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ENGAGING REGIONS IN GLOBALIZATION:

The Rise of the Economic Relationship between the San Francisco Bay Area and China

*Peter Volberding**

ABSTRACT: International economic policy is primarily perceived to be a product of national governments. However, while traditionally nation-centric policy formations still take precedence in international economic matters, the past decade has witnessed the remarkable growth of regional actors in policy creation. The first part of this paper analyzes the ascent of regional actors in the San Francisco Bay Area and its growing economic partnership with China. Organizations such as the Bay Area Council have capitalized on the region's strengths, such as its entrepreneurial talents and richly diverse ethnic makeup, to promote economic ties with Chinese regions and businesses. In particular, three economic sectors—the ports, high technology, and green technology—have dominated the relationship between the San Francisco Bay Area and China. Moreover, this paper argues that not only have regional actors become increasingly prominent in policy creation, but also these policies have a positive feedback effect on the regional economy. This paper finds that the Bay Area's relationship with China has generated tangible local benefits, including the creation of jobs and an expanded tax base, even during the current economic downturn.

INTRODUCTION

On November 12, 2008, the high-profile US-China Green Summit commenced in a swanky hotel along the Bund in Shanghai. Spurred by a growing interest in environmental sustainability, the conference focused on collaborative solutions to the mounting problem of climate change. Organizers labeled the conference as unprecedented. However, the event was not unprecedented because of its focus on the environment, nor because it brought high-ranking politicians and business leaders of both nations into dialogue, as the organizers trumpeted. In fact, the extraordinary part were the organizers themselves—the Bay Area Council and the Yangtze Council. Both

are business organizations providing a regional voice to their respective business communities. In this regard, the title of US-China Green Summit is a misnomer—the summit was not about grandiose national policy, but rather about regional business opportunities. As Jim Wunderman, the CEO of the Bay Area Council, unrepentantly announced at the conference, “[m]any of the people needed to create business or government deals are here. Go make those deals. Many of the people needed to finance your world-changing vision are here. Go get the money.”¹

The US-China Green Summit, the Bay Area Council, and the Yangtze Council are all indicative of a growing trend away from nation-centric policy towards an emphasis on regional governance. Both local and regional forums, governments, and organizations have gained increasingly influential voices in policy and governance in recent years. Regional organizations, such as the Bay Area Council, and even cities, most prominently San Francisco, have asserted their role not only domestically, but internationally as well. For example, they have conducted numerous trade missions, signed memorandums of understanding (MOUs) with overseas counterparts, and incentivized investment locally with favorable tax policies.² Joseph Cortright, in an article published by the Brookings Institution, has identified this trend as a “cluster strategy,” whereby cities and regions identify their comparative economic strengths and craft development policies to maximize the benefits.³ While the supremacy of the nation-state may not be significantly contested, it is impossible to ignore the growing trend of devolution.

Additionally, local and regional control provides a powerful tool to shape and understand the development of cities and regions. For example, it is well understood that what a region produces is extremely important—there are huge ramifications in the types and growth of jobs, immigration patterns, financial equity, individual opportunity, and race relations. There are vastly different expectations from a manufacturing town in the Midwest than from a high-tech cluster along the California

¹ Ross, “Shanghai meetings impress S.F. participants.”

² “Silicon Valley-Bay Area Region and Shanghai/Yangtze Region Sign Economic Cooperation Agreement on Biotech, “Green Tech,” Information Tech and Transportation.”

³ Cortright, *Making Sense of Clusters: Regional Competitiveness and Economic Development*.

coast.

A survey of the current literature, however, neglects to establish a connection between the disaggregation towards regional and city governance and the impact on the economic composition and well-being of the local community. A prime example of this intricate and often overlooked relationship is the San Francisco Bay Area, a region at the forefront of multiculturalism, technological innovation, and international integration. At the base level, the region's ethnic diversity and transnational connections have created a solid foundation of economic opportunity and prosperity. In order to fully capture the benefits of this diversity, regions have increasingly utilized regional and city organizations to create, develop, and maintain successful economic relationships on the world stage, which in turn have had enormous impacts at the micro level. In recent years, much of the focus of Bay Area organizations has been to develop strategic relationships with China. With its ascension to the World Trade Organization (WTO) in 2001 and its unprecedented economic growth, China has become a major trading partner with the Bay Area, and organizations like the Bay Area Council have been keen to take the initiative to encourage economic ties.

This paper aims to further the research of regional governance and clustering by analyzing the economic and political relationships between the San Francisco Bay Area and China. I argue that the regional governments have successfully capitalized on the region's strengths through a proactive policy with China, which in turn has contributed to the economic vitality of the Bay Area. I first begin with a survey of the existing theoretical literature on regional development and economic clustering. Then, I assess the comparative strengths of the San Francisco Bay Area and its relationship with China. In the next section, I examine the Bay Area-China relationship in three inextricably linked sectors: ports, high technology, and green technology. Finally, I provide an assessment of the relationship in the wake of the global financial crisis and conclude with the future prospects of cooperation.

THEORETICAL FRAMEWORK OF THE GROWTH OF REGIONS

Historically, nations were viewed as the central, and frequently only, economic players. Nation-to-nation economic relationships dominated the political policy making process, primarily driven by an ideology of national interest and a penchant for wealth accumulation. These robust beliefs led to grand economic strategies implemented on a purely national level. While 18th century mercantilism may be seen as the epitome of this type of policy making, this mindset persisted throughout the 20th century. However, regardless of the merits or drawbacks of such thinking, conceptions of economic relationships have profoundly shifted in recent decades. While the nation remains the highest authority, regions and even cities have claimed a growing influence in driving and maintaining economic vitality.

Globalization and the Region

The world economy, distinguished by international trade flows and capital accumulation, has largely existed in the West since the 15th century. However, Manuel Castells, an expert on urban organization and society, posits that the contemporary economy is differentiated from previous models. He prefers to characterize the current system as a global economy, “whose core components have the institutional, organizational, and technological capacity to work as a unit in real time, or in chosen time, on a planetary scale.”⁴

In recent decades, the importance of regions in the global economy has ascended to prominence among academics. Michael Storper, an economic geography and globalization scholar, notes that in the mid 1980s, “[t]he region, long considered an interesting topic to historians and geographers, ... was rediscovered by a group of heterodox political economists, sociologists, political scientists and geographers.”⁵ Archetypal images of Fordist, vertically-integrated industries became quickly outdated as the modularization and flexibility of production process led to a disintegration of the

⁴ Castells, *The Rise of the Network Society*, 102.

⁵ Storper, “The Resurgence of Regional Economies, Ten Years Later: The Region as a Nexus of Untraded Interdependencies,” 191.

mass production model.⁶ As Whitford and Potter explain, Piore and Sabel posited that this erosion of the Fordist production model led to an “opening up of new productive spaces for territorially embedded networks of firms enmeshed in a tangle of cooperative, competitive and social relations.”⁷ Krugman’s seminal 1990 article, which thoroughly discussed economic geography, similarly promoted a second look at the increasing role of regional actors instead of national ones.⁸

The prominence of regions is due in large part to the rise of modern globalization. Increased international connectivity reduces the importance of both physical constraints such as proximities to markets, and constructed political factors like national borders, since information can be instantaneously disseminated worldwide. Michael Porter, a professor at Harvard Business School that focuses on competitive strategy, adds that the globalization of value chains, the increasing knowledge and skill intensity of competition, and falling barriers to international trade and investment have similarly empowered the region.⁹ Furthermore, Saskia Sassen, one of the foremost scholars on urban sociology and globalization, notes that the expansion and specialization of the global economy has “renewed the importance of major cities as sites for producing strategic global inputs.”¹⁰ She argues that the global dispersal itself generates a demand for management, control, and servicing industries in the new economy.

Thus, regions have a natural tendency to replace nations as the building blocks of prosperity since they are “defined by economic rather than political boundaries.”¹¹ In addition, regions are also advantageous because they “are large enough to achieve a critical mass of companies, institutions, infrastructure, and talent—yet small enough to allow for the close interactions among people, firms, and organizations required to innovate and ultimately compete in the global economy.”¹²

⁶ Whitford and Potter, “Regional Economies, Open Networks and the Spatial Fragmentation of Production,” 497.

⁷ Ibid. For a more detailed explanation, see Piore and Sabel, *The Second Industrial Divide*

⁸ Krugman, “Increasing Returns and Economic Geography.”

⁹ Porter, “Regional Competitiveness in a Global Economy.”

¹⁰ Sassen, *Cities in a World Economy*, 5-7.

¹¹ *Report of the Strengthening America’s Communities Advisory Committee*, 4.

¹² Collaborative Economics, *The Innovation Driven Economic Development Model: A Practical Guide for the Regional Innovation Broker*, 8.

Competition, Clustering, and Councils

Not only are regions beginning to be viewed as an economic building block, but they are also seen as the primary unit of competition in the global economy. What results is a counterintuitive system of highly specialized and concentrated regions in a generally flattened world. As regions develop according to their relative strengths and weaknesses of factors of production, “regional specializations and comparative advantage[s] emerge.”¹³ This, in turn, creates “spikes”¹⁴ of industries (such as information technology hubs) and of production strengths (such as innovation and venture capital investment).

Michael Porter refers to these spikes among regions as economic clusters, which he defines as a “geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities.”¹⁵ Thus, much like Sassen’s explanation, an economic cluster encompasses a wide range of businesses and services, not simply the principle industry. In addition, Porter argues that clusters generally augment productivity, innovation, and new business formation despite the increased local competition. For example, a firm in a cluster is more able to experiment at lower costs and with greater efficiency, given its proximity to supporting industries. Moreover, the competition between rival firms generally helps to reinforce the advantages of innovation. However, Porter does warn against the strategy of creating winners, which distorts the development of the market, emphasizing that the role of the government should be to reinforce and build upon existing clusters.

Similarly, Joseph Cortright posits his own definition of a cluster, characterizing it as a “group of firms and related economic actors and institutions located near one another and that draw productive advantage from their mutual proximity and connections.”¹⁶ He, like Porter, identifies the growing trend of clusters, and strongly advises against creating a winner, preferring to assist organically-created clusters.

¹³ *The 2007 Index of Silicon Valley*, 5.

¹⁴ *Ibid.*

¹⁵ Porter, “Location, Competition, and Economic Development: Local Clusters in a Global Economy,” 16.

¹⁶ Cortright, *Making Sense of Clusters: Regional Competitiveness and Economic Development*, 1.

Cortright additionally notes that the greatest strength of clusters is the reorientation of economic policy-making decisions away from individual firms towards a collective group. By incorporating multiple firms and the public sector, clusters can provide a vibrant economic base that promotes development and creates new opportunities.

In following these policy prescriptions set fourth by Porter and Cortright, many regions have recently developed councils or economic forums, unifying local business leaders, governments, and organizations to facilitate and encourage uniform regional economic policies. These councils, located outside of the auspice of government, are principally and most successfully formed from bottom-up processes. Porter explains that unlike old policies, which were government policy-driven, the new model shifts responsibility to multiple government agencies, companies, research institutions, and other private enterprises in a collaborative environment.¹⁷ These concerted efforts not only attest to the enormous economic advantages of a strong cluster, but more importantly to the growing importance of regions. These clusters, or “spikes”, in the global economy thus vie for supremacy in a particular industry.

While this new regional mentality may seem to be highly divisive and antithetical of cooperation at first glance, there are ample reasons to believe the opposite. Initially, regions may tend to view competition as a zero-sum game, and hesitate to cooperate for fear of losing their comparative, and even absolute, advantage over another region. However, if the regions produce mutually compatible products and services, collaboration can generate higher productivity, profits, efficiency, and growth for both areas. This reasoning closely mirrors the advantages gained from clustering. Regions then pursue a policy of “integration with each other for the purpose of mutual gain.”¹⁸ Consequently, since collaboration becomes an advantageous strategy, regions will attempt to network with each other for their own economic gains, as illustrated by the aforementioned summit by the Bay Area and Yangtze Councils. In this light, regional and local organizations promote seemingly contradictory missions—while they in fact foster economic partnerships to improve their own gains, they are only

¹⁷ Porter, “Regional Competitiveness in a Global Economy.”

¹⁸ *The 2007 Index of Silicon Valley*, 6.

doing so to compete against other regions.

THE SAN FRANCISCO BAY AREA: REGIONAL STRENGTHS

This rise of regional influence has challenged the traditional notion of purely nation-to-nation economic integration. It is apparent that localities are playing increasingly collaborative and integrative roles in jockeying for economic power. The relationship of two major economic actors in particular, the San Francisco Bay Area and China, illustrate this growing trend of interconnectedness and regionalism.

In particular, the Bay Area economy has achieved a high level of globalization through its advantages of innovation, productivity, and investment. It boasts a large export-driven market, with especially strong information technology, biotech, and financial sectors, which has created “a regional economy of over \$400 billion that, if it were a country, would rank as the world's 18th largest.”¹⁹ The region is also one of the wealthiest in the nation; typical salaries are approximately 19% higher than the national average.²⁰ However, this robust economy did not develop without clear causes, as the region is a “global technology center, drawing skilled workers and executives plus a legion of tech sector consultants, vendors and investors.”²¹ In terms of education, the Bay Area has one of the highest numbers of college graduates at an astounding 42% of the population.²² Its major research universities—led by Stanford, UCSF, and UC Berkeley—account for a disproportionate 6% of all research and development funding (some \$2.5 billion annually) to universities nationwide. In addition, the Bay Area economy attracts an unparalleled \$9.5 billion, or 35%, of all venture capital (VC) investments made nationally; and at \$1,370 of VC per person per year, the region far outpaces second- and third-ranked Singapore (\$180 per capita) and New York (\$107 per capita).²³ With this combination of high education and high investment, the Bay Area

¹⁹ *Sustaining the Bay Area's Competitiveness in a Globalizing World: Bay Area Economic Profile*, 2.

²⁰ Zuckerman, “Bay Area economy, pay, cost of living are at the top of the heap.”

²¹ *Ibid.*

²² Randolph, “Bay Area needs to invest to retain top-tier economy.”

²³ *Sustaining the Bay Area's Competitiveness in a Globalizing World: Bay Area Economic Profile*, 4-6.

has led in innovation. Six of the top ten patent-producing cities in the United States are located in Silicon Valley alone.²⁴ As might be expected, this combination of knowledge, investment, and innovation has placed the Bay Area at the forefront of technological development.

While skills like education, innovation, and investment are indeed crucial for economic development, it is also well known that one of the most important assets to an economy is the population itself. In particular, the Bay Area has evolved into a polyglot of ethnicities and cultures, and one of the largest destinations for foreign immigrants. According to the 2007 American Community Survey, 21% of the population of the San Jose-San Francisco-Oakland Combined Statistical Area (CSA) is of Asian heritage. Additionally, over 27% of the population is foreign born, and 51.1% of these foreign born were born in Asia. Furthermore, of the approximately 1.515 million residents of the Bay Area that are of Asian ancestry, just over one third, or 537,657, is of Chinese decent.²⁵

This diverse racial and cultural makeup of the Bay Area has been intricately involved with two very important workings of the economy. First, each ethnic community, in particular the Chinese community, has far-reaching global connections that help to attract new business ventures to the area. Second, as a result of the prodigious levels of immigration, the Bay Area has attracted the best and the brightest from around the world. This diverse and intellectual makeup of the Bay Area has created an unprecedented level of entrepreneurship, equality, and collaboration, which has contributed to the region's economic vitality.

First, each ethnic community has extensive ties internationally, which draws investment to the regional and local levels. This, in turn, can create highly profitable economic links. Dajin Peng classifies this phenomenon as the ethnic Chinese business networks (ECBN), whereby Chinese communities retain strong ethnic and kinship ties that transcend national boundaries. He finds that ECBNs are highly effective in the

²⁴ *The 2007 Index of Silicon Valley*, 15.

²⁵ US Census Bureau American Community Survey Office and Adrien Hnat, "American Community Survey (ACS)."

development of regional linkages, especially when combined with production networks.²⁶

Within the San Francisco Bay Area, the Chinese community has utilized their ethnic and kinship connections from around the world to establish an international trading network. A Chinese businessman in California, for instance, may see an increasing demand for textile or electronics manufacturing in the United States; in order to satisfy the demand of this market, he will call upon his social ties in Asia and elsewhere to manufacture the products.²⁷ Historically, these community associations have taken numerous forms. Many have been informal, such as a family business or a common village heritage. Even as far back as 1917 there were ethnic Chinese organizations, like the Chinese Institute of Engineers (CIE), operating in the Bay Area. However, in recent decades, the Chinese-American business community has shifted to formal associations and the explicit promotion of economic ties. Founded in 1980, the Asian Business League of San Francisco (ABL-SF) “was the first non-profit organization in California to focus its attention on Asian trade and business promotion.”²⁸ Since then, nearly 20 other Chinese business associations have been formed in the Bay Area alone, all with the goal of “fostering business growth and networking.”²⁹

A large ethnic community can also help attract business ventures simply because there is a greater demand for a particular product. For example, a Chinese community needs “ethnic foodstuffs and products from China; these are supplied by immigrant importers.”³⁰ More recently, the English language China Daily newspaper, which is based in China, will open its US West Coast bureau in San Francisco, providing both jobs and further investment opportunities. While the newspaper was enticed with economic incentives, it also was no secret that “San Francisco's demographics didn't hurt, either.”³¹

²⁶ Peng, “Ethnic Chinese Business Networks and the Asia-Pacific Economic Integration.”

²⁷ Wong, *Ethnicity and Entrepreneurship: The New Chinese Immigrants in the San Francisco Bay Area*, 89-92.

²⁸ *Ties that Bind: The San Francisco Bay Area's Economic Links to Greater China*, 33.

²⁹ *Ibid.*, 34-35.

³⁰ Wong, *Ethnicity and Entrepreneurship: The New Chinese Immigrants in the San Francisco Bay Area*, 92.

³¹ Ross, “China bailout boon for S.F. groups in Shanghai.”

Secondly, the high levels of immigration have attracted highly educated and entrepreneurial workers from around the world. AnnaLee Saxenian has labeled this new, high tech class the “new Argonauts,” a group characterized by international mobility and avant-garde entrepreneurialism.³² It has already been established that the Bay Area has an above average rate of college graduates. However, “[l]ess-widely understood is the fact that over half of the region’s science and engineering (S&E) talent was born abroad. In 2000, this group constituted 49%, and by 2005, it expanded to 55% of the region’s science and engineering occupations.” This stands in stark contrast to the national data when in 2005 only 20% of S&E jobs were born abroad. While India was the largest origin of S&E workers at nearly 14% of the total, China was second at 8%.³³ Particularly in Silicon Valley, surveys of immigrant entrepreneurs have demonstrated that they have contributed considerably to innovation and job creation in the region.³⁴

However, having the best and the brightest workforce does not guarantee economic prosperity. Much of the success of Silicon Valley is derived from “a regional network-based industrial system that promotes collective learning and flexible adjustment.”³⁵ Silicon Valley, therefore, developed a system of relative equality that gathered workers from around the world to collaborate on new technologies. Companies like Hewlett-Packard and Intel eliminated “symbols of hierarchy and status” and promoted “creativity, initiative, and teamwork.”³⁶ The effects of this new type of business organization were profound—not only did it promote entrepreneurship, it also included the most talented workers regardless of background. Therefore, AnnaLee Saxenian concludes that “[t]he new immigrant entrepreneurs thus foster economic development directly, by creating new jobs and wealth, as well as indirectly, by coordinating the information flows and providing the linguistic and

³² Saxenian, *The New Argonauts*.

³³ *The 2007 Index of Silicon Valley*, 6.

³⁴ *Ibid.*, 10.

³⁵ Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*, 2.

³⁶ *Ibid.*, 51.

cultural know-how that promote trade and investment.”³⁷

CHINA’S REGIONAL DEVELOPMENT

Given these globally competitive strengths and ethnic ties, it is unsurprising that the San Francisco region has also developed increasingly close relations with China, another prosperous economy. Since 2002, China’s economy has registered an unprecedented 10% annual growth.³⁸ Additionally, from 1999 to 2007, China increased from California’s 11th largest trading partner to its 4th largest.³⁹ However, China, like the United States, is not a monolithic economic unit—there are enormous regional and local disparities in economic growth, personal income, and financial equity. By applying the same theoretical framework of a growing trend of regionalism, it becomes evident that China’s economy is dominated by three regions—the Shanghai-Yangtze River Delta, Beijing-Tianjin, and the Pearl River Delta (Guangdong Province)—which comprise approximately 37% of China’s total GDP.⁴⁰

Of particular interest is the Shanghai-Yangtze River Delta. The three provinces that make up the region (Shanghai, Zhejiang, and Jiangsu) are part of the strand of generally wealthier coastal provinces. According to Du Ying, Vice Minister of the National Development and Reform Commission, the Shanghai “delta region comprises only 2.1 percent of China’s land area, but generates about 22.5 percent of the country’s GDP, 31.5 percent of tax revenue, and holds 35 percent of the country’s foreign investment.”⁴¹ The region’s growth rate has also been consistently above the national rate, registering a high of 15.2% annual growth in 2007.

The Shanghai-Yangtze River Delta is also China’s primary cluster of high technology. For example, the region’s US\$200 billion economy includes high

³⁷ Saxenian, *Silicon Valley’s New Immigrant Entrepreneurs*, 24.

³⁸ *Ties that Bind: The San Francisco Bay Area’s Economic Links to Greater China*, 2.

³⁹ US Department of Commerce, “TradeStats Express - National Trade Data.”

⁴⁰ “Per Capita Income in Yangtze River Delta Tops \$1875.”

⁴¹ Mu, “China’s Yangtze River Delta to attain modernization by 2020, says official.”

concentrations of communication devices and services, high technology, and computer product manufacturers.⁴² Saxenian notes that as Taiwan's technology sector moved up the value chain, the Shanghai region evolved into a prime destination for FDI. Today, leading manufacturers such as Hewlett-Packard, IBM, and Toshiba have production sites throughout the Shanghai-Yangtze region. Additionally, Northern Zhejiang province is home to dozens of integrated circuit design manufacturers (Hangzhou), and Southern Jiangsu has clusters of computer peripheral producers (Suzhou) and PC manufacturing (Kunshan).⁴³

REGIONAL AND LOCAL CONNECTIONS

The Shanghai-Yangtze River Delta, and to a lesser extent Beijing, have developed into "spikes" of higher education, investment, and innovation. Combined with other structural advantages, such as lower manufacturing costs, it is clear that the Bay Area has enormous economic incentives to pursue a closer relationship. Since both are similarly economically structured in these "spikes," benefits from mutual cooperation ultimately lead to increased economic opportunities. This trend away from national policy is exactly what has transpired.

Recently, there has been a remarkable increase in the efforts from both parties to augment and maintain these economic relations. Most prominently has been the Bay Area Council, a group of the Bay Area's 275 leading companies, which has pioneered a strong relationship with China. In November 2008, the Bay Area Council and the Yangtze Council (representing the Shanghai-Yangtze region) sponsored the US-China Green Tech Summit, which discussed the growing role of the Bay Area and Shanghai in developing green technology and infrastructure.⁴⁴ This summit is part of the council's long-term "China Initiative," which specifically aspires to share "capital, ideas,

⁴² Fu, "Global woes pinch rise in city GDP."

⁴³ Saxenian, *The New Argonauts*, 209.

⁴⁴ Ross, "Shanghai a good place to hold green tech summit."

innovation and resources between the Bay Area and Yangtze Delta regions.”⁴⁵ The Council’s grand aspirations were further manifested in August 2009, when the Bay Area Council opened its first international office in the Yangpu District of Shanghai. Both sides warmly welcomed the venture. Chen An Jie, Yangpu’s Communist Party chieftain, explained, “We have to think international...[this agreement is] the cornerstone for the development of our future relationship.”⁴⁶

Moreover, on April 25, 2007, the Bay Area Council and the Yangtze Council signed “the first region-to-region memorandum of understanding...aimed at strengthening the global competitiveness of both regions by setting up a framework for increasing economic cooperation.”⁴⁷ The significance of this memorandum cannot be understated, since it is the first of its kind in the world, further illustrating the importance of region-to-region partnerships. In addition to a myriad of trade missions from both China and the Bay Area, economic summits have also grown into vogue. In May 2008, Bay Area leaders met with Chinese business leaders in a Venture Capital Summit to promote investment in technology startups.⁴⁸

Not only are regional organizations now playing increasing roles, cities are even beginning to participate. In November 2008, San Francisco, a sister-city of Shanghai since 1979, implemented its ChinaSF Initiative, which is “a public/private partnership that will help connect businesses in China to the San Francisco Bay Area and assist Chinese companies looking to locate or invest in North America.”⁴⁹ Spearheaded by Mayor Gavin Newsom, who has also conducted numerous trade missions to China, the project aims to make the San Francisco Bay Area the “premiere U.S. gateway for Chinese companies.”⁵⁰ Thus far, the ChinaSF Initiative has proven to be enormously successful. Numerous Chinese high tech and green tech firms have established their North American headquarters in San Francisco. In December 2009, the China Chamber

⁴⁵ Bay Area Council, “Bay Area Council - China Initiative.”

⁴⁶ Ross, “Shopping for an Office in Shanghai.”

⁴⁷ “Silicon Valley-Bay Area Region and Shanghai/Yangtze Region Sign Economic Cooperation Agreement on Biotech, “Green Tech,” Information Tech and Transportation.”

⁴⁸ “Top Bay Area Venture Capitalists Travel to China to Help Grow the Industry.”

⁴⁹ “Mayor Newsom Launches ChinaSF in Shanghai.”

⁵⁰ Ibid.

of International Commerce (CCOIC) and ChinaSF signed an MOU of their own, which will promote bilateral exchanges and business cooperation, complementing existing relations.⁵¹

In November 2008, California State Senators Fiona Ma (D-San Francisco) and Tom Torlakson (D-Antioch) went on a diplomatic and economic mission to China to discuss everything from trade policies to clean energy.⁵² More recently, even small to mid-sized cities have partaken in the rush to network with China. Pittsburg, California, recently sent its Economic Development and Redevelopment Directors to Wenzhou and Haimen, China, to promote the “creation of an Asian trade center where small- to medium sized manufacturers....could sell goods.”⁵³ Not only are these relationships increasingly widespread and localized, but they are also proving to be an enormously important economic strategy.

IMPACT ON THE BAY AREA

The Bay Area and China have an ostensibly endless network of economic connections. However, three sectors of the Bay Area economy in particular are intimately linked with China, and serve to profoundly influence the Bay Area’s local structure. First, physical trade via Bay Area ports provides thousands of direct and indirect jobs, especially as trade with China has exploded over the past decade. Second, high tech companies have served to foster investment, research, and high-wage jobs, as both regions have proven themselves as major clusters of technological innovation. Finally, both the Bay Area and China have been at the forefront of developing green technology.

Ports

⁵¹ “中国国际商会与旧金山市签署谅解备忘录 (Zhongguo guoji shanghui yu Jiu jinshan shi qianshu liangjie beiwanglu, China Chamber of International Commerce and the City of San Francisco Agree to MOU).”

⁵² Yi, “State lawmakers overseas during budget crisis.”

⁵³ Burgarino, “Far East May Just Foster Downtown.”

Given the Bay Area's geographic proximity to China and the Pacific Ocean, the region naturally plays a significant role in trade activity. The Bay Area is the nation's fourth-largest exporting region, and accounts for 36% of all of California's exports⁵⁴ and around 6.3% of all US exports.⁵⁵ Furthermore, not only is the Bay Area highly export-driven, but nearly half, 45.8%, of all exports go to Asia, compared with 27% for the United States.⁵⁶ This trend is due almost exclusively to increasing trade with China, since China's average annual growth rate for California exports since 1997 averaged 18.9% per year, well above the average of 3.6% growth for all other countries.⁵⁷ Therefore, given the high quantity of trade with China, the shipping and port industries are enormously impacted. The region's largest, and the nation's fourth-busiest, shipping port is the Port of Oakland.⁵⁸

The relationship between the Port of Oakland and China has also grown precipitously in recent years. China tops the Port's largest trading partners, which accounts for 18.1% of imports and 44.9% of exports.⁵⁹ In 2006, recognizing the significance of China, the Port of Oakland established an office in Shanghai to foster "relationships with ocean carriers, cargo owners and governmental trade development agencies."⁶⁰ In fact, the Port of Oakland expects trade with Asia to triple over the next 20 years, attesting to the growing integration between the two regions.⁶¹

Consequently, China has had a huge and largely unnoticed impact on the microeconomics of the Bay Area via the port. In order to prepare for the expected increase in port activity with China, the port is undergoing substantial renovations to improve efficiency and competitiveness. The largest plan, the Vision 2000 project, modernizes infrastructure, adds berthing capacity, and dredges waterways to accommodate larger ships. Moreover, these modernization projects have enormous

⁵⁴ *International Trade and the Bay Area Economy: Regional Interests and Global Outlook 2008*, 1.

⁵⁵ Shatz, *Airports and International Trade in the Bay Area*, 2.

⁵⁶ "Report Finds Growing Trade Activity by Bay Area Businesses."

⁵⁷ *International Trade and the Bay Area Economy: Regional Interests and Global Outlook 2008*, 51.

⁵⁸ *Ties that Bind: The San Francisco Bay Area's Economic Links to Greater China*, 51.

⁵⁹ "Facts & Figures: Trading Partners."

⁶⁰ Young, "Oakland's China Card."

⁶¹ Port of Oakland, "Oakland Army Base Port Development Program."

benefits to the local economy, creating thousands of new jobs and millions of tax revenue. For example, by 2010, these improvements in the Vision 2000 project are projected to increase direct and indirect jobs from the port to 22,300, 8,200 more than 2003 levels. Among those slated to benefit the most from increased trade are construction workers, port workers, and truck drivers. Tax revenue for state, county, and local levels are also expected to grow to \$140 million annually, \$23 million greater than in 2003.⁶² Additionally, in 2005 personal and business income had skyrocketed from 2001 levels, reaching \$2.02 billion and \$1.76 billion respectively.⁶³

In recent news, the Port signed a long-term contract with Ports America, which agreed to invest some \$2.5 billion in investment over the next 50 years. Economic consultants “estimate the long-term agreement will yield 6,000 jobs and more than \$100 million in direct personal income.”⁶⁴ While this litany of numbers appears tangential, the causes and effects are quite intriguing. Certainly the prospect of economic opportunity with China drives much of the investment. Economically, it also incentivizes local authorities to promote such investment.

This impact in jobs and revenue has also influenced regional economies. Transportation services, such as railroads and trucking, are positively impacted by an increased demand for the movement of goods. Recently, a rising number of distribution centers have also cropped up along the I-80 corridor to Sacramento and the I-580/I-5 juncture in the Stockton/Tracy area to warehouse goods coming and going from the port. In 2005, 2.6 million square feet out of a total 3.7 million square feet of industrial property was leased to warehouse/distribution facilities along the I-80 corridor.⁶⁵ These new warehouses have absorbed vacant space and provided thousands of new jobs for the region. Finally, while the Port of Oakland is undoubtedly the largest player, numerous other regional ports also play a significant, and usually more specific, role; San Francisco (cruise ships and bulk cargo), Richmond (petroleum products and

⁶² “Vision 2000: Benefitting the California Economy.”

⁶³ Martin Associates, *The Economic Impact Study of Port of Oakland Maritime Operations*.

⁶⁴ Raine, “Terminal operator's huge Port of Oakland plan.”

⁶⁵ *Ties that Bind: The San Francisco Bay Area's Economic Links to Greater China*, 53.

scrap metal), Benicia (automobiles and sugar), and Stockton (agricultural products).⁶⁶ Ultimately, these localized economic benefits are partly a result of China's growing role as a major trading partner.

High Technology

The Bay Area, a long-time high technology cluster, has been increasingly developing relationships and collaborative efforts with China in the area of technology. By the 1990s, Silicon Valley, commonly the pinnacle example of innovative technology, was "almost single-handedly seen as the driver of U.S. and even global economic growth."⁶⁷ While this supreme dominance has waned in recent years, the Silicon Valley, and the Bay Area more generally, is still a powerhouse in technology. Currently, the "region's exports are led by technology, including computers and electronic equipment, telecommunications equipment, environmental technology, medical technology and bio-pharmaceuticals."⁶⁸ State economic data for exports in 2007 reveal that computer and electronic products still compose the lion's share, 32.6%, of California exports, while it only accounts for 16.2% of exports nationally.⁶⁹ Computer and electronic products are also the largest export to all of California's five largest trading partners (Mexico, Japan, Canada, China, and South Korea). However, the snapshot economic view of trade is misleading. China has accounted for most of the growth in computer and electronic products exports from California, providing a 12.5% increase from 2006 to 2007, while the other top four trading partner's changes remained near zero.⁷⁰ Additionally, International Data Corp. (IDC) has forecasted 21.5% compound annual growth in China's IT sector alone, making its market by 2010 second in Asia only to Japan.⁷¹ In particular, the Shanghai region has developed into the technological center of China. In November 2008, a city district lined up millions of funding to "build

⁶⁶ *International Trade and the Bay Area Economy: Regional Interests and Global Outlook 2008*, 40-41.

⁶⁷ Huggins, "The Evolution of Knowledge Clusters," 3.

⁶⁸ *International Trade and the Bay Area Economy: Regional Interests and Global Outlook 2008*, 30.

⁶⁹ *Ibid.*, 52.

⁷⁰ *Ibid.*, 54.

⁷¹ *Ties that Bind: The San Francisco Bay Area's Economic Links to Greater China*, 78.

Yangpu into the Chinese version of US Silicon Valley.”⁷²

China’s rapidly expanding technology sector has greatly benefited Bay Area companies. First of all, “[g]lobal demand for the Bay Area’s technology products and services has been a driving factor behind the region’s economic expansion ... and accounts for a large share of revenue for Bay Area technology companies.”⁷³ Therefore, Bay Area technology companies have increasingly looked abroad to find new market opportunities. For example, Google and Yahoo! combined account for 34% of the Chinese web portal market.⁷⁴ Cisco Systems, Sun Microsystems, Nortel Networks, and 3Com were also all instrumental in building the actual system backbones of wiring, operating software, routers for the Chinese internet. Second, while China is not only a huge market, it also serves as an increasingly advantageous destination for outsourcing technology development. Apple, Hewlett-Packard, Agilent Technologies, Oracle and Cisco Systems have all opened significant manufacturing or research centers in China in the past five years.⁷⁵ This exportation of labor is ostensibly detrimental the Bay Area economy, but it actually serves to bolster competitiveness. While manufacturing and service jobs have left, costs have been dramatically reduced, allowing them to invest further in management, research, and product development—higher-paying, white-collar jobs that are located in the Bay Area. Talented immigrants are additionally attracted, further boosting the intellectual and innovative capacity of regional businesses. Even though specific numbers are not readily available, it can be safely extrapolated that the enormous Chinese market has boosted sales, profit margins, and competitiveness of Bay Area firms.

Patenting and venture capital investment, two integral parts of technological innovation, between the Bay Area and China have also seen a dramatic increase in recent years. Economic shifts have made China the second fastest-growing region for co-patents with Silicon Valley; there has been an average annual increase of 27% since 1993. The Shanghai region has especially made significant gains, as it is now the third

⁷² “Shanghai Yangpu District Plans Local Silicon Valley.”

⁷³ *International Trade and the Bay Area Economy: Regional Interests and Global Outlook 2008*, 30.

⁷⁴ *Ties that Bind: The San Francisco Bay Area's Economic Links to Greater China*, 75.

⁷⁵ *Ibid.*, 79-82.

fastest-growing region in the world for co-patents with Silicon Valley at just under 50% per year—ten years ago patenting activity with Shanghai was minimal at best.⁷⁶ As far as venture capital (VC), China is the largest recipient of Silicon Valley VC, receiving nearly \$1 billion in the last six years. Shanghai and Beijing are also the largest receiving regions in the world, and account for 55% of total VC invested by Silicon Valley firms.⁷⁷ Regional efforts have been made recently to increase the amount of VC invested, such as the previously mentioned Venture Capital Summit in May 2008, sponsored by the Bay Area Council and Yangtze Council. While this slew of numbers may seem irrelevant, VC and patents are the leading indicators of innovation. Therefore, the high levels of both indicate a substantial amount of economic growth. New companies are being started that not only provide jobs locally, but also that have potentially huge returns in the future.

Green Technology

Finally, green technology has proven to be the next cornerstone of the economic relationship with China. The Bay Area has developed into the world center of green technology, and the state of California attracted \$1.3 billion in VC in 2007, or just over half of the national total.⁷⁸ In fact, this clean technology boom combines many of the region's strengths—"a university system that is attracting large scale investment, contributions from multiple technology sectors, venture capital, [and] a strong environmental ethic."⁷⁹ At the same time, China is also on the cusp of an environmental meltdown, and quickly becoming one of the largest markets for clean technology. Both Chinese and Bay Area leaders recognize the potentially mutual benefits from an economic partnership. Chinese officials have said the "only hope to head off environmental catastrophe is through the kind of technology Silicon Valley offers." This creates an enormous opportunity for the Bay Area, as Sam Huang, an entrepreneur

⁷⁶ *The 2007 Index of Silicon Valley*, 49-50.

⁷⁷ *Ibid.*, 52-53.

⁷⁸ Buderl, "Cleantech Venture Investment Soared in 2007—Bay State a Distant Second to California."

⁷⁹ *Sustaining the Bay Area's Competitiveness in a Globalizing World: Bay Area Economic Profile*, 23.

from Silicon Valley, noted while visiting China: “Every market is big in China.”⁸⁰ They are additionally trying to develop the Shanghai/Yangtze region into a clean tech hub, with help of course from established companies in the Silicon Valley. As far as investments, the Chinese clean tech industry has recently received an infusion of VC, rising from \$7 million in 2004 to \$222 million in 2006.⁸¹ In October 2008, a joint US-China VC fund announced plans to make Shanghai a “clean technology industry cluster,” with the potential investment of up to \$1.1 billion.⁸²

Likewise, Bay Area leaders have also been quick to develop relations in China in order to foster business growth at home. Most recently, the US-China Green Tech Summit brought over 400 business and government leaders from both countries to Shanghai to discuss increasing relations. At the event, San Francisco Mayor Gavin Newsom delivered the keynote address, all the meanwhile promoting the city as a hub for clean tech investment.⁸³ In fact, San Francisco in particular has been at the forefront of encouraging Chinese business to invest and headquarter in the Bay Area. In 2007, Suntech, a large Chinese solar power firm, announced it would base its North American headquarters in San Francisco. While only employing a few dozen employees by the end of 2008, the event was hailed as “a visible flag in the ground that San Francisco is a major player for the Chinese international businesses community.”⁸⁴

Since then, Newsom’s ChinaSF program has landed two other Chinese solar energy firms, all in the hopes of creating thousands of new green-collar jobs for the area economy. In November 2008, Trina Solar announced its decision to base its North American headquarters in San Francisco.⁸⁵ In July 2009, Yingli Green Energy Americas announced its decision to locate its operations center in San Francisco as well. In explaining the decision, Robert Petrina, Managing Director of Yingli Americas, said that “San Francisco was the natural choice for our West Coast Operations location” because

⁸⁰ Boudreau, “Silicon Valley sees green in China’s smog.”

⁸¹ Ibid.

⁸² “GreenStar to Build Clean Tech Innovation Center in Shanghai.”

⁸³ Ross, “Caveat for clean tech venturing in China.”

⁸⁴ Robson, “Suntech America.”

⁸⁵ Riddell, “Trina Solar to open U.S. headquarters in SF.”

of the “established strategic partners in the Bay Area and beyond.”⁸⁶ Anecdotal reports as of November 2009 have at least two additional Chinese solar companies on track to open San Francisco offices as well.⁸⁷

However, not to be outshined, the East Bay is also positioning itself to reap the benefits of the growing green technology sector. The recent partnership between East Bay cities, UC Berkeley, and the Lawrence Berkeley Lab in the so-called green corridor, aims to keep nascent green tech industries in the area. Not only does it provide huge investment opportunities, it is also the source of “green collar jobs,” which, through new training and facilities, can replace the loss of blue collar manufacturing jobs.⁸⁸ Furthermore, R.E. Zalesky, the VP of biofuels and hydrogen at Chevron, also said that several East Bay communities, like Richmond and Antioch, could sustain green tech manufacturing, and that ultimately “California could provide all of the facilities needed for such projects from start to finish.”⁸⁹ And this is exactly what Bay Area leaders want—a growing green tech sector, coupled with huge demand from China, which will provide jobs and tax revenues locally.

THE GLOBAL ECONOMIC RECESSION

Despite the highly diversified and skilled labor force of the San Francisco Bay Area, the regional economy is not immune to a global economic downturn. As national financial defaults soared and international trade flowed waned, the Bay Area suffered from a depreciated real estate market, a mounting problem of unemployment, and a precipitous decline in investment.⁹⁰ A similar contraction of the Chinese economy has adversely affected the local economy as well. Most tangible is the Port of Oakland, which in recent years has heavily relied upon the growth of shipping traffic with China.

⁸⁶ “Mayor Newsom Welcomes Leading Solar Firm, Yingli Green Energy Americas to San Francisco.”

⁸⁷ Ross, “Chinese IT Firm Opening in SF.”

⁸⁸ Cockrell, “East Bay announces its 'green corridor' ambitions.”

⁸⁹ Avalos, “Bay Area stands to benefit from green-tech boom.”

⁹⁰ Beacon Economics, *Bay Area Economic Forecast 2009-2010*.

Largely a result of the decreasing exports from China, the Port of Oakland posted a 15.7% decrease in cargo volumes in the first three months of 2009 from the previous year.⁹¹ In 2008 the Port laid off approximately 100 employees, and in 2009 has left nearly 40 positions unfilled. The decline in port traffic has caused a ripple effect in the regional economy, causing increased unemployment and decreased tax bases.⁹²

However, while most indicators remain bleak, the Bay Area is well positioned to reap the benefits when the global, and Chinese, economy rebounds. For example, at the opening of the Bay Area Council's office in Shanghai over the summer, Council spokesman John Grubb exclaimed, "Yangpu still wants our companies... What's particularly exciting is that we're able to do this in a down economy."⁹³ Similarly, the Port of Oakland has continued to invest heavily in large infrastructure projects to keep the facilities competitive with other West Coast ports, especially as projections for trade with China and the rest of Asia continue to increase.⁹⁴ Furthermore, projects such as ChinaSF continue to make headway despite the economic downturn. San Francisco has landed agreements with three large solar companies, Isoftstone, a Chinese IT company, and China Medical City, a large biotech venture, all within the framework of a global recession.⁹⁵ The San Francisco government also has no intentions of stopping here—in October 2009 the city sent a delegation to Bangalore, India to foster business and economic ties, focusing on high tech and green tech sectors.⁹⁶

Regional economic councils have profoundly shaped policy creation and the promotion of bilateral economic ties in the current downturn. However, what is often omitted in the dialogue is the impact of these policy choices by foreign actors on the local economy. For example, China's \$586 billion stimulus package has inevitably contributed to California's economy, spurring investment in sectors ranging from high tech to heavy machinery producers.⁹⁷ Perhaps the most direct manifestation of the

⁹¹ Young, "Port of Oakland Offers Incentives to Hang onto Cargo Business."

⁹² Selna, "Port of Oakland Digs Deep for Greater Capacity."

⁹³ Ross, "Shopping for an Office in Shanghai."

⁹⁴ Selna, "Port of Oakland Digs Deep for Greater Capacity."

⁹⁵ Ross, "Chinese IT Firm Opening in SF."

⁹⁶ Ross, "S.F. Sustains Ties with Bangalore."

⁹⁷ Fraher and Benjamin, "China's Stimulus Package May Boost California, Japan."

impact of China's stimulus package was the US-China Green Energy Council and the U.S. Department of Commerce sponsored seminar entitled "Opportunities from China Stimulus Package and Cleantech." The event was specifically organized to assist US companies receive stimulus funding in the green technology sector.⁹⁸

Within the larger context of the global economic recession, the reciprocal nature of the region-to-region relationship is often overlooked. While certainly sectors suffer from decreased trade flows, such as the Port of Oakland, new opportunities undoubtedly arise in the relationship. The potential benefits for the Bay Area's green technology sector as a result of China's stimulus package are a prime example. As the global economy slowly emerges from the recession, regional councils are poised to exert substantial influence in regional economic development.

CONCLUSION

National economic policy is still the dominant power in trade relations. However, the rise of regional cooperation and integration has led many regions to start integrating into the world more directly, either via region-to-nation or region-to-region interactions. Through such relationships, both regions are able to mutually benefit economically.

At the forefront of this trend is the San Francisco Bay Area, a richly diverse and internationally connected region. Its high levels of education, productivity, and investment are coupled with an extraordinary ethnic diversity—a diversity that provides a solid foundation of global economic kinship ties and a highly educated workforce. Thus, in order to fully realize the potential economic prosperity, regional economic councils, businesses, and even local politician have hailed the use regional economic cooperation. Of particular interest to Bay Area leaders is China, another one of the world's leaders in innovation, technology, and trade. Three areas in particular—

⁹⁸ *Opportunities from China Stimulus Package and Cleantech.*

trade, high tech, and green technology—have been the focus for increased collaboration between the two actors. This growing economic relationship has tangible local benefits as well, especially for the Bay Area—the creation of new jobs, both blue and white collar, the formation of new start-ups, and an expanded tax base.

While the recent economic downturn has shelved discussion of economic integration and cooperation, the pause is likely to be only temporary. The futures of both regions are becoming increasingly interlinked, and with China poised to become the largest economic player in the coming decades, the Bay Area is already well positioned to reap the economic benefits.

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