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national governments share these responsibilities more or less equally. In some countries, urban land use and transportation decision-making authorities are held by a single government body—usually the national government. In either case, such arrangements create more opportunities for coordinating land use and infrastructure planning.

Tables 3-2 and 3-3 summarize the various government roles in coordinating urban land use, transit, and other transportation decisions in the United States, Canada, and several Western European countries. These summary points are elaborated in the following subsections.

Land Use, Transit, and Highway Planning in the United States

The number of local governments and the extent of their autonomy vary widely among American cities. Some older urbanized areas, such as greater St. Louis, Chicago, Boston, and Philadelphia, encompass hundreds of governments, and even fan out across several states. In other (often newer) urban areas, such as Indianapolis, Omaha, Oklahoma City, Jacksonville, and Albuquerque, the central city's boundaries have been expanded outward through annexation of once-rural areas to cover most of the metropolitan population.[9] In a few cases, large counties, such as Dade County encompassing Miami, have jurisdiction over much of the metropolitan area.

Though regional government bodies exist in many metropolitan areas, their role is usually limited to providing specific services, such as sanitation, water, parks, toll roads, airports, and public transit. On rare occasions—most notably in Portland, Oregon, and to a lesser extent in Minneapolis–St. Paul and Atlanta—metropolitanwide governments have been granted authority to make certain decisions about land use, transportation, and taxation that affect the entire region (Downs 1999; Eplan 1999; Katz and Bradley 1999). The majority of special-authority districts are established to supply a single commodity-like service most efficiently and have boundaries that encompass only parts of the metropolitan area. The Chicago region, for instance, has more than 500 such special districts that provide dozens of different services (Hemmens 1999, 125).

Most Americans, however, are reluctant to relinquish local control over land use, schools, and certain other public services and responsibilities that directly affect their quality of life (Williams 1971; Baldassare

et al. 1996). Some economists postulate that while such behavior may be parochial, it may also lead to the more efficient provision of public services. Although controversial (partly because it can be used to endorse exclusionary zoning), this theory holds that smaller, decentralized jurisdictions can best provide the type and quality of services (e.g., schools, parks, libraries) preferred by local residents. Competition among local governments for residents and tax-paying businesses, it is argued, can compel greater efficiency in the provision of services and more rational choices about the kinds of public services supplied, as well as the ways local governments exercise certain authorities, such as zoning and land use regulation (Tiebout 1956; Mieszkowski and Zodrow 1989).

By and large, local governments in the United States plan land uses as they wish with little oversight by state governments or coordination with other nearby jurisdictions (Porter 1991). Even when federal, state, and regional bodies (such as environmental agencies) do claim some oversight responsibility, their involvement is often reactive (Bollens 1992). For instance, whereas some states may review, and even preempt, local zoning and land use plans for conformity with statewide guidelines, they seldom participate directly in local planning processes or try to coordinate plans among localities (CBSSE 1999; Porter 1991; Bollens 1992). Because local governments are so dependent on real property taxes for revenue, state governments are reluctant to preempt local authority over land use. Likewise, local communities are often reluctant to accept state or regional intervention in land use, concerned that they will lose their ability both to deter undesirable forms of development and to entice other kinds of development that could raise property values and revenues.

In contrast, major urban transportation planning and programming are almost always handled at the state and regional levels, often with significant federal aid. Most public transit systems, for instance, are governed by a regional authority designated for a specific metropolitan area. Sometimes there is more than one public agency providing transit services in large urban areas, each with responsibility for a particular service (e.g., commuter rail or express bus operations) or for services within subregions.

Most transit authorities are overseen by boards of directors that include representatives from those jurisdictions receiving the service and contributing funding. Directors are often local elected officials; they are responsible for major transit policy and planning decisions; and the tran-

Table 3-2 Public- and Private-Sector Roles in Providing Public Transit Service in the United States, Canada, and Selected Countries of Western Europe

Country	National Role	State and Regional Role	Local Role	Private-Sector Role
United States	The federal government provides state and local governments with aid for the provision of transit infrastructure and equipment, contributing about half of transit capital funds. A small share of operating revenues is provided by the federal government (the share is largest for small transit systems).	Many states provide revenue for transit capital and operations. A few have state transit agencies with operating authority. Most have established regional transit districts for each metropolitan area. State-approved regional taxes (such as sales taxes) are sometimes used to generate the revenue for major capital improvements or operating subsidies.	County and city governments often provide operating subsidies for regional transit agencies. The revenue is derived from local property taxes, sales taxes, and other local sources. Transit is sometimes organized at the county or city level, rather than the regional level.	Private transit contracting is common in some states and most prevalent in California. Private businesses compete to provide specific transit services (or management functions) that are paid for and prescribed by state and local governments or by public transit authorities. The practice is most common among small transit systems and for specialized transit services such as paratransit and aspects of service such as maintenance. A small number of larger systems (e.g., in Denver and in San Diego and Orange Counties in California) have adopted this approach widely.
Canada	The national government has no role in transit funding, organization, or planning, except for some research and development programs.	The 10 Canadian provinces have traditionally provided significant capital and operating subsidies for urban transit (about half the total), although this responsibility has increasingly been shifted to metropolitan and municipal governments.	Regional metropolitan governments and their constituent municipalities provide most transit services with funding support from the province. Revenues are also derived from property taxes levied in special "transit assessment" districts. Some individual cities and mu-	The private sector has a small role in the provision of transit, except for some contracting with private business to supply services prescribed by the public-sector transit agencies.

			nicipalities also provide transit services, for instance through public utility commissions.	
Germany	The national government provides states (Länder) with block funds that can be used to subsidize commuter rail services or otherwise employed by local governments to fund mass transit. The federal government also contributes aid to specific capital projects, with state and local government sharing in the cost using revenues derived from motor fuel taxes.	States subsidize commuter rail and provide local government with funds for transit. States cover about half the cost of providing and maintaining railway infrastructure. They also set minimum transit service level requirements that must be met by local governments.	Many local governments allocate state and federal transit funds to regional cooperatives of transit operators known as "verkehrsverbunds" (VVBs). The VVBs coordinate the provision of transit services over the entire region and reallocate funds among individual operators.	The private sector is increasingly being called upon to compete for contract work. The Swedish model of private contracting or "tendering" on a route-by-route basis is becoming more common.
France	The national government finances transit directly in Paris and surrounding suburbs. National subsidies are minimal in the provinces, however, with the exception of funding for large rail transit additions or improvements.	Transit is organized at the regional level by the province or by groups of municipalities.	Local governments have the main responsibility for subsidizing bus and rail service (capital and operations) using revenues from employer payroll taxes approved by the national government. Taxes may be as high as 40 percent of an employer's payroll.	A small number of large private bus companies operate service franchises in municipalities. The companies compete to provide service over entire networks (as opposed to routes), and they are subsidized by local governments. These companies usually own their own equipment and have long-term contracts.

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Table 3-2 (*continued*) Public- and Private-Sector Roles in Providing Public Transit Service in the United States, Canada, and Selected Countries of Western Europe

Country	National Role	State and Regional Role	Local Role	Private-Sector Role
Sweden	The national government's contribution is limited mainly to the funding of major rail infrastructure projects.	County governments have primary responsibility for transit operating and capital subsidies and for the planning of services. Subsidies are allocated to local government for the procurement of transit services.	Local governments are responsible for procuring the services of private contractors. They contribute about half of the operating subsidy required (except in the Stockholm area, where the county contributes all of the subsidy and has sole responsibility for planning and procuring transit services).	Private companies bid for service on specific routes, according to fare, service, and schedule parameters prescribed by the local authority. Rail and bus operations are contracted out. The public sector prescribes the route and fare schedules to be adhered to and often owns the equipment and other necessary infrastructure.
Great Britain	The national government has primary responsibility for funding rail and bus transit in greater London. It also subsidizes commuter rail outside London by providing funds to local passenger transport authorities. In other areas, local authorities support some transit services with grant aid from the national government.		Local governments (e.g., counties) subsidize a small number of bus routes designated by passenger transport authorities as "socially necessary." Local authorities also fund concessionary fares for students, the disabled, and the elderly.	Bus services outside London are largely private, unregulated, and unsubsidized except for subsidies provided to private operators for "socially necessary" services. Private bus companies provide lightly subsidized contract services in greater London.
Netherlands	The national government provides most transit subsidies, contributing to both operations and capital. It also sets fare and service policies.		Local governments have minimal funding responsibility but are responsible for tendering private-sector services and ensuring performance.	Private companies are increasingly being called upon to compete for contract services.

Table 3-3 Urban Governance, Land Use, and Transportation Coordination in the United States, Canada, and Selected Countries of Western Europe

Country	Urban Governance	Land Use Planning	Transportation Planning	Land Use and Transportation Coordination
United States	Most urban areas contain dozens of autonomous governments, though large counties can form "regional" governments, and some cities have annexed suburban areas. Taxes are seldom levied at the metropolitan level except for specific services, such as transit.	Zoning and other land use powers have been ceded by most states to local governments. Some states review local land use plans, but local autonomy is seldom abridged. Intergovernmental competition for revenue hinders regional land use planning.	Highway and transit planning is usually conducted at the state or regional level. MPOs coordinate federal funding for transit, highways, and other transportation infrastructure in most urban areas.	MPOs are sometimes part of regional councils of governments that prepare long-range land use plans. Seldom, however, have jurisdictions established more formal means of coordinating transportation and land use at the regional level.
Canada	Many provinces (e.g., Ontario) have created regional governments or "municipal regions" that have multiple authorities and responsibilities for the urbanized area as a whole. They often have taxing authority; carry out regional land use and infrastructure planning; and provide many public services, such as policing and transit.	Land use plans developed by metropolitan governments (municipal regions) must comply with land use guidelines developed by provincial boards. The specific zoning regulations of local governments must conform to the land use plans developed by the metropolitan governments and approved by the province.	Provinces have traditionally funded and planned most urban transportation infrastructure, although in recent years, much of the funding and planning responsibility has been shifted to metropolitan governments.	Municipal regions have significant responsibility for both urban land use and transportation planning. Responsibilities for both often reside in the same government office, facilitating the coordination of planning and decision making.
Germany	Urban areas can contain dozens of local governments. State and local governments have taxing authority. There are few metropolitanwide governments. Local governments	The German constitution calls for the federal government to establish a national land use plan to serve as a guide for state and local governments. Local regulations must con-	The federal role in urban transportation planning and funding is diminishing, although the federal government has a national transportation plan. State and local governments	Formal links exist between state and local transportation and land use planners. All of these plans must comport with national land use and transportation guidelines.

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Table 3-3 (*continued*) Urban Governance, Land Use, and Transportation Coordination in the United States, Canada, and Selected Countries of Western Europe

Country	Urban Governance	Land Use Planning	Transportation Planning	Land Use and Transportation Coordination
	receive much of their revenue from state and federal grants.	form to these federal and state guidelines.	are responsible for most urban transportation planning.	
Great Britain	The national government has considerable influence on local governance. Local councils have limited authority, and there are no metropolitanwide governments. Most taxes are collected at the national level and distributed to local governments.	Land use planning is the responsibility of local officials but is subject to national guidance. Most regions have land use planning conferences that produce advisory land use strategies for their areas. Local authorities determine zoning in their urban development plans, which are subject to approval and revision by the national government.	The national government establishes overall transportation policy and funding. Local authorities produce local transport policies and programs designed to implement nationally developed and funded policies. Highway and transit rail infrastructure is funded by the national government. Bus services are generally private and uncoordinated by government.	The coordination of urban transportation and land use policies occurs at the national level; however, local coordination is managed through local transport plans that are part of broader urban development plans linking transportation programs with education, health, welfare, and other public services.
Netherlands	Local governments function mainly as service providers, rather than policy makers. They are funded largely by the national government through grants and revenue-sharing programs that have many stipulations.	The national government establishes land use directives for regions and has the authority to review all local land use plans and regulations for compliance. Local governments develop zoning ordinances in accordance with these national directives.	Most transportation financing and planning are managed by the national government's ministry of transportation. Local governments have a largely advisory role, as well as responsibility for implementation.	Because the national government has the main responsibility for land use and transportation planning, the two can be closely coordinated.

Note: MPO = *metropolitan planning organization.*

sit agency's professional staff report to them. RTA in Chicago, MARTA in Atlanta, WMATA in Washington, and SEPTA in Philadelphia are examples of large, regional transit authorities overseen by elected officials from throughout the metropolitan area. Frequently, these regional authorities span two or more states. In a few cases, such as Maryland, New Jersey, and Rhode Island, a single statewide transit agency—usually housed in the state department of transportation—administers transit services in several urban and rural areas.

By comparison, urban highway programs are typically administered by state transportation departments or toll authorities (and sometimes by multistate authorities, such as the Port Authority of New York and New Jersey). Since the 1930s, most states have enacted laws requiring that revenues from gasoline and diesel taxes be used largely or almost exclusively for highway construction, maintenance, and operations, an approach emulated by the federal government (Rose 1979, 34–36). Given their ability to impose such taxes over wide areas, state governments have been in a better position than local governments to raise the large sums of money needed to fund highway infrastructure and match federal grants (Wachs and Dill 1999; Rose 1979, 96).

The prominent state role in highway planning, funding, and operations has often been criticized for resulting in neglect of local needs and concerns. Beginning in the late 1960s, the federal government required states to establish metropolitan planning organizations (MPOs) to coordinate state and local transportation planning. MPOs were specifically charged with integrating and unifying federal-aid programming for both highway and transit projects. Most local governments in urbanized areas now participate in an MPO. Although organizational approaches vary by area, MPOs in most major urban areas are overseen by boards of directors consisting of local officials drawn from several counties and dozens of municipalities.

In recent years, the role of MPOs in allocating federal and state funds for urban highway and transit projects has been enhanced by federal legislation such as the Intermodal Surface Transportation Efficiency Act of 1991. The MPO's traditionally small role in developing and implementing land use plans has changed very little, however. For the most part, transportation plans developed by MPOs are reactive to many local and private-sector land use plans and decisions. Whereas regional transportation investments may subsequently affect land use (e.g., by prompting highway-

oriented development), such effects are examined mainly at the local level. As the only regional institution in many urban areas, MPOs offer a rare opportunity for local jurisdictions to discuss and possibly coordinate their local land use plans (Porter 1991). However, MPOs seldom have any direct jurisdiction over local land use, and most have few operational or implementation capabilities (Wachs and Dill 1999, 307).

Because the majority of local governments depend on land and real property taxes for much of their revenue, they are generally unwilling to relinquish to regional institutions any authority over land use planning and decision making. Competition among local communities for tax-producing development can render land use decision making even more complicated and unwieldy to coordinate regionally (Howitt and Altshuler 1993).

Only a few governments in the United States have shared or sole control over highway, transit, and land use decisions.[10] The most notable example is the multiple powers vested by the state of Oregon and local voters in the Portland area's metropolitan service district, known as Metro. In addition to being an MPO responsible for allocating funds for transportation facilities in the metropolitan region, Metro has been charged with developing a regional land use plan that sets limits on development outside a state-designated "urban growth boundary." Governed by an elected council, Metro has the authority to compel local governments to adopt land use plans that are in conformity with its regional plan—a power that few if any other MPOs enjoy. For instance, Metro can require local communities to allow high-density, transit-oriented development in the vicinity of transit stations. Although the long-term results of this approach are not yet evident, Portland's regional planning efforts and urban growth boundary are often cited as models for other American cities and states to follow.

Environmental concerns in major metropolitan areas—particularly with regard to air pollution and the need to meet federal air quality standards—have prompted some other states to gradually place limits on local land use control, particularly on major land use decisions. Compelled to meet federal air quality standards in greater Atlanta, for example, the state of Georgia has created the Georgia Regional Transportation Authority (GRTA), which encompasses 80 local jurisdictions. Although regarded primarily as a transportation planning agency, GRTA has been authorized by the state to develop a regional growth strategy. It has also been given power to review and approve all land use decisions in the Atlanta metropolitan area

that have a "regional impact" and require federal or state aid for road improvements (including those as simple as a curb cut) (Eplan 1999). It is noteworthy, however, that GRTA—unlike most regional planning bodies in Western Europe and Canada—cannot overrule efforts by local jurisdictions to exclude growth, such as prohibitions on high-density development near transit lines and stations.

Such regionally coordinated approaches to urban land use and transportation decision making are extraordinary and even interventionist by U.S. standards. Yet they are modest compared with practices in Western Europe and Canada.

Urban Land Use, Transit, and Highway Planning in Western Europe and Canada

As in the United States, the organization and responsibilities of local governments in the large urbanized areas of Western Europe and Canada vary by country, region, and city. This variability is in large part a reflection of different historical circumstances, political institutions, and constitutional frameworks. Germany, for instance, has a long tradition of provincial governance, dating back to its formation from many city-states and principalities. Sweden and Great Britain, in contrast, have a long history of local governance (i.e., municipalities and counties), but a near absence of any intermediate or larger regional forms of government. Still, the national governments in all three of these countries, as in most other Western European countries, have a strong role in many local affairs, including land use planning and regulation. Indeed, the best-known cases of metropolitan planning in Western Europe—the planned creation of suburbs and greenbelts outside the national capitals of Stockholm, London, and Paris—have generally been stimulated and even directed by the national governments seeking to provide amenities for city dwellers (Heidenheimer et al. 1983, 260). The desire of many Western European national governments to preserve agricultural areas around cities has likewise had a significant effect on metropolitan form (Downs 1999).

As in the United States, metropolitanwide governance is not the norm in Western Europe, where dozens of local jurisdictions can coexist within a single urbanized area (Parr 1999, 237).[11] Throughout Western Europe, however, urban land use planning is a national and regional prerogative as much as a local responsibility. This approach differs greatly from that in the

United States, where such shared responsibility is unusual. More than in the United States, national governments of Western Europe have shown a willingness to intervene in local land use planning and regulation. It is probably an accurate observation that Western European local officials are no less interested in controlling commercial and residential development within their jurisdictions, but they simply do not have the autonomy to exert the singular influence of local officials in the United States (Heidenheimer et al. 1983).

National governments in Western Europe exercise influence on land use planning and decision making through various means. The German federal government, for instance, has enacted legislation that discourages localities from competing with one another for development through local property tax concessions, a practice that has become commonplace in the United States. In implementing a constitutionally mandated policy of regional "equalization," the German government transfers local revenues among states (Länder). The states, in turn, must distribute the revenues evenly among local governments—a policy considered essential for local self-determination (CBSSE 1983, 149; Nivola and Crandall 1995, 81; Konukiewitz and Wollman 1982). The federal government has also established national guidelines for state and local authorities to follow when devising land use plans (Heidenheimer et al. 1983). As a practical matter, though, what binds local governments to these national plans is the practice of local revenue redistribution—grant programs with conformity requirements and spending stipulations (Mackensen 1999, 298–301).

Local governments in France, Great Britain, and the Netherlands have even less direct control over land use, including very limited zoning authority. Indeed, the Netherlands has a national Ministry of Land Use. In contrast with the United States, local governments in these countries do not depend heavily on taxes for a significant share of their revenue; they receive grants from the national government. This practice presumably reduces the incentive to use land use controls to influence property values and the local tax base. In Great Britain, Parliament abolished metropolitanwide councils in the mid-1980s; hence most important land use decisions are now likewise made by the national government. While local authorities prepare land use plans, these plans must conform with national guidelines and be approved by the national government, which is also the arbiter in any disputes.

In Canada, the provinces have absolute authority over local government entities and a strong influence on local decision making and institutional arrangements. The provinces have exercised this power by creating and funding metropolitanwide forms of government with wide-ranging powers, including regional land use planning (Rothblatt 1994). In some cases—such as Edmonton and Calgary—a single government entity covers all or most of the metropolitan region, whereas in others—such as Toronto and Ottawa—multifunctional metropolitanwide governments have been superimposed over a tier of local or municipal governments. Though many metropolitan areas consist of several municipalities that are authorized to provide certain local services, such as fire protection and libraries, the regionwide metropolitan governments formed by the provinces have multiple responsibilities that transcend the region, such as public transit, water supply, waste disposal, and policing. They also serve a regional revenue-sharing function and review local land use plans for consistency with regional land use and infrastructure plans.

As an example, the Regional Municipality of Ottawa-Carleton (RMOC), which encompasses 11 cities, townships, and villages, directs local land use through its regional master plan. RMOC was established by the province of Ontario, which requires the creation of a regional plan that integrates area-wide land use, transportation, and other infrastructure decision making (RMOC 1999, 2). In carrying out this planning, a stated goal of the regional municipality is to "maintain and enhance the central area as the region's focus for economic, cultural, and political activities" (RMOC 1999, 5). Local municipalities may adopt their own land use plans, but these must conform with the regional plan.

Regional plans in Canadian cities not only are strategic in nature, but also offer guidance about land use and transportation policies at a specific and practical level. As an example, the RMOC master plan calls for local communities to adopt specific zoning ordinances that locate new employment-related development near public transit stations. When planning land use and infrastructure facilities and reviewing applications for development, local officials must ensure the following (RMOC 1999, 28):

- Collector roads link several adjacent developments with direct transit routes.

- Local road systems minimize the use of cul-de-sacs.
- All potential building sites are located within 400 m of a public transit station or stop.
- Locations for high-density development are close to existing or proposed public transit stations.
- Direct and safe pedestrian and cycling ways are provided between residences and transit stops.

The Ontario plan—which emphasizes compact corridor development and suburban "centers"—calls for the location of future public transit stations in those locations targeted by the regional plan to be employment centers and areas of mixed-use and compact development (RMOC 1999, 26). By having such coordinated control over regional land use and transportation planning, Canadian urban planners are better positioned to anticipate future transit needs and purchase rights-of-way in corridors before this option is lost or becomes too expensive (Cervero 1986).

Conversely, coordination of urban land use and transportation decision making is possible in much of Western Europe not because these two responsibilities are controlled by a single government, but because governments at several levels share aspects of each—from their funding and implementation to their administration. With no single government unit in charge, all must work together. In Germany, for instance, the federal government has shifted more responsibility for urban highways to the state and municipal governments, which also share responsibility for land use planning and regulation. To assist with funding, the federal government provides states and localities with block grants (derived in large part from motor fuel taxes) that can be used for any transportation purpose. These grants are often accompanied by spending stipulations that give federal agencies influence over land use and transportation decisions.

In some Western European countries, coordination of land use and transportation is possible because one level of government, usually the national government, has almost complete responsibility for major decisions. In Great Britain, for instance, the national government has primary control over both land use and highway decision making (though transit provision is largely a private-sector responsibility outside greater London). Before 1986, when privatization laws were passed by Parliament, regional passenger transport authorities (PTAs) had been responsible for providing all public transit in metropolitan areas. Although PTAs still

exist, their main role is in planning and funding subsidized supplemental bus services (essential services not provided by the private market) and distributing national subsidies for some commuter and light rail services. In general, urban areas (outside of greater London) lack strong regional transit planning organizations, whereas highway and land use planning remain largely national responsibilities.

Other means by which land use, transit, and other transportation policies and programs are coordinated in Western Europe and Canada were summarized earlier in Tables 3-2 and 3-3. The variability noted above makes it difficult to generalize about organizational and jurisdictional approaches. If there is a common denominator, it is that responsibilities for transportation and land use decision making are held by one government or shared among several governments, not divided categorically among several levels of government as in the United States. Whereas coordination of land use and transportation planning does take place in the United States, the usual emphasis is on minimizing the adverse effects that a new development will have on local roadway traffic. In established areas, "in-fill" development proposals are often hindered by zoning ordinances forbidding new development that will increase local traffic volumes. The cumulative effects of these many local actions—usually eschewing higher-density development—on regional and metropolitan-wide land use and transportation patterns are seldom considered in formulating these plans. The local news article in Box 3-1 illustrates the difficulties that arise from these conflicting demands.

The existence of a more broadly oriented national or state role in land use decision making is perhaps the single most important factor distinguishing the transit-related policies and practices of Western Europe and Canada from those of the United States. Possible factors underlying this difference are considered in the next chapter.

Box 3-1

News Article Illustrating the Difficulties of Regional Land Use and Transportation Coordination in U.S. Urban Areas

Fairfax Weighs Buildup Around Metro Stations

When Metro riders get off at the Wiehle Avenue Station—one of four stops envisioned along a future train line down the Dulles Toll Road—they will be greeted by towering office and apartment buildings, urban-style restaurants and shops, and a design that all but eliminates the need for a car. That's the vision of a small group of Fairfax County business leaders, activists and politicians who have been meeting for six months to determine what the area around the stations should look like once they arrive—scheduled for 2006. Picture a smaller version of Ballston, the mini-city that rises around the Orange Line in Arlington. Or maybe a larger version of the Reston Town Center, with its upscale feel, pedestrian-friendly avenues and piazza dominated by a burbling fountain. Imagine high rises atop the Metro stations, with shops, museums, health clubs, dry cleaners and banks built on bridges arching across the Dulles airport and toll roads.

Members of the Dulles Rail Land Use Task Force are to report in March to the Board of Supervisors on changes that may be needed in the county's long-range plan. Not everyone is on the same page.

Residents living near the future Metro sites worry they will wake up one day to find that traffic has worsened, thanks to those huge buildings shadowing the swing sets in their yards. Likewise, county planners advising the Dulles Rail Land Use Task Force warn that if development is too intense, it will overwhelm nearby roads because most people who live or work in the new buildings will drive. Planners are suggesting that less development be considered.

"We have been looking at what the planned transportation network capacity is for that area," said Heidi Merkel, the county planner in

charge of supporting the task force. "Our fundamental assumption is that a considerable majority would continue to arrive in a car."

In addition, county planners oppose putting development on top of the Metro stations or across the toll road—which would require the complicated acquisition of air rights from several agencies, including Metro and the Metropolitan Washington Airports Authority. John Palatiello, who sits on both the county Planning Commission and the Dulles task force, said many task force members believe the staff is being too cautious. He said the Metro station development needs to be big enough to inject an urban feel into the heart of suburbia. Building close to, or on top of, the Metro stations may be essential to that atmosphere, he said. "There's a philosophical difference, and there's going to continue to be some different view of the world," he said. "Our job is not to make political assessments as to what is politically doable. Our job is to create a vision, create a situation where once someone is there, they can walk to a place to have lunch, walk to a dry cleaner, walk to a bank."

Fairfax County has been criticized in the past for not achieving that kind of development around its Metro stations. Construction around the Vienna stop, for example, consists largely of two-story town houses. Just this week, another multitier parking garage opened at the station to accommodate the army of commuters who arrive by car each day. Stuart Schwartz, director of the Coalition for Smarter Growth, praised the task force for seeking a better way, but faulted Fairfax officials for not addressing the county's overall land policies as they discuss the Dulles corridor. Concentrating people in high rises around Metro stations will ease congestion on nearby roads only if accompanied by large-scale reductions of development in other parts of the county, Schwartz said.

"Yes, development around the Metro stations is very important. But ideally, this corridor shouldn't be looked at in isolation," he said. "Ideally, you'd look at the county as a whole and eastern Loudoun together. If we shifted office development and residential development out of other areas and put it in this corridor, our traffic problems would be reduced." County officials note that would be difficult given centuries-

Continued ▸

Box 3-1 (continued) **News Article Illustrating the Difficulties of Regional Land Use and Transportation Coordination in U.S. Urban Areas**

old laws and legal precedents in the state that often favor the rights of landowners over local government.

Supervisor Gerald E. Connolly (D-Providence) said board members might be willing to reduce the amount of development in one part of the county in exchange for increasing it elsewhere—if such a trade-off were legal. "People do have land rights in Virginia, and it's not an easy task to be more directive about development," he said. "We are trying to do it with carrots. We don't have many sticks." Still, some people, like Joe Caravella, say they want the task force, and later the supervisors, to think hard before approving a plan that would permit large new developments so close to existing neighborhoods. Caravella lives in Hunters Green Cluster, a community of 118 homes just south of the proposed Wiehle Avenue station. He and his neighbors would be concerned if the six- and eight-story buildings near their neighborhood suddenly were doubled in size, he said. And all are holding their breath over what that might do to their roads. "The traffic is an absolute disaster now," Caravella argued. "You've got gridlock at 5:15." While Hudgins expressed confidence that the task force and supervisors will listen carefully to concerns, she said the new communities must include homes, businesses and shops. "Some folks have shared the view that they have moved out here because it is 'out here,'" she said. "They recognize that as we have grown, we have to accommodate the growth. To what level? All of these issues need to be explored to know what the impact is in the community."

NOTES

1. Karlsruhe officials estimate that the elimination of interline transfers has reduced travel times by more than 35 percent for affected travelers (TCRP 1997a, 6).
2. Similar devices have been installed on a limited basis in some American cities, such as San Francisco.
3. For a more detailed review of organizational and institutional changes in Western European public transit, see UITP (1997).

4. Outside greater London, transit bus services are completely privatized, subject mainly to safety regulations. Private companies are free to set fares and schedules and enter and exit routes as they see fit. Within greater London, London Transport contracts with private companies for the provision of bus services and therefore continues to control or have significant influence over bus fares, routes, schedules, and many aspects of service quality.
5. A small portion (around 10 percent) of the gap is attributable to differences in production, transportation, and distribution efficiencies (Metschies 1999, 90).
6. Diesel fuel, not shown in this table, is not taxed as heavily as gasoline in many Western European countries. The relatively low tax on diesel, combined with its greater fuel efficiency, has resulted in a large share of diesel-powered automobiles in France, the Netherlands, Germany, Sweden, and several other Western European countries. In these countries, diesel prices are 20 to 40 percent lower per liter than gasoline prices. In effect, this differing tax treatment, coupled with the large share of diesel passenger cars, makes motor fuel prices marginally closer to those in the United States overall, but still much higher on average.
7. In a few instances in the United States—most notably on the San Diego carpool lanes and the New Jersey Turnpike—tolls are added or varied by time of day to influence levels of traffic. The public's response to these programs, promoted as "value pricing," is being followed closely to determine the potential for further application.
8. For instance, the Port Authority of New York and New Jersey, which sets tolls on the Hudson River (west-side) crossings between New Jersey and Manhattan, is also responsible for the PATH railway, the main transit connection over the river. The New York Metropolitan Transportation Authority administers the tolls on the east-side crossings into Manhattan (and in the other boroughs of New York City) and runs New York City's subway, bus, and northern and eastern commuter rail lines.
9. For instance, the cities of Dallas, Columbus, and Albuquerque have increased their land area by 25 percent since 1970 (Ladd 1999, 329–331).
10. According to Downs (1994, 132), fewer than a dozen of the nation's more than 300 metropolitan areas have metropolitan regional governance.
11. Parr (1999) identifies the exceptions of the Berlin, Bremen, and Hamburg Länder, which are closely matched with each metropolitan area.

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ABBREVIATIONS

CBSSE	Commission on Behavioral and Social Sciences and Education
FHWA	Federal Highway Administration
RMOC	Regional Municipality of Ottawa-Carleton
TCRP	Transit Cooperative Research Program
TRB	Transportation Research Board
UITP	Union Internationale des Transports Publics

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4

External Policies and Factors Affecting Transit Use

A central aim of this study is to explore the broader external factors that contribute to higher rates of transit usage in Western Europe and Canada than in the United States. Some of the patterns and policies discussed in the previous chapters have been the result of factors well beyond the control of individual transit agencies. These factors, reviewed in this chapter, include differences in basic demographic and economic conditions, in history and tradition, in public attitudes and institutions, in urban highway and housing programs, and in transit management and funding environments.

To be sure, the abundance of historic cities—settled long before the mass introduction of automobiles—has made the provision of public transport especially critical throughout much of Western Europe. Limited urban infrastructure to accommodate automobiles can make driving costly and inconvenient. Yet there are numerous other reasons why Western Europeans use transit more than Americans. Their governments have a long history of taxing automobiles as luxury goods, tightly regulating urban land use, and controlling the supply and location of housing—policies and practices that have tended to encourage both compact urban areas and limited automobile usage. Moreover, the timing, character, and size of population and economic growth have differed markedly in Western Europe and the United States, having deep-seated effects on urban form, consumption patterns, and travel behavior.

In this chapter, these external factors and their possible role in causing the significant differences observed in the extent of transit-supportive policies and in transit availability and usage among cities in the United States, Canada, and Western Europe are reviewed. In the course of this review, it

becomes evident that far fewer such factors differentiate the United States from Canada than from Western Europe. Yet while the United States and Canada have shared many of the same economic, demographic, and historical trends, Canadians continue to make better use of public transit. More than the countries of Western Europe, therefore, it would appear that Canada can provide insight into how American policies and practices can be made more supportive of public transit. To this end, the salient differences between the two countries are examined in the final section of the chapter.

DEMOGRAPHIC AND ECONOMIC CONDITIONS

Pressures from Population and Social Change

Basic demographic data reveal major differences in population trends in North America and Western Europe, especially since World War II. Western Europe's population has been static as compared with that of the United States and Canada during this period (see Figure 4-1). The U.S. population has doubled since 1950, up by more than 130 million people. Nearly all of this growth has occurred in metropolitan areas, placing greater pressure on undeveloped land. Since 1950, the share of the country's population in metropolitan areas has increased from about 65 to 80 percent (Bureau of the Census 1999, 46).

In contrast, the combined population of France, Great Britain, and Germany (including the former East Germany) has grown by about 40 million since 1950, or about 25 percent. This total has been surpassed by the three U.S. states of California, Texas, and Florida, which have gained more than 45 million inhabitants during the same period.

Other demographic differences are notable and likely to have had an important effect on urban settlement and travel patterns. In Germany, Belgium, France, the Netherlands, and Great Britain, more people are over age 65 than are under age 18—a demographic pattern that has persisted for more than two decades. In contrast, nearly twice as many Americans are under 18 as are older than 65. During the 1960s—as millions of young Americans in the baby boom cohort were reaching adulthood—there were three times as many Americans under 18 as over 65. The maturing baby boom generation

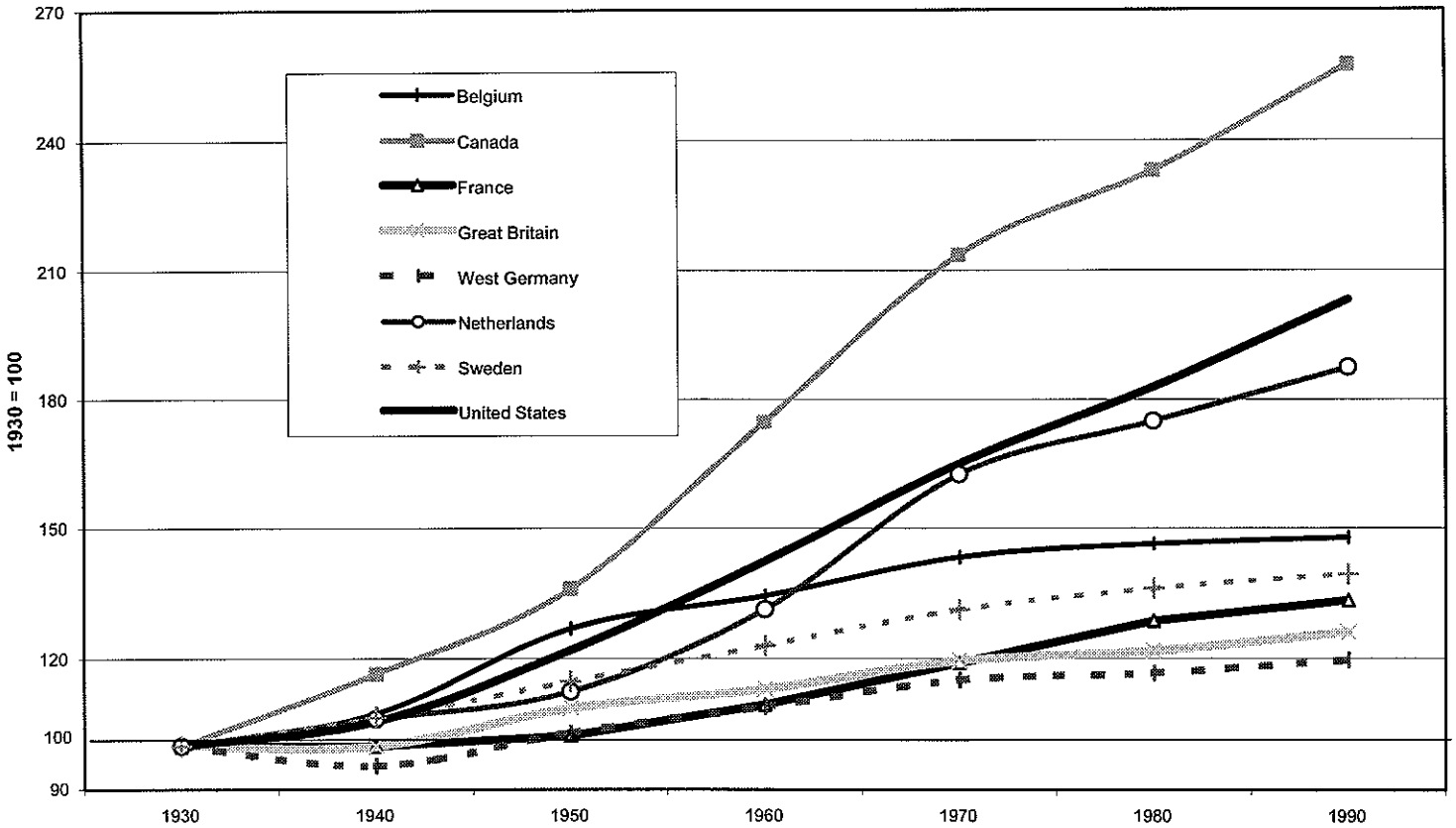

FIGURE 4-1 Population growth in the United States, Canada, and Western Europe, 1930–1990 (Bureau of the Census 1970–1995).

entered the workforce, the housing market, and concomitantly the driver population during the mid-1960s to mid-1980s.

During this period, the U.S. economy produced many more jobs than did the economies of Western Europe. Between 1960 and 1995, the U.S. workforce nearly doubled, growing by about 60 million (Bureau of the Census 1971; Bureau of the Census 1998). By comparison, nearly as many people left the workforce each year as entered it in Western Europe. From 1960 to 1995, the combined workforces of Germany, Great Britain, and France grew by only 20 percent, an increase of about 15 million workers (Bureau of the Census 1971; Bureau of the Census 1998). Given these disparities in population and economic growth, it is sensible to question their effects on the differing patterns of urban development that have been observed in the United States and Western Europe.

Another important difference in demographic patterns is that a large share of the newcomers in American cities after World War II consisted of immigrants from Asia and Latin America, as well as African Americans from the rural South. Because many of the urban immigrants were poor and belonged to minority racial groups, social tensions in cities were exacerbated. Seeking better housing and schools, many middle-class whites left center cities in favor of the newer suburbs. Many older cities not only lost residents and jobs, but also suffered declining tax bases, eroding city services, and growing crime and poverty, making it increasingly difficult to retain and attract new home owners and businesses. Such social problems were largely absent or occurred on a smaller scale in Western European cities (Downs 1999, 24).

To be sure, the social and economic stresses that plagued U.S. cities contributed to the continual outward expansion of metropolitan America and to the difficulty of instituting public policies designed to reverse or slow this trend. The many complex and interrelated forces associated with the declining American central city cannot be evaluated here.[1] Yet inasmuch as transit systems traditionally have been configured to serve cities, the shift of residents and workers to suburbs, coupled with concerns about urban crime, has exacerbated ridership declines. Whereas Western European transit operators have not been immune to such problems, they have not been as profoundly affected. With so many economic, demographic, and social factors differentiating urban America, Canada, and Western Europe, it is certainly reasonable to question their comparability.

Affluence and Consumerism

Many Americans have long been able to afford automobiles and to own their own homes. Like automobiles, nearly all major consumer goods, from televisions and kitchen appliances to central air-conditioning, were mass introduced years earlier in the United States than in Western Europe.

Throughout much of the post–World War II period, the array of consumer choices available to Western Europeans was limited, not only because of public policies, but also because of economic conditions. Few Western Europeans had sufficient income to buy their own home, much less a single-family house on a large lot outside the city. Rationing initiated during the war remained in effect into the 1950s, and by 1960, per capita purchasing power in nearly all Western European countries was only a fraction of that in the United States: 60 percent lower in France and West Germany and two-thirds lower in Austria and the Netherlands. Only Sweden, which escaped significant war damage, had a per capita income (measured in purchasing power) at least half that of the United States (Bureau of the Census 1998).

Not until the mid-1960s did Western Europe begin to close the gap, and by this time American and Western European urban forms had diverged further. Today the income levels of most of the major Western European countries have climbed to within 25 percent of that in the United States.

Household income is positively correlated with automobile ownership and use (Lave 1992; TRB 1997, 65). As mentioned earlier, Germany now averages nearly one car for every two people—equivalent to the level attained in the United States during the 1970s. France is also approaching one car for every two people, as are several other Western European countries. Despite high levels of car ownership, however, Germans still drive, on average, about as much as Americans did in the late 1960s. Although they own many cars, they do not use them at the same high rate as Americans. One would have to go back to the 1950s and early 1960s to find U.S. driving levels comparable with those currently found in Great Britain, Denmark, Sweden, and France. For the most part, however, Western European automobility and suburbanization are increasing with economic growth. These trends will continue to test the ability of Western European policy makers to regulate urban land use, preserve center cities, and encourage use of public transit.