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Short Essays: Improving Conditions in AOR Economies

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Preface

Welcome to the 2011 *Asia-Pacific Economic Update (APEU)*. In the spirit of consistency, we provide Volumes 1, 2, and 3 as we did last year. The first volume provides analytical updates, economic outlooks, and key statistics for area of responsibility (AOR) nations and territories. The second volume serves as a lexicon of economic terms that non-economists will find to be useful as they read economic-related literature in the course of their work. The third volume is a collection of three papers that are designed to provide insights on how AOR economies might be improved in the period ahead. Each of these volumes has been fully updated and augmented to meet changing needs.

A new *APEU* feature this year is Volume 4, which is an Energy Supplement. It provides energy profiles and key energy statistics for AOR economies. This volume was prepared by Odette Mucha, a Presidential Fellow who spent the summer of 2011 researching Asia-Pacific energy issues at the U.S. Pacific Command (USPACOM). Ms. Mucha brought a wealth of skills with her to USPACOM from her normal post as a Transportation and Budget Analyst at the Office of Management and Budget in Washington, D.C. If you require basic facts and insights about the energy space within an AOR economy, then you will find Volume 4 to be of great benefit. Our challenge going forward is to keep this new volume updated from year-to-year.

Our emphasis in all four volumes is to provide high-quality information on AOR economies, which are increasingly finding that they are the focus of attention for the remainder of world. While Western economies languish with slow growth and deep-seated financial instability, Asian economies continue to forge ahead with high-speed growth that is threatened at the margin by relatively high inflation. An exception is Japan, which is recovering from the devastation caused by the overwhelming March 11, 2011 earthquake and tsunami. Our goal is to provide bite-size, yet sufficient, information so that the USPACOM staff and the wider defense-related community can grasp quickly ongoing conditions in AOR economies. We know that this information will enable more informed and better balanced decision-making.

Whether you come to these volumes to obtain facts or analyses about just one economy or many, we invite you to assess the impact that these volumes have on your work. If you find them equal to the task, then let us know. If you find that something is missing, then please let us know as well. Our mandate is to make AOR economic issues user-friendly. However, we can only achieve this outcome by receiving your assessments. Please send your thoughts and comments about the 2011 *APEU* to Brooks.Robinson@pacom.mil or call 808.477.9195.

Thanks for the opportunity to serve!

Introduction

This is the second year that we have offered Volume 3 as part of the *Asia Pacific Economic Update* since we revised the publication's format in 2009. For 2010, we featured papers that highlighted potentially destabilizing conditions in area of responsibility nations (AOR). We included papers on economic conditions in China, on foreign direct investment in Association of Southeast Asian Nations (ASEAN), on assessing foreign assistance in the AOR, and on US-China economic and financial interrelations during a crisis.

This year, we take a proactive approach to economic conditions in the AOR by presenting papers that discuss strategies that might be adopted, which may assist in improving economic outcomes for AOR nations. We present three papers that are designed to highlight existing problems and potential solutions.

First, in "Economic Conditions in Vietnam: Problems and Prospective Solutions," we explore macro instability and fiscal and monetary policy problems in Vietnam. However, we go beyond a statement of the problem and include our analysis and suggested strategies for improving outcomes.

In the second paper, "Indian Infrastructure: An Important Factor in Faster Growth," we research India's efforts to build key infrastructure projects in this fast growing economy and potential problems that beset those efforts. The research occurs against a backdrop of a slowing global economy and declining foreign direct investment (FDI) in India.

Third, in "Blue Skies: Benefits of Improved U.S.-China Economic Relations, 2011-2020," we ask the question, "How might the two largest economies in the world leverage each other to improve economic outcomes out to 2020?" Specifically, we inquire concerning potential collaborative and cooperative strategies by the U.S. and China that can create win-win outcomes for these two important and leading economic powers.

The latter paper was prepared in the spring of 2011, and it is likely that developments since that time may shed new light on the possibility of U.S.-China collaboration. However, the paper continues to embody critical questions that should be asked about the two nations' future in the world economy and how they might benefit more from each other's economic activity.

The first two papers were written during the summer of 2011 following week-long trips to Vietnam and India. During those trips, the U.S. Department of State and the U.S. & Foreign Commercial Service (US&FCS) helped to arrange meetings with business representatives, scholars, and government officials in these countries who had keen insights about ongoing developments. Our discussions with these interlocutors were instrumental in helping us to analyze carefully conditions in Vietnam and India and in enabling us to think through strategies that may help improve outcomes in both nations.

We pause here and thank the Department of State and US&FCS for their efforts in making our visits successful.

At this writing, the extended global recovery from the 2008-2009 financial and economic crisis continues to unfold. An initial round of stimulus fueled a first growth wave and a general inflationary warming of economies in Asia. Now Asian nations are nearing the end of their monetary tightening cycles and await the resumption of growth, albeit at a somewhat slower pace. It is very appropriate, at this juncture, to be inquiring: “How might outcomes be improved for AOR economies?”

While we have only considered Vietnam, India, and China in this volume, the key questions that we ask, our analysis, and our suggested strategies may very well apply more broadly to other economies in the AOR.

We invite you to review these papers closely and to share your thoughts about this volume with us. Please write to Brooks.Robinson@pacom.mil; or call +1.808.477.9195.

We look forward to hearing from you.

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**“Economic Conditions in Vietnam: Problems and
Prospective Solutions”**

Abstract

During the summer of 2011, Vietnam was experiencing a variety of economic difficulties. Inflation and interest rates were high by historical standards. The country had a sizeable trade deficit. The value of its currency, the dong, was weak as a result of multiple devaluations. These were important short-term concerns, but there were also important long-term challenges: The need for more value-added production; a relatively poor-quality education system as evidenced by the number of students studying abroad; and a dearth of scientists and engineers to operate sophisticated production processes. However, in addition to the economic problems, Vietnam was facing security challenges with China, which had behaved aggressively in the South China Sea. Vietnam had called upon the U.S. for security support as a counterweight to China. In order to ascertain the basic economic strengths and weaknesses of a prospective security partner, this paper was prepared. The analysis presented herein provides clear insights on Vietnam's options for managing and resolving its short- and long-term economic problems. Ultimately, the paper sheds light on Vietnam's capacity to respond to its security challenges with China now and in the future.

Introduction

Following the end of U.S. military intervention in Vietnam as signaled by the signing of the Paris Peace Accords in 1973 and North Vietnam's defeat of South Vietnam in 1975, the U.S. had minimal relations with Vietnam until the 1990s. The U.S. reestablished diplomatic relations with Vietnam in 1995 under then President Bill Clinton. Since that time, the U.S. and Vietnam have expanded their diplomatic and economic relationships significantly. In fact, one could conclude that the U.S. has played a significant role in Vietnam's economic development, which transpired relatively smoothly until 2008. With a global food crisis and record-high energy prices as a backdrop, inflation surged to well over 20% in Vietnam during 2008. Inflation slowed to less than 10% in 2009 as Vietnam suffered the impact of the global financial and economic crisis. In 2010, Vietnam's economy recovered with moderate inflation, but high levels of inflation surfaced again in early 2011, and economic growth slowed.

By the early summer of 2011, Vietnam and China were experiencing strains in their diplomatic and military relationships—mainly over competing claims in the South China Sea (SCS). As a partial response to this outcome, Vietnam heightened its call for more U.S. involvement in the region as a counterweight to China's aggressive behavior. Given a potential for increased U.S. military support for Vietnam and other nations in the region, it became important for the U.S. Pacific Command (USPACOM) to obtain a balanced assessment of economic conditions in Vietnam. The operative question was, "How prepared is Vietnam to respond to its economic challenges?"

It was in this context that the USPACOM Economic Advisor visited Vietnam to obtain clear insights about Vietnam's economy. Through a series of high-level meetings in Ho Chi Minh City and in Hanoi in June of 2011 that were facilitated by the U.S. State Department and the U.S. and Foreign Commercial Service, the Economic Advisor was able to gather information from government, business, and think tank officials about Vietnam's economy. In essence, this paper reports the findings of that visit.

The paper includes the following sections: (1) An economic profile of Vietnam; (2) Vietnam's key economic problems; (3) Government of Vietnam (GOV) action to stabilize its macroeconomy; (4) prospective steps that could place Vietnam's economy on a stable and long-term growth path; and (5) an analysis of the unique aspects of the economic relationship between Vietnam and China.

Economic Profile

According to the International Monetary Fund (IMF) September 2011 *World Economic Outlook*, Vietnam's 2010 population was 88.3 million. Its gross domestic product (GDP) was \$103.6 billion at market prices and \$277.4 billion on a purchasing power parity

basis (PPP).¹ The PPP GDP measure ranked Vietnam 42nd among the world's nations. Vietnam's 2010 PPP GDP per capita was about \$3,100. As a point of reference, 2010 U.S. PPP GDP per capita was about \$46,850. On an inflation adjusted basis, Vietnam's GDP grew at a 6.8% rate in 2010.

The Central Intelligence Agency's (CIA's) 2011 *World FactBook* reported that Vietnam's literacy rate was 94% when measured in 2009; about 70% of the population was in the working age range from 15-65 years of age; and less than 11% of the population lived below the poverty line.²

In 2010, Vietnam's exports were valued at \$72.2 billion; its imports were valued at \$84.8 billion; producing a trade deficit of \$12.6 billion. Vietnam's primary exports were clothes, shoes, marine products, and petroleum; its key imports were machinery and equipment, petroleum products, steel products, and raw materials for clothes and shoes production. Vietnam's most important trading partners were China, Japan, and the U.S. At the end of 2010, Vietnam held \$13.4 billion in foreign exchange reserves.

In 2010, 54% of Vietnam's labor force was in agriculture; 20% worked in industrial operations; and the remaining 26% worked in service industries. Vietnam's GDP was comprised of 21% agriculture; 41% industrial output; and 38% services.

Most of Vietnam's energy is derived from petroleum; although the country exports petroleum, it must import almost all of the refined petroleum required to meet its energy demand due to little-to-no refining capacity.

In 2010, the GOV collected about \$29 billion in revenue, while it expended about \$35 billion—producing a deficit of about \$6 billion (5.8% of GDP). The nation's debt-to-GDP ratio stood at 57.1%.

Generally, Vietnam's economy is characterized by production of a sizeable volume of raw material, food, and low value-added exports, a high volume of manufactured goods and manufactured goods inputs imports; and a moderate size service sector—including the provision of government services.

Key Vietnam Economic Problems

The onset of Vietnam's most recent macro-instability can be traced, in large measure, to a GOV decision to accelerate growth in 2007. Up to that point, Vietnam had enjoyed 7%-to-8% growth rates.³ To accelerate growth toward the double-digit level, Vietnam

¹ Purchasing power parity (PPP) identifies prevailing prices in "foreign" and "home" nations, then restates a "foreign" nation's ability to purchase a specified basket of goods and services in terms of the "home" nation's currency. In this case PPP is computed for Vietnam as the "foreign" nation and the U.S. serving as the "home" nation.

²The CIA's *World FactBook* is also the source for the statistics on Vietnam's trade, labor, energy, and government fiscal status that are presented below.

³ According to the IMF, from 2000 to 2007, Vietnam's average real GDP growth rate was 7.6%.

adopted an easy monetary policy. Couple an easy monetary policy with a global food crisis and record-high energy prices, and you brew up a very high level of inflation, which reached 23% during 2008 (IMF, 2011).⁴⁵ Vietnam put on the brakes and began to slow inflation just as the global economy was experiencing the Great Recession of 2009. To accelerate growth following the slowness that accompanied the global recession, Vietnam adopted a loose monetary policy again in 2010, which precipitated accelerated inflation by 2011. By the summer of 2011 inflation neared the 20% level again. Consequently, one can argue that monetary policy was a key contributor to Vietnam's high inflation and macro-instability. However, the loose monetary policy stance was accompanied by other macro conditions, which helped facilitate macro-instability. Below, we delineate the accompanying conditions that characterize, in part, Vietnam's 2011 economic problems.

High interest rates.—In an effort to slow inflation, the Bank of Vietnam adopted a tighter monetary policy stance by raising interest rates. Higher rates helped slow growth as firms and consumers could not afford to borrow under high interest rate conditions to expand their operations and consumption, respectively. Ultimately, higher rates should slow economic growth further and help slow inflation. However, the State Bank of Vietnam (SBV) must time the reversal of its monetary policy stance in order to not prolong economic slowness and to avoid a contraction.

Large trade deficit.—Vietnam had an overall trade deficit of \$12.6 billion for 2010 (12.2% of GDP), which was more than accounted for by a trade deficit with China of \$12.7 billion.⁶ This trade deficit is partly the result of exporting mainly raw materials, with little-to-no value added contributions by the domestic economy. More than offsetting the exports are high valued imports, which reflect the nation's increasing demand for machinery and equipment, consumer goods inputs, and consumer goods based on demand caused by slightly rising incomes.

Dollarization.—A policy tool adopted to reduce the trade deficit was multiple devaluations of Vietnam's currency, the dong. Usually, a weaker currency will help slow import flows. However, the often-devalued dong presented a cause for dollarization of the economy. In fact, it is quite common to conduct transactions in Vietnam in one of three currencies: The dong, the U.S. dollar, or gold. Dollarization in response to a weak domestic currency can serve as a type of self-fulfilling prophesy, with the dollar and gold outweighing the dong as the preferred currency for certain types of

⁴ Easy money policy is characterized by central bank actions to force interest rates to low levels, to reduce bank reserve requirements, and to generally add liquidity to the financial system; thereby making money easily available to economic agents. Tight monetary policy involves the reverse actions.

⁵ The 2008 food crisis was characterized by the price of a ton of rice reaching nearly \$1,000 per ton; before the crisis, the price was in the \$300-to-\$400 range. In addition, the price of petroleum (sweet crude) reached a record high of \$146 per barrel.

⁶ See the GOV's General Statistics Office (2011) data on Vietnam "Exports and Imports of Goods by Country" for 2010; http://www.gso.gov.vn/default_en.aspx?tabid=472&idmid=3&ItemID=11820 (exports) and http://www.gso.gov.vn/default_en.aspx?tabid=472&idmid=3&ItemID=11816 (imports).

transactions. An ever-weakening dong made it difficult for the GOV to conduct transactions and to manage the economy effectively.

Top-heavy SOEs.—In 2009, over forty percent of Vietnam's GDP was accounted for by state-owned concerns—including state-owned enterprises (SOEs).⁷ SOEs are marked by three major problems. First, they tend to be inefficient producers, which slows productivity gains. Second, Vietnam's SOEs have leveraged their favored position and ability to gain access to capital in order to invest in the property market, and they have helped create a real estate market bubble. Third, because large SOEs suck up so much of the nation's capital, they stifle the formation of small-to-medium sized enterprises (SMEs), which can be a good source for new job creation.⁸ Hence, the overall makeup of firms in Vietnam is numerous and sizeable SOEs, many independent small ("Mom and Pop") firms, but few SMEs.⁹

Poor education system.—During our visit to Vietnam, multiple interlocutors noted the fact that Vietnam sends a sizeable amount of its college and university students abroad to study.¹⁰ Families send their students to the U.S., to Europe, to Australia, to Singapore, and to China depending on their level of wealth, respectively. The reason so many students study abroad is because the quality of education in Vietnam is viewed as low-level. It does not help that the first two years at the university are spent, by mandate, studying the intricacies of Communist Party ideology. The quality of college graduates is reflected in the fact that companies from Western nations generally find that only a small percentage of Vietnam college graduates are qualified to perform entry-level jobs that are offered by these companies.

⁷ See the GOV's General Statistics Office (2011) data on "GDP at Current Prices by Ownership and Type of Economic Activity"; http://www.gso.gov.vn/default_en.aspx?tabid=468&idmid=3&ItemID=9908.

⁸ For an analysis of the conditions under which SMEs are likely to be net creators of jobs, see Haltiwanger, Jarmin, and Miranda's (2010), "Who Creates Jobs? Small vs. Large vs. Young." National Bureau of Economic Research Working Paper #16300; <http://www.nber.org/papers/w16300>

⁹The Vinashin Group is emblematic of the three problems that are associated with SOEs. Initially, Vinashin was organized to develop Vietnam's ship building industry. The GOV went to great lengths to ensure that Vinashin's operations were financed sufficiently--to the tune of hundreds of millions of dollars. As opposed to focusing only on ship building, Vinashin diversified into many industries—including investment in the property market. Because air was being released from the property bubble in Vietnam, and because other facets of Vinashin's operations were not producing sufficient returns, the company defaulted on a \$60 million payment in December of 2010, which was associated with a \$600 million loan. To date, it remains uncertain how Vinashin will resolve its debt with its creditors—including U.S. investors. See Hookway and Tudor (2010), "Behind Firm's Default: Vietnam's Growth Mania," *The Wall Street Journal*, December 25th;

<http://online.wsj.com/article/SB10001424052970203568004576043180815719282.html>.

¹⁰ Kritz (2011) reports that, based on data collected for about 60 countries by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), over 36 thousand Vietnamese students studied abroad during 2008. For the same period, the Institute of International Education (2011) reports that about 262.4 thousand of U.S. students studied abroad. When one accounts for the fact that the U.S. population is about three times larger than Vietnam's population, and that U.S. income and wealth are orders of magnitude larger than Vietnam's, it becomes clear that Vietnam sends a disproportionately high number of its students abroad to study.

Government Actions to Stabilize the Economy

Properly viewing the 2011 macro-instability as unique and seeing that a national effort was required to address the instability, Vietnam's National Assembly developed Resolution 11 in early 2011.¹¹ Resolution 11 has seven components, which are intended to reduce inflation, restore macro-stability, and keep Vietnam on a steady growth path. We highlight six substantive components of Resolution 11 below.

1. Apply a tight and cautious monetary policy
 - a. Reduce credit growth to 20%
 - b. Direct available capital toward SMEs
 - c. Reduce loans to "nonproduction" sectors (i.e., real estate and finance)
 - d. Stabilize the exchange rate by forcing the sale of foreign exchange (mainly by SOEs) to the SBV and other means (i.e., reduce dollarization)
 - e. Eradicate the trading of gold in the free market
2. Apply tight fiscal policy
 - a. Increase public sector revenue collections by 7%-to-8% by increasing tax enforcement
 - b. Cut central government spending by 10% in 2011
 - c. Cut state government spending to 5% of GDP
 - d. Postpone or eliminate investment projects that are not urgent
 - e. Cut SBV investment by 10% for state-funded projects
3. Boost production
 - a. Manage the supply-demand balance of essential commodities (especially food items, such as rice)
 - b. Reduce the trade deficit to 16% of total exports by reducing import using import switching policies
 - c. Improve the management of electric power production and use
 - d. Raise taxes on certain exports
 - e. Lower taxes on essential imports
 - f. Reduce SVB loans for imports
 - g. Control SOEs' production costs and improve efficiency
 - h. Implement a nation-wide electric energy saving program
4. Adjust energy and fuel prices
 - a. Move fuel and energy price toward market levels

¹¹ Resolution 11 was completed and signed on February 24, 2011. It is available in its entirety at the following Internet Web site;

http://www.chinhphu.vn/portal/page?_pageid=439,1090569&_dad=portal&_schema=PORTAL.

- b. Provide assistance to poor households with respect to their energy and fuel needs
5. Strengthen social welfare
- a. Reduce poverty using local programs
 - b. Provide more loans to students
 - c. Provide assistance to the nation's civil servants and to the elderly who have no families to provide support
6. Accelerate information dissemination
- a. Use the mass media to inform citizens concerning the government's efforts to stabilize the economy and assist the poor
 - b. Use the mass media to alert citizens to issues of widespread social concern

Although Resolution 11 was issued in February of 2011, a few months elapsed as central government agencies determined how they would operationalize the resolution's requirements. During our June 2011 visit, the general sentiment was that the results of implementing the resolution would not be seen immediately, but that it would take a few months for effects to be observed.

According to the General Statistics Office of Vietnam, for the first eight months of 2011, the inflation rate was up 15.7% over the end of 2010; 23% above August of 2010. However, the rate of price increase had declined to less than 1.0% per month by August. On the trade front, for the first eight months of 2011 the trade deficit was reduced to about \$6.8 billion, with exports at \$60.8 billion and imports at \$67 billion.¹² We were unable to obtain additional information concerning other areas covered by the resolution at this writing.

Placing Vietnam's Economy on a Stable Growth Path

The GOV reflected wisdom and vision in order to develop a rather comprehensive plan to address the nation's macro-instability via Resolution 11. While not enough time has elapsed to observe the full impact of the resolution's components, Vietnam policy makers expect that they will impact economic conditions favorably.

However, from USPACOM Economic Advisor's vantage point, there are a few short-, intermediate-, and long-term actions that should help moderate inflation, restore the trade balance to some reasonable level, ameliorate dollarization, and help the economy to evolve with appropriate balance. These actions are itemized below:

¹² The inflation and trade statistics for the first 8 months of 2011 are from the General Statistics Office of Vietnam (2011), "Social and Economic Statistics , 8 Months of 2011"; <http://www.gso.gov.vn/default.aspx?tabid=622&ItemID=11314>

- **Short-term actions**

- The SBV must adopt a patient and stern stance on monetary tightening—being willing to suffer the pain associated with an economy that performs below potential output in exchange for a reduction in inflation.¹³ It is only by establishing credibility (a willingness to suffer the pain) that inflation can be wrung out of the economy. In the 1980s, the former Chairman of the U.S. Federal Reserve Board, Paul Volcker, was able to rid the U.S. economy of high inflation by establishing such credibility.
- Reduce dramatically the flow of capital to SOEs, and redirect that capital to SMEs. SOEs are inefficient producers; they over-invest in the property market and contribute to a real estate market bubbles; they enrich SOE employees who demand high valued consumer goods, which contribute to the trade deficit; and they do not create employment in the same way that SMEs can. In addition, SMEs can help diversify and balance the macroeconomy by initiating production in new industries that contribute significant value added to the economy. While SME operations may begin on a small scale, in time, SMEs can graduate and become large-scale producers, which employ even more workers.¹⁴

- **Intermediate- to long-term actions**

- Improve the educational system. A good start in this direction would be to eliminate the two-year requirement to study Communist Party ideology during the first two-years of college and university education, and to use that period to broaden the scope of study. In addition, Vietnam could open the door wider to permit foreign universities to enter the market and provide training and degree programs. It is by improving the educational system that Vietnam can retain its high-quality students and prepare them to work in new, value-adding industries that are not now operating in the economy.
- Use an improved educational system and study abroad programs to produce more scientist and engineers. Only through a sufficient supply of scientist and engineers can Vietnam graduate its economy to include technological industries, which are the industries of the future. Moreover, scientists and engineers can provide the basis for the development of industries that can add value to Vietnam's raw materials and increase the value of exports. In this way, Vietnam can position itself to absorb some of the production that may fall from China and other Asian economies as they move up the production value chain.

¹³ By "pain" we mainly mean higher levels of unemployment that usually accompany efforts to wring inflation out of an economy by adopting a contractionary monetary policy. Higher levels of unemployment can portend social actions on the part of workers.

¹⁴ The idea that larger firms create more jobs is contrary to popular opinion that small firms create the most jobs, but there is new support for the former idea. *Op. cit.* Haltiwanger, Jarmin, and Miranda (2010).

- Citizens generally benefit from improved governance and transparency. While all governments can improve in these areas, the citizens of Vietnam stand to benefit greatly from improved governance and transparency—especially at the local levels. While Resolution 11 calls for improved communications downward, the GOV might benefit significantly from opening the door to more and unregulated upward communications from its citizens concerning governance issues that matter most to them. As a result, the GOV can improve the shaping of policies to meet citizens' needs.
- Create more freedoms and a more participatory democracy. A freer more democratic political system is often associated with a more vibrant economic system—especially over the long-term.¹⁵ Therefore, Vietnam's economy could grow more rapidly and in a more balanced manner when its citizens are granted the freedoms to pursue their preferred interests.

These are a few fundamental actions that the GOV might consider adopting to improve economic conditions. They, in no way, comprise an exhaustive list. They constitute a starting point.

Vietnam-China Relations

Given their geographical proximity, Vietnam and China have a very long and shared history during which the nature of the two countries' relationship has fluctuated. During certain historical periods, China viewed Vietnam as province. Over the past 50 years, especially during the war between North and South Vietnam when China provided military support to North Vietnam, China viewed Vietnam as a "little brother." However, even this relationship was tested in 1979 when Vietnam and China engaged in a border dispute war, with both Vietnam and China claiming themselves the victor.

Vietnam has rejected the "little brother" role all along, but especially today. However, China appears to have gained the upper hand as economic development in the two countries has diverged: China is now recognized as a world economic power whose economic development and growth are likely to continue. Vietnam's future growth and development, on the other hand, are very much contingent upon adoption of appropriate policies. If Vietnam fails to adopt appropriate economic policies going forward, it stands to be caught in a "middle-income" trap, with further growth and development being delayed—if not postponed indefinitely.¹⁶

¹⁵ There is some controversy concerning the role of democracies in inciting economic growth. For an interesting analysis, see "Is Democracy the Best Setting for Strong Economic Growth?" in *The Wall Street Journal*, September 13, 2007; http://online.wsj.com/public/article/SB117330214622129995-wXADIsfRHp9Z34RAyyVjN_w1yBI_20080311.html.

¹⁶ A middle-income trap is defined as a condition in which developing economies reach a level of per capita gross national income (GNI) of at least \$1,000 but less than \$13,000, but, due to insufficient institutional infrastructure and a critical mass of human capital, is unable to rise above this level of per capita income. In this framework, lower-income developing nations have less than \$1,000 GNI per capita. Upper-income is defined as GNI per capita above \$13,000. See Gill and Kharas (2007) *An East Asian Renaissance: Ideas for Economic Growth* from the World Bank'

Currently, problems that complicate Vietnam's relationship with China are associated with at least three fundamental economic issues: (1) A large trade deficit with China; (2) China's upstream management of the Mekong River (a.k.a. *Cuu Long*, River of Nine Dragons); and (3) China's aggressive behavior concerning territories in the South China Sea (SCS) for which the two nations have overlapping claims.

On the large trade deficit, which was discussed above, Vietnam must adopt long-term strategies to discontinue the exportation of mainly raw materials to China and to begin to add value to those raw materials before exporting. If China identifies other raw material sources, then Vietnam can diversify its export partner base by identifying new customers for its new value added products. In addition and also as discussed above, if Vietnam improves its educational system, produces more scientists and engineers, and develops a more qualified workforce, it can position itself to absorb certain types of production that may fall from China as the latter moves up the production value chain.

On China's upstream management of the Mekong River, Vietnam has joined with other Mekong River Basin countries (Thailand, Cambodia, and Laos) and the United States to form the Lower Mekong Initiative (LMI).¹⁷ The fear is that China will dam upstream portions of the river to produce electric power; thereby affecting adversely the water flow and the availability of the food supply that is derived from the river once it reaches Vietnam. LMI members are engaged in an intense effort to ensure that China does not mismanage upstream portions of the Mekong River. However, China has never signed an international water agreement; therefore, negotiations concerning upstream use of the Mekong River may prove to be problematic.¹⁸ On the other hand, if China's upstream management of the river produces adverse results for Mekong River Basin countries, then LMI members may be able to leverage world sentiment concerning water rights and build economic support for their cause. It stands to reason that China may respond favorably when faced with economic consequences for poor upstream management of the Mekong River.¹⁹

On China's aggressive behavior in the SCS, the issue is "Which country has ownership rights to the oil and gas that lay below the ocean floor and the fish that swim in the ocean waters."²⁰ Having competing claims, Vietnam and China are subject to the

http://siteresources.worldbank.org/INTEASTASIAPACIFIC/Resources/226262-1158536715202/EA_Renaissance_full.pdf. Also see the World Banks' "How We Classify Countries"; <http://data.worldbank.org/about/country-classifications>.

¹⁷ See details about the Lower Mekong Initiative on a U.S. Department of State Internet Web site; <http://www.state.gov/p/eap/mekong/>.

¹⁸ See page 4 of Ng's 2005 report entitled "The ISEAS Forum on Water Issues in Southeast Asia"; <http://www.iseas.edu.sg/tr112005.pdf>.

¹⁹ By "poor management" we mean that China could make use of upstream portions of the Mekong River in ways that damage downstream portions of the river and reduces its benefits to Mekong River Basin countries.

²⁰ For a recent report on SCS issues see Higgins (2011), "In South China Sea, a Dispute Over Energy," *The Washington Post*, September 17; http://www.washingtonpost.com/world/asia-pacific/in-south-china-sea-a-dispute-over-energy/2011/09/07/gIQA0PrQaK_story.html.

United Nations' requirements for dispute settlement, in addition to a 2002 framework that Association of Southeast Asian Nations (ASEAN) and China have agreed to use to work out differences amicably.²¹ Nevertheless, Vietnam is concerned that China will continue to display the type of aggressive behavior that was displayed on May 26, 2011, when, according to Bloomberg Press, a Chinese vessel cut lines from a ship that was employed by Vietnam to explore for oil and gas in the SCS.²²

Although Vietnam has attempted to shore up its defenses by acquiring new weapons mainly from Russia and by calling for U.S. support as a counter to China, Vietnam does not appear to be in a good position to challenge directly an increasingly strong Chinese People's Liberation Army Navy at sea. Moreover, Vietnam's large trade deficit with China makes it somewhat beholden to China economically. Consequently, in response to the most recent aggressive behavior by China, Vietnam has mainly allowed its citizens to conduct demonstration against China to "let off steam"—particularly in Ho Chi Minh City and in Hanoi. As in the LMI case, Vietnam may achieve its best outcome in this case by following a U.S. suggestion to all nations with overlapping SCS claims: Negotiate a resolution of the claims in a multilateral framework. Multilateral negotiations will permit Vietnam to leverage the power and influence of other nations in the process against China should the latter prove to be unwilling to negotiate fairly or is unwilling to compromise.

Conclusion

Given successful implementation of Resolution 11 to ameliorate short-run economic concerns and adoption of appropriate moderate- to long-term economic policies, Vietnam has significant potential to grow and develop as an important Southeast Asian economy. Otherwise, Vietnam could end up in a "middle-income trap" with growth and development stifled. In addition, Vietnam must be careful to evolve effective strategies for addressing its unique economic challenges with China.

This paper makes clear that there is no dearth of potential solutions to Vietnam's economic problems. Nevertheless, whatever solutions are selected, they must be implemented in a process called "time." Therefore, at this time, Vietnam awaits the resolution of its economic problems and does not appear to be in a position for bold military steps to challenge vigorously status quo conditions with China—particularly over the SCS territorial claims.

²¹ For details on United Nations (1982) guidelines on dispute resolution, see the 1982 *United Nations Convention on the Law of the Sea* (UNCLOS); http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf. For details on the ASEAN (2002) agreement, see "Declaration on the Conduct of Parties in the South China Sea"; <http://www.aseansec.org/13163.htm>.

²² See Kate (2011), "South China Sea Oil Rush Risks Clashes as U.S. Emboldens Vietnam on Claims." Bloomberg Press, May 27th; <http://www.bloomberg.com/news/2011-05-26/s-china-sea-oil-rush-risks-clashes-as-u-s-emboldens-vietnam.html>.

Indeed, Vietnam's best strategy may very well be to leverage, wherever possible, its regional multilateral relationships to combat China's aggressive actions—should they persist. It could turn out that China may acquiesce to multilateral pressures, especially when they are backed by economic consequences. Such acquiescence could buy time for Vietnam to resolve its short-term economic problems and begin a concerted effort to adopt medium- to long-term policies that ensures that the nation avoids the “middle-income trap” to which we have referred. Over the longer-term, if Vietnam can develop its economy beyond the threat of the middle-income trap, then it will create a completely different context from which it can address its economic and security concerns with China.

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“Indian Infrastructure: An Important Factor in Faster Growth”

Abstract

In response to domestic needs and fearing being left behind an advancing China, the Government of India is facing increasing pressure to accelerate economic growth. The path to accelerated growth, in turn, is linked directly to the development of sufficient infrastructure. Ultimately, more infrastructure can only be put in place when sufficient investment is undertaken. This paper provides answers to the following, related questions:

- Broadly, over the last decade, what is India's investment record—particularly on infrastructure?
- What is the general anatomy of infrastructure projects in India?
- What are the key legal, physical, financial, and institutional barriers to the development of infrastructure in India and how can these barriers be overcome?
- What is the outlook for India's infrastructure and, by extension, for India's future economic growth?
- Is corruption a show-stopper?

We conclude that, if India successfully addresses barriers and hurdles to infrastructure project development, and if it can address corruption effectively, then the nation should be able to develop sufficient infrastructure, which can facilitate continued rapid growth.

Introduction

The Government of India (GOI) comprehends that, if 8.0% or higher real gross domestic product (GDP) growth is to continue, then appropriate physical infrastructure (roads, highways, and bridges, electric power plants, oil and gas pipelines, marine ports, water and sanitary facilities, telecommunications services, and storage facilities and cold chain technologies) must be developed to facilitate that growth. As part of its last three five-year plans, the GOI has implemented a variety of seemingly uncoordinated strategies to promote the growth of infrastructure. It is apparent that much new infrastructure is being constructed in India and that improved economic flows are the result. However, it is also clear that much infrastructure building remains to be put in place in urban and rural areas.

On the one hand, with plans for \$1 trillion in new infrastructure during the 12th Five-Year Plan (2012-2017), a dearth of capital to develop this infrastructure is apparent. On the other hand, because regulatory and physical challenges prevent “ready” infrastructure projects from coming to the fore, there is, in fact, adequate debt and equity capital for good infrastructure projects that surface. Indeed, investment for infrastructure projects is usually oversubscribed because of the very high returns that they provide.

So what is the rub? Will India be able to meet its challenge of building enough infrastructure fast enough so that rapid growth proceeds smoothly? There is reason for optimism. Until recently, experts underestimated infrastructure investment so that the nation has become confident that infrastructure growth will proceed at a rapid pace.²³

The U.S. Pacific Command’s Economic Advisor visited New Delhi and Mumbai, India during June 18-24, 2011 to assess economic conditions—particularly physical infrastructure. This paper reports findings based on a series of high-level meetings mainly with business, think tank, and government officials that were organized by the U.S. State Department. The goal is to answer key questions in four succinct sections:

- Broadly, over the last decade, what is India’s investment record—particularly on infrastructure?
- What is the general anatomy of infrastructure projects in India?
- What are the key legal, physical, financial, and institutional barriers to the development of infrastructure in India and how can these barriers be overcome?
- What is the outlook for India’s infrastructure and, by extension, for India’s future economic growth?

We conclude this paper by discussing the role of corruption in infrastructure projects, and provide insights on why corruption is unlikely to spoil completely India’s efforts to advance its infrastructure and maintain high rates of economic growth.

India’s Investment Record

²³ See Jogta (2011), “India to Miss Infrastructure Investment Aim” in *The Wall Street Journal*, September 12th; <http://online.wsj.com/article/SB10001424053111904265504576565943712980216.html>.

For fiscal years (ending in March) 2006-2011, India’s real gross domestic product (GDP) grew an average of 8.5% (see Figure 1). If we were to exclude the depth of the slow-down caused by the global financial and economic crisis in 2009, India’s real GDP grew on average nearly 9.3% over the period. At the same time, India’s real gross fixed capital formation (GFCF) (i.e., investment spending in the form of residential and nonresidential structures, infrastructure, and in equipment) grew 10.6% during these years. Again, if we exclude 2009, the real growth rate for GFCF rises to over 12.4%.

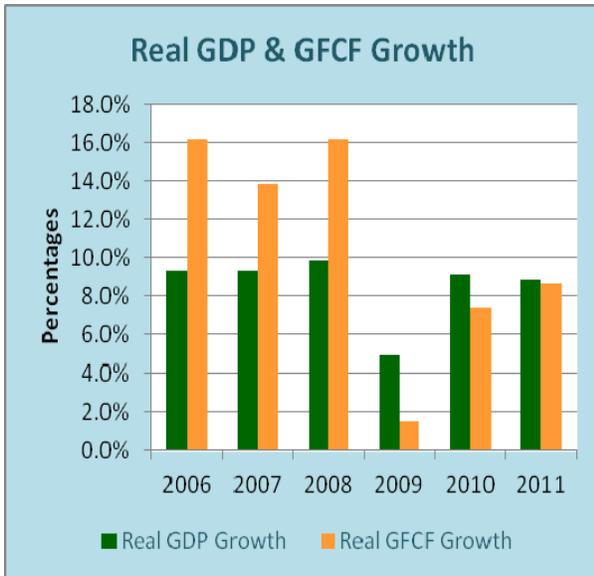


Figure 1 (Source CEIC Database)

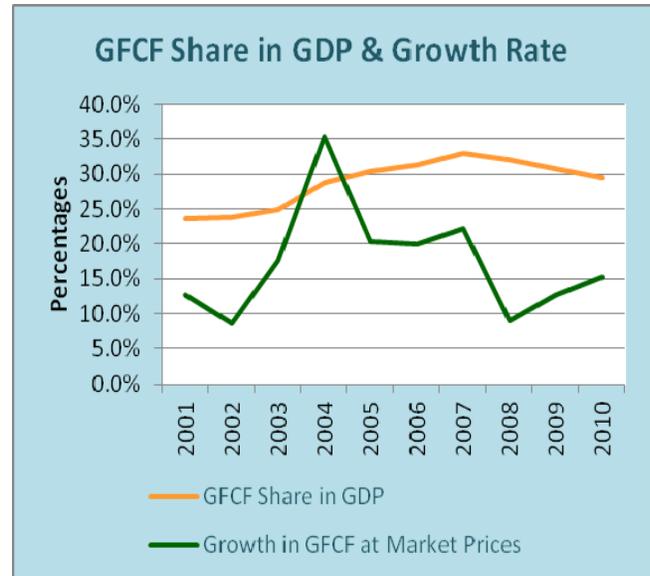


Figure 2 (Source CEIC Database)

Taking a different perspective over calendar years 2001-2011, India’s GFCF comprised an over 28% share of GDP—experiencing an over 32% peak share in 2008 (see Figure 2). Over this 10-year period and at market prices (that is, not accounting for inflation), GFCF grew on average over 17%, including peak growth in 2004 of over 35%.

These statistics indicate that India is dedicating a sizeable proportion of its output to investment in physical capital—including infrastructure. Figure 3 shows that the majority of India’s investment in infrastructure is going to roads and ports (i.e., other than railway transportation);

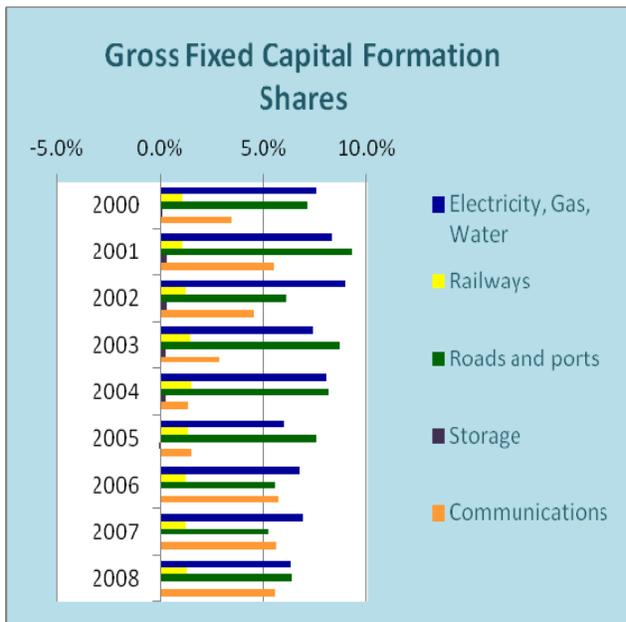


Figure 3 (Source CEIC Database)

electricity, gas, and water; and communications. Very little investment is going to storage, an area badly in need of investment.²⁴

Given its ongoing track record, it appears that the current rate of infrastructure is sufficient to accommodate India's relatively fast pace of economic growth. However, if the nation makes a decision to accelerate its current level of growth, then additional infrastructure investment will be required to facilitate the faster growth pace.

It is important to keep in mind that investment in infrastructure enters GDP by at least two paths. First, the actual output that is associated with the investment enters GDP directly as GFCF. The second path of entry is the role that newly available infrastructure plays in facilitating a faster pace of growth—i.e., the contribution to increased productivity.

Anatomy of Infrastructure Projects

For years now, India's leadership has expressed an interest in accelerating the nation's GDP growth to double digit. In order to assess whether India will be able to put sufficient infrastructure in place to accommodate faster growth, it is important to have a clear understanding of how infrastructure projects operate. Given this background, it becomes possible to identify potential obstacles to the development, implementation, and completion of infrastructure projects. Therefore, we developed an "Infrastructure Project Anatomy" (see Figure 4 on the next page).²⁵ The anatomy is intended to be very general in nature, and to apply broadly to the range of possible infrastructure projects. Understandably, different types of infrastructure projects have their own idiosyncrasies. However, all infrastructure projects have basic features; including some form of identifying a developer, a period of project development when designs are approved and various acquisitions and clearances are obtained, and a period of construction, which leads to project completion.

Figure 4 indicates that, generally, projects unfold as follows. First, the central and state governments agree that a new "Greenfield" project should be developed. In certain cases, a request for quotation (RFQ) is issued and a project competing process is undertaken. Once the project is awarded, the developer must finalize key aspects of the project: From finalizing land acquisition, to obtaining environmental approvals, to completing a financial package for the project (debt and equity financing), to obtaining other clearances, etc.²⁶ Once these early project development activities are completed, a construction ready project can take off. After project construction is completed and

²⁴ On August 9, 2011, the *Wall Street Journal* reported that "Over 540 Tons of Food Grains Damaged This Year." This outcome was attributable, in large measure, to the lack of food storage facilities in India.

²⁵ To develop this anatomy, we consulted with Deora Madhur, Director of Citi Bank's Global Investment Banking in India, and his colleague, Mr. Abhinav Lamba; both operate out of Citi Bank's Mumbai Offices.

²⁶ In India, the traditional infrastructure financing arrangement is for 25%-to-30% of the project to be underwritten by equity financing, and the remainder (70%-to-75%) to be underwritten by debt financing.

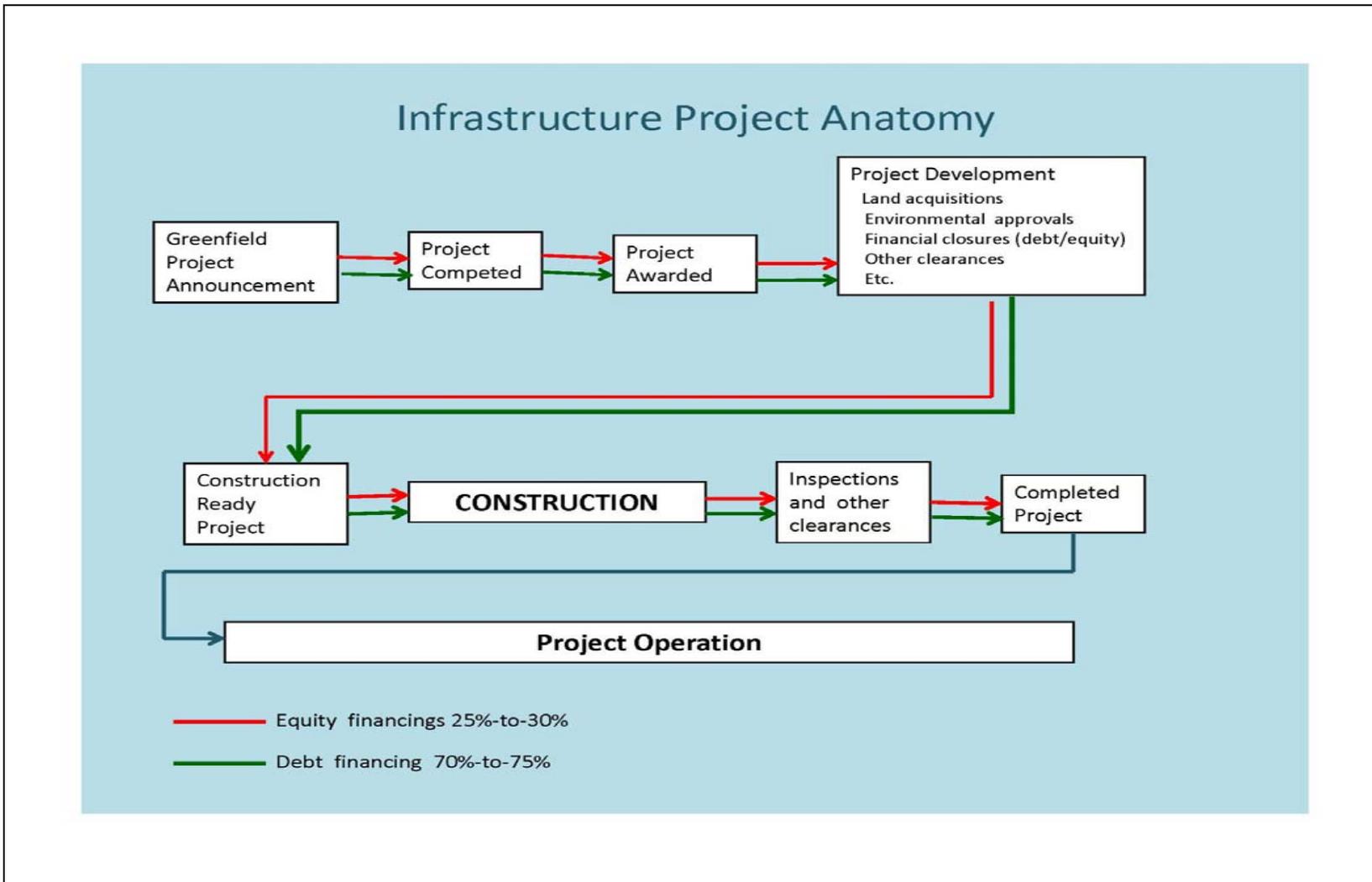


Figure 4 (Source USPACOM)

after required inspections are conducted and approved, then the completed project can begin operations and start producing returns for its investors.

Barriers to Successful Infrastructure Projects

The multi-component nature of infrastructure projects provides numerous opportunities for bottlenecks or barriers to successful completion to form. At the outset, the politics of getting a major infrastructure project on the drawing board for consideration can, alone, prevent projects from ever coming to fruition. Throughout the entire process as delineated in Figure 4, factors can arise that prevent a project from experiencing methodical and smooth development and reaching a successful completion. In this section we focus on subcomponents of “project development” in order to highlight the reasons why many projects experience delays and difficulties in orderly development before they come online to provide services to the public and help spur economic growth.

Land acquisition.—Identification of land for development projects is usually not an issue in India. Usually, the land that is desired for developing infrastructure projects is easily identifiable. The problem is obtaining access to the land. Quite often, three factors serve as key barriers to land acquisition.

- First, India’s long history and oral traditions clash with written accounts for determining land ownership. That is, although there may be written legal claims to land, parties of interest might lodge counter claims to land ownership. India’s age as a country and its oral traditions can provide a defensible case for land rights, which law courts are willing to entertain.
- Second, although the central and state governments of India have mechanisms for operationalizing eminent domain, special interests may mount efforts to block access to land mainly due to heritage or environmental reasons.
- Third, even when land ownership rights are clear, there remains the difficulty of motivating record keepers to record the transfer of land in an efficient and timely manner without “special urging.” Even after financial transactions have been arranged, record keepers may await their own “special urging” to transfer ownership to a new owner so that project development can proceed.

It is not uncommon for infrastructure projects to be delayed substantially or even blocked due to difficulty in acquiring required land. It is worth noting that India is seeking to address land acquisition issues with new legislation.²⁷

Environmental approvals.—Environmental agencies at the state and central government levels have a mandate and a duty to ensure that infrastructure projects are environmentally sound. However, employees in these agencies may face hurdles in

²⁷ See Lahiri (2011), “Jairam Ramesh Speaks on Land Acquisition,” in the *Wall Street Journal*, August 4th; <http://blogs.wsj.com/indiarealtime/2011/08/04/jairam-ramesh-speaks-on-land-acquisition-bill/?KEYWORDS=Jairam+Ramesh+Speaks+on+Land+Acquisition>.

evaluating impact statements due to resource constraints. On the other hand, they may require “special urging” to complete their assessments. In either case, projects can be delayed during environmental clearance processes.

Financial closure.—It turns out that Indian infrastructure projects are fraught with a wide array of risks. Financial investors are mainly concerned about risk when making investment decisions. In certain cases, prospective investors count on rating agencies to assess risk. In other cases, financial institutions that have an interest in investing in a project will perform their own in-house risk assessment. Therefore, infrastructure projects may be delayed or blocked because investors deem projects to be too risky.

The inordinately high level of risk that is associated with Indian infrastructure projects coupled with the relatively high in-country risk-free interest rate (as represented by Indian sovereign debt) combine to force very high yield requirements on these projects. For those investors with a sufficient appetite for risk, these high yields are welcomed. However, for the discerning investor who may have a close relationship with a project developer, the apparent risk may be somewhat overstated. Consequently, “relationship banking” is often the framework in which infrastructure project deals get done.

Undoubtedly, there is a range of other factors that can slow, stall, or block infrastructure project development. Skilled and experienced project developers have learned how to tackle them. However, land acquisition, environmental clearances, and financial closures are three key factors that can keep projects hanging in the balance. These very factors contribute to hesitancy in undertaking infrastructure projects and to investing in them. Good strategies and an appropriate measure of patience helps project developers find a path under, over, and around these hurdles in order to bring projects to a successful completion.

Outlook for India’s Infrastructure

There are at least two approaches to developing an outlook for India’s infrastructure. First, we could discuss prospects for future investment or GFCF in India’s economy. Second, we could conclude that future investment would, in some way, be contingent on the expected growth rate for India’s economy. This is separate and apart from the controversial theory that infrastructure actually contributes significantly to growth.²⁸ We consider both approaches in a comparative framework with China serving as the counterpart.

Figure 2 shows that India’s GFCF grew an average of 17% during 2001-2010. While India’s economy is vastly different from China’s economy, we compare the growth in

²⁸ Canning and Pedroni (2004) explain that although there is sound econometric evidence that additional infrastructure does not add significantly to growth in highly developed economies, there is also sound econometric evidence that additional infrastructure can contribute to growth in countries that have a dearth of infrastructure. The latter conclusion is consistent with the India case, and we use it to justify our claim that additional infrastructure will aid India’s economic growth.

India's GFCF with that of China over the same period—18%. Although the level and growth of China's GFCF is higher than in India, it reveals that the growth in India's GFCF is reasonable and that it should be maintainable going forward. If Canning and Pedroni's (2004) argument that additions to infrastructure can contribute to overall economic growth is valid, then how is India's economy likely to grow in the future?

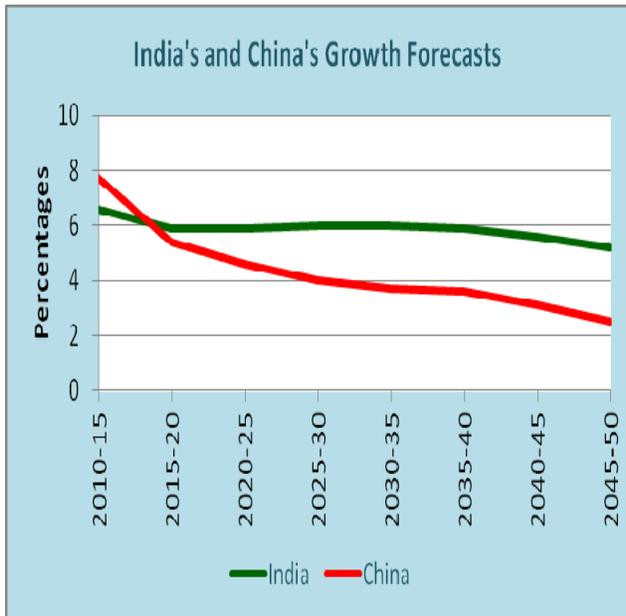


Figure 5 (Source: CEIC Database)

Goldman Sachs (2008) has produced forecasts of India's and China's economies out to 2050. Figure 5 reflects these forecasts, which show that India's economic growth is expected to be more rapid than China's growth—potentially because India will benefit more dramatically from infrastructure growth than will China, because India begins from a smaller economic base, and because India will benefit more from its demography than will China.²⁹ That is, the expectation is that the share of GFCF in India's GDP and the growth of India's GFCF may supersede the share of GFCF in China's GDP and China's GFCF growth rate going forward.³⁰

As noted earlier, India's 12th Five Year Plan calls for \$1 trillion in new infrastructure. While India may not reach this goal, the foregoing statistics show that it is reasonable to expect India to achieve a strong rate of GFCF growth and to produce a large volume of new infrastructure that can contribute to the nation's growth. Notably, a recent story on *Bloomberg.com* relates India's understanding of the role of new infrastructure and economic growth. The story is titled, "India to Construct Seven New Ports for \$7.6 Billion to Help Triple Exports."³¹ Clearly, Indian policymakers believe that new infrastructure is the key to India's growth—in this case, growth of India's exports.

²⁹Specifically, over the next two generation, India's demography is expected to retain a pyramidal shape (more workers than retirees), while China's demography is expected to morph into a more diamond shape (a population bulge of retirees). See the U.S. Census Bureau's charting of nations' population projections out to 2050; <http://www.census.gov/population/international/data/idb/informationGateway.php>.

³⁰ For the period 2001-2010, China's GFCF share of GDP averaged 40.1% compared with India's 28.8%.

³¹ See Sundaram (2011), "India to Construct Seven New Ports for \$7.6 Billion to Help Triple Exports." *Bloomberg.com*, August 22nd; <http://www.bloomberg.com/news/2011-08-22/india-aims-to-build-7-new-ports-for-7-6-billion-to-boost-trade.html>.

Why Corruption is No Show Stopper

Corruption may be viewed as an important barrier to new and rapid infrastructure development. We highlighted several ways that corruption plays this role in the section above entitled “Barriers to Successful Infrastructure Projects” when we mentioned “special urging.” Moreover, India was ranked 87th out of 178 nations by Transparency International’s *Corruption Perceptions Index 2010*.³² As part of that index, India was assigned 3.3 points on a scale of 1 to 10, with 1 being most corrupt and 10 being least corrupt. Therefore, there is some general evidence that India has a corruption problem.

Specific signs of corruption with respect to infrastructure are apparent in allegations against former Indian Minister of Telecommunications, Andimuthu Raja, who is under arrest for alleged acceptance of bribes in the sale of telecommunications’ spectrum rights. When top government officials are presumed to engage in corrupt practices in connection with infrastructure projects, the logical extension is that the entire infrastructure process is rife with corruption.

The Dalai Lama, the spiritual leader of Tibetans in exile who resides in India, says that corruption in India is “immense.” However, he caveats that conclusion by noting that India is a democracy and a deeply religious country. Therefore, corruption is particularly troublesome because democracies and highly religious societies typically reflect low levels of corruption.³³

At this writing, corruption protests are underway across India, which are being led by Mahatma Gandhi-styled leader Anna Hazare.³⁴ Mr. Hazare is galvanizing a broad spectrum of the Indian population against corruption, and causing the nation to consider new legislation that will create a large regulatory body that will seek to wring corruption out of the society. Clearly, a reduction in corruption should facilitate more and faster development of infrastructure in India.

Even if Mr. Hazare and his protestors are unable to convince the nation to launch a strong attack against corruption, there are other reasons why corruption should become less problematic for infrastructure projects in the future. A key reason for a declining impact of corruption on infrastructure projects is growth itself. Growth promotes the entry of more legitimate players to the infrastructure game; both on the development and financial sides. Given more players, the expectation is that there will be a greater probability that an official complaint will be lodged when corruption arises in the administration of an infrastructure project. More complaints force the issue increasingly

³² See Transparency International, (2010), *Corruptions Perceptions Index 2010*, at www.transparency.org.

³³ See Stancati (2011), “Corruption in India Worries Dalai Lama,” *Wall Street Journal*, August 10th; <http://blogs.wsj.com/indiarealtime/2011/08/10/corruption-in-india-worries-dalai-lama/?KEYWORDS=Corruption+in+India+Worries+Dalai+Lama>.

³⁴ See Denyer (2011), “India’s Anti-Corruption Movement Aims to Galvanize Democracy,” *The Washington Post*, August 12th; http://www.washingtonpost.com/world/asia-pacific/indias-anti-corruption-movement-aims-to-re-energize-democracy/2011/08/09/gIQAWMVWAJ_story.html.

to the forefront. Ultimately, with a critical mass of grievances, the judicial and political systems are forced into action to resolve the matter, which heightens anti-corruption pressure. In time, such pressure should reduce the extent to which corruption serves as a barrier to the development of infrastructure projects. When this occurs, more growth occurs, which then creates a virtuous circle that can ultimately—over time—stamp corruption out of the system.

Conclusion

Currently, India is enjoying relatively rapid growth. However, the nation understands that if it is to sustain or accelerate that growth, more infrastructure needs to be put in place. In order to generate more infrastructure, India must raise the GFCF share of GDP, and it must increase the rate at which GFCF grows over time. While India has been no slouch in this regard over the past decade, there is room for improvement.

On a learning-by-doing basis, India is improving the infrastructure project process, which can be quite complex. Nevertheless, there are numerous locales for hurdles or barriers to arise within the anatomy of infrastructure projects. If India is going to accelerate the rate at which it builds infrastructure projects in order to accelerate growth, then it is going to have to find ways to remove, or at least mitigate, these hurdles and barriers. In fact, based on our research and analysis, to date, it has been barriers to infrastructure projects that have prevented more infrastructure development, not a dearth of financing.

When India looks back after the next two or three Five Year Plans, what will it see? If its recent investment track record is any indicator and if Goldman Sachs is close to the mark, then India should be able to find that it was able to accelerate its investment and, consequently, enjoyed faster economic growth than China—a key Asian rival. Calls for growth rates that are in the double-digit range may not be realizable on an extended basis because it is increasingly difficult to grow faster as an economy expands. However, strategically developed and increased amounts of infrastructure should help ensure that India's economy grows much faster than it would without the infrastructure.

Corruption is a key factor that can slow infrastructure growth in India and prevent the nation from achieving a fast growth path. However, the nation appears to be addressing corruption head-on. Indeed, ongoing protests are buttressed with a real plan of action that can help thwart corruption. Moreover, as we noted in the last section of the paper, growth alone can produce conditions that help reduce corruption.

Although India has some distance to go to achieve a fully developed economy, it is growing rapidly in that direction. More, improved, and faster infrastructure development will continue to propel it along that route. While there are barriers to a successful conclusion to this story, India is fully cognizant of those barriers. It is up to India to take the necessary corrective actions to ensure that sufficient infrastructure is developed in order to facilitate desired growth.

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**“Blue Skies: Benefits of Improved U.S.-China
Economic Relations, 2011-2020”**

Abstract

It is difficult to identify assessments of future U.S.-China relations that do not highlight prospects for contentious competition as the two nations evolve along their expected development paths. This is particularly true for analyses that concern military-to-military and economic relationships between the two nations. It is rational that security experts would feature prospects for conflict in their analysis; militaries are designed to engage in conflict—even though deterrence is one of their prominent sub-strategies. On the future of U.S.-China relations, economists reflect perspectives that span a spectrum from unfavorable to favorable. We adopt a favorable view and inquire, “What and how much could be gained if the two nations resolve their current differences and develop a collaborative, fully integrated, supportive, and mutually beneficial set of economic relationships?” If it turns out that there is much to gain from the latter condition set, then policy makers may alter their current approach for engaging China. Clearly, there are barriers and costs to achieving such a favorable state. However, we mainly ignore them here and simply focus on areas where the two countries could benefit substantially from mutually beneficial policy and structural changes that enable improved economic relations and outcomes.

The ideas expressed in this paper are attributable to the author alone, and do not necessarily represent the views of the U.S. Pacific Command or the U.S. Department of the Navy. The author thanks Lt Col R. Lisch, Lt Col S. Springer, Maj N. Grauer, Dr. W. Morgan, Dr. R. Mataloni, Mr. J. Snyder, and Ms. K. Stehn for helpful comments on a draft of this paper. The author takes responsibility for any remaining errors or omissions.

Executive Summary

Improved, more collaborative, and integrated U.S.-China economic relations stand to benefit both nations tremendously in the period ahead. In this paper, we explore how greater economic integration and collaboration might benefit these nations on several fronts: (1) Trade in goods and services; (2) foreign direct investment (FDI); (3) research and development (R&D); (4) tourism; (5) educational exchanges; and (6) sharing of the provision of security services in the Asia-Pacific Region.

This “Blue Skies” paper explains how these benefits might be derived, reflects estimates of the benefits, and provides charts that characterize the magnitude of the benefits. We project benefits for the period 2011-20, but they could extend far into the future. All of our estimates are in market price terms (i.e., we do not adjust for price change). From a U.S. only perspective, the basic findings are presented in Table 1.

Table 1.—Projected Economic Outcomes 2011-2020
(\$'s Billions)

Line No.	Economic Activity	(A) Under current trends	(B) Under greater collaboration and economic integration	(C) Difference (B-A)
1	Cumulative trade deficit (exports to China less imports from China)	8,341	7,395	-946
2	Cumulative China FDI in the U.S. less U.S. FDI to China.	-31	1	32
3	Cumulative China R&D in the U.S. less U.S. R&D in China	-46	-58	-12
4	Cumulative China tourism in the U.S. less U.S. tourism in China	25	45	20.0
5	Cumulative Chinese students educated in U.S. schools less U.S. students educated in Chinese schools	45	70	25
6	Cumulative spending for the provision of security services in the Asia-Pacific Region	150	97	-52.8

Observing column “C” of Table 1 shows that the most important area of concern is trade; followed by security services, FDI, educational exchanges, tourism, and R&D. It is important to note that, while increased trade is usually desirable, trade reductions are desirable when imbalances become excessive; the latter condition characterizes the current U.S.-China trade relationship. It is also noteworthy that the relative ranking of these economic activities does not necessarily signal the relative difficulty or ease with which inferred gains might be attained by the U.S. or China.

Table 2 at the end of this document reveals that the total benefit to the U.S. is quite large: over \$1.0 trillion. Conversely, China incurs a decrement of about \$965 billion by engaging in this increased economic integration. However, the latter figure is quite misleading because China’s failure to be forward leaning in the relationship and to help rebalance the relationship could lead

to conditions where the economic relationship breaks down. We estimate that, even under greater economic integration and considering trade alone, China stands to incur about a \$7.4 trillion trade surplus with the U.S. over the 2011-20 period. If existing trends prevailed, China's trade surplus would be over \$8.3 trillion.

U.S.-China political relations are somewhat favorable at this time; viz. President Hu Jintao's January 2011 visit to the U.S. However, U.S.-China military-to-military relations undergo significant strains from time-to-time. Moreover, there is increasing concern about the imbalance in the economic relationship. Clearly, it would be a tragedy if the benefits that could accrue from an improved, more collaborative, and integrated economic relationship between the two countries were lost. Therefore, it seems reasonable that policy makers—particularly those in the U.S. Congress and in the defense arena—would keep these gains in mind as they make decisions concerning how to grow the relationship going forward. They should also keep in mind that the entire world economy could benefit greatly as the relationship is improved and rebalanced.

Introduction

It is difficult to identify analyses of U.S.-China future relations that do not purposely or inadvertently highlight prospects for contentious competition as the two nations evolve along their expected development paths. This is particularly true of analyses that concern military-to-military and economic relationships between the two nations. It is rational that security experts would feature prospects for conflict in their analysis; militaries are designed to engage in conflict—even though deterrence is one of their prominent sub-strategies. On the future of U.S.-China relations, economists reflect perspectives that span a spectrum from unfavorable to favorable. We adopt a favorable view and inquire, “What and how much could be gained if the two nations resolve their current differences and develop a collaborative, fully integrated, supportive, and mutually beneficial set of economic relationships?” If it turns out that there is much to gain from the latter condition set, then U.S. policy makers may alter their current approaches for engaging China. Clearly, there are barriers and costs to achieving such a favorable state. However, we mainly ignore them here and simply focus on areas where the two countries could benefit substantially from mutually beneficial policy and structural changes that enable improved economic relations and outcomes.

This paper begins by highlighting the recent past and current nature of U.S.-China relations. We attempt to determine how and when the nature of the relationship transitioned from cordial to contentious. In the face of current military and economic tensions between the two nations, we assume that increased economic cooperation and integration is a real possibility. If trade, foreign direct investment (FDI), research and development (R&D), tourism, educational exchanges, and shared military services were expanded to some favorable point from a U.S. perspective, what positive economic outcomes would result? Would gross domestic product grow to higher levels? Beyond the direct country-to-country impacts, what would be the impact on the global economy?

While it might be instructive to compare the results of the just-described analysis to the economic losses that could transpire if the two nations engaged in kinetic conflict, we do not perform this comparison. There are innumerable scenarios that could unfold that might lead the two nations to fight. However, an absence of war to this point signals that the U.S. and China have preferred to avoid the costs of war. Therefore, both parties may very well avoid war even if tensions were to heighten further. Consequently, it seems reasonable to assume that war will be avoided, and to focus on the benefits that could accrue in an environment of enhanced collaboration, cooperation, and integration. Such benefits may be sufficient to motivate policymakers in both countries to defuse tension, perform an “about face” and proceed down a path of cooperation and integration in order to realize potential benefits for the peoples of their nations and for the world economic order.

A Brief History of the Relationship

In 1972, when President Richard Nixon opened China in the modern era, the U.S. espoused a cordial, helpful, and collaborative relationship between the two countries. There were obvious ideological differences. Nevertheless, China served as a very capable hedge against the Soviet Union during the Cold War. The nations began a very small trading relationship that has continued to grow briskly over the last nearly 40 years. By 1999, U.S.-China bilateral trade in goods and services totaled \$109.3 billion. In 2008, that trade had risen to \$495 billion—an unprecedented 352 percent increase over the period.

Also over this period, the stock of U.S. FDI in China grew from \$49 million in 1982 to over \$49 billion in 2009 (without current cost adjustment). Data for China's FDI in the U.S. is more scanty; however, the U.S. Department of Commerce's Bureau of Economic Analysis (2010) reports that China's FDI in the U.S. grew from \$58 million in 1987 to \$791 million in 2009 (without current cost adjustment).³⁵ Fear of substandard governance on intellectual property rights has caused U.S. firms to be reticent about engaging in R&D in China; however, in 2008, firms from the two countries tied up for a total of about \$1.5 billion in R&D.³⁶ During 2010, the U.S. Government even initiated an energy R&D effort with China.³⁷ The flow of tourists between the two borders has grown steadily over the years; from a trickle in the 1970s to 524,817 in 2009—of which over 121,000 U.S. residents traveled to China in 2009.³⁸ The growth in foreign student exchanges was phenomenal. On the China-to-U.S. flow of students, it began at 2,770 in 1980-81, but rose to 127,628 students in 2009-10. The flow of U.S. students to China had risen to 13,674 by 2008-9.³⁹

Importantly, the U.S. played a very helpful role in China's economic development by providing extensive support for China's accession to the World Trade Organization (WTO) in 2001. It has not been a one-way street. China's ability to produce manufactured products cheaply has enabled the U.S. to acquire trillions of dollars in goods from China over the years while piling up large trade deficits. China has collaborated in this process by recycling trade dollars and becoming the number-one foreign holder of U.S. Treasury and Agency Securities (\$1.4 trillion as of June of 2009), and growing the largest volume of foreign exchange reserves in the world (\$2.5 trillion in 2010).^{40,41}

When did the relationship begin to sour? Arguably, certain aspects of the relationship are not sour. In some respects, China has been very cooperative—conducting the U.S.-China Strategic and Economic Dialogues since 2006, amicably resolving selected trade disputes, participating (although not as vigorously as the U.S. might desire) in the Six-Party Talks over North Korea, and agreeing to take appropriate, although muted, action with respect to valuation of the renminbi (China's currency). However, the brackish to sour relationship has mainly been on the economic front and with the language and action taken by the two nations' militaries. The U.S. Congress has supported strongly U.S. military stances.

One can primarily identify a transformation of the relationship from friendly to contentious when the U.S. temporarily halted military-to-military relations with China following the Tiananmen Square Massacre in 1989. Subsequently, China developed modern military capabilities and

³⁵The reference to "without current cost adjustment" refers to the fact that the data have not been adjusted to reflect the value of historical investments at today's market prices.

³⁶The R&D data are from the U.S. Department of Commerce, Bureau of Economic Analysis, International Investment Division (2011).

³⁷Readers can obtain details concerning U.S.-China collaboration on clean energy research from the U.S. Department of Energy (2010).

³⁸The tourism data are from the U.S. Department of Commerce, International Trade Administration (2010).

³⁹The statistics on the flow of students from China to the U.S. and from the U.S. to China are from the Institute of International Education (2010).

⁴⁰The data on China's holdings of U.S. Treasury and Agency Securities is from the U.S. Department of the Treasury, Treasury International Capital System (2010).

⁴¹The data on China's foreign exchange reserves are from the State Administration of Foreign Exchange. (2010).

halted military-to-military relations with the U.S. from time-to-time, especially when the U.S. sold arms to the Republic of Taiwan.

As China's economy has grown larger and stronger (exceeding gross domestic product (GDP) of \$5.0 trillion and becoming the second largest economy in the world during 2010), and has developed increasingly sophisticated military capabilities, there has been an increasing tendency for the two nations to experience heightened tensions periodically. If not challenging the U.S. directly, China has done so indirectly by creating tensions with other nations in the region, mainly over disputed territories in the South and East China Seas.⁴² We must also not forget economic rifts that have occurred between the two nations: e.g., currency valuation issues; saving versus consumption concerns; and trade disputes.

It is beyond the scope of this paper to delineate all of the mini-crises or points of contention that have unfolded between the U.S. and China. However, an absence of war reveals a preference to avoid armed conflict. Nevertheless, they continue a dangerous *pas de deux*. This paper ignores this line of analysis, and instead thrusts forward the notion that the energy expended in contentious engagement could be better spent in cooperative and collaborative integration.

Gains from Trade

Trade is an important area where the U.S. and China could benefit from a collaborative and more integrated economic relationship. This idea may seem anomalous given the very rapid growth rates of bilateral trade between the U.S. and China. However, the moderation of these growth rates (particularly for U.S. imports from China) could help improve the U.S. trade balance. At the same time, China's willingness to "meet the U.S. halfway" could prevent a collapse of trade between the two countries or more draconian efforts to reduce the trade imbalance because of ballooning trade deficits.

U.S. President Barack Obama has established a goal of doubling U.S. exports by 2015.⁴³ A 20 percent export growth rate over five years will result in a doubling of exports. Interestingly, over the period 1999-2008, the U.S. averaged nearly a 20 percent growth rate in U.S. exports to China; imports grew over 18 percent per year. Therefore, current trend growth would keep the U.S. on track to achieve its export growth goal with respect to China. This goal might be enhanced if the U.S. is successful in resolving trade disputes with China. The *Financial Times* indicates that, as of May 2010, the U.S. and China had lodged a total of 26 dispute actions against each other with the WTO over the period 2002-10.⁴⁴ (The most important area of concern appears to be steel; seven of the 26 disputes involve steel.) The export goal might also be reached with greater ease if the U.S. relaxed its export controls on so-called "dual use" and "munitions list" high technology products, which China desires to import. In combination, these three factors (maintaining trend growth, resolving trade disputes, and relaxing export controls), could help ensure U.S. success in meeting its export goal and could help increase economic well-being in China and in the U.S.

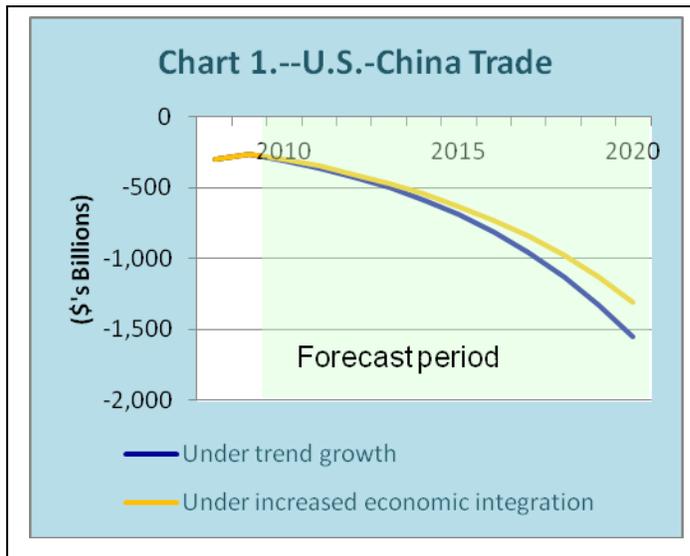
⁴²Notable dustups in the region have involved China in conflict with Vietnam over the Paracel Islands in 1974 and 1988 in the South China Sea, and with Japan near the Senkaku Islands in the East China Sea in September of 2010.

⁴³See Cooper (2011). The goal is to double exports in nominal, not real (price adjusted), terms.

⁴⁴See Justine Lau (2010).

It is difficult to use the just-mentioned three factors to derive an algorithm for estimating how U.S.-China trade might change if the factors were operated optimally. However, we can use historical trade patterns with other key trading partners to imagine the future growth in U.S.-China trade that might be favorable for both nations. In this case we adopt Japan as a prototype trading partner during the period 1980-89. It was during this period that the U.S.-Japan trade imbalance was seemingly large, and Japan was rising to take its place as an important world power—much the situation that we have today with China. In 1985, Japan joined with the U.S. and other nations in signing the “Plaza Accord,” which helped adjust the dollar-yen and other exchange rates in favor of the U.S. It was the “Plaza Accord” and later the “Louvre Accord,” which helped engineer a purposeful and orderly depreciation of the dollar against the yen and other currencies and helped to rebalance U.S.-Japan, and broader U.S., trade.⁴⁵ A more collaborative and integrated economic relationship with China might enable China to respond to the current U.S. trade imbalance much the way that Japan did during the second half of the 1980s—namely, permitting the yuan to appreciate more dramatically against the dollar.⁴⁶

As mentioned above, the growth in U.S.-China exports and imports is quite brisk. However, in 2009, the U.S. trade deficit with China stood at \$261 billion. If exports and imports were to continue growing at the rate that they grew over the 1999-2008 period, by the time we reach 2020, the U.S.-China trade imbalance would be over \$1.5 trillion; exports would reach \$0.7 trillion, while imports would reach \$2.2 trillion. On the other hand, if over the period 2011-20, U.S. exports to China grow at the rate that U.S. exports to Japan grew from 1980-89 (12.3 percent), then export would reach \$338.4 billion. Similarly, for 2011-20, if U.S. imports from China grow at the rate that U.S. imports from Japan grew from 1980-89 (14.95 percent), then imports would reach \$1.6 trillion. In other words, as opposed to a trade deficit of over \$1.6 trillion in 2020, the trade deficit with China would reach only \$1.3 trillion. Cumulatively, over the period 2011-20, the trade imbalance would be improved about \$946 billion (see Chart 1 below).



We should emphasize that China’s incentive for helping facilitate the \$946 reduction in the U.S. trade deficit during 2011-20 is that failure to do so could jeopardize the \$7.4 trillion cumulative trade surplus that it is expected to incur under increased economic integration. The projected \$8.3 trillion cumulative trade deficit with China under trend growth may very well become an increasingly bitter pill for the U.S. to swallow when combined with the very high fiscal deficits that are projected over the same period. Consequently, the Congress and other interested U.S. parties could mount efforts to manage

⁴⁵See Belongia (1992).

⁴⁶Paris and Kong (2011) make it clear that pressure on China to permit the yuan to appreciate is not restricted to the U.S. and the developed world, but that emerging market countries, in this case, India and Brazil, also have adopted a similar position.

the trading relationship in a manner that would be very unfavorable for China (i.e., the establishment of trade barriers). Therefore, China may logically conclude that it is in its best interest to forego \$946 of an uncertain \$8.3 trillion trade surplus in exchange for the opportunity to amass a more certain \$7.4 trade surplus.

Gains from Increased FDI

It would be an interesting exercise to explore how the U.S. and China might seek to integrate their financial investment transactions more fully in the period ahead. It is common knowledge that China is the number-one foreign holder of U.S. Treasury Securities and that U.S. economic agents hold a sizeable volume of Chinese financial assets. However, for purposes of this paper, we focus on real economy factors when it comes to investment. In this case we are concerned about FDI flows between the U.S. and China, which are considerably out of balance currently: According to the Bureau of Economic Analysis, in 2009, the U.S. held \$49.4 billion of FDI (without current cost adjustment) in China, while China held less than one billion dollars in FDI in the U.S.⁴⁷

It seems logical that the two nations could benefit significantly by expanding and extending their bilateral holdings of FDI. In analyzing how future, increased FDI might unfold between the two countries, we consider trend growth in FDI (i.e., average period-to-period growth in FDI) along with FDI flows that are based on patterns that the U.S. has experienced with other countries. For U.S. FDI in China, we adopt a pattern that is based on the period-to-period growth in U.S. outward FDI to Singapore, which averaged \$6 billion during the period 2000-09. This compares with the \$3.1 billion that the U.S. has invested in China over the period. It seems reasonable to use the Singapore pattern for future U.S. FDI flows into China because China plans to elevate its production to resemble Singapore's; that is China plans to transition away from low-level manufacturing to more sophisticated forms of production.

For China's FDI in the U.S., we use one-half of the average period-to-period flow of FDI from Japan into the U.S. over the period 2000-09 (\$6.761 billion, which is one-half of \$13.521 billion).⁴⁸ This compares with actual China-to-U.S. FDI flows of less than \$100 million during the same period. The Japanese pattern of FDI flows to the U.S. seems appropriate as a proxy for future China investment in the U.S. because China could begin to undertake large investment ventures under more integrated economic conditions that it has been denied up to this point—mainly because of political and ideological barriers.⁴⁹

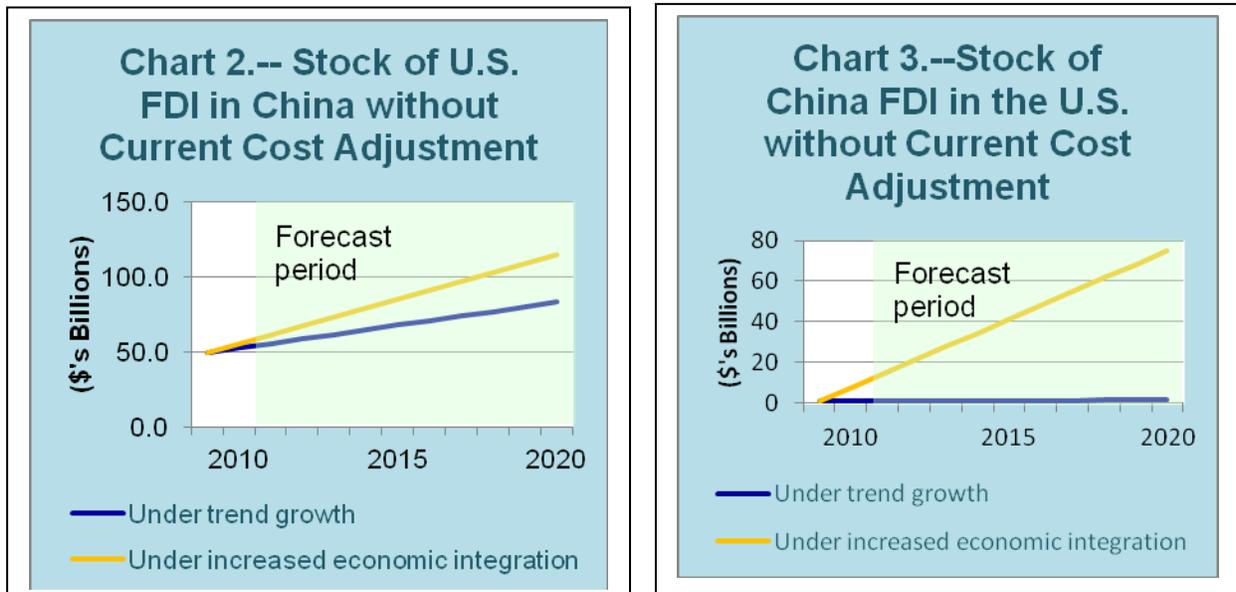
⁴⁷Such a small volume of China FDI in the U.S. may seem anomalous; however, we must keep in mind that a rising China only began to invest at a significant rate in other nations within the past half-decade. Moreover, much of China's early FDI was aimed at securing resources for production from developing countries.

⁴⁸The shortened 2003-09 period is used for the analysis because it reflects the period for which data are available on China's FDI in the U.S.

⁴⁹The type of large investment projects about which we speak are characterized by China's past effort to invest in such projects. For example, Chinese company CNOOC Ltd. attempted to acquire U.S. company Unocal Corporation in 2005, which was rejected by the U.S. Congress. Another example is a 2008 attempt by Chinese company Huawei to acquire U.S. company 3Com, which was thwarted by the Committee on Foreign Investment in the U.S.

If the U.S. adopted a Singapore pattern of FDI in China during 2011-20, the U.S. would accumulate about \$29 billion more in its stock of FDI in China than it would under the current rate of FDI accumulation (see Chart 2 below).

If China were to adopt a pattern of investment in the U.S. that is equivalent to one-half the rate that Japan invested in the U.S. during the period 2000-9, then during the 2011-20 period, China would invest about \$60 billion more in the U.S. than it would if it continued its trend level of investment (see Chart 3 below).



Clearly, projected developments on the China FDI in the U.S. front are more dramatic than developments on the U.S. investment in China front. However, even after the ten-year forecast period, China's FDI in the U.S. (~\$75 billion) would remain about 65 percent of U.S. FDI in China (~\$115 billion). The important outcome of such developments would be that both countries would accumulate significantly more capital with which to produce over the 2011-20 period, and the two countries would be significantly more integrated with respect to FDI at the end of the period. Another important consideration is the flow of earnings that accrue from the additional FDI; something that we do not estimate here.

Gains from Increased R&D

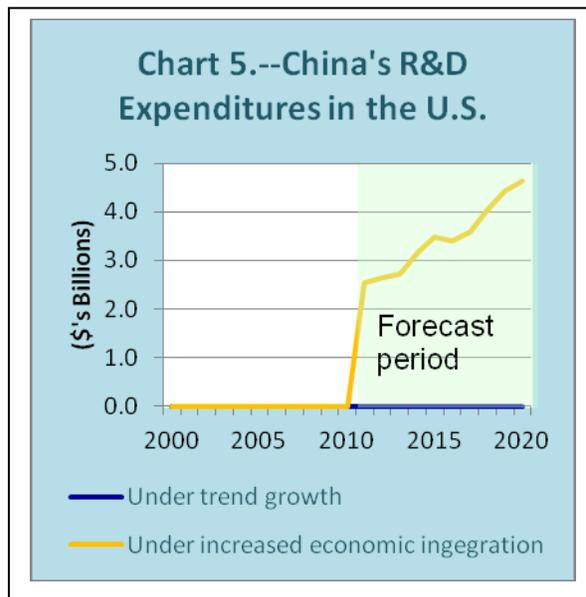
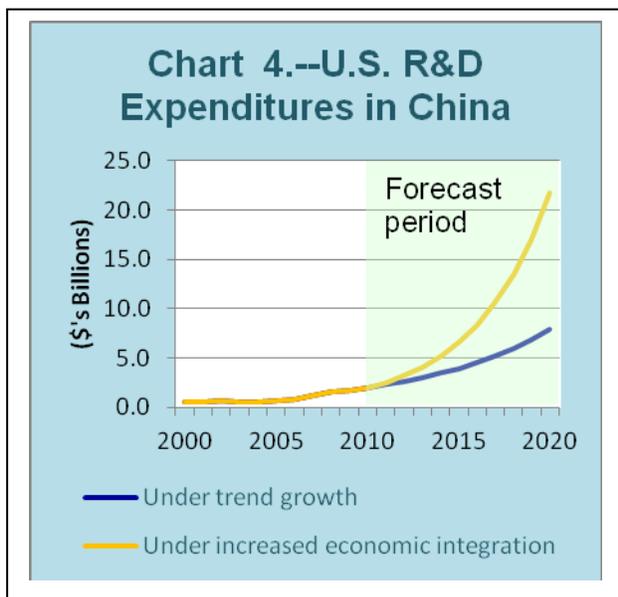
Some of the world's best trained scientists are Chinese—having been trained in the U.S. Logically, U.S. firms would increase their utilization of this human capital to perform R&D if intellectual property rights (IPR) were protected more effectively in China. However, China is moving to improve its governance of IPR, and the U.S. government, particularly the Department of Energy (DOE), is increasingly engaging with China on a variety of clean energy R&D projects.⁵⁰ At the same time, it is not now logical that Chinese-owned firms should be expected to conduct significant amounts of R&D in the U.S. and benefit from U.S. technological expertise because there is so little Chinese outward FDI in the U.S. However, as discussed in the

⁵⁰See the U.S. Department of Energy (2010).

section above on FDI, China could expand significantly its FDI in the U.S., and would be expected to conduct R&D under those conditions. This all portends increased opportunities for the two nations to benefit from increased bilateral R&D undertakings in the years ahead. Given the importance of energy to both nations' economies and the fact that both nations have a storied background in energy R&D, it seems reasonable that the two nations could benefit significantly from increased collaborative R&D in the field of energy.

It is common knowledge that the amount of U.S.-China bilateral R&D has been relatively small. Nevertheless, we use 2000-08 U.S.-China R&D data to prepare R&D trend growth estimates for 2011-20. U.S. R&D expenditures in China reached \$1.5 billion by 2008. However, China R&D expenditures in the U.S. were essentially nil over the 2000-08 period. We compare these trend estimates with estimates of U.S.-China bilateral R&D expenditures that are based on proxy U.S. R&D expenditure relationships. For U.S. R&D expenditures in China, we adopt South Korea as a proxy. While U.S. R&D expenditures in China increased at an almost 15 percent average annual rate from 2000-08, U.S. R&D expenditures with South Korea increased at a nearly 27 percent average annual rate. It is reasonable to use South Korea as a proxy because Korea has advanced its R&D program in recent years much the way China may be expected to advance its R&D program in the decade ahead. For China R&D expenditures in the U.S., we adopt Japan as the Proxy. It is reasonable that Japan serve as a proxy for this purpose because its economy is of comparable size to China. Moreover, if China uses its massive foreign exchange reserves to invest in the U.S. as has Japan, China could acquire the types of firms that would conduct a considerable amount of R&D in the U.S.—much the way Japanese affiliates have in the U.S.

Chart 4 below shows that, given U.S.-to-South Korea 2000-2008 R&D spending as a proxy for U.S.-to-Chinese R&D spending during 2011-20, U.S. R&D spending in China would reach \$21.7 billion by 2020. This compares with a \$7.9 billion trend estimate. Cumulatively, increased economic integration between the two countries would permit the U.S. to invest about \$47 billion more in R&D in China than it would if current trends continued. As in the case of R&D spending in the U.S., it is reasonable to assume that additional R&D spending in the Chinese economy would be augmented by a forward multiplier effect, which would further increase GDP above and beyond the value of the R&D spending itself.



Given Japanese-to-U.S. 2000-2008 R&D spending as a proxy for Chinese-to-U.S. R&D spending during 2011-20, Chart 5 shows that China's R&D spending in the U.S. would reach \$4.6 billion by 2020, which compares with an essentially \$0 billion trend estimate. Cumulatively, economic integration would permit China to invest almost \$35 billion more in R&D in the U.S. than it would if current trends continue. In addition, forward multipliers indicate that the overall effect of China's R&D spending in the U.S. would exceed the R&D spending itself (see Chart 5 above).

Hence a win-win situation could result from increased U.S.-China bilateral R&D spending. Under improved IPR governance and increased economic integration, both the U.S. and China could expect to benefit substantially from increased R&D spending and the associated forward multiplier effects.

Gains from Increased Tourism

China increasingly enjoys U.S. cultural, entertainment, and recreational exchanges through travel and tourism in this country. The reverse is also true. The 2008 Olympics and the 2010 World Expo in Beijing, China attracted a considerable number of U.S. tourists. However, both nations could enjoy the benefits of increased tourism if they were to open up their visa counters more completely and permit a freer flow of citizens across borders. As incomes rise in China, more Chinese citizens will be able to afford travel to the U.S. On the other hand, as more U.S. citizens develop an interest in China, there is likely to be an elevated flow of tourists from the U.S. to China. Traditionally, the flow of tourists between the U.S. and Europe marked the epitome of interlocking cultures and traditions. As the U.S. and China become more economically and culturally integrated, it stands to reason that the level of tourism between the two countries could reach the level of tourism between the U.S. and Europe.

Growth in China-U.S. tourism is already brisk. In nominal terms, tourism spending by U.S. tourists in China averaged \$2.1 billion during 2000-08; spending by Chinese tourists in the U.S. in the period averaged \$1.8 billion.⁵¹ Clearly, there is room for growth in U.S.-China tourism.

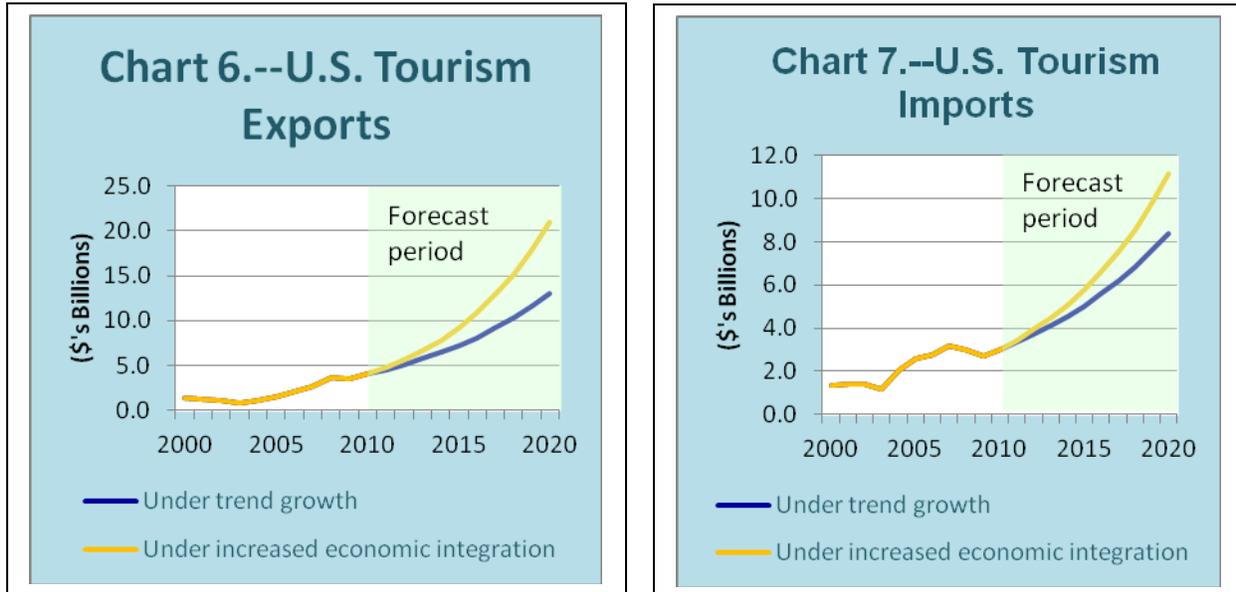
To project possible growth in tourism between the U.S. and China over the next decade under ideal conditions, we consider growth in U.S.-India tourism during a high growth decade. Like China, India is an Asian country with a certain allure that stimulated tourism growth during 2000-08. In addition, the flow of U.S.-India tourists was much more fluid than the flow of tourists between the U.S. and China. Consequently, U.S.-India tourism serves as a reasonable proxy for tourism growth that might occur between the U.S. and China as the two economies become more integrated and as tourism interest grows. At current market prices, U.S. tourism exports to India reached \$4.3 billion in 2008; U.S. tourism imports from India reached \$2.8 billion.

We project the value of U.S.-China tourism out to 2020 using trends in growth during the 2000-08 period. We contrast that trend growth spending with elevated tourism spending using the U.S.-India tourism spending rate during the 2000-08 period as applied to the 2011-20 period. The increase in tourism spending from 2011-20 under the assumption of increased economic integration is significant. Cumulatively, the difference in spending for tourism exports on a trend

⁵¹ We use 2008 as an endpoint because 2009 reflects significant weakness in tourism due to the global financial and economic crisis. The data are from the U.S. Department of Commerce, International Trade Administration (2010).

versus greater economic integration basis is about \$31.0 billion—representing about \$3.1 billion in additional annual exports during 2011-20 (see Chart 6 below).

Likewise, the cumulative difference in tourism imports for 2011-20 on a trend versus greater economic integration basis is just over \$11 billion; representing about \$1.0 billion annually in additional imports during the 2011-20 period (see Chart 7 below).



Gains from Increased Educational Exchanges

China has adopted policies that have enabled the development of more high-quality institutions of higher learning for the increasing proportion of its secondary school students who aspire to attend college and beyond.⁵² Nevertheless, it makes sense that China will continue to permit some of its best and brightest to pursue post-secondary education in U.S. colleges and universities. From the U.S. perspective, an increased flow of Chinese students enables colleges and universities to keep desks filled and tuition revenues to remain at a high level. Depending on the degree to which those students become inculcated as “die-hard alumni,” they could continue to support these institutions long after graduation with financial and other types of contributions. China, on the other hand, would be the beneficiary of a well-trained supply of labor, which helps the nation to continue to innovate, grow, and increase productivity.

At the same time, as China improves its own post-secondary educational institutions, more U.S. students will find it in their best interest to enroll in those institutions to obtain academic training. After completing their training, whether these students remain in China to work for Chinese or

⁵² *The Economist* (2010) states that China’s higher education institution building policies and China’s one-child policy are likely to combine to reduce the number of Chinese foreign students in the future. However, if the U.S. is able to maintain many of its institutions of higher learning in the elite class, then it is likely that the U.S. will continue to be able to attract sizeable numbers of Chinese foreign students. This is particularly true if elite U.S. colleges and universities remain on the cutting edge of developments in high technology fields.

U.S. companies or return to the U.S. to work, they will help bring the two nations closer together.

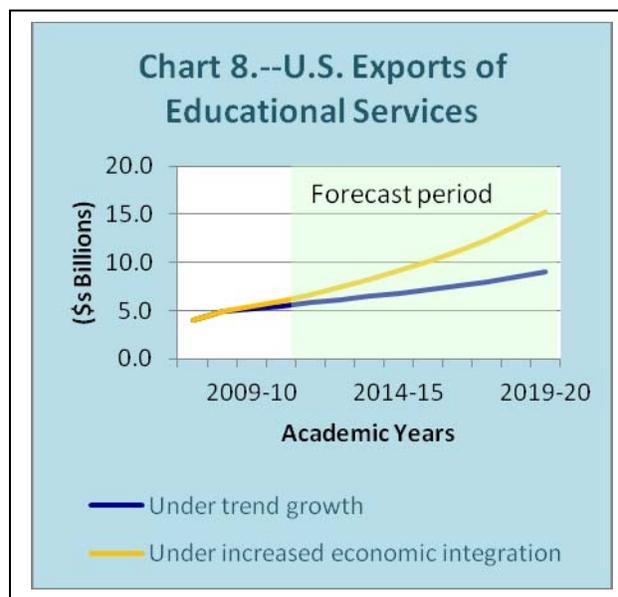
While it is expected that the flow of Chinese students to the U.S. is likely to supersede the flow of U.S. students to China for some time, at some point, the two flows may converge and then begin to swing in China's favor. The logic of this scenario is borne out in an agreement signed by Presidents Obama and Hu during Obama's visit to Beijing in November 2009. The agreement states:

Nearly 100,000 Chinese are now studying in the United States, and the U.S. side will receive more Chinese students and facilitate visa issuance for them. The United States has approximately 20,000 students in China. The United States seeks to encourage more Americans to study in China by launching a new initiative to send 100,000 students to China over the coming four years.⁵³

To project student exchange flows under ideal, collaborative, and economically integrated conditions, we compare trend growth over the period 1997/8 – 2007/8, with "ideal" growth. For exports of educational services (Chinese students arriving in the U.S.), the latter (ideal) growth is best characterized by the growth in foreign students from India during the period 1997/8 - 2007/8. For imports of educational services (U.S. students visiting China), "ideal" growth is best represented by the growth in U.S. students studying in Argentina over the period 1997/8 - 2007/8. We project student flows under trend growth and under increased economic integration (ideal) conditions for the period 2011-20. To value these flows, we assume a conservative per student tuition rate of \$50,000 for all years. The growth under increased economic integration versus trend growth conditions is substantial.

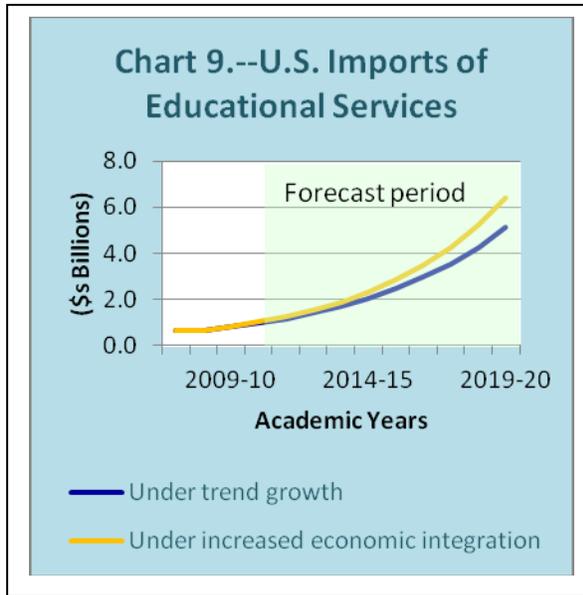
For inbound students (exports), the increased economic integration scenario results in a cumulative difference of just over \$29 over the trend growth scenario for 2011-20.⁵⁴ By academic year 2019-20, there would be over 304,000 Chinese students in the U.S. as opposed to 179,000 under trend growth. On a valuation basis, the Chinese tuition bill would be \$15.2 billion as opposed to \$9.0 billion in 2019/20 (see Chart 8).

For outbound students (imports), the increased economic integration scenario results in a cumulative difference of nearly \$5 billion over the trend growth scenario. By academic year 2019-20, there would be nearly 129,000 U.S. students in China as opposed to just 102,000 under trend growth. On a valuation basis, the U.S. tuition bill is \$6.4 billion as opposed to \$5.1 billion in 2019/20 (see Chart 9 below).



⁵³This statement appears in the "U.S.-China Joint Statement" from November 17, 2009, which was released by the White House.

⁵⁴The data source for these estimates is the Institute of International Education (2010).



Reduced Defense Spending

In this paper, we do not attempt to assess the total level of U.S. defense spending in its efforts to provide security services and protect the homeland through its presence in the Asia-Pacific region. However, U.S. political and military officials—including U.S. Secretary of State Hillary Clinton and U.S. Secretary of Defense Robert Gates—have expressed the expectation that China will assume some of the burden of providing security services in the Asia-Pacific region and beyond as its military capacity and strength grows.⁵⁵ In fact, during China’s President Hu Jintao’s 2011 visit to the U.S. when President Obama noted that China’s success is attributable, in part, due to the U.S. forward presence in Asia, President Hu responded: “We should turn Asia-Pacific into an important region

where the U.S. and China work closer together, on the basis of mutual respect.”⁵⁶ Therefore, it is possible that, at some point, the U.S. could be able to reduce its defense spending in the area as it collaborates to provide security services in the Asia-Pacific region with China.

While we do not have access to estimates of overall defense spending in the region, we do have estimates of a significant portion of defense spending in Asia and the Pacific.⁵⁷ For purpose of this analysis, we will project that, under appropriate collaborative arrangements (up to and including a U.S.-China treaty ally relationship), the U.S. may be able to reduce by at least

⁵⁵During an October 29, 2010 speech at the East-West Center in Honolulu, Hawaii, Sec. Clinton said:

Now, the relationship between China and the United States is complex and of enormous consequence, and we are committed to getting it right. Now, there are some in both countries who believe that China’s interests and ours are fundamentally at odds. They apply a zero-sum calculation to our relationship. So whenever one of us succeeds, the other must fail. But that is not our view. In the 21st century, it is not in anyone’s interest for the United States and China to see each other as adversaries. So we are working together to chart a positive, cooperative, and comprehensive relationship for this new century.

In addition, speaking for Sec. Gates during a January 6, 2010 speech at the International Institute for Strategic Studies in Washington, D.C., the Deputy Assistant Secretary of Defense for East Asia Michael Schiffer said:

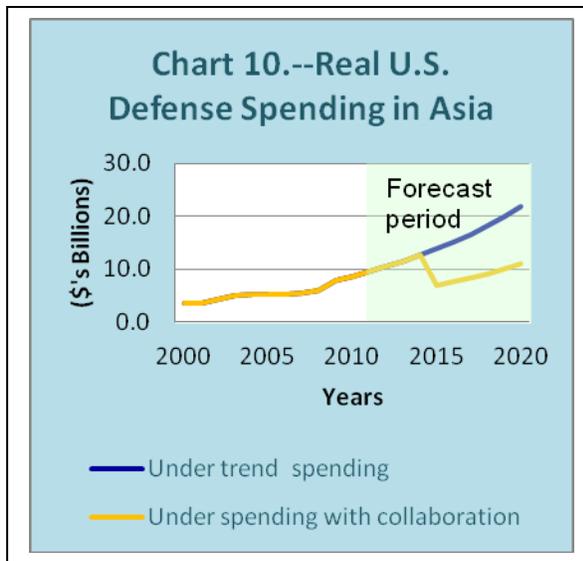
The U.S.-China relationship has been premised from its very inception on shared commitment to stability within the region and the international security environment....And we welcome and encourage China’s active and positive contributions to the stability, resilience, and growth of the regional and international system.

⁵⁶ See McGregor, Dyer, and Dickie (2010).

⁵⁷ Estimates of U.S. Government defense and miscellaneous spending are from lines 22 and 28, respectively, of interactive Table 12, “International Transactions, by Area – Asia and Pacific,” from the U.S. Department of Commerce, Bureau of Economic Analysis (2011).

one-half its spending in the region, say beginning in 2015. To determine how much might be saved over the next decade, we have prepared trend estimate of U.S. spending from 2000-9, and have extrapolated that trend out to 2020. To reflect expected savings, we reduce the 2015-20 trend estimates by one-half.

The data reflect that U.S. spending in the Asia-Pacific increased 9.67 percent on average during 2000-09. If spending were to continue on the current spending path, it would reach nearly \$22 billion annually by 2020, for total spending during the 2011-20 period of nearly \$150 billion. Given a 50 percent reduction in projected spending beginning in 2015 due to collaborative efforts with China, there would be nearly \$53 billion in saving during the last five years of the period (see Chart 10 below). Therefore, on a service imports and government receipts and expenditures basis, the trade and fiscal deficits could be reduced by around \$10 billion each year from 2015-20 after the U.S. achieves sufficient collaboration with China on providing security services in the Asia-Pacific region (see Chart 10 below).



Impacts on National Accounts

We have considered how trade, FDI, R&D, tourism, educational exchanges, and defense spending might be affected under a “blue skies” U.S.-China relationship. In each case, we have quantified optimal benefits that might accrue to the two nations under such an arrangement. Table 2 summarizes the magnitude of these improved economic outcomes for the U.S. and China with respect to both nations’ GDP, Government Receipts and Expenditures, and International Transactions Accounts.⁵⁸

While the estimates that are presented in Table 2 (see below) may appear to show that the U.S. is the big winner under a “Blue Skies” relationship, the reality is that China wins in R&D and in FDI because net inward flows favor China over the U.S. But even that realization is deceiving because China benefits from a continued vibrant trading relationship with the U.S. Based on our estimates for 2011-20, China accumulates nearly \$7.4 trillion in trade surpluses with the U.S. under increased economic integration. It is difficult to fathom that a nation is a loser under such circumstances. Fortunately for the U.S., as we have alluded to above, this \$7.4 trillion trade deficit is an improvement over the \$8.3 trillion trade deficit that would likely occur under trend economic conditions. It seems reasonable that China would be willing to undergo a \$965 billion seeming decrement from 2011-20 in exchange for the opportunity to continue an unimpeded and open trading relationship with the U.S. This is the type of economic rebalancing that economists have been discussing over the past few years, which will require China to incur

⁵⁸Note that we treat R&D as investment, something that is required by the *System of National Accounts, 2008*, and that will be incorporated into the U.S. National Income and Product Accounts during the next comprehensive revision, which is scheduled for 2013.

“losses” in some areas and to open up in other areas in order to continue benefiting from trade.⁵⁹

**Table 2.—Cumulative Gains (Losses) from “Blue Skies”
U.S.-China Relations 2011-20
(\$’s Billions)**

Line No.	Account Categories	United States	People’s Republic of China
1	Unduplicated Total	1,047	(965)
2	Gross Domestic Product	1,079	(997)
3	Investment	35	47
4	R&D spending	35	47
5	Net exports of goods & services	1,044	(1,044)
6	Net merchandise trade in goods & services	946	(946)
7	Government transfers (defense)	53	(53)
8	Net tourism services	20	(20)
9	Net educational services	25	(25)
10	Government Receipts & Expenditures	53	(53)
11	Government transfers (defense)	53	(53)
12	International Transactions	1,012	(1,012)
13	Current Account	1,044	(1,044)
14	Net exports of goods & services	1,044	(1,044)
15	Financial Account	(32)	32
16	Net FDI	(32)	32

Conclusion

This paper has considered possible benefits that might accrue under “ideal,” “Blue Skies” conditions in a U.S.-China relationship. We showed that it is possible for both nations to benefit from an effort to rebalance trade in goods and services, increase FDI, R&D, tourism services, and educational services, and by rebalancing responsibilities for ensuring security in the Asia-Pacific region. Based on Table 2, while it may seem that the U.S. is the big winner, it should not be forgotten that such a “Blue Skies” arrangement permits China to continue to benefit greatly from its trading relationship with the U.S. A failure to consider the type of rebalancing that is hinted at in this paper might stimulate rumblings of protectionism in the U.S., which would not be favorable for China.

The fact that the U.S. stands to benefit to the tune of nearly \$1 trillion cumulatively over the 2011-20 period should also play a role in motivating policy-makers—particularly those in the Congress, in the security arena, and on the economic and trade fronts—to see the types of favorable outcomes that can occur for the U.S. through an expanded and a more collaborative relationship with China. Clearly, these prospective gains for the U.S. appear much more favorable than continued expenditures in a head-to-head arms race that could ensue should a more collaborative relationship not form with China.

⁵⁹On rebalancing, see the International Monetary Fund (2010).

Although this is a “Blue Skies” paper, it was not a stretch to imagine this type of alternative future and to use conservative estimates in doing so. If (when) the U.S. and China decide to develop a more collaborative and economically integrated relationship with each other, there is no question that the two nations can benefit. We can rest assured that the rest of the world will look on approvingly because, as these two economies grow, so does the rest of the world.

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