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Abstract

Based on industry data, research reports, and field interviews in both cities, this paper compares the networked effects of return migration in three areas: ICT, VC, and philanthropy/social entrepreneurship. We find that Chinese returnees play a substantial role in ICT companies listed abroad and dominate the domestic VC market. Overseas Indians and returnees have represented key links to multinationals' outsourcing activities, and are as dominant in VC as their counterparts in China. In both Beijing and Bangalore, entrepreneurs draw on school- and work-based networks, whether domestic or international. A greater contrast between the Silicon Valleys are their areas of comparative advantage. ICT firms in Beijing are geared towards serving the domestic ICT market, while Bangalore has been oriented towards global outsourcing. In the field of philanthropy, despite high profile exceptions, returnees are less active than domestic entrepreneurs in both countries. However, returnees are increasingly active in running non-governmental organizations (NGOs) and social enterprises. Analytically, the paper outlines a framework for understanding returnee impact that includes both the individual attributes of returnees and the institutional context of different policy environments.

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“Today, Bangalore has the highest number of PhDs in India, the highest number of startups, the highest number of VCs, and the highest number of Indians returning back to the country.”

-- Mark Andreessen, Netscape, cited in *Economic Times*, 9 March 2015

“I don’t mind that I took a 60% pay cut when I left Credit Suisse to join this new VC fund in Beijing. I fly to the US every month to recruit potential entrepreneurs. Our target group are people who were born and raised in China and then went to college or graduate school in the US.”

-- 26-year old returnee in Beijing, 12 June 2015

“We all live in a gated community not far from the IT Park. Each villa costs at least US\$700,000 and some are several million dollars. The villa communities are self-enclosed with security, amenities, and good IB [International Baccalaureate] schools. There’s western food and wine with the same brands and prices as in the US and UK.”

-- 42-year old returnee MNC executive in Bangalore, 21 January 2015

Within the past two decades, Beijing and Bangalore have become known as the “Silicon Valleys” of China and India, respectively. Both areas possess a concentration of top-tier educational and research institutions, and have benefited from state investment in infrastructure. Their transformation into leading centers for information and communications technology (ICT) and global outsourcing has also been attributed to return migration of those who have studied and/or worked abroad. Anne Lee Saxenian (2005) describes this migratory dynamic as “brain circulation,” as a sanguine counterpoint to earlier concerns about national brain drain. In this spirit, China and India have enacted policies to encourage return migration of highly educated talent.¹ Although the role of the Chinese and Indian diaspora in the ICT sector has generated considerable attention and debate, the developmental impact of returnees in Beijing and Bangalore is not confined to the ICT industry. The sector itself has introduced new patterns of consumption with implications for the local economy and labor market. Successful returnees have also engaged in venture capital (VC) and philanthropic activities. As cosmopolitan centers, Beijing and Bangalore attract a disproportionate share of well-educated returnees relative to other cities in China and India. Yet with the exception of Kapur (2010), existing studies of the developmental impact of returned talent typically analyze individual sectors, such as software, finance, or higher education, which limits the generalizability of their findings.

Based on industry data, research reports, and field interviews in both cities, this paper compares the networked effects of return migration in three areas: ICT, VC, and philanthropy/social entrepreneurship. We find that Chinese returnees play a substantial role in ICT companies listed abroad and dominate the domestic VC market. Overseas Indians and returnees have represented key

¹ This paper focuses on returnees with post-graduate training, including Masters degrees, executive MBA/MPA certification, and doctorates.

links to multinationals' outsourcing activities, and are as dominant in VC as their counterparts in China. In both Beijing and Bangalore, entrepreneurs draw on school- and work-based networks, whether domestic or international. A greater contrast between the Silicon Valleys are their areas of comparative advantage. ICT firms in Beijing are geared towards serving the domestic ICT market, while Bangalore has been oriented towards global outsourcing. In the field of philanthropy, despite high profile exceptions, returnees are less active than domestic entrepreneurs in both countries. However, returnees are increasingly active in running non-governmental organizations (NGOs) and social enterprises.

Analytically, the paper outlines a framework for understanding returnee impact that includes both the individual attributes of returnees and the institutional context of different policy environments. Building on the notion of "mixed embeddedness" from economic geography, the proposed typology situates returnees within their individual social networks in relation to the opportunity structures of particular sectors (Kloosterman 1998, 2006, 2010). In the three areas under consideration, state policies and the sectoral ecosystem are key in defining the opportunity structures for returnee impact. One of the theoretical implications of this approach is that the interaction between the state and returnees represents a sectorally-contingent expression of state-society relations. In this pattern of interaction, certain components of "returnee society" arguably possess greater leverage than local citizens without overseas experience. This is especially apparent in Bangalore, where the privileged status of returnees has generated new hierarchies in local society. By contrast, even though some Chinese returnees enjoy policy privileges, domestic entrepreneurs in Beijing often have stronger networks and local practical knowledge than returnees who lived abroad for longer periods. The observed differences between Bangalore and Beijing may be traced to variation in the nature of returnee networks and the institutional context of particular sectors.

The paper proceeds as follows. The first section reviews the dominant theoretical frameworks for understanding return migration and draws on the structural, transnationalism, and social network approaches for analyzing different types of returnees in Beijing and Bangalore. The next four sections examine the comparative impact of returnees in ICT, VC, and philanthropy/social entrepreneurship. The conclusion cautions against overestimating the developmental implications of national policies geared towards enhancing return migration. Highly educated returnees constitute an elite cosmopolitan community in Beijing and Bangalore; but their effectiveness remains mediated by local and transnational networks, as well as the ecosystem of particular sectors.

Explaining Return Migration and Its Impact

Why do international migrants return to their home countries? After returning, what factors shape whether returnees become agents of change? To what extent does the concept of "returning" capture contemporary patterns of mobility and communications? International migration theory

addresses these questions to varying degrees through four lenses: neoclassical labor economics/new economics of labor migration, structuralism, transnationalism, and social networks (Cassarino 2004).

New Economics of Labor Migration

Economic explanations emphasize material motives for return migration—such as labor market failure, wage differentials, and market uncertainties. Although they find that return migration can mitigate brain drain effects through human capital accumulation, the underlying assumption is that returnees are motivated by higher earnings (Dustmann, Fadlon, and Weiss 2011). Non-economic motives and effects are either treated as externalities, or redefined in economic terms. The impact of migration on elderly parents, for instance, can be measured through economic analysis (e.g., Antman 2015). As discussed further below, numerous studies have examined the economic impact of returnees on ICT development in Beijing and Bangalore. However, within the distinct sub-field of return migration, the new economics of labor migration literature focuses more on the drivers of return migration rather than its effects. Hence, the other three frameworks offer more conceptual options for theorizing about the differential impact of returnees in various sectors.

Structuralism

The structural approach to understanding return migration includes cultural, social, and geographical factors that influence reverse migration in addition to individual-level objectives. In particular, Francesco Cerase's (1974) classic study of returnees from the United States to southern Italy distinguished among returnees based on their intentions (i.e., *failure* to integrate abroad, *conservative* migration goals, *retirement* in home country, and desire for *innovation*). Migrants who "return for innovation" have the most potential for serving as "carriers of change." However, Cerase found that this potential is unlikely to be realized due to the rigidity of established social, economic, and political structures in the home country. In southern Italy, entrenched structures inhibiting returnee innovation include protection rackets and corruption. More recent extensions of Cerase's typology have reached similarly discouraging conclusions about the conditions under which returnees may contribute to their home countries. Siddiqui and Tejada (2015)'s survey of highly skilled Indian returnees found that certain structural variables (professional and philanthropic contacts in India, temporary visits) and social identities (religion, gender, caste) increased their desire to participate in homeland development, but that their resulting influence was quite modest after returning.

Besides noting the reality of domestic developmental constraints (de Haas 2012), structuralists also highlight temporal and spatial variables. Residing abroad for longer periods of time increases the challenge of re-integration. As Russell King (1986, 19) explains,

If [time abroad] is very short, say less than a year or two, the migrant will have gained too little experience to be of any use in promoting modernization back home. If the period of absence is

very long, returnees may be so alienated from their origin society, or they may be so old, that again the influence exerted will be small (cited in Cassarino 2004, 7).

Indeed, reintegration may fail all together, as seen in the experiences of Greek-Americans whose “post-return lives showed mostly disappointment, even anger,” due to frustrations with the bureaucracy, chaotic traffic conditions, lack of recycling, and corruption (King et al. 2014, 259). Relatedly, the location of re-settlement, meaning rural versus urban areas, influences the extent of change that may have occurred, as well as the institutional context facing entrepreneurial returnees. But overall, structuralists are not optimistic about the prospects of returnee impact (Cassarino 2004).

Transnationalism

In contrast to the economic and structural approaches, transnationalism is premised on a more dynamic conceptualization of migration and identity. Even while abroad, migrants retain ties with the homeland through sustained interactions (Portes et al. 1999). From this perspective, the linear terminology of “returning” misrepresents the experience of cosmopolitan migrants with hybrid identities, if not dual citizenship. The emergence of transnational spaces, groups, and practices calls for recognizing migrants who retain transnational networks regardless of where they happen to reside at any given point in time (Vertovec 2001). These networks may serve instrumental functions, but they are ultimately rooted in shared identity based on common ethnicity, language, religion, origins, or kinship (Levitt 2007). Aihwa Ong (1999)’s notion of “flexible citizenship” among the Chinese diaspora captures well the ethnic ties that facilitate translocal strategies of accumulation.

Within the transnational approach, various studies focus on the impact of global capitalism on transnationalism (Portes 2001, 187), the political power/potential of transnational communities (Adamson 2012; Tarrow 2005), and temporal variation in active diasporic identity (Chan 2015). Whether transnationalism has deterritorialized the operational concepts of identity and citizenship remains subject to debate. As discussed further below, an elite subset of skilled returnees in Beijing and Bangalore is so mobile, both professionally and socially, that they should not even be considered “returnees,” given the implied permanence or even semi-permanence of the term. However, their transnational networks and lifestyles are not rooted solely in shared ethnic origins, as acknowledged by social network approaches. Furthermore, when it comes to developmental impact, multicultural fluency should not be conflated with access to truly transnational networks and resources that can negotiate the institutional complexities identified by structuralists.

Social Networks

While transnationalism situates returnees within diasporic networks that extend beyond territorial borders, the social network approach to return migration is agnostic about the basis of ties connecting returnees across countries (Cassarino 2004). Classmates, colleagues, neighbors, business

associates, friends, family, and relatives are prospective sources of social capital that can be harnessed upon return. What matters more than common ethnicity or kinship is the strength of the interpersonal relationship and associated networks. The social network framework recognizes that returnees have varying levels of social and economic resources, and observes that networks must be nurtured and activated to be effective.

These insights are illustrated in Prashantham and Dhanaraj (2010)'s study of how social networks evolved among software companies in Bangalore seeking to internationalize their operations. The successful companies exercised "agency and strategic action...[by] learning from the other actors in the network, which is a distinct form of resource mobilization, apart from those that flow from network access (p. 987)." Additional findings from social network studies of India and China's IT sectors are discussed below. Although social network theories emphasize different causal mechanisms (network structure, agency, learning, interaction, etc.), they share an overarching focus on the relationships between returnees and other actors, whether they be contacts from previous immigrant countries, country of origin, or other returnees.

The Mixed Embeddedness of Elite Transnationals

The four main approaches to explaining return migration offer insights that amplify different dimensions of the return migration experience that are not necessarily mutually exclusive. Returnees, including highly educated ones, do respond to market pressures and opportunities. Following return, they may face institutional constraints in achieving their objectives and experience disappointment. Some returnees would be better defined as transnationals whose identities and interactions span multiple continents contemporaneously. Other returnees draw on social networks that go beyond ethnic or diasporic connections. Each of these claims holds up to different strands of conventional wisdom and empirical research. The question, then, is whether they can be accommodated within a broader analytic framework without compromising their core conceptual principles.

Derived from sociology and economic geography, the concept of "mixed embeddedness" offers a constructive organizing frame for understanding the developmental impact of returnees. While earlier applications of "social embeddedness" to immigration studies focused on the social characteristics of ethnic groups (Granovetter 1985; Portes 1995; Rath 1999), mixed embeddedness recognizes that actors must negotiate multiple institutional contexts (Kloosterman, van der Leun, and Rath 1998 and 2010, 323). In addition to social networks, the opportunity structure for entrepreneurship is also conditioned by market characteristics and the policy environment. Borrowing from Kloosterman et al.'s (2010) discussion of immigrant entrepreneurs in Dutch cities, arguably, the experience of returnee entrepreneurs "can only properly be understood by taking into account not only their embeddedness in social networks of immigrants, but also their embeddedness in the socioeconomic and politico-institutional environment of the country of settlement (p. 316)."

With mixed embeddedness in mind, this paper proposes a working framework for identifying the nature of returnee networks (*individual network variables*) and the opportunity structures that returnees face in particular sectors (*institutional variables*). At the individual level, the returnees in this study have all received post-graduate training (if not certification) and seek to have entrepreneurial impact. In this project, the latter includes non-economic forms of entrepreneurship, such as social change, policy advocacy, or philanthropy. Within this group of well-educated aspirational entrepreneurs, they vary in terms of time spent abroad and the nature of their professional experiences. The return migration literature traditionally defined returnees as “anyone who attended a university or graduate program abroad and then returned home”; in the “brain gain” literature, however, “the more normal definition of ‘returnee’ is an individual who finished their studies abroad, then worked in a foreign ICT firm prior to independently returning to be involved in domestically owned, or self-started, ventures (Kenney, Breznitz, Murphree 2013, p. 395).” As such, it makes sense to distinguish among returnees who have *studied abroad*, *worked abroad*, *studied and worked abroad*, and the *amount of time* spent in those pursuits. A related dimension of a returnee’s experience is whether s/he has been *employed by a foreign firm or international organization*, either domestically or abroad.

Table 1. Individual Variables
Time abroad (years)
- studied abroad
- worked abroad
- studied and worked abroad
Professional experience
- worked for international organization, domestically or abroad

These variables have implications for the nature of returnee networks. Those who have studied abroad have international alumni networks, though graduating from more internationalized domestic institutions of higher education may provide comparable access. Those who have worked for a foreign entity (MNC, NGO, IO, etc.) have professional contacts in that particular sector. The length of time spent abroad or employed by an international firm/organization affects the returnee’s embeddedness in transnational versus local networks. As Chen (2008) noted in his comparative study of Chinese returnees to Hsinchu (Taiwan) and Zhongguancun, the relative strength of returnees’ local and transnational connections affects their ability to compete for institutional resources to start a business, raise financing, and secure government contracts.

Finally, returnee experiences and networks have implications for self-perceived and socially ascribed identity. The term “returnee,” may not be shared by so-called returnees themselves even if they fall into the rough definitional boundaries of having resided abroad for at least two years. Those with foreign citizenship or dual citizenship may view themselves as “expats,” while many who only

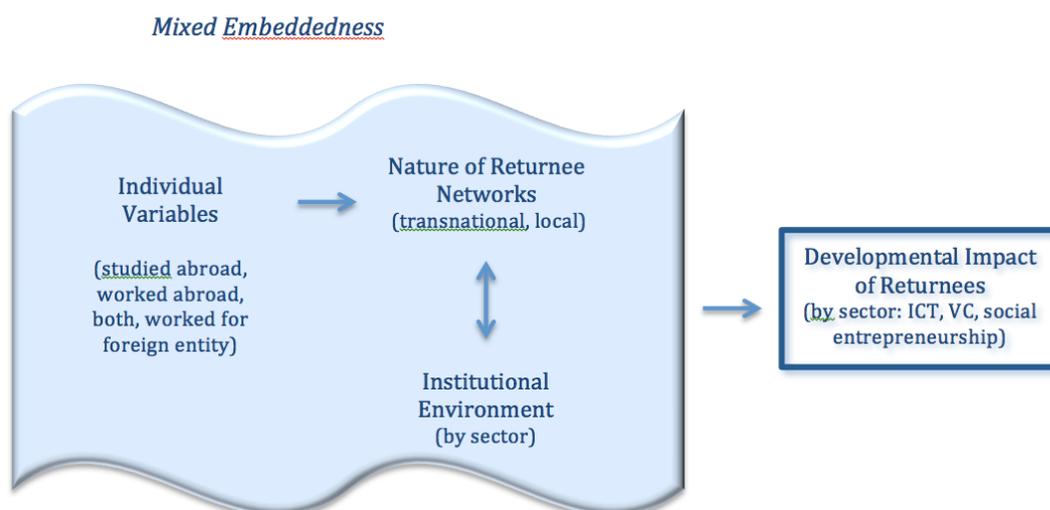
studied abroad retain a “local” identity. Besides “transnational,” the migration literature has proliferated additional hybrid terms, most of which have not entered common discourse: “relocatees” (Smith 2011), “counter-diasporic returnees” (King and Christou 2008; Tsuda 2009), “serial migrants” (Ossman 2013), “1.5 generation” (Rumbaut 2002), and “third culture kids/adults,” (Pollock and Van Reken [1999] 2009). In short, understanding the impact of “returnees” requires nuanced appreciation for their networks, resources, and associated identities and aspirations.

Meanwhile, regardless of the precise nomenclature, all entrepreneurs—domestic, immigrant, returnee, transnational—operate in an institutional context that varies sectorally. In some countries, including China and India, the state offers concessionary terms to recruit returnees in general, and the ICT sector in particular. In China the privileges extend to attracting ethnic foreign direct investment, overseas Chinese talent in higher education, and charitable giving. But returnee recruitment policies co-exist with the broader market, financial, legal, and political institutional environment for operating a commercial or non-commercial entity. Returnees are embedded in multidimensional social and institutional contexts.

Table 2. Institutional Variables	
-	Policies reserved for highly skilled returnees
	Operating conditions
-	Market demand
-	Registration
-	Financing
-	Relative political priority

With these variables in mind, the next section presents national-level indicators about well-educated returnees in China and India, followed by sectoral analysis of their impact. Comparing the experiences of returnees in similar sectors but different contexts reveals how network effects are mediated by particular institutional arrangements. This approach facilitates a grounded empirical account of the mixed embeddedness of returnees, which in turn, offers insights into cross-national and inter-sectoral variation on the impact of returned talent. The explanatory logic is summarized in Figure 1.

Figure 1. Summary of Argument



National Context and Returnee Policies

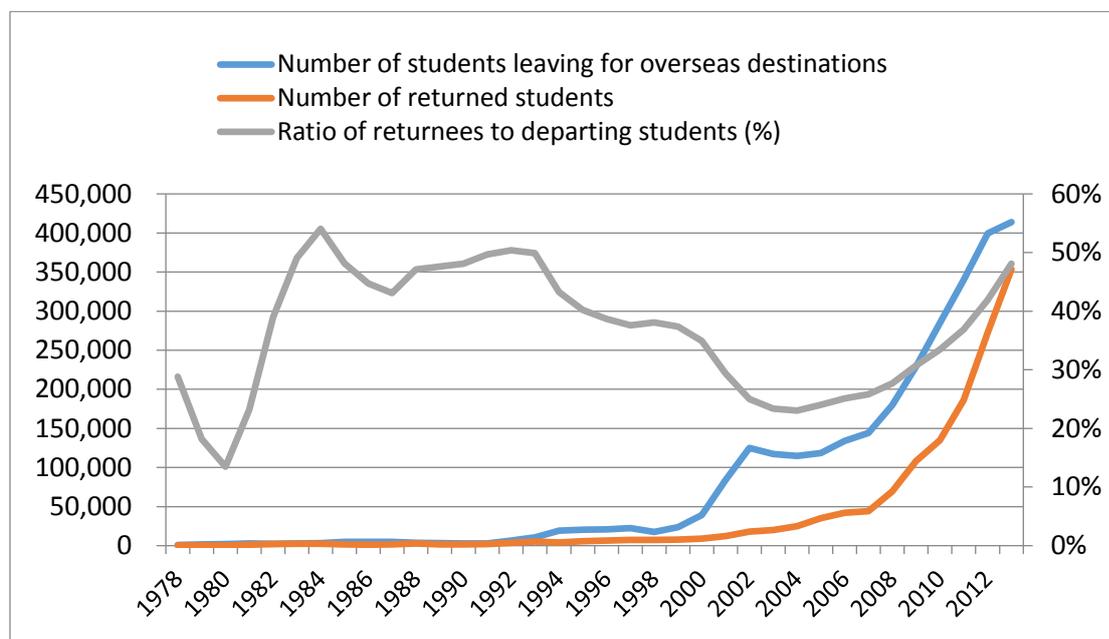
While China and India's global diaspora numbers at approximately 50 million and 28 million, respectively (Wang 2014, MOIA 2015), this paper focuses on return migration of its highly skilled population, defined broadly as those with post-graduate training. Official statistics on the migration flows of students, scientists, engineers, venture capitalists, and entrepreneurs are not equally available for China and India, but some basic indicators are presented below. Overall, China has been much more proactive in encouraging the return of "overseas talent" than India has in its recruitment of highly educated non-resident Indians (NRIs) and persons-of-Indian origin (PIOs).

Returned Students: China

The Chinese government has been strategically attuned to out- and return migration of its students and has published annual statistics documenting the flow. Table 3 shows that the percentage of returned students reached a low of 13.5 percent in 1980 during the early reform period when the government was encouraging students to go abroad; but reached a high of 54 percent in the mid-1980s when students sponsored by the state were required to return to China at the end of their studies (Zhu 2009). As the proportion of self-funded students increased, the returnee rate gradually declined to another low of 23 percent in 2004. The rate of returned students has climbed since then, reaching 54 percent in 2013, when 493,100 students went abroad and 353,300 returned to China.²

² This number includes those who return with only bachelor degrees. National statistics on returned students with post-graduate training are not available. However, Finn's (2012) study of foreign doctoral students in the

Figure 2. Flow of Chinese Students Studying Abroad and Returning, 1978-2013



Source: *China Statistical Yearbook 2014* (<http://www.stats.gov.cn/tjsj/ndsj/2014/indexeh.htm>)

China’s steady series of policies to encourage the return of “overseas talent” since the 1990s have been well documented (Cao 2004; Chen 2015; Keren, Guo, & Ping 2003; Zhu 2009; Zweig and Wang 2013). They have been launched by various central units, including the Chinese Academy of Sciences (Hundred Talents Program, 1994), the Ministry of Education (Chunhui Program Scholars Program, 1996), the State Administration of Foreign Experts Affairs (Discipline Based Talents to Universities 2006, with MOE), and in recent years, the Organization Department of the Chinese Communist Party (1,000 Talents, 2008; 1,000 Youths, 2011). These programs offer generous incentives for the most accomplished Chinese scholars, scientists, and engineers to return to the country. In higher education, the results have been mixed in terms of China’s ability to attract the very best of returnees with foreign Ph.D.s, and returnees’ impact on domestic academic norms (Cong 2008; Zweig and Wang 2013; Zweig and Yang 2014).

Returned Students: India

According to a study by the Indian Institute of Management-Bangalore (IIM-B), between 2000 and 2009, the number of students from India studying abroad grew from 53,266 to 189,629, representing an increase of 256 percent (ICEF Monitor 2012). As with Chinese students, over half of

US found that as of 2009, 89% of Chinese graduate students in science and engineering, and 79% of Indian students intended to remain in the US.

out-bound Indian students go to the United States. Although official statistics on returning students in India are not maintained in a manner that is directly comparable to China, an estimated 60,000 Indian professionals returned to the country in 2010 (Das 2013).

The Government of India has not enacted as many initiatives as China to attract highly educated returnees, but policy efforts have increased in the past decade. The launching of Pravasi Bharatiya Divas (NRI Day) in 2003 provided a national platform for recognizing the achievements of the Indian diaspora, and encouraging them to return to India.³ The Ministry of Overseas Indian Affairs (MOIA) was subsequently established in 2004 to “connect the Indian Diaspora community with its motherland” (www.moia.gov.in, accessed 12 July 2015). MOIA has introduced various support schemes, such as the Know India Programme (KIP), a three-week program geared towards students and young professionals; the Study India Program, offering short courses to overseas Indian youth, and a scholarship program that funds 100 children of PIO/NRI’s annually to take undergraduate courses in India (Dubey 2011). The Foreign Education Institutions Bill, under consideration by parliament since 2011, would enable foreign universities to establish campuses and award degrees in India.

Since his election as Prime Minister in 2014, Narendra Modi has made special appeals to the Indian diaspora to invest in, make donations, and return to India. The NRI category has been expanded to include Overseas Citizenship of India (OCI) as well as PIO cardholders. In addition, NRI investments are now regarded as domestic investments, which eliminates previous investment restrictions facing NRIs (*The Hindu*, 15/7/15). Meanwhile, PIOs have been granted life-long visas, and visa-on-arrival has been introduced in 43 countries (*Times of India*, 9/1/15).

Information and Communications Technology

The Chinese and Indian diaspora have been credited with the rapid transformation of (Zhongguangcun) Beijing and Bangalore into Asia’s Silicon Valleys (SVs). Saxenian (2005, 2006) observed that the return of highly skilled computer scientists, engineers, and entrepreneurs—armed with US doctorates and Silicon Valley experience—represents brain circulation rather than uni-directional brain drain. The brain circulation thesis has generated debate, about the degree and nature of diasporic impact, as well as the comparative advantages of Zhongguangcun and Bangalore in the ICT sector. Over ten years ago, Yasheng Huang and Tarun Khanna (2003) quipped in the pages of *Foreign Policy*, “With the help of its diaspora, China has won the race to be the world’s factory. With the help of its diaspora, India could become the world’s technology lab.” The following section reviews the genesis of the two ICT hubs, including the evolution of the sector’s institutional environment for returnees. Case studies based on field interviews by the author and data compiled

³ The date of Pravasi Bharatiya Divas, January 9, is the anniversary of when Mahatma Gandhi returned from South Africa to India in 1915.

from industry sources reveal temporally contingent support for the brain circulation thesis. India's SV diaspora has indeed been critical to Bangalore's ascendance as the global outsourcing center of the world. Meanwhile, China also has many high profile and start-up returnee entrepreneurs in ICT; however, returnees are not necessarily equally committed to remaining in China.

Zhongguancun (ZGC)

Located in northwestern Beijing's Haidian district, Zhongguancun is surrounded by a concentration of China's best universities and research institutes, including Peking University, Tsinghua University, the Chinese Academy of Sciences (CAS), and the Chinese Academy of Engineering (CAE). Narratives of ZGC's founding origins as a cluster of IT and electronics markets all start with CAS physicist Chen Chunxian's government-sponsored visit to the US in 1980. Visiting Silicon Valley inspired him to establish the PRC's first private scientific institute, Cathay Silicon Valley (*huaxia xigu*), which paved the way for hi-tech development in ZGC. By the early 1980s, a vibrant "Electronics Avenue" with dozens of small, private electronics stores had emerged in ZGC.

Although the status of China's private economy was politically sensitive at the time, ZGC's concentration of hi-tech entrepreneurialism and R&D was facilitated by cooperation with various state units (Segal 2002). Legend (later renamed Lenovo) was founded in 1984 by eleven engineers from CAS's Institute of Computing Technology. Similarly, when the technology company Founder Group was established in 1986, Peking University held 70% of its shares. Established in 1984 by a group of former Tsinghua students, the Stone Group registered as a people-run collective enterprise (*minban jiti qiye*) with the Haidian district government and received a loan from a local township even though it was really a private firm (Kennedy 1997). The central government eventually acknowledged the existence of ZGC in 1988 by designating it a Beijing Experimental Zone for High-Technology Industrial Development.

What has since become the ZGC National Demonstration Zone now comprises 26 university science and technology parks and 29 Overseas Student Pioneer parks; and is home to most of China's leading internet firms and 98 branches of Fortune 500 firms (e.g., Intel, Microsoft, Oracle, Siemens) (<http://www.zgc.gov.cn/sfqgk/56261.htm>, 14/7/15). In 2014 alone, about 13,000 start-ups were launched in ZGC (Xu 2015). In addition, ZGC reported that there are over 6,000 enterprises employing at least 18,000 returnees (www.zgc.gov.cn/56261.htm, accessed 14/7/15). Prominent examples include Liu Chuanzhi (柳传志, President of Lenovo), Robin Li (李彦宏, President of Baidu); and Lee Kai-Fu (李開復, former CEO of Google Greater China, President of Innovation Works). The ZGC Science Park also employs 1,090 "high-end overseas talent" as part of its Recruitment of Global Experts initiative (Liu 2015).

While ZGC's self-reported indicators are generally limited to the actual number of returnees and foreigners, more in-depth research has examined the potential broader impact of returnee entrepreneurs. For example, Filatotchev et al. (2011) analyzed panel data for 1,318 high-tech firms in the ZGC Science Park and found that ICT enterprises founded by returnees have generated positive externalities by motivating domestic entrepreneurs to engage in innovation (as measured by number of patents and new sales). The causal logic stems from both the human capital qualities of returnees (technical knowledge and training, transnational networks), as well as the *absorptive capacity* of non-returnee small and medium enterprises. As of 2014, the number of successful patent applications by firms in ZGC reached 11,800, accounting for 54% of Beijing's total (PRNewswire, 22/1/2015).

Despite such accounts, doubt has been raised about the extent to which returnees have played a pivotal role in ZGC's success. In particular, Martin Kenney et al. (2013)'s study asserts, "Returnees played no role in the creation of the early pioneering and now globally competitive Chinese electronics and ICT hardware firms." Their historical tracing of ZGC's evolution finds, instead, that it was "indigenous risk-takers from both the private and public sectors [who] developed the eco system within which returnees could successfully return and become entrepreneurs (Kenney et al. 2013, 394). Their observation is consistent with the developmental sequence of ZGC.

During the 1980s, domestic entrepreneurs established a variety of software, electronics, hardware components, and research outlets with quiet cooperation from local academic institutions and government entities (Segal 2002; Zhou 2008). It was not until after Deng's tour of southern provinces in 1992 that multinational corporations (MNCs) established production facilities in China on a larger scale. The government encouraged foreign joint ventures (rather than wholly-owned foreign enterprises) in the hopes that MNC presence would facilitate technology transfer. Hence, to the extent that returnees were involved in ICT during the early to mid-1990s, it was generally through MNC employment rather than in an entrepreneurial capacity (Kenney 2013, 400).

The founding of Sohu.com by returnee Charles Zhang (张朝阳) in 1996 presaged the rise of returnee entrepreneurialism in the dotcom boom at the end of the decade. Zhang received his Ph.D. in experimental physics from MIT and established the predecessor to Sohu, Internet Securities Inc. (ISI), with two MIT professors and VC funding (http://www.chinavitae.com/biography/Zhang_Chaoyang/bio, accessed 13/7/15). Sohu developed the first search engine in the country and listed on NASDAQ in July 2000, following Sina.com's listing a few months earlier. Since the 2000s, it is clear that returnees have been playing an important, if not leading role in China's ICT sector. Our analysis of the composition of senior leadership (CEO or Chair) and the management group of Chinese companies listed on NASDAQ found that one-third are led by returnees, and over 36 percent have returnees within their management group. Out of the 30 listed companies, only one—Kingtone Wirelessinfo Solution Holding Ltd—does not have any

returnees among its senior leadership or management group; and the three companies with 100% returnees in the management group are not led by returnees (Actions Semiconductor, ChinaCash International, and Sungy Mobile).

Table 3. Returnee Representation in Management of NASDAQ-Listed Chinese Companies (as of 15 July 2015)

NASDAQ Technology Companies	CEO and Chair	Management Group	Management w/Overseas Experience	% w/Overseas Experience	Positions	IPO Year
SINA	Yes	4	3	75.0%	COO,CFO,VP	2000
Sohu	Yes	10	5	50.0%	CFO,VP,HR	2000
51job	Yes	11	3	27.3%	VP	2004
Kong Zhong Corporation	No	2	2	100.0%	CFO,CIO	2004
Actions Semiconductor	Yes	2	0	0.0%	N/A	2005
Baidu	Yes	9	4	44.4%	President,CFO,VP	2005
Vimicro International	Yes	3	1	33.3%	CFO	2005
eFuture Information Technology	No	7	3	42.9%	CFO, Director, VP	2006
AirMedia Group	No	7	2	28.6%	CFO,PR	2007
China Sunergy	No	3	2	66.7%	CTO, VP	2007
JA Solar Holdings	No	3	2	66.7%	CFO,CTO	2007
Vision China Media	No	4	1	25.0%	VP,	2007
China Information Technology	No	8	2	25.0%	CFO and CTO	2008
ChangYou.com	Yes (co-CEO)	3	1	33.3%	CFO	2009
Cleantech Solutions International	No	4	1	25.0%	Indep. Director	2009
ChinaCache International	No	2	2	100.0%	President, CFO	2010
ChinaNet Online Holdings	No	12	3	25.0%	COO,CTO,CFO	2010
Kingtone Wirelessinfo Solution Holding Ltd	No	2	0	0.0%	NA	2010
SGOCO Group	Yes (CEO)	5	1	20.0%	Audit	2010
Sky-mobi Limited	No	4	1	25.0%	Fin'l Director	2010
21Vianet Group	No	6	3	50.0%	CFO,COO,VP	2011
Jiayuan.com International	Yes (Chair)	6	2	33.3%	VP and ID	2011
YY	No	3	1	33.3%	GM	2012
China Mobile Games & Entertainment Group	No	7	2	28.6%	CFO,Executive VP,	2012
Sungy Mobile	No	2	2	100.0%	COO,CFO	2013
IDreamSky Technology	No	3	1	33.3%	CFO	2014
Momo	No	6	1	16.7%	CFO	2014
Weibo Corporation	No	2	1	50.0%	CFO	2014
Xunlei	Yes	3	2	66.7%	GM,CFO	2014
Wowo Limited	No (3)	7	1	14.3%	CFO	2015
Total	10(32)	150	55	36.7%		

Sources: Compiled from company websites, SEC filings, and NASDAQ Data (<http://www.nasdaq.com/screening/company-list.aspx>), July 2015.

Although companies listed on NYSE extend beyond ICT, it is interesting to note that there is a similar percentage of returnees in the management group (35.4%), and 28.6% representation of returnees among CEOs and Chairs. See Table 4.

Table 4. Returnee Representation in Management of NYSE-Listed Chinese Companies (as of 15 July 2015)

NYSE Listed Technology Companies	CEO and Chair	Management Group	Managers w/Overseas Experience	% with Overseas Experience	Positions	IPO Year
Semiconductor Manufacturing	No	6	2	33.3%	EVP,COO	2004
Trina Solar	No	7	4	57.1%	COO,CFO,VP,HR	2006
China Digital TV Holding	No	3	1	33.3%	CFO	2007
Yingli Green Energy	No	10	5	50.0%	CTO,CFO,VP	2007
Renesola	No	9	2	22.2%	President(EU),President (US)	2008
Jinko Solar Holding	No	2	1	50.0%	CFO	2010
DAQO New Energy	CEO Yes	10	6	60.0%	CFO,CMO,ID,Director	2010
Bitauto Holdings Limited	No	3	1	33.3%	CFO	2010
Youku Tudou	Yes	11	2	18.2%	President, CFO,	2010
SouFun	Yes	2	0	0.0%	n.a.	2010
Renren.com	Yes	5	2	40.0%	COO,VP for HR	2011
NQ Mobile	No	2	0	0.0%	n.a.	2011
Qihoo 360	No	7	2	28.6%	CBO,CFO,	2011
58.com	No	5	1	20.0%	VP	2013
Total	4(14)	82	29	35.4%		

Sources: Compiled from company websites and NASDAQ Data (<http://www.nasdaq.com/screening/company-list.aspx>), which includes NYSE listed companies, July 2015.

By contrast, returnees are barely represented in the management of ICT “red chip companies,” meaning PRC-based firms registered abroad that are listed on the Stock Exchange of Hong Kong Limited (HKEx). Table 5 shows that of the seven red chip ICT companies, *none of the CEO’s or chairs are returnees*, and only two companies have returnees in their management groups. The low percentage of returnees among senior leadership of red chip companies may be attributed in part to the relative strength of their domestic and regional networks. Listing on NASDAQ and NYSE involves underwriting by international investment banks. But overall, most technology companies have listed in New York rather than Hong Kong due to the HKEx’s traditional requirements (Betts and Cai, 2014). These include a “profit test” of HK\$20 million (e.g., minimum profits of HK\$20 million (US\$2.6 million) in the past financial year and HK\$30 million (US\$3.9 million) in the previous two years). In addition, companies using “variable interest equity” (VIE) structures to allow foreign investment without formal equity stakes have run into difficulties in listing on HKEx. VIEs are popular among China’s internet, social media, and mobile app companies due to restrictions on foreign ownership and investment in the telecommunications industry (Betts and Cai, 2014).

Table 5. Returnee Representation in Management of Red Chip ICT Companies

(as of 15 July 2015)

Company	Main Business	CEO and Chair	Mgt. Group	Mgt w/ Overseas Exp.	% with Overseas Exp.	Positions	IPO Year
Changhong Jiahua Holdings Ltd	IT solutions and services	No	5	1	20%	AMD	2000
China Mobile Ltd.	Telecommunications	No	3	1	33%	VP	1997
China Unicom(HK)	Mobile, Internet, Information technology	No	6	0	0%	n.a.	2000
Lenovo Group Ltd.	Technology products and services	No	14	0	0%	n.a.	1994
CITIC Telecom Int'l Holdings Ltd.	Telecommunications services,	No	4	0	0%	n.a.	2007
Inspur International Ltd.	Software development and software outsourcing	No	6	0	0%	n.a.	2004
Founder Holdings Ltd.	Software development, systems integration	No	5	0	0%	n.a.	1995
Total		0	43	2	4.7%		

Notes: There are a total of 143 red chip companies, including 5 in the Growth Enterprises Market and 138 on the Main Board. Only Changhong Jiahua Holdings is from the Growth Enterprises Market.

Source: Company information collected from HKEx, available at https://www.hkex.com.hk/chi/stat/smstat/chidimen/chidimen_c.htm

But well before the point of reaching sufficient scale to launch an IPO, the general ecosystem of ZGC has been highly welcoming for returnees. The Haidian Overseas Students Pioneer Park (OSSP) was established in 1997 as Beijing's first incubator park dedicated to returnee students. Incentives include subsidized rent, exemption from the company tax, office support services, and access to innovation grants (www.osspp.com, accessed 13/7/15). The OSSP also offers corporate training workshops on topics such as upgrading middle management skills, delivering persuasive business presentations, virtual teambuilding, records management training, good corporate governance for SMEs, large customer sales training, and so on.

Among the earliest cohort of "Distinguished Entrepreneurs" supported by OSSP is Jane Yan (嚴望佳). After earning her Ph.D. in computer science from the University of Pennsylvania in 1996, Yan declined job offers from companies in the US, and returned to China where she founded VenusTech (<http://www.venustech.com.cn/en/>), now one of country's leading cyber security company. When VenusTech was just starting, the OSSP helped connect it with the Torch High Technology Industrial Development Center, the SME Technology Innovation Fund, and most critically, the Ministry of Science and Technology (Fu 2007). During the early 2000s, a stream of China's top leaders visited VenusTech: Jiang Zemin, Li Lanqing, Zeng Qinghong, Hu Jintao. In June 2010, VenusTech listed on the Shenzhen Stock Exchange's SME Board, making it the country's first private internet security company to go public. Beyond serving as an example of the OSSP incubator's pride, Yan could be considered a "model returnee" from the perspective of the Chinese government. She reportedly refused foreign funding during its early years (www.wantchinatimes.com, 11 May 2012): "Network security is a matter concerning national sovereignty and economic stability. China's Internet security should be handled internally." (www.womenofchina.com, 2 January 2014).⁴ VenusTech's clients include dozens of leading

⁴ Note, however, that foreign VCs now account for 22.85% of VenusTech's shareholders (http://www.venustech.com.cn/en/templates/T_Second/index_55.html, accessed 14 July 2015).

government, Chinese Communist Party, military, and state media units. Sometimes called the “Mother of the Great Firewall of China,” Yan is a member of the CPPCC, the All-China Youth Federation, and the Federation of Industry and Commerce’s Standing Committee (Wang, 2011, 116).

The more recent spectrum of returnees ranges from those inspired by China’s market at one extreme, to those who are frustrated and planning to migrate again. This section presents cases of both. The first is an example of a young returnee entrepreneur with renewed confidence in China’s opportunities after corporate management experience in Silicon Valley (SV). At the other end of the spectrum are disenchanted “serial entrepreneurs,” who are diversifying their investments domestically as a means to avoid official attention and/or leave the country permanently.

Larry (pseudonym), a 29-year old crowdfunding entrepreneur, is an example of a returnee energized with transnational networks and SV experience (BJ436072015 interview, 7/6/15). After graduating with a computer science degree from Fudan University in 2007, Larry moved to Beijing to work for Google China. When he expressed irritation with the domestic limits of product development due to export controls in the US, his supervisor sent him to Google’s headquarters in Mountainview, California for six months. At Mountainview, he was impressed by the free flow of information, and learned about Google’s “20% Project” principle, which encourages staff to devote 20% of their time towards project innovation. Upon his return to Beijing, he used the 20% Project principle to recruit a team of engineers that ultimately developed Google Shopping, which became one of the largest projects in Google China. Shortly before Google announced its intention to leave China, Larry decided to move to Facebook in Palo Alto. The job transition period was nervewracking. His visa application came through just months before Google announced that it would be moving all its servers to the US.

Larry joined Facebook just as it was taking off. When he arrived Palo Alto in March 2010, Facebook had about 500 staff. By the time Larry left four and a half years later, it had expanded to about 10,000 employees. Larry was tasked with developing a payment platform for games on Facebook. As his team grew from five to fifty engineers, Larry found that he was spending all of his time as a professional manager making sure that all his staff were happy with the company and their projects. Business hours were consumed by meetings (at least 21 each week) and thousands of e-mails. He could turn to his real work as a computer scientist only after 5 pm.

Concluding that being a corporate manager was not the best use of his time—and to his parents’ dismay—Larry gave up his competitive six-digit Facebook salary to start his own company in China. He still had a lot of connections because he had only been away for a couple of years. Besides, while still at Facebook, he started attending conferences in China on payment platforms. In the summer of 2014, he made over ten round trips between Palo Alto and Beijing. With classmates from Fudan, including a business partner who worked for Microsoft for six years, Larry launched a

reward-based crowdfunding platform in April 2015. Named “Rise” (pseudonym), the mobile app received US\$1.5 million in VC funding. He had already met venture capitalists through his Google China experience; moreover, he often served as the official host when venture capitalists were visiting Facebook. Two months after launching, Rise was already hosting 1,000 projects (BJ436072015 interview, Beijing, 14/7/15). Out of Rise’s 20 employees, half are engineers and most have worked for a foreign company in China. Larry explained (in Chinese), “We want to make sure they fit culturally. I tell all job applicants that it is very risky because they are about to spend the best years of their lives on the team.” Larry and his partner each draw 10,000 yuan/month in salary.

Unlike returnee entrepreneurs such as Larry who traded a well-compensated position in Silicon Valley for the more modest station of running a domestic start-up, Sally (pseudonym) is a returnee who has already accumulated significant assets throughout China; yet she longs to reverse her returnee status (BJ8121913 interviews, Beijing, 19/12/13, 15/4/14, 5/6/15). She prefers to converse in English when possible, and expresses nostalgia for the days that she was a doctoral student studying finance in the Bay Area. Blue skies, ski trips, and friendly (Chinese) neighbors brought sharp relief from the daily pollution and corruption of life in Beijing.

Sally’s casual appearance belies the fact that she is a serial entrepreneur who owns and manages a conglomerate of businesses in diversified sectors. Her oldest company, founded in 1998, is an internet-based public relations firm that serves MNCs operating JVs in China. Her second company is a high-end food wholesaler that harvests organic produce sold through a membership-based distribution channel. The clients are almost exclusively state-affiliated units, including private dining clubs reserved for officials Beijing. The third is an events planning company that serves local party-state clients. Revenues generated through the second and third businesses have dwindled significantly since the anti-corruption campaign started in 2010. The fourth is a chain of bakeries operating in five provinces. The fifth and most recent one is a solar charger company that she founded with three US-based Chinese engineers that she met during graduate school. With a 70% stake, Sally suggests that the latter enterprise may serve as a means for her to transfer China-based assets abroad. When asked why she has not concentrated on increasing the scale of just one or two of her businesses, she explained, “It’s dangerous to get too big in China. This way if any one of my enterprises runs into trouble, I have other options.” She added, “My goal is to return to the United States with my daughter so she can grow up in a cleaner, less corrupt, and more relaxed environment.” Meanwhile, for the past two years Sally has been spending up to 179 days at a time in the US due to the 180-day visa limit on her unsponsored visits.

Many other interviewed returnees echo Sally’s disillusioned stance, though systematic data is lacking on how widely it is shared within China, or even Beijing’s population of “returned talent.” A question from the Kauffman Foundation’s (2011) survey of Chinese returnees regarding quality of life

comes the closest: 40.7% indicated that it is “somewhat” or “much better” in the US, while 25.9% responded that quality of life is “much better” or “somewhat better” in China (n=111). For the present analysis, the point is that even economically secure returnee entrepreneurs embedded in both transnational *and* local networks, such as Larry and Sally, may differ in their level of personal commitment to remaining in the country.

Bangalore

Similar to Beijing, Bangalore already had a strong base of human capital, research institutions, and physical infrastructure prior to its IT boom. As part of the British East India Company’s transportation route, the development of railway, postal, and telegraph services made Bangalore a logical site for the new capitol of Karnataka in 1956. The central government made significant investment in heavy industry and defense sectors during the 1950s and 1960s, as evidenced by the fact that the headquarters of major public enterprises—Hindustan Aeronautics, Bharat Electronics, Bharat Heavy Electricals, Indian Telephone Industries, Hindustan Machine Tools (now Bharat Earth Movers), and the National Government Electric Factory—are all in Bangalore. These were accompanied by supporting educational and research infrastructure, including the National Aerospace Laboratories, the India Institute of Science, over 20 engineering colleges, and several other universities.

Although India initiated liberalizing economic reforms later than China (1991 versus 1978), Bangalore was well poised for ICT development even before the establishment of software technology parks. The vision for transforming Bangalore into India’s Silicon Valley dates back to 1978 when the Rama Krishna Baliga, the first Chairman and Managing Director of Keonics (Karnataka State Electronics Development Corporation) established an Electronics City on 332 acres of land in southwest Bangalore (<http://www.electronic-city.in/about/history#head>, accessed 15/7/15). That same year, the passage of the Foreign Exchange and Regulation Act precipitated IBM’s departure from India; IBM was not willing to comply with new requirements to accept local shareholders (Saxenian 2006, 274). IBM’s decision created an immediate supply of 1,200 unemployed software experts in Bangalore. Some established their own computer companies; others pursued employment abroad, (Heeks 1996: 70). Meanwhile, the US’s export controls on high technology equipment to countries (perceived as) aligned with the Soviet Union, combined with India’s import controls, limited outsourcing work by Indian computer programmers to facilities in the US (Saxenian 2006, 278). These bilateral trade barriers fueled the beginning of what became known as “body shopping” of Indian engineers working in the US on time-limited H1-B visas for low wages.

Among the earliest and most prominent returnees for India’s IT sector was Azim Premji. After his father passed away in 1966, 21-year old Premji curtailed his studies in engineering at Stanford to run his family’s business, the Western Vegetable Oil Company. Observing the market

void after IBM's departure, Premji diversified the business into manufacturing minicomputers and renamed it Wipro in 1977. A partnership with Multitech (Acer) in Taiwan in 1985 enabled Wipro to distribute a PC that it had developed; and a joint venture with GE in 1989 led to the relocation of the headquarters of Wipro Technologies to Silicon Valley. Vivek Paul of GE was recruited to lead the division. Wipro grew rapidly as Paul commuted between Mountainview and Bangalore, bringing news of latest market developments. By the 1990s, Wipro was proactive establishing offshore software development centers. With a market capitalization in the range of US\$35 billion in 2015, Wipro provides global IT, consulting, and outsourcing services with over 158,200 staff across six continents (<http://www.wipro.com/about-wipro/>, accessed 15/7/15).

Founded by (non-returnee) six engineers in 1981, Infosys was another early leader in India's IT services and software industry. Infosys relocated to Bangalore in 1983, which was followed by the establishment of India's first wholly foreign-owned software subsidiary, Texas Instruments, in 1986. Throughout the next two decades, a series of MNCs such as Motorola, Cisco, and Intel proceeded to establish offices in Bangalore. Even IBM returned in 1997. These offices were largely managed and staffed by returnees with Silicon Valley experience. Kapur (2002) observed, "Companies like Yahoo, Hewlett Packard, and General Electric opened operations in India largely because of the confidence engendered by the presence of many Indians working in their US operations." Returnees rose through the ranks to become middle managers and as well as senior leadership positions in the Bangalore branches of MNCs (Ghamawat 2000).

Meanwhile, the central Ministry of Technology introduced a series of Software Technology Development Parks of India (STPIs) to encourage offshore development centers and production units devoted solely to exports. The pre-existing Electronics City became one of the first six STPIs that offered tax incentives, broadband communication networks, and more favorable basic infrastructure (roads, water, electricity). Besides Electronics City, the Whitefield cluster includes International Tech Park Bangalore, which was formed as joint venture between India and Singapore in 1994, as well as an Export Promotion Industrial Park Zone (EPIP) with campus-style facilities for SAP, Dell, Unisys, Huawei, and Oracle, among others. Given the traffic-related challenges of travelling from one part of Bangalore to another, expats and returnees tend to live in self-contained housing developments in Whitefield that provide western amenities and international schools (field interviews, January 2015).

Bangalore's transformation into the Outsourcing Capital of the World has had both national and local economic impact. Bangalore is the site of outsourcing services for 400 of the Fortune 500 companies (KIG 2013, 5). Taken together, the over 2,200 IT companies in Bangalore now generate US\$17 billion in software exports, accounting for 35 percent of the country's total exports (KIG 2013, 4). Locally, the population more than doubled from 2 million in 1981 to 5 million in 2001—and more than doubled again to 10.8 million by 2015. English has become the dominant common language in

Bangalore due to the influx of migrants from other parts of the country. “You could be Bangalorean too,” one start-up entrepreneur advised (BG121202015 interview, Bangalore, 20/1/15). “I came to Bangalore in 1989 and don’t speak the local dialect, Kannada, because it isn’t necessary.” The city now employs an estimated 35 percent of India’s labor supply of 2.5 million IT professionals (Bhatt 2015).

Some indicators of the role of returnees in Bangalore’s remarkable expansion can be seen in their representation in senior leadership and management of the NASSCOM-ranked leading IT and BPM services firms.⁵ Nearly half of the CEO’s and Chairs of the top 20 IT services companies have overseas experience, and only two companies (Tata and Hexaware) have no returnees among their senior leaders *and* management groups (Table 6).

⁵ We also analyzed returnee representation in Indian IT companies that have listed on NASDAQ and NYSE, but found that the overwhelming majority list on the Bombay Stock Exchange rather than in the US. While there are 32 Chinese companies on NASDAQ and 14 on NYSE (Tables 3 and 4), among the listed Indian IT/internet companies, only six (Sify, Infosys, MakeMyTrip, Videocon, Wipro, WNS) are listed on NASDAQ and only two (Wipro and Infosys) are listed on NYSE.

Table 6. Returnee Representation in India’s Top 20 IT Services Companies, 2013-14

Top 20 IT Services Companies	CEO and Chair	Management Group	Managers w/Overseas Experience	% with Overseas Experience	Positions	IPO Year
Tata Consultancy Services	No	2	0	0.0%	n.a.	2004
Infosys	Yes	15	0	0.0%	n.a.	2012
Wipro Limited	Chair Yes	9	1	11.1%	CSO	2000
HCL Technologies Ltd	Yes	18	5	27.8%	CFO,VP,CTO	1999
Tech Mahindra Ltd	Chair Yes	12	2	16.7%	VC,Head of Strategy	2006
L&T Infotech	Yes	2	0	0.0%	n.a.	n.a.
Syntel Ltd.	Chair Yes	14	3	21.4%	VC, COO, BUH	1997
Mphasis	No	9	4	44.4%	BFSI Head, President, CSO	1996
Genpact India Pvt. Ltd.	No	7	2	28.6%	SVP	2007
iGate	Yes	6	1	16.7%	Director	2005
Mindtree Ltd.	No	9	1	11.1%	COO	2007
KPIT	Chair Yes	9	1	11.1%	President	1999
Zensar Technologies Ltd.	No	11	3	27.3%	Global Department Head	2007
Hexaware	No	13	0	0.0%	n.a.	2000
Cyient	Yes	12	1	8.3%	SVP	2013
NIIT Technologies	No	6	1	16.7%	President	2004
Infinite Computer Solutions	Yes	3	0	0.0%	n.a.	2010
Persistent Systems	Chair Yes	6	1	16.7%	President	2010
Geometric Ltd.	Yes	6	0	0.0%	n.a.	2000
MASTEK Ltd	No	5	2	40.0%	JMD,SVP	1992
Total	14(30)	174	28	16.1%		

Sources: Company rankings from NASSCOM, <http://www.nasscom.in/industry-ranking>. Backgrounds of leaders collected from company websites.

Returnee representation among India’s leading business process management (BPM) companies, however, is far more modest (Table 7). One of the reasons may be that BPM—which includes knowledge services, data analytics, and legal services—has only developed more recently. While India’s comparative advantage in business process outsourcing (BPO) relies on the lower cost of skilled labor, BPM provides clients with “higher end” consulting services such as predictive diagnostics, business process transformation, and other business intelligence products (Bhaskar 2015). Indeed, India’s National Association of Software and Services Companies (NASSCOM) has been working to rebrand BPM to raise awareness about the value-added of BPM relative to traditional BPO and software development (www.nasscom.in, accessed 17/7/15).

Table 7. Returnee Representation in India's Top 15 BPM Services Companies, 2013-14

Top BPM Companies	CEO and Chair	Management Group	Managers w/Overseas Experience	% with Overseas Experience	Positions	IPO Year
Serco Global Services	No	5	1	20.0%	Director of Finance	2002
Infosys BPO	No	6	1	16.7%	VP	n.a.
Aegis Ltd.	No	9	1	11.1%	Far east CEO	n.a.
Firstsource Solutions Ltd.	Yes	9	2	22.2%	EVP, SVP	2007
WNS Global Services	No	7	1	14.3%	Head of Sales	2006
Hinduja Global Solutions Ltd.	No	14	0	0.0%	n.a.	2007
EXL	No	7	0	0.0%	n.a.	2006
Eclerx Services Ltd	No	11	1	9.1%	Director	2007
Total	1(11)	68	7	10.3%		

Sources: Company rankings from NASSCOM, <http://www.nasscom.in/industry-ranking>. Backgrounds of leaders collected from company websites.

Table 8 compares returnee representation in China's US-listed companies with that in India's leading IT-BPM companies. The primary difference is that the management groups in India's companies have a lower percentage of those with overseas experience compared to those in China (14.5% vs. 36.2%), but returnees account for over 36 percent of the CEOs/Chairs in India's most highly ranked companies.

Table 8. Returnee representation in China's US-listed IT Companies and India's Top IT-BPM Companies

	China	India
# of selected companies	44 listed on NASDAQ or NYSE	28 (20 top IT services, 15 top BPM companies)*
% CEO/Chair with overseas experience	30.4%	36.6%
Average % of management with overseas experience	36.2%	14.5%

*Note that seven of India's top IT services firms also have BPM subsidiaries, which is why the total number of companies under consideration is 28 rather than 35.

One of the distinguishing features of Bangalore's eco-system compared with that of ZGC is that Bangalore attracted more MNCs and employed more Indian engineers in Silicon Valley, thereby creating a larger pool of former IT employees. MNC co-workers constitute the basis for professional networking based on shared (and highly coveted) employment experience. Although Bangalore-based staff are not returnees, their occupational identities as MNC professionals in the IT sector differentiate them nonetheless. They work long hours within well-maintained campuses, eat in company canteens, wear security cards on lanyards with the corporate logo, and in some cases,

socialize almost exclusively with other colleagues who live in gated communities. A senior executive explained, “I’ve been working for this [MNC] for nearly ten years, but all my family members are in Mumbai, so everyone I know in Bangalore works here. We spend all our time together at work and usually go out to eat in Whitefield” (BG191222015 interview, Bangalore, 22/1/15).

Indeed, all the start-ups interviewed in Bangalore turned out to be based on partnerships with former classmates or co-workers, regardless of whether they had lived abroad. After climbing the corporate ladder at Texas Instruments (TI) for 15 years, for example, CEO Avinash Basu experienced “the typical mid-life crisis” and decided to go out on his own (BG121202015 interview, Bangalore, 20/1/15). He confesses that his first start-up was a failure. It involved designing hi-tech electronic products with friends from college. They had all studied electrical engineering at IIM-Kashipur, but did not understand the importance of developing a business plan. To gain more experience, Basu joined a Silicon Valley start-up, Momental Systems, where he managed the microprocessor development process.

After a few years, Basu decided to try his hand at entrepreneurship again. In 2008, he and three former colleagues from Texas Instruments co-founded Silvan Innovation Systems, a home automation business tailored towards an Indian lifestyle. As Basu explained, “The product is in the home, so it has to be sensitive to how people live in India. Homes are constructed differently and people live differently. For example, there are extended families in the same house, with a wide range of age groups (toddlers to grandparents). The product needs to be acceptable to everyone.” Running a start-up comes with risks. Basu and his partners did not draw personal salaries for the first four years, which worried their families. To their relief, Silvan now accounts for 60 percent of all smart homes in Bangalore and has attracted attention from potential investors. Basu hopes to serve other Indian cities and expand abroad as well. He added at the end of our interview, however, that Silvan “could have reached this point in about three years if we were in Silicon Valley. The appetite for risky investment is much lower in Bangalore than in SV. There’s more interest in internet companies here.” The next section discusses the VC environment further.

In Bangalore, domestic entrepreneurs launched some of the earliest IT giants such as Tata Consultancy Services and Infosys. Concurrently, MNCs had a defining impact in shaping the circulation and networks of IT professionals. Laid-off IBM engineers founded many of the earliest IT businesses in Bangalore or went to work in Silicon Valley. The Government of India has not enacted as many policies as China in encouraging return migration. Instead, the expiration of H1-B visas, state investment in IT parks, and consequent growing ICT opportunities in Bangalore were important contextual factors that attracted returnees. Many were recruited to manage branches of MNCs engaged in global outsourcing. Returnees also started their own businesses and assumed senior leadership positions in domestic IT-BPM companies. Meanwhile, the industry created employment

opportunities not just in IT, but also growing demand for products and services to support middle-class and upper-middle class habits of consumption, including restaurants, hair salons, shopping malls, housing compounds, and so on. Beyond returnees and expatriates, Bangalore has also attracted millions of domestic migrants who work in these new service sectors.

Venture Capital

While the spatial clustering of research institutes, high-technology parks, and IT companies in ZGC and Bangalore bears resemblance to Silicon Valley, the contrasts are sharper when it comes to the actual business and financing environment. In both China and India, the venture capital funds that emerged in the 1990s were dominated by large state entities. Yet public fund managers were not accustomed to evaluating ICT businesses and tended to be risk adverse, preferring late-stage investments over start-ups. Meanwhile, international venture capitalists were challenged by uncertainties in the domestic business environment, coupled with various regulatory obstacles to conventional VC financing structures (Saxenian 2005, 50). One of the early challenges, for example, was the absence of “tax pass-through treatment” for capital gains on investment. Given the disjuncture between Silicon Valley investment practices and local operating realities, returnees in China and India have played a leading role in VC investment. Their domestic networks enable them to negotiate local challenges, while their transnational experience brings the entrepreneurial sensibilities and know-how for structuring VC. The positive developmental impact of returnees’ mixed embeddedness is most apparent in the VC sector.

Moreover, returnee VC has remained robust over time. Even though national restrictions on VC arrangements have relaxed somewhat, one of the popular indices consulted by international investors—the World Bank’s *Ease of Doing Business Index*—reveals areas of on-going concern (see Table 9). In particular, both China and India rank quite low in “starting a business,” “dealing with construction permits,” “getting electricity,” and “paying taxes.” China also has a low ranking in “protecting minority investors,” and India has notably lower rankings than China in “enforcing contracts” and “resolving insolvency.” The *Ease of Doing Business Index* is meant to measure the regulatory environment for domestic business and is compiled through consultation with legal professionals rather than firm surveys. In other words, the index highlights relative cross-national evaluations of regulatory barriers through an Anglo-American lens, which is important for international investors. However, the rankings may overstate the challenges faced by returnee entrepreneurs who possess a mix of domestic and transnational networks.

Table 9. World Bank’s Ease of Doing Business Rankings, 2015

<i>Ease of...</i>	<i>China</i>	<i>India</i>	<i>China-India</i>
Doing Business	90	142	-52
Starting a business	128	158	-30
Dealing with construction permits	179	184	-5
Getting electricity	124	137	-13
Registering property	37	121	-84
Getting credit	71	36	35
Protecting minority investors	132	7	125
Paying taxes	120	156	-36
Trading across borders	98	126	-28
Enforcing contracts	35	186	-151
Resolving insolvency	53	137	-84

Source: World Bank (2015), <http://www.doingbusiness.org/rankings>

Note: The rankings and data are benchmarked to June 2014 and all rankings are out of 189 countries.

ZhenFund, for example, was co-founded in 2011 by returnees Bob Xu (徐小平) and Victor Wang (王强) in collaboration with Sequoia Capital. With US\$30 million, ZhenFund is one of the leading angel funds in China, focusing on social networking, gaming, e-commerce, business software, O2O, education, and training start-ups (www.zhenfund.com, accessed 18/7/15). Bob and Victor both studied and worked abroad for several years after graduating from the Beijing Central Conservatory of Music and Peking University, respectively. As a music student in the US, Bob washed dishes in Chinese restaurants and delivered pizza to get by, but then transferred to the University of Saskatchewan on a scholarship. After earning his MS in music, Bob tried to start a music video company in China to produce songs that he wrote while abroad (www.learning.sohu.com/s2014/xuxiaoping/, accessed 18/7/15). The company was not successful. Meanwhile, Victor taught English as a lecturer at Peking University for a few years before enrolling in a MS degree program in computer science at the State University of New York. After graduating, he worked as an engineer in the software division of Bell Communications Research (www.crunchbase.com/person/wang-qiang, accessed 18/7/15).

Bob and Victor gained prominence after returning to China as the co-founders of New Oriental Education & Technology Group, one of China's largest private education services company. Established in 1996, New Oriental listed on NYSE in 2006. As of 2015, New Oriental includes a network of 60 schools, 722 learning centers, and 28 bookstores in 50 cities (www.neworiental.org, accessed 18/7/15). They also host an online network with about 10.4 million registered users.

The missions of New Oriental and Zhen Fund are complementary as they appeal to the educational and entrepreneurial aspirations of China's contemporary middle class. Together, they cover each stage of the migration lifecycle. New Oriental runs English-language schools, and offers English tutoring and preparation for standardized tests such as the TOEFL, SAT, and GRE. At the

next stage, they provide consulting services for applying to international schools, colleges, and universities, including dealing with scholarships, visas, and off-campus housing. New Oriental Highway Career Services then identifies employment opportunities for returnees and connects recruiters with highly ranked universities.

Zhen Fund is even more attuned to supporting returnees. Bob recounts that his first investment was inspired by a returnee who wanted to launch an education start-up. The student persuaded him to invest because he happened to be a former tuition-paying student of New Oriental (*Beijing Daily*, 6/11/12). ZhenFund now runs an Entrepreneur-in-Residence summer program dedicated towards incubating start-ups by returnees (see Figure 3). The on-line application is welcoming, short, and does not require a business plan (<http://www.mikecrm.com/f.php?t=Oscmv4>, accessed 18/7/15). As of 2015, their investments were split evenly between local and returnee start-ups (BJ576122015 interview, 12/6/15). Bob views his road to success as delayed by limited opportunities of his time: “I didn’t attend college until I was 22, go abroad until I was 32, return to China until I was 40, and become successful until I was 50 (*Beijing Daily*, 6/11/12).” Had they existed at the time, Bob could have benefited from the services of New Oriental and ZhenFund.

Figure 3. “Overseas Students! ZhenFund Calls You Home to Start a Business”



以真格的创业与投资智慧制一剂治愈孤独良药。

“ZhenFund’s entrepreneurialism and investment wisdom cures loneliness.”

Source: ZhenFund, www.zhenfund.com, accessed 18/7/15.

Not surprisingly, over half of ZhenFund’s staff are returnees, and some are more accurately considered Chinese-American expats. The daughter of Victor Wang, Olivia Wang, for example, moved to the US when she was three years old, grew up in Ohio, and graduated from Johns Hopkins University (BJ576122015 interview, 12/6/15). Olivia inherited her father’s local network even though she is “totally American.” She grew up speaking Chinese with her parents, and went to China every summer where she attended government banquets. After graduating from Hopkins, she worked for Credit Suisse in New York for a few years and then joined a bit coin start-up in Beijing—until bit coin was banned in China.

Olivia is now a Vice President at ZhenFund with responsibility for the US tech start-up portfolio. She finds it ironic that she left the US to work in China, and yet, since joining ZhenFund a year ago, she has been flying back to the States nearly every month for deal sourcing. ZhenFund targets those who were born and raised in China, but went to college or graduate school in the US. Their recruitment activities are focused on Stanford, Harvard, Yale, and Princeton – but especially Stanford.⁶ Olivia observes that traditional “return turtles (*haigui*)” who have been out of the country for a long time are not good for start-ups: “People are increasingly staying in China because it’s moving at light speed. It’s hard for people to readjust to Chinese culture. You have to be well embedded here. [Being a *haigui*] is even seen as a crutch; it isn’t as celebrated as before.”

⁶ Olivia commented, “If you’re in VC and you say ‘Stanford,’ that’s *it*. No Harvard MBA has really made \$1 billion, but three from Stanford have.”

Overall, the scale of VC China and India expanded rapidly during the 2000s, but remains modest compared with Silicon Valley. During the 1996-2006 decade, for example, the average annual volume of VC in the US was \$35.2 billion, as compared to \$598 million in China and \$448 million in India (Li and Zahra 2012). Although both Beijing and Bangalore now host dedicated zones for start-ups, private and international VC are more desired sources of investment than state-sponsored facilities. In both countries, moreover, an elite group of returnees are investing more actively than their domestic counterparts. As shown in Tables 10 and 11, our analysis of the managerial composition of Chinese and Indian VC firms found that over 63% are led by returnees. Nearly half of China's VC firms are based in Beijing (18 out of 41); and all the VC firms in Beijing were founded by entrepreneurs with overseas experience. Within India, Mumbai hosts a larger number of VC offices, but 36 percent (13 out of 36) of domestic VC firms have offices in Bangalore, and 70 percent of those in Bangalore are led by returnees.

Table 10. Returnees and Chinese Venture Capital Companies

Company	Founder	Studied Abroad	Worked Abroad	Location	Year
Zhen Fund	Xu Xiaoping	✓	×	Beijing	2011
	Wang Qiang	✓	✓		2007
Jiuding Capital	Huang Xiaojie	×	×	Beijing	
	Wu Gang	×	×		
Innovation Works	Li Kaifu	✓	✓	Beijing	2009
CSC Group	Shan Xiangshuang	×	×	Beijing	2000
Tiantu Capital	Wang Yonghua	×	×	Shenzhen	2002
IDGVC	Xiong Xiaoge	✓	✓	Beijing	1993
GSR Ventures	Wu Shenjun	✓	✓	Beijing	2004
New Horizon	Yu Jianming	✓	✓	Beijing	2007
H&Q Asia Pacific	Xu Dalin	✓	✓	Beijing	1986
China Equity	Wang Chaoyong	✓	✓	Beijing	1999
Northern Light	Deng Feng	✓	×	Beijing	2004
SEQUOIA Capital China	Zhang Fan	✓	✓	Beijing	2005
	Shen Nanpeng	✓	✓		
CDH Investment	Wu Shangzhi	✓	✓	Beijing	2002
CBC Capital	Tian Suning	✓	×	Beijing	2006
Infotech Pacific Ventures	Alfred Chu	✓	✓	BJ/SH	2000
Paterners China	Zhang Ying	✓	✓	Beijing	2008
	Shao Yibo	✓	✓		
Tsing Capital	Ye Dong	✓	×	Beijing	2001
Ce Yuan Ventures	Feng Bo	✓	✓	Beijing	1999
Ivy Capital	Weng Jiye	✓	✓	Shanghai	2007
	Fu Lei	✓	✓		
	Xiao Chaoyang	×	×		
Leading Capital	Wu Chaoyang	×	×	Shanghai	2007
	Gao Fengyong	×	×		
SOVA Capital	Yan Ai'e	×	✓	Shanghai	2004
TPB Capital	Li Shujun	×	×	Shanghai	2006
Broadhi Capital	Kong Qiang	×	×	Shanghai	2008
PDVC	6 domestic enterprises	×	×	Shanghai	1997
New Margin Ventures	Feng Tao	✓	✓	Shanghai	1999
Preipo	Wu Kezhong	✓	✓	Shanghai	1999
Qiming Venture Partners	Kuang Ziping	✓	✓	Shanghai	2006
DFJ Dragon Fund China	Zhao Guangdou	✓	✓	Shanghai	2006
DT Capital Partners	Roman Shaw	✓	✓	Shanghai	2006
	Joe Tian	✓	✓		
Chengwei Ventures	Li Shimo	✓	✓	Shanghai	2000
Forture Investment	Liu Zhou	×	×	Shenzhen	2000
Hiway Capital	Li Mingzhi	×	×	Guangzhou	
Co-power Venture Capital	Han Tao	×	×	Shenzhen	2008
GTJA Investment	Cai Dajian	×	×	Shenzhen	2000
CDF Capital	Xiao Shuilong	✓	×	Shenzhen	2007
Youngy Investment Holding	Lv Xiangyang	×	×	Guangzhou	1995
Green Pine Capital	Luo Fei	×	×	Shenzhen	2007
	Li Wei	×	×		
Oriental Forture Capital	Chen Wei	×	×	Shenzhen	2006
	Chen Houbo	×	×		
SINOWISDOM	Zong Peimin	×	×	Hangzhou	2002
Cybernaut	Zhu Min	✓	✓	Hangzhou	2005
Pegasus Brigade	Yuan Yue	✓	×	Beijing	2011
n=41	26 returnees	51	31		

Table 11. Returnees and Indian Venture Capital Companies

Company	Founder	Study Abroad	Work Abroad	Location	Year
AMBIT Pragma	Mangesh Pathak	×	×	Mumbai	2009
	Nirmesh Prakash	×	×		
	Rajeev Agrawal	×	×		
Aavishkaar	Vineet Rai	×	×	Mumbai	2001
Abraaj Group	Arif Naqvi	✓	✓	Mumbai	2002
Aditya Birla PE	Bharat Banka	×	×	Mumbai	2009
Amplus	Sanjay Lalbhai	×	×	Ahmedabad	2011
Ascent Capital	Raja Kumar	✓	×	Bangalore	2000
Asian Healthcare Fund	Anand C. Burman	✓	✓	New Delhi	2010
	Ajay Kumar Vij	×	×		
Avugi Capital	Achal Ghai	×	✓	New Delhi and Mumbai	2003
CX Partners	Ajay Relan	×	×	New Delhi	
	Jayanta Kumar Basu	×	×		
Catamaran Ventures	Arjun Narayan	✓	✓	Bangalore	2010
Everstone Capital	Atul Kapur	×	✓	Bangalore, Mumbai, Dehli	2006
	Sameer Sain	✓	✓		
Forum Synergies	Samir Inamdar	×	×	Bangalore	2008
	Hemchandra	×	×		
Exfinity VC	V Balakrishnan	×	×	Bangalore	2013
Fulcrum	Krishna Ramanathan	×	×	Chennai	2000
Gaja Capital	Ranjit Shah	✓	✓	Mumbai	2004
	Gopal Jain	×	×		
GIT Capital Group	Gaurav Dalmia	✓	✓	New Delhi	2010
	Madhav Dhar	✓	✓		
Helion	Ashish Gupta	✓	✓	Bangalore	2006
	Sanjeev Aggarwal	×	×		
IDFC	Rakesh Mohan	✓	✓	Mumbai, Delhi, Bangalore	1997
Inventus Capital Partners	Kanwal Rekhi	✓	✓	Bangalore	2007
IFVA	Vishal Nevatia	×	×	Bangalore, Mumbai	1999
Intelicap	Vineet Rai	×	×	Hydrabad, Mumbai	2002
Jacob Ballas Capital	Rajan Jetley	×	×	New Delhi	1995
Lightbox	Sandeep Murthy	✓	✓	Mumbai	2014
Lumis Partners	Rohit Bhayana	✓	✓	Gurgaon	2006
	Sandeep Sinha	✓	✓		
Milestone capital	Ved Prakash Arya	✓	×	Mumbai	2007
NIRVANA	Amit Patni	✓	✓	Mumbai	2011
	Rajan Mehra	✓	×		
Nexus Venture Partners	Sandeep Singhal	✓	✓		2006
	Suvir Sujan	✓	✓		
New Silk Route	Parag Saxena	✓	✓	Mumbai, Bangalore	2006
Ojas Venture Partners	Rajesh Srivathsa	✓	✓	Bangalore	2007
Omnivore VC	Jinesh Shah	×	×	Bangalore, Mumbai, New Delhi	2010
Piramal	Ajay Piramal	✓	✓	Mumbai	1980
Rajasthan VC	Shri Girish Gupta	×	×	Rajasthan	2002
Seedfund	Bharati Jacob	✓	✓	Bangalore, Mumbai, Delhi	2006
	Mahesh Murthy	N/A	✓		
	Pravin Gandhi	✓	×		
Utthishta	P.Ramakrishna	×	×	N/A	2012
	Mohsin Khan	✓	✓		
Ventureast	Sarath Naru	✓	✓	Chennai	late 90s
Westbridge Capital	KP Balaraj	✓	✓	Bangalore	2011
	Sumir Chadha	✓	✓		
	SK Jain	✓	✓		
	Sandeep Singhal	✓	✓		
n=36	23 returnees	54	32		

Given the relative youth of China and India's VC industry, few academic studies have compared them directly. Nonetheless, it is worth highlighting certain findings from country-specific studies that point the way for further comparative research on varieties of VC investing and the wider impact of returnees.

In the case of China, Fuller (2010) has identified three patterns of VC investing in tech start-ups. VC firms led by returnees prioritize technology-intensive start-ups that introduce "tangible products embodying a significant amount of technology and skills (p. 452)." Foreign VC investors tend to focus on service-oriented start-ups, meaning those "trying to be first to market with a certain business model or service new to China or at least slightly differentiated from what is already on the market (Ibid)." Finally, VC firms funded by local governments generally invest in state-directed projects or avoid tech start-ups altogether. Fuller (2010) attributes the variation in investment preferences among returnee, foreign, and governmental VC to differences in "learned skills." In other words, it is relevant to situate different types of investors in the context of the social and professional environments in which these skills were developed. As outlined in the mixed embeddedness framework, the individual attributes of entrepreneurs are mediated by their domestic/international educational and employment experiences; and these experiences, in turn, have implications for their investment attitudes and behavior.

This general proposition is supported by a recent study of VC investors in China. Based on a sample of 1,141 start-ups and 2,420 VC investment deals during the 1994 to 2011 period, Li & Xia (2014) found that foreign VCs are more likely to invest in start-ups run by returnees, while domestic VCs are more likely to invest in those run by non-returnees. Furthermore, compared with domestic VCs, foreign VCs are less risk adverse and provide more early-stage investment. In terms of performance, they found that returnee enterprises with foreign VC investment are more likely to go public; and when they have their IPOs, they are more likely to list on international rather than domestic exchanges.

Whether similar dynamics are apparent in India warrants further research. As shown above, returnees dominate the leadership of VC firms, but we have not identified dedicated research on how their investment preferences compare with foreign VC.

Philanthropy and Social Engagement

Studies of China and India's returnees tend to focus on their impact on economic development, yet returnees are also engaged in domestic philanthropy, the NGO sector, and social entrepreneurship. In Beijing and Bangalore, returnee participation in ICT and venture capital has had spillover effects into philanthropy. Perhaps overstated, one news editorial even declares that the "IT czars of Bangalore" are leading a new "post-Ghandian wave of philanthropy (Guha 2012)." Successful ICT entrepreneurs also support local NGOs, though some are led by socially-minded returnees with non-IT backgrounds. The field of social entrepreneurship is more complex, involving entrepreneurs with both social and commercial motives, and those (in China) who merely register their social organizations as businesses for greater autonomy from restrictions facing NGOs. Overall, the ecosystems for philanthropy and the voluntary sector in China and India are less hospitable than that for ICT. As such, returnees are playing an emergent, though comparatively modest role.

Our examination of the backgrounds of China and India's top ten philanthropists revealed that few are actually returnees (see Tables 12 and 13). The founder of Alibaba, Jack Ma (马云), donated \$2.4 billion in stock options to his charitable trust, making him China's largest donor (*Fortune*, 22/4/15). However, Jack never studied or worked abroad. In India, Aziz Premji of Wipro topped the charts as the "Most Generous Indian" in 2014 and 2013, having donated \$4.4 billion of his personal wealth to charity (*Quartz India*, 5/1/15). The fact that he graduated from Stanford places him within the loose category of returnees, though Premji returned to India (in 1966) before the emigration waves of the 1970s and 1980s, and subsequent reverse migration of Silicon Valley returnees during the 1990s and 2000s.⁷ Nonetheless, Premji has set a high bar for philanthropy. Established in 2001, the Azim Premji Foundation is dedicated to improving India's education system. The Foundation funds the Azim Premji University, state and district field institutes, and various tuition-free demonstration schools. In addition, after becoming the first Indian to sign Warren Buffett and Bill Gates' Giving Pledge campaign, Premji donated 21 percent of his share of Wipro to the Azim Premji Foundation, and by 2015 he had donated another 18 percent (Ramanathan 2015).

Table 12. China's Top 10 Philanthropists, 2015

⁷ Kenney, Breznitz, and Murphee (2013) do not regard Aziz Premji as a returnee in the way that the returnee literature views one as "an individual who finished their studies abroad, then worked in a foreign ICT firm prior to independently returning to be involved in domestically owned, or self-started, ventures (p. 395)."

Name of Donor	Firm/Foundation Name	Location	Donated (US\$mil)	Sector	Donation Causes	Studied Abroad	Worked Abroad
Jack Ma Yun & Family	Alibaba	Zhejiang	2,400	IT	Social welfare	No	No
Tang Lixin	Shinensun	Sichuan	51.5	Real estate, culture	Education	No	No
Wang Jianlin & Family	Wanda	Beijing	51	Real estate, culture	Education, poverty alleviation, social welfare	No	No
Xin Fuping & Family	Liwang	Hubei	50.5	Real estate	Education	?	
Tao Xinbo	Boli	Jiangsu	50	Real estate	Education	No	Vietnam, Myanmar, Singapore
Huang Rulun	Century Golden Resources	Beijing	46	Real estate	Education, poverty alleviation, social welfare	No	Started business in Philippines
Xu Rongmao	Shi Mao	Shanghai	32	Real estate	Education, poverty alleviation, social welfare	No	Immigrated to Hong Kong; returned after 1987
Chen Fashu	New Huadu	Fujian	30	Retail and coal	Education	No	No
Chen Yuandong	China Western	Beijing	28	Real estate, investment	School construction	?	
Dang Yanbao	Baofeng Energy	Ningxia	24	Coal producing & selection	Social welfare, education	No	No

Source: www.china.org.cn, “Top 10 China Philanthropists of 2015” and www.hurun.net, over the period of 1 April 2014 – 31 March 2015.

Table 13. India’s Top 10 Philanthropists, 2014

Name of Donor	Firm or Foundation Name	Location	Donated (US\$mil)	Sector	Donation Causes	Studied Abroad	Worked Abroad
Azim Premji	Wipro	Bangalore	1990	Technology, Media, Telecomm	Education	Yes	No
Anil Agarwal	Vedanta Resource	London	291	Energy	Social and Rural Development	No	No
Shiv Nadar	HCL	New Delhi	160	Technology, Media, Telecomm	Education	No	No
Ratan Tata	Tata Sons	Mumbai	100	Manufacturing	Education	Yes	No
Mukesh Ambani	Reliance	Mumbai	95	Energy	Healthcare	Yes	No
Nandan & Rohini Nilekani	Infosys	Bangalore	80	Technology, Media, Telecomm	Education	No	No
Kavitar Ram Shriram	Google	Menlo park	60	Technology, Media, Telecomm	Education	No	Yes
Ronnie and Zarina Screwvala	UTV Group	Mumbai	55	Technology, Media, Telecomm	Social and Rural Development	No	No
S Gopalakrishnan	Infosys	Bangalore	40	Technology, Media, Telecomm	Healthcare	No	No
Ravi Pillai	Ravi Pillai Group	Dubai	25	Real Estate	Healthcare	No	No

Source: www.hurun.net, accessed 15/7/15.

In addition to showing the dominance of non-returnee philanthropists, Tables 12 and 13 indicate a preference for donating to educational causes in both countries, but reveal differences between China and India in terms of the leading philanthropists’ business sectors. With the exception of Jack Ma, China’s largest donors derived their wealth primarily from real estate development. By contrast, six of the ten largest philanthropists in India are from the ICT industry (with three based in Bangalore). Studies of philanthropy in India have observed that “lines in the individual-corporate philanthropy nexus—between CSR and personal philanthropy—are often blurred in India, particularly in the case of family-run businesses (Jansons 2015, 990).” This can be seen in Azim Premji’s donations to the Azim Premji Foundation, and from the respective families of the Biocon Foundation and Bharti Foundation.

Focusing on the largest philanthropists provides insight into the most concentrated sources of private sector wealth, but charitable activity among the general population remains modest, especially in China. Out of 153 countries ranked in the Charities Aid Foundation’s World Giving Index 2014, China ranks 128 and India ranks 69 (CAF 2014, 9). The Index includes three forms of giving—helping a stranger, volunteering time, and donating money. Within the latter category, China and

India rank 107 and 52, respectively (CAF 2014, 35). Given the size of their respective populations, however, India has the largest number of people making monetary donations (249 million) and China ranks third after the US (148 million) (CAF 2014, 19). The primary channels for such donations include individual giving, foundations and trusts, religious philanthropy, and corporate philanthropy. International foundations and charities mobilize a smaller proportion of domestic donations, though they are more likely to include returnees among their staff.

Interestingly, a survey of the top 100 philanthropists in China conducted by the China Philanthropy Research Institute found that about 80 percent of all donations in 2014 (24.2 billion yuan) were extended to foreign rather than domestic charities (Zhang and Xu 2015). Particularly large gifts by Jack Ma (16.9 billion yuan) to a foreign charity and Pan Shiyi and Zhang Xin of Soho China (US\$15 million) to Harvard University account for the skewed distribution towards foreign donations (Chen 2015). But the apparent growth in outbound philanthropy has also been attributed to tax policies that limit the attractiveness of domestic giving. For example, Chinese companies are taxed on donations that exceed 12 percent of their annual profits. By the same token, unlike foreign charities, Chinese charities are required to pay a 25 percent value-added tax on donated shares of a company (Zhang and Xu 2015). There are also restrictions on establishing trusts funded exclusively by equity donations.

Although India has its share of bureaucratic complications, its institutional environment for charitable giving has been less constraining than China's. Levels of domestic and foreign donations have increased significantly since the late 2000s: the proportion of individual giving doubled from 14 to 28 percent between 2009 and 2013, and funding by international donors more than doubled during the same period (Bain & Company 2015, 7-8). The CSR regulations under the 2013 Companies Act is also increasing corporate philanthropy by requiring companies above a certain threshold (network above Rs 500 crore and net profit above Rs 5 crore) to spend a minimum of 2% of average profit in the preceding three years on CSR activities (Mansukhlal Hiralal & Company 2015). Despite these positive trends, surveys of Indian donors reveal mistrust of NGOs, and grassroots NGOs face chronic funding shortages (Bain & Company 2015). However, initial fieldwork suggests that returnees may be playing a role in bridging the gap in donor and NGO expectations by example.

In 2001, for instance, returnees Ramesh and Swati Ramanathan established the Janaagraha Centre for Citizenship and Democracy to improve urban governance in India. After graduating from Yale's School of Management, Ramesh worked at Citibank in New York and London for ten years. Meanwhile, his wife Swati earned an MA from the Pratt Institute of Design and worked for architectural firms in New York and London. Having achieved professional success in banking and architecture, respectively, in 1998, Ramesh and Swati decided to return to India to promote social change (Mahalingam 2015). Based in Bangalore, Janagraha focuses on enhancing the quality of

urban infrastructure and services, while engaging participation by urban residents. It receives a steady stream of support from both domestic and international donors. The latter is facilitated by the US-based India Development and Relief Fund (IDRF). In addition to their leadership of Janaagraha, Ramesh and Swati are perhaps best known internationally for co-founding www.ipaidabribe.com, a website dedicated to exposing “retail corruption.” The site allows people to report, anonymously, bribes that they have paid, bribes requested but not paid, and expected bribes that did not materialize. On a more encouraging note, the site includes a section entitled, “I Met an Honest Officer.”

Other returnees have sought to demonstrate that social impact and commercial profit are not mutually exclusive. Dr. Harish Hande went to the US with the specific purpose of studying sustainable energy (BG221222015 interview, 22/1/15). During the 1980s, the University of Massachusetts-Lowell was one of the few universities offering graduate training in rural electrification (in collaboration with MIT). Upon receiving his doctorate, it was a “no brainer” for Harish to return to India. He did not go to the US with the intention of remaining there, so he would not call himself a returnee. Harish has strong opinions about the impact of extended international experience: “The more years people stay out of this country, the more they are socially concerned in a romantic fashion, but they are not able to grasp the core issues. They directly jump in with a charity or philanthropy mindset, or assume market forces will automatically change things. Few understand the middle ground of true social entrepreneurship. [Returnees] are either all about making money or colonial style charity.” Harish confided that it took him two years to unlearn the biases of higher education: “In Indian culture, as you get more educated, you go up the caste system. Education makes people feel superior and then they can’t come up with real ideas. I had to figure out how to remove the Ph.D. from my thinking.”

When Harish founded Selco as a social enterprise in 1995, his vision was premised on correcting three common myths, that 1) poor people cannot afford sustainable technologies; 2) poor people cannot maintain sustainable technologies; and 3) social enterprises cannot be run as commercial entities. The subsequent success of Selco in providing solar-powered generators to households in slums and microenterprises is contributing to dispelling those myths. Selco now employs 375 staff and runs an internship program that attracts students from the London School of Economics, MIT, Yale, Columbia, INSEAD, and Engineers without Borders. About half of the interns are expats, the other half are Indian. The latter are generally second generation immigrants whose parents have ingrained in them that India is a very poor and underdeveloped country, so they arrive primed to look down on the country and complain that nothing works. Shocked by local conditions, some of Selco’s Indian

interns have gone back within 24 hours. Expats, on the other hand, start respecting the country immediately. Harish notes with understated pride, however, that 90 percent of Selco's interns allow themselves to become "uneducated," and some have stayed on as full-time staff.

Returnees and domestic social entrepreneurs in China face a more complex, politicized regulatory environment. On the one hand, the Chinese Communist Party's ideology rests on the premise of "serving the people" and mobilizes mass contributions to priority causes, such as disaster relief and poverty alleviation. Meanwhile, both the central and local governments have actively pursued donations from overseas Chinese and "compatriots" in Taiwan, Hong Kong and Macau. On the other hand, the party-state's concerns about the emergence of an autonomous civil society—including potentially renegade pockets funded by "foreign influences"—contrast from India's vibrant, if underfunded, NGO sector. In China, domestic NGOs can only be registered with the Civil Affairs Bureau as "social organizations" if they are sponsored by a state unit (*zhuguan danwei*); and in 2015 foreign NGOs became regulated by the Ministry of State Security. These political realities limit possibilities for social entrepreneurs, whether domestic or returnee.

Nonetheless, the number of foundations, NGOs, and social enterprises in China has expanded in the past decade. Some of the higher profile ones are led by an elite group of mid-career entrepreneurs, public policy analysts, and international development professionals who have had the opportunity to participate in short-term executive programs abroad. Victor Yuan (袁岳), the CEO of Horizon Research, was among the earliest cohorts of Chinese students who completed the yearlong mid-career Mason Fellows program at Harvard's Kennedy School. He subsequently received a scholarship to attend the 7-week Water Fellows program at Yale. Victor is not a returnee and expresses reservations about the conventionally perceived advantages of returnees who have completed degree programs abroad. "The problem," he explains, is that "before students go abroad, they don't know about China because all they've been doing is studying for exams; and then when they go out, they don't know anything about the destination country either. When they return, it seems like they know nothing about the world (BJ536092015 interview, 9/6/15). Victor thus feels that it is important to encourage charitable consciousness among domestic students. In 2009, he founded an NGO called Black Apple to incentivize university students to participate in community service projects. He hopes that such activities will help socialize them into a culture of philanthropy. When asked about the inspiration for the NGO's name, Victor explains, "If students don't have any experience, they are green. Those with experience are red. Green plus red is black. That means you

must have youth, energy *and* life experience.” As of 2015, approximately one million students in 500 universities have received grants from Black Apple.

Foundations and NGOs established by successful entrepreneurs are lauded publicly when their activities complement party-state priorities. Nonetheless, China’s voluntary sector remains modest. Chen Yimei, the Executive Director of China Development Brief (CDB), notes that philanthropy is still emerging as a concept (BJ476082015 interview, 8/6/15). With an international relations degree from Peking University, Yimei had no idea what an NGO was in 1997 when the Chinese Academy of Social Sciences (CASS) seconded her to join the staff of Ford Foundation-Beijing. During her decade at Ford, she interacted with its grantees, and like Victor Yuan, spent a year (2003-04) as a mid-career Mason Fellow to earn an MPA from Harvard. Yimei chose the non-profit management concentration at the Kennedy School. Although she would not be considered a returnee, Yimei has strong networks in the international development community. Her time at Ford-Beijing and Harvard provided the experience and training required for serving as the China Country Director of Mercy Corps (2008-2012). Yimei stepped down from the position when she and her daughter joined her academic husband for a sabbatical year (2012-13) at American University. But she was readily recruited to lead China Development Brief when her family returned to Beijing.

Founded by British journalist Nick Young in 1996, CDB registered as a business (rather than a “social organization”) in 2003. For nearly two decades, CDB has served as China’s leading grassroots umbrella-organization for providing information on domestic and international NGO activities: it maintains an NGO directory; issues policy recommendations based on field research; and provides consulting services to various international and domestic organizations (<http://chinadevelopmentbrief.cn/services/>, accessed 24/7/15). CDB’s status, as well as the NGOs in its network, have proven to be politically vulnerable. Its founder, Nick, was forced to leave the country in 2007. Various NGOs in its directory can no longer be reached.

But even beyond the political sensitivity grassroots NGOs, the ecosystem for philanthropy and social organization in China faces limitations shared by those in India. Funding is constrained for grassroots organizations that are not favored by international or state-affiliated donors. Yet Yimei believes that the primary obstacles to “third sector” development are not just financial in nature: “Beyond funding, there isn’t sufficient understanding about what philanthropy means. There isn’t trust or confidence on the part of foundations. At the same time, NGOs don’t respect or trust foundations. The NGO sector is still very, very small in China and not a major component of China’s thinking or values.” Yimei has seen a lot of people who came out of the corporate sector, went into the NGO world, and then returned to the corporate sector due to the underdeveloped quality of resources, people, and managerial capabilities. In short, the institutional environment for

philanthropy and social entrepreneurship poses challenges for returnees and non-returnees alike, though stronger domestic experience provides more grounded expectations about local challenges.

Conclusion

As the IT hubs of China and India, respectively, Beijing and Bangalore attract highly educated returnees. The latter have indeed contributed to the success of their ICT industries, though state-sanctioned entrepreneurship in Zhongguancun and Silicon Valley linkages to Bangalore account for different patterns of comparative advantage. Bangalore is the outsourcing capitol for MNCs. While ZGC has provided a more hospitable ecosystem for domestic entrepreneurship, India's largest IT companies were not founded by returnees. Returnees in both countries draw extensively on their school- and work-based networks, and also play a dominant role in venture capital. The ecosystems for philanthropy and social enterprises are less conducive for entrepreneurship, which reflects the limits of returnee networks and national policies encouraging social contributions by elite returnees. The concept of mixed embeddedness serves as an analytic reminder that sector-specific policies mediate the effectiveness of developmental gains from returnees.

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