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Funding Japan's Highways Following the Tax-Earmarking

Professor, Keio University
Kazusei Kato

Though more than ten years have passed since highway earmarked funding system ended in 2009, automobile users are still burdened by several taxes in Japan. In FY 2020, the total amount of revenue from automobile-related taxes is 6.1 trillion yen. Highway expenditure remains constant, the national highway budget is earmarked for disaster prevention and reduction, and national resilience. Based on the national inspection, the national subsidy increased because the subsidy projects were established for extending the life of highway and other structures of local governments. In the US, the highway condition in urban areas have worsen in recent ten years, though there are no permanent measures to increase the revenue of Federal Highway Trust Fund.

- The System of Revenues Earmarked for Highway ended the end of March 2009. All taxes has been remaining as the general tax, but revenues have been decreasing.

Table 1 Automobile-Related Taxes

Tax Items(Government)	Implementation Year	Earmarked for Highway in 2008	Main Rules	Temporary Tax Rate (FY2008)	Temporary Tax Rate (FY2015)	Revenue (FY2008)	Revenue (FY2019)	Revenue (FY2020)
Automobile Acquisition Tax (Local)	1968	All	3% of Acquisition Cost(private)	5% of Acquisition Cost(private)	3% of Acquisition Cost(private)	402.4	84.0	— ^(※3)
Motor Vehicle Tonnage Tax (National)	1971	77.5% of National Tax Revenue(=2/3 of Total Revenue)	2,500yen per 0.5t	6,300yen per 0.5t	4,100yen per 0.5t (less than 13years)	554.1	376.0	393.0
Motor Vehicle Tonnage Transfer Tax (Local)	1971	1/3 of Total Revenue	593/1000 of the revenue from the tax is credited to the General Accounts of the Central Government(above). The remaining 407/1000 is granted to local Governments.			360.1	274.2	284.5
Gasoline Tax (National)	1954	All	24.3 yen/ℓ	48.6yen/ℓ	48.6yen/ℓ	2,729.9	2,303.0	2,204.0
Liquefied Petroleum Gas Tax (National)	1966	1/2 of Revenue	17.5 yen/kg	—	—	14.0	7.0	6.0
Local Gasoline Tax (Local)	1955	All	4.4 yen/ℓ	5.2yen/ℓ	5.2yen/ℓ	299.8	246.4	235.8
Liquefied Petroleum Gas Transfer Tax (Local)	1966	1/2 of Revenue	1/2 of the revenue from the tax is credited to the General Accounts of the Central Government. The remaining 1/2 is granted to local Governments.			14.0	7.2	6.3
Light Oil Delivery Tax (Local)	1956	All	15.1yen/ℓ	32.1yen/ℓ	32.1yen/ℓ	991.4	953.7	958.6 ^(※4)
Total (billion yen)						5,365.7	4,251.5	4,088.2

※1 Total may not match sum of the number due to rounding off.

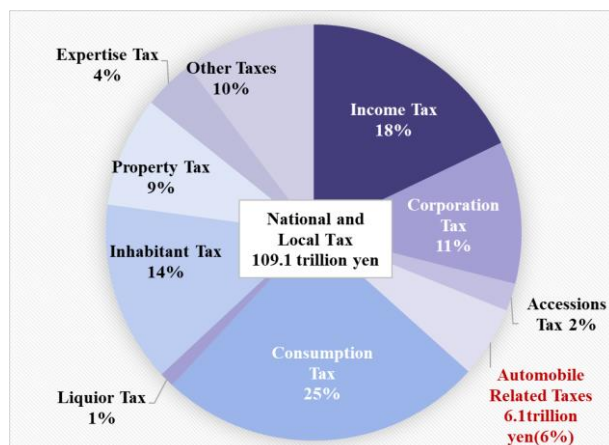
※2 The consumption tax is imposed as a national tax at the time of acquisition. The automobile tax is imposed as prefectural resident tax and the light vehicle tax is imposed as municipal inhabitant tax in the possession stage.

※3 Automobile acquisition tax was abolished from October 2019 and "environmental performance-based tax break" was introduced.

※4 The taxation system of the gas oil delivery tax was revised in 2018. The number is the expected income under the existing law , However, the expected income under the revised law is 964.1 billion yen.

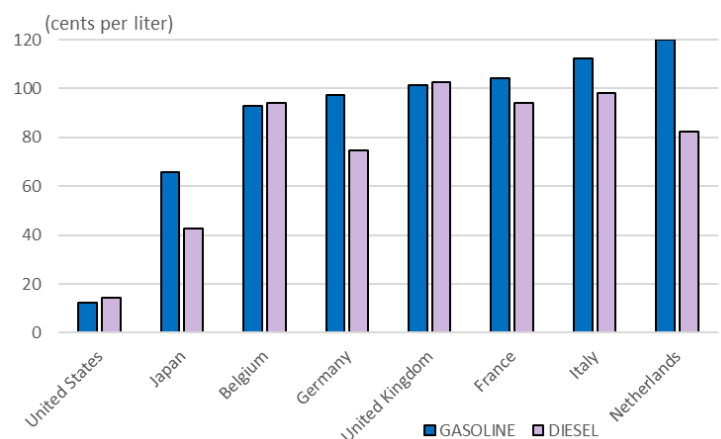
Data source: MOF, MIC, Japan Automobile Manufacturers Association, Inc.

Figure 1 Tax Revenue and Automobile-Related Taxes (FY2020)



Data source: MOF, General Account Budget, (Initial Budget) ; MIC, Revenue Estimates of Local Taxes and Local Transfer Taxes

Figure 2 Motor Fuel Tax Rates for Selected Countries (2019)

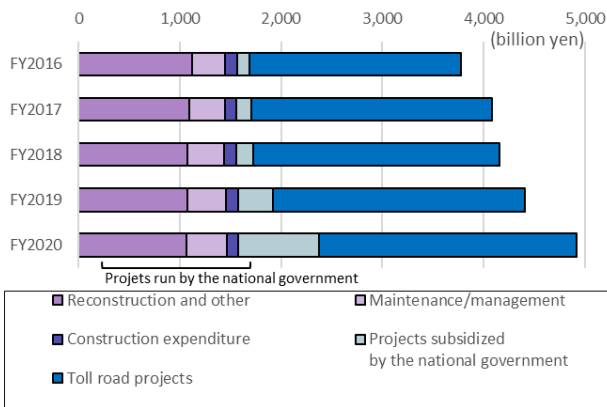


Note US includes the weighted average of state fuel taxes plus the federal fuel tax.

Data source: [USDOT, Federal Highway Administration](https://www.usdot.gov/federal-highway-administration)

Figure 3 Highway Budget in Recent 5 Years

■ The national highway budget is earmarked for disaster prevention and reduction, and national resilience. The national subsidy increased because the subsidy projects were established for extending the life of highway and other structures of local governments.

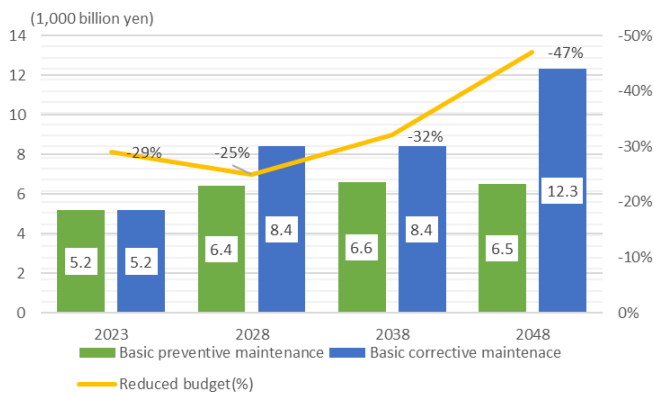


Note In addition to these, there are comprehensive social infrastructure maintenance grants and disaster prevention/safety grants that can be used for road maintenance in response to the needs of local governments.

Data source: MLIT, Road Bureau and City Bureau, Budget Summary

Figure 5 National Inspection of Facilities

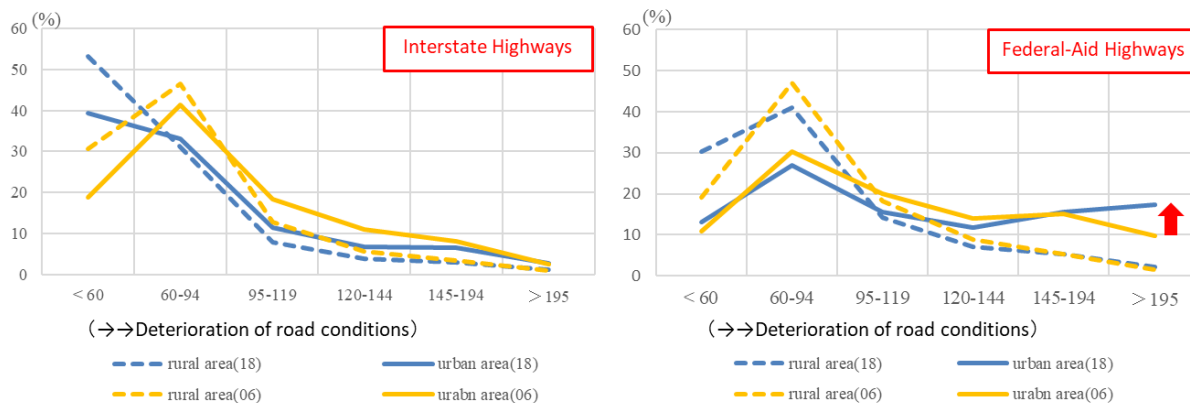
■ The cost of preventive maintenance will be reduced by about 50% after 30 years compared with the case of corrective maintenance (FY2018 estimation).



Data source: MLIT, Infrastructure Maintenance Information.

Figure 7 Highway Conditions in the US Based on the International Roughness Index (Comparison between 2006 and 2018)

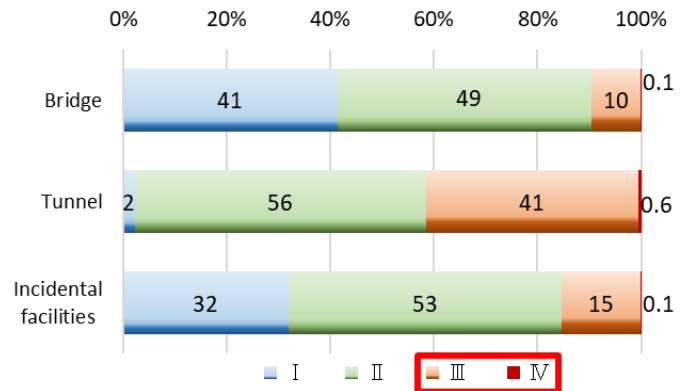
■ The larger the International Roughness Index (IRI), the worse the highway condition. The condition of the Interstate Highway System is generally maintained and improved (left). Federal-Aid highways in urban areas are deteriorated (right).



Data source USDOT, Highway Statistics 2006,2018, HM – 47

Figure 4 National Inspection of Facilities

■ As a result of nationwide inspection, 10% of the bridges (about 70,000) and 42% of tunnels require repairs.

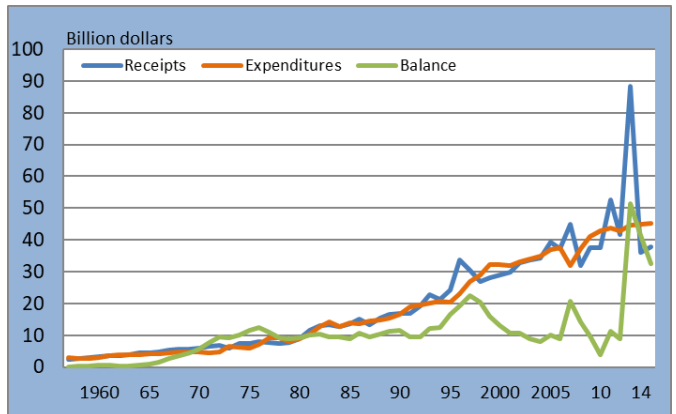


I : No Deterioration of the function of the structure
 II : No Deterioration of the function of the structure, but action is required.
 III : Deterioration of structural functions, requires repairs.
 IV : Deterioration of structural functions, requires immediate repairs.

Data source: MLIT, Road Bureau and City Bureau, Budget Summary

Figure 6 Balance of Federal Highway Trust Fund in the US

■ The balance of the Federal Highway Trust Fund was decreasing. In 2015, \$70 billion were transferred from the general account, improving the balance.



Data source: USDOT, Highway Statistics, Fe-210c