

Nanotech Spending in Asia: Government Funding

COMS 2011

Greensboro, NC

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About Us

- Founded in 2006
- Pan-Asia = full coverage of all tech centers
- Focus on small, high-tech clients in US & Europe

HQ in Singapore

- Branch offices:
 - Japan: Tokyo 
 - Korea: Suwon 
 - Taiwan: Hsinchu 
 - Regular contractors:
 - Australia China India Indonesia Malaysia Thailand Vietnam



Report: About The Data

- Compiled during market research process
 - Looking for “pure” nanotechnology projects
 - Applied some filtering
 - NanoGasoline, NanoRefridgerator, etc.
- Rounding due to f/x movements
- Interviews and government publications
- Focused on *per capita* and not PPP
- **US spending = \$4.84**



China

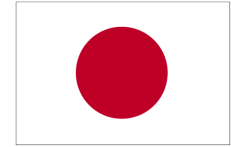


- National, Province, & Municipal funding
- Systemic problems for commercialization
- Very little venture capital or equipment
- Shanghai and Suzhou successes

- Nanotech spending: \$180,000,000
- Population: 1,327,000,000
- **\$0.14 per capita**



Japan



- National & Provincial funding
- Essentially no defense spending on nanotech
 - Materials, Bio, Electronics, etc.
- Bigger companies getting lions' share of gov't \$
 - AIST is the major gov't research lab for nano
- Nanotech spending: \$1,200,000,000
- Population: 127,000,000
- **\$9.44 per capita**



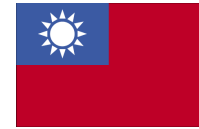
Korea



- National & Provincial funding
- Small but growing domestic market
- A few enormous companies
 - Heavy industry & electronics
- Nanotech spending: \$310,000,000
- Population: 48,500,000
- **\$6.39 per capita**



Taiwan



- National & County funding
 - Primarily through ITRI
- Must export
- Increasing labor shortage

- Nanotech spending: \$185,000,000
- Population: 23,000,000
- **\$8.04 per capita**



Singapore



- National funding only
 - More towards bio
- Lacking venture capital
- Most labor imported
- No domestic market

- Nanotech spending: \$100,000,000
- Population: 4,700,000
- **\$21.28 per capita**



Per Capita review

- **Singapore** **\$21.28**
- **Japan** **\$9.44**
- **Taiwan** **\$8.04**
- **Korea** **\$6.39**
- **China** **\$0.14**

- **USA** **\$4.84**



Rest of Asia

- **Australia: \$100M / 21,300,000 = \$4.69**
 - Will increase
- **India: \$50M / 1,157,000,000 = \$0.04**
 - Will increase significantly
- Indonesia: \$0
- Malaysia: \$25M / 25,700,000 = \$0.97
- Pakistan: \$0
- Philippines: \$0
- Thailand: \$25M / 66,000,000 = \$0.38
- Vietnam: \$10M / 89,600,000 = \$0.11



Common Denominators in Asia

- Nanotech is viewed as key economic driver
 - Bio, Electronics/IT, Environmental, Energy
 - Aging populations
 - Lack of technical labor
 - “New Industrial Revolution”
 - Based on manufacturing
 - 5-year plans typically
 - EHS is growing as a topic



Analysis

- **Japan** remains the strongest
 - Nanotech mostly unaffected by tsunami
- **Singapore** leads in per capita spending
 - Critical mass is not yet there
- **China** most successful at city level
- **Taiwan** has high “hit” ratio
- **Korea** is impressive and rising



Conclusions

- Nanotech spending is increasing in Asia
- PPP is not the key indicator for analysis now
 - \$ per capita is more indicative
- Japan spending the most in real terms & per capita on the widest range of nano
- Taiwan & Korea are smaller but very effective
- China lagging, contrary to news reports



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