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Brain circulation, diaspora, and international competitiveness

Rosalie L. Tung

The Ming & Stella Wong Professor of International Business, Simon Fraser University, Canada

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Summary Drawing upon findings of several studies, this paper examines the interrelationships between brain circulation or ''triangular human talent flow'', ethnic diasporas (specifically, the Chinese and Indian diasporas), and a country's international competitiveness. Globalization, the lowering of immigration and emigration barriers to the movement of people, and the emerging concept of boundaryless careers have all contributed to the phenomenon of brain circulation. Brain circulation replaces the traditional concepts of brain drain versus brain gain because of the growing mobility of human talent across international boundaries. Implications, both theoretical and practical, are then discussed.

Introduction

While labor has long been recognized as a factor of production in the annals of international trade, the pivotal role that human resources can play in a firm's or country's international competitiveness is only a relatively recent phenomenon.

In the 1980s, at the height of the western world's attempt to unravel the secrets of the Japanese economic miracle, Tung (1984) wrote a book entitled, *Key to Japan's Economic Strength: Human Power*. In her book, she asserted that because Japan is virtually devoid of all natural resources, that country viewed that the surest path to economic growth and development is to harness and leverage its human capital. This explains, to a large extent at least, why Japan has committed tremendous energy and effort into developing its human resources. This investment apparently did pay off as Japan was transformed from its war-torn economy into a leading industrial powerhouse within the course of three short decades.

Similarly, in his book entitled, Competitive Advantage: Creating and Sustaining Superior Performance (1985), Porter asserted that human resources span the entire value chain. Thus, human capital is considered essential to a firm's ability to create and sustain international competitiveness. Along the same lines, Nonaka and Takeuchi (1995) argued that in a knowledge-based economy, innovation is critical to a company's ability to attain and sustain its competitive advantage. Nonaka and Takeuchi identified two types of knowledge — explicit and tacit. Unlike explicit

E-mail address: tung@sfu.ca

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knowledge that is usually articulated in mathematical formulae and manuals and, hence, readily accessible to others, tacit knowledge resides within people as it is learned or transmitted via experience and/or socialization. Viewed in this context, tacit knowledge becomes the property of individual employees rather than that of the organization. Consequently, if an employee who is rich in tacit knowledge decides to leave one firm and join another, that acquired knowledge will move along with the individual.

This growing awareness that knowledge is power, and that this power is portable as highly-qualified employees move from organization to organization and across international boundaries has led to the theme of the 2006 World Economic Forum in Davos, Switzerland, the ''War for Talent''. In a knowledge-based economy, firms and nation-states are aware that in order to gain and/or maintain their international competitiveness, they need to seek, attract, recruit, and retain human talent wherever they could be found. Human talent is pivotal to the acquisition and generation of new knowledge that can ensure the organization's survival in the Twenty-first century. Because highly-skilled human talent has become increasingly more globally mobile, nation-states may no longer have exclusive claim to people who were born, raised and/or educated within their national boundaries. More and more, nation-states have to compete with organizations in other countries for the same talent pool. Thus, human capital has become a key strategic resource and talent poaching (i.e., hiring away key personnel from one's competitors) has become widespread. The much publicized legal suit filed by Microsoft against Google over the latter's poaching of Dr. Kai-Fu Lee, a speech recognition expert, highlights the intense competition for talent among the two major technology giants. That suit has now been settled.

This paper seeks to explore the relationships between the emerging phenomenon of brain circulation that arises from the global mobility of human talent, ethnic diaspora, and international competitiveness. The concepts of brain circulation and ethnic diaspora are explored and, where relevant, the findings of several studies will be presented to highlight the relationship between brain circulation and ethnic diasporas and how this can impact a firm's or country's international competitiveness.

Brain circulation

In the past, there has been a tendency to talk about ''brain gain'' — whereby a country receives a healthy injection of human talent through immigration — and its converse situation, ''brain drain''. Increasingly though, it appears more appropriate to view such immigration and emigration patterns in the context of ''triangular flow of human talent'' and ''brain circulation''.

Based on extensive studies of Hong Kong immigrants to Canada, DeVortez and Ma (2002) identified two major trends: one, after obtaining their advanced education and work experience in Canada, many Hong Kong immigrants chose to return to their country of origin (COO) to take advantage of better career opportunities and lower taxes there. Two, they found that Hong Kong immigrants who chose to return to Hong Kong were, in general, more highly-educated and wealthier. Taken together, these two patterns suggest that Canada has become a human capital entrepot whereby people arrive, acquire competencies and skills that would be useful to them later in their career, and then leave. Devoretz and Ma found that the same pattern also applied to Indian immigrants to Canada. They characterized this situation as the ''triangular flow of human talent'' because what was once a brain drain from Hong Kong and India and hence Canada's brain gain, has now been reversed as Canada suffers a brain loss through the outflow/return of immigrants to their COO. However, this brain loss on Canada's part may not be permanent as many of these émigrés apparently cherish their Canadian passports and the quality of life in Canada and, hence, may yet return to Canada in the future. In fact, some Hong Kong immigrants to Canada maintain dual residences and businesses in both places and they have been dubbed in the Chinese press as ''astronauts'', i.e., people who shuttle back and forth between two distant hubs.

Along the same lines, economic geographer, Saxenian in her book, *The New Argonauts: Regional Advantage in a Global Economy* (2006), likened the Chinese and Indian immigrants in Silicon Valley to Jason's Argonauts in the Greek mythology who went to faraway lands in search of the golden fleece. In her studies, Saxenian tracked the journey of these high-tech immigrants who, after successfully establishing their IT operations in California, have decided to ply between the US and their COO to manage their businesses in disparate regions of the world to capitalize on the opportunities in both the US and their motherland. Viewed in this context, human capital circulates between the COO and adoptive country of these high technology immigrants, hence the concept of ''brain circulation''. This leads to a win—win situation for all as both the recipient and sending countries concurrently benefit from the same human talent pool.

Saxenian noted that by the end 1990s, Chinese and Indian immigrants (with the former outnumbering the latter) accounted for 29% of all IT start-up companies in Silicon Valley. According to a study conducted in 2005 by Duke University and released in 2007, the percentage of immigrant start-ups in Silicon Valley has risen to 52%. During this same period of time, Indian immigrants have outpaced their Chinese counterparts in terms of new entrepreneurial start-ups. The Duke University study also found that for the state of California alone, immigrants accounted for 39% of all entrepreneurial operations (Kachru, 2007). Collectively, in 2005, companies that were either owned or established by immigrants employed 450,000 people and generated sales in excess of USD 52 billion.

Brain circulation or triangular human talent flow has become possible because of several important developments: One, globalization — the growing economic interdependence has meant that countries around the world are more inter-connected than at any other previous time in history; two, the reduction in immigration and emigration barriers to the movement of people, thus making it easier for people to relocate across countries; three, a growing number of countries, including the US, Canada and many European Union countries permit dual citizenship, thus facilitating this mobility across nations; and four, the emergence of the concept of boundaryless careers where highly qualified people are increasingly willing to change jobs across