

Locating Cities in Global Networks: Tokyo and Regional Structures of Interdependence

Saskia Sassen

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The rapid and spectacular rise of Shanghai as a global city has, regrettably brought back to life a series of arguments that overemphasize inter-city competition and leave out the growing importance of networked inter-city systems and dynamics. The scales of such networked systems vary; they can be global, regional, subnational. There is competition, and as a city like Shanghai gains power, others such as Tokyo and Taipei lose some power—investment, prestige, and perhaps more than anything else, clout. But inter-city competition is only half the story, and overemphasizing it leads to misunderstandings of how the global economy actually functions. Overemphasizing competition also leads to missed opportunities for cities, such as developing parallel networked inter-city policy initiatives centered on the growing economic importance of inter-city networks for firms and markets.



Shanghai

Here I want to emphasize briefly two trends that underline some of the features of inter-city economic networks. One of these trends, quite counter-intuitive, is that the deep economic histories of major cities and city-regions matter more in today's global economy than they did in the Keynesian period geared towards national territorial convergence and standardization. Since the 1990s much of the world has seen a shift toward targeting such subnational entities as global cities and high-tech districts. There is a global division of functions that feeds off the specialized differences and complementarities of cities and regions. The fact of such a division of functions is easily obscured by the emphasis on inter-city competition and by the standardization (no matter how good the architecture) of the built environments associated with the shift to the current dominant economic sectors. Inter-city competition is also taking place, but overemphasizing it obscures some of the critical traits of today's global economy.

The second trend is that the specialized

division of functions in the global economy is partly constituted and implemented through a proliferation of specific inter-city networks. These are specific in a double sense. They often involve particular groups of cities and particular contents. For instance if I were to track the global market for gold futures, that is to say, financial instruments based on gold, some of the key cities that would appear on my map are Chicago and London. If I were to track the global trade in gold, additional cities would appear, notably Johannesburg, Mumbai and Dubai. The critical mass of these networks has expanded to include in its aggregate about forty major and minor global cities. Notions of inter-city competition do not adequately capture this development. Global firms and markets need multiple global cities from where they can organize their operations.

This network of global cities is much more than a set of cross-border flows connecting cities. It is a complex, highly specialized organizational infrastructure for the management and servicing of the leading economic sectors. The specialized differences among cities take on renewed value in this organizational infrastructure.

In what follows, I discuss several of the major conditions that illuminate these two trends by bringing to the fore the multi-sidedness of the global economy. All the distributions of major corporate sectors show a significant and growing number of cities as constituting the global corporate map, even as sharp inequalities remain among them. These distributions also tell us something about the lasting economic weight of major older centers, notably Tokyo and Osaka. We need to understand Tokyo today in terms of a global economy marked by a proliferation of intercity networks. This perspective brings to the fore dimensions that are easily obscured by a competition analysis.



Osaka

Certainly, Tokyo has lost some of the prominence it acquired in the 1980s, when the current global era took off. But in those years, the networked global economy was barely developed. The meaning of rankings of major financial and business centers has changed sharply since the 1980s and today. Two decades ago, the rankings concerned fairly closed, self-contained national systems. A networked system thrives in specific ways, and one of these is that even as a city's share of a sector may decline, its actual value may increase because the sector is now far more interconnected regionally and globally. The zero sum outcome of competition is not as salient – and perhaps not even present – in networked systems. The network would not gain by losing Tokyo—even though many population and economic groups in Tokyo might be spared much pain and loss. It is impossible to develop the subject fully here. [1] Rather, this article seeks to understand one important aspect of this larger phenomenon. In what follows, I will examine the multi-sidedness of the global economy as an indicator of a networked system.



Tokyo skyline

Global Urban Infrastructures

There are two key features of the organizational infrastructure constituted through the network of global cities. One is that it contains the capabilities for organizing enormous geographic dispersal of economic and financial operations. The second is that it possesses the capabilities for maintaining centralized control over that dispersal. The implementation, management, coordination, servicing, and financing of much of the global economic system takes place in this network of global cities. This encompasses only certain components of the global economy, specifically, its organizational side, yet it has contributed to a re-positioning of cities nationally, regionally and globally.

For the particular questions discussed here, a first step is to elaborate why cities matter at all in a global economy dominated by powerful multinational firms and new global telecommunications capacities. [2] Constructs such as the global city and the global-city region provide a very particular lens onto a reality usually understood in terms of self-evidently global entities and scales, not subnational ones. In developing the notion of global city, my effort was to qualify what was emerging in the 1980s as a dominant discourse on globalization, technology and cities. This

discourse posited the end of cities as important economic units or scales. I saw a tendency in that account to take the existence of a global economic system as a given, a function of the power of transnational corporations and global communications.

My counter argument was then and remains today that the capabilities for global operation, coordination and control contained in the new information technologies and in the power of transnational corporations need to be produced. By focusing on the production of these capabilities we add a neglected dimension to the familiar issue of the power of large corporations and the capacity of the new technologies to neutralize distance and place. We shift the emphasis to the *practices* that constitute what we call economic globalization and global control.

The focus on practices draws the categories of place and work process into the analysis of economic globalization. Both of these categories are easily overlooked in accounts centered on the hypermobility of capital and the power of global firms. This does not negate the importance of hypermobility and power. Rather, it brings to the fore the fact that many of the resources necessary for global economic activities are not hypermobile and are, indeed, deeply embedded in place—among others, global cities, global-city regions, and export-processing zones.

Embeddedness in places leads to a focus on infrastructures, activities, firms, and jobs necessary to run the advanced corporate economy. Advanced urban industries, such as finance and corporate services are typically conceptualized in terms of the hypermobility of their outputs and the high levels of expertise of their professionals rather than in terms of the work process involved and the requisite facilities and non-expert jobs that are also part of these industries. Recapturing the geography of places involved in globalization allows us to

recapture people, workers, communities, and more specifically, the many different work cultures, besides the corporate culture, involved in the work of globalization. Focusing on the work process also brings with it an emphasis on economic and spatial polarization because of the disproportionate concentration of very high and very low-income jobs in these major global city sectors. It also brings with it an enormous research agenda, one that goes beyond the by now familiar focus on cross-border flows of goods, capital and information. Emphasizing place, infrastructure and non-expert jobs matters precisely because so much of the focus has been on the neutralization of geography and place made possible by the new technologies.

The growth of networked cross-border dynamics among global cities includes a broad range of domains beyond the economic ones focused on here, including political, cultural, social, and criminal. There are cross-border transactions between immigrant communities and communities of origin and a greater intensity in the use of these networks once they become established, including for economic activities that had been unlikely until now. Thus recent research (Farrer 2006) shows a multiplication of business networks between Shanghai and its immigrant community in Tokyo. We also see greater cross-border networks for cultural purposes, as in the growth of international markets for art and a transnational class of curators; and for non-formal political purposes, as in the growth of transnational networks of activists around environmental causes, human rights, and so on. These are largely city-to-city cross-border networks, or, at least, it appears at this time to be simpler to capture the existence and modalities of these networks at the city level. There has also been a proliferation of new cross-border criminal networks, from trafficking in people and drugs to criminal gangs and organized terrorist networks.

Finally, by emphasizing the fact that global processes are at least partly embedded in national territories, such a focus introduces new variables in current conceptions about economic globalization and the shrinking regulatory role of the state. That is to say, the space economy for major new transnational economic processes diverges in significant ways from the duality global/national presupposed in much analysis of the global economy (Sassen 2006a). The duality national versus global suggests two mutually exclusive spaces—where one begins the other ends. One of the outcomes of a global city analysis is that it makes evident that the global materializes by necessity in specific places and institutional arrangements a good number of which, if not most, are located in national territories. In this process there is a partial, often highly specialized denationalizing of what has historically been constructed as national, *pace* its many diverse meanings.

The Multi-Sitedness of Corporate Economic Globalization

It is perhaps one of the great ironies of our global digital era that the more globalized firms and markets become the more they require vast and dense concentrations of resources to handle this dispersal. It is this juxtaposition that in good part explains the rise of global cities. This is a core hypothesis of the global city model. Thus massive trends towards the spatial dispersal of economic activities at the metropolitan, national, regional and global level, which we associate with globalization, have not brought with them the end of cities. Rather they have altered the meaning of urban economies and have produced a tighter global map of what cities matter. Dispersal contributes to a demand for new forms of territorial centralization of top-level management and control functions when that dispersal takes place as part of firms with operations in multiple countries. The extent to

which this occurs under conditions of concentration in control, ownership and profit appropriation is, in my analysis, one key variable contributing to the spatial concentration of central functions and associated agglomeration economies. This raises the level of complexity of their central corporate functions. Insofar as these functions benefit from agglomeration economies even in the face of telematic integration of a firm's globally dispersed manufacturing and service operations, they tend to locate in cities, and not just any cities. This raises a question as to why they should benefit from agglomeration economies, especially since globalized economic sectors tend to be intensive users of the new information and telecommunications technologies; further many of these firms increasingly produce a partly digitized output, such as financial instruments and specialized services. [3]

The rapid growth of affiliates illustrates the dynamic of simultaneous geographic dispersal and concentration of a firm's operations (see Sassen 2006b for detailed empirical elaboration). [4] By 1999 firms had well over half a million affiliates outside their home countries accounting for US\$11 trillion in sales, a significant figure considering that global trade stood at US\$8 trillion. The most recent data show that by 2004 the number of affiliates had doubled, reaching almost a million. Firms with large numbers of geographically dispersed factories, offices, and service outlets face massive new needs for central coordination and servicing, especially when their affiliates involve foreign countries with different legal and accounting systems, and different management and advertising cultures. Foreign assets and workforces can account for a large share of a firm's totals among the largest multinationals. It also shows Japan's ongoing significance in some of these major corporate global geographies. What matters for cities is the work of managing, servicing, coordinating, implementing this dispersal.

Another instance today of this negotiation between a global cross-border dynamic and territorially-specific sites is that of the global financial markets. The orders of magnitude in global finance have risen sharply. This increase is illustrated by traded derivatives' increase from US\$192 trillion for 2002 and US\$290 trillion in 2005. Derivatives are a major component of the global economy and dwarf the value of global trade, which increased from \$8 trillion in 2002 to \$11 trillion in 2005.

Much attention has gone to electronic markets and their capacity for instantaneous global transmission. But the other half of the story is the extent to which global financial markets are located in an expanding network of financial centers, with a disproportionate concentration in cities of the global North but also with a growing number of global cities in the South as the global economy expands.

One of the components of the global capital market is stock markets. The late 1980s and early 1990s saw the addition of markets such as Buenos Aires, Sao Paulo, Mexico City, Bangkok, Taipei, Moscow, and growing numbers of non-national firms listed in most of these markets. By the late 1990s Shanghai had joined the network. The growing number and dispersion of stock markets has facilitated raising the capital that can be mobilized through these markets, reflected in the sharp worldwide growth of stock market capitalization, which reached US\$24 trillion in 2000 and 37 trillion in 2004. This globally integrated stock market is embedded in a grid of very material, physical, strategic places. Tokyo clearly remains a major capital market, four times as large as Hong Kong and ten times as large as Shanghai; Osaka is seven times as large as Shanghai.



Shanghai stock exchange

Top 12 Stock Market Capitalization (US Millions)

Stock Market	Market Capitalization as of March 2006	Percentages of Members Capitalization as of March 2006
New York (NYSE)	14,072.3	31.7%
Tokyo	4,774.6	10.8%
Nasdaq	3,786.6	8.5%
London	3,253.3	7.3%
Osaka SE	3,142.9	7.1%
Euronext	3,115.8	7.0%
TSX Group	1,620.9	3.7%
Deutsche Borse	1,399.6	3.2%
Hong Kong Exchanges	1,213.4	2.7%
BME Spanish Exchanges	1,094.1	2.5%
Swiss Exchange	1,015.9	2.3%
OMX	917.8	2.1%
Total for Federation Members	44,384.4	88.9%

*TSX Group also includes TSX Venture market cap

*OMX includes Copenhagen, Helsinki, Stockholm, Tallinn, Riga and Vilnius Stock Exchanges

Source: Compiled from World Federation of Exchanges Report: April 2006, pp. 54 with calculations of percentages added

The tables in the appendix provide more detail about this particular type of multisitedness of the global corporate economy. These tables show that there is a growing network of cities within which many globalized sectors are housed. In some sectors, such as insurance, it is vast.

United States, Japan and United Kingdom: Share of World's 50 Largest Banks, 1991, 1997, and 2005 (US\$ millions and percentage)

and percentage)					
1991					
	No. of Firms	Assets	% of Top 50	Capital	% of Top 50
Japan	27	6572416	40.7	975192	40.6
United States	7	913099	5.7	104726	4.4
United Kingdom	5	791652	4.9	96750	2.4
Sub-total	39	8277077	51.3	1136668	47.4
Total for Top 50	50	16143353	100.0	2400439	100.0
1997					
	No. of Firms	Assets	% of Top 50	Capital	% of Top 50
Japan	12	6116307	36.4	1033421	45.8
United States	6	1794621	10.7	242000	10.7
United Kingdom	5	1505686	9.0	120587	5.8
Sub-total	23	9416814	56.0	1406008	62.3
Total for Top 50	50	16817690	100.0	2257946	100.0
2005					
	No. of Firms	Revenue	% of Top 50	Profits	% of Top 50
Japan	4	107506	6.4	1648	0.1
United States	7	321142	19.1	54928	31.9
United Kingdom	5	248328	14.8	36132	21.0
Sub-total	16	676976	40.3	92708	53.9
Germany	11	329242	19.6	12446	7.2

Source: Author's Calculations based on "World Business," Wall Street Journal, September 24, 1992 and September 28, 1998, and "Global 500," Fortune Magazine, July 25, 2005.

Note: 1997 data ranked by assets as determined by Dow Jones Global Indexes in association with WorldScope; figures are based on each company's 1997 fiscal-year results, except data on Japanese banks, which are based on fiscal 1998 results.

Exhibit 3.7

Location of Top Banking, Industrial, and Commercial Firms by City, selected years, 1960-2005

City, Country a	2005 b	1997 c	1990 c	1980 c	1970 c	1960 c
Tokyo, Japan	10 (1) d	18 (5)	12 (2)	6	5 (1)	1
New York, USA	7 (2)	12 (1)	7 (5)	10 (4)	25 (8)	29 (8)
Paris, France	8 (1)	11 (1)	5	7 (2)	0	0
Osaka, Japan	1	7 (3)	2 (1)	1	1	0
Detroit, USA	1 (1)	4 (2)	2 (2)	2 (2)	3 (3)	5 (2)
London, UK	4 (1)	3 (1)	7 (2)	8 (3)	7 (3)	7 (3)
Chicago, USA	1	3	2	4 (2)	5	6 (2)
Munich, Germany	4 (1)	3	2	1	1	1
Amsterdam, Netherlands	1 (1)	3	0	0	0	0
Seoul, South Korea	2	3	0	0	0	0

Notes: a After ranking cities according to the number holding the world's 100 largest corporation headquarters (in 1999), the list was trimmed to the top 40 cities of which 10 are listed in the table above.

b Author's calculations based on "Global 500," Fortune Magazine, July 25, 2005.

c Source: Short and Kim, Globalization and the City, 1999, p.26.

d The figure in brackets gives the number of the world's top 20 corporations for that city.

Exhibit 4.6

Cities Ranked by Assets of the World's 50 Largest Insurers, 2005

Rank	City	Assets	Percentage of Top 50
Total for Top 50		8,324,240	100.00
Total for US		2,760,140	33.16
Top 20 Cities in the World (ranked by assets)			
1	Munich	1,374,460	16.51
2	New York	1,251,180	15.03
3	London	938,180	11.27
4	Paris	759,880	9.13
5	Zurich	553,280	6.64
6	Toronto	388,110	4.66
7	Newark, NJ	381,940	4.59
8	Tokyo	352,370	4.23
9	Trieste	317,660	3.81
10	The Hague	311,160	3.74
11	Hartford, CT	259,740	3.12
12	Omaha, NE	181,860	2.18
13	Northbrook, IL	149,730	1.80
14	Columbus, OH	116,880	1.40
15	Philadelphia, PA	110,380	1.33
16	St. Paul, MN	109,680	1.32
17	Hamilton, Bermuda	103,470	1.24
18	Taipei	68,840	0.83
19	Dorking	60,020	0.72
20	Sydney	55,400	0.67

Top 10 Cities in the United States

1	New York	1,251,180	15.03
2	Newark, NJ	381,940	4.59
3	Hartford, CT	259,740	3.12
4	Omaha	181,860	2.18
5	Northbrook, IL	149,730	1.80
6	Columbus, OH	116,880	1.40
7	Philadelphia	110,380	1.33
8	St. Paul, MN	109,680	1.32
9	Columbus, GA	52,910	0.64
10	Warren, NJ	43,130	0.52

Author's Calculations based on "The Forbes Global 2000," Forbes Magazine, March 31, 2005.

One of the notable patterns in this network (as shown in the tables) is the weight of Tokyo and Osaka in the global map of majors sectors and leading firms. While these measures are all partial, one summarizing table puts Tokyo among the top five global cities in the world. That does not necessarily mean that it is a strategic center for financial innovations as is New York, or the most denationalized financial

center in the world as is London, whose rise has been fed by firms from the US, Netherlands, Germany, France, and Japan, among others.

Exhibit 3.11
Top 5 Global Command Centers Based on Corporations, Banks, Telecommunications, and Insurance Agencies (2005)

Rank	City 1	Corporations	Banks	Telecommunications	Insurance Agencies
1	Tokyo	56	3	2	6
2	Paris	26	4	2	3
3	London	23	3	0	5
4	New York	22	2	1	4
5	Beijing	12	4	2	1

Notes: 1 Cities with the most high-revenue multi-national corporations.

Source: Author's Calculations based on "Global 500," Fortune Magazine, July 25, 2005.

The Ongoing Weight of Centrality and Density: The Other Side of Global Dispersal

The new information and communication technologies (ICTs) should have neutralized the historical advantages of cities—centrality and density. No matter where a firm or professional is, there should be access to many of the needed resources. In fact, however, the new ICTs have not quite eliminated the advantages of centrality and density, and hence the role of cities as economic and physical entities. Even as much economic activity has dispersed, the centers of a growing number of cities have expanded physically, at times simply spreading and at times in a multi-nodal fashion. The outcome is a new type of spatial centrality in these cities. They have physically expanded over the last two decades, a fact we can actually measure, and can assume more varied formats, including physical and electronic formats. The geographic terrain for these new centralities is not always simply that of the downtown; it can be metropolitan and regional. In this process, the geographic space in a city or metro area that becomes centralized often grows denser than it was in the 1960s and 1970s. This holds for cities as different as Zurich and Tokyo, Sydney and Frankfurt, Sao Paulo and London, Shanghai and Buenos Aires.

There are several logics that explain why cities matter to the most globalized and digitized sectors in a way they did not as recently as the 1970s. Here I briefly focus on three of these

logics.

The first concerns technology and its many misunderstandings. When the new ICTs began to be widely used in the 1980s, many experts forecast the end of cities as strategic spaces for firms in advanced sectors. But it was the routinized sectors that left cities while advanced sectors kept expanding their operations in more and more cities. Today's multinationals have over one million affiliates worldwide. But they also have expanded their central headquarter functions and fed the growth of a separate specialized services sector from which they are increasingly buying what they once produced in-house.

Why were those experts so wrong? They overlooked a key factor: when firms and markets use these new technologies they do so with financial or economic objectives in mind, not the objectives of the engineer who designed the technology. The logics of users may well thwart or reduce the full technical capacities of the technology. [5] When firms and markets globalize operations utilising new technologies, the intention is not to relinquish control over the worldwide operation or appropriation of the benefits of that dispersal. Insofar as central control is part of the globalizing of activities, their central operations expand as they expand their operations globally. The more powerful these new technologies are in allowing centralized control over globally dispersed operations, the more these central operations expand. The result has been expanded office operations in major cities.

A second logic explaining the ongoing advantages of spatial agglomeration has to do with the complexity and specialization level of central functions. These rise with globalization and with the added speed that the new ICTs allow. As a result global firms and global markets increasingly need to buy the most specialized legal, accounting, consulting and other such services. These service firms do

some of the most difficult, sensitive and knowledge-intensive work. To do this work they benefit from being in complex environments that function as knowledge centers because they contain multiple other specialized firms and high-level professionals with worldwide experience as well as familiarity with local and regional business cultures. Cities are such environments—with the forty plus global cities in the world the most significant of these environments, but a growing number of other cities developing one or more element of such environments. This then also promotes circulation among different groups of cities as an advantage—setting up affiliated offices with top level professionals.

A third logic concerns the meaning of information in an information economy. There are two types of information. One is the datum, which may be complex yet is standard knowledge: the level at which a stock market closes, the privatisation of a public utility, the bankruptcy of a bank. But there is a far more difficult type of "information," akin to an interpretation/evaluation/judgment. It entails negotiating disparate data and a series of interpretations of various data in the hope of producing a higher order synthesis. Access to the first kind of information is now global and immediate from just about any place in the highly developed world and increasingly in the rest of the world thanks to the digital revolution. But it is the second type of information that requires a complicated mixture of elements—the social infrastructure for global connectivity—which gives major financial centers a leading edge. When the more complex forms of information needed to execute major international deals cannot be gotten from existing data bases, no matter what one can pay, then one needs the social information loop and the associated *de facto* interpretations and inferences that come with circulating information among talented, informed people. It is the importance of this input that has given a whole new importance to

credit rating agencies, for instance. Part of the rating has to do with interpreting and inferring. When this interpreting becomes "authoritative" it becomes "information" available to all. The process of making inferences/interpretations into "information" takes quite a mix of talents and resources.

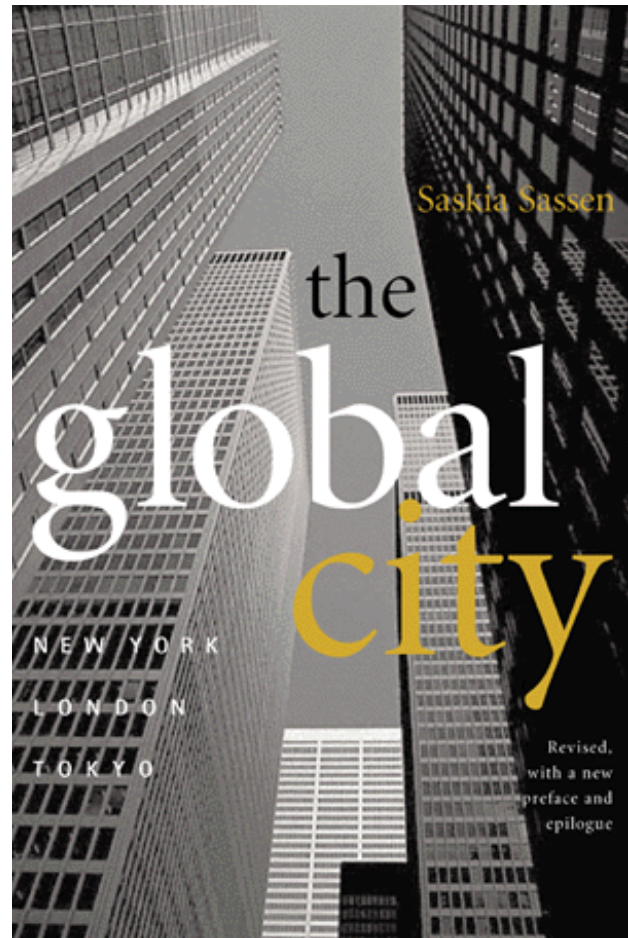
In brief, the complex and mixed environments of global cities provide the social connectivity which allows a firm or market to maximize the benefits of its technological connectivity.

When the global needs to inhabit multiple national settings

Global networked systems such as those described here are multisited. They are not seamless electronic spaces. They are lumpy. They inhabit multiple national systems, prominent among which are global cities; but they also include various highly specialized agencies of national states (Sassen 2006a: chapter5).

It is important analytically to unbundle the fact of strategic functions for the global economy or for global operations, and the overall corporate economy of a country. This distinction matters for a variety of reasons, from economic to political. Global corporate control and command functions are partly embedded in national economic corporate structures but also constitute a distinct corporate subsector. The globally oriented subsector can be conceived of as part of a network that connects global cities across the globe through firms' affiliates or other representative offices, the specialized servicing and management of transactions in the global capital market, foreign investment, and financial flows. [6] Thus the top 100 global specialized corporate services firms in law, advertising, management consulting, accounting, and insurance operate in 315 cities worldwide, each firm with offices (either headquarters or branches) in at least 15 countries.

For the purposes of certain kinds of inquiry this distinction may not matter. But it does matter for understanding the global economy. This distinction also matters for questions of regulation, notably regulation of cross-border activities. If the strategic central functions—both those produced in corporate headquarters and those produced in the specialized corporate services sector—are located in a network of major financial and business centers, the question of regulating what amounts to a key part of the global economy will entail a different type of effort from what would be the case if the strategic management and coordination functions of multinationals were as distributed geographically as their factories, service outlets and offices, whatever their mode of affiliation. We can also see here the possibility of an emergent strategic geography for political activists that seek accountability from major corporate actors, among others, demands for adherence to standards regarding the environment, workplaces, and workers' rights and benefit structures. Global markets and firms require not one but a growing network of central places where the most complex work of globalization gets done. Theoretically this addresses two key issues in current debates and scholarship. One of these is the variable articulation of capital fixity and capital mobility. The other is the position of cities in a global economy. Elsewhere (2006a: chapters 5 and 7) I have developed the thesis that capital mobility cannot be reduced simply to that which moves, nor can it be reduced to the technologies that facilitate movement. Rather, multiple components of what we keep thinking of as capital fixity are actually components of capital mobility. This conceptualization allows us to reposition the role of cities in an increasingly globalizing world: multiple specialized networks comprising specific sets of cities function as strategic platforms for the global economy, especially its most mobile and electronic components.



Cover of Saskia Sassen's *Global City : New York, London, Tokyo*. Princeton UP, 2001.

In my current research I have increasingly found that part of this repositioning of cities has to do with a switch from Keynesian national economies to globally networked specialized sub-economies. [7] The switch entails an often complex—and quite invisible—dislodging of particular older capabilities forged in the economic past of a place. These get relodged into novel (contemporary) systems with different organizing logics from the original ones that shaped those capabilities. Having a past as a major industrial complex (e.g. Chicago, Sao Paulo, Shanghai, Osaka, and to a lesser extent Tokyo) makes that switch more difficult in the current economic phase than does a past as a trading and financial center (e.g. London, New York, Hong Kong). New York and London had manufacturing, but not heavy

manufacturing, and trade and finance were always far more significant. Shanghai, certainly has a venerable history of trade and finance; but manufacturing is today its region's major economic sector. Osaka once compared with Tokyo as a major international financial center, and trade remains important. But Osaka is above all at the heart of a heavy manufacturing region. Tokyo was once a major industrial center, on a scale that London and New York never achieved, but it began to switch to a knowledge economy in the 1980s. It has yet to take that switch as far as New York and London or Hong Kong have. It still has a very significant and highly specialized manufacturing sector. In my reading, both Osaka and Tokyo still have a lot of switching ahead to transfer the knowledge built on their industrial past into a "knowledge" economy. New York, in contrast is in the business of inventing rarified financial instruments involving multiple far-flung market circuits. Chicago has probably come full circle—for good or for bad. Sao Paulo and Shanghai have not.

A city-region with an industrial past will have developed financial, legal and accounting expertise geared towards addressing many of the needs of industrial firms and markets. This can give that city a specialized advantage in producing certain types of financial, legal and accounting instruments for the global market because today's global economy is enormously specialized on the organizational side. But for this specialized advantage to materialize entails repositioning that past knowledge in a different set of economic, financial and even cultural circuits. It entails, then, disembedding that expertise from an agro-industrial or industrial economy and re-embedding it in a "knowledge" economy, one where expertise can increasingly be commodified, function as a key input, and, thereby, constitute a new type of intermediate economy which ceases to depend on the actual existence in situ of an industrial complex. But that switch is not simply a matter of *overcoming* that past, as is

commonly thought. It requires developing a new organizing logic that can revalue capabilities developed in an earlier era (Sassen 2006a: chs 1 and 5).

I find in my research that one critical variable is economic diversity. Thus a quasi monoculture as is Detroit—one economic sector, no matter how complex—does not enable the switch. But the massive diversified industrial economies in Tokyo's past, and to a lesser extent its present, and in Osaka today as in the past, signal a complex economic future. It would be very difficult to displace these cities from the global network, especially because the network gains strength from each individual "member" city. I made a similar argument for Hong Kong when many were forecasting doom in the mid 1990s. Hong Kong is today once again the premier trading and financial center it once was, and has in the last few years clearly consolidated its position as China's main international financial center with Shanghai increasingly the major national financial center.

This type of optic on globalization brings to the fore a complex organizational architecture, which cuts across borders and is both partly de-territorialized and partly territorially concentrated in cities. Further, it creates an enormous research agenda in that every particular national, regional or urban economy has its specific and partly inherited modes of articulating with the hundreds of specialized global circuits that constitute today's global economy.

Notes

[1] For detailed empirical information and sources on global cities generally and Tokyo in particular please see the forthcoming Japanese translation (Tokyo: Chikuma Shobo, 2006) of *The Global City: New York, London, Tokyo*, (2001 2nd ed.).

[2] See generally Gugler 2004; Taylor 2004; GaWC; Abrahamson 2004. On the Asia-Pacific region see Chen 2006; Lo and Marcotulio 2000; Yeung 2000; for some of the new developments in the Persian Gulf area see Parsa and Keivani 2002.

[3] For an exhaustive review of the many different trends in the corporate services sector see Daniels and Bryson 2006.

[4] Affiliates are but one mechanism for corporate dispersal of factories, offices, and service outlets.

[5] Elsewhere I have explained in detail this thwarting of technical logics by the economic, financial, or for that matter cultural and political logics of users see Sassen 2006: ch 7.

[6] In this sense, global cities are different from the old capitals of erstwhile empires, in that they are a function of crossborder networks rather than simply the most powerful city of an empire. There is, in my conceptualization, no such entity as a single global city as there could be a single capital of an empire; the category global city only makes sense as a component of a global network of strategic sites. The corporate subsector, which contains the global control and command functions, is partly embedded in this network.

[7] See Sassen 2006a: chs 1, 4, and 9) for a general theoretical and methodological treatment of this notion that change is, more often than we realize, predicated on dislodging existing capabilities from old organizing logics (or systems) and reloading them into novel ones; in this switch, the valence of these capabilities changes, but the capabilities do not disappear. It is not creative destruction.

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