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Globalization and the Real Estate Industry: Issues, Implications, Opportunities

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Globalization and the Real Estate Industry: Issues, Implications, Opportunities[1]

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Introduction

Real estate has historically been viewed as a local phenomenon. Builders and investors for decades prided themselves in their ability to find the best "location, location, location" based on their local knowledge. It is among the least "tradable" of products, in the sense of being physically unmovable, even though it can be bought and sold both domestically and internationally. This combination of local knowledge and predominantly local tradability was the primary reason why discussions of globalization in the 1990s and earlier, overlooked the real estate industry as a possible participant in the ongoing phenomenon of increasing global economic integration. Although an occasional headline would be grabbed by a foreign purchase of a local landmark (New York's Rockefeller Center, Arco Plaza in Los Angeles, and even the Pebble Beach resort), the business itself remained largely local, with US firms dominating in US markets, and foreign firms in foreign markets.

In the last decade, however, globalization has increasingly involved the internationalization of services sectors as much as of manufacturing, and the various sub-sectors of the real estate industry have been enthusiastic participants in this global surge. Builders, brokerage firms, consulting and services firms, real estate finance firms and investors have extended their area of operations beyond local markets to a world-wide base.

Several factors have led to this transformation of the industry. Technological changes have extended the geographic reach and weakened the nexus between "local" and "location". The increasing

[1] This paper is part of a larger set of studies on how globalization is affecting the US real estate industry. The authors of this report have benefited from the insights of our colleague Dwight Jaffee, and the research assistance of Jackie Begley, Nathan George and John Tang. We are also grateful to Robert Edelstein and Nancy Wallace for comments and suggestions.

openness of formerly closed economies in the developing world has significantly expanded opportunities for real estate firms across the globe. Liberalization of business licensing, taxation and property ownership regulations related to foreign investors and firms, in some of the largest emerging real estate markets, further facilitates the participation by US real estate firms in global opportunities.

On the financial investment side, securitization and development of a variety of different financial instruments all over the world lend liquidity and tradability to both real estate equity and debt. Foreign investors are able to invest in these financial assets in the US, while diversification motives and the search for a different risk-return profile lead many US investors to add foreign real estate physical assets or foreign real-estate-related financial securities to their portfolio. The increasing integration of global financial markets, in their turn, tends to impact the pricing of these assets.

On the demand side, many of the largest consumers of real estate have become global. Multinational manufacturers, their distributors and suppliers, and now increasingly service sector firms, ranging from financial to legal, have global footprints. Major US real estate service firms have accompanied these clients abroad, expanding the types of services provided, as well as their geographic coverage. Moreover, offshoring, or the transfer of production facilities, back-offices and R&D centers by US multinationals to developing countries has given a major boost to commercial real estate in those countries. Even residential real estate brokerage firms have followed an increasingly mobile expatriate population into the international arena, forging alliances with companies throughout the globe to provide relocation services and worldwide access to residential markets. Additionally, the emergent middle-classes in Asia and elsewhere, with their pent up demand, have given a boost to residential and retail real estate activity, providing a new range of opportunities for international real estate firms.

Globalization, in general, and offshoring in particular, have also had direct and indirect effects on the supply chain for real estate construction. Offshoring, made possible by low labor costs in developing countries and advances in transportation and shipping, has led to the global sourcing of inputs, such as steel and wood products. At the same time, US builders are competing for inputs, equipment and resources in the face of growing worldwide demand led by the emerging economies of Asia. China has become both a leading producer and consumer of many building materials, and questions exist as to whether China's growth will lead to excess capacity or excess demand in coming years. Either could significantly affect the building process and real estate prices in the US.

This article is a preliminary look at the impact of globalization on the US real estate industry. We set the context for the study by defining the major elements of the real estate industry, briefly reviewing relevant literature, and discussing the data used in the paper as well as data limitations. The paper then focuses on several aspects of globalization in the US real estate industry, combining information from published sources, supplemented with interviews and observations of real estate firms. We begin with a description of trends in cross-border investments in real estate and portfolio investments in real estate related securities. We next address issues related to global sourcing and trends in the real estate supply chain. We review future global opportunities for the real estate industry in the context of comparative international statistics and global demographic changes. We then illustrate how these trends affect firm activities and structure, drawing on information from a company database, firm web sites, annual reports, interviews, workshop comments, and a survey. We conclude with a discussion of the questions raised by trends in globalization, some challenges to global opportunities, and future research directions.

Defining the US Real Estate Industry

The real estate "industry" spans across several industrial categories, including individual sectors within the broader groupings of services, finance and construction. The sector defined by the North American Industrial Classification system as *real estate* (NAIC 531) includes only real estate services such as leasing, brokerage, management and appraisal. This segment of the industry employed 1.5 million nationwide in 2006 (just over 1 percent of the US employed labor force).

Table 1
Major Real Estate Employment Categories, Employment Levels and Growth

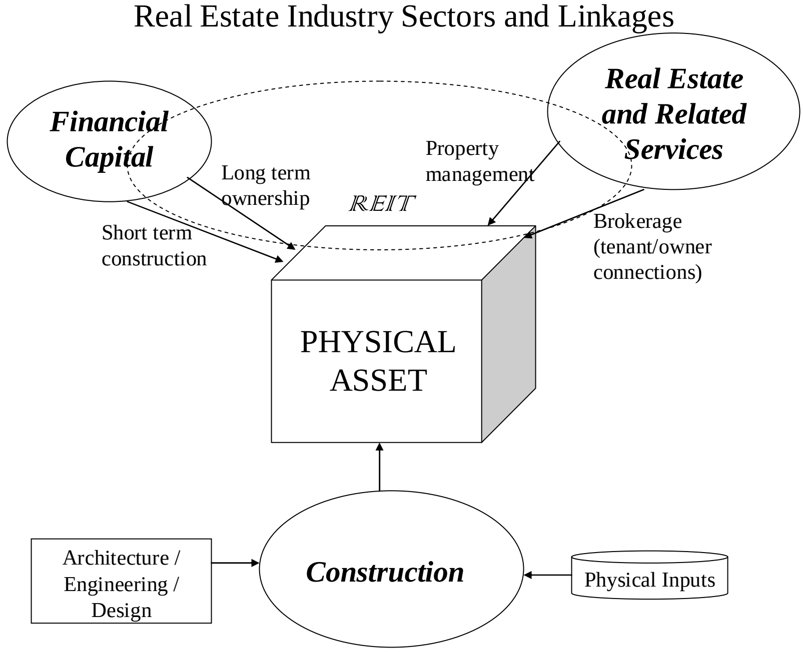
NAIC Code	INDUSTRY NAME	Employment 2006 (1000s)	1995-2000	2000-2006
	Total Nonfarm	136174	2.4%	0.5%
2360	Construction of buildings	1806	4.3%	1.7%
2361	Residential building	1017.5	5.5%	3.6%
2362	Nonresidential building	788.5	3.1%	-0.4%
2372	Land subdivision	96.7	2.4%	1.4%
2380	Specialty trade contractors	4899.6	5.8%	2.5%
	Finance Related	546	8.3%	9.2%
5222	Real estate credit	354.8	8.4%	8.0%
5223	Mortgage and nonmortgage loan brokers	146.2	8.8%	15.7%
5259	Other investment pools and funds*	45	7.1%	2.9%
5300	Real estate and rental and leasing	2179.6	2.7%	1.4%
5310	Real estate	1503.3	2.2%	2.3%
5311	Lessors of real estate	599	1.0%	-0.2%
5312	Offices of real estate agents and brokers	381	3.3%	5.2%
5313	Activities related to real estate	523.3	3.3%	3.6%
5313	Real estate property managers	438.9	3.3%	3.1%
5313	Offices of real estate appraisers	41.5	3.5%	4.4%
5313	Other activities related to real estate	42.8	3.3%	8.0%
	Real estate related professional services	1521.4	4.5%	1.8%
5413	Architectural and engineering services	1385.6	4.4%	1.9%
5414	Specialized design services	135.8	5.8%	0.6%

Source: Authors from Bureau of Labor Statistics employment series.

Real estate finance, including the mortgage industry, related financial activity, and real estate investment trusts, employs an additional half million. Building construction and land subdivision firms are also major players in the real estate industry, with 1.8 million employees in 2006. An additional 1.5 million were employed in real estate related professional services such as architecture, engineering and design. The overall employment in the real estate cluster is therefore close to 5 million, accounting for about 3.5% of the employed labor force. (See Table 1).

Figure 1 shows the relationships among these different segments of the real estate industry. An individual type of firm can overlap several types of activities. For example, REITs include a financial ownership structure that adds liquidity to what was once a highly illiquid asset. At the same time, many REITs are heavily involved in many activities related to the physical asset, from land assembly to design and construction to building management. The industry was a leader in job growth both in the last half of the 1990s and the first 6 years of the new millennium.

Figure 1
Real Estate Industry Sectors and Linkages



When it comes to the international operations of US firms, a significant amount of real estate related activity gets subsumed under other categories. Real estate developers and service providers work in tandem with multinational companies and other clients to ensure that the entities are "housed" wherever they are located globally. Thus, an investment by a corporation in a company facility abroad, whether in manufacturing, warehousing, retail or office space is also a real estate transaction, and real estate professionals may be employed within these firms to manage transactions and daily operations. There is also a real estate "component" to transactions, both domestic and international, that spill over into public sector infrastructure and natural resources.

Short Literature Review on Globalization and Real Estate

Academic literature on the interaction of globalization and real estate is sparse. In economics, for example, international economics and real estate economics co-exist in virtually isolated arenas, with rare cross-references, with some notable exceptions, such as Henderson (1982), and the emerging literature on the "new economic geography," which deals with the interplay between cities, urban agglomerations and international trade (Fujita, Krugman and Venables, 2001). Ades and Glaeser (1995), and Krugman and Livas-Elizondo (1996), for example, are among some of the papers that link urban economics, international economics and trade policy.

There is somewhat more literature on the finance side of globalization and real estate, particularly related to the issue of portfolio diversification and real estate market co-movements. Eichholtz (1995) finds that international property rates of return covariances are unstable, which may limit their usefulness in standard portfolio allocation models, and Goetzmann and Wachter (1996) perform a mean-variance analysis for a sample of international office markets and identify three clusters of office markets that tend to "move together", which may impair investor ability to diversify across international markets. However, Conover et al (2002) show that foreign real estate investments provide diversification benefits beyond that obtainable from foreign stocks. Hoesli et al (2004) confirm the portfolio diversification benefits of including real estate assets in a mixed-asset portfolio, but Stevenson (2000), on the other hand, shows that the potential diversification benefits that could arise from investing in real estate securities are generally not statistically significant. Bardhan, Edelstein and Tsang (2007) find that a country's real estate security excess (risk-adjusted) returns are negatively related to its openness providing further evidence of increasing global financial integration, its interplay with the real estate sector, and the tendency to equalization of returns after adjusting for country and currency risks. In a paper employing explicit variables form international economics in real estate related research, Bardhan, Edelstein and Leung (2004) discover that openness of national economies has a positive impact on urban residential rents in 55 cities around the world.

A number of studies have addressed newly emerging mortgage markets, but there is little academic research on the interaction between US and other developed country mortgage markets and mortgage systems in emerging economies, or on international investments in mortgage security instruments. Deng, Zheng and Ling (2004) assess the early experience in China with a mortgage system dealing with different borrower risk profiles than in developed countries. Ong (2005) emphasizes the variety of experiences with mortgage instruments in Asian markets, from India to China to Hong Kong, pointing to the small size of these markets and the growth potential. At the US end, Jacobides (2007 forthcoming) finds that despite a US mortgage industry structure that makes international servicing possible, local institutional characteristics of developing countries have resulted in these ventures being problematic. The impact of global capital imbalances and of Asian capital inflows into US treasuries and mortgage backed securities on US interest rates, mortgage rate and the housing market is another subject where research is still in its initial stages.

Most of the analyses of globalizing real estate services come from trade publications, rather than from academic literature. Giordano (2003), for example, concludes that global expansion of building activity and financing has led to greater need for consistent project management, and Edge (2001) describes issues relating to appraisal standards as property investments globalize. The role of a small number of real estate investment trusts in providing global, retail development expertise is covered in Luxenberg (2007a). Rushmore (2007) analyzes the tourism sector and concludes that US hotel developers will have stronger opportunities by providing services in the US to middle class tourists from developing countries, rather than by becoming developers and operators of hotels within the emerging economies themselves. These studies are of value in showing the perspectives of knowledgeable participants in the industry.

The effects of globalization on specific aspects of local real estate markets have been addressed through a number of academic case studies. Lichtenberger (1993) identifies the twin issues of insufficient supply and rapid increase in prices in fast-opening urban centers. The emerging opportunities and continuing risk of real estate investments in Mexico, associated with changing institutional structure, is described by Jones, Jimenez and Ward (1993). Sheng and Kirinpanu (2000) argue that expanded access to international capital in Thailand led first to a housing boom, followed by a collapse with financial repercussions. The interplay of global investors, local firms, and the local institutional structure can have different implications depending on the geographic, cultural and political setting, as demonstrated by case histories in Mumbai (Nijman 2000) and Shanghai (Zhu, Sim and Zhang 2006).

The published literature leaves many gaps in the research agenda, as well as quite a few questions unresolved. Many of the unexplored questions reflect the lack of reliable data on the global aspects of real estate, which we address in the next section.

Measuring Globalization in Real Estate

Globalization of an industry usually encompasses three different kinds of activity: first, an international trade in goods and services that the industry produces; second, cross-border investment in facilities for production, sales, distribution of the output or of some element of the supply chain; and third, cross-border portfolio investments in the financial securities of that industry. We use several approaches to measure and track the degree of globalization of each of these aspects of the real estate industry.

We rely on published statistics from the US Bureau of Economic Analysis and the US Treasury Department for foreign purchases of US Treasuries, Agency securities and other financial instruments, and for quantitative measures of foreign direct investment by US real estate investors abroad and by foreign investors in the US. [2] The data on financial flows appear to be consistent and reliable, although not always at the level of detail preferred by academic researchers. The data on direct investment flows are quite problematic. The reported real estate measures for FDI and DIA appear to refer to a very small proportion of actual cross-border investment in real estate assets. We briefly address this in the report but will address the problem in much more detail at a later stage in our study of real estate globalization.

Data on employment and output in various sectors of the real estate industry come from the US Bureau of Labor Statistics and the US Bureau of Economic Analysis. Value added and gross product measures for real estate show inconsistencies with employment measures. We concentrate on employment aspects in this report and leave closer scrutiny of output and value added for a later stage of the study.

Indices of building material supplies and prices are drawn from trade organization data as well as data compiled by the Bureau of Economic Analysis and the Bureau of Labor Statistics. We also draw on international demographic and economic statistics published by the United Nations and the World Bank for data regarding potential demand in emerging economies.

[2] Defined by the US Dept of Commerce as ownership or control, directly or indirectly, by one foreign person, or entity, of 10 percent or more of the voting securities of an incorporated domestic business enterprise or an equivalent interest in an unincorporated domestic business enterprise.

To understand company structure, we analyze company data from OneSource database to determine the extent to which large real estate firms are accessing global markets, the degree to which their ownership structure has become global, and the extent to which they have established global branches. To augment this information, we conducted a brief, preliminary survey of firms on the Fisher Center for Real Estate and Urban Economics Policy Advisory Board, to determine current and future plans for global activities and to explore the motivations behind expanding globally.

International Investments in Real Estate and Real Estate Finance

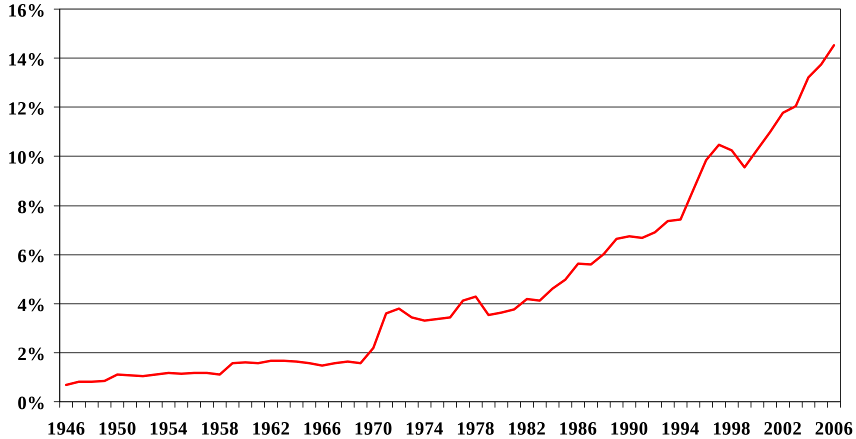
The lack of "international trade" in real estate is now being compensated for by increasing cross-border investments in real estate, international development projects, multinational real estate ventures and integrated township/housing developments, not just in markets traditionally hospitable to foreign investments, such as Europe and North America, but increasingly in the real estate markets of the developing world. The motivations of foreign investors have been varied, and include stable and solid returns, a quest for diversification, as well as the role of US real estate and other assets as a refuge of "last resort".

Foreign direct investment (FDI) in US real estate has had a long history, but unfortunately the official data seriously underestimate foreign direct investment in US real estate and US real estate investment abroad. According to official US Department of Commerce data, by 1990 there was only $30 billion (on a historical cost basis) invested in US real estate by foreign individuals, firms and organizations. Except for a momentary dip from 2002 to 2003, FDI has been rising steadily, as have the official numbers on direct investment by US investors in foreign real estate (direct investment abroad or DIA) since 2002.

We believe the real estate figures for both FDI and DIA understate the extent of foreign investment in physical real estate, because company investments in facilities are frequently counted as being part of the investment of the company in its main line of business/industrial sector (e.g. manufacturing), rather than as a real estate investment. As a rough guide, an examination of the domestic investment figures of the US national accounts shows that investment in structures (or the real estate component), on average accounts for close to one-third of all business investment. The overall figures for the 2005 year-end position for FDI in the US and DIA by the US for all sectors are $2.8 trillion and $3.5 trillion, respectively, in market value terms. The real estate sector accounts for a negligible share of the total, going by the official figures--in the range of one to two percent. Applying the "one-third rule" mentioned above, reflecting the real estate content of investments in other sectors, would increase the figures for international investments in real estate by an order of magnitude.

Global capital flows have been of a significant magnitude for decades, and recent years have seen a major increase in cross-country portfolio investments in both equity and debt instruments, particularly in mortgage related fixed income instruments. Figure 2 shows the increasing role played by foreign central banks, organizations and investors in the total US credit market (in addition to treasuries and agency backed securities, this also includes corporate and municipal bonds, mortgages, other loans and consumer credit) in the post-war period. In addition to playing a big role in US credit markets, non-US entities also own a significant portion, approximately 15%, of the total US equities outstanding.

Figure 2
Total Credit Market Debt Held by Rest of World as Share of Total US Credit Market Debt Outstanding; 1945-2006



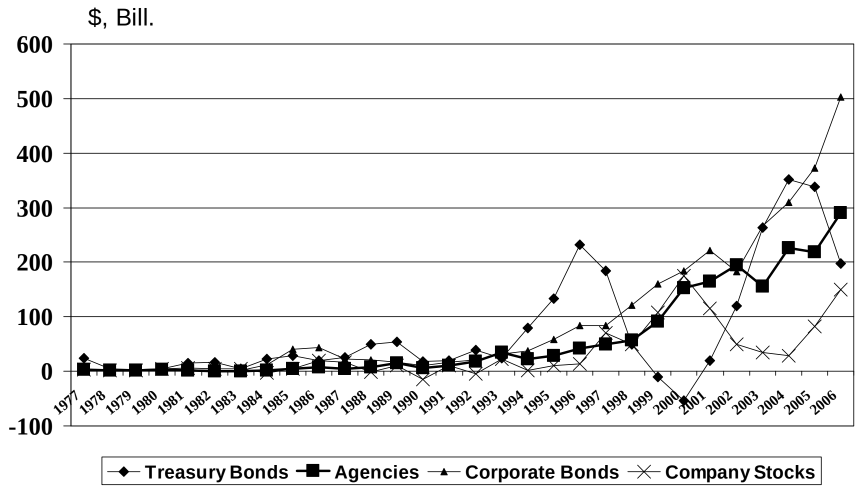
Source: Flow of Funds; Table L 1

There are differing geographical patterns for foreign investments in US physical structures and in US mortgage-related financial securities. The same problematic FDI data that give an undercount of overall foreign investment in real estate show the developed European countries, such as Netherlands, the UK, Germany and Switzerland, and Japan as the major investors in real physical assets. This pattern is similar to that of the country of origin of foreign investment in other sectors of the US economy, whether they are in manufacturing or services. In contrast to the pattern of country-wise holdings in real estate physical assets, where the developed, industrialized countries are the major players, China has been the largest investor in US agency bonds, issued by Government Sponsored Enterprises, such as Fannie Mae and Freddie Mac (see Table 2).

Table 2 Top 10 Foreign Holders of US Securities, June 2005							
Treasury Bonds		**Agency Bonds**		**Corporate Equities**		**Corporate Bonds**	
Country	**Share***	**Country**	**Share***	**Country**	**Share***	**Country**	**Share***
Japan	35%	China	20%	UK	9%	Belgium	13%
China	16%	Japan	15%	Canada	8%	Luxembourg	12%
Taiwan	4%	Russia	8%	Japan	6%	UK	12%
S Korea	3%	Belgium	5%	Netherlands	6%	Cayman Is.	10%
UK	3%	Cay. Is.	5%	Cayman Is	6%	Japan	6%
Germany	2%	S Korea	5%	Luxembourg	5%	Ireland	5%
Hong Kong	2%	Luxembourg	5%	Switzerland	5%	Bermuda	4%
Luxembourg	2%	Taiwan	4%	Singapore	3%	Canada	3%
Cayman Is.	2%	Bermuda	3%	Germany	3%	Netherlands	3%
Switzerland	2%	Mexico	3%	France	3%	Switzerland	3%
Source: http://ustreas.gov/tic/fpis.html *Share of total foreign holdings.							

Table 2 gives shares of US financial securities held by various countries as a percentage of the total held by foreigners. Furthermore, the absolute amounts are quite significant. For example, out of a total of $6.6 trillion of overall outstanding agency debt, close to $1.2 trillion (or about 18%) is held by foreign entities. Net annual purchases of treasury bonds and company stocks have fluctuated, although rising on average over the past decade, while there has been steady growth in the foreign purchase of both agency and corporate bonds. Over the last few years, there has been a trend on the part of foreign investors, particularly Asian central banks, to invest more in agency bonds and mortgage backed securities. Net annual foreign purchases of US treasuries peaked in the year 2004 at $350 billion and have come down to $200 billion in 2006, while net purchases of agencies by foreigners have seen a steady rise, going from around $150 billion in the year 2000 to nearly $300 billion in 2006 (see Figure 3).

Figure 3
Net Annual Purchases by All Foreigners of US Securities



Source: http://www.ustreas.gov/tic/s1_99996.txt

A number of ongoing studies deal with issues relating to the foreign financing of US debt and its impact on US interest rates, including the mortgage rate. There is a general consensus that the major purchases of credit market instruments by foreign investors have been a factor in keeping US interest rates low, but there is a range of opinion regarding the potential vulnerability of the US financial system, in general, and the future course of the dollar, in particular.

Diversification and risk reduction possibilities for international real estate investors have increasingly lured them into new markets, and demand from endowments and pension funds for investments in foreign real estate are helping drive the trend. Some of the push is driven by a belief that overseas markets offer more opportunities and higher investment returns than US markets (Luxenberg 2007a and 2007b). There is some evidence that cross-continent investment can offer increased diversification, as shown by a study by Torto Wheaton Research on the correlation of rent within and between continents (Torto 2002). However, discussions among real estate investment executives and economists specializing in international finance indicate concern that geographic diversification may not always be forthcoming.[3] Indeed, connected to this trend of greater international participation by investors in most national markets is the phenomenon of financial market contagion. The Asian crisis of 1997 was an early indicator of the nexus between real estate and banking crises, on the one hand, and the interconnectedness of financial markets in the region, on the other.

Yet another aspect of globalization and its impact on the world of real estate finance is the demonstration effect and impact of the US institutional structure on real estate and mortgage markets in the emerging economies. Experts and policy makers in Asian countries, for example, are trying to model various aspects of their mortgage markets after the US mortgage markets, including the range of mortgage products, aspects of risk-based pricing, appraisal standards, secondary markets for mortgage backed securities, provision of affordable housing and mortgage insurance. (Allen, Chui, Maddaloni, 2004; Ong, 2005; Zhu, 2006; Deng, Zheng, Ling, 2004).

Global Sourcing and the Real Estate Supply Chain

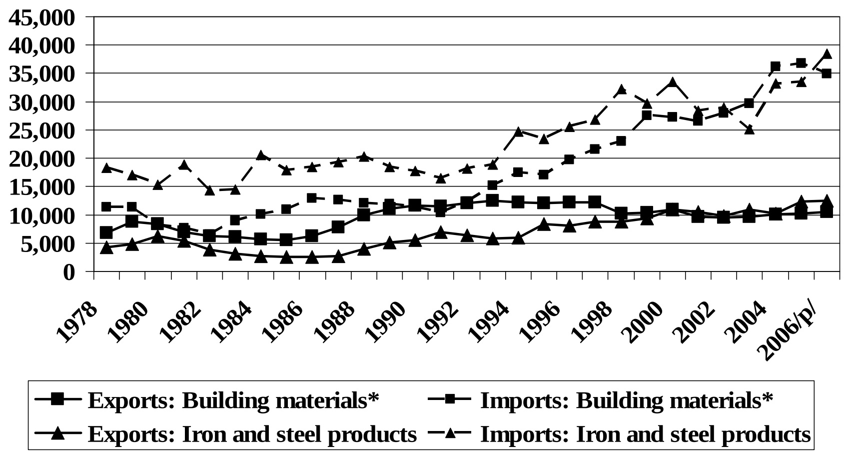
The supply chain for real estate is affected by two separate phenomena, both connected to globalization. The interplay of offshoring and real estate can be seen in the transfer of some back-office activities in the US real estate cluster itself, for example in design/architecture, real estate finance and property management, to design, finance and accounting firms in India. However, from the point of view of US real estate and construction firms, the possibility of offshoring some elements of their supply chain cost-centers to cheaper locations can potentially be a mixed blessing. The growth in emerging markets, partly fueled by offshoring of manufacturing and services jobs from developed

[3] Discussions at the Fisher Center for Real Estate and Urban Economics/Sloan Networking Workshop on Globalization and Real Estate, Berkeley, March 2, 2007--see Fisher Center for Real Estate and Urban Economics/Sloan Foundation 2007 for more information on the workshop.

countries, has led to a rapid growth in demand for mineral resources, building materials and other inputs, leading to a sizeable impact on global prices.

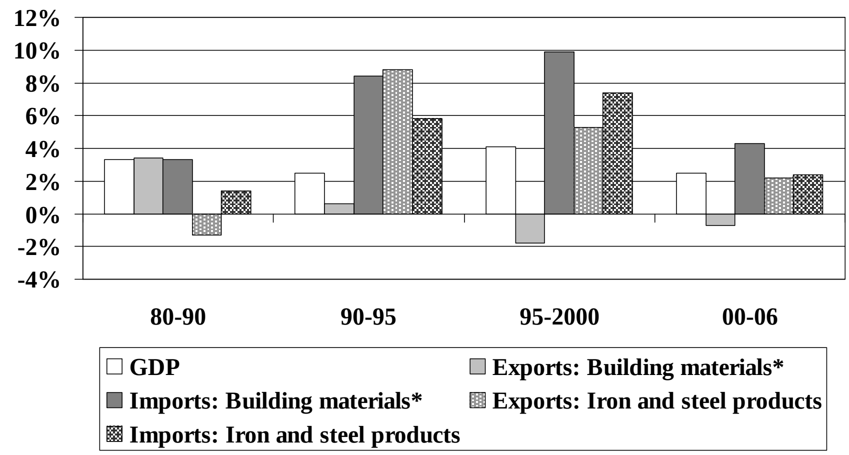
A few charts illustrate some of the trends taking place in the markets for key commodities. Figure 4 shows import and export trends for nonmetal building materials and iron and steel, adjusted for inflation using the Producer Price Index, from 1978 through 2006. Exports (by value, adjusted for inflation) are currently higher than they were in 1980 but lower than in the mid-1990s. Building material imports are more than 4 times their 1980 level and the rate of growth of imports accelerated sharply in the 1990s, as shown in Figure 5. This is comparable to the change in levels of overall imports in the US.

Figure 4
Import and Export Trends, Building Materials
1978-2006 ($ millions, 2006 base)



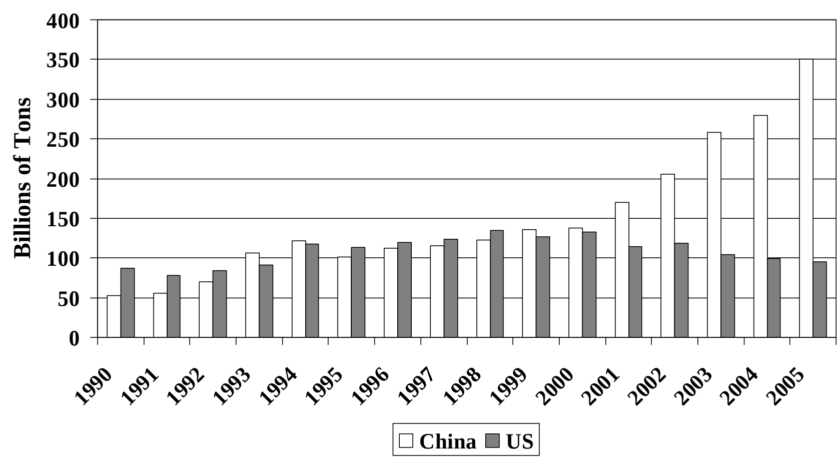
Source: US Bureau of Economic Analysis, International Transactions Accounts data; adjusted for inflation with the producer price index.
*except metals

Figure 5
Import and Export Growth of Building Materials Annual Rate of Change, Selected Periods



Source: US Bureau of Economic Analysis, International Transactions Accounts data; adjusted for inflation with the producer price index.
*except metals

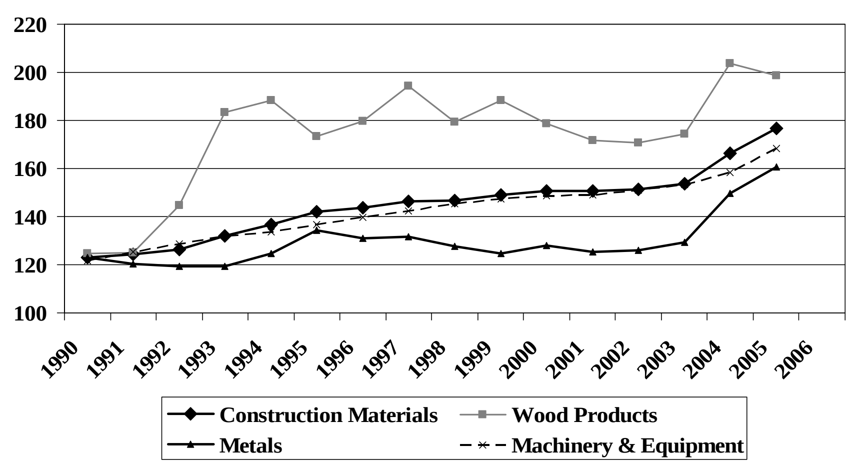
Figure 6
Steel Consumption, US and China, 1990-2005



Source: International Iron and Steel Institute

The increasingly global nature of the supply chain is reflected in consumption patterns as well as in import and export flows. The International Iron and Steel Institute, for example, reports a broad shift in relative levels of steel consumption between China and the US, as shown in Figure 6. Data also show that the global competition for limited key resources and materials has coincided with sharp increases in the prices of some building materials (see Figure 7). However, it is possible that the supply crunch, at least for some of the commodities, is temporary, and that the combination of efficient global allocations of plants, technological change and scale economies will boost globalizing supply and help meet the global growth in demand (Linneman 2006). In addition, discussion with real estate developers as well as a presentation on the real estate supply chain (Madhavan 2007) suggests that the proportion of inputs whose prices have been rising quickly on the global markets constitute a relatively small share of the total inputs used in the real estate sector (perhaps as low as 5%, based on an estimate from the US Economic Census), and that the key costs were labor costs. Developers attending the Fisher Center for Real Estate and Urban Economics/Sloan Foundation 2007 workshop concurred with this experience. The effect is likely to be different in the emerging economies where the proportion of labor costs is lower and that of inputs higher.

Figure 7
Selected Building Products Price Indices
1990-2005



Source: US Bureau of Labor Statistics; 1982=100.

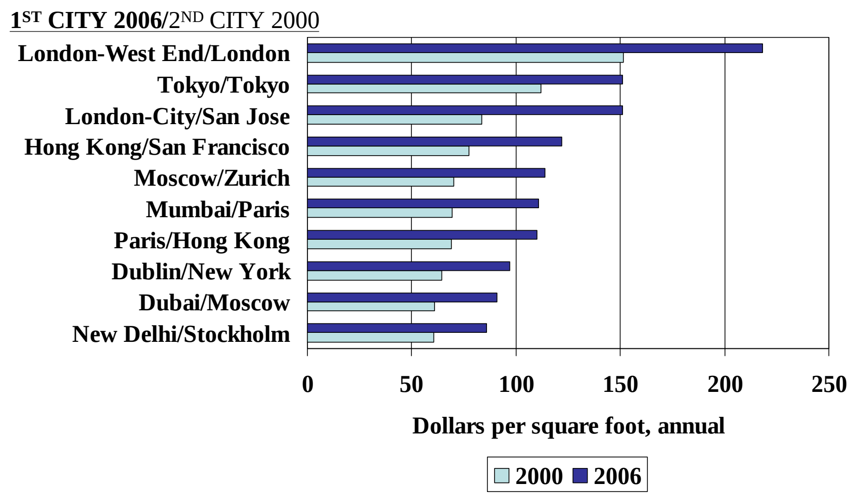
Economic Growth and Global Opportunities

Three broad factors have come together at the present moment in economic history and given rise to global real estate opportunities, particularly in the emerging economies. These include the rapid economic growth experienced by these countries, recent and projected demographic changes, both in developed and developing countries, and the phenomenon of offshoring. Opportunities have been created by the recent opening up of countries in the developing world, and also by the widespread fragmentation of real estate markets in emerging economies, the proliferation of family owned-traditional firms and the accompanying lack of professionalization in the sector. While the manufacturing and services sectors in these countries have always had at least a few firms which were efficient adopters of global best practices in organization and management, the real estate sector, in a sense, has been a late-comer to modernization itself, although even in the real estate sector, every developing country has examples of state-of-the-art hotels, office buildings and residential complexes.

The offshoring of white-collar jobs from the US to India and to several other emerging economies has gathered steam in the last decade or so, joining the outmigration of blue-collar manufacturing jobs to China. This has implications for real estate on both sides of the offshoring divide. The increasing possibilities of global sourcing more broadly have the potential of impacting urban space, form and structure, and consequently, the demand for real estate. An underlying reason for the formation of industrial, urban clusters and agglomerations has been the benefit derived from having upstream and downstream firms located close by. The growth in offshoring can therefore mitigate the need for sectoral clustering. Some potential impacts on the US office and industrial markets are discussed in Bardhan and Kroll 2003. Of course, this process can go hand-in-hand with a cluster developing at the receiving end, as with the growth of the high-tech oriented urban metros of Bangalore and Hyderabad in India, and in a number of cities in China.

Countries at different stages of development offer opportunities for the introduction of new real estate products and services. A comparative look at office markets across a group of global cities underscores the broad range and diversity in prices and illustrates some of the trends in the global economy. Figure 8 shows relative leasing costs for office space for the ten most costly markets worldwide in 2000 and 2006.

Figure 8
Top 10 Global Office Markets by Occupancy Costs
2000 and 2006

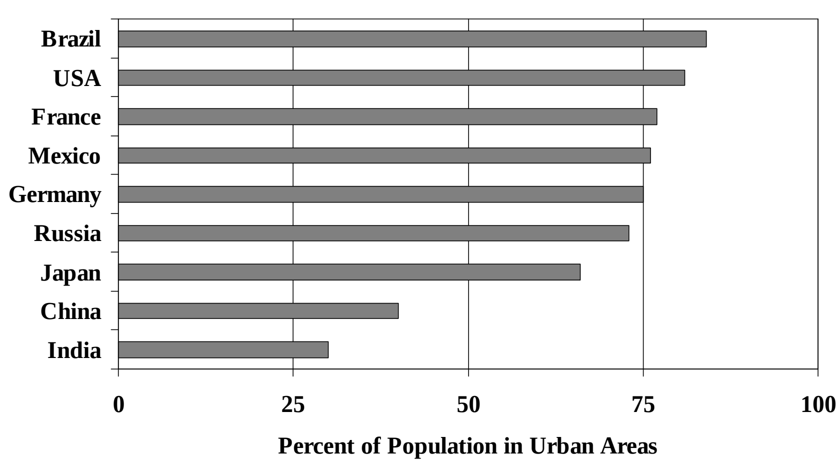


Source: Grubb & Ellis Real Estate Forecast 2007 and unpublished data 2002.

The change in the composition of the leading office markets between 2000 and 2006 demonstrates how quickly urban commercial real estate markets in emerging economies can become part of the global bidding process. Places like Mumbai and New Delhi were not even on the list of Grubb and Ellis' top 60 markets in 2000 or 2001. Status on the list can change quickly - Three US markets made the top ten in 2000, riding on the coattails of the dot-com boom and the related financial boom, and San Jose was the third most expensive metro office market worldwide; by 2006, however, no US market was in the top 10. The US markets that were in the top 10 in 2000 are not shown in Figure 7 because they are no longer in the top 10--midtown New York had the highest US rents, at $76, San Francisco rents were down to $41, and San Jose to $31.

One of the key areas of opportunity for firms from developed countries, and from the US in particular, is in the fast growing economies of Asia. India and China, for example, still have the majority of their population in rural areas, in contrast to more advanced economies, where more than three fourths of the population resides in urbanized areas (See Figure 9). Strong, regionally disparate growth in key urban areas in both countries is driving domestic, internal labor mobility, and together with the burgeoning middle-classes is responsible for an upsurge in demand for residential real estate, in spite of the high housing price to income ratio, relative to the industrialized countries. In addition to rapid growth and urbanization, recent financial reforms and developments have resulted in greater availability of mortgages at the relatively low, global interest rates.

Figure 9
Percent of Population in Urban Areas
Selected Countries 2005



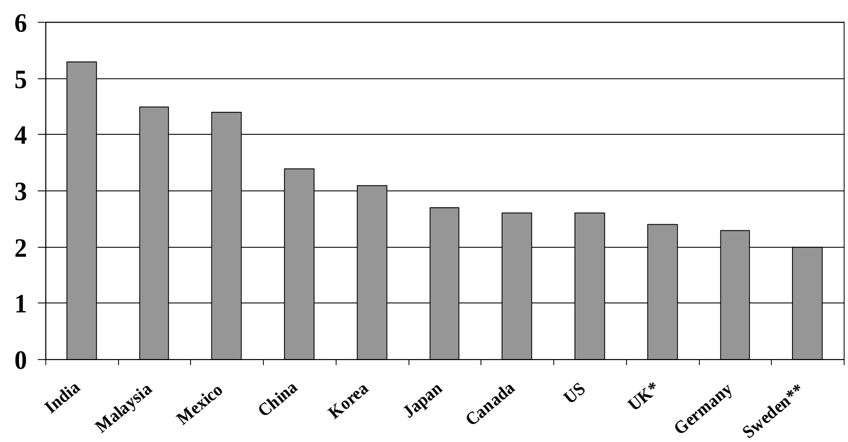
Source: World Bank

At the same time, a number of factors have led to an increase in demand for all other categories of real estate (Conner, Halle, 2006; Conner, Liang, 2006). Higher tax revenues for the governments have inspired serious spending on many infrastructure projects, such as highways, dams, and bridges. Greater disposable incomes, at least in a certain segment of the urbanized upper middle-classes, and emergent consumerist attitudes have spurred a retail boom; and increased internal and external trade have led to higher demand for warehousing space, as well as improvements in existing and construction of new ports and airports.

In addition to both rising commercial and residential demand, and the opportunities that are presented to foreign players because of inadequate local capacity, there is yet another by-product of globalization that plays a role in generating opportunities for global players in these markets, particularly for US firms. The demonstration effect of high-quality US real estate, conveyed most effectively by expatriates and diaspora returnees generates the kind of specific demand for certain type of real estate attributes, whether in Grade A office space, or Silicon Valley style single family homes, that can in turn result in opportunities for US businesses. US real estate developers, service and consulting firms have piggybacked on the major foray made by US multinationals into India and China, and have been instrumental in dealing with demand for all categories of real estate, both for purely business purposes, as well as for housing requirements of expats. Both China and India have attracted developers from nearby Asian locations, such as Hong Kong and Singapore, as well as construction companies from throughout the world to augment their capacity. Although US firms have played a limited role so far, either as intermediaries between US clients and local suppliers or in providing a specialized skill, the past couple of years have seen a significant increase in US interest in the region.

The demographic profile in many of the emerging market giants is also suggestive of future opportunities. Household size, for example, is related to many factors, including income levels, and the historical and cultural context. Most developing countries have 4 or more persons per household (see Figure 10), but there is broad expectation that income growth, labor mobility, proliferation of unitary households, and the breakdown of traditional joint families would tend to reduce the number of persons per household, which in turn would increase the demand for housing units.

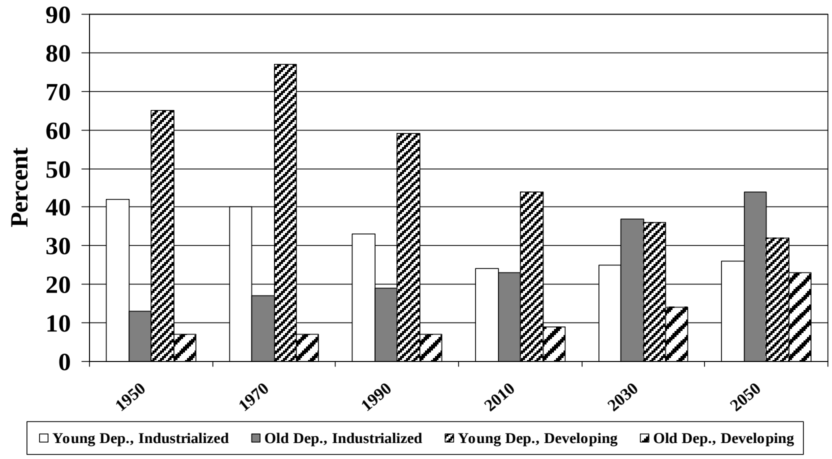
Figure 10
Household Size by Country
(2000/2001 unless otherwise noted)



Source: World Bank, US Bureau of the Census, UN, Kwon 2003 *Urban population only **1990.

The changing age profile of the population in both industrialized and developing countries has major implications for all aspects of the economy, including real estate. While both types of countries have seen a decrease in the number of young dependents relative to adults of working age, there are projections of a sharp rise in the number of aging dependents over the next few decades for the industrialized world, and for a healthy share of working adults, with large numbers in the home-buying cohort, in the developing world (see Figure 11).

Figure 11
Dependency Ratios*: Industrialized Countries



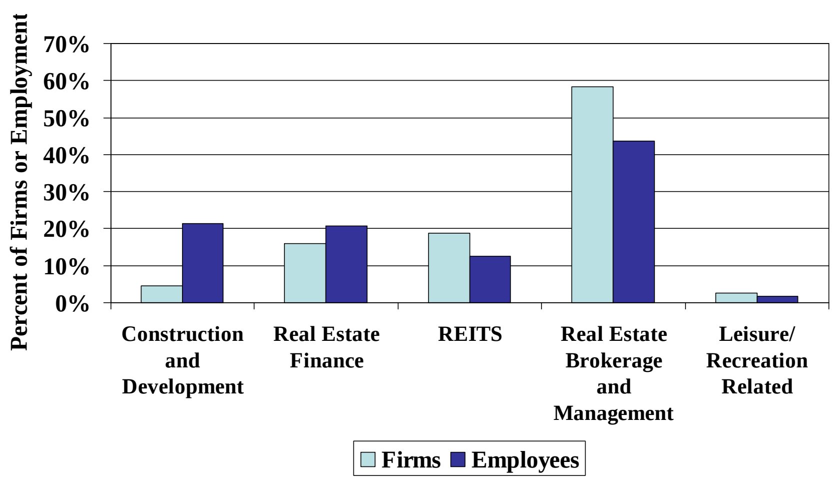
Source: Global Demographics, UN, 2006.
*Proportion of dependent population to working aged population

US real estate firms have begun to respond to these opportunities in a variety of ways. Company records, interviews, and a survey of selected real estate firms shows movement first to markets in other developed countries, where economic structure and underlying institutional support is often similar to the US. The increasing trend to invest in emerging and developing markets is a more recent phenomenon.

Globalization of Real Estate and Firm Characteristics

We draw on two sources of information to examine to what extent real estate firms are expanding into global markets, the countries where they operate, and the motivations for these changes. We build a data set from the OneSource database, drawing US real estate firms with 500 or more employees. The OneSource sample includes 326 firms in real-estate related finance, real estate investment trusts, real estate services (brokerage and management), leisure and recreation related real estate, and construction, as shown in Figure 12.[4] From OneSource records, annual reports and websites, we determined which of these firms served market areas beyond the US, and their geographic areas of operation.

Figure 12
Profile of Onesource Large Real Estate and Construction Firms
by Industry Sector



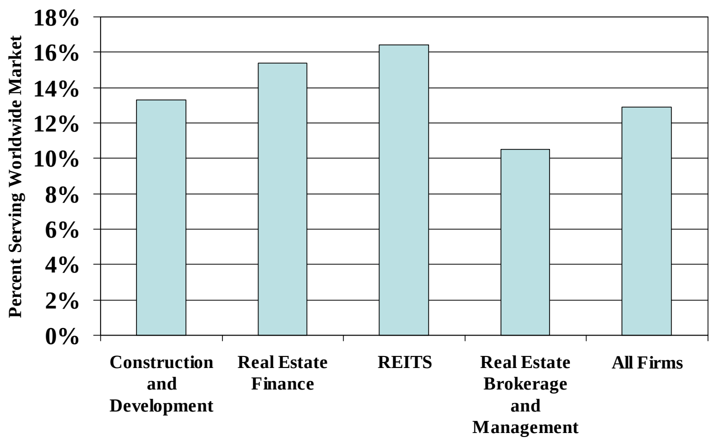
Source: Authors from Onesource data; firms with 500 or more employees

Only 13 percent of the large real estate firms listed in OneSource had global operations beyond the United States. Firms involved in real estate investment activity, including in the form of REITs or other investment vehicles, were more likely to be global than were firms involved in real estate services (see Figure 13). The brokerage and management category had the greatest number of firms, but the smallest share with global interest. This category includes on the one hand, residential brokerage firms involved primarily in single family home sales, which were largely US based (although a few had alliances with companies overseas that allowed them to provide international

[4] In construction we include only firms whose construction activity involved real estate development, rather than those operating in infrastructure or technical facilities alone.

relocation services to their customers), and on the other hand, some of the largest commercial real estate services firms, which provide a wide package of services to clients throughout the world. The finance category also represents a wide range of activities, from firms specializing in single family home loans (largely locally based), to firms that develop real estate investment pools and collective trusts for private investors (often international in scope).

Figure 13
International Activity of US Real Estate Firms by Subsector
Onesource Database

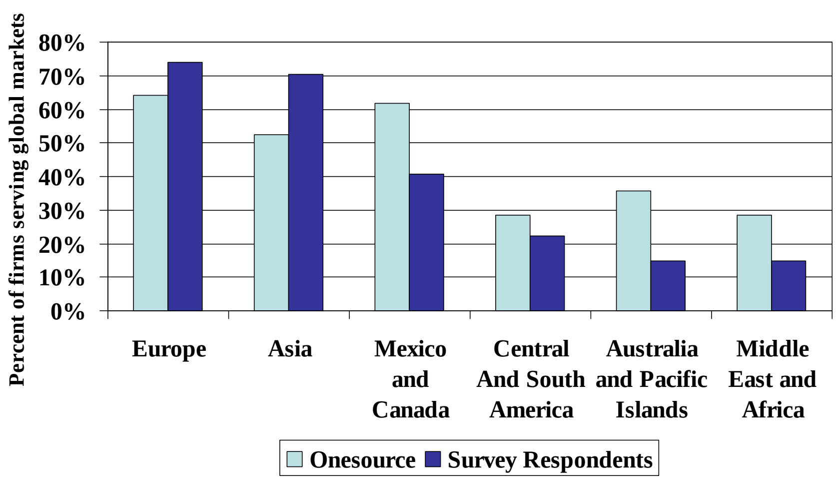


Source: Authors from Onesource data on firms with 500 or more employees

Most of the companies in this database were more likely to have global activities in Europe or North America (Mexico and/or Canada), than in Asia. The pattern for construction firms, however, was somewhat different than for other real estate firms--a larger share was involved in Asia and the Middle East than in Europe and North America. The construction firms involved in Asia and the Middle East were primarily those serving specialized sectors and infrastructure needs, such as the energy sector or specialized manufacturing.

A second source of information was a survey of the 168 policy advisory board members of the Fisher Center for Real Estate and Urban Economics, who represent a broad range of large real estate finance and service firms, including legal, consulting, and design companies as well as core real estate brokerage and management firms. The survey was conducted in February and March 2007 via e-mail and the web. Responses came from 44 (26 percent of those surveyed). The responses are clearly self selecting, with those involved in global operations more likely to respond. From the point of view of a major purpose of the survey, to learn where and why firms were involved in global activities, the self-filtering issue is not a big concern. Of greater importance in interpreting the response is the location profile of the survey sample firms compared to the OneSource database. While the survey sample of firms includes companies from throughout the United States, it is more heavily weighted towards firms headquartered in California than is the OneSource sample. Later research will involve an expanded set of questions and a broader sample group combined with more in-depth interviews of selected firms for purposes of case studies.

Figure 14
International Market Areas of Global US Real Estate Firms
Onesource Database and Survey Respondents

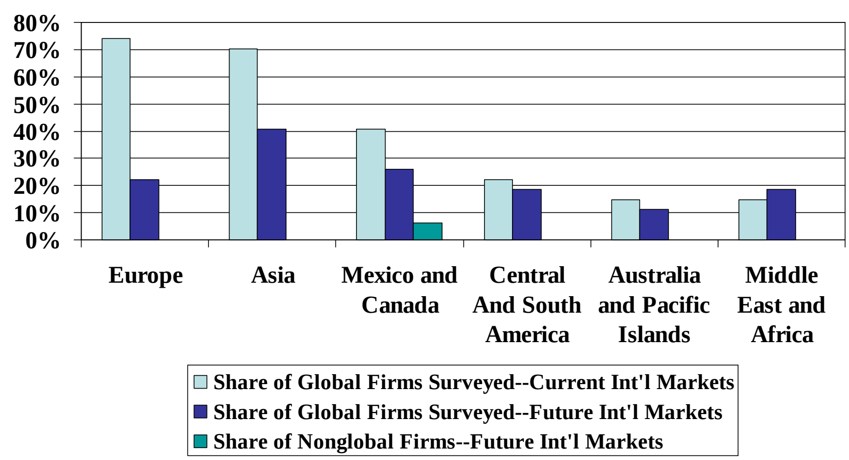


Source: Authors from Onesource data on firms with 500 or more employees and FCREUE survey of Policy Advisory Board members 2007.

More than 60 percent of the firms responding to the survey were involved in global activity. The areas of international activity of firms in the survey were somewhat different from that of the firms in the OneSource database (see Figure 14). Europe was the geographic area most frequently cited for global activity, followed closely by Asia. Canada and Mexico played less of a role than among firms in the OneSource database.

Firms were asked not only about current plans but about future regions/countries under consideration for expansion. Asia was the region most frequently mentioned, followed by Mexico and Canada, as shown in Figure 15. Almost all of the firms planning future global business expansion were already involved in international real estate activity.

Figure 15
Future Global Markets of Surveyed US Real Estate Firms

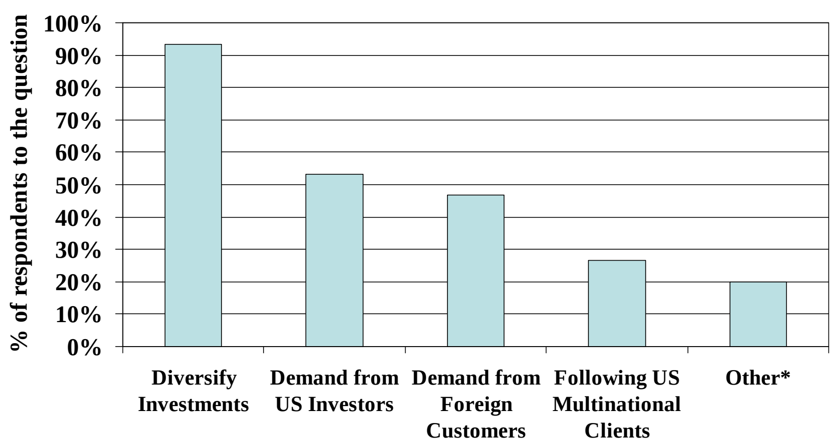


Source: Authors from Onesource data on firms with 500 or more employees

Firms with global activities were almost entirely involved in investment or development activity (or in most cases both), while a much smaller number were involved in brokerage, consulting, or other services. The primary motivation for moving into other markets was to provide more diversification to the pool of investments (Figure 16). While most firms selected global markets based on their expert opinion on relative risks and returns, in some cases, especially with moves into Asia, the firm was responding to demand from their investors and shareholders, despite some concerns over the risks and potential returns. As one respondent noted, the firm's strategy of concentrating on markets in Europe, which they perceived as more predictable and reliable, was beginning to lose them clients who wanted to take advantage of the opportunity for potential higher returns in Asia. Some service firms and REITS specializing in specific product types were also drawn to global markets by potential demand from foreign customers or by requests from existing multinational clients.

Figure 16

Real Estate Firm Motivations for Globalizing



Source: FCREUE survey of Policy Advisory Board members 2007.
* High returns; access to specialized services.

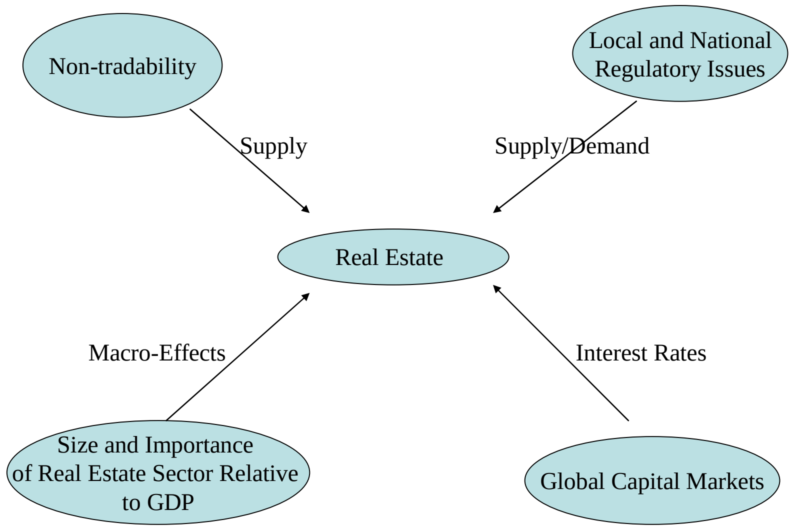
Observing global moves by different types of real estate firms provides some insight into the competitive advantages of US real estate firms. Real estate services firms have been able to move from the US to a global market place through the ability to transfer a broad mix of services, from brokerage to property management to relocation services to the multinational customers they have served at home. REITs and private developers have found niches of expertise to help them compete in global markets--moving into China and Mexico with US retail center designs and a mix of US and local tenants; offering multi-tenant warehouse and industrial space in Japan and other markets where single tenant and owner-occupied space has dominated development; providing large scale housing development in markets that have relied on smaller scale residential development; and exporting a variety of leisure community developments to both developed and developing countries.

Even with these successful moves, the US real estate industry faces significant competition for growing worldwide real estate opportunities. Singapore and Hong Kong developers, for example, have been far more active than US firms in China and India's expanding real estate markets, and European firms have shown a strong ability to compete in architecture and urban design.

Research Issues and Concluding Remarks

Real estate markets are particularly complex because a number of economic and “extra-economic” factors go into the determination of economic outcomes. Figure 17 gives a schematic overview of some of the underlying economic, institutional and other factors that shape the response of real estate to various influences, including globalization, and the channels through which they impact real estate markets – the prices, quantities, composition, structure and so-forth. The “non-tradability” aspect of real estate, for example, has implications for the supply-side in real estate, while global capital flows into treasury instruments, agency bonds and mortgage-backed securities have helped lower interest rates and thus impacted real estate transactions. The pivotal role of the real estate sector and its connection to every facet of the economy is felt in the macro-economic impact generated by housing starts and sales.

Figure 17
Real Estate: Some Research Issues



The combination of the non-tradability of the underlying, physical asset and the relative inelasticity of supply make the interplay of globalization and real estate unique, from a research point of view. In addition to the research issues brought up earlier in this report, there are some other questions that arise. The impact of global sourcing on real estate firm organization and management challenges are an issue that requires attention. While some questions relating to portfolio diversification through investing in publicly traded international real estate firms have been studied, the increasing integration of financial markets, their co-movement, contagion effects, cross-listing of real estate securities, the nexus between banking and real estate, and the growing role of capital markets in financing real estate are other areas where more research is required.

The effect on current real estate markets of global migrations of people is yet another example of the impact of globalization on real estate. Some analysts have commented on the role of foreign born (the largest cohort in US history since 1910) in the recent housing boom in the US. While there has been anecdotal evidence on their purchasing power, home-buying proclivity etc. (particularly in some key coastal markets) the question is still wide open. The other real estate related issue brought about by the global movement of people is connected to the hospitality sector; analysts expect strong growth in global tourism in the coming years, primarily fuelled by the large numbers of Chinese citizens venturing abroad. The role of US firms in meeting the changing demand is a further aspect of these questions.

The effect of this globalization on the employment side of the industry is also an open question; i.e. the question whether in real estate, FDI and exports are complementary or substitutes. As US real estate firms expand operations as well as investments overseas, the "local" aspect of the industry reemerges. Foreign offices most often involve local acquisitions, partnerships, or the hiring of local staff. One design firm interviewed as part of a related study noted that in the early period of operations in China, much of the professional work was done within the US offices, but as the firm gained experience and broadened its local presence, far less of the international work was done within the US and a greater share of offshore employees were local citizens. In India, with English language skills and institutional similarities, the great majority of real estate staff of US firms are Indian citizens (See Bardhan and Kroll 2006).

The international prospects for real estate firms suggest a number of other unanswered questions that could be addressed by future research. A few to start off would include:

What additional data are needed to better understand the flows of real estate related capital among countries? How do the changes in the global economy affect the real estate supply and demand balance in terms of where new development is required, price levels, competition for capital, and opportunities for and competitiveness of US firms relative to those from other industrialized countries? How can we measure competitiveness of US real estate firms, and how does globalization affect their competitiveness worldwide and in US markets? What innovations are needed in risk management for the future? What is the job creation impact domestically of US real estate investments abroad? What is the impact of global sourcing on urban agglomerations and clusters?

Globalization of the real estate industry is now a fact of economic life. Cross-border investments are increasingly common, both in physical assets and in portfolio investments; offshoring is widespread in certain parts of the supply chain; and variables from the field of international economics, such as openness, international capital flows, exchange rates and so-forth have an increasing impact on real estate markets.

US firms, along with firms from many other countries find themselves facing major opportunities and challenges in the suddenly global real estate market. Despite some institutional reforms, there are still significant differences among countries that complicate the process of development, ownership and leasing. Differences in business structure, demographic profiles and cultural preference may present new opportunities for US builders, investors and service providers but also require new approaches to analysis, design and investment for successful new ventures. In spite of rapid globalization, it should be noted that real estate is still primarily influenced by local factors. Local knowledge, local economies, local actors and local institutions will continue to play the significant role, albeit somewhat affected now by firms, consumers and economic influences from other, distant parts of the world.

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