Impact of Public to Private Partnerships In BRICs

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This work will explore the regulatory agencies, public to private partnerships (PPP's) that provide standards in the markets and how they impose financial protection in light of the global recession. This work will test the economic drivers with the trading partners and the impact on direct investment in their respective countries.

The results will be provided regarding the progress and the transparent nature of real estate valuation and the impact on the local economy. The hypothesis is that the BRICs transition economies who seek access to investment must expedite the real estate valuation standards for development, securitization and investment to enter the global financial community.

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Executive Summary

Overview

Major transitions are occurring in real estate, in contrast to the global recession, in the BRICs countries of Brazil, Russia, India and China. Each country represents unique examples occurring in the valuation of real estate specific to methodologies, analysis, education and valuer experience. This work presents an overview of the historical real estate transition from the public to private markets and the requirements to provide the framework allowing for this transition to occur. Specific analysis will be provided on BRICs checks-and-balances required to protect the public and provide confidence in the national and international financial markets. It is expected that the economic leverage gained in the global economics will lead to the ability to gain access into primary financial markets in the US, EU, UK, and Asia.

Introduction

The reasons to create the PPP's are:

- Technology inefficiencies related to energy industries (i.e. fuel rate, average efficiency, capacity of stations);
- Infrastructure demands related to population growth (i.e. water distribution and roads, and highways);
- No stimuli to increase efficiency, encourage energy saving, or plan rationally for future needs;
- Distribution bottlenecks - in separate regions for energy, water and transportation.
- Public ventures often has no pay discipline, or non-payments result;
- Public markets were closed for new independent participants.

Overall, Public to Private Partnership must have the following in order to implement and have a reliable transition:

- Legal Authority – Vote or Decree;

- Transfer Right – Property Rights to be Granted (Freehold v. Partial Interest);
- Assets Protection – Title and Insurance / Evaluation/ Efficiencies of Systems;
- Tariff/Tax- Maintain existing infrastructure and services system;
- Transparency – Protectionism v. Competition

The results of implementing PPP's are:

- Cashflow – Most Emerging Markets have limited internal resources and therefore must sell State assets to provide of the public good. If internal resources exist (oil, gas, lands) then these assets must be marketable to supply revenue.
- Credibility – Expansion of GDP forces need to engage other economies. The World is a small place to do business.
- Competition – Global investment in real estate, nature resources, labor pool, or local assets (chattel) requires access to compete for currency

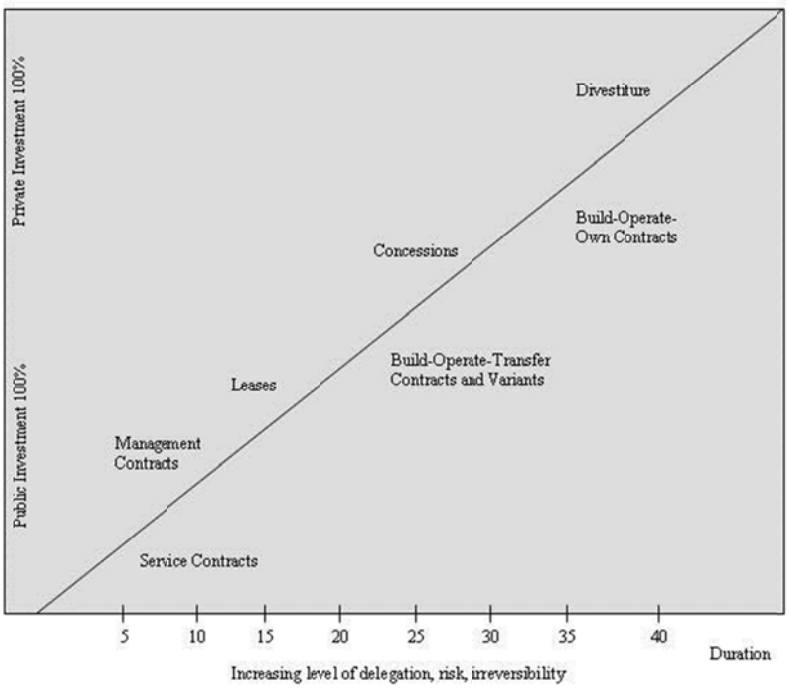
Public to Private Partnerships and Financial Markets

Public to Private Partnerships are contracts or agreements between a private sector entity and the government that call for the private partner to deliver a desired service and assume the associated risks. In return for agreeing to provide the service, the private partner receives payment (in the form of a fee, tariff or user charge) according to certain standards of service and other criteria as specified in the contract. The government is relieved of the financial and administrative burden of providing the service, but retains an important role in regulating and monitoring the performance of the private partner. The types of projects are social and economic infrastructure for building and operating hospitals, schools, prisons, roads, bridges and tunnels, light rail networks, air traffic control systems, and water and sanitation plants. For the government, private financing can support increased infrastructure investment without immediately adding to government borrowing and debt, and can be a source of government revenue. At the same time, better management in the private sector, and its capacity to innovate, can lead to increased efficiency; this in turn should translate into a combination of better quality and lower cost services. For the private sector, PPPs present business opportunities in areas from which it was in many cases previously excluded. The ultimate result is the partnership of a public benefit that benefits the public while working with private enterprise.

The following graph represents the participation of both public and private entities in the assumption of risk during the project.

Figure 1

The Range of PSP Options



Public Investment typically manages the responsibility of the operations, maintenance and financing while the private partner assumes greater risk associated with construction and ultimate transfer. Greater profit is expected with the private entity who assumes the greater risk.

The partnership between the public and private entity may also provide alternatives to the typical shared risk which might include revenue-sharing provisions, buy-back provisions, and lease-back provisions.

LENDING

In total the global project finance market - which funds energy and infrastructure projects - stood at US$147.4bn in 2009, 44% down on the record US$250bn figure from 2008 but still near the US$166bn figure achieved in 2005. It is clear the global downtown has had an impact on investment and is primarily attributable to the availability of debt. Many governments in order to stabilize employment and increase monetary flow actually increased public project investments (Peak 2008) when the global recession was symbolically referenced with the failure of Lehmann Brothers in August 2007.

The top financial firm for project finance is India's SBI Capital, which replaced UK-based Royal Bank of Scotland. The next three slots in the Top 10 are French banks - Calyon, BNP Paribas and Societe Generale. These are followed by Japanese and Spanish banks plus Indian bank, IDBI.

The power market was the largest single industrial sector and received project finance totalling US$57.5bn. The public private partnerships (PPP) markets declined with the Europe and Middle East market dropping 25% to 4.8bn euros. However it had stood at 2.3bn euros in 2007. In the UK the decline is more prolonged - down from £8.2bn in 2007, £5.2bn in 2008 to £3.4bn in 2009. Some of this decline can be attributed to the fact that while there still remains a large amount of private equity seeking infrastructure investments with more than 75 infrastructure funds seeking to raise $100 billion. Much of the funds already raised have had difficulty finding projects in which to invest. Overall, the problem is not lack of financing but lack of suitable projects.

Overall, the latest figures show the project finance market has recovered from the financial crisis and funds are now available. However, the bigger question for 2010 will be whether there will be the economic demand for new projects and the right projects available to attract investors.

The profile of a lender group can range from project to project, and may include a combination of private sector commercial lenders together with export credit agencies, and bilateral and multilateral finance organizations. These international, often political, entities are frequently involved in PPP projects and can have an important impact on the risk allocation and financing used in a project. When involved in such projects, these agencies will place strict requirements on the project structure and lending arrangements, in particular in relation to environmental and social safeguards). Lenders anxious to

benefit from such involvement (and the potential mitigation of political risk) will make it a priority to ensure that these requirements are met.

Funding is sometimes provided by project bonds, sold on the capital markets, or by sovereign wealth funds and other financial intermediaries.

The lenders will be involved in most of the important phases of the works, including the financial structuring, the drafting of the project documents and certification of completion. They will generally maintain their review powers over the project with the assistance of various consultants such as engineers. The lenders may require that direct agreements be entered into between themselves and each of the project participants. The terms and conditions that lenders will be willing to give for a specific project will depend primarily on the nature of the borrower, in particular the borrower's credit position and the nature of any other security, credit enhancement or support the project may have. However, the nature of the lender will have a lot to do with the terms and conditions offered. For example,

- Bankability requirements and lender appetite will depend on the nature of the lender, their existing loan portfolio, their strategy for portfolio development and their desire to enter into new markets. Lenders will react to political risk in different ways, those familiar with the country or a region may approach the risk in a less risk-averse manner than others. Lenders with a bilateral or multilateral origin may have better relationships with the relevant government, and will therefore view political risk in a different way.

- Price and fees will clearly be based on market practice and on the nature of the lender in question. Similarly, some lenders will be more efficient than others, and therefore the cost to the borrower of managing lender involvement and due diligence can differ significantly

- The flexibility exhibited by different lenders can vary, for example the ability of the borrower to renegotiate or reschedule debts terms and conditions. To this extent, banks are usually more flexible than bondholders.

- The complexity, sophistication of the type of debt available to borrowers will depend on the nature of the lender, their experience in such products and the depth of financial market in which the lender operates.

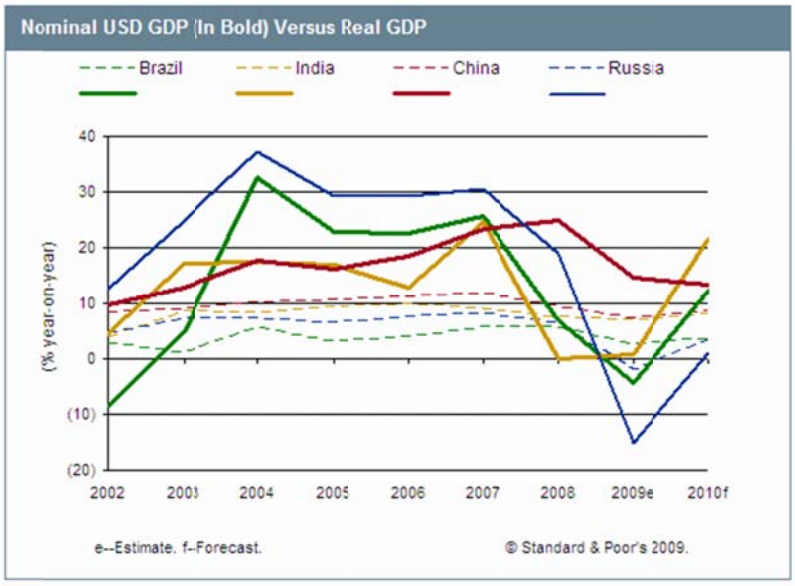
Another vehicle for financing may be the Equity Investors. In this case, Sponsor will identify a project and put together a bid in an effort to be awarded the project. This typically means the private sector investors will create a new company – usually a limited liability special purpose vehicle (SPV) - which will contract with the grantor to design, construct, operate, maintain and transfer the project. The use of an SPV is likely to enable the sponsors to finance the project on a limited recourse basis. The grantor may require that the project company includes local investors in order to improve transfer of technology, and provide jobs and training to local personnel. Most shareholders will want

to be able to divest their shareholding as early as possible, in particular commercial/construction companies that are not accustomed to long term shareholding. The grantor, on the other hand, will want the shareholders tied to the fortunes of the project company as long as possible, to align their interests more with those of the grantor (a financially viable project over the long term). Shareholders of the project company will often be both shareholder in the SPV and a contractor to the SPV.

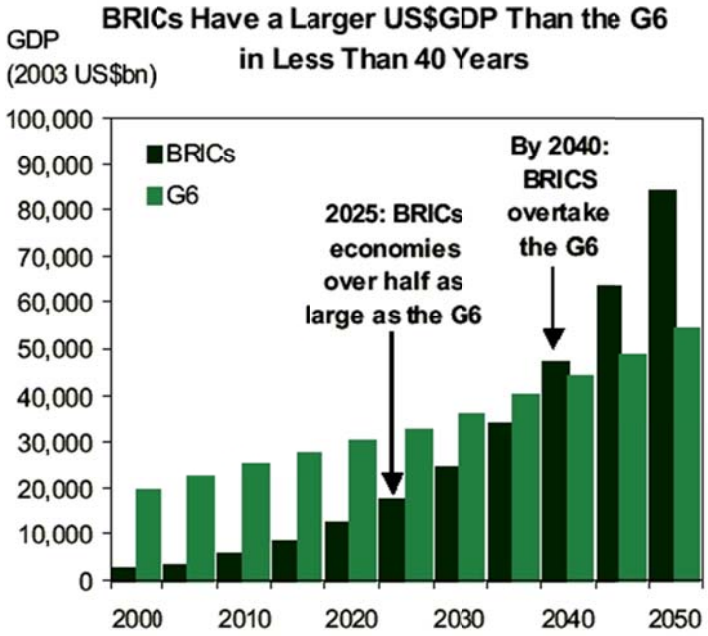
The project company may also be subject to public control, for example through a joint stock company. This approach, while not common globally, is found in many developing countries. Key challenges associated with government shareholding in the project company include conflicts of interest between the government as shareholder and the government as grantor, for example difficulties for the government as shareholder to agree for the project company to sue the government as grantor.

BRICs (Brazil, Russia, India and China) – Overview

Brazil, Russia, India, and China, four of the world's largest emerging economies collectively known as BRIC play a vital role in the global economy. These countries are registering strong growth rates and also experiencing strong Foreign Direct Investment (FDI) inflows. FDI inflow to BRIC economies reached $255.6 billion in 2007, more than doubling that of 2006. Since 2000, the annual real GDP growth averaged 9.6% in China, 7% in Russia, 6.7% in India and 2.6% in Brazil.



It was projected that by 2009, the annual increase in total U.S. dollar expenditures to the BRICs will be greater than that of the G6 (Germany, France, Italy, Japan, UK and USA). As growth accelerates and per capita incomes rise in these countries, they will become the world's most important consumer markets. This is projected in the following chart.



Brazil – Valuation System

Real estate valuation in Brazil is regulated by the NBR-14653 issued by the Brazilian Association of Technical Norms (ABNT). It addresses standards for General Procedures, Urban Real Estate, Rural Real Estate, Development Projects, Machines, equipment, installations and industrial assets in general, Natural and Environmental Resources, and Assets of Historical Relevance

Legally, appraisals in Brazil can only be carried out by Architects, Engineers and Agronomists registered in the Confea-Crea system. The system (Federal and Regional Councils of Architecture, Engineering and Agronomy) congregates all professionals in these categories and also regulates these professions.

Brazil – PPP Programs

In Brazil, PPP's are special kinds of concessions. There are Common Concession, Sponsored Concessions and Administrative Concession.

- Common Concession – a concession of a public service in which revenues come exclusively from user tariffs. PPP and Common Concessions have similar economic structures

- Sponsored Concession - a common concession of public services based on the tariff + public payments

- Administrative Concessions – a direct or indirect services to the public administration for public services. The origin of revenue is public payments

Projects are prioritized by:

- Development Strategy of the Federal government
- Revenue Generation Capacity
- Interest by the Private Sector
- Level of Project Development

Brazil – Case Study

SAO PAULO METRO LINE 4, BRAZIL

The new Metro Line 4 will be a principal commuter route that runs southwest to northeast through metropolitan São Paulo, connecting residential neighborhoods to important commercial districts adding approximately 21 percent in additional capacity to the metro system across low, medium and higher income populations.

The project includes two main contracts: (a) a turnkey contract for the provision of civil works and electrification for the 12.8 km of metro line14 and (b) a concession to operate the system for 30 years, in exchange for the provision of the rolling stock and systems, financed mainly by the private sector and the State. This case study analysis focuses on the latter PPP project component. Total project costs are estimated at US$ 398.55 million with about US$ 82.95 million equity contribution from sponsors (21%). Total debt of US$ 315.60 (79%) is split in two tranches, a $69.2 million, 15-year A loan from the IADB, and a $240 million, 12-year B loan, and led by IADB, from Banco Santander, SMBC, KfW, Banco Espirito Santo, BBVA as lead arrangers and Société Générale and WestLB as co-lead arrangers. The project was not eligible for support from the Brazilian government's development bank, BNDES, because the trains for the project were manufactured outside of the country.

The Project was awarded in November 2006 to a consortium (Via Quatro)15 led by Companhia de Concessões Rodoviárias (CCR) pursuant to an international public bidding process with the Government of the State of Sao Paulo. This was a landmark event, and the first PPP signed by any public sector agency in Brazil since the passage of the new Brazil's PPP legislation in 2004. Under the terms of the PPP contract, operator ViaQuatro will be responsible for the provision of rolling stock, trains and technical equipment, and the operation and maintenance of a 12.8 km metro line (Metro Line 4) in Sao Paulo during a 30-year concession term. The state of São Paulo's government, under its civil works authority, is responsible for the construction of the required civil infrastructure works which includes various stations, tunnels and railways. The state performs such civil works before turning over the supply, operation and maintenance to ViaQuatro.

The concession was awarded on the basis of a low bid for required availability payments; it also benefits from a minimum revenue guarantee and revenue-sharing threshold, protecting the concessionaire from low revenues, but providing the state with revenue sharing if use is higher than projections. Most of the consortium's income will come from passenger tariffs, but should this fall below the projected levels the government must top

it up. However, if income is greater than expected the consortium must share the proceeds with the state.

BUSINESS – *New*: The project involves the construction of a new line for the current metro system in Sao Paulo. The demand for the metro is known, traffic on the new line is unknown. The project company is responsible only for this new line.

CONSTRUCTION OBLIGATION – N/A

PRIVATE FUNDING – *Finance*: The project financing includes equity contribution from sponsors of about US$ 83 million (21%). There is also a substantial portion of debt in the form of an A loan from IADB and a B loan, led by IADB, from several commercial banks. The project therefore is classified as Finance.

SERVICE DELIVERY – *User*: Project operator will deliver service directly to the metro's customers; it is also responsible for collection and billing obligations as well as customer service.

SOURCE OF REVENUES – *Tariffs*: Most of the consortium's income will come from passenger tariffs, with a minimum revenue guarantee and revenue-sharing threshold, protecting the concessionaire from low revenues, but providing the state with revenue sharing if use is higher than projections.

Russia – Valuation System

The Appraisal profession started in Russia in 1993 with the founding of the Russian Society of Appraisal (RSA). The RSA was soon joined by other organizations, among them the Russian Collegium of Appraisers, Association of Russian Master Appraisers. For five years, until the passage of the first federal law on appraisal in 1998, these private groups of appraiser members formed the structure of standards of professional practice, education, and ethics for appraisers in Russia. The Russian valuation system reflects strong influences from USPAP and IVSC.

Russian appraisers are regulated by two sets of laws or rules: (1) those created by the governments of the countries in which they operate, and (2) those imposed by private professional organizations to which appraisers may choose to belong.

After the passage of this original federal law regulating appraisal activity appraisals in Russia could only be issued by legal entities holding a license from the Department of State Property Regulations.

In order to issue appraisals that are valid on the territory of the Russian Federation, each officially operating appraiser have to maintain membership in a Self-Regulated Organizations (SROs). These private associations of professional appraisers are bear the responsibility for enforcing the professional competence and practice standards of their members. The law still requires an authorized federal government body to establish

certain minimum requirements for developing and reporting appraisal work (Russian Federal Valuation Standards.

Russia– PPP Programs

- The Russian government has announced plans to spend about $1 trillion over the next 10 years on improving infrastructure. It has also made it clear that a significant part of this investment will be in the form of PPPs, to benefit from the leverage provided by the efficiency, competition and investment of the private sector.

- The first projects being developed mostly in the transport and, to a lesser extent, the utility sector, there is also scope for future use of PPPs to develop other social infrastructure.

- Despite the recent volatility of its economy, the long term outlook for foreign investment in Russian infrastructure remains positive. This investment will be bolstered by the small number of state owned banks that are likely to provide a significant portion of the financing of imminent projects.

- There are currently two PPP models being followed in parallel: 1) the federal government's concession law, under which the physical asset remains owned by the government, a fact that makes enforcement of bank security complicated; and 2) a specific regional PPP framework, such as the one developed by the St Petersburg government.

- The Federal Russian Law on Concession Agreements (the Federal Concession Law), adopted on 21 July 2005, includes provisions on: entities involved in the concession granting process; concession facilities; selection procedure; concession agreement; and certain guarantees for investors and government support issues.

- The law's adoption set the stage for the utilization of PPPs in many parts of the public sector, including transportation, energy, education, health care and utilities.

- For the most part, the legislation is flexible and does not impose rules on how relations between the state and private investors will be conducted during implementation of concession projects. Once a concession agreement has been concluded, regulation of the investor state relationship is to be governed by the detail of the agreement itself.

Russia– Case Study

ORLOVSKI TUNNEL CONCESSION, RUSSIA

The Orlovski tunnel will connect the centre of the city of Saint Petersburg with its northeast section. It crosses the Něva River at the historic location of Smolny. It is

anticipated that approximately 60,000 vehicles will pass through it daily. The estimated investment costs are approximately 1.5 billion US Dollars. The bidding process is currently underway, with 4 international consortiums having prequalified. The bidders must propose designs for three lanes in each direction, but the decision to use one or two tunnels, and using tunnel boring technology or submerged sections is left to the bidders. Bidders must provide a mixture of manual and electronic tolling. The revenue for the project company will be based on an availability payment from the City, with performance penalties. The revenue for the project company will be based on an availability payment from the City, with performance penalties.

BUSINESS – ***New:*** The project involves a new tunnel under the Neva River, in St. Petersburg.

CONSTRUCTION OBLIGATION – ***Build:*** The project company is responsible for the construction of a Greenfield tunnel.

PRIVATE FUNDING – ***Finance:*** The project is financed through a combination of Government subsidy, equity from sponsors and commercial financing.

SERVICE DELIVERY – ***User:*** The project company provides access to the tunnel to individual users.

SOURCE OF REVENUES – ***Fee:*** The project company revenues are derived from performance based fees paid by the Government.

India – Valuation System

Property valuation in India has been done by diverse groups of people with varying backgrounds and skills and is considered part of the disciplines of engineering and architecture, so a degree in these subjects is sufficient to become a property valuer. It is an accepted fact that property valuation methods in India are as varied as the property laws in different states. In the absence of any prescribed standards, guidelines or reporting formats, valuers work without adequate structure or guidelines and methodology.

In the past, the Securities & Exchange Board of India (Sebi) has said disclosures made by real estate developers prove there are no standards of valuation and guidelines established by International Valuation Standards and RICS will provide some guidelines once adopted.

The urban development ministry, along with the Indian Bank Association (IBA), the National Housing Bank (NHB) and the corporate affairs ministry, has drafted a handbook on policy, standards and procedures for real estate valuation by banks and housing finance institutions. The exercise, the first ever, is to put some order in real estate valuation. In parallel, the company affairs ministry has drafted a Valuation Professionals

Bill. It seeks to create a Council of Valuation Professionals of India. The council will set standards for valuers, train them, set qualifying norms and monitor them.

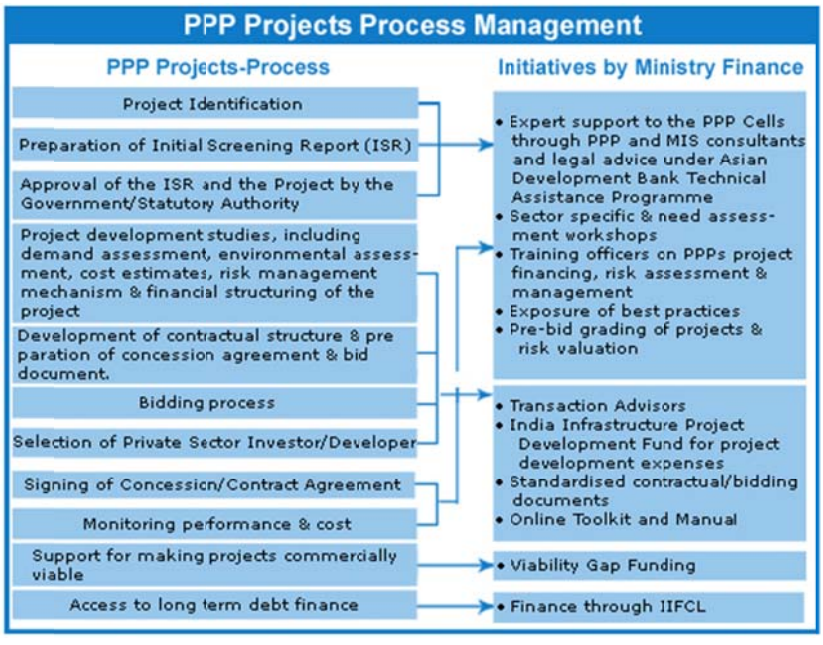
India– PPP Programs

According to the India Planning Commission, an approximation of 8% of the Gross Domestic Product or GDP needs to be invested. This would help in acquiring a prospective economy as stated in the 11th Five Year Plan. Fund investment of over US $494 billion has been conceived of according to the 11th Five Year Plan with effective from 2007 to 2012. The investment sectors under consideration are inclusive of telecommunications, electric power, water transport, road, rail, air, water supply as well as irrigation.

Promotion of PPP is therefore necessary since it's the most preferred mode. The overall issues and plan can be summarized as follows:

- Several initiatives have been undertaken by Government of India to enable a greater PPP framework in order to reduce the constraints related to: 1) regulatory framework, 2) lack of access for private sector participants, 3) lack of management expertise, and 4) financing securitization.

- Framing of standardized contractual documents for laying down the terminologies related to risks, liabilities and performance standards have been devised. Approval schemes for PPPs in the central sector have been streamlined through Public Private Partnership Appraisal Committee or PPPAC. The PPPAC process is shown as follows:



India– Case Study

DHABOL POWER CORPORATION, INDIA

Pursuing a policy of economic liberalization by the Indian government to open up the electricity sector to foreign investment, a senior Indian delegation invited Enron, along with other international investors to participate in the country's sector reform. As a result, the Power Purchase Agreement (PPA) for the Dhabol Power Project was signed in 1993 for a $2.8 billion combined-cycle 2,000 megawatt LNG power plant in Maharashtra, India's third largest state. Under the renegotiated PPA in 1995, Enron, GE and Bechtel, through their 8-1-1 joint-venture Dhabol Power Corporation (DPC), signed a take or pay off-take agreement to sell all the electricity to Maharashtra State Electricity Board (MSEB) for 20 years. The MSEB PPA is counter-guaranteed by the state and federal governments.

BUSINESS – ***New***: The project involves the construction of a power plant facility on a Greenfield basis by the project company and assumes no previous or existing business or customers.

CONSTRUCTION OBLIGATIONS – ***Build***: The project company, Dhabol Power Company (DPC), assumes significant risk in association with the construction of a new power plant; these involve inherent risks during the construction of a major infrastructure project, including geological and design risk, cost overruns, delays etc.

PRIVATE FUNDING – ***Finance:*** The project entitles significant contribution from the consortium in the form of equity and diverse sources of financing including commercial banks, export credit agencies (ECAs).

SERVICE DELIVERY – ***Bulk:*** Project Company DPC is responsible for delivering services directly to a sole taker, in this case public entity Maharashtra State Electricity Board (MSEB), and does assume additional responsibility for customer service.

SOURCE OF REVENUE – *Fee*: Since revenue stream for the project originates from a sole taker, in this case public entity Maharashtra State Electricity Board (MSEB), and the project company does not assume responsibility for customer service.

China – Valuation System

In China, two valuation systems are applied in real estate appraisal, which are applied to real property valuation and land valuation, respectively. The real property appraisal abides by Standards for Real Estate Appraisals of the People's Republic of China GB/T50291-1999(SREA), which was established and enacted by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China in 1999, and the Ministry of Construction is responsible for its interpretation.

The land valuation abides by Regulations for Urban Land Evaluation of the People's Republic of China GB/T18508-2001(RULE), which is established and enacted by General Administration of Quality Supervision, Inspection and Quarantine of the People's

Republic of China in 2001, and the Ministry of Land and Resources is responsible for its interpretation.

Currently, China's real estate and land valuation standard system is independent of International Valuation Standards (IVS) which formulated by International Valuation Standards Committee (IVSC).

China– PPP Programs

Since year 2000, market mechanisms have become mature in most cities. PPPs have also become one of the government's strategies for the provision of public facilities and services.

The government has started to strengthen its monitoring and control systems on public facilities and services provided by the private sector. There are three major causes why the China government needs to reform the provision of public facilities and services.

- The first cause is due to an inadequate investment in public facilities and services. China is undergoing a high rate of urbanization. At the end of 2003, the urbanization rate in China was only around 40%. Based on international experience, if the urbanization rate is between 30% and 70%;

- The second cause is the limited funding sources and inadequate private investment in public facilities and services. So far, the main source of investment in public facilities and services relies heavily on government funding.

- The third cause is because of the slow rate of reform of state-owned enterprises and their poor provision of public facilities and services. A high proportion of state-owned enterprises, coupled with their obsolete management systems and lack of market competition and social responsibility, all resulted in inefficient use of capital.

In order to overcome the hurdles, the government has actively promoted PPP practices for a better provision of public facilities and services. The Ministry of Construction issued the "Opinions on Acceleration of Privatization Process of Public Facilities" in December 2002 and the "Rules on Management of Franchised Operation of Public Facilities" in May 2003.

Based on the above Central Government directives, local governments started to establish detailed rules governing the scope, procedures and relevant details for opening up the market for the provision of public facilities and services. For instance, the Shenzhen Government issued the "Rules for the Franchised Operation of Public Facilities" in May 2003, and the Beijing Government issued the "Rules for the Franchised Operation of Basic Urban Facilities" in October 2003.

The Beijing Government issued the "Regulations for Franchised Operation of Beijing Basic Urban Facilities" on 1 March 2006. This is the first formal regulation providing an exemplary legislative framework on the provision of public facilities by the private sector. Basically, the PPP model adopted in China is based on the traditional build-operate-transfer.

It is critical as China goes forward with their PPP program that the government follows international PPP practices and maintain independent, transparent, accountable and professional monitoring system, with the appropriate authority.

China – Case Study

GREENFIELD CONTRACT: SHANGHAI WASTEWATER

The Greenfield contract (e.g., BOT, TOT) is the dominant form of private sector participation in wastewater sector reform throughout the country. Shanghai Zhuyuan No.1 WWTP project is one of the most famous Greenfield projects in China. It is presently one of the largest WWTP in China, with a treatment capacity of 1.7 million m^3 per day and an advanced primary treatment, serving an area of 107 km^2 and about 23.5 million inhabitants. But it also has become famous for the lowest service price: 0.22 RMB (ca. 0.0266US$ at the exchange rate of 1US$ = 8.276RMB) per cubic meter treated wastewater.

A Project Company (Shanghai Zhuyuan Youlian No.1 Wastewater Treatment Ltd. CO.) was established and awarded a 20-year concession agreement by Shanghai Water Authority. A service management contract was signed with Shanghai Sewerage Company (a fully state-owned company administrated by the government) including details of rights and obligations. Two years later, Youlian Development Company withdrew from this project by transferring the shares and obligations to InterChina Holdings Group.

In the case of Shanghai Zhuyuan Greenfield project, the government has transferred its traditional responsibilities of investment, construction, operation, and maintenance (for the contract period) to the private Project Company, accompanied by paying a service fee

Different from other joint ventures in China the private operator within a Greenfield contract is paid a service price negotiated between the government and the private sector. This service price depends on the investments and agreed performance levels, rather than on the user fee level, and which provides the private sector with the financial risks. Accordingly, the low service price of Zhuyuan No.1 WWTP (which was 42% less than the projected costs by government) presented in the public bidding, was argued to have a close relation to earlier governmental input in this project. Shanghai Water Assets Management Development CO. Ltd., a fully public-owned company, was in charge of the pre-phase design and invested about 30 million US dollars in the fixed infrastructure of this project, while the government provided the land free of charge to the operator.

Strictly speaking, Shanghai Zhuyuan No.1 WWTP Greenfield project is a quasi-BOT project, due to the fact that part of the investment comes from the government.

The experience of Shanghai is an example of full governmental delegation of the daily management of WWTP to the private sector, while financial support via subsidies and preferential policies (e.g., land use) facilitate privatization with low service prices.

FOREIGN DIRECT INVESTMENT IN BRICS

The BRIC countries appear well positioned to weather the global economic downturn considering the subprime economic woes of the US. The US is a major trading partner of Brazil and China, and the foremost customer of India's burgeoning IT services industry. Three factors enable the BRIC countries to withstand the slowdown of the developed Western economies:

- Strong growth of local purchasing power and domestic demand, which allows BRIC-based companies to compensate for flagging Western exports;
- Expansion of 'South-South' trade, including growing trade between the BRIC countries themselves and other emerging markets
- Continued inflows of foreign direct investment (FDI), which testify to the foreign investor community's long-term confidence in the BRIC economies and which provide those countries with a measure of insulation from the global credit crunch

FOREIGN INVESTMENT

Between 2000 and 2006, inward FDI stock in the four BRIC countries grew from $136.9bn (8% of global FDI stock) to $1.53tn (13%). This represents a compound annual growth rate of 41.3%, against a CAGR of 24.1% in the US (the single biggest recipient of FDI) and 32.7% in the EU (the largest regional destination).

The strong FDI performance of the BRIC countries continued in 2007. China, by far the leading emerging market destination of foreign direct investment, received $67.3 FDI inflows last year. Combined with the $54.4 FDI reaching Hong Kong (chiefly comprised of foreign capital ultimately destined for the mainland), the PRC ranks second behind the US in the bidding for foreign direct investment.

The Russian Federation received $48.9bn FDI in 2007, a 70.3% increase over the previous year.

Brazil, which has traditionally underperformed in the FDI sphere relative to its size and resource endowment, experienced a near-doubling of inbound foreign investment between 2006 and 2007 ($18.8bn to 37.4bn). India remains the laggard of the BRIC

group, attracting $15.3bn inbound FDI last year.

A recent study by the Economist Intelligence Unit (*World Investment Prospects to 2011*) signals the growing prominence of the BRIC countries as foreign investment hosts in coming years. The unit forecasts average annual FDI inflows to China and Hong Kong of $134.8bn, behind the US ($250.9bn) but ahead of the UK ($112.9bn) and France ($78.2bn). Russia and Brazil are projected to receive annual FDI inflows of $31.4bn and $27.5bn respectively, while inbound investment reaching India is expected to rise to $20.4bn per year.

Brazil

A number of leading multinational corporations have been active in Brazil for decades. The country's size, resource endowment, industrial base and geographic locale offer huge rewards for foreign investors. But a variety of factors (high levels of corruption, acute income inequality and a long history of political-economic instability) has hindered Brazil from realising its FDI potential.

While Brazil is unlikely to attain Chinese FDI levels, recent developments bode well for the country's ability to boost foreign direct investment. The Lula government's economic reform program has improved business conditions, while its privatisation campaign has spurred cross-border mergers and acquisitions in financial services, telecommunications and other sectors.

Brazil's automotive, food and beverages and retail distribution sectors are receiving increasing amounts of FDI. The Brazilian biofuels industry, which has become a world leader amid growing demand for renewable energy products, is also garnering significant attention from the foreign investor community.

Russia

The Russian Federation is a late comer in in the foreign investment as the regulatory and legal systems were not well established until the late 1990's.

While Russia has now surpassed the Central and Eastern Europe Countries (CEE) countries as an FDI host, the Russian business environment remains less attractive to foreign investors than the EU accession states that are converging toward Western-style legal/regulatory norms. Compounding, this is the delay in Russia's entry to the World Trade Organisation has stalled the country's adoption of intellectual property protections and related reforms critical to the foreign investor community.

Russia's centrality as an oil and gas supplier to Europe indicates growing inflows of hydrocarbon-related FDI. Additionally, Russia's rising per capita income and expanding middle class are stimulating foreign investment in non-energy sectors, including banking, consumer goods and real estate. Manufacturing-related investment in Russia remains small (about 7% of inbound FDI), but is likely to grow in the coming

years as Russian manufacturers seek foreign investment to bridge the competitive gap with China, Brazil and East Central Europe.

India

At $66bn, India's inbound FDI stock is the smallest of the BRIC countries, and smaller than the FDI stocks of other, far less populous emerging economies like Chile, Czech Republic and Hungary.

India's weak performance in the FDI arena demonstrates several factors:

- India's belated opening to foreign investors, which didn't occur until 1990 and which enabled China to exploit first-mover advantages in manufacturing-related FDI

- The low FDI intensity of off-shored IT services, which have become the bulwark of India's foreign investment sector

- A notoriously balky and inefficient bureaucracy, which raises entry costs for foreign investors

- A poorly developed infrastructure, which frustrates transportation, logistics and supply chain management by foreign manufacturers and distributors

The central challenge facing India is leveraging the country's success in IT services to stimulate technology-intensive investment in manufacturing and other non-service sectors. To that end, the Indian government has accelerated privatisation of state-owned companies, launched major investments in infrastructure and created special economic zones to attract export-oriented FDI. This is a critical component for India's PPP program.

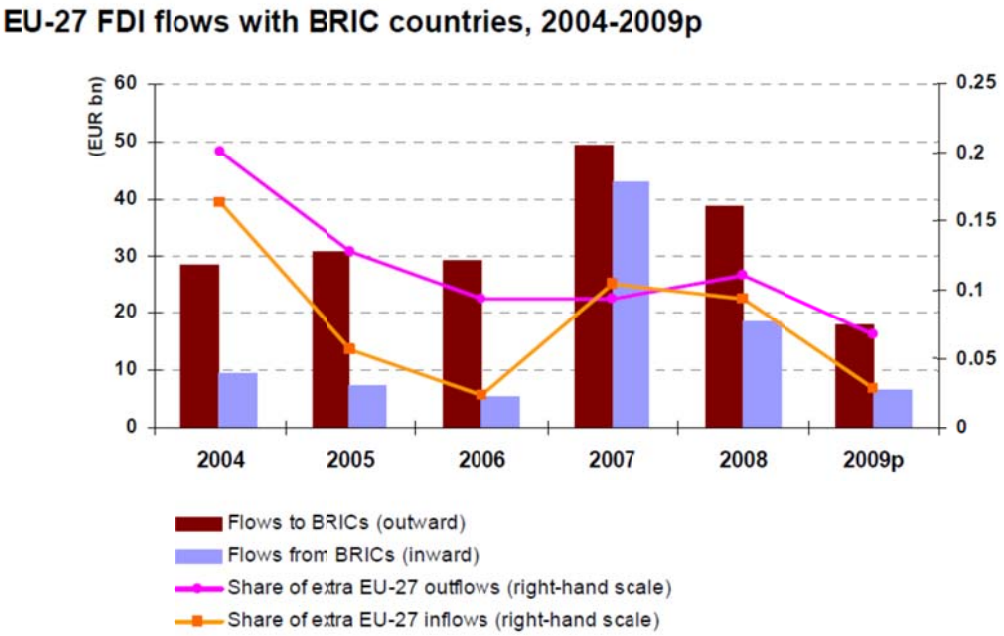
China

The Foreign Direct Investment to China is reflected in the manufacturing sector. When the WTO-mandated liberalisation of Chinese foreign investment this stimulated FDI in financial services, real estate, construction, and other non-manufacturing sectors.

This advantage in manufacturing has eroded slightly based on rising wages in Shanghai and other coastal regions precipitating a diversion of manufacturing-related FDI to Vietnam and other lower-cost locales. Overall, manufacturing remains the centrepiece of China's foreign investment sector, accounting for nearly 70% of the country's inbound FDI stock. China's large installed manufacturing investments are represented in automotive, consumer durables, garments, microelectronics, and telecommunications.

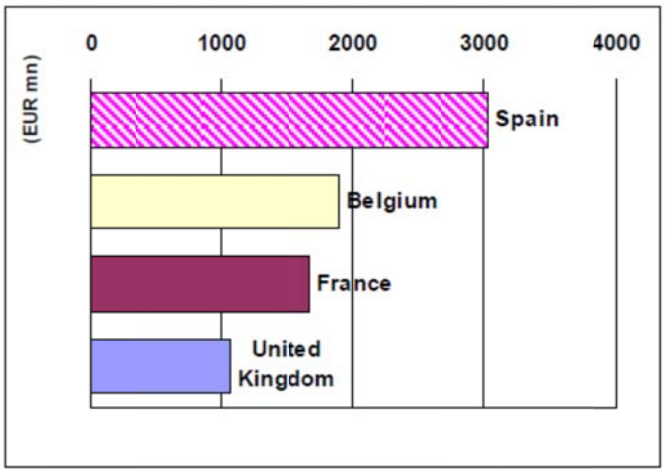
PRIMARY FDI INTO BRIC AND PRIMARY COUNTRIES

The confidence in foreign investment into BRIC's countries is highlighted in the following chart demonstrating the historical demand and the continued interdependence between the developed and emerging markets.

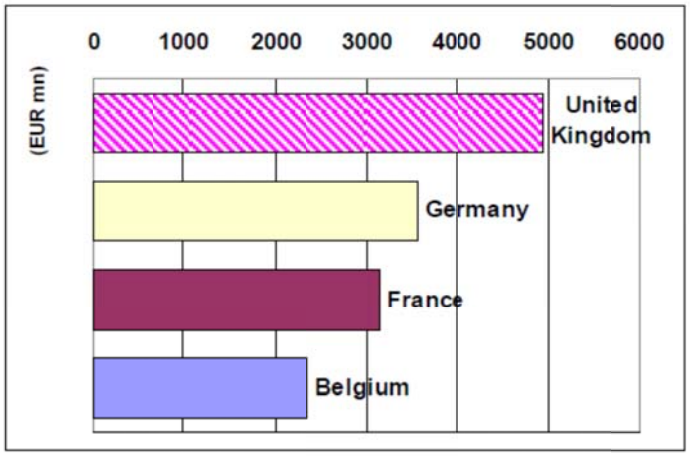


As the global markets recognize the opportunity in BRIC's the countries investing most heavily in the different emerging markets are as follows:

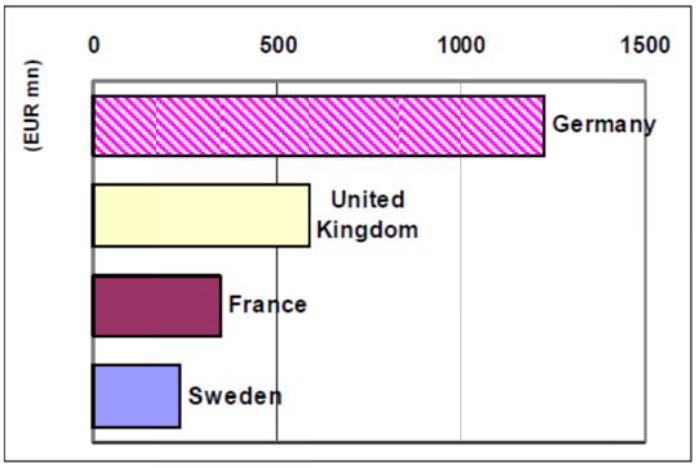
FDI INFLOWS TO BRAZIL FROM EU COUNTRIES - 2008



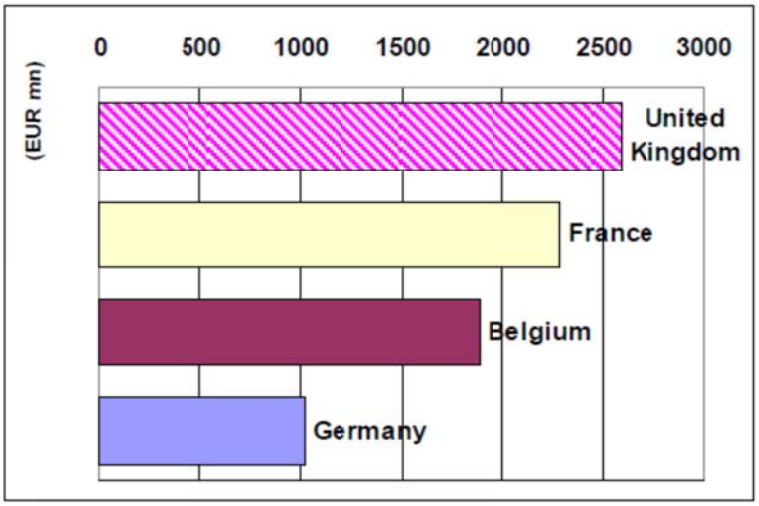
FDI INFLOWS TO RUSSIA FROM EU COUNTRIES – 2008



FDI INFLOWS TO INDIA FROM EU COUNTRIES – 2008

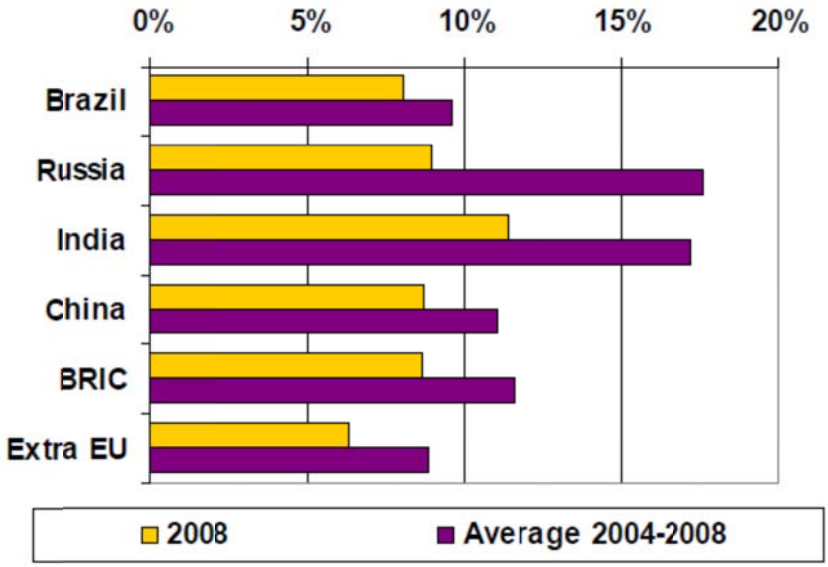


FDI INFLOWS TO CHINA FROM EU COUNTRIES – 2008



The demand for BRICS and the global community interest in these emerging markets is best exemplified by returns over the past several years that reflects the risk/reward relationship.

RATE OF RETURN ON BRICS INVESTMENT - 2008



Overall, global and EU-15 investments in the BRICs, as measured by the number of investment projects, were resilient to the global crisis until 2008. With regards to the current economic downturn and the expected drop in global FDI, the BRICs may have the advantage in the following areas.

- First of all they are large economies where FDI is mainly attracted by the local markets with growth expectations above world average;
- Local economic growth especially in China and India will allow for FDI to grow if companies from crisis-hit countries are in the position to invest;
- Larger multinationals may increasingly concentrate on the very few countries in the world where they can expand revenues and returns, such as China, India and Brazil, and shift investments accordingly;
- For European companies the expansion to the BRICs remains a major attraction. Due to the size of the BRICs and their distance to Europe;

As part of the overall investment programs for individual countries the United States leads the FDI with most EU countries as follows:

Investment projects in the BRICs, by source country

Source country	2003	2004	2005	2006	2007	2008	2009	Total
USA	705	882	843	957	732	926	41	5,086
Japan	366	487	281	273	194	332	12	1,945
Germany	212	216	224	259	242	289	13	1,455
UK	145	202	170	259	201	259	22	1,258
France	117	135	133	183	161	227	10	966
Italy	66	85	80	77	71	108	6	493
South Korea	80	90	83	84	69	83	3	492
Taiwan	88	70	43	78	62	64		405
Netherlands	65	66	46	63	68	90	1	399
Hong Kong	85	50	46	65	62	81	6	395

Source: FDI Intelligence from Financial Times Ltd.

SUSTAINING GROWTH WITH PPP'S

The ability of Brazil, Russia, India and China to sustain robust growth rates and strong FDI inflows in the global economy is highlighted by both the weaknesses and strengths

of each country.

Brazil has strong population base, natural resources, industrial base and geographic global centrality as positives. The negatives are high levels of corruption, income inequality and a long history of political-economic instability.

Russia has significant oil and gas, and natural resources (timber) as well as a rising per capita income, expanding middle class, and close proximity to Asian markets as positives. The negatives are similar to Brazil with high levels of corruption, income inequality and a developing private market with economic instability.

India's has a strong educated population base, advanced communications technology for IT, and created special economic zones as positives. The negatives are inefficient bureaucracy and inadequate infrastructure for transportation, logistics and supply chain management.

China has a skilled labor base, well developed manufacturing base and government support for large public projects. The negatives are political and administrative bureaucracy.

The transition for these countries and growth is demonstrated in the continued and projected long term inflows from foreign investment with the catalyst being the commitment to the PPP's programs demonstrated by each country.

In order to maximize the potential for investment and sustained growth the following conclusions are made to instil confidence for the global participants:

- Legal Authority – Vote or Decree;
- Transfer Right – Property Rights to be Granted (Freehold v. Partial Interest);
- Assets Protection – Title and Insurance / Evaluation/ Efficiencies of Systems;
- Tariff/Tax- Maintain existing infrastructure and services system;
- Transparency – Protectionism v. Competition

The results of implementing PPP's are:

- Cashflow – Most Emerging Markets have limited internal resources and therefore must sell State assets to provide of the public good. If internal resources exist (oil, gas, lands) then these assets must be marketable to supply

revenue.

- Credibility – Expansion of GDP forces need to engage other economies. The World is a small place to do business.

- Competition – Global investment in real estate, nature resources, labor pool, or local assets (chattel) requires access to compete for currency

PPP's and the investment in infrastructure are both a cause and a consequence of economic growth. Infrastructure contributes to growth, because this mutually reinforcing relationship itself helps to support higher demand for investment. The role of infrastructure's role in integrating countries into the global economy is critical especially for BRIC's. The BRICS countries can each maximize their individual strengths by using the commitment to Public Private Partnerships. Investment in PPP's also raise the quality of human capital, which is a key factor in our long-term growth models and assist in the reduction of income inequality.

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