

A note on spatial perspectives: Tacit knowledge, embeddedness and clusters

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Now people are debating about whether HK should and can become, in various senses, the “Switzerland of Asia”, a vision which visitors to this homepage of mine would not be unfamiliar with (e.g. click [here](#) and [here](#)), I feel safe to investigate a little bit further another point that I’ve raised: that of the need for HK to develop “clusters” of leading sectors.

That presupposes, particularly in HK’s context, a “triangular alliance” among the government, the business sector, and the academia in helping the economy to climb the high-tech, high value-added ladder (see the [executive summary of a report by the Hong Kong Foundation for Social Democracy](#) and my two Chinese articles in [October 2001](#) and [February 2002](#)).

Why clusters?

Why bother with these issues? Well, there are still many commentators around who think that the market mechanism plus free trade would allocate resources in the most optimal way. The idea that HK should become this of that is to them total nonsense. Just open up the economic border and everything would be fine. Moreover, in a world of instant Internet connections and communications, there is no need for any “cluster”. R&D could be done in India, with software designed in Ireland and manufactured in Brazil!

This sort of ideology flies in the face of the economic reality, in particular the utterly uneven spatial distribution of resources, wealth and activities over the globe. Other than path-dependence, which implies that serious researchers have to study history, I think a spatial perspective is necessary in developmental models of any worth.

Worrying about “free trade”?

With big companies in the leading IT industries planning to move white-collar jobs aboard, some US conservatives have woken up to the “free trade nightmare”: countries with absolute advantage might absorb all the jobs and even the strongest economy in the world would lose out (see for example, Charles Schumer and Paul

Craig Roberts, “[Exporting jobs is not free trade](#)” and Paul Craig Roberts, “[The trade question](#)”). The fine point is to distinguish between comparative and absolute advantage---something that Ricardo emphasised in his original theory.

Does the US need to worry about “free trade”? Yes and no. Yes, China and India seem destined to become the “Manufacturing Hub of the World” and the “Back Office of the World”. The “rest of the world”, including the US, would lose a lot of jobs and their unemployment situation would worsen, IF they do not respond effectively. And that is a big “if”. The whole idea of continuous upgrading is central to free trade theory, and protectionists are regularly mocked as cowards who dare not face up to the challenges of technology and history. Why is it the turn for the theory’s protagonists to be so threatened this time? ,

Marshall, Krugman and Porter

But the answer is also no. Factors of production, especially high quality labour, will never be totally mobile, because pooling is an important prerequisite to achieving economies of scale and economies of scope. “Clusters” is not a new concept. It could be traced back to the writings of the economist Alfred Marshall on industrial districts; and the “central place theory”---a founding cornerstone in the field of human geography developed by Walter Christaller (1893-1969)---was also about hierarchical clusters. Modern theoretical developments were provided impetus by Paul Krugman’s *Geography and Trade* (Leuven University Press and MIT Press, 1991) and Michael Porter’s *The Competitive Advantage of Nations* (New York: The Free Press, 1990).

In the new era of global sourcing and supply chain management, however, clusters might seem unnecessary. And there are economists and geographers who doubt the wisdom of Krugman and Porter as well as the research they sparked off. For example, Sjoerd Beugelsdijk and Maarten Cornet argue in an empirical piece that “a far friend may be worth more than a good neighbour” (“How far do they reach? The localization of industrial and academic knowledge spillovers in the Netherlands”: www.eco.rug.nl/~los/TEG2002Pap/Cornet.pdf). And Arnould Lagendijk has serious theoretical reservations about the so-called “New Regionalism” approach that underlies many studies (“Will New Regionalism survive? Tracing dominant concepts in economic geography”, EUNIT Discussion paper series, 1997, no. 10: www.kun.nl/gap/user/lage/lag-nr-survive.PDF).

Hierarchy of knowledge: Codified versus tacit

In any case, the strongest argument that supports the continued, and perhaps increasing, relevance of clusters goes back to Marshall's concepts of localised knowledge and industrial agglomerations. The notion of tacit knowledge, explored by economists of the Austrian School such as Hayek, was a central pillar of the thinking of the scientist-philosopher Michael Polanyi (*Personal Knowledge, Towards a Post Critical Epistemology*, London: Routledge, 1958). In our modern context, what can be dispatched through emails and discussed in video conferences is essentially explicit or denotative information and ideas, which may be readily transmittable through electronic means. But in the hierarchy of knowledge, the most subtle and creative element is usually tacit and connotative. That is why it is always enriching to follow a great teacher, no matter how idiosyncratic she or he is, because understanding can never be fully codified or digitalised through web-based learning.

Relating to industrial activities, face-to-face dialogue in an intelligent community is critical to extending the frontier of R&D; so is "praxis" (informed and committed action) by a group of co-researchers. Hence high-quality human capital has to stay in clusters to produce synergy.

In terminology with a socio-technological touch, this is called "embeddedness", a theory initially nurtured by economic sociologists. The innovation process is very often "embedded" in specific institutions and cultures that foster creative thinking and interactions. For a literature review and an empirical study, see Meric S. Gertler, David A. Wolfe and David Garkut, "No place like home? The embeddedness of innovation in a regional economy", *Review of International Political Economy*, 7:4, Winter 2000, pp.688-718 (www.tik.uio.no/gertler.pdf).

Networking and clusters.

From a practical perspective, this kind of observations borders on the common sense. Every successful manager or businessman knows the importance of networking. Personal trust is crucial in building constructive and enduring relations. The other day, a friend of ours who is a regional marketing executive had to be late for lunch because he needed to make an overnight trip to Singapore. When asked whether his trip was actually necessary, he responded, "Do you think I could manage just by emails and video conferencing? Nobody says anything really crucial in them!"

Oh, yes: face-to-face meetings and “informal” activities. One could imagine that the best pieces of intelligence and the most insightful ideas are often exchanged in the hotel corridor or the pub! (For formal models of the economic importance of “F2F” dynamics, see Michael Storper and Anthony J. Venables, “Buzz: Face to Face Contact and the Urban Economy”: <http://econ.lse.ac.uk/staff/ajv/BUZZ9.pdf>.) Hence social networks are instrumental for decision makers to extract “non-redundant” information and for organizations to launch and sustain innovative advancement (see Martin Ruef, “Strong ties, weak ties and islands: structural and cultural predictors of organizational innovation”, *Industry and Corporate Change*, Vol.11, No.3, 2002, pp. 427-449: www.cvn.columbia.edu/jl/readings/Ruef_ICC_2002.pdf). To push the analysis further, networks can facilitate knowledge spillovers, but they have to be actively involved in “associational activity”, resulting in the production and the accumulation of social capital which lubricates entrepreneurial behaviour so that economic benefits may be reaped (Sjoerd Beugelsdijk and Ton van Schaik, “Social Capital and Regional Economic Growth”: www.jyu.fi/ersa2003/cdrom/papers/518.pdf).

Policy implications for dynamic spatial stickiness

There is no doubting that globalisation and IT technology have rendered international division of labour more pervasive. So even “spatial stickiness” has assumed a dynamic characteristic. However, this does not negate the need for innovation based on tacit knowledge; and institutional embeddedness becomes crucial for success, especially at the high value-added end of production and service. The new qualification is that the Schumpeterian process is turning less predictable and more competitive, with greater abrupt changes and discontinuities; while knowledge and information are being constantly created, codified and turned obsolete. As Michael Fritsch said,

“...innovation processes are characterized by an intensive division of labor that has a pronounced spatial dimension... If the current trend continues, we should expect a further increase in labor division, regional specialization, and clustering of innovation activity in the future. The emerging spatial pattern will then be characterized by only a few regional centers of excellence throughout the world for each technological field in which the main market players have to be present in order to monitor technological developments and absorb relevant knowledge.” (“Do Regional Systems of Innovation Matter?” Freiberg Working Paper #3/2003: www.tu-freiberg.de/~wwwfak6/paper/Fritsch_3_2003.pdf).

The policy implications of these observations are profound. It is no longer very meaningful to think of economic development as simply either government-led or market-led, the worn out ideological dichotomy that so many are still fond of debating about. Innovation is a highly complex process; and as I argued, a “triangular strategic alliance” among the government, the business sector, and the academia is required to foster an operating environment that is conducive to the formation of a core with suitable peripheries, as well as the propagation of the proper dynamics. Just setting up a science park with physical infrastructure and investment benefits, and grouping companies and experts together is not sufficient, as Su-Ann Mae Phillips and Henry Wai-chung Yeung analyse in the case of Singapore (“A Place for R&D? The Singapore Science Park”, *Urban Studies*, Vol.40, No.4, 2003, pp.707-732: http://courses.nus.edu.sg/course/geoywc/publication/2003_UrbanStudies.pdf). Indeed, “institutional thickness” and “local embeddedness” are essential, and they need the right types of networks, enabling conditions and interactive dynamics. Of course, for HK, even the appropriate infrastructure and incentives have not yet been put in place.

A sense of irreversibility in history

Cities do rise and fall economically, and the speed seems to be picking up. The world increasingly becomes a ruthless arena for regions to engage in the intense competition for quality and excellence. Decisions at critical historical junctures would have far-reaching or even irreversible effects. And economists are paying more and more attention to the phenomena of path dependence and hysteresis (see, for example, Anthony J. Venables, “Economic Policy and the Manufacturing Base: hysteresis in location”: <http://econ.lse.ac.uk/staff/ajv/envntloc.pdf>).

The further economic “integration” between HK and Mainland China is a high-risk and, one hopes, high-return developmental path for the SAR, particularly if it is ill prepared and still under the illusion of “free trade”---an illusion that even some conservatives in the US are beginning to question. Clusters may form or dissolve down the road. Watch out!