URBAN AND REGIONAL PLANNING IN JAPAN AND WEST GERMANY: A COMPARISON

Michael Wegener and Ryosuke Shibasaki

Department of Civil Engineering
University of Tokyo

1. Introduction

There are many similarities between Japan and Germany. Today both countries are highly industrialized, economically prosperous and relatively affluent. Both countries command a territory which is small compared with its population, hence high population density, scarcity of land and environmental bottlenecks are problems common to both of them. Both countries are highly urbanized, and both face the problems connected with the final phase of the demographic transition, a stagnating and ageing population.

These similarities date back into history. Both countries are, in global terms, latecomers. Industrialization started in Germany about a century later than in Britain, and another fifty years later in Japan. In both Japan and Germany the modern nation-state appeared only in the second half of the 19th century, although in both countries there was a semi-modern predecessor (the Tokugawa regime in Japan and Prussia in Germany) establishing a state ideology, administrative traditions and a civil ethic (through Confucianism in Japan and Protestantism in Prussia) which have proved to be powerful, in good and bad, until today.

These similarities make a comparison of urban and regional planning in Japan and Germany especially interesting. Because, despite these similarities, clearly there are significant differences in size, internal organization and physical appearance between Japanese and German cities. The urban system of Japan is much more centralized than the one of West Germany, culminating in a metropolitan capital region of overwhelming dominance. But even cities of smaller size are different from their German counterparts: they seem to be less organized both at the macro level of land use zoning and at the micro level of building control. This is at first sight surprising as there are important historical links between the two countries in the field of urban design and planning. The aesthetic quality of the traditional Japanese house deeply influenced the *Bauhaus* style in architecture, while at the same time the Japanese planning laws were modelled partly after the German example.

Why then are Japanese and German cities so different? That is the question guiding this comparison. If it is possible to identify the causes of the differences in the results of planning, it may be possible to ask where the two countries might learn from each other, and how policies and institutional arrangements that work well in one country might be adopted and adjusted in the economic, legal and cultural setting of the other.

2. Economic and Demographic Trends

Before we start the actual comparison of urban and regional planning, we briefly look at the economic, social and political environment in which urban and regional planning have developed in the two countries. Table 1 lists the most important phases of socioeconomic and political development in Japan and in Germany (later the Federal Republic of Germany) side by side in chronological sequence. In both cases we start with the establishment of the modern nation-state, i.e the Meiji Restoration in Japan in 1868 and the foundation of the *Reich* in Germany in 1871.

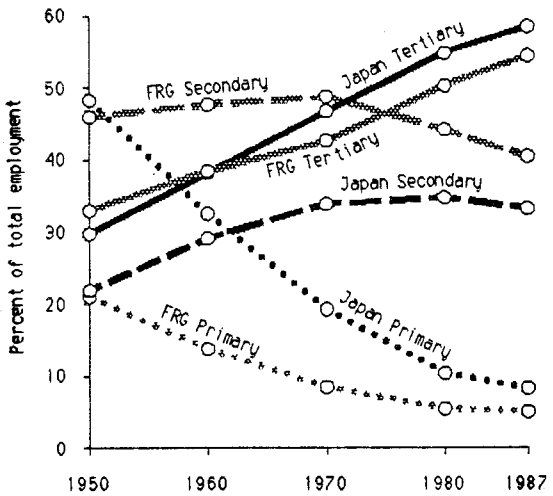
In both countries, this first period was one of rapid industrialization, but from very different starting

Table 1. Economic and demographic trends in Japan and West Germany.

Period	Japan	Period	West Germany
1868-1890	**Meiji Restoration** • introduction of Western industrial technologies • government factories as show cases	1871-1918	**German *Reich*** • rapid industrialization • rural-to-urban migration • population growth • rapid growth of cities • emergence of large industrial areas (e.g. the Ruhr)
1890-1920	**Industrialization** • light industry (e.g. textile) • Japan-China War 1904/5 • heavy industry (e.g. steel) • rapid economic growth	1918-1933	***Weimar* Republic** • period of economic crises (inflation, mass unemployment)
1920-1945	**Military expansion** • invasion of East Asia • expansion of military expenditure and production • World War II: air raids on most large cities; atomic bombs on Hiroshima, Nagasaki	1933-1945	**Nazi period** • expansion of military production • World War II: 55 million dead • Germany divided • 7 million refugees • 80 percent of buildings cities destroyed
1945-1955	**Reconstruction** • insufficient food for 80 million people • lack of private and social overhead capital • severe flood disasters	1945-1960	**Reconstruction** • two Germanies: FRG and GDR • population increase by refugees • poverty, hunger, lack of housing • recovery of the economy ('economic miracle')
1955-1975	**Rapid growth** • manufacturing industry growing in Pacific belt • rapid population movement to Pacific belt • insufficient infrastructure (e.g. harbors and roads) • regional disparities in terms of income and economic growth • urban sprawl • land price problems • environmental problems (e.g. Minamata disease)	1960-1975	**Growth** • rapid expansion and diversification of production • growth of domestic consumption in food, housing, motorization, travel, leisure • population growth through natural increase ('baby boom') and foreign workers • suburbanization
1975-1989	**Stable growth** • change of economic structure (from heavy industry to high-tech and information industries) • mass production and consumption (personalization of demand and variety of supply) • increasing demand for environmental quality • internationalization (responsibility for development aid, international competition, trade conflicts) • semi-deurbanization (core areas slightly declining. expansion of suburbs slowing down) • concentration of management functions in Tokyo • ageing urban stock • growing land price problems	1975-1989	**Stagnation** • decline in traditional sectors of industry (coal, steel, textiles, shipbuilding) • growth in modern industries: automobiles, electronics,services • structural unemployment regional disparities: North-South divide • oil crisis: energy conservation • environmental problems • declining birth rates • smaller households • fewer work hours, changing life styles • decline of inner cities, deurbanization
1989-	**Postindustrial society** • the rapidly ageing society • population decline • smaller households, more singles • more consumption and leisure • continuing internationalization • open labor market • telecommunication and high-speed interregional transport (Maglev)	1989-	**Postindustrial society** • ecological production and agriculture • continuing structural change • unemployment: new 'classes'? • population decline • less children, more old people • migration N-S, urban-rural • more consumption, leisure, culture • overcapacity in transport • telecommunication: interregional polarization, intraregional dispersion

positions. Germany had already a sizeable industrial base, which quickly expanded and attracted large numbers of workers from rural to urban areas, while Japan, after 250 years of isolation, practically started from zero. As a consequence, already before the turn of the century, less than half of the economically active population of Germany worked in agriculture, while this occurred in Japan not before the year 1950.

The general pattern is: compared to Germany, Japan starts late in almost all fields, but after 1950 picks up rapidly and in many respects surpasses Germany. Figure 1 demonstrates the much faster economic change in Japan with agricultural employment declining from nearly 50 percent to less than 10 percent in only three decades.

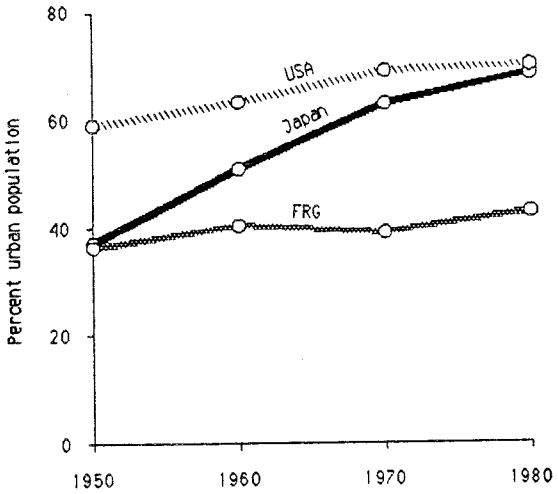


Source: Japan Institute for Social and Economic Affairs

Figure 1. Employment structure in Japan and West Germany 1950-1987.

Most of the surplus rural labor was absorbed by the rapidly growing manufacturing and service industries in the cities, with the effect that the urban population of Japan more than tripled making Japan today one of the most urbanized countries of the world, while West Germany's urban population stagnated in relative and absolute terms (see Figure 2).

Today Japan and West Germany, who shared the experience of almost total destruction of their economic base after World War II, are among the most prosperous countries in the world.



Source: OECD

Figure 2. Urbanization in Japan, West Germany and USA 1950-1980.

Table 2 lists some basic indicators illustrating the similarities and differences between the two countries.

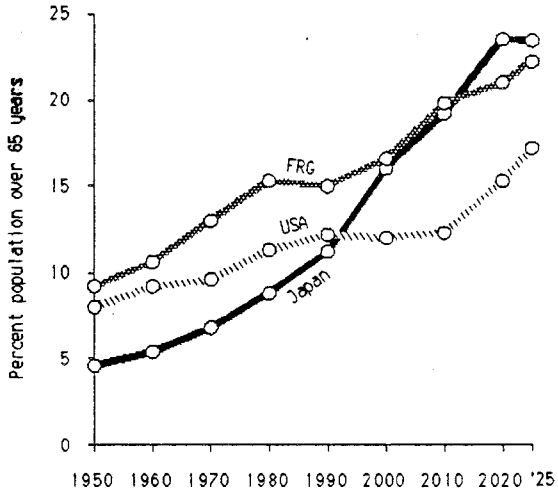
Table 2. Basic indicators of Japan and West Germany 1987.

	Japan	FRG
Population (million)	122.2	61.1
Area (1000 km^2)	378	249
Density (pop/km^2)	323	246
GNP (US$ billion)[a]	1,966	897
GNP/capita (US$)[a]	16,184	14,700
Employment (million)	59.1	25.9
Annual work hours	2100	1640
Wage/hour (US$)[a]	8.78	7.74
Unemployment (%)	2.8	8.9

a 1986
Source: Japan Institute for Social and Economic Affairs

In the future the similarities between Japan and West Germany may even increase as both countries face the challenges of the postindustrial society. However there are still differences that point to a more turbulent development in Japan than in the more 'saturated' Federal Republic. For the spatial development of the two countries, three problem fields or trends seem to be of particular importance.

The first is the rapid process of ageing of the Japanese due to their high average life expectancy, which will make Japan the 'oldest' of the industrial nations after the year 2010 (see Figure 3).



Source: Japan Institute for Social and Economic Affairs

Figure 3. Population over 65 years in Japan, West Germany and USA 1950-2025.

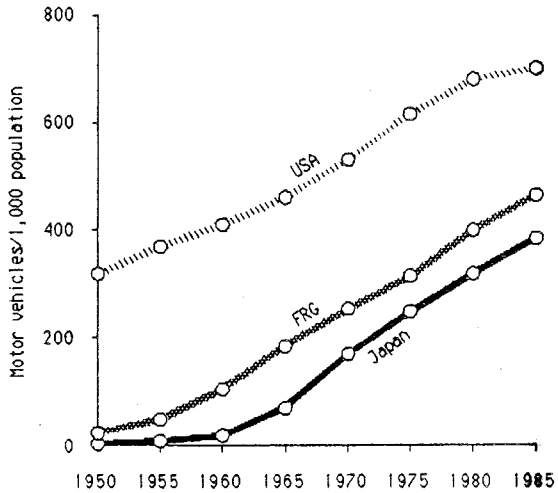
The second important factor is housing. As Table 3 shows, housing provision in Japan is still considerably behind the standards of comparable industrial nations. If the Japanese economy continues to grow as it has in the recent past, it seems inconceivable that this gap will persist, and that certainly will challenge not only the construction industry but also the spatial organization of cities in terms of demand for land and transportation infrastructure.

Table 3. Housing conditions in Japan, West Germany and USA 1986.

	Japan	FRG	USA
Units/1000 pop	323[a]	447	413[b]
Area/unit (m^2)	85.9[ac]	93.8	134.8[b]
Area/capita (m^2)	27.7[ac]	41.9	55.7[b]
New units/1000 pop	11.6	4.1	6.8

a 1983 *b* 1984 *c* different measurement method, actually approximately 80 m^2/unit and 26 m^2/capita.
Source: Construction Ministry; OECD

A final trend that seems certain to have a significant impact on the future of Japanese cities is the continuing growth in car ownership. Figure 4 shows motor vehicles in Japan and West Germany in comparison with the US. Clearly both in Germany and Japan a levelling off of the increase in motor vehicles, as it can be seen in the US, is not likely in the near future, and this will present severe problems to planners in urban areas with already crowded road infrastructure.



Source: Road Transport and Economic Statistics

Figure 4. Motor vehicles in Japan, West Germany and USA 1950-1985.

Under these prospects urban and regional planning will play a key role in shaping the future of both Japan and West Germany, and it will be of crucial importance for both countries that their planning laws and institutions are organized in a way that they are able to cope with the difficult tasks lying ahead.

3. National and Regional Planning

In this and the next section, we will discuss the emergence of urban and regional planning in Japan and in West Germany before the background of socioeconomic and political developments sketched out in the previous section. We start with the level of national and regional planning. Table 4 lists the major phases of national and regional planning in Japan and West Germany in chronological order for comparison.

There is a remarkable similarity in the early origins of national and regional planning in both countries. Neither of the two imperial governments recognized the need for actively influencing the development of specific regions of their countries beyond the classical fields of highway, railway and waterway construction, which

Table 4. National and regional planning in Japan and West Germany.

Period	Japan	Period	West Germany
1868-1900	**Infrastructure planning** • promotion of regional development through individual infrastructure projects	1871-1918	**Infrastructure planning** • no national or state spatial planning • railway, highway and waterway planning on national and state level

1900-1933	**Emergence of regional planning**
	• Hokkaido Regional Development Plan (agricultural development plan)
	  • First Plan 1901-1910
	  • Second Plan 1910-1924
	• Tohoku Comprehensive Development Plan 1933
	  • agricultural development
	  • industrial development based on water power
		1918-1933	**Emergence of regional planning**
			• consolidation of metropolitan governments (Greater Berlin)
			• formation of planning associations (*Siedlungsverband Ruhrkohlenbezirk* = Association of Ruhr Area Mining Cities)
			• new discipline *Raumordnung* ('spatial order')

1933-1945	**National planning for military purposes**
	• National Development Plan 1943
	  • defense-related industrial development
	  • based on ideas from Tennessee Valley Authority and New Deal policies as well as on ideas from German *Raumordnung*
	• plans for occupied territories
		1933-1945	**Centralized planning: an interlude**
			• new highways following US freeway example (*Autobahn*)
			• new industrial complexes (e.g. Wolfsburg = Volkswagen)
			• regional development plans (not implemented because of war)
			• regional planning in occupied territories following central place theory

1945-1955	**Emergence of national planning**
	• Guidelines for National Reconconstruction (1946)
	• National Comprehensive Development Law (1950)
	  • national development
	  • 'project areas' (water power and disaster prevention)
	  • prefectures
		1945-1960	**Aversion against planning**
			• reasons:
			  • reaction to misuse of state power by Nazi regime
			  • beginning Cold War
			  • dominant neo-liberal economic doctrine
			• practically no national or regional planning

1955-1975	**Planning for growth**
	• Tokyo Metropolitan Area Development Law 1956:
	  • containment through green belt
	  • suburban development control
	• 'Plan for Doubling GNP' 1960
	  • objective: decreasing regional disparities through growth
	  • infrastructure investment mainly in Pacific belt
	• First National Comprehensive Development Plan 1962
	  • strategic relocation of manufacturing industries to
	  • 'New Industrial Cities'
	  • 'Special Industrial Development Districts'
	• Second ('New') National Comprehensive Development Plan 1969
	  • linking central management functions in metropolitan areas with production/distribution functions in non-metropolitan areas
	  • more emphasis on quality of living environment
	  • regional development through large-scale projects
	• National Land Use Planning Law 1974
	  • promotion of rational land use
	  • reform of land tax (heavy tax on capital gains from land)
		1960-1975	**Re-emergence of planning**
			• reasons:
			  • end of Cold War
			  • popularity of Kennedy reform policy in USA
			  • reappearance of Keynesian economic theory
			  • change of government from conservatives to the social-democrats
			• Federal Law of Spatial Structure (*Raumordnungsgesetz*) 1965
			  • basic goal of spatial develment: creation of *equivalent* living conditions in all parts of the country
			  • division of responsibility between Federal and state governments:
			  • Federal government:
			  • monitoring of spatial development
			  • coordination of state plans and programs
			  • railways, highways, waterways, airways
			  • state governments:
			  • regional planning
			  • control of local planning
			  • joint responsibility:
			  • regional economic development (financial aid to retarded regions)

Table 4. National and regional planning in Japan and West Germany (cont'd).

Period	Japan	Period	West Germany

1975-1989	**Planning for stable growth**
	• Third National Comprehensive Development Plan 1977
	  • comprehensive improvement of living environment
	  • balance between conservation and development
	  • adjustment to socioeconomic changes
	  • comprehensive settlement plan
	• Fourth National Comprehensive Development Plan 1987
	  • promotion of non-metropolitan regions through
	  • adjustment to economic structural change (high-tech and information industries)
	  • enforcement of interregional network
	  • improvement of living environment
	  • development of Tokyo as international center and promotion of internationalization
		1975-1989	**Retreat of national and regional planning**
			• gradual cutting-back of 'oversized' plans for highway expansion
			• improvement of national long-distance railways (Intercity and possibly Maglev) at the expense of service in rural regions
			• state development programs and plans exist, but have little impact, are not updated
			• regional planning authorities influence regional development through their right to approve local F- and B-plans and through informal coordination between local governments
			• growing disparities between prosperous southern and declining northern regions call for stronger involvement of national and regional planning

1989-	**Future tasks**
	• promoting balanced national development through
	  • telecommunication
	  • high-speed transportation
	• promoting individualized development of each region
		1989-	**Future tasks**
			• monitoring spatial disparities
			• promoting economic change in retarded regions
			• monitoring the environment
			• coordinating environmental policies of the states

had always been, partly for military reasons, the responsibility of central government.

In Germany in the 1920s there were some consolidations of metropolitan governments and associations of municipalities to coordinate their interests in fields such as water provision and highway construction, but these initiatives remained exceptions. Ironically, in both countries regional planning was introduced under military or totalitarian governments to strengthen their political and military power at home or in occupied territories, and more ironically the example followed was the New Deal paradigm of the Tennessee Valley Authority in the democratic America.

However, after their defeat in World War II, the development in both countries took a different path.

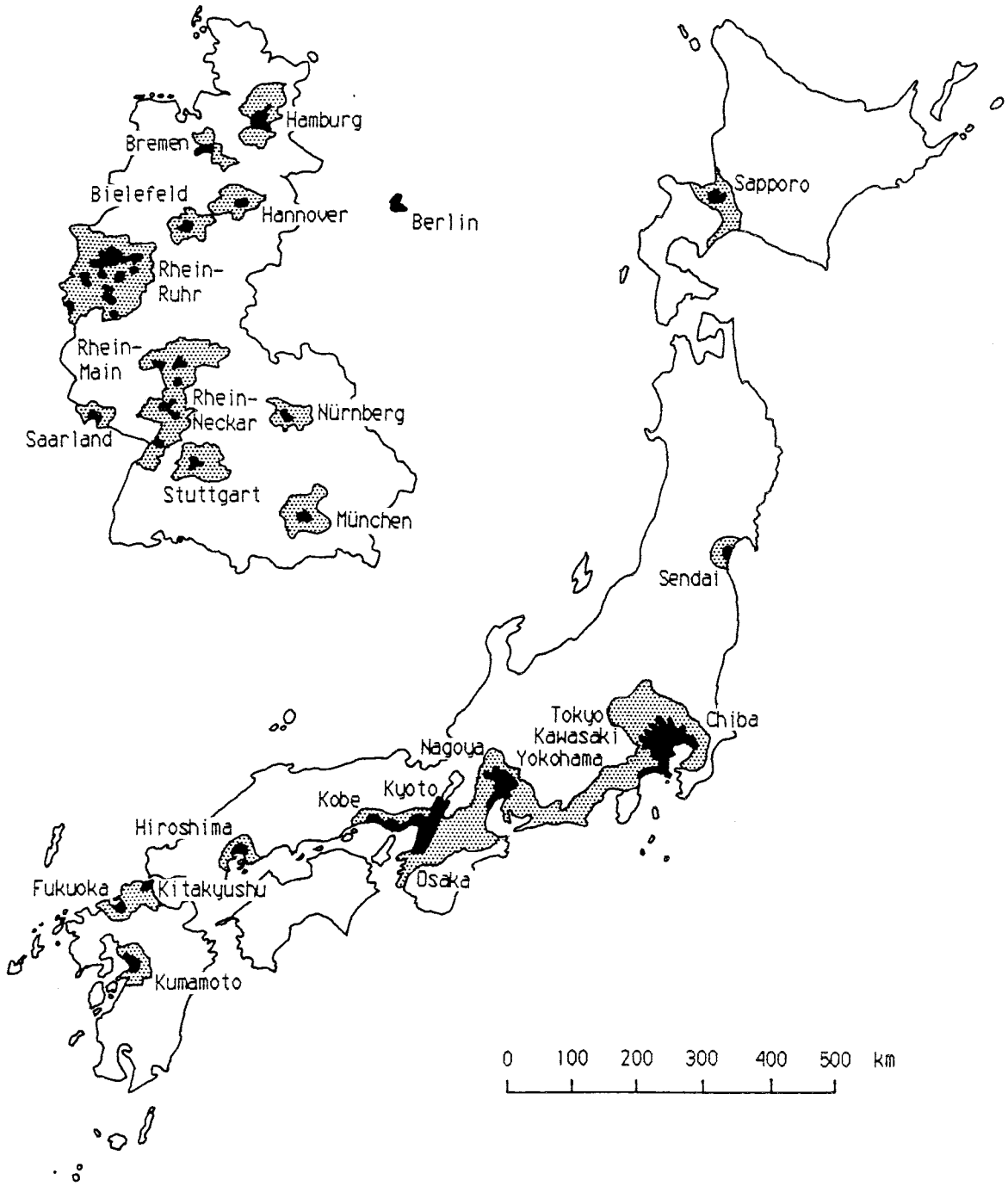
In Germany, the *idea* of planning became deeply discredited because it was associated with totalitarianism and communism when the Cold War broke out. The *economic miracle* of the German reconstruction was built on neoliberal concepts of a free-market economy in which there was no room for state intervention. Consequently, there was practically no national or regional planning in the first two decades after the war.

In Japan there was no such reaction. Instead the new government initiated a strong tradition of centrally guided development policy. Based on the National Comprehensive Development Law of 1950, there were four National Comprehensive Development Plans, in which goals and policies of spatial development were laid down. With each plan, the problem of spatial disparities between metropolitan and peripheral regions received more attention and was attacked with policies such as tax subsidies, programs to promote agriculture, and transportation and education infrastructure for retarded regions with the effect that the income gap between poor and rich regions was significantly reduced (Lin, 1989), although it is now slightly widening again (Mera, 1989).

Much less successful have been the attempts to contain the unbalanced growth of the metropolitan areas, in particular Tokyo. Today more than 50 million people, or 42 percent of the total population of Japan, live in the three metropolitan areas Tokyo, Nagoya and Osaka, which together form a 400 km long megalopolis along the Pacific coast of Japan (see Figure 5). During the 1950s and 1960s more than one million people migrated each year into these three metropolitan areas to find income opportunities or higher education.

There have been numerous plans and programs designed to offer attractive alternatives to firms and households to locate outside the large metropolitan areas, most notably in the two first National Comprehensive Development Plans and the *Technopolis* program of 1983, yet in spite of some success in relocating heavy industry their total effects have been small compared with the simultaneous growth of the metropolitan areas. Nevertheless without these policies the growth of the megalopolis would undoubtedly have been even greater.

Figure 5. Metropolitan areas in Japan and West Germany (same scale).



West Germany, on the other hand, had inherited a relatively decentralized spatial system, as the former capital Berlin was divided and separated from the West German territory by 200-km corridors through communist East Germany. The largest urban agglomeration in the Federal Republic, the Rhein-Ruhr area (see Figure 5), has less than 18 percent of the national population, and Bonn, a city of less than 300,000 population serves as the national capital.

Thanks to its decentralized system of medium-sized economic and cultural centers, its good transportation network, and its federal organization of government, the country has not experienced the problems connected with over-agglomeration. In fact without any national planning effort, the spatial structure developed more or less by itself in the direction even a sophisticated planning system would have identified as desirable.

Meanwhile, during the 1960s, the general aversion against planning had subsided as the Cold War ended and a new social-democrat government propagated *detente*, a reform policy following the model of the Kennedy administration and a new system of economic guidance along the lines of Keynesian economic theory. In spite of this, the new national planning law restricted the role of the central government to monitoring and coordination functions, defined regional planning as the responsibility of the member states, and left only regional *economic* development in the joint responsibility of Federal and state governments. Due to this decision, there is no national planning in West Germany until today.

But even the states exercise the right to plan with little enthusiasm. All of them have regional planning laws, regional planning agencies and more or less elaborate regional plans, but the impact of these plans is generally small, and the plans are rarely updated. Instead the regional planning agencies employ a more 'transactive' style of planning based on negotiations and informal guidance of local governments, especially through their right to approve local land use and building plans.

Today growing income disparities between the prosperous southern states and the declining northern ones with their old industrial heritage may call again for a stronger involvement of national and regional planning. However, the style of planning will remain informal trying to work through persuasion and incentives rather than through regulation and control.

4. Urban planning

While clearly Japan is more active in the field of national and regional planning, West Germany seems to pay more attention to planning on the urban and neighborhood level. This will be illustrated in this section. Table 5 lists the major phases of the history of urban planning in both countries.

Again we start with the time after the establishment of the Meiji government in Japan and the *Reich* in Germany. In this period Germany was leading in the new discipline of city planning. City planning developed from two origins: engineering and architecture, and there was a heated dispute which of the two should dominate. Germany was also innovative in developing the basic legal instruments of city planning such as zoning ordinances and building codes and *land readjustment*, a system of land pooling and redistribution originally used for agricultural property, but later becoming an important tool for implementing new road projects in historically grown cities.

These tools were used to control the rapid growth of cities accompanying the industrialization of the second half of the 19th century. The result was the basic organization of the cities in Germany as they exist still today, but also a vast number of low-standard blocks of worker housing crowded around factories or commuter railway stations. After World War I, opposition against the housing conditions in these 'rent barracks' lead to the *New Urbanism* or *Bauhaus* movement which created a new type of housing areas based on principles of separation of working and housing, sunlight and access to green space and a new

Table 5. Urban planning in Japan and West Germany.

Period	Japan	Period	West Germany
1868-1890	**Introduction of Western style urban planning** • Western architects and city planners in Japan • development of Ginza	1871-1918	**Emergence of urban planning** • urban planning engineering discipline to solve problems of hygiene, fire protection and water provision • large-scale plans for city extension (e.g. Hobrecht Plan for Berlin 1862) • 1862 R. Baumeister: 'City Extensions under Technical, Police and Economic Aspects' • counter-movement for architectural aspects of urban design • 1889 C. Sitte: 'Urban Design Following Artistic Principles' • influence of E. Howard: 'Garden cities of To-Morrow' (1898) • introduction of zoning ordinances (Frankfurt 1891) and building codes (Prussian Building Line Law) • land readjustment law ('Lex Adickes') in Frankfurt (1892) and Prussia (1902)

1890-1919	**Movement for Japanese urban planning**
	• Classical urban issues:
	  • infectious diseases, fires, narrow streets, poor residential environment
	  • movement for urban planning		

1919-1923	**First urban planning legislation**
	• 'Old' Urban Planning Law 1919
	  • introduction of 'city planning area'
	  • zoning regulations following US and German examples
	  • land readjustment (*kukaku seiri*) following German example (*'Lex Adickes'*)
	• Building standards Law 1919
	  • fire and safety regulations
	  • minimum distances between buildings
		1918-1933	***'Neuer Städtebau'* (New Urbanism)**
			• opposition against high-density prewar housing ('rent barracks')
			• 'scientific' approach to housing design, site planning ('Bauhaus')
			• separation of urban functions working, housing, leisure and transport (Charta of Athens 1933)
			• large public housing programs
			• new state planning laws and building codes

1923-1935	**Containing urban sprawl** • 1923 Kanto earthquake: land readjustment applied for reconstruction of Tokyo • urban sprawl in large cities • influence of garden city movement		
1935-1945	**Urban planning for military purposes** • urban planning for cities in occupied territories • planning for air-defense: 'bomb-proof' cities	1933-1945	**Period of inactivity** • new city planning law: expropriation for prestige avenues • grand plans for major cities (e.g. Berlin, München), not implemented because of war
1945-1955	**Reconstruction of cities** • land readjustment used for reconstruction • determined basic structure of present cities	1945-1960	**Reconstruction of cities** • mostly following old plans and street layouts (because of infrastructure costs) • first priority on mass housing construction and repair • little planning control • poor housing standards and building materials (today a problem)

1955-1975	**Framework for urban planning**
	• various laws for specific types of development
	• proposals for land price and land use regulation
	• 'New' Urban Planning Law 1968
	  • zoning:
	  • urbanization promotion area
	  • urbanization control area
	  • development permission (for projects over 1000 m^2) in urbanization promotion area
	  • no development in urbanization control area
	• Urban Redevelopment Law 1969
	  • promotion of efficient use of urban land
	• 'New' Building Standards Law 1970
	  • building control in urbanization promotion area enforced
	  • restriction on building volume, floor space ratio, form
		1960-1975	**Urban planning legislation**
			• Federal Building Law 1960 (*Bundesbaugesetz*)
			  • two-level system of local planning control:
			  • land use plan (F-plan)
			  • building plan (B-plan)
			  • land ownership control (expropriation, compensation, land readjustment etc.)
			• 'urban development planning':
			  • integrated development plans
			  • 'scientization' of planning
			• Urban Promotion Law 1972
			  • special provisions for:
			  • new urban developments
			  • inner-city urban renewal
			  • public participation required

Table 3. Urban planning in Japan and West Germany (cont'd).

Period	Japan	Period	West Germany

1975-1989	**Changes of urban planning laws**
	• 1975 introduction of urban development promotion area into Urban Planning Law
	  • promotion rather than restriction
	  • recognition of role of private sector
	• 1980 introduction of District Planning into Urban Planning Law following German B-plan
	  • intermediate level between zoning and building control
	  • two types of district plans:
	  • policy district plan
	  • detailed district plan with statutory binding force
	  • district planning so far only applied in few cases
	• 1981 introduction of master plan for redevelopment into Urban Development Law
		1975-1989	**Gradual problem shift**
			• not urban growth, but improvement of existing cities
			• development programs and plans forgotten and not updated
			• large infrastructure expansion criticized and partly abandoned
			• typical urban planning projects are becoming small-scale, e.g.:
			  • house-by house urban renewal
			  • neighborhood improvement
			  • car restraint projects (pedestrian malls, bicycle lanes, 'woonerfs')
			  • energy conservation projects (subsidies to house owners)
			• 'interior development', i.e. intensifying inner-city land use (instead of developing new suburban land)
			  • reclamation of derelict inner-industrial land

1989-	**Future tasks**
	• 'humanization of cities'
	  • upgrade housing conditions
	  • improve living environment
	  • increase open/green space
	  • increase pedestrian space
	  • reform urban land markets
	  • reduce commuting times
	• strive for 'ecological' city
	  • reduce urban sprawl
	  • ecological waste disposal
	  • decrease pollution/noise
	  • improve urban climate
	• safety from natural disasters
	  • floods
	  • earthquakes
	• improve/maintain/refine infrastructure
		1989-	**Future tasks**
			• 'humanization' of cities
			  • neighborhood improvement
			  • wide-area car restraint
			  • industrial 'parks'
			  • urban culture
			• strive for 'ecological' city
			  • reduce land consumption
			  • restore natural ecosystems
			  • improve urban climate
			  • ecological waste disposal
			  • decrease pollution/noise
			• maintain/refine infrastructure
			  • fine-tune traffic control
			  • improve demand orientation of public transportation
			  • optimize resource utilization of transportation networks

functional architecture which later was adopted worldwide as the *International Style*.

Japan in these years clearly was the receiving part. During the first years of Meiji it relied on inviting foreign architects and city planners for demonstrating Western style urban planning and building design. It took until 1919 before the first Japanese urban planning law was enacted, and while its designers looked to America to adopt its *zoning* system, they copied the German system of *land readjustment*. Land readjustment became a cornerstone of city planning in Japan, where it was applied much more frequently than in Germany itself (Nishiyama, 1988), for example during the reconstruction of Tokyo after the 1923 earthquake.

After a brief period in which urban planning was instrumental for military or political purposes, Japan and Germany shared the experience of nearly total destruction of their major cities.

And in both countries the pressures of poverty, hunger and housing shortage were so great that the chance for a basic reorganization of the cities was missed: most cities were reconstructed more or less along the old street layouts, and this has largely determined the basic structure of the cities of today. However, the consequences have been much more serious in Japan, because German cities used to have a network of wide thoroughfares since the 19th century whereas Japanese cities, especially Tokyo, were vastly lacking in this respect.

The reconstruction of cities was conducted in both countries largely without planning controls. However, in the 1960s and early 1970s both countries set out each to establish a system of planning laws to cope with the growing problems of urban growth. But here the similarity ends.

West Germany enacted its Federal Building Law in 1960 as the first unified urban planning law for the whole country. The law established the two-tier system of local planning existing today: Each municipality is required by the law to set up a *land use* or *zoning plan* for its territory (*F-Plan*) specifying for each sub-area its zoning type and maximum floor space ratio and maximum ground coverage including space for transport and other infrastructure needed in the foreseeable future. Without exception, each development has to be approved with respect to its compliance with the F-plan. In addition, the municipalities can issue a more detailed *building plan* (*B-plan*) for areas where they think detailed control is necessary. The B-plan contains very specific regulations about the position, size and proportions of buildings, the shapes of roofs, access roads and parking, green space and vegetation, sometimes even building materials. Each development in a B-plan area has to be approved with respect to its compliance with the B-plan.

German cities are using the instrument of the B-plan extensively and have set up large staffs to handle the amount of work involved in setting up a large number of B-plans. Both F- and B-plans must be approved by the state regional planning authority and are subject to review by the public and by various institutions such as transportation and utility companies.

Japan's *New Urban Planning Law* of 1968 settled for a much lesser degree of development control. The area of a municipality is subdivided into an *urbanization promotion* and an *urbanization control* area. For the former, the city sets up a zoning plan, but only developments over 1,000 m^2 must apply for a development permission. In the urbanization control area no development except with special exemption is allowed.

Although there have been several other laws designed to improve the position of public authorities in controlling land development, the 1968 law remains the backbone of Japanese urban planning. In 1980 the District Planning Law introduced an equivalent to the German B-plan into the Japanese planning system, however this law has been applied in only very few cases.

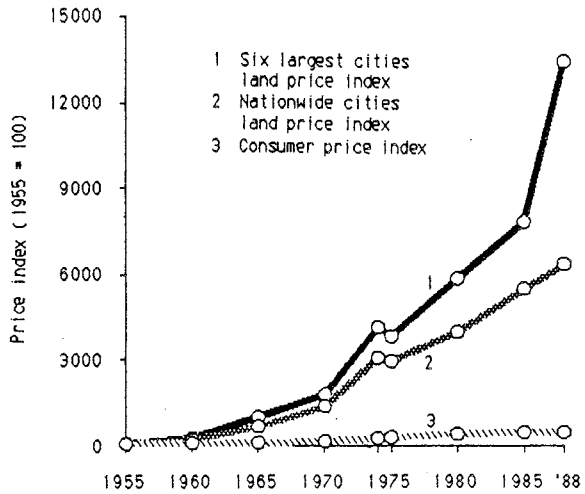
If one compares the two urban planning systems, the result is that despite some similarity in the legal instruments the actual degree of development control in West Germany is significantly greater than in Japan. One of the reasons for this is that the municipalities in Japan do not have in their planning departments the manpower necessary to effectively exercise the control possibilities made available to them by the planning laws. But there must be deeper reasons. Obviously the Japanese system reserves a greater role in urban development for the private sector, in line with the much lesser rate of taxation in Japan which forces local governments to look for ways to share the burden of infrastructure investment wherever possible. Another reason may have to do with the special importance associated with land ownership in Japan, which may explain why a limitation of land property rights through the public authorities is resented as a particularly severe infringement of personal freedom.

Whichever explanation is correct, the difference in control intensity between Japanese and West German urban planning is sufficient to account for the difference in appearance between Japanese and German cities. While West German urban planning cannot be said to have been successful in every respect, it has succeeded in maintaining minimum levels of access, sunlight, safety and aesthetic congruence of buildings in a neighborhood. This cannot be said for Japanese cities. As the zoning regulations permit residential buildings on almost all types of land, and as most developments comprise less than 1,000 m^2, most projects are controlled only by the most rudimentary building regulations. The result is the sometimes picturesque, sometimes simply awkward conglomerate

of buildings of different purpose and shape cramped on small lots along narrow alleys. It is argued that this dense mixture of land uses is essential for the liveliness and variety of the Japanese urban landscape. That may be true, but it leaves open whether the same liveliness could not be better achieved with a minimum of public control and a little coordination and cooperation between neighboring landlords.

However, urban planning in both countries has failed in another respect: in the control of urban sprawl. No land use plan has prevented the massive exodus of households from West German core cities to the surrounding countryside creating declining inner cities and serious environmental problems at the urban fringe. The same can be said for Japanese cities, only that the problems here, due to their size, are much more severe. The decentralization of housing in Japanese metropolitan areas, in particular in Tokyo, illustrates vividly how little regulatory land use planning can achieve if it is not rigorously enforced and supported by an appropriate land and tax policy.

The role of the land market in the decentralization of the metropolitan areas in Japan can only be briefly sketched here. That land prices in Japanese cities have increased extraordinarily and much faster than other prices is well known (Figure 6).



Source: Japan Real Estate Institute

Figure 6. Land price increases in major Japanese cities 1960-1988.

At the root of this phenomenon lies, of course, the relative scarcity of land in Japan, but, more importantly, the attractiveness of real estate property as a portfolio asset in a country with low interest rates and surplus money looking for investment opportunities. Once land prices have reached a certain level, the return on investment can no longer be generated from rent or lease income but only from speculative gains, i.e. it becomes separated from the income that can be produced on the land by economic activity or households. The effect is that only corporations seeking prestige locations can afford to stay in the city center while middle class households are forced to move out into still semi-rural suburban land further expanding the area covered by the speculative land market.

Together with fragmented agricultural land ownership inherited from the postwar land reform and a system of tax reliefs for agricultural land facilitating speculative land hoarding, this leads to a scattered low-density pattern of settlement in suburban areas where small groups of houses and shops are surrounded by fields still in agricultural use (Hanayama, 1986). Because the majority of employment opportunities continues to be in the city centers, the price for this extensive land utilization is paid by the residents in the form of commuting - extremely long commuting times in large urban areas. The response of urban planning has been to improve the transport infrastructure, partly with impressive results. The dilemma transportation planners face, however, is that in a land market distorted by speculation transportation improvements may serve only to stimulate further land price increases that drive people out even further and thus actually worsen their situation.

An easy solution to this problem is not in sight. Unless a radical reform of the land market is enforced, the chance to reverse the decentralization of population seems very small. It has also been argued that the dispersed settlement form now characterizing the fringe of Japanese cities may be environmentally and socially more acceptable than many forms of crowded

city housing *if* it is possible to provide these areas with adequate infrastructure and, more importantly, jobs (Hebbert, 1985). Under this perspective, one of the main future tasks of urban planning in Japan would consist of creating equal living conditions at the urban fringe and of decentralizing urban employment in order to bring the jobs closer to the people.

While urban planning in Japan is struggling with these growth-generated problems of land-use allocation and infrastructure provision, West German city planners are faced with a quite different situation. In the absence of economic and demographic growth, there has been a gradual problem shift accompanied by a shift in public attitude towards planning. On the one hand, cities have to fight for economic survival by restructuring their economy and trying to attract or stimulate the creation of future-oriented enterprises. This has lead to a new style of 'city marketing' in especially established economic promotion agencies, something revolutionary for the local government bureaucracy. For the traditional planning departments not urban growth management, but improvement of the living conditions in existing cities has become the most important task. The ambitious development programs and plans of the 1970s have fallen into oblivion and are not updated as originally planned, and large infrastructure projects such as motorways designed in the times of growth are now criticized for ecological reasons. Typical urban planning projects are increasingly small-scale such as house-by-house urban renewal, neighborhood improvement or local car restraint. Resource conservation policies such as energy saving or land-recycling receive growing attention.

It can be assumed that these tendencies will extend into the future. If household incomes continue to increase and work hours decrease, the concomitant change of values towards a more leisure-oriented and convenient yet environment-conscious way of life will require urban planners to concentrate their efforts on the 'humanization' of existing cities. Improving the neighborhood quality of residential areas will continue to be of importance, but now also work places in the manufacturing sector will be made more attractive. Ecological questions will receive even more attention than today, with the reduction of land consumption high on the list of priorities. In transportation policy, not expansion but refinement of the existing infrastructure will be the dominant task with wide-area car restraint and fine-tuning of traffic control being two central topics.

In Japan urban planning will for some time continue to have to tackle problems of urban growth until its backlog in housing and car ownership will be reduced. However, there are signs that the problem shift experienced in urban planning in West Germany has already started to appear also in Japan, as both countries move into the postindustrial era. One theme in particular will come to the fore in both countries: how to provide housing, transportation and services for the growing number of old people. Although the magnitude and time scale of this problem can be predicted with certainty, it has not received sufficient attention in either country.

5. Conclusions

Despite many striking similarities between Japan and West Germany, the approaches to spatial planning in the two countries have been markedly different.

In the field of national and regional planning, Japan has established a strong tradition of central guidance of regional development. Backed by its centralized government system, a sequence of National Comprehensive Development Plans was enacted which were successful in reducing the income disparities between the regions but have failed in containing the dominance of the Tokyo-Osaka megalopolis. West Germany, on the other hand, due to its federal system of government, has refrained from setting up any form of national planning and delegated regional planning to the member states. However, the states have used their planning privilege with restraint and have relied more on informal monitoring and coordination strategies.

In the field of urban planning, however, the situation is reverse. Here West Germany has developed sophisticated planning legislation and an efficient two-level system of local development control which is actively used and has much contributed to maintaining minimum standards of order and congruence in buildings and urban spaces in West German cities. In Japan, however, although the planning legislation is very similar to and in fact has been largely modeled after the West German one, the majority of urban development takes places with only a minimum of development control. Strong land interests and a land market distorted by speculation contribute to the weak position of generally understaffed urban planning departments and have lead to the concurrent problems of over-concentration in the city centers and inefficient land utilization at the urban fringe.

While these differences are rooted in the different conceptions of the role of the public and private sector in society in Japan and West Germany, in the future the similarities in the socioeconomic development of the two countries will increase. This makes a convergence of the two approaches to planning more likely. Japan may realize that some more direct control of urban development on the neighborhood and building level must not necessarily restrict private sector initiative and will produce a better urban environment. West Germany may study with interest the policies Japan has used to reduce regional disparities and may find in Japan, at all planning levels, models of public-private partnerships it can usefully apply in its planning system, which is, especially at the urban level, still largely oriented to regulation and direct public intervention.

References

Hanayama, Y. (1986): *Land Markets and Land Policy in a Metropolitan Area: A Case Study of Tokyo*. Boston, MA: Oelgeschlager, Gunn & Hain.

Hebbert, M. (1985): Urban Sprawl and Planning Failure - Some Reflections on the Japanese Case. In: Masser, I., ed. (1985): *Japanese Urban Planning: Some British Perspectives*. Sheffield, England: Department of Town and Regional Planning, University of Sheffield, 29-53.

Lin, J. (1989): *Study on the Effects of Regional Policies toward Regional Inequalities*. Unpublished PhD Thesis, Department of Civil Engineering, University of Tokyo.

Mera, K. (1989): An Economic Policy Hypothesis of Metropolitan Growth Cycles: A Reflection on the Recent Rejuvenation of Tokyo. *Review of Urban and Regional Development Studies* 1, 37-46.

Nishiyama, Y. (1988): *Japanese Town Planning in a Comparative Perspective: Land Readjustment is the Mother of Town Planning in Japan*. Nagoya: Department of Architecture, Nagoya Institute of Technology.

OECD (1986): *Urban Policies in Japan*. Paris: Organisation for Economic Co-operation and Development.