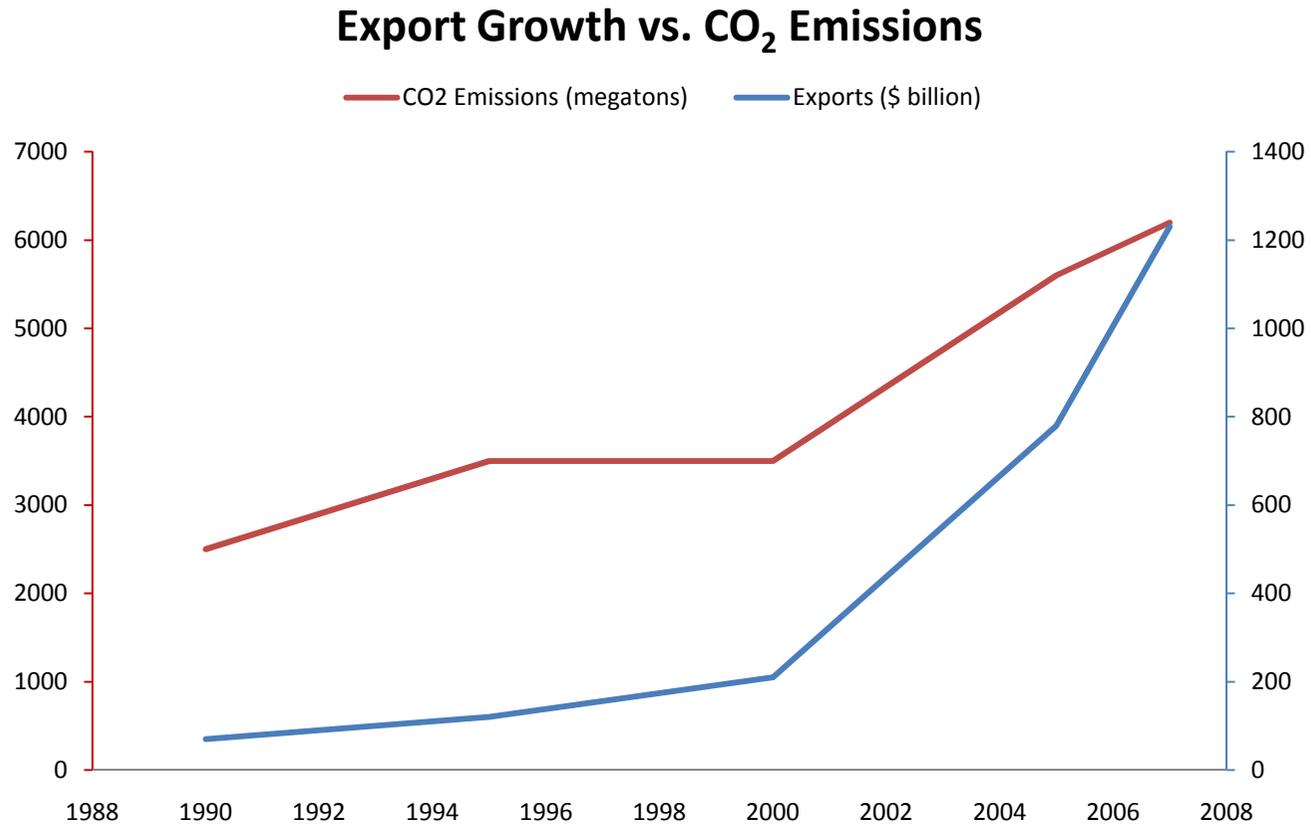


Source: International Energy Outlook 2009, EIA, US DoE

Challenge: China is the Largest Annual CO₂ Contributor



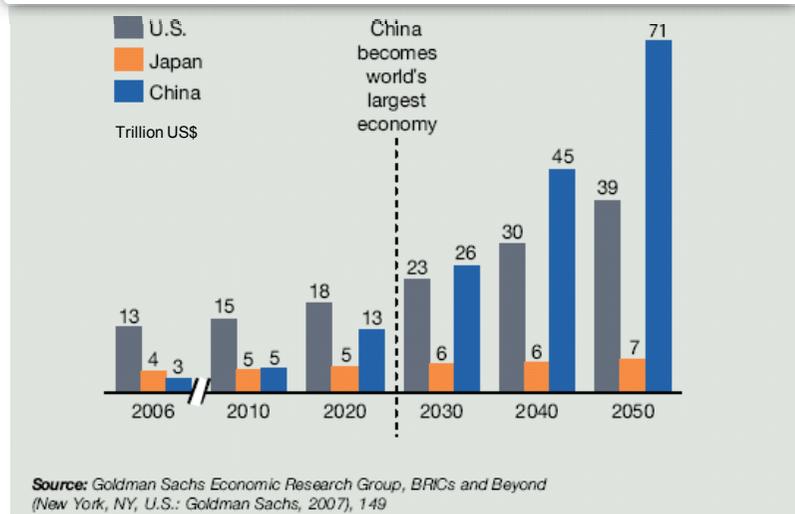
Challenge: World Factory vs. World Polluter



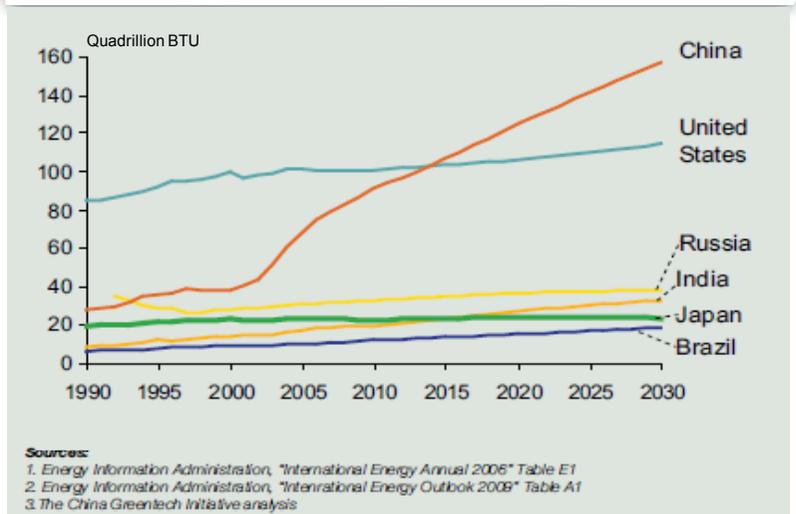
Source: Tsing Capital, blog.cfr.org,

Challenge: Growth on High Pollution and Low Efficiency

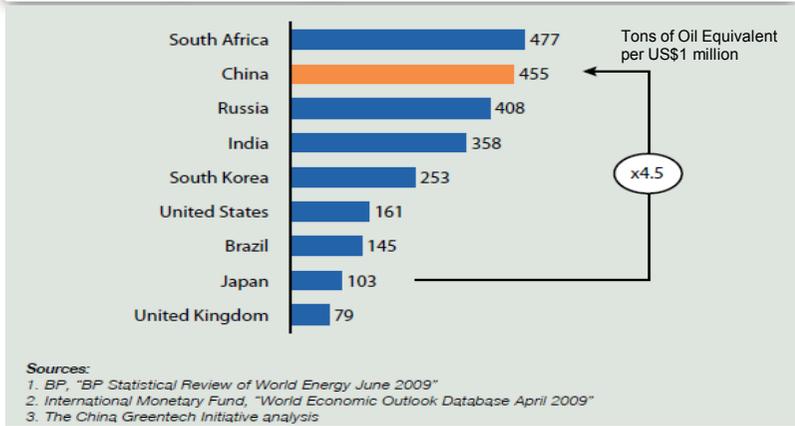
GDP Projections, trillion US\$



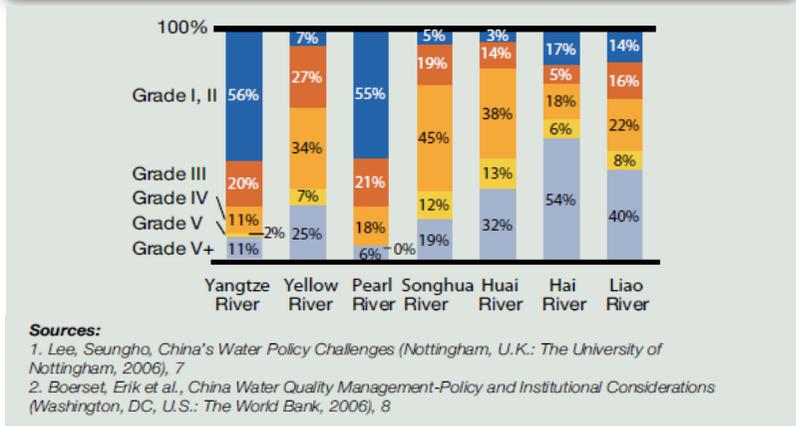
Energy Consumption Projections



High Energy Intensities of GDP

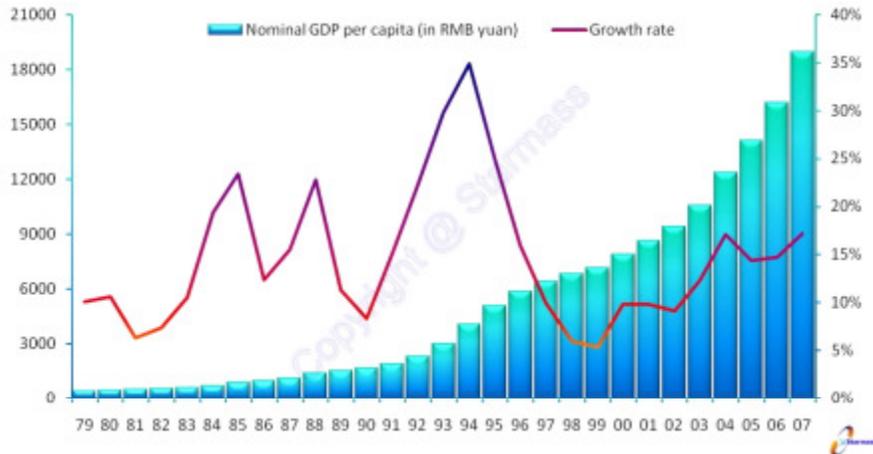


Serious Water Pollution In River Basins



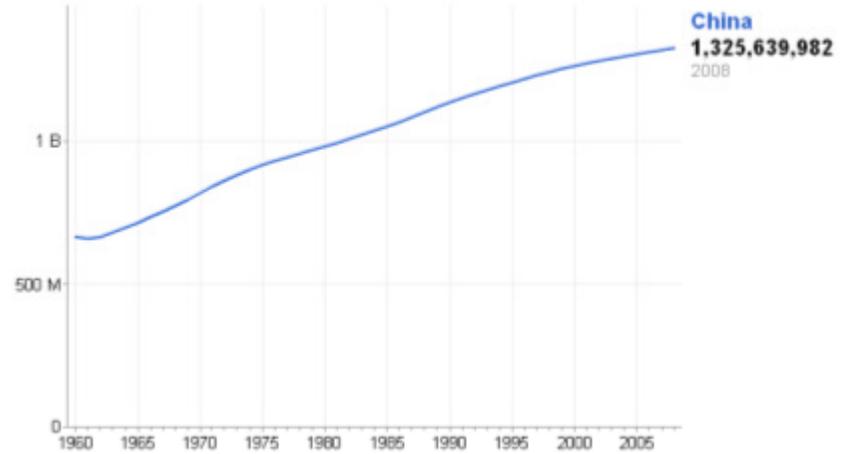
Challenge: Population and Urbanization

GDP per Capita Growth (RMB)



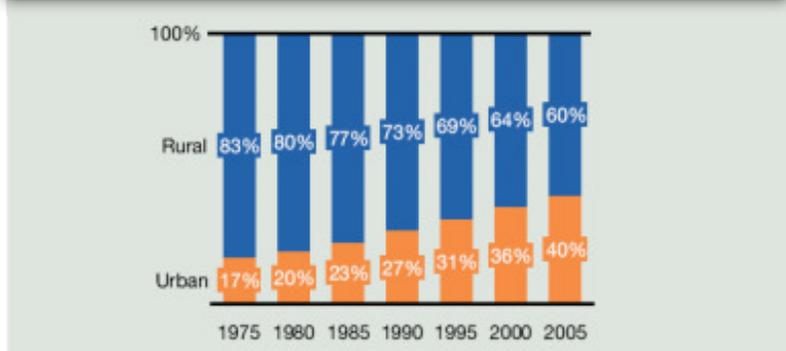
Source: www.starmass.com/china_review/economy_overview

Population Growth



Source: World Development Indicators, World Bank, Nov 2009

Massive Urbanization

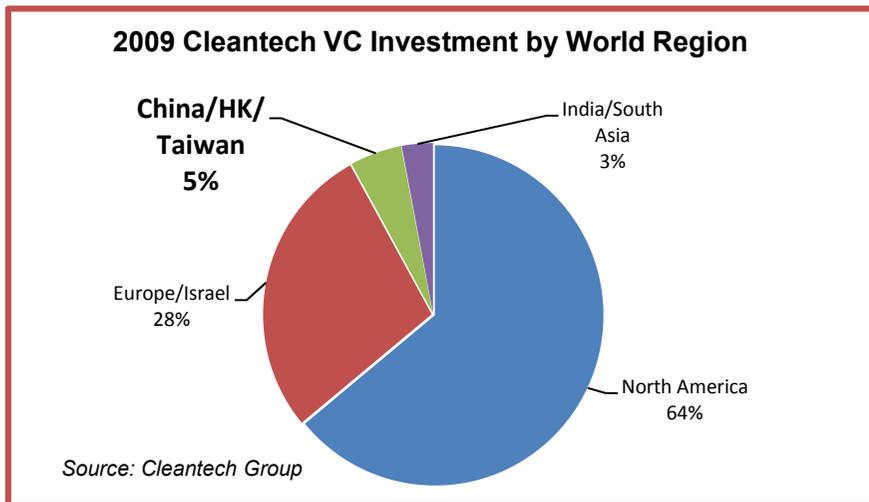
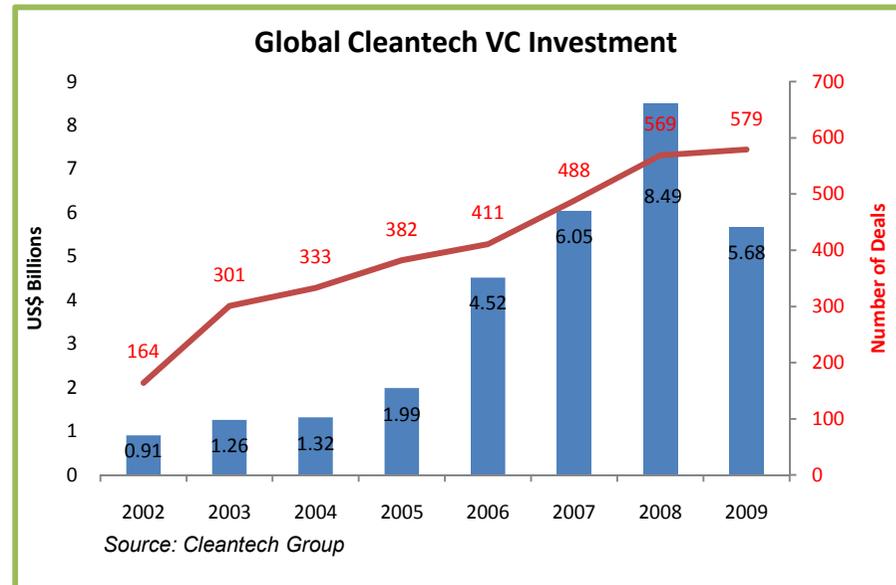
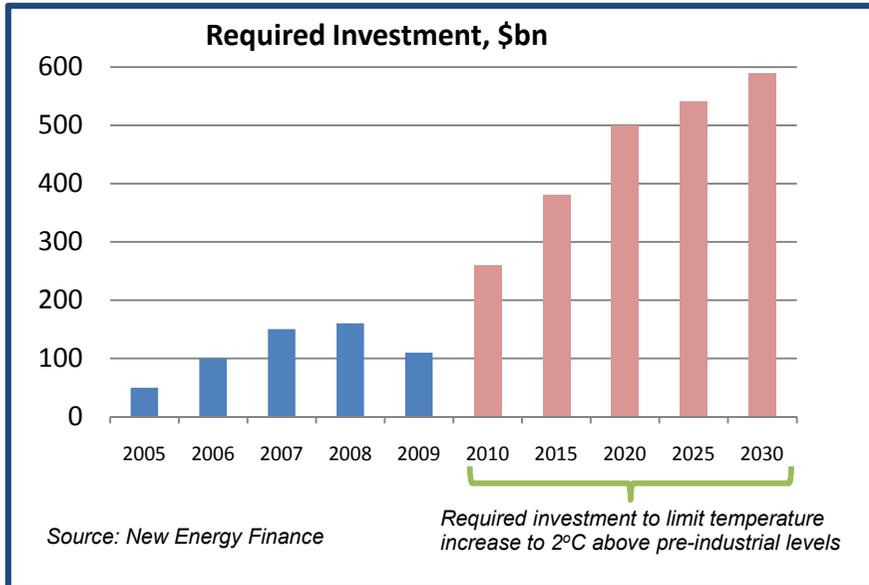


Source: United Nations, "World Urbanization Prospects: The 2007 Revision Population Database"

China's economy has experienced rapid development over past few decades

- **GDP per capita:** RMB 18,000/capita in 2007, average 15% YoY growth since 1979
- **Population:** 1.3 billion strong has nearly doubled since 1960
- **Urbanization:** Urban population expanded by nearly 400 m since 1975

Rising Demand for Cleantech Investment Worldwide



- Rising cleantech investment: \$600B required annually by 2030
- Global VC investment in Cleantech
 - ✓ Cumulative total invested since 2002 = USD 30.3 billion,
 - ✓ CAGR 30%
- Massive growth potential for Chinese VC cleantech investment

Opportunity: China is the Largest Cleantech Market

- #1 solar PV production (50% of global PV cells in 2009, 30GW installation by 2020)
- #1 installed base of solar water heaters (over 125 million m²)
- #1 wind-power market (200GW installation by 2020)
- #1 hydro resources (540GW);
- #1 water demand
- #1 auto production and market (13 million new vehicles in 2009)
- #1 in CDM registration
- #1 fresh water farming
- And many more

Cleantech is A Top Government Agenda

“Green” GDP on Agenda

- 🌱 2003: “Circular Economy”, “Green GDP”
- 🌱 2004: “Harmonious Society”
- 🌱 2005: “Environmentally Friendly and Resource Efficient Society”
- 🌱 2006: “Renewable Energy Law”, “New Village Build-up”
- 🌱 2007: “Energy Savings & Emission Reduction”
- 🌱 2008: “Green Olympics”
- 🌱 2009: “Low carbon economy”
- 🌱 2010: “Clean Economy”

China’s 11th 5-Year Plan/REEE Law

Renewable energy

- 🌱 By 2010, at least 10% of total energy consumption from RE
- 🌱 By 2020, at least 16% of total energy consumption from RE

Energy Efficiency and Savings

- 🌱 By 2010, energy consumption/GDP decrease by 20%
- 🌱 Water consumption/industrial output decrease by 30%

Environmental Protection

- 🌱 Sewage Treatment rate: 70% by 2010
- 🌱 Refuse Decontamination: 60%

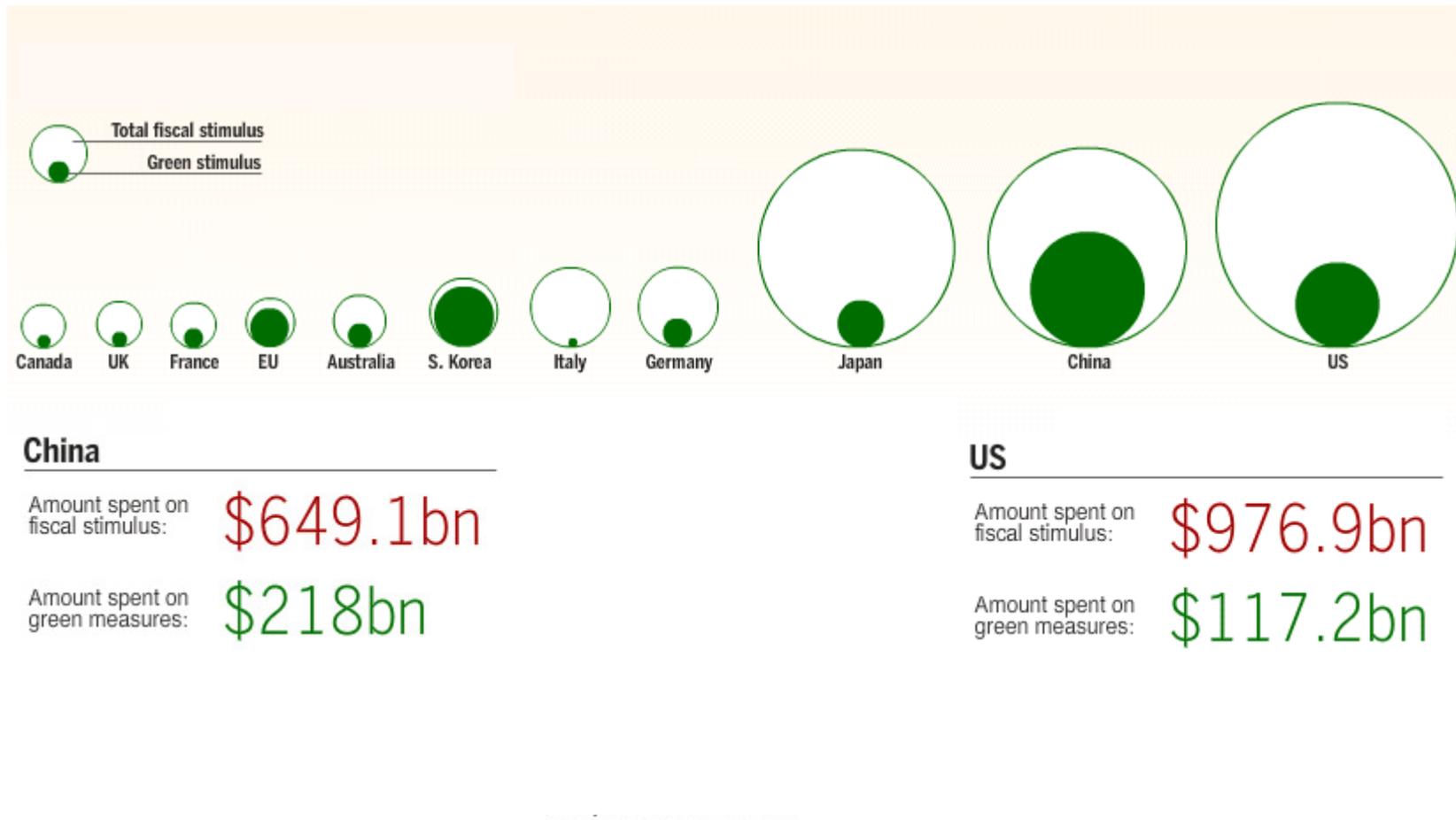
Incentive Plans

| SUBSIDY | ANNOUNCEMENT DATE | AMOUNT OF SUBSIDY | DESCRIPTION OF ELIGIBILITY |
|--------------------------|-------------------|---|--|
| GOLDEN SUN | July 2009 | <ul style="list-style-type: none"> • 50% of grid-connected solar investment • 70% of off-grid PV power investment | <ul style="list-style-type: none"> • 300 kW min capacity • 1-year max construction period • 20+ year operations requirement |
| SOLAR ROOFS | March 2009 | <ul style="list-style-type: none"> • 15-20 yuan per watt of capacity | <ul style="list-style-type: none"> • Targets new construction • Minimum efficiency guidelines • 50 kW min installation |
| PHEV/EV/FC* | January 2009 | <ul style="list-style-type: none"> • 28K-600K yuan per vehicle | <ul style="list-style-type: none"> • Minimum fuel saving 5% for passenger and light commercial vehicles • Minimum fuel saving 10% for busses |
| WIND TURBINE | August 2008 | <ul style="list-style-type: none"> • 600 yuan per kW for the first 50 units | <ul style="list-style-type: none"> • Only Chinese turbine manufacturers • 50/50 split between component suppliers and turbine manufacturers • 1 MW minimum capacity |
| BIOMASS POWER GENERATION | July 2008 | <ul style="list-style-type: none"> • Temporary electricity tariff increase by 0.1 yuan/kWh | <ul style="list-style-type: none"> • Certain types of feedstock only (forest, firedamp and straw) |
| COAL BED METHANE MINING | April 2007 | <ul style="list-style-type: none"> • 0.2 yuan per cubic meter | <ul style="list-style-type: none"> • Methane for consumer or chemical industry sale only, not power generation |

Source: China Greentech Report, Oct 2009

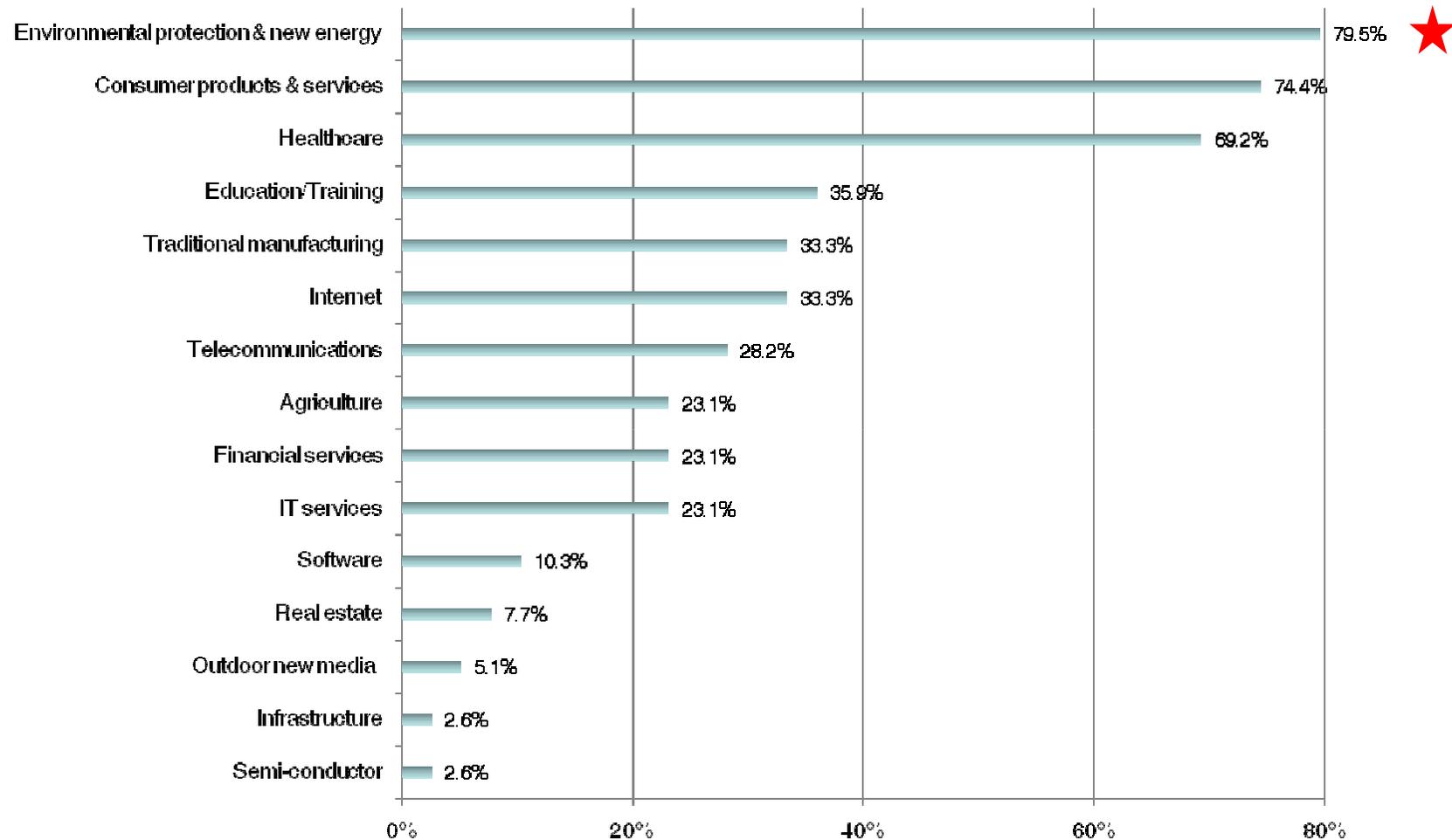
- ❑ RMB 4 trillion stimulus and planned RMB 3 trillion package for renewable energy is unprecedented
- ❑ Clean energy, energy efficiency, electric vehicles and new materials has been named by the government as 4 of 7 key “Strategic New Industries” to form the core of economic stimulus package

China's Green Stimulus is Unprecedented



Source: HSBC All figures quoted in US dollars

Cleantech Becomes VC/PEs' Focus in China Since 2009



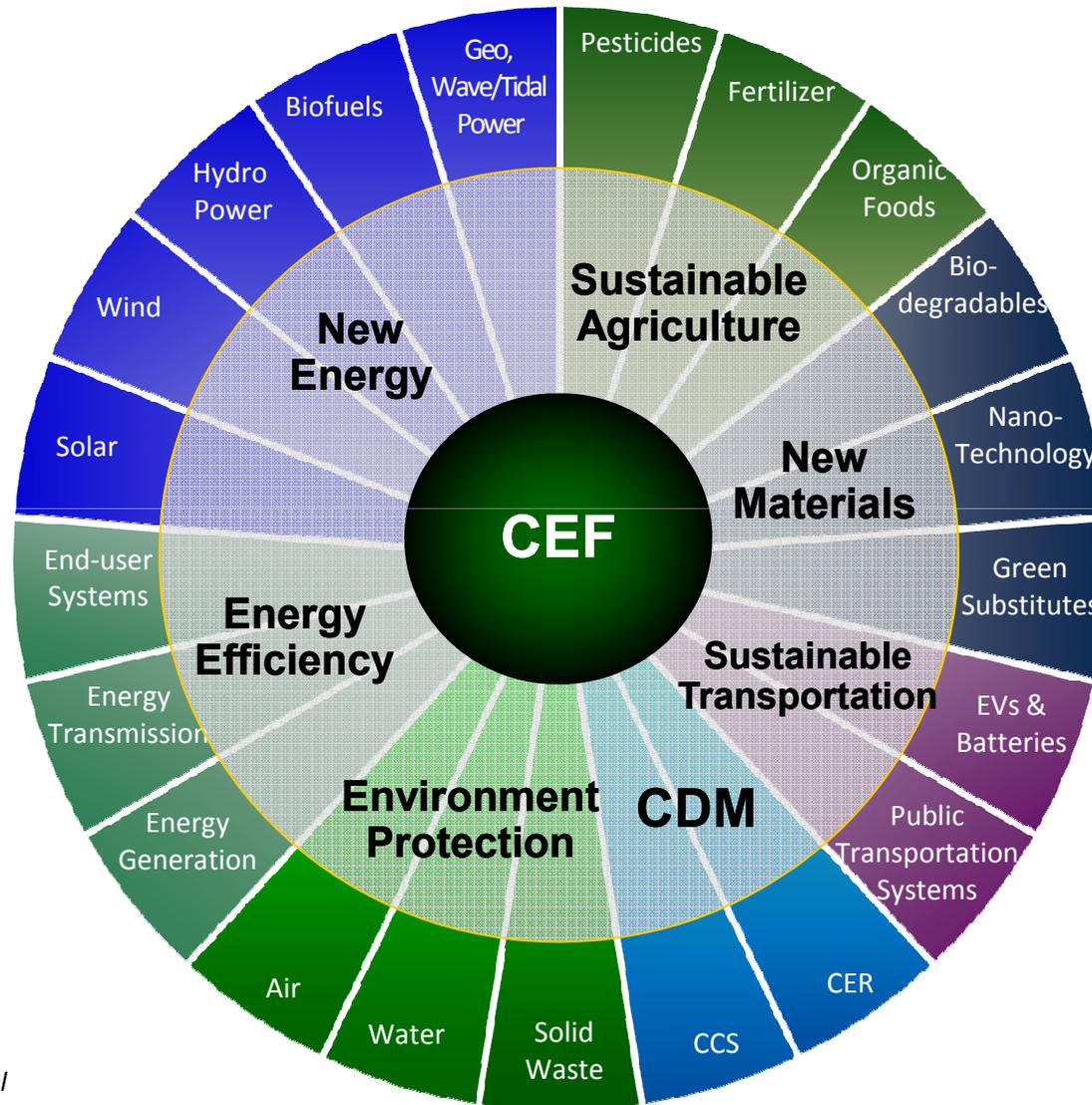
China VC/PEs' Investment Focuses in the Next 1-2 Years, over taking traditional investment areas

Source: CVCA 2009 China PE Industry & Regulatory Environment Survey Report

Pioneer and Leader in China Cleantech Investment



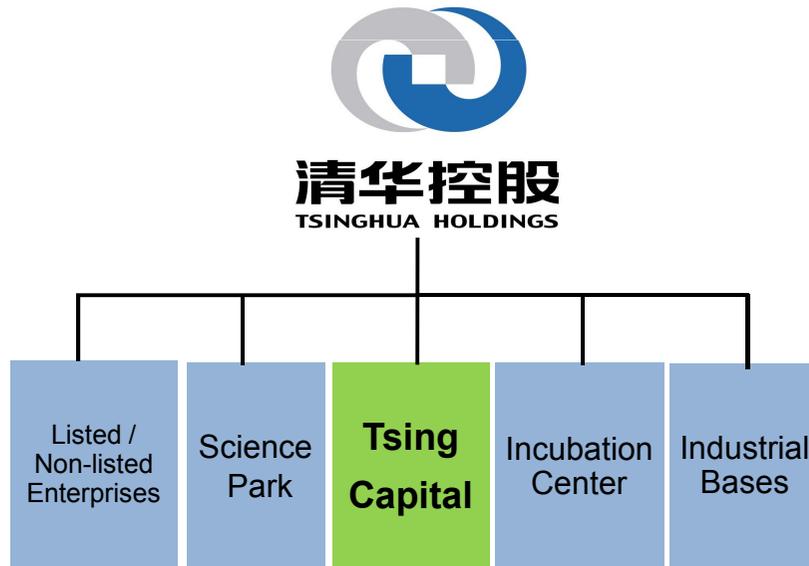
Clean Economy



Tsinghua University Resources

Tsinghua Holdings

- Exclusive asset management arm wholly owned by Tsinghua University
- Almost 100 companies under management
- 32B RMB revenue in 2008



Tsinghua University

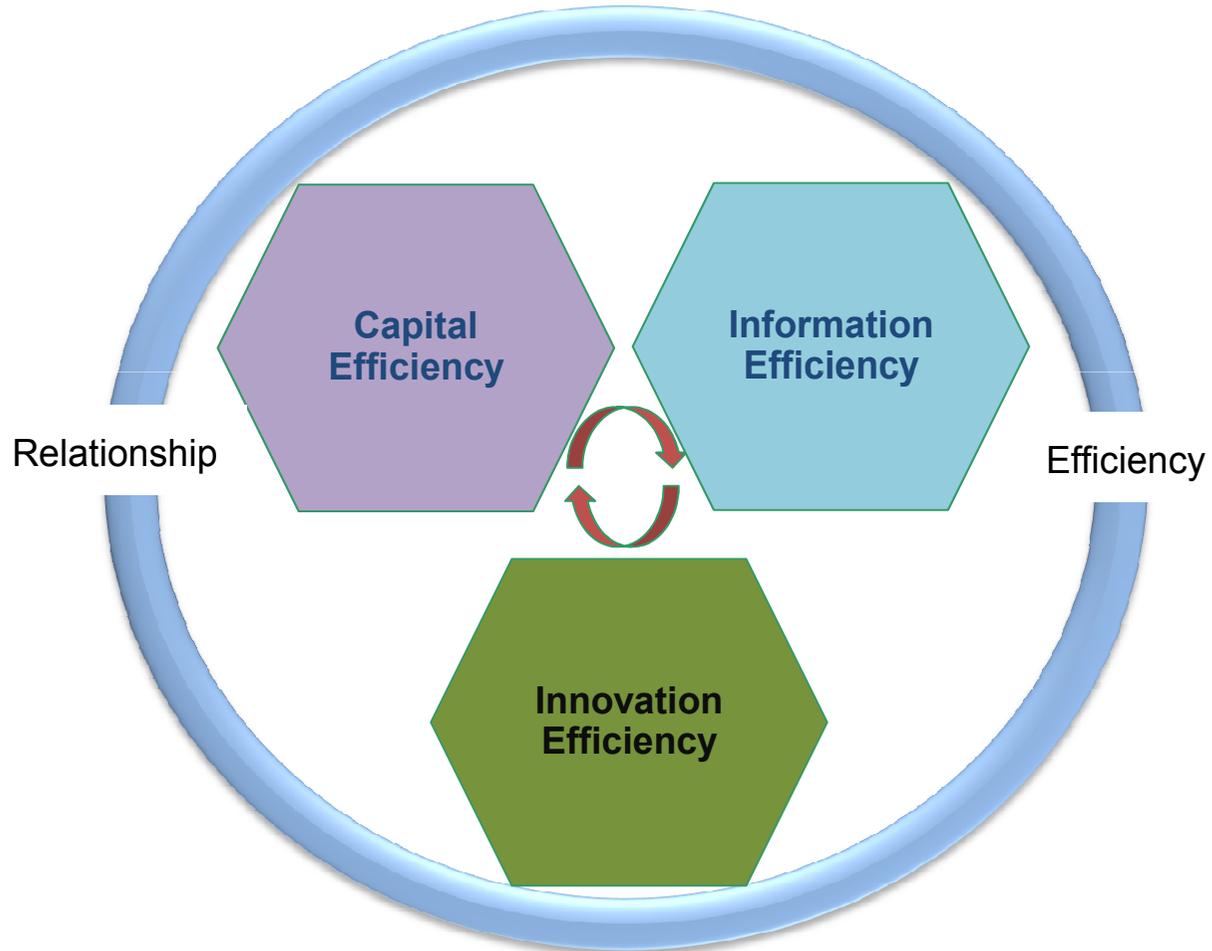
- Internationally recognized, prestigious and influential university in China
- Academic leaders in science and technology, comprising most members of China Academy of Science and China Academy of Engineering
- Leading environmental, automotive, thermal, mechanical, chemical and civil engineering departments in China
- 71 research institutes/centers, 166 laboratories; Over 1,000 new technologies developed annually
- Over 60,000 alumni world wide, all over various sectors
- Strong government backing and extensive deal flow



Cross Border Collaboration Challenges

- **Cross-border cleantech solution commercialization faces the following challenges:**
 - Information Gap
 - Business Culture/Environment Gap
 - Financing Gap
- **Cross-border cleantech collaborations through inter-government initiatives focus heavily on research and early development, which is less attractive for private resources**
- **Cleantech innovations are sprouting in many places and need an efficient system for applying them where they are needed the most**
- **China and the US/Canada present the greatest collaboration and commercialization opportunities and the US-China CERC needs a private channel as a complement to be more effective**

4-Efficiency Theory



Contact Information:

David Gong
Venture Partner, Tsing Capital
Managing Director, Terraza Venture

dgong@terrazaventure.com

Tel: +1 (408) 623-8719

Fax: 8610-8215 1150