

## ✓ Knowledge and Thai Networks in the New East Asian Region

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*Response to the Financial Crisis of 1997 and to globalization has deepened regional integration among the ASEAN Plus Three. But the new regional competition for foreign investment and trade demands constant industrial upgrading in Thai supporting industries. Improving vertical and horizontal knowledge transfer among Thai small and medium-size enterprise is one challenge. Stronger networks among Thai SMEs will promote more effective transfer of knowledge. The paper concludes with strategies for embedding networks in Thai supporting industries to promote knowledge transfer.*

Regions integrate nations around common economic and political interests. The European Union, NAFTA, and ASEAN have forced a rethinking of national interest among member states. Other fora with non-binding agreements such as ASEAN plus 3 and APEC have come to the fore more recently to promote not only common market development, but also coordination of security priorities.<sup>1</sup> Indeed the growth of intra-regional trade has led to a *de facto* integration outpacing government discussions of *de jure* intra-regional institutions of governance. If a more inclusive ASEAN Plus 3, as well as the convergence of economic and security priorities have given impetus to a New East Asian Regionalism, how will this affect

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<sup>1</sup> ASEAN Plus Three includes the ten member states of ASEAN plus China, Japan, and South Korea. See [www.aseansec.org](http://www.aseansec.org)

Thai prospects for industrial upgrading?<sup>2</sup> If priorities of economic efficiency now take precedence over nationalism, and market liberalization trumps state-directed development, how do nations promote national goals within the new regional orders?

Globalization has brought not only the expansion and intensification of trade and investment across national borders, but also the integration of such flows by transnational firms. Some see regionalism with preferential trade agreements as a hedge against the instability of cross-border flows of capital and goods. Others look to regionalism as an opportunity to expand into global flows from a regional base. A revolution in communications and information technologies has intensified globalization and radically changed the spatial configuration of the firm, the industrial sector, the national economy and indeed of national economic interests. Global sourcing, the mobility of capital, and the ease of relocating production technologies now foster global value chains across national borders. How do nations gain a foothold in these chains? What might anchor production within national borders despite the attraction of lower-cost production sites abroad? *Structural embeddedness* is one response to globalization among developing nations. To *embed* means to incorporate firms into local, spatially anchored networks, which facilitate information exchange and learning.<sup>3</sup>

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<sup>2</sup> Philippe Regnier, "Economic Cooperation in East Asia: Revisiting Regional Concepts and the Subregional Case of ASEAN." Pp. 52-67 in Fuo-Kuo Liu and Philippe Regnier, eds., *Regionalism in East Asia: Paradigm Shifting?* London: RoutledgeCurzon, 2003. P. 62. See also Fu-Kuo Liu and Philippe Regnier, "Prologue: Wither Regionalism in East Asia?" Pp. xiii-xxxi in Fuo-Kuo Liu and Philippe Regnier, eds., *Regionalism in East Asia: Paradigm Shifting?* London: Routledge Curzon, 2003. Kent Calder had earlier written of changes in Northeast Asia. Kent E. Calder, "The New Face of Northeast Asia." *Foreign Affairs* 80, 1 (January/February 2001): 106-122.

<sup>3</sup> Michael Taylor and Simon Leonard, "Approaching 'Embeddedness'." Pp. 1-18 in Michael Taylor and Simon Leonard, eds., *Embedded Enterprise and Social Capital: International Perspectives*. Burlington VT: Ashgate, 2002. P. 3

Global strategies of production have ironically enhanced the specificity of the local. David Harvey wrote of the growing significance of local “fragmentations” for social identity and action, in the face of expanding standardization and homogenization across borders. Emerging global unities enhance local distinctiveness. As borders shrink and global capital seeks out production sites, there is a growing appreciation for what makes a place “special and gives it a comparative advantage.”<sup>4</sup> The struggle for inclusion in global value chains has already sparked discussions of moving Thailand’s “supporting industries” from labor-intensive to higher value-added production. How can Thailand anchor the foreign investments already in place and attract new foreign capital and technology in competition with its regional neighbors? Perhaps more to the point, how can Thailand survive the China challenge?

Knowledge is the critical resource for inclusion in global value chains. Success in the new regional competition for foreign investment and trade will demand constant industrial upgrading in Thailand’s supporting industries.<sup>5</sup> The question then is how can the nation improve vertical and horizontal knowledge transfer among Thai firms? Stronger social networks are one answer. Improved networking among Thai small and medium-size enterprise will promote more effective transfer of knowledge. I begin with knowledge, continue with networks, and conclude with strategies for embedding networks in Thai supporting industries to promote knowledge transfer.

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<sup>4</sup> David Harvey, *The Condition of Postmodernity*. Cambridge Massachusetts: Blackwell, 1990.

<sup>5</sup> See my comparison of the Korean and Thai trajectory in regional production networks. Dennis L. McNamara, *Market and Society in Korea - Interest, Institution and the Textile Industry*. London: Routledge Press, 2002. pp. 173-177.

## 1. Knowledge

Knowledge can be defined either as a reflection or replication of objective reality, or more as a belief within a particular set of experiences. Nonaka takes the latter “constructivist” approach in defining knowledge as “justified true belief,” conditioned by the subject’s point of view, their sensibility, and the character of their experiences. The same author then looks to the context that “harbors meaning,” a shared time and space in which knowledge is created and shared.<sup>6</sup> Daniel Bell had earlier written more simply of *knowledge* as simply a statement of facts based on a reasoned judgment, but was careful to distinguish knowledge from simply news or entertainment.<sup>7</sup> Castells later followed Bell’s lead in distinguishing *knowledge* from *information* or more simply, ‘data.’<sup>8</sup> A parallel distinction between tacit knowledge and codified or explicit knowledge has gained wide attention in the literature on knowledge and technology transfer in the development process.<sup>9</sup> What does the information revolution mean for the transfer of explicit and tacit knowledge among middle income countries seeking to move up the industrial ladder?

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<sup>6</sup> Ikujiri Nonaka, Georg Von Krogh, and Kazuo Ichijo, eds., *Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Innovation*. Oxford: Oxford University Press, 2000. pp. 6-7, 265. Ikujiri Nonaka, Noboru Konno, and Ryoko Toyama, “Emergence of ‘Ba:’ A Conceptual Framework for the Continuous and Self-transcending Process of Knowledge Creation.” Pp. 13-29 in Ikujiro Nonaka and Toshiro Nishiguchi, eds. *Knowledge Emergence*. Oxford: Oxford University Press, 2001. pp. 13-14.

<sup>7</sup> Daniel Bell, *The Coming of the Post-industrial Society: A Venture in Social Forecasting*. New York: Basic Books, 1973. p. 175

<sup>8</sup> Manuel Castells, *The Rise of the Network Society*. Volume I, *The Information Age: Economy, Society and Culture*. Malden MA: Blackwell, 1996. p. 17, fn. 27.

<sup>9</sup> See for instance Slavo Radosevic, *International Technology Transfer and Catch-up in Economic Development*. Cheltenham, UK: Edward Elgar, 1999. P. 72.

Knowledge is controlled and shared in global markets today largely within global value chains of production and marketing. The concept of such chains extend the continuity of production and distribution to organization among lead firms and suppliers, and to institutions of the public and private sector sustaining the flows. Gereffi wrote of “sets of inter-organizational networks clustered around one commodity or product,<sup>10</sup>... that underscore the embeddedness of economic organization.” Writing further of what he earlier termed “commodity chains,” Gereffi emphasized how they have “expanded the scope of global integration by altering how people, resources, and places are connected in economic transactions.<sup>11</sup> Henderson recently extended the insights on organization or governance with a focus on corporate ownership, both domestic and foreign, particularly among lead firms in the Global Value Chains.<sup>12</sup> For instance, how do hubs in Toyota’s auto production network differ from those of General Motors? How do nodes in the global production and distribution network of a trading company like Itochu in textiles and garments differ from those of a chemical

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<sup>10</sup> Gary Gereffi and Miguel Korzeniewicz, eds., *Commodity Chains and Global Development*. Westport CT: Praeger, 1994. p. 2

<sup>11</sup> Gary Gereffi, “Shifting Governance Structures in Global Commodity Chains, with Special Reference to the Internet.” *American Behavioral Scientist* 44, 10 (June 2001): 1616-1637. 1616

<sup>12</sup> Jeffrey Henderson, “Globalization on the Ground: Global Production Networks, Competition, Regulation and Economic Development.” Working Paper Series Paper No. 38, Centre on Regulation and Competition, Institute for Development Policy and Management, University of Manchester. <http://idpm.man.ac.uk/crc> Henderson offers a valuable new perspective on the local context of value chains, but the insertion of a totally new term, i.e., “global production networks” appears neither accurate nor helpful in developing a common theoretical perspective. One obvious problem with “production networks” is the fact that production, distribution, and marketing are usually implied.

and textile manufacturer like Dupont?<sup>13</sup> Networks extend our understanding of “hubs” from logistics centers to integrated clusters of firms, associations, and governments in specific sectors of the economy closely linked in a vertical flow.

We can visualize knowledge transfer within the chains along two dimensions. A vertical flow of information develops between the transnationals and the local suppliers. Explicit knowledge of organization and technology moves along this axis in the form of specifications and manuals, and often through seminars or even training sessions at the headquarters of the transnationals. The transfer of tacit knowledge is more difficult along this vertical axis, given differences in culture and experience, and limited opportunities for the shared space and time of communication. A recent article on the posting of home firm employees to subsidiaries and affiliates highlights the distinctive patterns of transfer among Japanese firms.<sup>14</sup> Japanese nationals in Toyota, Toray, or Itochu face a similar challenge in interactions with local employees at Thai subsidiaries. A horizontal flow of knowledge is necessary among a cooperating group of supporting industries within the target nation. For instance Thailand’s SMEs in automobile production or textiles supporting

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<sup>13</sup> Dennis L. McNamara, “Trust and Technology Transfer in Global Production Chains.” Pp. 180-188 in International Social Economy Association ed., *Proceedings of the International Symposium on Unemployment and Poverty - Causes and Remedies*. Rome: INAIL, 2002. See also a later paper, “Global Sectors, National Systems, and Local Societies - Japan’s Production Networks in Asia.” Paper presented at RC 02 Plenary Session, “Asian Models of Economy and Society,” XVth World Congress of the International Sociological Association in Brisbane, Australia, July 8, 2002.

<sup>14</sup> James R. Lincoln and Christina Ahmadjian, “*Shukko* (Employee Transfers) and Tacit Knowledge Exchange in Japanese Supply Networks: The Electronics Industry Case.” Pp. 247-269 in Ikujiro Nonaka and Toshiro Nishiguchi, eds. *Knowledge Emergence*. Oxford: Oxford University Press, 2001.

a particular firm will learn similar organization and production techniques, and work with similar specifications. Continuities of location, ethnicity, schooling, or religion, often promote a cultural basis for transferring tacit knowledge as well. The transfer of technologies, whether of tools or organization, is certainly a precondition for effective industrial upgrading. But the transfer of tacit as well as explicit knowledge is necessary to deepen and extend the benefits.

## 2. Networks

Giddens emphasized the “disembedding” from place and local practice in the process of modernization and globalization. Customs and practices identified with a particular village, region, or nation are disembedded with the influx of international trade and investment.<sup>15</sup> Others have highlighted the extension of global patterns with the “penetration of world market rhythms to connect physically separate communities,” and of “integration into the new time and space of world markets.”<sup>16</sup> Modern society tears space from place as we spend more of our lives in interaction with absent others, communicating at a distance. As disembedded institutions come to join local practice with globalized social relations,<sup>17</sup> local networks must adapt vertically and horizontally, globally and locally. How do these local practices become re-embedded in global patterns?

Castells wrote of a “space of flows” in contrast to a “space of place.” Whereas location in a specific geographical space has long been the basis of personal and national identities, the confluence of

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<sup>15</sup> Anthony Giddens, *The Consequences of Modernity*. Stanford CA: Stanford University Press, 1990.

<sup>16</sup> Philip McMichael, *Development and Social Change - A Global Perspective*. Thousand Oaks, CA: Pine Forge Press, 2000. xi.

<sup>17</sup> Bernice A. Pescosolido and Beth A. Rubin, “The Web of Group Affiliations Revisited: Social Life, Postmodernism, and Sociology.” *American Sociological Review*, 2000. Vol. 65 (February 2000): 52-76. p. 65.

globalization and emergence of an “informational society” has dramatically changed dominant patterns of social organization. Flows of capital, technology, information, or indeed of interactions among organizations have come to shape much of what we produce and consume. The space of flows might be described as “the material organization of time-sharing social practices that work through flows.” Such flows characterize what Castells termed, the “network society.”<sup>18</sup> People now live out their lives at the nexus of the space of flows and the space of place, of simultaneous globalization and localization. Transnational investment in local production joins the international flows of capital, technology, and demand in a specific domestic space or place. Anchoring and extending that investment depends in part on the embedding of new vertical and horizontal networks.

The dialectic of the space of flows and the space of place has turned attention to both geography and society. On the one hand, Michael Porter highlighted interrelationships among firms and governance in value chains across borders with his study of the “diamond of national advantage.” Factor conditions including location, were balanced with favorable domestic demand, a web of supporting industries, and good governance.<sup>19</sup> Scholars then joined insights on value chains from the business literature with sociological studies of commodity chains to what we now read of as “global value chains.”<sup>20</sup> On the other hand, Piore and Sable highlighted “flexible

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<sup>18</sup> Castells, *The Rise of the Network Society*, Volume I, p. 425

<sup>19</sup> M. Porter, “The Competitive Advantage of Nations,” *Harvard Business Review* (March-April 1990): 73-93.

<sup>20</sup> See for instance John Humphrey and Olga Memedovic, *The Global Automotive Industry Value Chain: What Prospects for Upgrading by Developing Countries*. UNIDO [United Nations Industrial Development Organization] Sectoral Studies Series. Vienna: UNIDO, 2003. Gary Gereffi and Olga Memedovic, *The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries*. UNIDO [United Nations Industrial Development Organization] Sectoral Studies Series. Vienna: UNIDO, 2003.

specialization” of local SMEs in industrial districts such as the Emilio-Romagna region of northern Italy as the “second divide,” or a new stage of industrialization where rapid response to changing consumer tastes favors smaller over larger firms.<sup>21</sup>

Ann Markusen later examined why certain places manage to anchor productive activity while others do not. Among factors in the anchoring process, of particular interest here are the role of the state as rule maker and as supporter of innovation, the role of large firms, and the embeddedness of firms locally and in networks across national and international space.<sup>22</sup> Markusen proceeded to distinguish a variety of industrial districts, quite different from the Italian model of strong socially embedded local ties buttressing knowledge transfer among SMEs. Indeed, she found little evidence of such districts in either Japan or South Korea, and highlighted instead a hub-and-spoke model of large local or transnational firms supporting a network of smaller supporting industries.<sup>23</sup> The latter model seems more representative of Thai supporting industries in textiles and automobiles.

Meanwhile Walter Powell proposed socially embedded networks as a distinctive type of exchange between impersonal market ties and the hierarchical organization of firms.<sup>24</sup> This work coincided with a range of studies on network organization in

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<sup>21</sup> Michael J. Piore and C. F. Sabel, *The Second Industrial Divide: Possibilities for Prosperity*. New York: Basic Books, 1984.

<sup>22</sup> Ann Markusen, “Sticky Places in Slippery Space: A Typology of Industrial Districts.” *Economic Geography* vol. 72 (1996): 293-313. p. 295-6.

<sup>23</sup> See my own paper on such networks, particularly as these networks move abroad. Dennis L. McNamara, “SME Networks in Northeast Asian Industrial Districts - Bridging Local and Global Markets.” Paper presented at APEC Study Center Consortium Conference in Phuket, Thailand, May 25-28, 2003.

<sup>24</sup> Walter W. Powell, “Neither Market Nor Hierarchy: Network Forms of Organization.” Pp. 295-336 in L. L. Cummings and Barry M. Staw, eds. *Research in Organizational Behavior*. London, England: Jai Press Inc., 1990.

Asian capitalism,<sup>25</sup> including the contrast between the hierarchical networks of the Japanese keiretsu and the Korean chaebol, versus the horizontal, networks of the ethnic Chinese SMEs.<sup>26</sup> Richard Stubbs argued that a distinctive way of doing business had emerged in the Asian region, “that emphasizes networks of companies, flexibility..., and operating in conjunction with governments and public enterprises.”<sup>27</sup> The Thai case highlights the interaction of Japanese foreign investment with largely ethnically Chinese local partners, a blend of quite different types of networks. Apart from joint ventures, the majority of Thai supporting industries remain SMEs of ethnic Chinese ownership and management.

Thai SMEs include 118,646 enterprises out of a total of 126,704 in the manufacturing sector, or 98% of the total number of manufacturing firms. The SME is defined as having a workforce of less than 200 people, and fixed assets of less than 100 million baht. The vast majority of SMEs are located in the Greater Bangkok Metropolitan Area, with some to the Northeast and Northern regions

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<sup>25</sup> Among earlier works see Marco Orru, Nicole Woolsey Biggart, and Gary G. Hamilton, “Organizational Isomorphism in East Asia.” Pp. 361-389 in Paul DiMaggio and Walter W. Powell, eds., *The New Institutionalism in Organizational Analysis*. Chicago: the University of Chicago Press, 1991. Gary Hamilton, Gary G., William Zeile and Wan-Jin Kim, “The Network Structures of East Asian Economies.” Pp. 105-129 in Stewart R. Clegg and S. Gordon Redding (eds.). *Capitalism in Contrasting Cultures*. Berlin: Walter de Gruyter, 1990.

<sup>26</sup> Among recent studies see Ming Yue, “Kinships and Competitiveness: Overseas Chinese Business Networks and the Pattern of East Asian Regionalism.” Ph.D. dissertation, Cornell University, Political Science, May 2003. See also Dajin Peng, “Ethnic Chinese Business Networks and the Asia-Pacific Economic Integration.” *Journal of Asian and African Studies* 35, 2 (May 2000): 229-250.

<sup>27</sup> Richard Stubbs, “Asia-Pacific Regionalization and the Global Economy - A Third Form of Capitalism?” *Asian Survey* 35, 9 (September 1995): 785-797. p. 796

as well.<sup>28</sup> The Ministry of Industry established a Master Plan for SME development in 1998. Among their priorities was a strategy to “develop networking SMEs and clusters.” Measures included pilot projects for clusters in each region, promotion of associations and business relations as a step towards cluster relationships, and provision of infrastructural support and financing.<sup>29</sup>

What does the link between geography and society in industrial clusters tells us of knowledge-transfer necessary for industrial upgrading in supporting industries? It appears that collective efficiency within clusters of SMEs “emerges where trust sustains inter-firm relations and where traders connect clusters to sizeable markets.”<sup>30</sup> Trust or *social capital* has been described as “the resource available to actors as a function of their location in the structure of social relations,” or their embeddedness within social networks.<sup>31</sup> Networks in turn might be equated with high-trust relationships, and social networks as interpersonal relationships nurtured through face-to-face interactions.<sup>32</sup> With new appreciation for trust and social capital, scholars have drawn a link between proximity and innovation as a means towards collective learning. Perhaps most important,

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<sup>28</sup> Suthiphand Chirathivat, and Nathavit Chantrasawang, “Experience of SMEs in the Financial Crisis in Thailand.” Pp. 85-100 in Moha Asri Adbullah and Mohd. Isa Bin Bakar, eds. *Small and Medium Enterprises in Pacific Countries*. Volume I: Roles and Issues. Huntington New York: Nova Science Publishers, Inc., 2000. P. 87.

<sup>29</sup> Peter Brimble, David Oldfield and Manusavee Monsakul, “Policies for SMEs Recovery in Thailand.” Pp. 202-237 in Charles Harvie and Boon-Chye Lee, eds., *The Role of SMEs in National Economies in East Asia*. Cheltenham, UK: Edward Elgar, 2002. p. 217-218. Regnier, Philippe, *SMEs in Distress: Thailand and the East Asian Crisis and Beyond*. London: Ashgate, 2000. pp. 73-87.

<sup>30</sup> Institute of Developing Societies, University of Sussex, “Clustering: Route to Industrial Competitiveness?” *IDS Research*. [www.ids.ac.uk/ids/global/vw.html](http://www.ids.ac.uk/ids/global/vw.html)

<sup>31</sup> Paul S. Adler and Seok-Woo Kwon. “Social Capital: Prospects for A New Concept.” *Academy of Management Review* Vol. 27, No. 1 (2002): 17-40. P. 17.

<sup>32</sup> Frank McDonald and Giovanna Vertova, “Clusters, Industrial Districts and Competitiveness.” Pp. 38-64 in Rod B. McNaughton, ed., *Global Competition and Local Networks*. Burlington VT: Ashgate, 2002. p. 51

a consensus is emerging on the social, inter-connected bases of innovation including local business systems, universities, research institutes within and beyond the firm.<sup>33</sup>

### 3. Embedding Thai Networks

Local networks of Thai SMEs in the automobile and textile sectors support upstream foreign invested larger firms. While this fits the hub-and-spoke model above, we cannot overlook the critical role of foreign technology and investment from the upstream firms. Fruin distinguished one type of network particularly relevant here: “socially constructed networks that enhance markets without replacing or diminishing hierarchy’s role and function.”<sup>34</sup> Upstream Taiwanese, Indian, and Japanese firms in textiles, or U.S. and Japanese firms in automobile production remain the key to technology and knowledge among their supporting local industries. Global firms need to regularly upgrade their local production to maintain a competitive edge abroad. The question then is not simply local access to the information and tacit knowledge necessary for higher value-added production, but rather the process of transfer. Proximity and interaction, or clustering and social networking appear to foster knowledge transfer, particularly among SMEs. I looked to clustering and development of hubs in an earlier paper.<sup>35</sup> I focus here on strategies for strengthening social networks among clustered Thai SMEs in the two sectors.

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<sup>33</sup> Philip Raines, “Cluster Policy - Does it Exist?” Pp. 21-36 in Philip Raines, ed. *Cluster Development and Policy*. Burlington VT: Ashgate, 2002. p. 27

<sup>34</sup> Mark Fruin, “Analyzing Pacific Rim Networks and Markets: An Introduction.” Pp. 3-31 in Mark Fruin, ed. *Networks, Markets, and the Pacific Rim*. Oxford: Oxford University Press, 1998. p. 9

<sup>35</sup> Dennis L. McNamara, “From Local Clusters to Regional Hub - Thailand’s Next Challenge.” Paper for 2003 Korean Studies Conference on “Korea’s Globalization” sponsored by the Institute of East Asian Studies, Thammasat University, Bangkok Thailand, November 27-28, 2003.

Markusen cited examples of the hub-and-spoke clusters such as Toyota City near Nagoya, Japan, Ulsan with its Hyundai Plants in South Korea, or the Boeing aircraft plants in Seattle, Washington. Unlike the northern Italian model of the industrial district, the hub-and-spoke model lacks the structures and solidarities that promoted knowledge transfer in Italian SMEs. Flexibility and shared innovation were possible in the Italian case due to strong trade associations, strong identification with the local area, and ‘frequent and intensive exchanges of personnel between customers and suppliers.’<sup>36</sup> She also noted local governance structures ensuring stability, including strong labor unions, local city administrations, and banks with “patient capital.” In contrast, the hub-and-spoke clusters find workers identified mainly with the larger firm rather than the area, and were less likely to cooperate with local SMEs outside the suppliers for the main firm.

There are disadvantages to dependence on larger firms.<sup>37</sup> Brian Uzzi cited the loss of flexibility with the withdrawal of core firms from the network, depriving dependent SMEs of not only a customer base, but also of a source for knowledge of markets and products. New institutional arrangements such as consolidation of suppliers, or as we have seen in Thailand, the easing of local content requirements, or trade liberalization facilitating supply from the core firm’s home country could pose a further problem for dependent SMEs. Others have observed the problem of “over-embeddedness” where limited links beyond the network can also undermine the flexibility of local SMEs. A recent study of the famed Ohta District of Japanese SMEs supplying automobile and electronics firms

<sup>36</sup> Ann Markusen, “Sticky Places in Slippery Space: A Typology of Industrial Districts.” *Economic Geography* vol. 72 (1996): 293-313. P. 301.

<sup>37</sup> Brian Uzzi, “Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness.” *Administrative Science Quarterly* 42 (1997): 35-67. pp. 57-60

highlighted these same problems.<sup>38</sup> Uzzi cited three factors affecting the flexibility of networked relationships among small and medium sized firms: 1) quality of social ties, 2) structure of the SME network, and 3) the firm's structural position in the network. Effective networks permitted extensive knowledge transfer. The author cited the exchange of "fine-grained" knowledge, not only more detailed and tacit than price data, but also more holistic.<sup>39</sup>

Hub-and-spoke patterns of vertical ties with transnationals provide access to global markets, and to the technology necessary for higher value-added production. But vertical ties can take precedence over horizontal ties, sometimes limiting backward linkages to the affiliates or joint ventures of the transnationals. How can we promote more effective horizontal knowledge-transfer among Thai SMEs in the sectors of automobile or textile & garments? Markusen singled out the role of the state and transnationals, and the incorporation of local SMEs both locally and across national and international markets. The same author raised the possibility of transitions among types of industrial districts, i.e., of how a hub-and-spoke pattern might evolve towards the more embedded and better anchored Italian model of collective efficiency.<sup>40</sup> Stronger local institutions promoting cooperation and competition might promote such a transition. Trade associations among SMEs might foster special training programs in production and marketing. Industry specific research and standards institutes might strengthen quality control across the industry. The Thai Textile Institute and the Thai Automotive Institute

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<sup>38</sup> Tsutomu Nakano, "A Paradox of Embeddedness: Social Network Analysis of a Japanese Industrial District." Ph.D. dissertation, Sociology, Columbia University 2002. UMI ATT 3048199.

<sup>39</sup> Brian Uzzi, "Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness." *Administrative Science Quarterly* 42 (1997): 35-67. pp. 45-46.

<sup>40</sup> Ann Markusen, "Sticky Places in Slippery Space: A Typology of Industrial Districts." *Economic Geography* vol. 72 (1996): 293-313. p. 308.

would be examples. Government agencies supporting SMEs might focus on the integration of location and social networks in promoting more information sharing among often reluctant SMEs.<sup>41</sup>

## 4. Conclusion

We began with the new phase of East Asian Regionalism evident in ASEAN Plus Three, particularly the growth of intra-regional trade and investment, and intensified competition with China for direct foreign investment. Incorporation into spatially and sectorally specific clusters was cited as one strategy to insure a role for Thai industries in global value chains. Such local incorporation or *embedding* would facilitate sharing of information and especially, of the tacit knowledge critical for national goals of industrial upgrading.

The task is to establish contexts that can harbor meaning, the shared time and space cited by Nonaka and colleagues in which knowledge is created and communicated. The information revolution has expanded these contexts with the sometimes conflicting space of flows and space of place, or of competing priorities of globalization and localization. Thai industries must establish themselves as a critical node within global value chains to harmonize and enhance synergies of the global or vertical ties with foreign transnationals,

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<sup>41</sup> See Dennis L. McNamara, "Textiles in the New Global Order: Trade and Technology Transfer." Keynote paper presented for the Seminar on "The New Global Order in Textiles" at the Institute of East Asian Studies, Thammasat University, Bangkok, Thailand, August 22, 2002. Dennis L. McNamara, "Role of Trade Promotion Organizations in Government-Industry Partnerships." Paper for presentation in Panel 2, "A Coordinated Approach to SME Exporter Development: Building Government and Industry Partnerships," in the Seminar titled, "Growing the APEC SME Exporter Community: A Business Perspective." APEC SME Working Group, Preliminary Meeting in Chiang Mai, Thailand, August 4, 2003.

and of the local or horizontal ties among domestic SMEs.<sup>42</sup>

Our lives, our experience are grounded in specific locales, in a history of families and countries, in a familiar stream of interpreted past, experienced present, and imagined future. Self-identity, and indeed national identity and goals emerge from this group identification demarcated by the boundaries of locales, ethnicity, sub-region and nation-states. The global flow of capital and production has eroded the economic sovereignty of states, but promoted the distinctive advantages of specific localities. The economic interests of a nation, such as industrial upgrading, must now be re-imagined within global as well as local contexts. A balance must be struck between the interests of the transnational firms and the priorities of Thai supporting industries. But this compromise must at the same time contribute to the anchoring of capital and technology within the nation's industrial clusters. Capturing national advantage within global value chains demands a reorientation to integrate place-based identities and interests with cross-border flows of information, technology, and capital.

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<sup>42</sup> Nodes are "the location of strategically important functions that build a series of locality-based activities and organizations around a key function in the network. Location in the node links up the locality with the whole network." Castells, *The Rise of the Network Society*, volume I, p. 413

Lee, eds., *The Role of SMEs in National Economies in East Asia*. Cheltenham, UK: Edward Elgar, 2002.

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