

Beyond the Digital Divide

- Creating Knowledge Communities

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*Communication Policy Research: south (CPRsouth),
IIT-Madras, December 2007.*

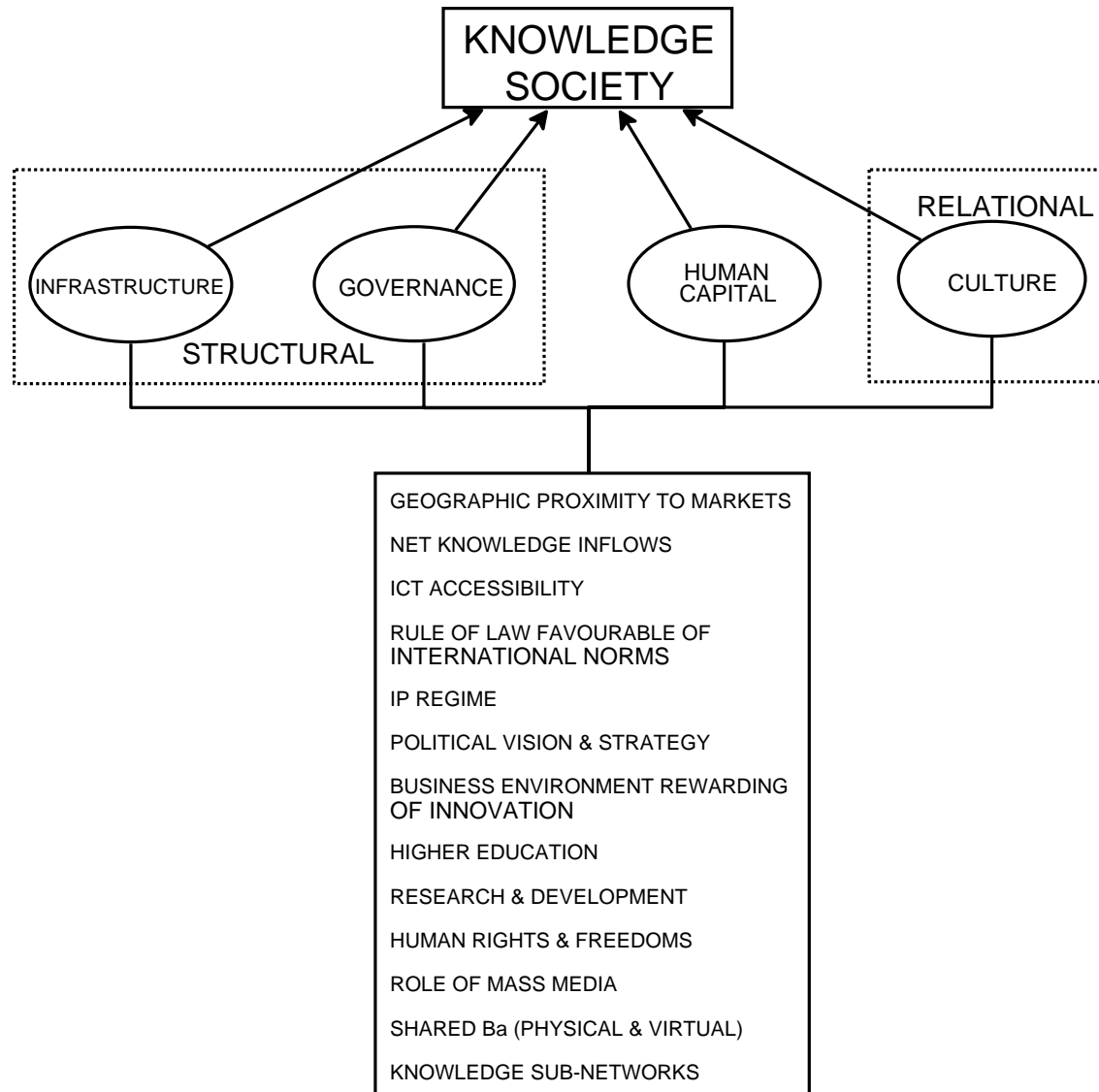
Outline

- What is a Knowledge Community
- A Model and Framework
- Dimensions of Knowledge Communities
- Empirical Observations
- Policy Perspectives
- Closing Remarks

What is a Knowledge Community

- “An economy based on the sharing and diffusion of knowledge provides an opportunity for emerging nations to increase the well-being of their populations.” (Matsuura 2006)
- Examples of several communities which have transformed themselves into network societies favorable to “knowledge seeking, innovation, training and research”.
- Concludes that knowledge sharing is indeed a powerful tool in both the fight against poverty as well as the key to wealth creation.

Model & Framework



Knowledge Community Dimensions

Dimension	Claim	References
1. Geographic Proximity to Markets	Much of the research into knowledge economies stresses the self-reinforcing advantages of having knowledge producers, suppliers and support services concentrated in a certain geographic area as tacit knowledge can be shared, integrated and transferred through informal relationships.	Cheng et al., 2004; Dolfisma, 2006; Foray, 2006; Houghton & Sheehan, 2000
2. Net Knowledge Inflows	UNESCO maintains that providing universal access to knowledge is crucial factor in the transition towards knowledge societies, hence adequate means have to be made to ensure that knowledge is diffused to the greater populace.	Dolfisma, 2006; Ergazakis et al., 2006; Rodrigues, 2002; UNESCO, 2005
3. ICT Accessibility	Successful knowledge societies are often well-connected, with broadband facilities equally accessible to organizations and individuals.	Ergazakis et al., 2006; Mansell, 2002; UNESCO, 2005
4. Rule of Law favourable of International Norms	Globalisation is characterised by rapid increases in the flows of foreign direct investment, capital transfers other than direct investment, trade flows of goods and services, and technology transfer and hence national laws must be harmonised.	Houghton & Sheehan, 2000
5. IP Regime	Intellectual Property Rights (IPRs) regime has to be sound and unbiased because the balance between protecting such IP rights has to be maintained carefully with the need to promote and disseminate the useful knowledge for the advancement of the society.	Dolfisma, 2006; Kahin, 2006; Olssen & Peters, 2005; Powell & Snellman, 2004; UNESCO, 2005
6. Political Vision & Strategy	Governments' political vision and strategy are key factors that are necessary to ensure the success of the transition towards a knowledge society.	Cheng et al. 2004; Conceicao et al., 2003; Ergazakis et al., 2004; Mansell, 2002; Olssen & Peters, 2005

1.	Business Environment Rewarding Innovation	of	A positive business environment would encourage the set-up of more innovative firms, furthering the society's knowledge creation and dissemination.	Ergazakis et al., 2004; Houghton & Sheehan, 2000
2.	Higher Education		Changes have to be made in order for these higher education institutions to stimulate a greater knowledge-sharing culture in our societies.	Ergazakis et al., 2004; Foray, 2006; Olssen & Peters, 2005
3.	Research & Development		A successful knowledge society is one where there is extensive research and development to acquire knowledge and learning for common good.	Ergazakis et al., 2006
4.	Human Rights & Freedom		The assurance of the rights of citizens – the right to access data held by public authorities, civil society participation rights, universal participation and universal access to knowledge – is fundamental to the promotion of human development and leads to a greater citizen empowerment and the sharing of information and knowledge.	Ergazakis et al., 2004; Ergazakis et al., 2006; Foray, 2006; Mansell, 2002; UNESCO, 2005
5.	Role of Mass Media		The role of a fair, open and responsible mass media cannot be understated in the creation of an informed society capable of making collective decisions in a consensual manner so that it remains inclusive of all potential within.	Masterman (1996), Rice (2007, personal communication)
6.	Shared (Physical & Virtual)	Ba &	Knowledge is created when information is put into context ... when people gather in a meeting room and share their knowledge to solve a problem, they are providing a shared context to create new knowledge.	Baqir & Kathawala, 2004; Nonaka et al., 2000; Dvir & Pasher, 2004
7.	Knowledge Sub-networks		The diffusion of knowledge through formal networks and links is augmented by exchanges in such informal networks such as friendships, and these sub-networks can act as localized knowledge repositories.	Cheng et al., 2004

Research Methodology

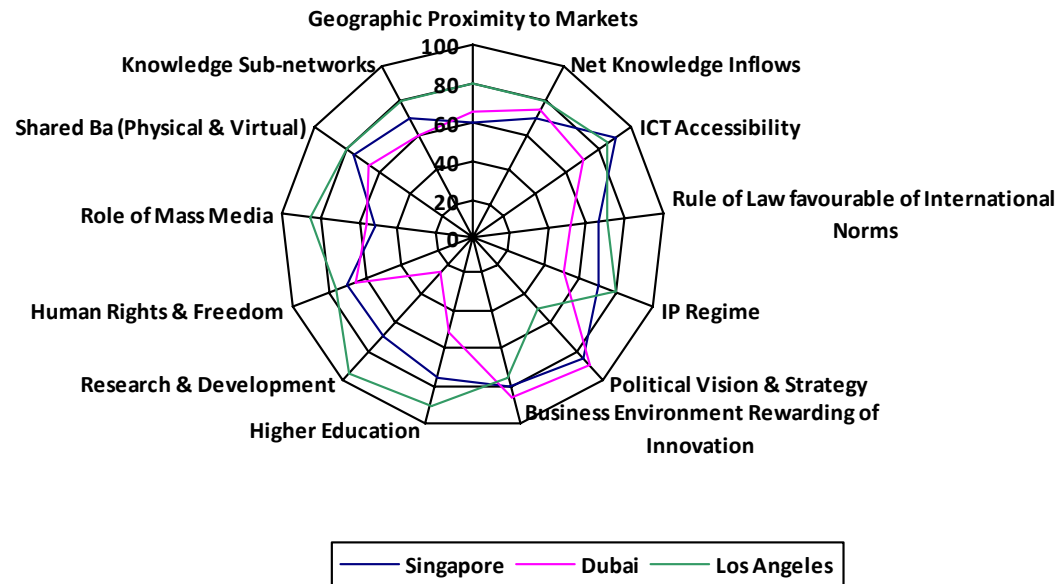
- CSFs from the literature
- Delphi feedback from peers
- Data scanning for composite proxy measures
- Field exercise of SG-Dubai-LA to establish useability
- (conference and journal publication) for validation

Empirical Observations

	HDI Rank	Share of Trade in GDP	GDP per capita	Intangible Capital per capita	FDI Stocks 2006	NRI Rank	Internet Subscribers	Broadband	Government Effectiveness	Rule of Law	Global Peace Index Rank	Patents	NPL Citation	Political Stability	Regulatory Quality	Control of Corruption	BCI Rank	GCI Rank	Ease of doing business rank	Index of Economic Freedom 2007 Rank	Tertiary Attainment	GERD	BERD	RnD Personnel	EU Democracy Index (out of 10)	V&A	Press Freedom Rank	Household Expenditure on Rec & Culture	
HDI Rank	1.00																												
Share of Trade in GDP	-0.46	1.00																											
GDP per capita	0.89	-0.15	1.00																										
Intangible Capital per capita	0.76	-0.03	0.94	1.00																									
FDI Stocks 2006	-0.63	0.24	-0.76	-0.79	1.00																								
NRI Rank	0.69	0.03	0.80	0.73	-0.43	1.00																							
Internet Subscribers	0.38	-0.54	0.36	0.35	-0.32	0.04	1.00																						
Broadband	0.27	0.68	0.22	0.21	-0.11	0.10	0.20	1.00																					
Government Effectiveness	0.72	0.17	0.76	0.70	-0.37	0.92	-0.01	0.18	1.00																				
Rule of Law	0.70	0.23	0.70	0.66	-0.48	0.82	-0.04	0.24	0.87	1.00																			
Global Peace Index Rank	-0.63	-0.26	-0.53	-0.52	0.29	-0.55	-0.07	-0.46	-0.61	-0.60	1.00																		
Patents	0.58	-0.31	0.81	0.84	-0.81	0.71	0.60	-0.02	0.50	0.56	-0.41	1.00																	
NPL Citation	0.55	0.02	0.48	0.39	-0.38	0.53	0.27	0.08	0.62	0.67	0.00	0.34	1.00																
Political Stability	0.58	0.30	0.56	0.58	-0.18	0.78	-0.22	0.17	0.77	0.68	-0.83	0.51	0.06	1.00															
Regulatory Quality	0.72	-0.15	0.72	0.70	-0.32	0.88	0.07	0.16	0.94	0.79	-0.59	0.52	0.59	0.72	1.00														
Control of Corruption	0.70	0.18	0.78	0.74	-0.40	0.89	-0.04	0.11	0.96	0.85	-0.59	0.50	0.57	0.76	0.92	1.00													
BCI Rank	0.68	-0.10	0.84	0.82	-0.60	0.89	0.32	0.06	0.84	0.77	-0.48	0.86	0.38	0.61	0.79	0.84	1.00												
GCI Rank	0.69	0.00	0.83	0.80	-0.55	0.96	0.13	0.14	0.87	0.83	-0.61	0.85	0.42	0.77	0.81	0.85	0.94	1.00											
Ease of doing business rank	0.63	-0.20	0.68	0.61	-0.31	0.94	0.11	0.01	0.90	0.74	-0.46	0.63	0.52	0.68	0.91	0.83	0.86	0.86	1.00										
Index of Economic Freedom 2007 Rank	0.68	-0.19	0.69	0.66	-0.30	0.92	0.02	0.16	0.92	0.79	-0.55	0.54	0.49	0.73	0.96	0.88	0.82	0.85	0.95	1.00									
Tertiary Attainment	0.69	-0.19	0.42	0.03	-0.35	0.71	0.21	-0.01	0.54	0.54	-0.30	0.23	0.40	0.43	0.60	0.41	0.41	0.53	0.85	0.75	1.00								
GERD	0.65	-0.09	0.61	0.41	-0.41	0.70	0.24	0.29	0.55	0.61	-0.46	0.56	0.38	0.55	0.54	0.48	0.49	0.66	0.61	0.60	0.84	1.00							
BERD	0.45	0.11	0.62	0.57	-0.49	0.69	0.23	0.25	0.50	0.59	-0.50	0.78	0.16	0.66	0.41	0.47	0.72	0.79	0.61	0.54	0.51	0.78	1.00						
RnD Personnel	0.57	-0.19	0.57	0.53	-0.67	0.40	0.03	0.21	0.39	0.64	-0.35	0.49	0.13	0.43	0.33	0.38	0.43	0.46	0.35	0.33	0.47	0.49	0.54	1.00					
EU Democracy Index (out of 10)	0.76	0.06	0.72	0.75	-0.62	0.46	0.34	0.35	0.61	0.59	-0.54	0.39	0.37	0.35	0.55	0.59	0.58	0.52	0.46	0.54	0.57	0.38	0.34	0.41	1.00				
V&A	0.80	0.25	0.83	0.89	-0.65	0.59	0.34	0.38	0.71	0.66	-0.56	0.54	0.63	0.46	0.65	0.72	0.70	0.63	0.53	0.60	0.18	0.33	0.36	0.42	0.93	1.00			
Press Freedom Rank	0.74	0.45	0.76	0.79	-0.69	0.48	0.25	0.41	0.61	0.56	-0.62	0.40	0.39	0.47	0.54	0.63	0.57	0.54	0.38	0.46	0.11	0.30	0.29	0.43	0.87	0.94	1.00		
Household Expenditure on Rec & Culture	0.58	-0.48	0.40	0.08	-0.48	0.50	0.12	-0.47	0.52	0.39	0.20	0.10	0.68	-0.08	0.92	0.56	0.55	0.35	0.80	0.78	0.48	0.07	-0.38	0.41	0.55	0.31	0.17	1.00	

Policy Perspectives

- see annex of tables
- Application of framework for public policy



What have we learnt?

- Culture of sharing, tolerance, diversity
- policies that encourage participatory access to knowledge and an integration of various knowledge policies (similar to what Michael Potter might have called the cluster approach to development),
- The idea of leapfrogging or achieving hyper-growth in transforming from an agricultural to a knowledge society is indeed appealing in its theoretical ideal of creating a less disparate world as well as in its practical goal of poverty alleviation. However, our understanding of how such societies may emerge, based on the research reported in this paper, is that such a transformation is not possible without the necessary building blocks of infrastructure, governance, talent and culture. Alas, in the foreseeable future, much of this will be strongly associated with OECD member societies.

Open Discussion

- i) What are some drivers and inhibitors of cultivating knowledge societies?
- ii) What are some measurable characteristics of knowledge societies? Are these causes or outcomes?
- iii) How are knowledge societies of value to humanity at large?