Ties That Bind

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The San Francisco Bay Area's Economic Links to Greater China

A Bay Area Council Economic Institute Report

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Executive Summary

China and the San Francisco Bay region enjoy a 160-year relationship dating back to the first arrival of immigrants during the Gold Rush. New arrivals came in the tens of thousands, built railroads, panned for gold, fished the Bay, worked as servants, started businesses and built thriving communities in San Francisco, Oakland, San Jose, Sacramento and the Delta.

Since then, successive waves of immigrants from Hong Kong, Taiwan and mainland China have made important contributions to the regional economy—as business owners, and most recently as entrepreneurs with advanced degrees in science, technology, engineering and mathematics.

The Bay Area has also contributed to China's development as a global economy. The region's universities, research laboratories and companies have played a role in building China's Internet; reforming its legal and judicial systems; planning new, sustainable buildings and communities; and supporting entrepreneurial growth.

China's admission into the World Trade Organization (WTO) in 2001 marked the beginning of an explosion in investment and trade that changed the global landscape, stimulating massive investment in China—primarily in manufacturing—and generating large Chinese trade surpluses that have produced more than $3 trillion in foreign exchange reserves. The 2008–09 recession marked a change, however. Nearly two decades of double-digit GDP growth ended, and with it the dramatic expansion in U.S.-China trade. Trade growth has resumed but is slower; the assumption of a continuous and steep upward economic trajectory has given way to new pragmatism.

Within China, the largest mass rural migration to cities in world history is continuing. Rising wage and land costs are pushing new industrial development away from highly developed cities such as Beijing and Shanghai, to Tier 2, Tier 3 and interior cities. And a growing and sometimes restive middle class is pressing the government for improved working conditions, a cleaner environment, a stronger social safety net and continued upward mobility.

These trends point to important synergies, as the San Francisco Bay Area is a global center for much of the talent, innovation and technology crucial to China's continued economic transformation.

Economy

China's economy is slowing and becoming more diversified.

- Urbanization is driving growth, which is moving inland. This massive shift will continue, with another 200 million Chinese moving to urban centers in coming decades.
- China's labor force has shifted from agriculture to manufacturing and services, serving both export markets and a rapidly emerging middle class.
- The economic, social and environmental implications of these shifts will be profound—with growth in incomes and markets, but also environmental challenges.

Students

Chinese students have made an important contribution to the region's economy. Many have chosen to remain in the area after graduation, supporting technology innovation, launching start-ups, and becoming angel and venture investors.

- China contends with India as the top source of students from overseas.
- The number of students in the Bay Area from greater China—the People's Republic of China (PRC), Taiwan and Hong Kong—has grown from approximately 5,500 in 2004–05 to an estimated 7,000 in 2011–12.
- Tuition, living expenses and other spending in 2011–12 by Chinese students enrolled in Bay Area colleges and universities contributed nearly $219 million to the state and regional economies.
- The Bay Area's elite universities continue to attract top talent, primarily at the graduate level where students concentrate in science and technology.

- Stanford has opened a facility in Beijing, and Berkeley has a research presence in Shanghai.
- Undergraduate enrollment at Bay Area universities by Chinese students is up dramatically, helping budget-strapped schools.
- This has raised new issues, however, as many undergraduates show up unprepared, scholastically and in English language proficiency.
- Reported endowments from Chinese donors to Berkeley and Stanford in the past two decades total more than $150 million.

Professional Networks

Professional associations provide robust entrepreneurial and business networks, offering information, mentorship and access to business opportunities.

- Associations such as the Asia America MultiTechnology Association (AAMA), the Hong Kong Association of Northern California, the Monte Jade Science and Technology Association, the Hua Yuan Science and Technology Association (HYSTA), and the Chinese American Semiconductor Professional Association (CASPA) continue to thrive and have evolved their offerings as member interests and the channels for access to China have grown.
- New associations have been added to the region's already rich landscape of China-related organizations. The Chinese Enterprise Association, for example, helps more than 80 large mainland firms with a Bay Area presence stay current on technology advances and connect with business and government leaders. The Taiwanese American Industrial Technology Association (TAITA) promotes Taiwan-Silicon Valley exchanges.

Trade and Tourism

Trade with China is growing, but more slowly than in recent years.

- Between 2006 and 2012, U.S. exports to China doubled to $110.5 billion; imports from China increased by nearly 48 percent, to $425.6 billion.
- Nearly $18 billion in imports from China and $6.4 billion in exports to China passed through Bay Area ports and airports in 2012. About $4 billion of that $6.4 billion originated in the region (the balance being goods in transit.)
- While Bay Area trade with the PRC and Taiwan has recovered to 2008 levels, imports from Hong Kong have declined by half, as more cargo moves directly to and from mainland ports.

As China's middle class broadens its horizons, the number of Chinese travelers to the U.S. is growing. The Bay Area is a prime destination.

- From 2008 to 2012 the number of Chinese tourists visiting the U.S. grew from 275,000 to nearly 1.5 million, enabled by the Chinese government's granting of "approved destination status" for the U.S. and the U.S. government's streamlining of visa processing in China.
- SF Travel estimates that the city hosted 198,000 visitors from mainland China in 2011, 60,000 from Taiwan and 50,000 from Hong Kong. The association has offices in Shanghai and Beijing.
- The profile of Chinese tourism is shifting from lower-end packaged tours to more and wealthier Chinese traveling as individuals.
- Hotel chains such as Hilton, Starwood and Marriott have introduced Chinese-friendly services at locations popular with Chinese tourists, including the Bay Area.
- Four airlines—United, Cathay Pacific, Singapore and Air China—offer a combined 49 non-stop weekly flights to Hong Kong, Beijing and Shanghai through SFO, with a capacity of more than 16,000 passengers. In 2013 China Eastern Airlines began daily non-stop flights to Shanghai, with continuing same-plane service to Wuhan and Qingdao, adding over 1,600 seats per week. In 2014, United Airlines will launch same-aircraft service to Chengdu, via Shanghai, and will reinstate non-stop service to Taipei.

Affiliates and Invention

Cross-border investment and collaborative innovation are growing. The presence of Chinese companies in the Bay Area is increasing, as is the presence of Bay Area businesses in China.

- The Bay Area is home to 96 affiliates of companies from Taiwan, 51 from China, and 38 from Hong Kong.

- The PRC ranks second among the top sites for Bay Area businesses abroad. Currently there are 795 Bay Area affiliates located in the PRC, plus 303 in Taiwan and 216 in Hong Kong.
- Collaborative patenting activity with China-based inventors represents a growing percentage of total foreign co-patenting in the region, expanding from less than 1 percent in 2002 to 9.9 percent in 2012.
- Investment from the Bay Area to China reached $2.7 billion in 2011, representing 38 percent of all Bay Area investment abroad in that year.
- China is also a growing investor in the Bay Area, with $495 million invested in 2011, or 7 percent of all foreign private equity and venture capital flowing to the region.

Key Sectors

While China remains an important manufacturing base and markets continue to grow, Chinese objectives have broadened to include indigenous innovation and the creation of globally competitive Chinese brands. As a result, today's business environment is increasingly complex.

Architecture and Urban Planning

Bay Area architecture and planning firms have brought cutting-edge design and sustainability principles to Chinese cities, as China has embraced daring forms and sustainable design, with planning and construction taking place on an extraordinarily scale. In the last decade, Chinese demand has helped keep a number of Bay Area firms afloat, particularly as new construction in California and the Bay Area contracted, and as China's stimulus spending ramped up. A revival of construction in California and the Bay Area now offers increased opportunity at home, but Bay Area architecture and planning firms remain in demand due to their prestige and reputation for leadership in sustainable design.

Key projects include Gensler's Shanghai Tower, China's tallest, and the China headquarters of Internet portal Tencent; Skidmore Owings and Merrill's Huawei Technologies Corporate Campus and the Knowledge and Innovation Community technology park in Shanghai; Heller Manus' China Automotive Technology & Research Center in Tianjin and its sustainable plan for Guangzhou's city center; and Woods Bagot's 78-story CBD Tower Z11 in Beijing.

Energy/Environment

China's rapid growth has translated into rising energy demand and massive environmental costs, with the government under intense pressure to address growing health problems induced by poor air quality. The 12th Five-Year Plan aims to cap coal consumption, promote clean coal and renewable energy technology, strengthen energy conservation and building efficiency standards, and create pilot carbon trading programs. These measures spell opportunity for Bay Area firms.

Conservation-related exchanges mainly involve government bodies, research institutions and non-governmental organizations. The China Energy Group at Lawrence Berkeley National Laboratory manages extensive joint energy efficiency research and technical support projects with Chinese counterparts and has helped Chinese steel, cement, refining and textile firms develop cost-effective operating efficiency standards and best practices. Energy Foundation China supports LBNL's China Energy Group and has more than 100 partner institutions in China. It has also advised China's State Council in drafting particulate matter emissions standards and supports sustainable urban design projects in six cities; the furthest along is in Kunming, where Berkeley-based Calthorpe Associates is developing the master plan.

Cleantech

China's pressing need for renewable energy and environmental solutions and California's expertise in both cleantech and environmental management (primarily concentrated in the Bay Area) point to further synergies. Cleantech markets in both the Bay Area and China are growing, but that has also brought political complexity.

Major Chinese solar panel makers and systems providers Trina Solar, Suntech Power and Yingli Green Energy have established North American headquarters in the Bay Area. A glut of subsidized solar panels from China in 2009–10 squeezed U.S., Chinese and other manufacturers but benefited system installers. In 2013, the U.S. government imposed significant antidumping duties and countervailing duties on Chinese solar imports.

China has also made significant investments in Bay Area cleantech firms, including Kaistar Lighting's $25 million investment in Livermore LED lighting technology firm Bridgelux, and Hanergy Holding Group's $120 million acquisition of MiaSole, a Santa Clara maker of thin-film solar cells.

Banking/Finance

Foreign-owned banks in China continue to face headwinds. The most sophisticated global banks make money but have small shares of an already thin slice of an otherwise huge market. Wells Fargo Bank has two branches, in Shanghai and Beijing. Bank of America's Asia-Pacific operations activities, with 27,000 employees, are headquartered in Hong Kong, with client-serving offices in Beijing, Guangzhou and Shanghai. Opportunities are growing to serve mid-market U.S. companies with operations in China, and Chinese companies that are expanding internationally. Bank of Tokyo-Mitsubishi UFJ has been active in China since 1980; its U.S. subsidiary Union Bank leverages this China presence through its Global Business Coordination Unit in San Francisco. Silicon Valley Bank has a strong focus on tech and innovation-centered companies and has subsidiary offices in Shanghai and Beijing and a banking license to handle onshore dollar-based transactions.

Hong Kong and Taiwan banks have a long history in the Bay Area, and now PRC banks are making an initial approach. Industrial and Commercial Bank of China (ICBC) has five Bay Area retail branches—in San Francisco, Oakland and South San Francisco—through its 80 percent interest in Bank of East Asia, a Hong Kong-owned bank chartered in the U.S. The Bank of Communications has been approved to open in downtown San Francisco its second wholesale branch outside New York.

Mobile/Internet

As the Internet matures, it has become the nexus where computing and communications intersect, for consumers and increasingly for enterprises. China has been quick to embrace this change, and the Internet in China begins with the smartphone. In 2013, one in three smartphones sold in the world were sold in China.

Oracle serves its top 500 enterprise accounts in China—mainly large institutions, government agencies and state-owned enterprises, such as China Mobile, China Telecom and China Unicom—through a dedicated sales force and has an R&D center in Shanghai. Cisco was instrumental in developing China's Internet infrastructure and works with universities and provincial governments to expand delivery of public services. Intel has production facilities in Shanghai, Chengdu and Dalian.

Tech companies active in China since the 1980s face challenges from both technological change and from Chinese competitors. Global web portal Yahoo! and search firm Google once enjoyed lead positions in China but were caught between government surveillance, censorship policies and competition from indigenous portals. Yahoo eventually traded its China operations and $1 billion to Alibaba.com for a 40 percent stake. Google took down its China site and moved its servers to Hong Kong in 2010 to offer unfiltered search via Google.hk. Its Android operating system, however, is found on most Chinese-made handsets and enjoys a 90 percent share of the China mobile phone market.

iPhones are considered a luxury in China and sell mainly to high-end customers in major cities. As a result, Apple (served by China Unicom) has only a 4.2 percent share of China's mobile phone market. The September 2013 launch of its less expensive iPhone5c in partnership with China Mobile, however, is expected to increase its market share.

Chinese IT companies are also expanding their Bay Area footprint in R&D and as service providers. China's leading Internet search engine, Baidu, plans to open the Institute of Deep Learning (IDL)—its first wholly-owned research center—in Cupertino. China Mobile and Huawei both have R&D centers.

Law

China's admission to the WTO created a market for investment-related legal services: cross-border regulatory and tax compliance; the formation of wholly foreign-owned enterprises (WFOEs);

technology licensing; and cross-border M&A and public listings. M&A and IPO business stalled during the global downturn. Business is returning now, but often in different areas: Chinese bank and SOE (state-owned enterprise) offshore financing and investments; structuring of overseas renminbi funds; and cross-border real estate transactions in both directions. Advisory work on inbound Chinese investment across a range of sectors is growing. As case law develops, intellectual property disputes are fewer but remain common.

Life Sciences/Health Care

China represents a $300 billion-plus life sciences market that is growing 15–20 percent annually, amid challenges of aging, chronic diseases, environmental illnesses and pandemics. The 12th Five-Year Plan aims to ensure comprehensive insurance coverage for over 90 percent of the population; upgrade the pharmaceutical supply chain; expand drug coverage, and modernize and expand public health infrastructure. The Plan also seeks to reduce reliance on foreign vendors and suppliers.

Bay Area firms are taking advantage of China's growing pre-clinical and clinical trial research capacity, conducting trials at lower cost and in shorter time frames than in the United States. Chinese pharmaceutical, biotech and medical device firms are also looking to the U.S. for partnerships and M&A that combine cutting-edge U.S. science with low-cost production to more deeply penetrate Chinese and global markets. They are also investing in the Bay Area.

Investment

The environment for foreign direct investment (FDI) between the U.S. and China is changing at both ends. Some U.S. investors in China have taken a defensive posture, favoring greater China plays—financial services in Hong Kong, and tech manufacturing in Taiwan—that leverage the mainland market. Venture and private equity groups are favoring later stage investments in companies with proven management and business models. Fund managers are using the Five-Year Plan as a roadmap to invest in sectors that address identified national priorities and enjoy government support.

The biggest news, however, is the dramatic growth in outbound investment from China to the U.S. and other countries. Chinese FDI in the U.S. has been rising strongly, setting new records every year since 2009. Some proposed Chinese investments have failed, primarily due to strategic or security concerns. In response, a new strategy may be emerging in favor of deals under $500 million; joint ventures, partnerships and equity stakes rather than outright acquisitions; a focus on privately held versus publicly traded firms; and avoidance of companies that are likely to raise strategic or security concerns.

Property development in particular is attracting investment from China. Chinese developer Zarsion, a private company, has committed $1.5 billion to a partnership with Signature Development Group to develop the Brooklyn Basin project on Oakland's waterfront. Vanke, China's largest residential developer, is partnering with U.S. firm Tishman Speyer to build two high-rise residential towers in San Francisco's South of Market district.

Connectors

New organizations have joined the already-rich landscape of institutional connectors between Bay Area and China business.

- The Bay Area Council has opened offices in Shanghai and Hangzhou and will open a third in Nanjing.
- The Governor's Office of Business and Economic Development (GoBiz) has opened a California Office of Trade and Investment in Shanghai, in partnership with the Bay Area Council.
- China SF and China Silicon Valley are working to bring Chinese investment to San Francisco and San Jose.
- Regional centers are leveraging the federal EB-5 program to bring investment to projects such as Hunters Point in San Francisco and call centers, logistics facilities and nursing homes in Oakland.
- Chinese entrepreneurs and developers have launched technology and life sciences incubators to connect start-ups, established companies and investors for cross-border collaboration with Chinese counterparts. Early entrants include InnoSpring, Hanhai Z-Park and Hanhai-Zibo Life Science Park.

Paths Forward

Several specific areas of opportunities emerge from this analysis.

- *Education*: The Bay Area is a major destination for students from China, who bring tangible benefits to the region and its economy. To stay competitive, and support California students, continued investment in public higher education in California is essential. While Bay Area universities have opened teaching and research facilities in China, there is also a significant opportunity for Chinese universities to establish facilities in the Bay Area.
- *Tourism* will continue to grow as an area of opportunity.
- *Immigration*: Current policy makes it unnecessarily difficult for many graduates from China and other countries to stay and contribute to the economy. Immigration reform is needed that removes country quotas for green cards (which are quickly exhausted for high-volume countries such as China), makes it easier for entrepreneurs from China and other countries to stay in the U.S. to found companies, and enables foreign graduates of U.S. universities with advanced degrees in STEM fields to secure green cards.
- *Energy and Climate*: California and China share an interest in reducing the consumption of fossil fuels, increasing the production of renewable energy, improving energy efficiency, and mitigating climate change. This presents an opportunity for the Bay Area, where the state's cleantech industry is concentrated and where government, university and private initiatives offer a rich basis for dialogue and cooperation.
- *Investment*: As China sends ever-larger volumes of investment capital abroad, California and the Bay Area are positioned to capture an outsized share. Evidence to date suggests that Chinese investment is bringing positive benefits through infusions of capital, job creation and, in some cases by improving access to Chinese markets.
- *The EB-5 program* is a promising vehicle to expand Chinese and other foreign investment and can play an important role in financing infrastructure, housing and new businesses. Overseas investors, however, need more security and transparency. The EB-5 program (which is currently only a pilot and subject to extensions) should be made permanent. U.S. Citizenship and Immigration Services should also be given the resources it needs to expedite applications processing (which can take as long as 18 months), advance priority projects, and exercise better oversight of regional centers.

Conclusion

The Bay Area is in a strong position to interpret China to the U.S., and the U.S. to China, as it continues to build a positive, multifaceted relationship.

While China will remain a sometimes controversial topic in Washington, states, regions and private companies tend to see China more pragmatically. The Bay Area has shown a particular affinity and openness to China, and ever since the historic creation of the Shanghai-San Francisco Sister City Committee, has reached out to develop new relationships and channels. New intermediary entities such as ChinaSF and the Bay Area Council's Shanghai and Hangzhou offices exemplify this trend and provide platforms for continued business growth.

The wealth of opportunities outlined in this report does not suggest that China will be an easy place to do business or that significant barriers don't exist. China's economy is slowing, labor costs are rising, and competition from Chinese firms is increasing both in China and overseas. Cyber security, intellectual property protection, transparency, and government policies that require technology transfer or favor national companies will remain significant issues for both businesses and policy makers.

Bay Area companies, however, have demonstrated their capacity to succeed in China's often challenging environment, and local government has chosen to lead as well. As the Economic Institute found in its 2006 report, as China grows as a major force in the world economy, the San Francisco Bay Area continues to occupy the pole position among its potential U.S. partners. Because of the scale of this opportunity, the relationship merits continued investment at both the public and private sector levels.