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# Emerging Silicon Valley – Asia Entrepreneurial Links: A New Form of Cross-Border Innovation Collaboration?

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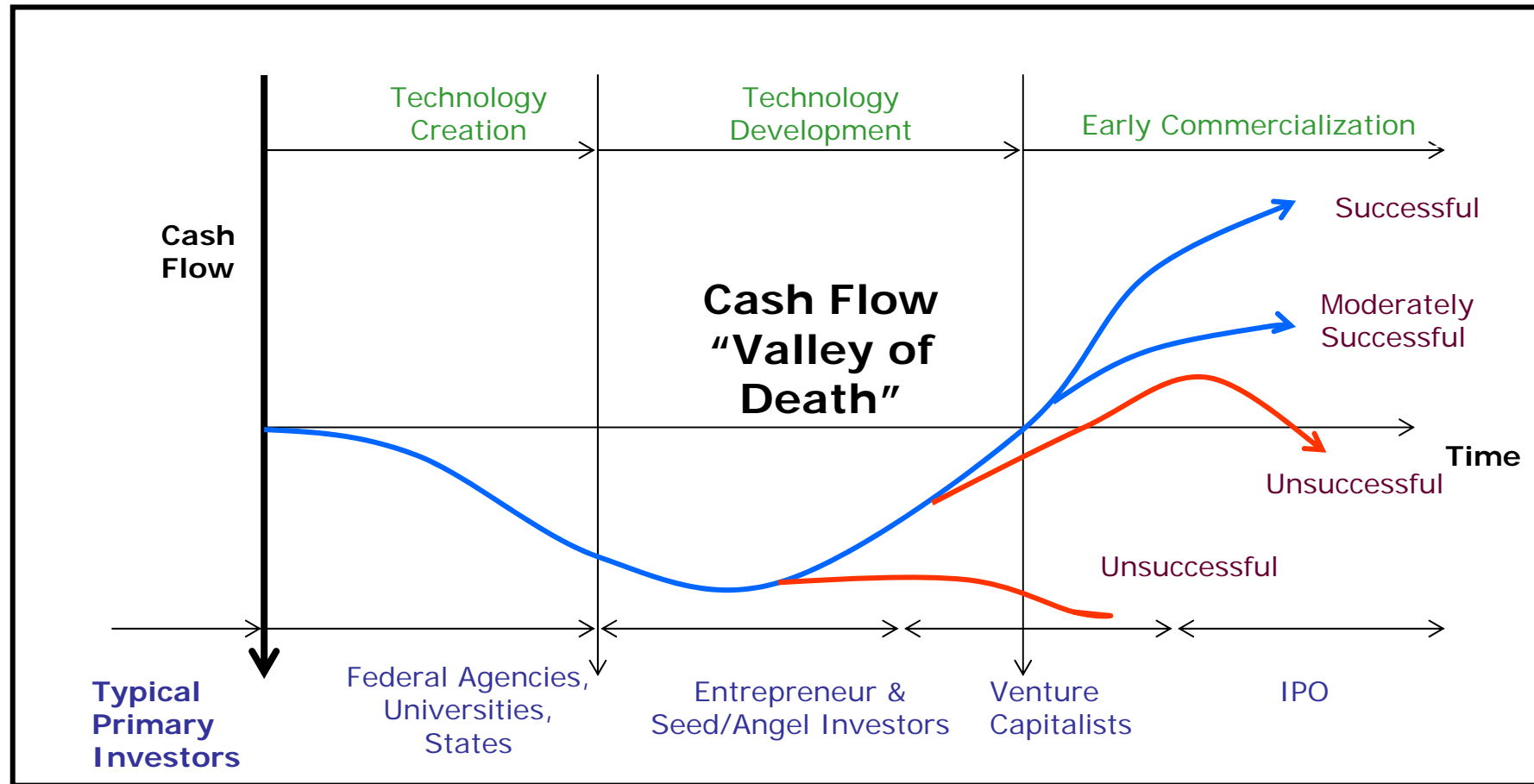
# Commercializing innovation: The critical challenge facing Asia

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- While all Asian countries have been increasing their indigenous investment in R&D, the critical bottleneck lies in the *commercialization* of innovation
  - Foreign MNCs represent an important channel for innovation commercialization, but there is a need for increasing the number and level of innovation capabilities of indigenous firms
  - The classic “Valley of Death” problem for start-ups
  - Even more critical for newly industrializing economies
    - “Lead Users” are often in the more advanced countries → need to target international markets quite early
    - Lack of early stage seed capital funding mechanisms in the domestic economy (sophisticated angel investors, early stage VCs)
- Access to Global Markets, Resources (especially venture capital and experienced entrepreneurs) critical to commercialize indigenous technological innovation
- Such access may be facilitated by *Social Networks*

# Funding Gaps in Innovation Commercialization

The Cash Flow Valley of Death: A wide valley with uncertain outcomes



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Source: Wessner (2004)

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# The role of *social network* in technology commercialization

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- *Social network theory*
  - Markets for information and resource acquisition to discover and exploit opportunities are highly imperfect; hence social networks are used to mitigate the transaction costs involved through mechanisms such as *trust*, *obligations* and *social capital acquisition*
  - Social networks encompass personal, family, business and professional network relationships accumulated over the years, and covers both strong and weak ties (Granovetter)

# Silicon Valley & its connection to Asia

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- As the “overseas diaspora” of highly advanced technical professionals from Asia have continued to grow over the years, there is now a significant pool of experienced Asian immigrant scientists & engineers in the US and Europe that can be tapped for facilitating innovation commercialization back in Asia
- Silicon Valley has been the largest concentration of foreign high tech entrepreneurial talents in the world since the 1980s
- Research by Annalee Saxenian in the late 1990s have found that ethnic Asians accounted for more than ¼ of the high tech start-ups founded in Silicon Valley.
- A later study in 2001 by Saxenian also found that there is a high level of interest among Asian technical professionals working in Silicon Valley to eventually return to their home countries

# SV-Asia Entrepreneurial Links: The advantage of SV-based Asian entrepreneur

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- The ability to discover and exploit opportunities and/or resources in SV AND Asia offers new venues for entrepreneurial value creation
- SV-based Asian entrepreneurs may be pre-disposed and better equipped to discover and exploit such new venues?
  - Opportunity discovery advantage: combination of bi-locational “knowledge corridors” > single-location focused ones
  - Execution advantage: Value creation via SV-Asia links needs to be > costs incurred in building and exploiting such links

# SV-Asia Entrepreneurial Links

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- *Advantages through Bi-locational Social Network*
  - Opportunity discovery advantage: Superior access to “knowledge corridors” in both locations
    - Better *access* to localized knowledge in both locations through information channels established through social networks
    - Prior contextual knowledge (e.g. language, culture, prior domain expertise) to *interpret* and *synthesize* the new information
  - Execution advantage:
    - Lower external transaction costs (e.g. search, negotiation, safeguards against information asymmetry) incurred in resource *acquisition*
    - Lower internal operational costs (e.g. coordination, management) incurred in resource *exploitation*

# SV-Asia Entrepreneurial Links

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- Advantages of *immigrant Asian entrepreneurs* in exploiting bi-locational social networks to develop and exploit entrepreneurial links
  - Social network ties from home country/region + SV
  - Entrepreneurial links already established within SV
- Added advantages of *Reputation* effect if entrepreneur has been “successful” in SV
  - Enhances the “social network status” of the entrepreneur in Asia, thereby facilitating his/her ability to develop and exploit social networks in Asia
  - However, this may be mitigated by over-entrenchment in SV arising from the enhanced “social network status” in SV itself



# SV-Asia Entrepreneurial Links

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## Other Influencing Factors?

- Home country contexts in Asia, including public policies to attract SV-based entrepreneurs in general and Asian entrepreneurs in particular
- Changing environment of Silicon Valley itself
- Technology sectors
- Life-cycle stage of entrepreneur – transition from Creating wealth vs. “leaving a legacy”?

# Silicon Valley – Asia Entrepreneurial Links

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A multi-year study of the leading Asian  
Entrepreneurs in Silicon Valley & their  
emerging links with Asia

STANFORD PROJECT ON REGIONS OF INNOVATION AND ENTREPRENEURSHIP

SPRIE



NUS Entrepreneurship Centre



# SV-Asia Entrepreneurial Links

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## Key Research Questions :

- How do Successful Asian Entrepreneurs in SV use social networks in SV and Asia to *build* and *exploit* SV-Asia entrepreneurial links to discover opportunities, acquire and exploit resources? How do they do this differently from other entrepreneurs?
- What lessons can we learn from their experience so far, so that we can improve the process in the future?
- What salient trends and changes in SV-Asia entrepreneurial links can we predict over the next few years, and what are the venture-practice and policy implications for the venture communities in SV and Asia?

# SV-Asia Entrepreneurial Links

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- *Entrepreneurial activities that span SV and Asia and induce resource flows between them*
- *Entrepreneurial activities:*
  - *Activities to discover opportunities and acquire resources to exploit them*
- Focus on the roles of SV-based Asian entrepreneurs in initiating and shaping such activities

# SV-Asia Entrepreneurial Links

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## Some Preliminary Findings:

- About 15% of CEO/CTO/CFO/COO of high tech ventures funded by leading VCs in Silicon Valley from 1980-2003 are ethnic Asian; proportion significantly higher for ventures funded by Asian VCs with operation in Silicon Valley
- Predominantly immigrant from India, Taiwan and (increasingly) China; some from Southeast Asia, but few from Japan and Korea
- Significant increase in interest among successful Silicon Valley-based Asian entrepreneurs in expanding their entrepreneurial links with Asia

# SV-Asia Entrepreneurial Links

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## Some Preliminary Findings:

- However, a wide range of entrepreneurial roles were found to be pursued by the entrepreneurs interviewed, depending on the life-cycle stages of the Asian entrepreneurs, their prior networks in Asia, and the global resource/market contexts
- The different perceived roles induced different entrepreneurial links between SV and Asia, as well as different venturing models for exploiting the resources and/or markets in Asia
  - SV-centric model
  - Bi-locational model I-III
  - Returnee model

# Scoping of Entrepreneurial Roles

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## **Roles**

Venture creation

Venture execution

Venture investing

Venture mentoring

Venture prospecting

Social change agent

## **Defining Titles**

Founder, co-founder

CEO, CTO, COO etc.

Angel investor

BOD, Advisor, consultant

Networker ??

“Social entrepreneur”  
(Philanthropist, policy  
advisor, educator, etc.)

# Possible SV-Asia Entrepreneurial Links induced by Entrepreneurial Roles of SV-based entrepreneurs

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<b>Roles</b>	<b>Possible SV-Asia Entrep Links Induced</b>
Venture creation	Start up new venture in Asia Raise funding from Asia
Venture execution	Exploit opportunities/resources in Asia Acquire resources from Asia
Venture investing	Invest in Asia-based ventures Invest in entrepreneurs from Asia
Venture advising	Advising Asia-based ventures Advising entrepreneurs from Asia
Venture prospecting	Prospecting/network building in Asia Prospecting/network building among Asian venture community in SV
Social change agent	Initiating activities in Asia Initiating activities among Asian venture community in Asia.



# Building SV-Asia Links: The Venture Perspective

		Resources exploited in:	
		SV	Asia
Opportunities targeted in	SV	 1	2
	Asia	3	4

# Complementarity between SV & Asia

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		Market opportunities	Resources
Location	SV	<ul style="list-style-type: none"><li>•Lead-user</li><li>•Replication potential in US market</li></ul>	<ul style="list-style-type: none"><li>•Technology</li><li>•Talents</li><li>•Venture Capital</li><li>•Supporting ecosystem</li></ul>
	Asia	<ul style="list-style-type: none"><li>•Replication market potential</li><li>•Niche Lead-user</li><li>•Region-specific demand factors</li></ul>	<ul style="list-style-type: none"><li>•Niche Technology</li><li>•Low-cost talents</li><li>•Emerging VCs</li><li>•Facilitating public policies</li></ul>

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# SV-centric venture

		Market opportunities	Resources	
Location	SV	<ul style="list-style-type: none"> <li>• Lead-user</li> <li>• Replication potential in US market</li> </ul>	<ul style="list-style-type: none"> <li>• Technology</li> <li>• Talents</li> <li>• Venture Capital</li> <li>• Supporting ecosystem</li> </ul>	Entrep VCs
	As	<ul style="list-style-type: none"> <li>• Replication market potential</li> <li>• Niche Lead-user</li> <li>• Region-specific demand factors</li> </ul>	<ul style="list-style-type: none"> <li>• Niche Technology</li> <li>• Low-cost talents</li> <li>• Emerging VCs</li> <li>• Facilitating public policies</li> </ul>	

# Bi-locational venture type I – exploiting Asian resources

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		Market opportunities	Resources	
Location	SV	<ul style="list-style-type: none"> <li>•Lead-user</li> <li>•Replication potential in US market</li> </ul>	<ul style="list-style-type: none"> <li>•Technology</li> <li>•Talents</li> <li>•Venture Capital</li> <li>•Supporting ecosystem</li> </ul>	Entrep VC's
	Asia	<ul style="list-style-type: none"> <li>•Replication market potential</li> <li>•Niche Lead-user</li> <li>•Region-specific demand factors</li> </ul>	<ul style="list-style-type: none"> <li>•Niche Technology</li> <li>•Low-cost talents</li> <li>•Emerging VC's</li> <li>•Facilitating public policies</li> </ul>	

# Bi-locational venture type II: exploiting Asian markets

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		Market opportunities	Resources	
Location	SV	<ul style="list-style-type: none"> <li>•Lead-user</li> <li>•Replication potential in US market</li> </ul>	<ul style="list-style-type: none"> <li>•Technology</li> <li>•Talents</li> <li>•Venture Capital</li> <li>•Supporting ecosystem</li> </ul>	Entrep ← VC's ←
	Asia	<ul style="list-style-type: none"> <li>•Replication market potential</li> <li>•Niche Lead-user</li> <li>•Region-specific demand factors</li> </ul>	<ul style="list-style-type: none"> <li>•Niche Technology</li> <li>•Low-cost talents</li> <li>•Emerging VC's</li> <li>•Facilitating public policies</li> </ul>	

# Bi-locational venture type III: exploiting Asian resources & markets

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		Market opportunities	Resources	
Location	SV	<ul style="list-style-type: none"> <li>•Lead-user</li> <li>•Replication potential in US market</li> </ul>	<ul style="list-style-type: none"> <li>•Technology</li> <li>•Talents</li> <li>•Venture Capital</li> <li>•Supporting ecosystem</li> </ul>	Entrep VC's
	Asia	<ul style="list-style-type: none"> <li>•Replication market potential</li> <li>•Niche Lead-user</li> <li>•Region-specific demand factors</li> </ul>	<ul style="list-style-type: none"> <li>•Niche Technology</li> <li>•Low-cost talents</li> <li>•Emerging VC's</li> <li>•Facilitating public policies</li> </ul>	

# “Returnee” venture: exploiting Asian resources & markets

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		Market opportunities	Resources
Location	SV	<ul style="list-style-type: none"> <li>•Lead-user</li> <li>•Replication potential in US market</li> </ul>	<ul style="list-style-type: none"> <li>•Technology</li> <li>•Talents</li> <li>•Venture Capital</li> <li>•Supporting ecosystem</li> </ul>
	Asia	<ul style="list-style-type: none"> <li>•Replication market potential</li> <li>•Niche Lead-user</li> <li>•Region-specific demand factors</li> </ul>	<ul style="list-style-type: none"> <li>•Niche Technology</li> <li>•Low-cost talents</li> <li>•Emerging VCs</li> <li>•Facilitating public policies</li> </ul>

# SV-Asia Entrepreneurial Links

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## **Policy Implications for Asian countries I: from DFI promotion to immigrant entrepreneur promotion**

- The emerging entrepreneurial links between SV and Asia represent opportunities for forging new forms of international collaboration in technology commercialization
  - Beyond existing DFI promotion policy targetted at large, established firms, new policy to target successful SV-based Asian entrepreneurs and VCs?
  - Beyond basic policy of attracting investment by Returnees, also to consider facilitation of other forms of entrepreneurial links
  - Learn from lessons of economies that have been relatively successful in promoting such cross-border links, especially Taiwan
  - Beyond promotion policy targeted at returnees who are own nationals, also to attract other Asian immigrant talents, e.g. Singapore's foreign talent policy



# SV-Asia Entrepreneurial Links

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## **Policy Implications for Asian countries II: Promotion of International *Networking***

- A number of Asian-based high tech social networking organizations have been active in the US in general and SV in particular
  - Monte Jade
  - Hua Yuan
  - TiE
  - SVCWireless
  - AAMA
- Opportunities for Asian governments to leverage the access to such Asian diaspora networks
  - Monte Jade and TiE have both established branches back in Asia

# SV-Asia Entrepreneurial Links

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## **Policy Implications for Asian countries II: Promotion of *Networking* (Continued)**

- Promoting a regional *networking* hub for the Asian high tech venture community
  - E.g. Singapore's Global Entrepolis program
- Program to expose university students to the high tech entrepreneurial culture of advanced innovation hubs in the world
  - E.g the Overseas Internship Program of National University of Singapore (NUS)

# SV-Asia Entrepreneurial Links

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## Conclusions:

- Innovation policy needs to go beyond R&D policy, and must encompass international technology commercialization
- The emerging SV-Asia entrepreneurial links represent a new form of international collaboration in technology commercialization that requires new policy approaches by Asian governments