

An Overview of Twenty-first-century Chinese “Brain Circulation”

Don DeVoretz and David Zweig

Globalization in the twenty-first century has progressed from prosaic trade and investment concerns to a realization that, at the heart of this process, is the movement of people. Coupled with this realization is the redefinition of the movement of highly skilled workers away from the limited concepts of “brain drain” and “brain gain” to a broader view coined as “brain circulation.”¹ To date, the “brain circulation” literature has concentrated largely on theoretical conceptualizations or descriptions of the national or global environment.² It also focuses on the impact of return migration. The present compilation of papers looks at a series of micro-level studies that highlight the issues and challenges inherent in the movement of highly skilled Chinese from developed host countries (Australia, Canada and the United States) to the sending regions of Hong Kong, China (PRC) and Taiwan and, in some cases, their return home.

The papers in this volume were originally presented at a conference entitled “People on the Move: The Transnational Flow of Chinese Human Capital,” organized by the Center on China’s Transnational Relations at Hong Kong University of Science and Technology, held on 20-22 October 2005.³ The goal of the conference was to document how recent Chinese émigrés have fared in the migratory and brain circulation process. To provide a comprehensive analysis of these issues, the conference drew on experts from various disciplines: anthropology, economics, geography, political science, psychology and sociology. The papers in this special issue are grouped around major themes: 1) the impact of immigration on the place of origin; 2) constraints and processes of workers’ cross-border mobility; 3) the experiences of Chinese and Taiwanese immigrants in their countries of adoption; and 4) the psychological

¹ Jacques Gaillard and Anne Marie Gaillard, “Introduction: The International Mobility of Brains: Exodus or Circulation?” *Science, Technology & Society*, 2 (2) (1997), pp. 195-228. The key exception to this trend is AnnaLee Saxenian, *Local and Global Networks of Immigrant Professionals in Silicon Valley* (San Francisco, CA: Public Policy Institute of California, 2002).

² Jean-Baptiste Meyer et al., “Turning Brain Drain into Brain Gain: The Colombian Experience of the Diaspora Option,” *Science, Technology and Society*, 2 (2) (1997), pp. 285-315.

³ Funding for the conference came from the Chiang Ching-kuo Foundation for International Scholarly Exchange (Taiwan) and the Research & Conference Fund, Department of Foreign Affairs and International Trade, Government of Canada. Other papers from this conference were published in the Fall 2006 issue of the *Journal of Integration and Migration*. All of the papers are available at <www.cctr.ust.hk>.

effects of returning home and its impact on economic development. Each paper offers a glimpse into one part of the brain circulation process, spanning the physical starting point of migration, the entry channels opened to potential immigrants, the relative success (or failure) of immigration in the receiving countries and, finally, the completion of the cycle: the return to the country/place of origin.⁴

Alan and Josephine Smart remind us of the fragility of the globalization process that has given rise to the return migration discussed in this issue. Their historical account of measures adopted by Hong Kong to manage its 20-mile border with Mainland China, both before and after the 1997 transfer of sovereignty, illustrates how border issues, in conjunction with immigration, contributed to the development of a unique Hong Kong identity. Focusing on economic and cultural issues and security, they describe the efforts Hong Kong has taken to maintain an elusive balance between border security, labour mobility and the flow of goods. They particularly emphasize the effect of borders in punctuating these flows, which, despite globalization and greater economic integration, do constrain the flow of human capital and talent.

Even when that talent crosses borders—in this case, returns to the home country of China—its impact may be limited by domestic institutions in the original country. As Yun-Chung Chen argues, Chinese returnees have as yet only a limited impact on technological developments in Beijing, challenging the assertion that returnees play an important role in knowledge transfer.⁵ Transnational technology communities, and not multinational corporations, are the crucial agents fostering technology transfer between the Silicon Valley and the Hsinchu region in Taiwan, according to Saxenian's "brain circulation" model.⁶ The Beijing Zhongguancun (ZGC) Science Park authority is also adopting the brain-circulation strategy by aggressively attracting Chinese transnationals (or returnees) to build startups in one of the 23 Overseas Student Venture Parks in ZGC. However, can Saxenian's brain-circulation thesis apply to Chinese returnees in ZGC, given two very different entrepreneurial climates? Chen argues that the vertical controls imposed by parent companies on Chinese startups in ZGC, as compared to the free-flowing lateral exchanges among firms in Hsinchu Park, means that only experienced returnees who can navigate transnational networks and build institutional connections have a sizable impact on technological development in China. Thus the "brain circulation" that does occur may have its limits.

What about the quality of life and success or failure of the new migrants in their host countries? Canada has received numerous Chinese skilled

⁴ Don DeVoretz, "Immigration Policy: Methods of Economic Assessment," *International Migration Review*, 40 (2): 390-418 (2006).

⁵ For an argument that returnees play a major role in knowledge transfer, see David Zweig, Chung Siu Fung and Wilfried Vanhanocker, "Rewards of Technology: Explaining China's Reverse Migration," *Journal of International Migration and Integration*, 7 (4) (2006), pp. 449-471.

⁶ Saxenian et al., *Local and Global Networks of Immigrant Professionals in Silicon Valley*, p. 1..

immigrants, offering many of them permanent residence, the prospect of rapid family reunification, and ascension to citizenship. However, Peter Li concludes that Canada does not utilize the brain power of its highly skilled, university-educated Chinese immigrants. In particular, those who follow the pattern of “educate, then migrate” find that the skills developed back home in China are not valued in Canada, leading to much lower incomes than the Mainland students who “migrate and then educate.” For this latter group, whose qualifications developed in Canada are valued by Canadian society, salaries tend to be double those of the migrants educated in China. Li argues that Canada is losing more than half the embedded human capital in these immigrants, and he suggests policies that will allow Canada to gain from highly skilled immigration. Moreover, the poor performance of Chinese Canadians who are carefully selected and welcomed to permanent residency based on their skills and status stands in sharp relief to the success of the H1-B visa holders in the United States.

Nora Chiang and Chih-Hsiang Yang analyze the adaptation and identity processes of young Taiwanese in their country of choice, Australia. In-depth interviews with immigrant youths, who moved to Melbourne alone or with their parents to acquire a good education, underline the important role of families in decisions surrounding immigration. The authors also explore how these young people create a dual identity that encompasses both Taiwanese and Australian cultures when, largely in search of better opportunities, they return to Taiwan. The identity thus created allows young returnees to better exploit their backgrounds in the global community.

In sum, these essays provide readers with micro-snapshots of the difficulties of leaving China, living abroad, and possibly returning. They offer insights into human dimensions often overlooked in the discussion of the new “brain circulation” literature, such as the limitations imposed on effective “brain circulation” by the nature of a state’s business environment. They also address important policy dilemmas faced by the United States, Canada, China and other countries in maximizing the full value of highly skilled migrants.⁷ These findings should guide our future research and allow us to seek immigration policies that reduce the social and economic costs of the migration of the highly talented.

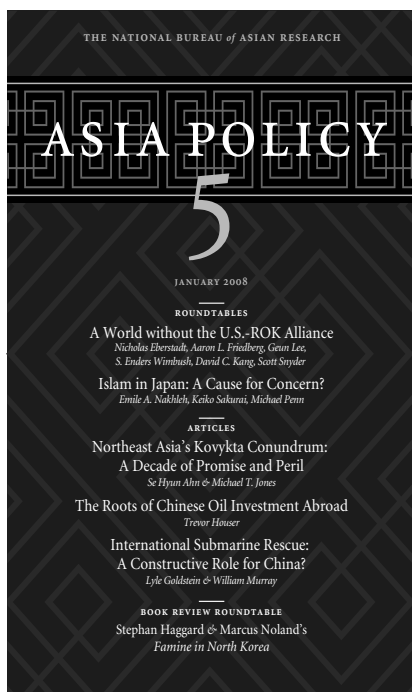
*Simon Fraser University, Canada and
Hong Kong University of Science and Technology, Hong Kong, March 2008*

⁷ For an excellent summary of the problems returnees face see Jean-Pierre Cassarino, “Theorising Return Migration: The Conceptual Approach to Return Migrants Revisited,” *International Journal on Multicultural Societies*, 6 (2) (2004), pp. 253-279.

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