

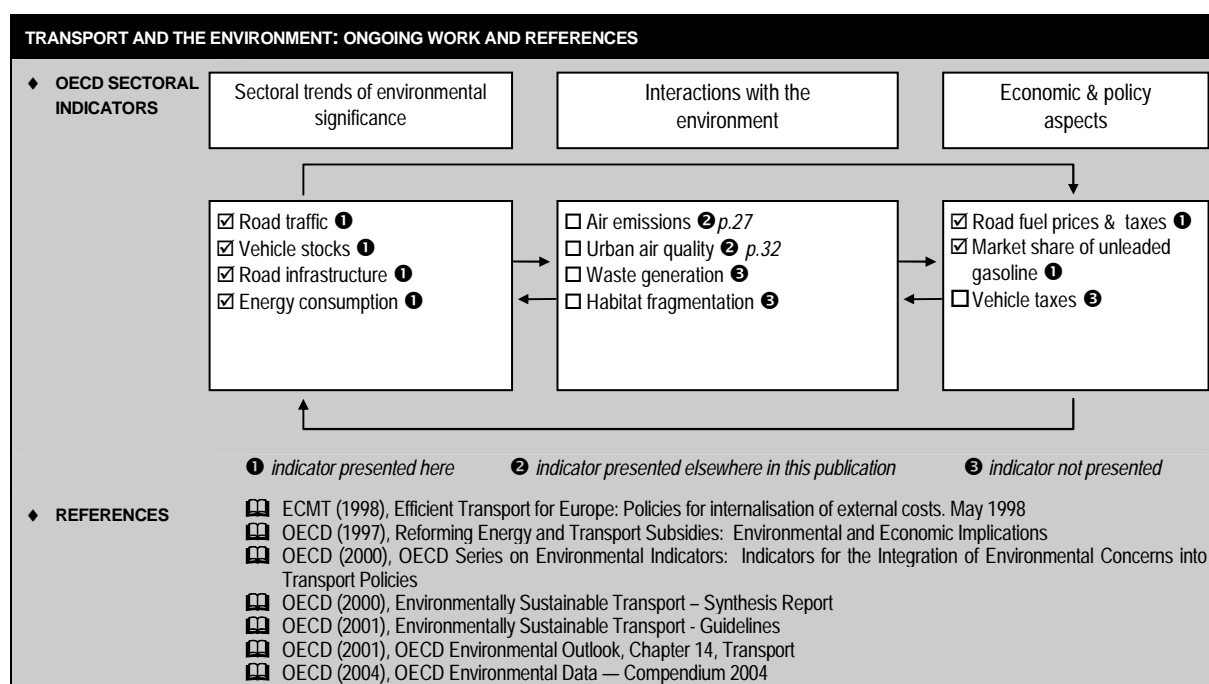
TRANSPORT

Transport is a major component of economic activity, both as a sector in itself and as a factor input to most other economic activities. It has many effects on the environment: air pollution raises concern mainly in urban areas where road traffic and congestion are concentrated, though road transport also contributes to regional and global pollution problems such as acidification and climate change; transport infrastructure leads to fragmentation of natural habitats; and vehicles entail waste management issues.

Road transport plays an important role in a country's environmental performance and the sustainability of its development. The volume of traffic depends on the demand for transport (largely determined by economic activity and transport prices) and on transport supply (e.g. the development of road infrastructure). Road traffic, both freight and passenger, is expected to increase further in a number of OECD countries. The main challenge is to reduce the environmental and health effects of transport, particularly regarding air pollution and climate change, by ensuring that efficiency gains from technological developments and demand side management achieve lasting environmental quality improvements.

Indicators presented here relate to:

- ♦ road traffic and vehicle intensities, i.e. traffic volumes per unit of GDP and per kilometre of road, and vehicle numbers per capita and per kilometre of road;
- ♦ road infrastructure densities, i.e. the length of road and motorway networks per square kilometre of land area;
- ♦ road fuel prices and taxes, notably the relative price and taxation levels of diesel fuel and leaded and unleaded gasoline.

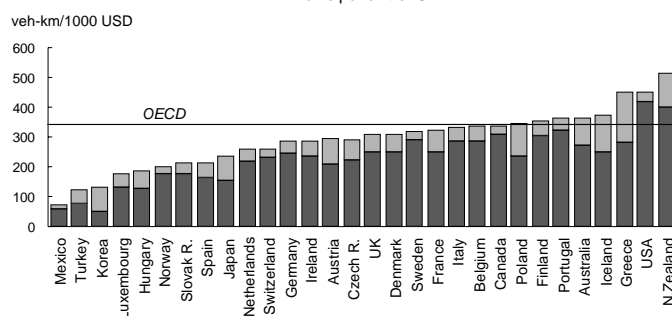


ROAD TRAFFIC AND VEHICLE INTENSITIES **26**

Road traffic intensities

State, 2002

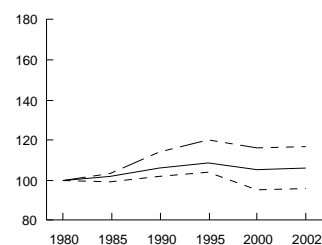
Traffic per unit of GDP



Road traffic intensities

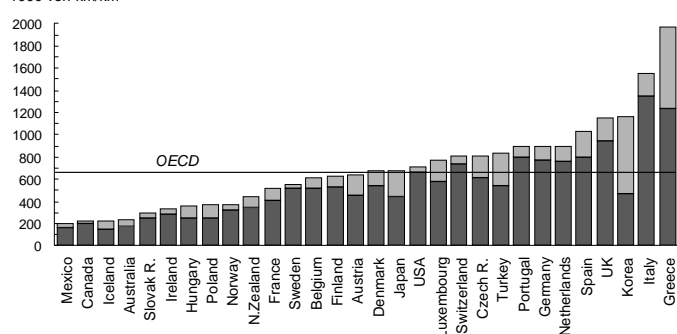
Trends, Index 1980=100

Traffic per unit of GDP

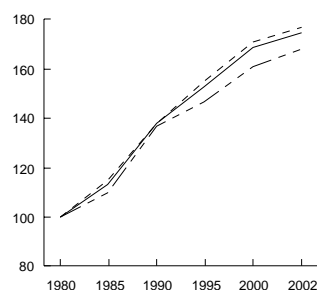


Traffic per network length

1000 veh-km/km



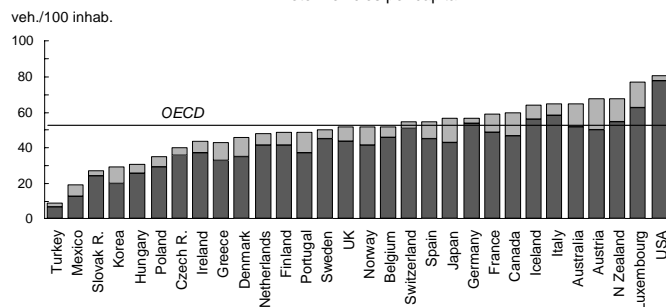
Traffic per network length



Road vehicle intensities

State, 2002

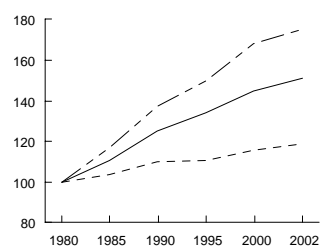
Motor vehicles per capita



Road vehicle intensities

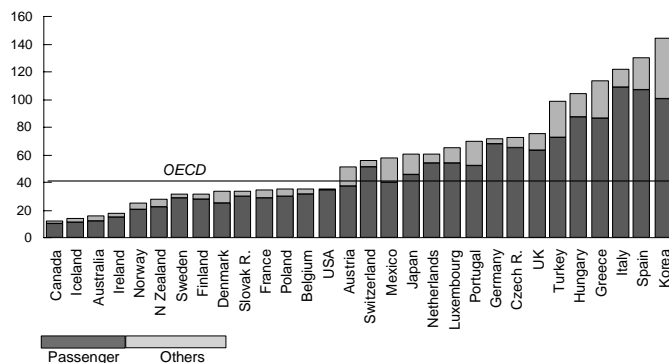
Trends, Index 1980=100

Motor vehicles per capita

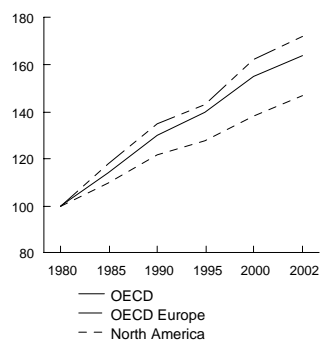


Motor vehicles per network length

veh./km



Motor vehicles per network length



Passenger Others

26 ROAD TRAFFIC AND VEHICLE INTENSITIES

	Road traffic						Motor vehicles in use				GDP
	Total volume		Intensity		Goods vehicles		Total stock		Private car ownership		% change
	billion veh-km	% change	per unit of GDP	per network	Volume	share in total	1 000	% change	veh./100 inh.	% change	
	2002	since 1980	veh-km/1 000 USD 2002	length 1 000 veh-km/km 2002	% change since 1980	2002	2002	since 1980	2002	since 1980	
Canada	316	54	338	224	-55	7	18912	43	47	13	84
Mexico	68	60	76	201	3	20	19533	235	13	116	69
USA	4580	87	455	718	98	8	234571	51	78	19	95
Japan ♦	788	103	238	672	83	33	72255	95	43	111	70
Korea	107	1125	132	1166	1606	56	13949	2543	20	3028	352
Australia ♦	192	67	366	237	70	23	12800	76	52	31	105
N.Zealand	41	129	515	450	189	24	2651	69	55	32	83
Austria ♦	68	91	296	639	102	27	5419	93	50	66	65
Belgium ♦	90	88	338	610	112	14	5390	55	46	45	54
Czech R. ♦	45	113	291	808	215	23	4018	108	36	107	21
Denmark	48	83	313	671	60	17	2457	46	35	30	51
Finland	49	82	360	625	64	13	2540	82	42	65	68
France	517	75	326	520	105	22	35144	62	49	38	57
Germany ♦	591	46	287	901	63	13	47276	72	54	64	53
Greece ♦	83	305	451	1965	255	37	4801	280	33	273	46
Hungary ♦	24	24	188	364	30	30	3141	..	26	..	30
Iceland ♦	3	235	375	231	-100	3	184	92	56	50	73
Ireland	33	77	289	341	45	15	1706	113	37	71	221
Italy	483	113	333	1558	84	13	37682	97	58	85	50
Luxembourg ♦	4	80	181	769	181	13	341	119	63	79	188
Netherlands ♦	113	68	260	902	102	14	7784	71	42	42	70
Norway ♦	34	79	203	370	154	15	2365	69	42	39	91
Poland	138	210	348	366	86	27	13275	333	29	331	45
Portugal ♦	65	202	364	896	45	9	5138	..	37	291	85
Slovak R.	13	56	218	302	-42	15	1476	143	24	144	37
Spain ♦	181	157	217	1035	135	21	22881	155	45	126	83
Sweden ♦	77	73	322	558	145	7	4466	45	45	31	56
Switzerland ♦	57	59	262	805	65	11	4007	65	51	43	40
Turkey ♦	53	256	125	834	163	30	6236	433	7	296	136
UK ♦	481	82	312	1156	82	17	31351	81	44	61	72
OECD	9408	90	339	673	89	14	623751	79	48	49	79

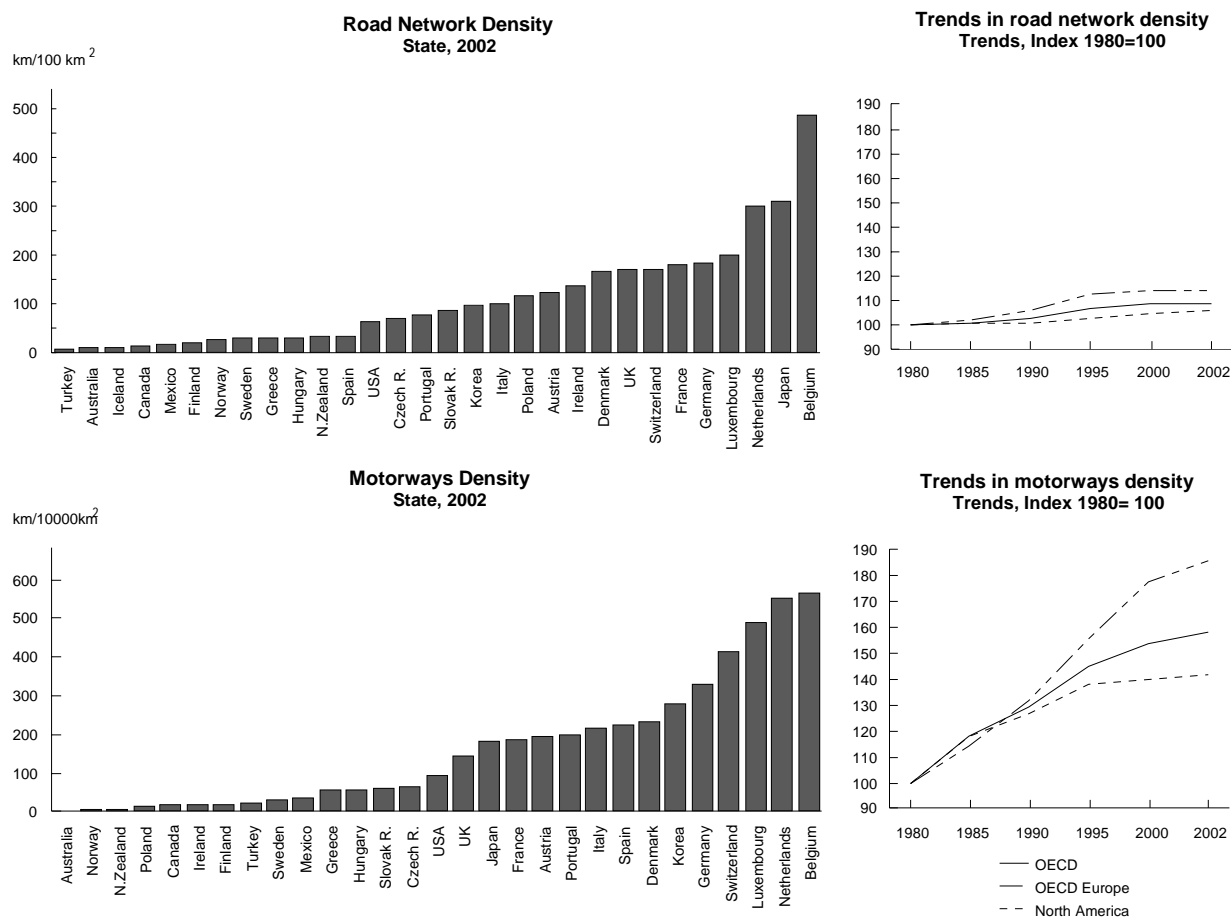
♦ See Technical Annex for data sources, notes and comments.

STATE AND TRENDS SUMMARY

From 1980, countries' efforts in introducing cleaner vehicles have largely been offset by growth in vehicle stocks and the rapid increase of their use. In most OECD countries road traffic growth rates exceeded economic growth.

Traffic intensities per unit of GDP and per length of network show wide variations among OECD countries. The same holds for vehicle availability per capita and vehicle density.

ROAD INFRASTRUCTURE DENSITIES 27



27 ROAD INFRASTRUCTURE DENSITIES

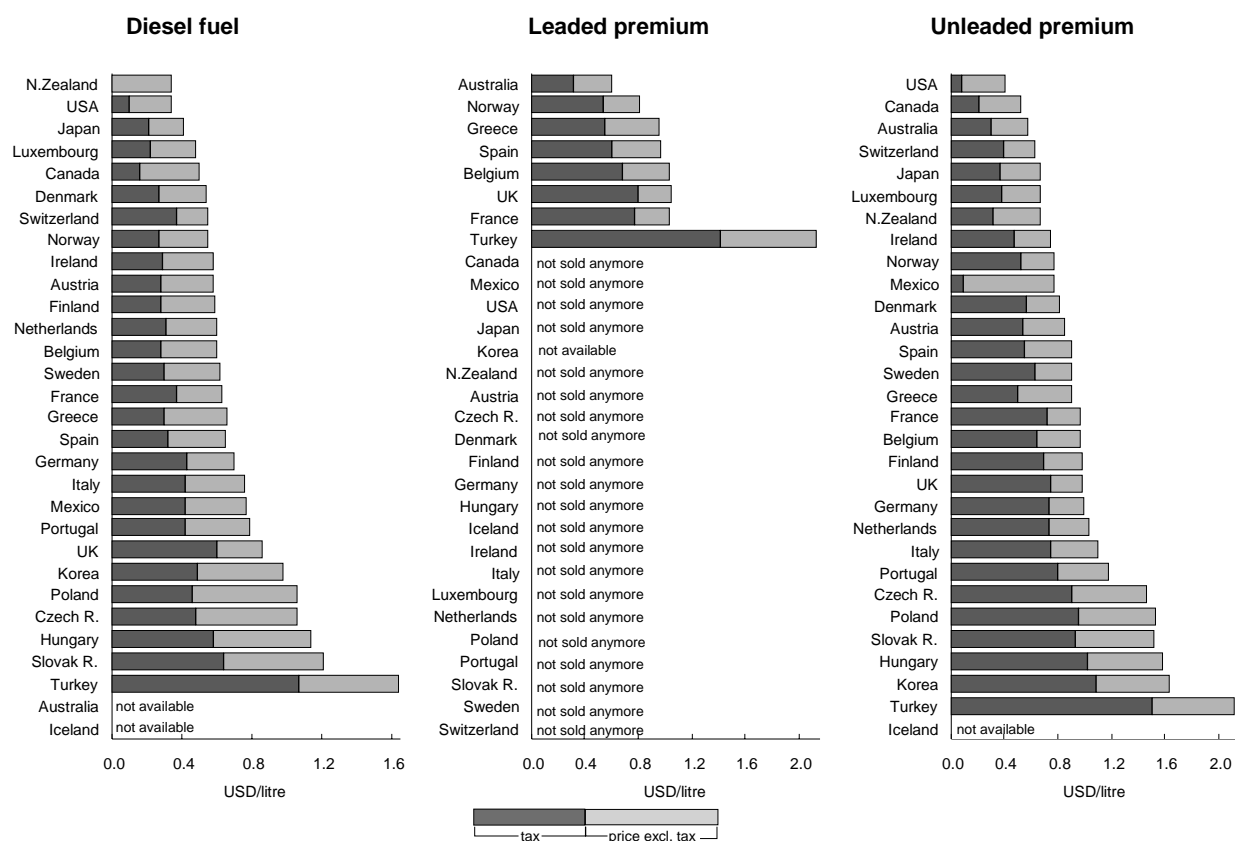
		Road network				Motorways				GDP
		Total length		Density km/100 km ² 2002	Total length		Density km/10 000 km ² 2002	% change since 1980		
		1 000 km 2002	% change since 1980		since 1990	km 2002			% change since 1980		since 1990
Canada	♦	1409	..	..	14	16900	106	12	17	84
Mexico	♦	337	..	..	17	6987	..	..	36	69
USA	♦	6382	4	4	66	89807	26	6	93	95
Japan	♦	1177	6	6	312	6915	168	48	183	70
Korea		96	104	69	97	2778	127	79	280	352
Australia	♦	810	19	6	11	1509	39	26	2	105
N.Zealand	♦	92	-1	-1	34	190	60	35	7	83
Austria	♦	106	0	0	126	1645	89	14	196	65
Belgium	♦	149	19	6	488	1729	38	4	566	54
Czech R.	♦	55	-1	-1	70	518	..	..	66	21
Denmark		72	4	2	167	1009	100	55	234	51
Finland	♦	78	3	1	23	603	196	168	18	68
France	♦	994	24	23	181	10223	94	44	186	57
Germany	♦	656	9	5	184	11800	28	9	331	53
Greece	♦	42	13	3	32	742	715	291	56	46
Hungary	♦	30	..	..	32	533	..	..	57	30
Iceland		13	4	4	13	-	..	..	..	73
Ireland		97	5	5	138	125	..	1463	18	221
Italy		310	4	2	103	6487	10	5	215	50
Luxembourg		5	2	2	201	126	..	..	487	188
Netherlands	♦	126	16	8	303	2291	29	10	552	70
Norway		92	13	3	28	178	212	144	5	91
Poland		372	25	2	119	405	191	84	13	45
Portugal	♦	73	41	11	79	1833	1343	391	199	85
Slovak R.	♦	43	..	..	88	302	82	57	62	37
Spain	♦	176	17	13	35	11406	490	123	225	83
Sweden	♦	138	7	3	31	1507	77	62	33	56
Switzerland		71	7	0	172	1706	46	14	413	40
Turkey	♦	63	5	7	8	1851	7613	655	24	136
UK	♦	416	..	9	170	3586	..	13	146	72
OECD		14481	14	10	41	185909	59	22	53	79

♦ See Technical Annex for data sources, notes and comments.

STATE AND TRENDS SUMMARY

Length of road network is an indicator of transport infrastructure development, which in turn is an important component of transport supply. Transport infrastructure exerts pressures on the environment through use of space and physical transformation of the natural environment (e.g. fragmentation of habitats).

Density of road infrastructure varies greatly among OECD countries (from 1 to 61). The length of motorways often grows faster than GDP.

ROAD FUEL PRICES AND TAXES **28**

28 ROAD FUEL PRICES AND TAXES

		Diesel				Leaded premium				Unleaded gasoline		Energy consumption by road transport		
		Price USD/litre		Taxation % of price		Price USD/litre		Taxation % of price		Price USD/litre	Taxation % of price	share of total cons.	Total Mtoe	% change since
		1980	2003	1980	2003	1980	2003	1980	2003	2003	2003	2002	2002	1980
Canada	♦	0.59	0.50	..	32	..	..	..	..	0.53	41	75	40	14
Mexico	♦	0.09	0.77	..	54	..	..	..	..	0.77	13	91	35	136
USA		..	0.35	..	30	..	..	..	..	0.41	22	82	511	47
Japan	♦	0.74	0.41	24	52	..	..	..	..	0.67	55	82	78	78
Korea	♦	0.79	0.99	..	50	3.17	..	..	..	1.64	67	76	25	2376
Australia	♦	0.50	..	..	..	0.52	0.60	19	53	0.58	52	82	23	64
N.Zealand		0.74	0.34	2	1	0.94	..	28	..	0.68	48	47	3	55
Austria		1.00	0.58	33	48	1.10	..	42	..	0.85	64	85	6	61
Belgium	♦	0.59	0.60	33	47	1.08	1.02	53	67	0.97	67	83	8	62
Czech R.		..	1.06	..	45	..	..	..	..	1.46	62	90	5	135
Denmark		0.43	0.54	..	51	1.05	..	59	..	0.82	70	79	4	60
Finland		0.74	0.59	32	48	1.09	..	36	..	0.98	72	83	4	52
France		0.76	0.63	47	59	1.09	1.05	58	75	0.97	74	83	44	57
Germany		0.79	0.70	41	62	0.91	..	49	..	1.00	74	86	56	39
Greece		0.86	0.66	12	45	2.03	0.96	42	58	0.90	55	75	6	146
Hungary		..	1.15	..	50	..	..	..	..	1.59	64	90	3	41
Iceland	♦	..	..	..	..	..	..	..	..	..	..	63	0	70
Ireland		0.81	0.58	28	50	1.14	..	48	..	0.76	64	81	4	142
Italy		0.64	0.76	8	55	1.63	..	61	..	1.10	68	90	39	72
Luxembourg		0.51	0.47	17	46	0.79	..	44	..	0.67	59	81	2	316
Netherlands		0.56	0.60	23	52	0.98	..	52	..	1.04	71	73	11	57
Norway		0.35	0.55	1	49	0.81	0.81	52	66	0.76	69	67	3	66
Poland		..	1.06	..	43	..	..	..	..	1.52	63	88	8	30
Portugal		0.97	0.80	7	53	2.57	..	61	..	1.18	68	86	6	207
Slovak R.		..	1.21	..	53	..	..	..	..	1.52	61	75	2	39
Spain		0.73	0.66	25	49	1.47	0.97	34	62	0.90	62	81	29	171
Sweden		0.38	0.62	8	49	0.77	..	49	..	0.90	70	85	7	34
Switzerland		..	0.55	..	67	0.96	..	51	..	0.63	63	74	5	44
Turkey		0.93	1.64	..	66	1.60	2.13	..	66	2.12	71	83	11	119
UK		0.88	0.87	40	70	1.00	1.04	46	76	0.99	76	76	40	49

♦ See Technical Annex for data sources, notes and comments.

**STATE AND TRENDS
SUMMARY**

Prices are a key form of information for consumers. When fuel prices rise relative to other goods, this tends to reduce demand for fuels and stimulate energy saving, and may influence the fuel structure of energy consumption.

The use of taxation to influence energy consumer behaviour and to internalise environmental costs is increasing. Taxation of unleaded fuel ranges from 13 to 76 per cent of the price. Many OECD countries have introduced tax differentials in favour of unleaded gasoline and some have imposed environmental taxes (e.g. relating to sulphur content) on energy products.