



## Michigan COMMENTARY

### Transportation Funding and the Transportation Future

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This *Commentary* presents an overview of the status of transportation funding in Michigan, examines the need for increased spending, and raises some broad policy issues related to the state's transportation future. Investing more in the state's transportation infrastructure is essential to improving the economy. In planning such investment, however, it is important to consider the effects on society and the environment of the *kind* of transportation system we choose to promote. Our present system, which relies primarily on personal cars and dense networks of pavement spreading ever farther beyond our cities, is very costly. It is not only expensive in itself, it also exacts a high price from the environment and contributes to the decline of our cities. Unless transportation policy takes such costs into account, they eventually could vitiate the benefits of new investment.

#### NEW DOLLARS AND OLD ROADS

Many in Michigan are looking to federal transportation funds to help the state out of its economic doldrums. From fiscal year (FY) 1985 to FY 1992 federal transportation aid to Michigan fell by almost 40 percent. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, however, provides more money to the states, funds that will give Michigan greater policy latitude. Michigan's share in FY 1993 could be as high as \$371 million, a 36-percent increase over FY 1992; the state could receive about \$3.1 billion over six years. To receive its federal allocation, Michigan must provide partial matching funds, a 10-percent match for funds dedicated to interstate highway construction and a 20-percent match for funds for other programs.

In February Governor Engler announced a plan to invest about \$5 billion over ten years to improve the state's highways and bridges. The plan, called "Build Michigan," is intended to create jobs and make Michigan more competitive economically. The governor proposed that the state issue bonds to provide matching funds to capture about \$1.2 billion in new federal funds. (The ten-year state program, however, depends on extension of the present six-year federal program.) Bond sales began in July. Democratic legislators also have advanced proposals to use the new federal funds to increase spending on transportation infrastructure.

There are compelling reasons to take full advantage of the new federal transportation funds. According to the Citizens Research Council of Michigan (CRC), the Federal Highway Administration found 61 percent of paved major roads in Michigan in only fair or poor condition in 1990, only one percent fewer than in 1985. The Michigan Department of Transportation (MDOT) reports that in 1990, 33 percent of the state's bridges were "functionally obsolete or structurally deficient." The draft Michigan Transportation Policy Plan (TPP), drawn up by the Michigan State Transportation Commission, points out that travel on state trunkline roads, which carry more than 50 percent of the state's travel, has increased by 32 percent since 1980, but their capacity has increased by only one percent. According to the TPP, this threatens to increase highway congestion, including delays at border crossings, which could divert commerce away from Michigan. Congestion is an obvious threat to the just-in-time delivery systems that have become vital to efficient manufacturing. The MDOT has not updated its estimates of transportation spending needs since 1986, but at that time it was estimated that about \$15 billion would be needed through 1994 just to rectify deficiencies in Michigan's highways, roads, and streets. To put this in perspective, state transportation expenditures for



all purposes from FY 1986 through FY 1991, six of the nine years covered in the 1986 estimate, were only about \$9 billion.

## EXPENDITURES AND REVENUE

The CRC points out that the poor quality of Michigan's roads is part of a nationwide problem; Michigan's roads are about average compared with those in other states. Michigan, however, has been spending less on its highways than many comparable states. The CRC compared Michigan highway expenditures in 1990 with those of the fourteen other states with populations of more than five million and its neighboring states (all of which, except Minnesota and Wisconsin, also meet the first criterion). (See Exhibit 1.) The council found that Michigan ranked tenth among the seventeen states in total spending and in the bottom third or below the seventeen-state or the national average for most relative measures, such as spending per capita or per vehicle-mile traveled or spending per \$1,000 in personal income. These rankings are not surprising given that Michigan ranked tenth among these states in total highway revenue collected in 1990, last in revenue per capita, and next to last in revenue per \$1,000 in personal income and revenue per vehicle-mile traveled. In 1990 per capita state and local highway revenue in Michigan was 18 percent below the seventeen-state average and 21 percent below the national average.

Motor fuel taxes are the largest single source of Michigan highway revenue. Fuel tax receipts fell by 0.7 percent from 1988 to 1991 due to improving gas mileage and a faltering economy. All states have had to cope with these reductions in fuel tax revenue. Michigan, however, has been unable to compensate by raising

### EXHIBIT 1

#### Relative Comparisons of State and Local Government Expenditures on Highways, 1988-89

	Per Capita	Per \$1,000 Personal Income	Per Licensed Driver	Per Registered Vehicle	Per Road Mile	Per Vehicle Mile Traveled
California	\$141	\$7.74	\$210	\$190	\$25,025	\$0.016
Florida	222	13.73	312	251	26,041	0.026
Georgia	200	13.33	299	245	11,947	0.017
Illinois	240	13.72	389	349	20,613	0.034
Indiana	189	11.77	276	245	11,541	0.019
Massachusetts	187	9.03	260	291	32,748	0.024
<b>Michigan</b>	<b>193</b>	<b>11.69</b>	<b>278</b>	<b>250</b>	<b>15,146</b>	<b>0.022</b>
Minnesota	350	21.19	627	464	11,747	0.041
Missouri	207	13.47	303	278	8,913	0.022
New Jersey	271	12.34	373	372	61,204	0.035
New York	248	12.87	437	444	40,115	0.042
N. Carolina	197	13.91	288	253	13,706	0.021
Ohio	186	12.03	275	213	17,883	0.024
Pennsylvania	226	13.99	350	345	23,441	0.033
Texas	248	17.19	380	336	13,811	0.026
Virginia	316	18.10	455	396	28,599	0.032
Wisconsin	272	17.56	402	381	12,052	0.031
17-St. Average	\$217	\$12.74	\$328	\$295	\$19,182	\$0.026
17-St. Median	\$222	\$13.47	\$312	\$291	\$17,883	\$0.026
U.S. Average	\$234	\$14.33	\$351	\$310	\$14,986	\$0.028

SOURCE: Citizens Research Council of Michigan, *Highway Funding in Michigan*, May 1992, p. 71.

the gas tax rate, which was capped by law at 15 cents per gallon in 1984. Michigan is one of only seven states that have not raised the gas tax since 1984.

Exhibit 2 shows how Michigan compares with other states in several revenue categories. Although Michigan's per capita fuel tax revenue in 1990 was below the national average, it was about 2 percent above the average for comparable states. It is not surprising that in Michigan relatively few dollars per capita go to highways from local property taxes; the need to fill the gap in local school funding left by a steadily declining state contribution already burdens property tax receipts. Michigan also falls conspicuously behind in federal aid per capita. Federal highway aid to the states comes from federal taxes on motor fuel and other highway-related federal taxes. The allocation formula is such that Michigan gets back less than its population puts in, an average of about 90 cents for every dollar paid since 1956.

## EXHIBIT 2

### Per Capita State and Local Highway Revenues, By Source, 1990

	Michigan	17-State Average	National Average
Motor fuel taxes	\$71.83	\$70.62	\$79.24
Vehicle registration fees	42.02	43.79	41.24
Other state highway fees	7.03	13.76	16.69
Road and crossing tolls	1.49	16.21	13.31
Local highway-user revenue	0.00	4.71	4.08
<b>TOTAL HIGHWAY-USER REVENUES</b>	<b>\$122.35</b>	<b>\$149.09</b>	<b>\$154.55</b>
Property taxes	\$3.34	\$17.49	\$17.30
Nonhighway-related taxes	0.00	2.51	3.86
Appropriations from general fund	37.99	45.80	46.16
Miscellaneous receipts	20.34	28.12	26.44
<b>TOTAL NONHIGHWAY-USER REVENUES</b>	<b>\$61.67</b>	<b>\$93.93</b>	<b>\$93.76</b>
<b>FEDERAL AID</b>	<b>\$35.07</b>	<b>\$49.77</b>	<b>\$59.45</b>
<b>TOTAL HIGHWAY REVENUES</b>	<b>\$219.09</b>	<b>\$292.79</b>	<b>\$307.76</b>

SOURCE: Citizens Research Council of Michigan, "Council Comments: Highway Funding in Michigan," May 1992, p. 5.

## BENEFITS AND COSTS

The case is strong for investing more in our transportation infrastructure and finding a way to acquire Michigan's full share of federal assistance. Governor Engler says that the Build Michigan program will support, directly and indirectly, as many as 18,000 jobs during the 1990s. In the long-run, adequate transportation infrastructure is essential to maintaining and increasing economic productivity. A study conducted by David Ashauer of the University of Michigan, found that as public investment in transportation, water and sewer systems, and other infrastructure increases, so does the productivity of private investment in workers and equipment. In short, public infrastructure investment provides fertile ground for private enterprise.

In considering the long-term role of transportation in Michigan's economic strategy, however, it is important to think creatively about the *kind* of transportation system we want. Our present automobile-based transportation system entails some serious costs. The people of the United States, about 5 percent of the world's population, drive about one-third of the world's cars. While this allows great personal mobility, it comes at the price of environmental degradation, the deterioration of our cities, and expensive and risky foreign entanglements.

The automobile-based transportation system in the United States contributes a major share of some of the country's most dangerous air pollutants: about 68 percent of carbon monoxide, about 60 percent of hydrocarbons, and about 49 percent of nitrogen oxides. When no longer useful for transportation, cars become cumbersome and enduring solid waste, which includes batteries containing lead and acid as well as air conditioners containing ozone-depleting freon. According to one estimate, about 650 million cars have been discarded or buried since the turn of the century. Michigan alone generates about 7.5 million used tires a year.

Another argument against our primarily car-based transportation is that the development of this system has contributed to the decline of our urban areas. Many factors have spurred the flight of jobs and people from the cities, but widespread car ownership and a burgeoning post-war highway system made such flight possible and shaped what architecture critic Jane Holtz Kay calls the "centerless sprawling environment" that has grown up around and between the cities. This sprawling settlement pattern is an impediment to economical mass transit, which operates more efficiently where population is concentrated. Lack of mass transit in cities makes them less livable, and lack of regional mass transit makes it more difficult for less affluent urban residents to get to suburban jobs, exacerbating poverty in the cities and the fiscal distress of city governments, in turn making cities progressively less attractive places to live and do business. A study conducted by a Southeast Michigan Council of Governments (SEMCOG) task force, released in 1991, notes that "low density fringe development stymies ... public transit service, effectively cutting off ... jobs from urban core residents .... An estimated 75 percent of the new jobs created in Southeast Michigan during the 1980-90 period were located in developing areas with no available transit service."

The Detroit metropolitan area exemplifies the tendency of American cities to spread themselves thinly across the landscape. The SEMCOG study estimates that about 40 percent more land will be required to accommodate the 6 percent population growth projected for the next twenty years. Such sprawling growth exacts environmental as well as social costs. In response to increasing automobile traffic, the U.S. Environmental Protection Agency now requires auto emissions testing in Macomb, Oakland, and Wayne counties to help control pollution from automobile exhaust, which is responsible for 45 percent of the smog in Detroit. The problem, however, is spreading. According to a state air quality specialist, more people own cars and are driving them farther. Starting in November 1993, emissions testing also will be required in Washtenaw, Kent, and Muskegon counties, and Monroe, Livingston, St. Clair, and Ottawa counties also may be included.

In addition to the pollution entailed by automobile-dependent settlement, one must take into account such consequences as the destruction of arable land and the loss of valuable wildlife habitats. By one estimate, about 10 percent of the arable land in the United States is now covered by roads and parking lots. From one-third to one-half of Michigan's wetlands—which play a vital role in flood control and water purification as well as providing important wildlife habitat—have been lost since the first European settlement, due in part to sprawling development.

This issue is at the heart of a current controversy in the lakes area of Oakland County, where retail, residential, and industrial development worth millions of dollars has taken place in anticipation of an as yet unconstructed road connecting the area to the Detroit freeway system. Work on the new route has not begun because it would require filling 44.4 acres of wetlands. State law allows this, if agreement can be reached on a plan to replace the wetlands. Consequently, a plan is being developed. Some, however, oppose the new route under any wetlands replacement plan on the grounds that it would encourage even more development and, consequently, further environmental damage in the lakes area.

In cataloging the social and environmental costs of our current transportation system we cannot overlook the foreign policy implications of our prodigious consumption of oil. Not only does the United States, with less than 3 percent of world oil resources, consume about 30 percent of the world's oil production, but also about 63 percent of that is consumed by our fuel-intensive automobile-based transportation system. Because the United States imports about 45 percent of its supply, our thirst for oil has driven our relationships with

oil-exporting countries for decades. Although buying oil from the Middle East generally has been cheaper than extracting it from domestic deposits, pump prices do not reflect the political and military costs of dependence on Middle Eastern oil. Not only has this dependence led the United States into relationship with unsavory allies, it has cost an immense amount of money. One environmental scientist estimates that Middle Eastern oil would have cost the United States \$495 a barrel from 1985 to 1989 (*before* the Gulf War) if the cost of our military intervention in the region had been included. Actual OPEC prices in those years ranged from about \$10 to about \$30 a barrel. In effect, our military spending has been subsidizing our oil consumption rather generously.

Our present transportation system was not the inevitable result of the development of automotive technology. It depended from the start on the willingness of government to take responsibility for providing the immense and costly infrastructure cars demand. Most highway funding comes from levies on highway use and related activities and expenditures, but other revenue also subsidizes our automobile-based transportation system. About 72 percent of the state and local revenue devoted to Michigan's highway system comes from motor fuel taxes, vehicle registration fees, or other taxes and fees directly related to highway use. About 28 percent comes from revenues unrelated to highway use. This is slightly below the national average of about 30 percent. Other subsidies are less obvious. Suburbanization throughout the country has been subsidized by public funding of nonhighway infrastructure. Federal tax policy treats \$100 a month of employer-provided parking as a tax-free fringe benefit, while employer-provided transit or van pool fares over \$15 are fully taxable. Local zoning ordinances often mandate low-density development and a strict separation of residential, commercial, and industrial land uses that encourages automobile travel. In short, public policy at all levels has supported automobile-based transportation and subsidized land-use and settlement patterns that have discouraged the development of alternatives.

### DIMINISHING RETURNS

Although the freedom of movement allowed by our automobile-based transportation system endangers our cities, it is also one of the system's undeniable beauties. In some parts of the country, however, dependence on automobiles for mobility appears to be reaching the point of diminishing returns. To the extent that it inhibits mass transit, our present system long has fettered those who are physically unable to drive and those who cannot bear the substantial expense of a private car. More dramatically, it now has begun to diminish the mobility of automobile users themselves. Los Angeles, which discarded its streetcar system and opted for unrestrained horizontal sprawl decades ago, is now threatened with gridlock on its acres of roads, which—along with parking lots and other automobile infrastructures—occupy more than half the city's surface area. Congestion not only impedes movement, it also greatly increases fuel consumption and pollution. Motorists in Los Angeles, for example, burn one of every four gallons of gas waiting for traffic to move on overcrowded roads. In Michigan, the Transportation Interest Group (TIG)—a coalition that includes the Michigan Municipal League, the County Road Association of Michigan, the Michigan Public Transit Association, and the Michigan Road Builders Association—estimates that sitting on traffic-bound roads costs the average motorist \$993 a year for fuel, vehicle wear, and lost time. The TIG also notes that congestion contributes to traffic accidents.

High time, then, to build more roads—or is it? Some observers suggest that we cannot build our way out of gridlock because improving and building more roads only encourages more automobile use, and soon the system is once again inadequate. A study of 31 cities around the world conducted at Australia's Murdoch University reached this conclusion. In this country New Jersey is acting on the principle that road building begets the need for more road building. Consequently that state has canceled \$1.2 billion in new highway projects and is using its share of the new federal transportation funds to double its spending on mass transit, focusing on a low-pollution commuter rail system. Planners are counting on congested highways to encourage commuters to use the new trains.

The Murdoch University study suggests that we may not be able to engineer our way out of automobile pollution, either. In Perth, Australia, while congested roads decrease fuel efficiency, the greater traffic on

uncongested roads brought a 30-percent increase in fuel use and a corresponding increase in pollution. Tougher emissions standards and better pollution control technology can help, but some experts, like James Bond, executive officer of the California Air Resources Board, warn that the growing number of cars in this country is undermining technological advances. "All the progress we are making through [clean air] technology is being eaten up by growth," says Bond.

## DIRECTION AND DEPENDENCE

The ISTEA allows states more flexibility in spending their federal dollars than have previous federal transportation funding laws, giving them the opportunity to shift substantial funding from highways to mass-transit programs if they see fit. This flexibility has engendered controversy in several states—such as New York, Wisconsin, and Missouri—where advocates of more mass transit and proponents of "highways-as-usual" are struggling over the fundamental direction of transportation policy.

What direction is Michigan's transportation policy taking? The state's Transportation Policy Plan (TPP) provides some clues. Public hearings were held in June on a new version of the plan. The draft TPP demonstrates concern about the wider effects of transportation policy. To begin with, it indicates awareness that growth management is part of transportation planning and that building roads can contribute to dispersed growth, it also states opposition to transportation projects that encourage relocation of jobs within Michigan. Furthermore, this draft strongly advocates the coordination of transportation planning with land-use planning and cooperation among state, regional, and local agencies. It also notes that auto-related air pollution must be taken into account in transportation planning and that public transportation can help meet clean air standards. Finally, the plan labels assistance to those who depend on mass transit a public responsibility. The Build Michigan program addresses similar concerns, proposing to replace half the state's superannated bus fleet with cleaner, more fuel-efficient vehicles. The final TPP will guide the Build Michigan program as well as other aspects of transportation policy. Michigan also is participating in the federal Intelligent Vehicle/Highway Systems (IVHS) program, developing automated "smart car" and "smart highway" systems to make traffic flow safer and more efficient.

These latter efforts, however, are tentative gestures toward escaping our costly dependence on cars and highways. The TPP shies away from rethinking long-standing assumptions. Although it contains several sections on mass transit and recognizes its value in certain circumstances, the TPP tends to portray mass transit as a residual strategy, something to fill the gaps in the auto-and-highway system. The TPP also seems to be based on an assumption that preferences arise independently of transportation policy. Certainly, public policy must take careful account of the preferences of transportation system users, but it is important to remember that public policy has helped to shape those preferences. Decades of policies encouraging automobile use have forged deeply ingrained habits and helped to make cars potent symbols of both social and geographic mobility and independence. Decades of automobile-based growth and settlement have created a landscape in which mass transit often is less efficient and attractive.

Improving Michigan's transportation system is extremely important, but this does not necessarily mean focusing our attention on the car-and-highway complex. In the long run, using more cars may be as detrimental to Michigan as selling fewer is in the short run. Having helped to foster the current system, automobile-based land-use patterns, and transportation preferences, public policy can help reshape them. This is no small challenge. As both consumer and producer, Michigan is heavily dependent on automobiles. Shifting policy support to alternatives obviously will require the automobile industry to adjust. The transportation system, however, will not change drastically overnight; the industry will have some time to change. Also, gradual withdrawal from near-total dependence on automobile use and public policy support for decreasing automobile consumption are consistent with Michigan's long-standing policy of encouraging diversification of the state's manufacturing base. The high costs of the present automobile-based transportation system are making themselves felt throughout the country and the world. In confronting this pressing problem, it is better for Michigan to lead than to follow.

Transforming transportation policy will take money, of course. In its financial commitment to transportation Michigan has been heading in the opposite direction. From FY 1973 to FY 1991 transportation spending fell from 12.2 percent of total state spending to about 8 percent. Increased federal aid will help, but there is also a case for raising more revenue within the state. An increase in motor fuel taxes to fund transportation alternatives would make sense. Just as it is legitimate to ask highway users to pay a large share of the cost of the motor vehicle infrastructure, it would be legitimate to ask them to help pay for creating alternatives whose benefits they will share. Higher fuel costs also would be an incentive to use automobiles more efficiently and take advantage of alternatives as they develop.

In addition to more money for transportation, Michigan needs fewer restrictions on how it can spend its transportation dollars. The state constitution allows only 10 percent of the Michigan Transportation Fund to go to the Comprehensive Transportation Fund (CTF), which supplies funds for both local and intercity public transportation development and assistance. The CTF also receives a share of vehicle-related sales tax revenue, but the constitution limits its share to 25 percent. This limitation makes sense if our transportation system is equated primarily with highways, but it does not make sense if our long-term goal is integrating transportation policy with environmental and urban policy.

Funding transportation alternatives is not necessarily solely a state responsibility. The SEMCOG report strongly recommends an "areawide" tax to fund transportation improvements in southeast Michigan, emphasizing the need for better public transportation—possibly some combination of light rail and bus transit—to give residents of older urban areas access to jobs on the suburban fringe. The report notes that metropolitan Detroit is the only major region in the country without some kind of areawide funding and that southeast Michigan is the only large region in the country without effective public transit.

What else can be done? State government could use tax incentives to encourage businesses to reduce vehicle use by organizing car and van pools for their employees. Local governments could be awarded grants for developing similar programs to reduce congestion and bring city residents to distant jobs. In addition, state government could provide financial incentives to local and regional planning agencies and local governments for moving toward land-use patterns conducive to mass transit and the redevelopment of older city centers. The SEMCOG report points out that southeast Michigan is the only one of the country's twenty largest metropolitan areas that does not encourage public transit and car pool use by providing special lanes on freeways for busses and car or van pools. This glaring deficiency deserves immediate attention.

There is much that can be done if we begin to think of transportation policy as an integral part of environmental and urban policy. Transportation investment is clearly essential to Michigan's economic health; unless we break out of the narrow confines of the dominant system, however, the short-term economic benefits of transportation investment could be undone by the growing costs of environmental degradation and urban decline.

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