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Forord

Danmarks Statistik udgiver hermed *Transport 2005*. Formålet med publikationen er at give en samlet fremstilling af de væsentligste foreliggende statistiske oplysninger om transportområdet. Hovedvægten er lagt på beskrivelse af strukturen og udviklingen i gods- og persontransporten gennem tekst og figurer. For at sikre bredest mulig datamæssig sammenlignelighed er 1990 som hovedregel benyttet som referenceperiode.

Tabeldata om transport er indlagt på den medfølgende *cd-rom*, som indeholder kopi af de tabeller, som gratis kan hentes i Statistikbanken via Danmarks Statistiks hjemmeside, på http://www.statistikbanken.dk. Tabellerne i Statistikbanken vil løbende blive opdateret.

Dokumentation om de enkelte tællinger kan ligeledes hentes via Danmarks Statistiks hjemmeside, på http://www.dst.dk/Vejviser/dokumentation.aspx. Dokumentationen er også gengivet på den medfølgende *cd*.

Endelig indeholder *cd'en* en fortegnelse over de *definitioner,* der anvendes i den danske transportstatistik. Definitionerne er om muligt forsynet med reference til tilsvarende internationale definitioner som anført i *Glossary for Transport Statistics*, 3rd Edition, United Nations, Geneva 2003.

Transport 2005 er i stort omfang en videreførelse af *Transport 2000.* Publikationen er opdelt i afsnit omhandlende infrastruktur, transportmateriel, trafik, gods- og persontransport, trafikuheld, økonomi, beskæftigelse, energiforbrug og miljøpåvirkninger. Teksten, definitionsfortegnelsen, Statistikbankens tabeller og tællingsdokumentationen bringes også i en engelsk version.

Transport- og Energiministeriet har som ved de tidligere temapublikationer om transportstatistik ydet et væsentligt økonomisk bidrag til udarbejdelsen af publikationen og til etablering af statistikbankens tabeller.

Arbejdet med *Transport 2005* er udført og koordineret i Danmarks Statistiks sektion for transportstatistik, under ledelse af specialkonsulent Erik E. Grib.

Tekstafsnittene er udarbejdet af fuldmægtig Søren Dalbro (bilbestand, nyregistreringer, familiernes bilrådighed, personbilers energieffektivitet, og persontransportmønstret), fuldmægtig Tøger Flagstad (energiforbrug, miljøpåvirkning, økonomisk udvikling og beskæftigelse), specialkonsulent Lisbeth Laursen (færdselsuheld på vej) og Erik E. Grib (øvrige afsnit). Specialkonsulent Lars Knudsen har bistået ved overførslen af data til den medfølgende *cd.*

Danmarks Statistik, 14. oktober 2005

Jan Plovsing / *Kristian Hjulsager*

Preface

Statistics Denmark hereby issues *Transport 2005*. The purpose of the publication is to provide a comprehensive presentation of the most important data available within the field of transport. The overall aim is to describe the structure and development of goods and passenger transport by means of text, tables and figures. To ensure the widest possible comparability of data, the 1990s are used as the general period of reference.

Data on transport in tabular form are available on the accompanying *CD-ROM,* which contains a copy of the tables accessible, free of charge, from *Statbank Denmark* via Statistics Denmark's website at: http://www.statistikbanken.dk. The tables in *Statbank Denmark* are continuously updated.

Documentation of each individual survey is also available via Statistics Denmark's website at: http://www.dst.dk/Vejviser/dokumentation.aspx. Documentation is also provided on the accompanying *CD*.

The *CD* also contains a list of the *definitions* used in the Danish transport statistics. The definitions are as far as possible provided with a reference to the corresponding international definitions as stated in *Glossary for Transport Statistics*, 3rd Edition, United Nations, Geneva 2003.

Transport 2005 is to a wide extent a continuation of *Transport 2000*. The publication is divided into chapters covering infrastructure, means of transport, traffic, goods and passenger transport, traffic accidents, economy, employment, energy consumption and environmental effects. The text, list of definitions, tables in *Statbank Denmark* and documentation of the surveys are also available in an English version.

As with the previous theme publications on transport statistics, the Danish Ministry of Transport and Energy has provided a considerable financial contribution to the preparation of this publication and to the establishment of the tables in *Statbank Denmark*.

The work with *Transport 2005* was carried out and coordinated at Statistics Denmark, Section of Transport Statistics, under the supervision of Erik E. Grib, senior advisor.

The individual chapters were prepared by Søren Dalbro, head of section (motor vehicles, cars at the disposal of families, energy efficiency of passenger cars and the passenger transport pattern), Tøger Flagstad, head of section (energy consumption, environmental effects, economic developments and employment), Lisbeth Laursen, senior advisor (road traffic accidents) and Erik E. Grib (remaining chapters). Lars Knudsen, senior advisor, has assisted in transferring data to the accompanying *CD*.

Statistics Denmark, 14 October 2005

Jan Plovsing / *Kristian Hjulsager*

Indholdsfortegnelse

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Transport 2005

0. Transportstatistikkens omfang

Transport-statistik

Transportområdet dækker alle bevægelser af transportmidler, gods og passagerer på det offentligt tilgængelige netværk af veje, jernbaner, søveje, luftveje og rørledninger. Transportstatistikken belyser hovedsagelig transportens fysiske aktiviteter i form af trafikomfang, fragtmængder, personrejser og transportarbejde. I forbindelse hermed beskrives også infrastrukturen, dvs. transportnetværket, og de anvendte transportmidler. Herudover belyser transportstatistikken energiforbrug, miljøpåvirkninger og trafikuheld i forbindelse med trafik.

Transport-sektor

I nærværende publikation er der også medtaget opgørelser fra den generelle erhvervsstatistik om transportsektorens økonomi og beskæftigelse. Transportområdet er bredere end transportsektoren i den økonomiske statistik, der afgrænses som salg af transportydelser og tjenesteydelser i forbindelse hermed. I nationalregnskabet og i den generelle økonomiske erhvervsstatistik indgår firmaernes transport for egen regning således ikke i transportsektoren. Det samme gælder husholdningernes transportaktiviteter.

1. Transportens infrastruktur

Investeringer i infrastruktur

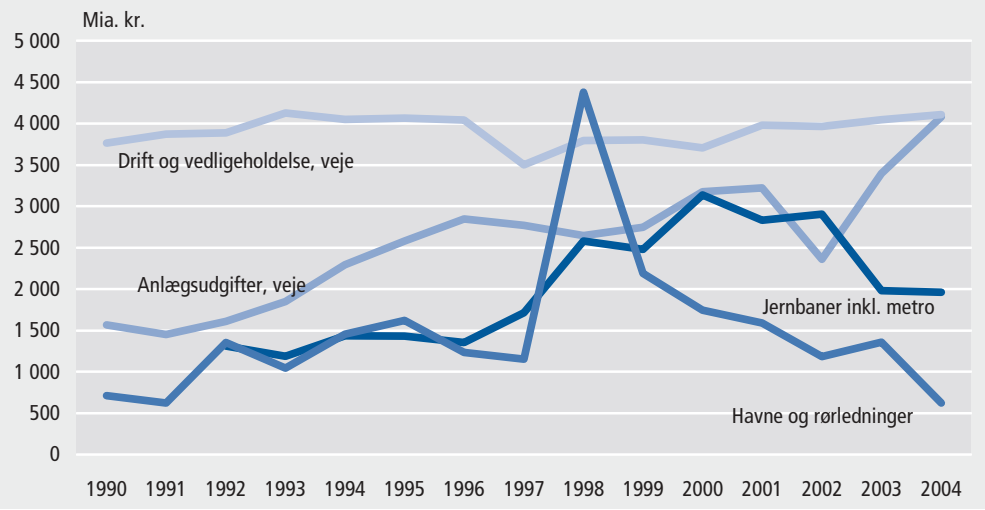
Transportens infrastruktur udgøres af landets vejnet, jernbanenet, rørledninger, lufthavne og havne.

Udgør 10 pct. af landets bruttoinvesteringer i bygninger og anlæg

I 2004 blev der investeret omkring 14 mia. kr. i transportnettets bygninger og anlæg. Det svarer til 10 pct. af landets samlede, faste bruttoinvesteringer i bygninger og anlæg. Investeringernes omfang svinger år for år, jf. figur 1. Omregnet til 1995-priser har der i perioden 1990-2004 gennemsnitligt været investeret omkring 11,5 mia. kr. om året i transportens infrastruktur.

I perioden 1990-2004 blev omkring halvdelen af investeringsudgifterne til transportens infrastruktur anvendt på vejnettet, en sjettedel blev brugt på jernbaner inklusive Metroen, og en femtedel gik til investeringer i Storebælts- og Øresundsforbindelserne.

Figur 1. **Investeringer i infrastruktur i 1995-priser**



Den markante stigning i investeringerne havne mv. i 1998 skyldes ombygning og udvidelse af Københavns Lufthavn samt øgede investeringer i den ny gasrørledning i Nordsøen fra Syd Arne feltet til Nybro. Bygningen af metroen i København er hovedårsagen til de øgede investeringer i jernbaner fra 1997.

Vejnettet

Vejnettet er øget med 2 pct. siden 1990

Pr. 1. januar 2005 havde Danmark 72.257 km offentlige veje. Heraf var 84 pct. kommuneveje, 13 pct. amtsveje og 2 pct. statsveje. De private fællesveje anslås til 15.000 km. Vejnettets fordeling mellem stat og amter er ændret pr. 1. januar 1998, hvor ca. 2.900 km statsveje overgik til amtslig bestyrelse.

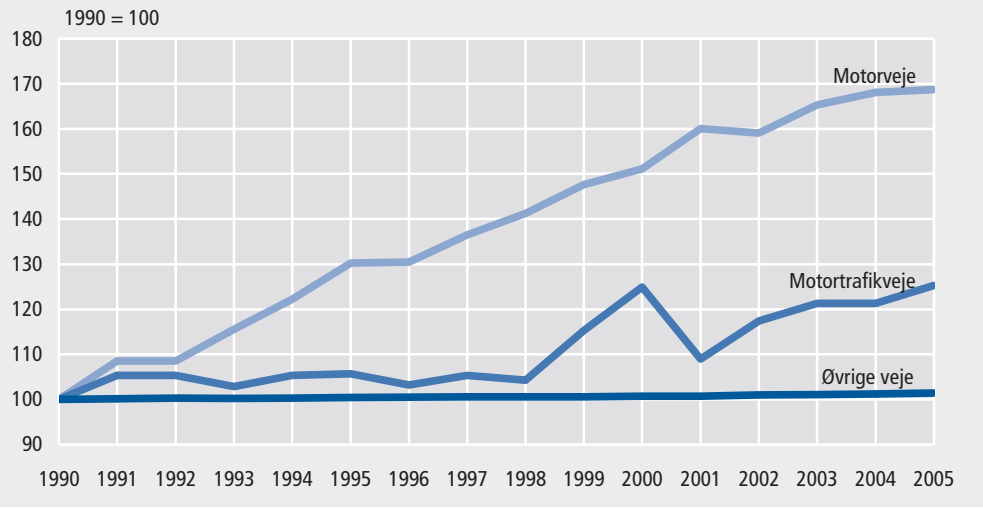
Nettotilgang af kommuneveje

Det offentlige vejnet vokser langsomt. Siden 1990 er længden øget med 2 pct. svarende til næsten 1.500 km. Forøgelsen er overvejende sket ved nettotilgang af kommuneveje, som er udvidet med over 1.700 km. Samtidig er det overordnede net af motorveje og motortrafikveje udvidet med 500 km ved nybygning eller udbygning af eksisterende veje. Længden af de resterende stats- og amtsveje er til gengæld over 700 km kortere end i 1990.

Stor tilgang af motor- og motortrafikveje

Motorvejsnettet er øget med 420 km eller 69 pct. fra 1990 til 2005. Det består nu af 1.031 km vej svarende til 1,5 pct. af vejnettet. Motortrafikvejene er i samme periode øget med 71 km eller 25 pct. til 352 km i januar 2005.

Figur 2. **Vejnettets længde 1. januar. 1990-2005**



10 pct. af det offentlige vejnet findes i hovedstadsområdet, 25 pct. på Øerne i øvrigt og de resterende 65 pct. i Jylland. Udvidelsen af vejnettet er jævnt fordelt over landet. Derimod er udbygningen af motorvejsnettet især foregået i Nordjyllands Amt, Ribe Amt, Århus Amt og Vejle Amt.

1,68 km vej pr. km²

I Danmark var der 1. januar 2005 1,68 km offentlig vej pr. km². Vejtætheden pr. km² var størst i Hovedstadsregionen, der havde 2,47 km vej pr. km², og lavest i Viborg Amt med 1,35 km vej pr. km². Opgøres vejlængden i stedet pr. indbygger, havde Sønderjyllands Amt den største vejdækning med 27 m pr. indbygger, mens Hovedstadsregionen havde den laveste med 4 m vej pr. indbygger.

Jernbanenettet

2.644 km jernbanenet

Længden af det samlede jernbanenet var pr. 1. januar 2005 på 2.644 km. Hovedparten, 2.132 km, forvaltes af Banedanmark, det tidligere Banestyrelsen.

Resten er overvejende regionalbanernes (tidligere privatbanerne) banenet på 495 km. Københavns Metro, der åbnede i 2002, har 17 km banenet.

Færre km godsbane

Siden 1990 er jernbanenettet blevet næsten 200 km kortere, overvejende som følge af nedlæggelse af godsbanestrækninger på Banedanmarks net.

24 pct. af nettet elektrificeret

Pr. 1. januar 2005 var 636 km af jernbanenettet elektrificeret. Det svarer til 24 pct. af den samlede strækning.

82 pct. af banenettet har strækningssikringsanlæg

82 pct. af det samlede jernbanenet er nu udstyret med strækningssikringsanlæg. 87 pct. af Banedanmarks net havde strækningssikringsanlæg. Regional- og S-baner var fuldt udstyret, mens 92 pct. af hovedbanerne og 79 pct. af lokalbanerne havde strækningssikringsanlæg. Af privatbanernes banestrækning var 61 pct. forsynet med strækningssikringsanlæg primo 2005.

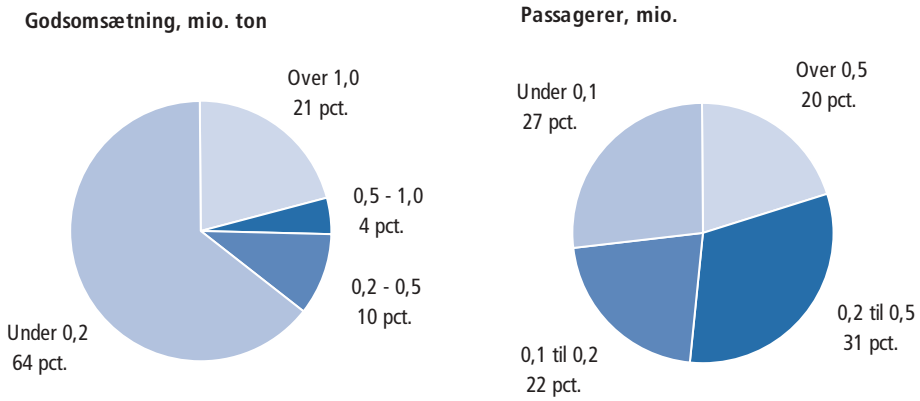
Danmark har 61 km jernbane pr. 1.000 km^2. Sammenlignet med Sverige og Norge er jernbanetætheden for det danske, statsejede jernbanenet hhv. to og fire gange så stor, men i forhold til de fleste andre europæiske lande er det danske jernbanenet af noget mindre omfang.

Havne

119 havne

I 2004 havde Danmark 119 havne inkl. separate færgelejer, som regelmæssigt blev anvendt til erhvervsmæssig ekspedition af gods, køretøjer eller passagerer. Øvrige havne, som kun lejlighedsvis anvendes til ud- eller indskibning af gods eller passagerer eller som udelukkende anvendes som fiskerihavne eller lystbådehavne, indgår ikke i transportstatistikken.

Figur 3. **Havne efter størrelse. 2004**



Godsomsætningen er koncentreret på 25 havne

118 havne havde ud- eller indskibning af gods. De fleste ekspederede dog mindre end 0,2 mio. ton om året, jf. figur 3. Godsomsætningen er koncentreret på de 25 største havne med en godsomsætning på mindst 1 mio. ton om året. I 2004 foregik 89 pct. af havnenes samlede godsomsætning over disse havne.

Danske havne er forholdsvis små

Efter europæisk målestok er de danske havne relativt små. Ifølge Eurostat har de 20 største europæiske havne hver en godsomsætning på over 30 mio. ton årligt, mens de to største danske havn, Fredericia Havn og Århus Havn, ekspederer hhv. 17 og 10 mio. ton gods om året (2004).

Passagertrafikken er koncentreret på 11 havne

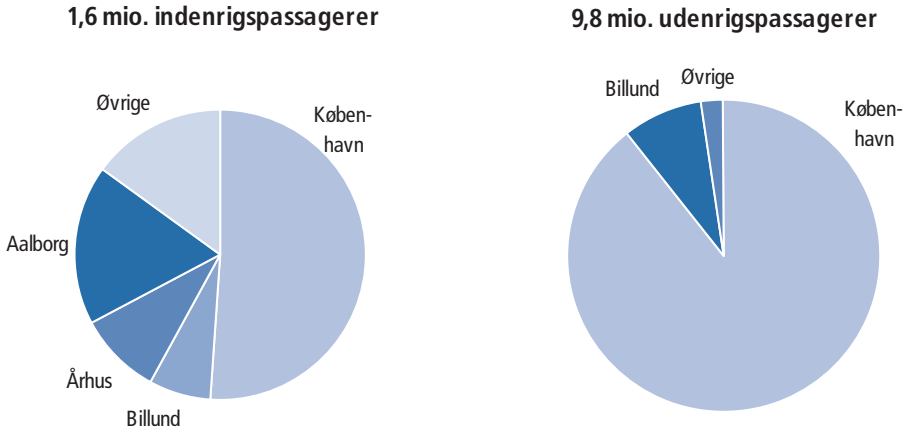
Der var 74 havne med skibspassagerer i rutefart. De fleste havde færre end 0,5 mio. passagerer om året, jf. figur 3. 11 havne, med hver mere end 1 mio. passagerer, dækkede 73 pct. af havnenes samlede antal passagerer.

Lufthavne

23 betjente lufthavne

I 2004 var der 23 offentlige, betjente lufthavne i Danmark mod 28 i 1990. Københavns og Roskilde Lufthavne er et statsejet aktieselskab. Bornholms Lufthavn drives af staten. De øvrige provinslufthavne drives i kommunalt regi. Primo 2005 havde de 23 lufthavne i alt 36 landingsbaner, heraf 11 græsbaner. 9 af lufthavnene har primo 2005 startbaner på mindst 1.800 meter og er dermed i stand til at modtage større fly.

Figur 4. **Lufthavne efter afrejsende passagerer. 2004**



Udenrigstrafikken går over København

Københavns Lufthavn er suverænt landets største internationale lufthavn. I 2004 fløj 93 pct. af rutepassagererne i udenrigstrafik fra Københavns Lufthavn, og 59 pct. af charterpassagererne til udlandet rejste fra København. De øvrige rute- og charterpassagerer til udlandet anvendte hovedsagelig Billund Lufthavn.

Indenrigstrafikken går til og fra København

Indenrigstrafikken går praktisk taget kun til eller fra Københavns Lufthavn, der af samme grund har halvdelen af det samlede antal indenrigspassagerer. Aalborg og Århus var mht. indenrigstrafik de største provinslufthavne i 2004 med tilsammen lidt over en fjerdedel af de indenlandske rutepassagerer.

Målt efter antal passagerer var Københavns Lufthavn den 14. største lufthavn i EU i 2003.

Rørledninger

DONG A/S ejer og driver rørledninger i Nordsøen

DONG A/S, Dansk Olie- og Naturgas, ejer det system af højtryks-rørledninger, der transporterer størstedelen af den producerede olie fra Gorm-feltet i Nordsøen via Filsø pumpestation på den jyske vestkyst over Jylland til Fredericia Råolieterminal. DONG ejer og driver også det system af højtryks-rørledninger, som siden 1982 har transporteret gassen fra først Tyra feltet, og fra 1999 også fra Harald og Syd Arne felterne i Nordsøen via Nybro Gasbehandlingsanlæg ved den jyske vestkyst til trafikknudepunktet i Egtved, hvorfra den fordeles videre til regionerne. Herfra ledes gassen videre til de danske slutbrugere i et lavtryks-ledningsnet, der består af ca. 17.000 km distributionsledninger.

GASTRA A/S ejer og driver de landbaserede gasrørsledninger

Fra 2003 ejer og driver det statsejede Gastra A/S det landbaserede transmissionsnet til gastransport, mens DONG A/S fortsat ejer og driver søledningerne i Nordsøen frem til Nybro. DONG ejer også halvdelen af den gasrørledning, som fra 2004 forbinder Tyra feltet med Holland.

330 km olierørledninger

Olierørledningen blev anlagt i 1982/83. Den er 330 km lang, heraf 220 km i Nordsøen.

1.473 km gasrørledninger

Rørledningerne til transport af naturgas består dels af Nordsøledninger på 576 km, dels af transmissionsnettet på land på 862 km inkl. rørledningerne under Bælterne. Fra 2004 medregnes også de 35 km af rørledningen til det hollandske ledningssystem, som er beliggende på den danske kontinentalsokkel.

2. Transportmidler

Bestand af biler mv.

Udviklingen i bestanden af køretøjer fra 1990-2005

Bestanden af motorkøretøjer vokset med 30 pct. fra 1990-2005

Bestanden af motorkøretøjer har i 2005 passeret 2,5 mio. enheder. Det er 586.000 eller 30 pct. flere end i 1990. Antallet af personbiler er vokset med 318.000 stk. (54 pct. af tilgangen af motorkøretøjer), mens der er kommet 141.000 flere varebiler til (24 pct. af tilgangen). Antallet af knallert-45 og motorcykler er vokset med 119.000 enheder (20 pct. af tilgangen).

Bestanden af øvrige køretøjer har i 2005 passeret 900.000 enheder. Det er 341.000 eller 60 pct. flere end i 1990. Antallet af små påhængsvogne op til 2.000 kg totalvægt ("trailere") er vokset med 352.000 stk., mens der er kommet 31.000 campingvogne til. Antallet af traktorer er faldet med 66.000 enheder siden 1990.

Oversigtstabel 1.

Køretøjsbestanden i Danmark. 1. januar 1990-2005

	1990	1999	2001	2003	2005	1990 -2005
			1.000 stk.			pct.
Alle køretøjer i alt	**2 511,1**	**3 025,7**	**3 175,9**	**3 298,5**	**3 438,1**	**36,9**
Motorkøretøjer i alt	**1 943,3**	**2 302,0**	**2 392,5**	**2 456,7**	**2 529,6**	**30,2**
Personbiler	1 598,0	1 817,1	1 854,1	1 888,3	1 915,8	19,9
Busser	8,0	13,9	14,0	14,0	14,2	76,7
Varebiler	247,6	308,9	335,7	353,6	388,8	57,0
Lastbiler 3.501-6.000 kg	5,6	5,1	4,6	4,0	3,6	-35,9
Lastbiler over 6.000 kg	34,5	33,2	33,0	31,7	30,7	-11,1
Sættevognstrækkere	6,3	10,5	11,6	12,4	13,0	108,1
Motorcykler	43,3	64,0	73,7	82,7	94,8	119,2
Knallert-45	•	48,1	64,6	68,6	67,3	•
Brand- og redningskøretøjer[1]	…	1,2	1,3	1,3	1,3	•
Øvrige køretøjer i alt	**567,9**	**723,7**	**783,4**	**841,8**	**908,5**	**60,0**
Sættevogne	14,5	23,2	24,2	25,6	28,1	93,5
Påhængsvogne	289,4	473,3	531,3	589,2	651,3	125,0
Traktorer	174,0	122,3	119,0	113,7	107,7	-38,1
Campingvogne	89,9	104,9	108,9	113,3	121,4	35,0

[1] Kun vare- og lastbiler.

Nyregistreringer af køretøjer i perioden 1990-2005

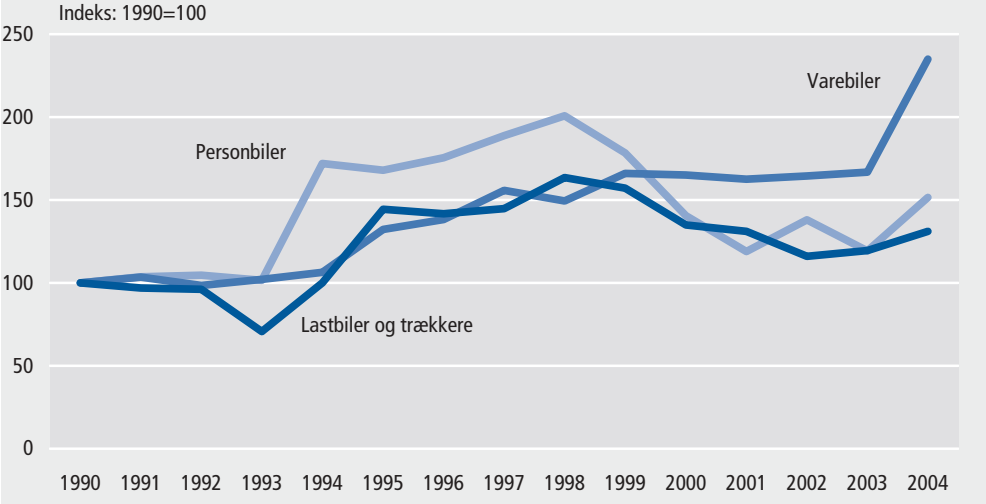
Tilgang og afgang bestemmer bestandsudviklingen

Udviklingen i bestandene af køretøjer over en periode er nettoresultatet af tilgangen af nye og importerede brugte biler fraregnet afgangen af skrottede eller eksporterede biler.

Nyregistreringerne tog fart i 1994

I de første år i 1990'erne var der stort set balance mellem tilgange og afgange – bestandene voksede kun langsomt – men i 1994-95 steg antallet af nyregistreringer kraftigt, og bestandene begyndte nu at vokse noget hurtigere.

Figur 5. **Nyregistrerede person-, vare- og lastbiler 1990 til 2005**



Personbiler

Den mest markante udvikling skete for personbilerne, hvor salget fra et niveau på 80-90.000 biler om året i perioden 1988 til 1993 i 1994 steg til over 130.000 nye biler. Med et højeste salg i 1998 på lidt over 160.000 biler lå salget på dette niveau frem til 1999. Fra midten af 1999 bevægede personbilsalget sig ned på et niveau omkring 100-110.000 biler om året, men fra starten af 2003 har det igen bevæget sig opad, og vil i 2005 nå 140-150.000 biler.

Siden 1960'erne har salget af personbiler bevæget sig i bølger, hvor det har toppet med 10-12 års mellemrum, og holdt sig på et højt niveau i 3-5 år. Denne cykliske bevægelse afspejler til en vis grad den almindelige levetid for køretøjerne, men de økonomiske konjunkturer og forskellige politiske indgreb har også spillet ind i forhold til at forøge eller begrænse de private husholdningers forbrugsmuligheder og erhvervenes investeringslyst.

Varebiler

Salget af nye varebiler lå ligesom personbilernes lavt i perioden 1988-1993 med 17-20.000 biler om året, men fra 1994 steg salget i løbet af få år til omkring 30-32.000 biler, som har været niveauet frem til 2003. I 2004 er salget steget yderligere bl.a. som følge af husholdningernes stigende køb af varebiler til privat anvendelse.

Lastbiler og sættevognstrækkere

Salget af lastbiler og sættevognstrækkerne dykkede i 1993 noget under niveauet i de foregående år for derefter i perioden 1995-1999 at blive fordoblet til over 5.000 enheder. Fra 2000 har salget været på 4.100-4.800 enheder. Forløbene for de to lastbiltyper har dog været noget forskellige med en stigende andel af sættevognstrækkere og en faldende andel af lastbiler.

Personbiler

20 pct. flere personbiler end i 1990 ...

Der er primo 2005 registreret 1.916.000 personbiler, hvilket er 20 pct. eller 318.000 biler flere end i 1990, og de bliver stort set alle anvendt til privatkørsel.

... og de er blevet tungere

Mens 35 pct. af personbilerne havde en egenvægt på indtil 800 kg i 1990, gælder det kun 8 pct. i 2005. Omvendt udgør bilerne i vægtgruppen fra 1.001-1.500 kg i dag 56 pct. af bilerne mod 22 pct. i 1990.

10 pct. kører på diesel

Dieselbilernes andel af bestanden er blevet mere end fordoblet siden 1990, om end andelen endnu kun er kommet op på 10 pct. Hvis dieselbilernes øjeblikkelige andel på ca. 25 pct. af salget af nye biler fortsætter, vil dieselandelen stige yderligere i de kommende år. Resten af personbilerne kører på benzin.

Forskydning i alderssammensætning fra 1990 til 2005

Mens gennemsnitsalderen kun er steget en anelse, er alderssammensætningen af personbilbestanden i 2005 noget anderledes end i 1990. I 1990 var 38 pct. af bilerne under 5 år, mens kun 27 pct. var det i 2005. Til gengæld var 28 pct. 5-9 år i 1990, mens 36 pct. var det i 2005. Forskydningerne i alderssammensætningen hænger sammen med bølgebevægelser i nyregistreringerne, og her kommer 1990 kun ca. to år efter en topperiode, mens 2005 kommer otte til ni år efter.

Stigende relativ bilrådighed, ...

Bilbestanden svarer til 354 biler pr. 1.000 indbyggere i 2005 mod 310 i 1993, og det er en stigning på 14 pct. Forskellene i bilrådighed – antal biler pr. 1.000 indbyggere – amter og kommuner imellem udspringer bl.a. af demografiske forskelle mht. alder, indkomst og familietyper, erhvervsstrukturelle forskelle mht. virksomhedslokalisering og pendlingsmønstre samt geografiske forskelle mht. bymæssighed og dækningen af kollektiv trafik. Tydeligst er den lave bilrådighed i Københavns og Frederiksberg kommuner.

... men uændret geografisk fordeling

Selv om tilvæksten ikke har været helt ligelig i perioden, er fordelingen af personbiler på amter og landsdele stort set uforandret fra 1992 til 2005.

Busser

Stor tilgang af busser siden 1990

Der er primo 2005 en bestand på 14.200 busser. Det er ca. 6.200 flere end i 1990. Langt størstedelen af tilgangen er små busser med en totalvægt op til 5.000 kg og 12 eller færre passagerpladser, mens resten er de største busser med 60-79 pladser.

1/3 af busserne til rutekørsel, 2/3 til turistkørsel mv.

Hele tilvæksten fra 1990-2005 er registreret til turistkørsel, og derfor udgør denne anvendelse 2/3 af busserne i 2005 mod 1/3 i 1990. Omvendt er det gået med rutebusserne, hvis andel er faldet til 1/3 uanset, at antallet er uændret.

Busser kører på diesel

88 pct. af busserne kører på diesel i 2005 mod 99 pct. i 1990. Det er specielt tilgangen af de små busser i perioden, der har ændret dette forhold, idet en relativ stor del af disse kører på benzin. Under 250 busser kører på gas.

½ mio passagerpladser i busserne

38 pct. af busserne har 50 eller flere passagerpladser, mens 54 pct. har færre end 20 passagerpladser. Den samlede kapacitet er på 510.000 passagerpladser primo 2005, og det er 18 pct. eller 76.000 pladser flere end i 1990.

Ældre busser i 2005 end i 1990

Bussernes gennemsnitsalder er i 2005 9,3 år. Mens 34 pct. af busserne i 1990 var under 5 år, gælder det kun 25 pct. i 2005. Omvendt er bestanden af busser over 10 år steget fra 30 pct. i 1990 til 48 pct. i 2005.

Varebiler

Stor stigning i antallet af varebiler ...

Bestanden af varebiler er primo 2005 på 388.800 køretøjer. Det er 57 pct. flere end i 1990. Udviklingen dækker over store fremgange for varebiler med en totalvægt på over 1.500 kg og tilbagegange for de lettere biler.

75 pct. af varebilerne kører på diesel.

... og stor stigning i lastekapaciteten

Den samlede lastekapacitet er 374.700 ton i 2005. Det svarer det til en stigning på ca. 115 pct. siden 1990.

Uændret gennemsnitsalder

Gennemsnitsalderen for varebiler er på 7,1 år i 2005. Lige som ved personbilerne var der en høj registreringsaktivitet sidst i 80'erne, en lav aktivitet først i 90'erne og en høj aktivitet sidst i 90'erne. De 0-4-årige varebiler udgjorde 54 pct. af bestanden i 1990, 34 pct. i 1995 og 42 pct. i 2005.

Lastbiler og sættevognstrækkere

Færre små lastbiler …

Bestanden af små lastbiler (totalvægt 3.501-6.000 kg) er primo 2005 på 3.600 køretøjer, og det er 36 pct. færre end i 1990. 44 pct. af lastbilerne har en totalvægt på 5.001-6.000 kg og 56 pct. har en totalvægt på 4.001-5.000 kg. Der er stort set ingen køretøjer med en totalvægt på 3.501-4.000 kg.

De små lastbilers samlede lastekapacitet er 7.800 ton i 2005. Det svarer til et fald på 31 pct. siden 1990.

Gennemsnitsalderen for de små lastbiler er 9,1 år i 2005. Fornyelsen af bestanden er stort set sket fra 1998 til 2000. I øvrigt ligner alderssammensætningen varebilernes.

… og også færre store lastbiler, …

Bestanden af store lastbiler over 6 ton totalvægt er primo 2005 på 30.700 biler. Det er 11 pct. færre end i 1990.

… men de er til gengæld blevet så meget større, …

Tilbagegangen i antal er blevet kompenseret ved større og tungere køretøjer med en større lasteevne. Fx er andelen af køretøjer med 3 eller flere aksler vokset til 43 pct. af bestanden i 2005 mod 33 pct. i 1990.

… at den samlede lastekapacitet er vokset

Væksten i køretøjernes lasteevne har været tilstrækkelig til, at den samlede lastekapacitet er steget med 3 pct. fra 1990 til 2005 til i alt 288.500 ton.

Ældre køretøjer i 2005 end i 1990

Den mindre tilgang af nye lastbiler i perioden har forskudt aldersfordelingen opad. De nyeste køretøjer yngre end 5 år udgør således kun 33 pct. af bestanden i 2005 mod 52 pct. i 1990, mens køretøjerne ældre end 9 år udgør 30 pct. af bestanden i 2005 mod 20 pct. i 1990.

Stor tilgang af sættevognstrækkere …

Mens antallet af lastbiler er gået ned, er antallet af sættevognstrækkere mere end fordoblet fra 1990 til 2005, hvor bestanden har rundet 13.000 køretøjer.

90 pct. heraf anvendes til vognmandskørsel (kørsel for fremmed regning), mens resten anvendes til firmakørsel.

… giver en ganske lav gennemsnitsalder …

Gennemsnitsalderen for sættevognstrækkerne er 4,2 år i 2005. Det store antal nyregistreringer de senere år betyder, at 68 pct. af bestanden er under 5 år gammel.

… og tungere og større biler

Også sættevognstrækkerne er blevet tungere og større. De højere tilladte totalvægte har muliggjort tilkobling af tungere sættevogne.

Sættevognstrækkerne har vundet ind på lastbilerne

Udviklingen for lastbiler og tunge påhængsvogne sammenholdt med udviklingen for trækkerne og sættevogne viser en klart større præference i transporterhvervene for den mere fleksible transportform, som sættevognskombinationen udgør. Sættevognstrækkerne udgør i 2005 således 30 pct. af den samlede bestand af trækkere og tunge lastbiler mod 15 pct. i 1990.

Trailere, påhængsvogne og sættevogne

Stor tilgang af små påhængsvogne, …

Bestanden af trailere (dvs. påhængsvogne op til 2.000 kg totalvægt) er mere end fordoblet fra 1990 til 2005 til 628.000 køretøjer, som samtidig udgør 96 pct. af alle påhængsvogne. Langt hovedparten af disse anvendes privat, og for landet som helhed er det så mange, at hver sjette familie har en trailer i 2005.

… men også mange flere store påhængsvogne …

Bestanden af påhængsvogne med en totalvægt over 2.000 kg (anvendes primært erhvervsmæssigt) er i 2005 på 23.500 køretøjer mod 13.300 i 1990.

… og 95 pct. større lastekapacitet

De små og store påhængsvognes samlede lastekapacitet er primo 2005 på 449.000 ton, og det er næsten en fordobling siden 1990. 58 pct. af lastekapaciteten er på på-

hængsvogne indtil 2.000 kg totalvægt, mens 30 pct. er på påhængsvogne med en totalvægt på over 16.000 kg (lidt over 1 pct. af bestanden).

Stor stigning i antallet af sættevogne ...

Bestanden af sættevogne er primo 2005 på 28.100 køretøjer mod 14.500 i 1990, og det svarer til en stigning på 93 pct. Hovedparten af køretøjerne (83 pct.) har en totalvægt over 35 ton. Den samlede lastekapacitet er fordoblet fra 1990 til 2003 til i alt 743.700 ton.

... bl.a. som følge af standardisering

Væksten i antallet af sættevogne bl.a. til veksellad eller containertransport afspejler også den gennemgribende standardisering inden for transportkæderne, der sikrer en hurtig og sikker transport.

Sættevognene er blevet yngre

Med 54 pct. af sættevognene under 5 år i 2005 mod 43 pct. i 1990, og 17 pct. over 10 år i dag mod 34 pct. i 1990, er bestanden af sættevogne blevet noget yngre siden 1990.

Øvrige køretøjer

Færre traktorer, ...

Antallet af traktorer er primo 2005 på 107.700 mod 138.100 i 1990. 90 pct. af traktorbestanden i 2005 er ikke indregistreret, men alene godkendt til begrænset transport på offentlig vej.

... men højere produktivitet

Den højere egenvægt – 66 pct. af bestanden har i 2005 en egenvægt over 3 ton mod 45 pct. i 1992 – indikerer dog, at maskinerne er blevet kraftigere og mere effektive. Dvs. at nedgangen i bestanden er blevet kompenseret ved, at de enkelte maskiner er blevet mere produktive.

Høj gennemsnitsalder

Gennemsnitsalderen for traktorerne er 17,9 år i 2005. 70 pct. af traktorerne er i dag 10 år eller derover.

Stigning i antallet af campingvogne, ...

Bestanden af campingvogne er primo 2005 på 121.400, og det er 31.500 eller 35 pct. flere end i 1990. 62 pct. af campingvognene hører hjemme i Jylland.

... og de er blevet større ...

I 1990 havde 81 pct. af campingvognene en totalvægt på op til 1.000 kg, men det gælder kun 45 pct. af bestanden i dag, hvor til gengæld 55 pct. har en totalvægt over 1.000 kg.

... og en anelse ældre

Alderssammensætningerne i 1990 og 2005 viser, at campingvognene er blevet noget ældre. De 0-4-årige udgjorde 29 pct. af bestanden i 1990 og 22 pct. i 2005, mens de 10-årige og ældre er vokset fra 55 pct. til 59 pct.

Stor stigning i antallet af motorcykler ...

Bestanden af motorcykler er primo 2005 på 94.800 mod 43.300 i 1990, og det svarer til en tilgang på 119 pct. De små maskiner op til 150 kg udgør en noget mindre andel i dag end i 1990, mens motorcyklerne med en egenvægt 151-250 kg til gengæld udgør en større andel – 72 pct.

... og de gamle forsvinder ikke

58 pct. af motorcyklerne var ældre end 14 år i 2005, mens det kun gjaldt 30 pct. i 1990. Gennemsnitsmotorcyklen i 2005 er en bedaget maskine på 21,2 år.

Nyt køretøj på de danske (lande-)veje

Knallert-45 blev introduceret på det danske marked i 1994. De lette køretøjer, der stort set alle har en egenvægt på op til 100 kg og er billige i drift, er frem til omkring 2001 registreret i stort tal, men bestanden har siden da stabiliseret sig på 67-68.000 køretøjer. Knallert-45'erne har relativt set haft størst gennemslagskraft uden for de store byer og vest for Storebælt.

Familiernes bilrådighed

Rådighedsbegrebet

En familie har bilrådighed, når et eller flere af følgende kriterier er opfyldt:

- Et eller flere familiemedlemmer er ejer af en eller flere personbiler
- Et eller flere familiemedlemmer er ejer af en varebil til privat godstransport.
- Et eller flere familiemedlemmer har firmabil til rådighed

Hovedtræk af bilrådighedsforholdene i 2000 og 2005

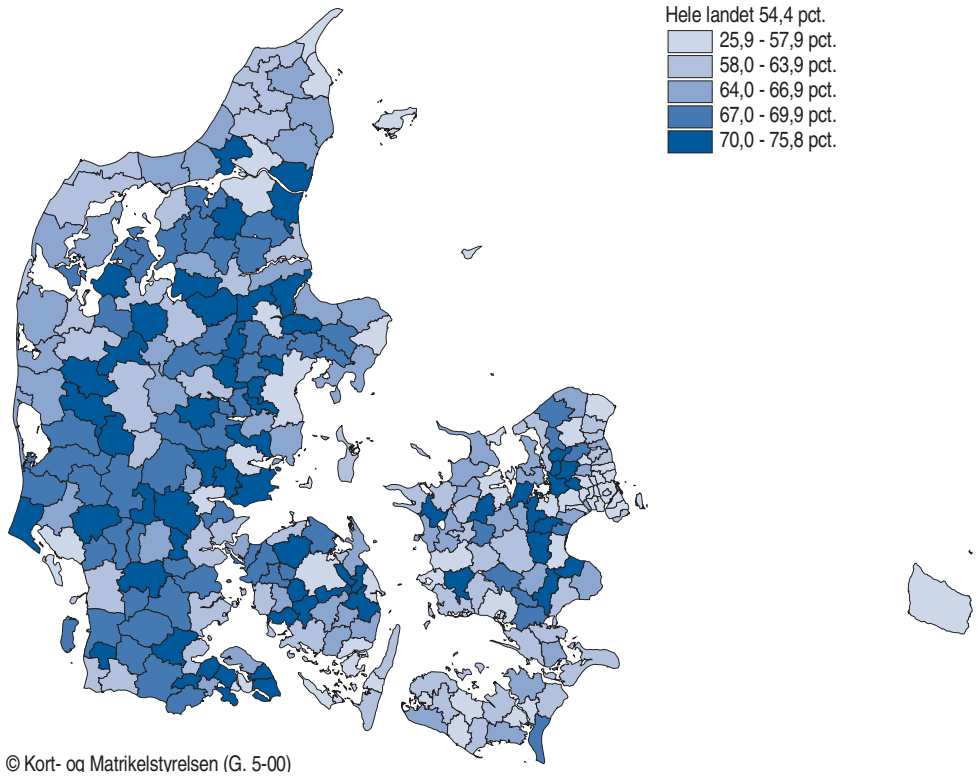
Moderat stigning i antal familier med bilrådighed ...

Antallet af nyregistreringer af person- og varebiler i perioden 1999-2004 har været en del mindre end i de foregående år i 1990'erne, og på samme vis har der også kun været en moderat udvikling i antallet af familier med bil i de seneste år. Mens der 1. januar 2000 er 1,49 mio. familier med bil svarende til lidt under 52 pct. af alle familier, er der 1. januar 2005 1,58 mio. familier svarende til lidt over 54 pct. af alle familier.

... men lidt større stigning i antal familier med flere biler

Relativt set har udviklingen været lidt kraftigere for familier med flere biler. Mens der i 2000 er 251.000 familier med flere biler svarende til lidt under 9 pct. af alle familier, er det i 2005 steget til 273.000 familier eller lidt over 9 pct. af alle familier.

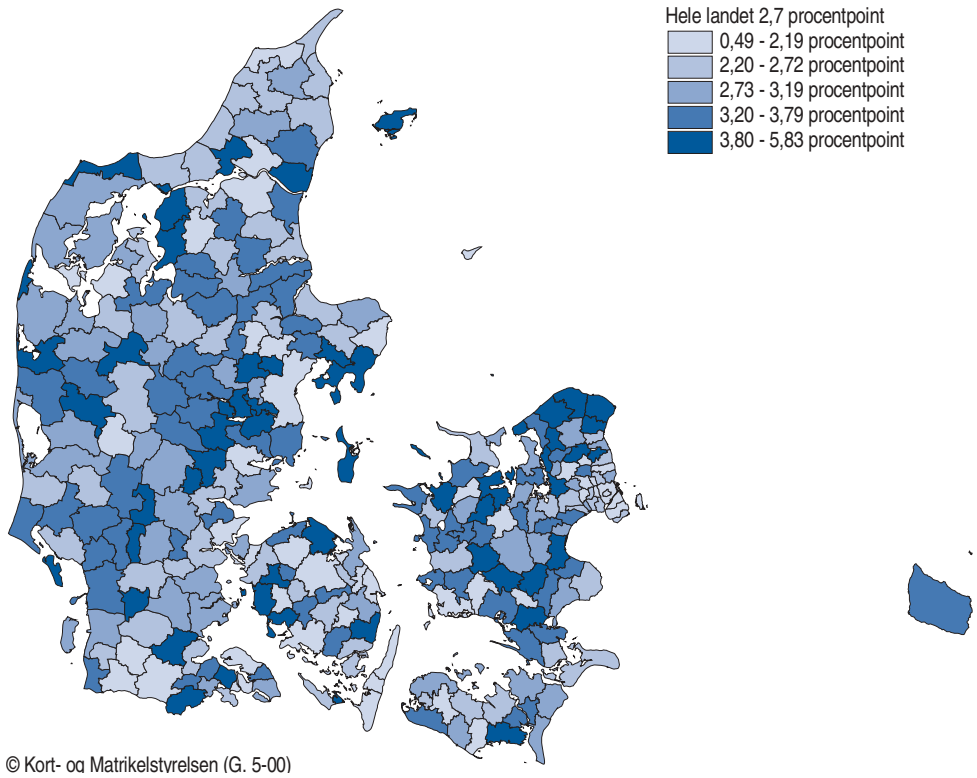
Figur 6. **Familiernes bilrådighed pr. 1. januar 2005**



Højeste bilrådighed i Jylland, ...

Bilrådigheden i Jylland og på Fyn er jf. kortet størst i omegnskommunerne til de større bysamfund (Odense, Århus, Aalborg, Randers, Esbjerg, Herning, Silkeborg, Vejle, Sønderborg mv.), mens den på Sjælland er størst i kommunerne omkring Roskilde, syd for Køge og i Vestsjælland. I disse kommuner har 70 pct. eller flere af familierne bilrådighed.

Figur 7. **Stigning i familiernes bilrådighed pr. 1. januar fra 2000 til 2005**



... men største vækst på Sjælland

Selv om den generelle udvikling på 2,4 procentpoint fra 2000 til 2005 i andelen af familier med bilrådighed er moderat, er billedet meget forskelligartet kommunerne imellem. Den store vækst på Sjælland og i Øst-, Midt- og Sydvestjylland uden for de større bysamfund er karakteristisk, og den afspejler sandsynligvis en øget præference for at anvende bilen til pendling fra land til by.

Familiekarakteristika og bilrådighed

Forskellige år for familiernes baggrund

Familiernes karakteristika mht. familietype oplyst t.o.m. 1. januar 2005, mens oplysningerne om indkomst, beskæftigelse, boligforhold og uddannelse kun foreligger t.o.m. 1. januar 2004.

Par- og børnefamilier har den højeste bilrådighed

Der er markante forskelle i bilrådigheden imellem de forskellige familietyper. Mens 85 pct. af parfamilierne har bil i 2005 (82 pct. i 2000), gælder det kun 30 pct. af de enlige (26 pct. i 2000).

Forskellene er næsten lige så store for familier med børn i forhold til familier uden børn. Mens 80 pct. af børnefamilierne har bil i 2005 (79 pct. i 2000) gælder det kun 47 pct. af familierne uden børn (44 pct. i 2000).

De højeste indkomster har den højeste bilrådighed og vice versa

Der fremstår over hele perioden en klar sammenhæng mellem indkomst og bilrådighed; jo højere indkomst jo højere bilrådighed. Spredningen i bilrådigheden går i 2000 fra 38 pct. for den fjerdedel af familierne, der har de laveste ækvivalensvægtede indkomster (under 69.000 kr.) til 74 pct. for den fjerdedel af familierne, der har de højeste ækvivalensvægtede indkomster (over 331.000 kr.). I 2004 er bilrådigheden faldet til lidt under 37 pct. for den laveste fjerdedel (under 80.000 kr.), mens den for den øverste fjerdedel (over 391.000 kr.) er steget til 78 pct.

Beskæftigede har højere bilrådighed end ikke-beskæftigede

Bilrådigheden i forhold til familiens beskæftigelse/socioøkonomiske klassificering udviser også en ret stor spredning. Der fremstår en klar skillelinie imellem de, der har beskæftigelse (og indtjening) og de, der ikke har. For de beskæftigede (selvstændige og lønmodtagere) er bilrådigheden i 2000 mellem 64 og 74 pct., mens den i 2004 er

mellem 67 og 75 pct. For de ikke-beskæftigede er bilrådigheden 32 pct. i 2000 og 33 pct. i 2004.

Størst bilrådighed i familier med ejerbolig (stue- og parcelhuse)

Bilrådigheden i forhold til familiens bolig varierer dels efter, om familien er ejer eller bor til leje, dels efter selve boligtypen. Ejerfamiliernes bilrådighed har udviklet sig fra 73 pct. i 2000 til 76 pct. i 2004, mens lejerfamiliernes har udviklet sig fra 31 pct. til 33 pct. Boligtypemæssigt har familierne i stue- og parcelhuse i 2000 en bilrådighed på 72 pct. stigende til 75 pct. i 2004. Familierne i række-, kæde- og dobbelthuse har en bilrådighed på 51 pct. i 2000 stigende til 53 pct. i 2004, mens familierne i etageboliger går fra 30 pct. i 2000 til 32 pct. i 2004.

Størst bilrådighed i familier med erhvervskompetencegivende uddannelser

Bilrådigheden i forhold til familiens uddannelse varierer efter, om familien har en erhvervskompetencegivende uddannelse eller en skoleuddannelse. Bilrådigheden i familier med en kompetencegivende uddannelse ligger omkring 70 pct., og har udviklet sig med 1-2 procentpoint fra 2000 til 2004. Bilrådigheden i familier med en skoleuddannelse ligger i begge årene på 34 pct.

Energieffektiviteten for nyregistrerede personbiler

Baggrund

Siden den 1. juli 1997 har der skullet betales afgift efter bilens brændstofforbrug for nyregistrerede personbiler. For personbiler nyregistreret før denne dato er vægtafgiftssystemet fortsat gældende.

Oversigtstabel 2. **Gennemsnitlig energieffektivitet og egenvægt for nye personbiler**

	1. registreringsår								
	1998	1999	2000	2001	2002	2003	2004	2005 1. halvår	1998 -2005
	km/l								pct.
Personbiler i alt	**13,3**	**13,8**	**14,2**	**14,5**	**14,8**	**15,0**	**15,3**	**15,6**	**17,7**
Priv. personbefordring	13,3	13,9	14,3	14,6	14,9	15,1	15,4	15,7	18,4
I husholdningerne	13,6	14,2	14,8	15,3	15,5	15,7	16,0	16,1	18,7
I erhvervene	12,6	13,0	13,5	13,8	14,1	14,4	14,5	15,0	18,8
Taxakørsel	13,0	13,7	13,6	13,6	13,6	13,6	13,5	13,5	4,3
Andre anvendelser[1]	9,0	9,5	10,0	9,7	10,0	10,0	10,5	10,8	20,5
	kg								
Personbiler i alt	**1 112**	**1 127**	**1 144**	**1 183**	**1 196**	**1 211**	**1 220**	**1 203**	**8,2**
Priv. personbefordring	1 101	1 111	1 122	1 162	1 175	1 186	1 193	1 176	6,8
I husholdningerne	1 073	1 079	1 080	1 114	1 139	1 149	1 149	1 143	6,5
I erhvervene	1 175	1 187	1 195	1 229	1 233	1 237	1 263	1 247	6,1
Taxakørsel	1 519	1 534	1 566	1 583	1 604	1 647	1 687	1 685	11,0
Andre anvendelser[1]	1 927	1 859	1 857	1 986	2 047	2 064	2 113	2 153	11,7
	km/l ved 1.000 kg								
Personbiler i alt	**14,7**	**15,5**	**16,3**	**17,2**	**17,7**	**18,2**	**18,7**	**18,8**	**27,3**
Priv. personbefordring	14,6	15,4	16,1	17,0	17,5	18,0	18,4	18,5	26,4
I husholdningerne	14,5	15,3	15,9	17,0	17,6	18,0	18,4	18,4	26,5
I erhvervene	14,8	15,4	16,1	16,9	17,3	17,8	18,3	18,7	26,1
Taxakørsel	19,7	21,0	21,4	21,6	21,9	22,4	22,8	22,8	15,7
Andre anvendelser[1]	17,3	17,6	18,6	19,2	20,5	20,6	22,1	23,2	34,6

[1] Bl.a. ambulancer, mandskabskørsel, beboelse og "særlig anvendelse".

Det nye afgiftssystem blev indført for at begrænse luftforureningen fra bilernes udstødning, idet afgiften gradueres i forhold til bilens energieffektivitet. Ved at afgiften stiger eksponentielt med et stigende brændstofforbrug pr. kørt km (= en faldende energieffektivitet), tilskynder afgiftssystemet bilkøberne til at købe personbiler med et lavere brændstofforbrug.

En ny bil i 2005 kører 2,3 km længere på literen end en ny bil i 1998 ...

Den gennemsnitlige energieffektivitet er 15,6 km/l for nye personbiler i 2005 mod 13,3 km/l for biler nyregistreret i 1998, når benzin og diesel og alle anvendelser ses under et. Den gennemsnitlige egenvægt er 1.203 kg i 2005 mod 1.112 kg i 1998.

... men teknisk set er det 3,7 km længere

Den *tekniske* energieffektivitet, der udtrykker det kørselsarbejde, som en liter brændstof omsættes i, når der skal flyttes 1.000 kg, er steget fra 14,7 km/l til 18,8 km/l eller 27,3 pct. Når udviklingen i den tekniske energieffektivitet ikke slår fuldt igennem i tallene for de faktisk solgte biler er det et udtryk for, at en del af forbedringen er anvendt til at flytte biler af en højere vægt samt til drift af energikrævende ekstraudstyr som aircondition mv.

Togbestanden

Flere togsæt

Inden for de seneste 15 år er der sket en udvidelse og fornyelse af bestanden af såvel dieseldrevne som el-drevne togsæt. Der er kommet flere el-drevne togsæt, navnlig IR4-tog og Øresundstogsæt, og fjerde-generations S-tog har i stort omfang afløst de ældre S-tog. Desuden har DSB fortsat den tidligere udvidelse af bestanden af de dieseldrevne IC3-tog. Endelig har privatbanerne øget deres bestand af togsæt.

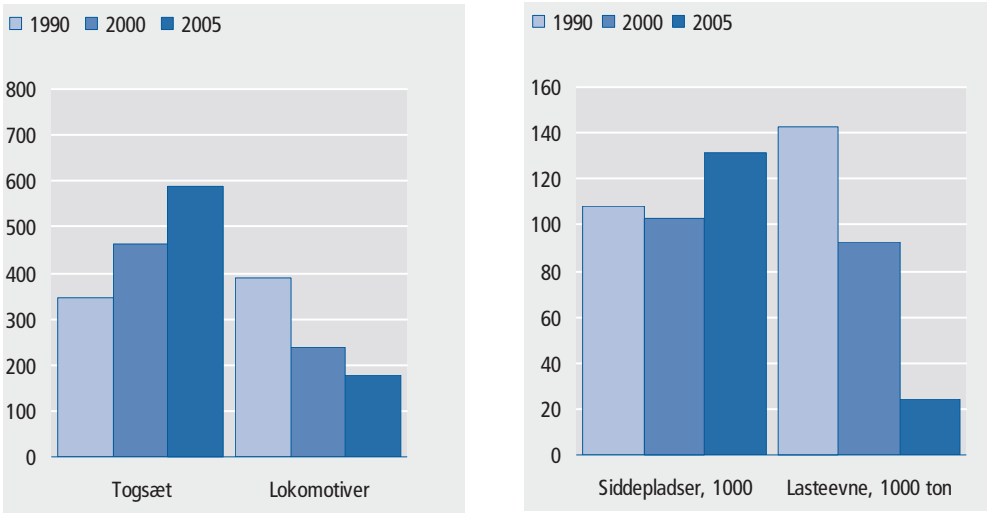
Færre lokomotiver

Samtidig er der sket en halvering af antallet af lokomotiver. Der er navnlig blevet færre diesellokomotiver, mens der er sket en mindre udvidelse i bestanden af el-drevne lokomotiver. Som konsekvens heraf er der også blevet færre traditionelle personvogne, mens antal vogne i togsæt er vokset.

Flere siddepladser

Resultatet af omlægningen har bl.a. været, at der i januar 2005 er 21 pct. flere siddepladser i togvogne end i 1990.

Figur 8. **Lokomotiver, togsæt, siddepladser og lasteevne**



Færre godsvogne og lastekapacitet

Bestanden af godsvogne, som hører til jernbaneselskaberne, faldt fra 4.677 vogne i 1990 til 514 i 2005. Lastekapaciteten er i samme periode reduceret med 83 pct. Nedgangen hænger bl.a. sammen med frasalget i 2000 af DSB Stykgods til Danske Fragtmænd, som herefter overflyttede stykgodset til lastbiler, samt af salget af resten af DSB Gods til Railion Danmark i 2001.

Danske skibe

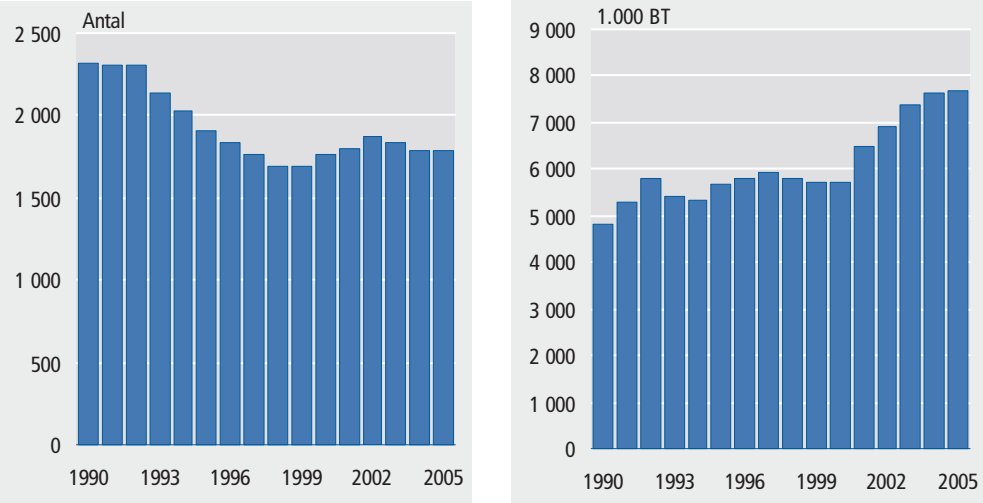
Skibsbestanden faldt i 1990'erne ...

Bestanden af dansk registrerede skibe med en bruttotonnage (BT) på mindst 20 har været faldende i 1990'erne, men efter 2000 har bestanden ligget omkring 1.800 skibe. Pr. 1. januar 2005 var der 1.792 danske skibe mod 2.324 i 1990.

... men bruttotonnagen er vokset markant

Derimod har der været fortsat vækst i den dansk registrerede skibstonnage efter etableringen af Dansk Internationalt Skibsregister (DIS) i 1988. Pr. 1. januar 2005 var de danske skibes samlede bruttotonnage på 7,7 mio. BT. Det er 2,9 mio. BT eller 59 pct. mere end i 1990 og det højeste nogensinde.

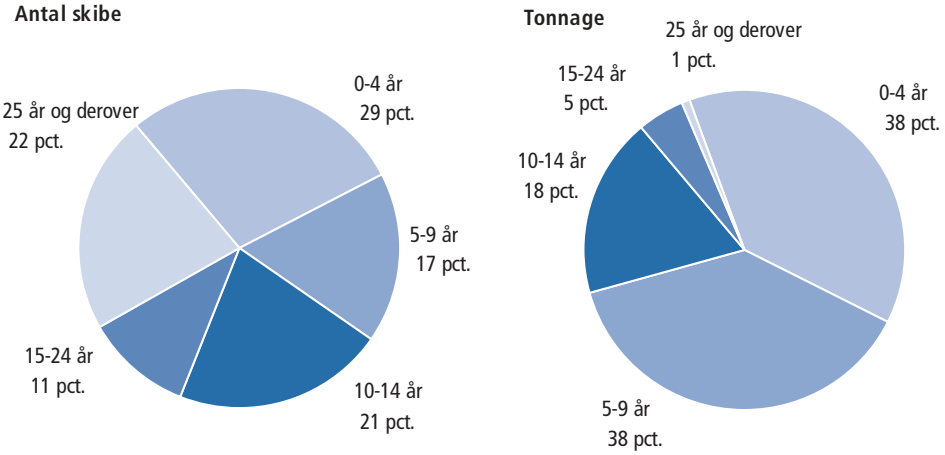
Figur 9. **Antal danske skibe og den samlede tonnage pr. 1. januar**



Fortsat mere bruttotonnage i containerskibe

Tankskibenes bruttotonnage var i 2005 på næsten 2,0 mio. BT, nogenlunde det samme som i 1990. Tørlastskibenes bruttotonnage er derimod vokset med 2,4 mio. BT, overvejende som følge af flere og gennemsnitligt større containerskibe. Containerskibenes bruttotonnage var primo 2005 på 4,4 mio. BT. Det er mere end en fordobling over de seneste 10 år. Containerskibene har nu over halvdelen af de danske skibes samlede bruttotonnage. De øvrige tørlastskibes tonnage var til sammen på 0,5 mio. BT i 2005.

Figur 10. **Danske tankskibe pr. 1. januar 2005 efter alder**



96 pct. af skibstonnagen var registreret i Dansk Internationalt Skibsregister (DIS) og knap 1 pct. af tonnagen var hjemmehørende i Grønland.

Aldersfordeling

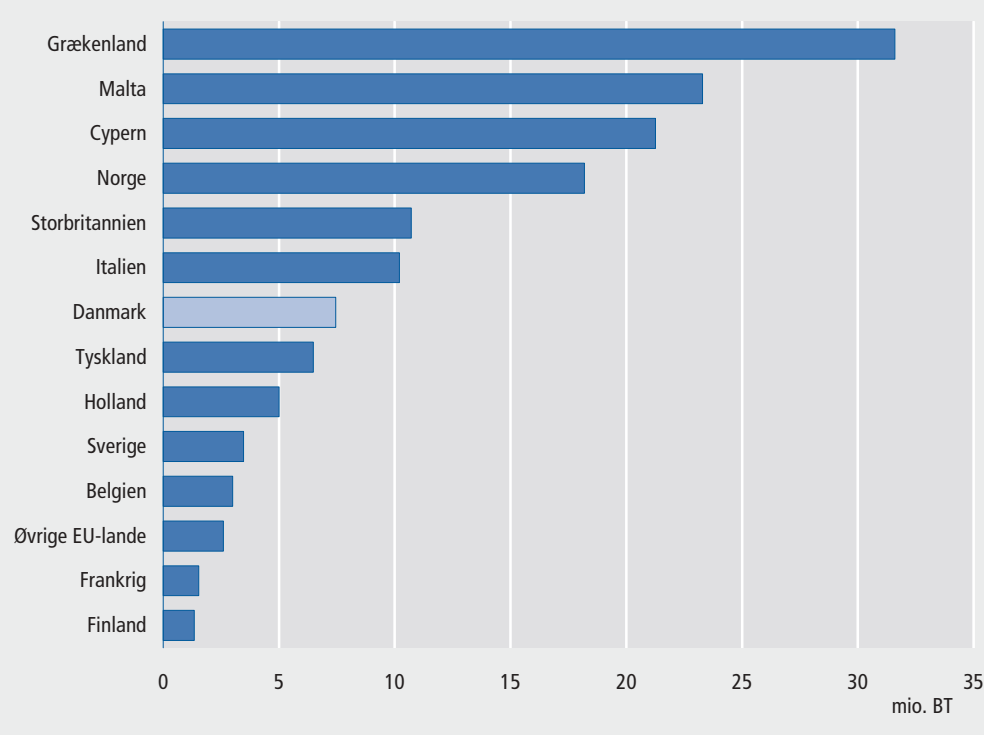
Pr. 1. januar 2005 lå 72 pct. af den samlede tonnage på skibe under 10 år, 12 pct. af tonnagen var mellem 10 og 14 år gammel og 9 pct. mellem 15 og 19. For tankskibene var 76 pct. af bruttotonnagen på skibe under 10 år og kun 1 pct. på skibe over 24 år.

Handelsflåden var på 7,3 mio. BT

Handelsflåde opgøres som lastskibe, færger og passagerskibe på mindst 100 BT. Den danske handelsflåde var primo 2005 på 457 skibe med tilsammen over 7,3 mio. BT. Den danske handelsflåde havde 1,3 pct. af den samlede verdenstonnage for handels-

skibe (2004) og 6 pct. af EU(25) landenes tonnage i handelsskibe. Danmark har den sjette største handelsflåde i EU, kun overgået af Grækenland, Malta, Cypern, Storbritannien og Italien, jf. figur 11.

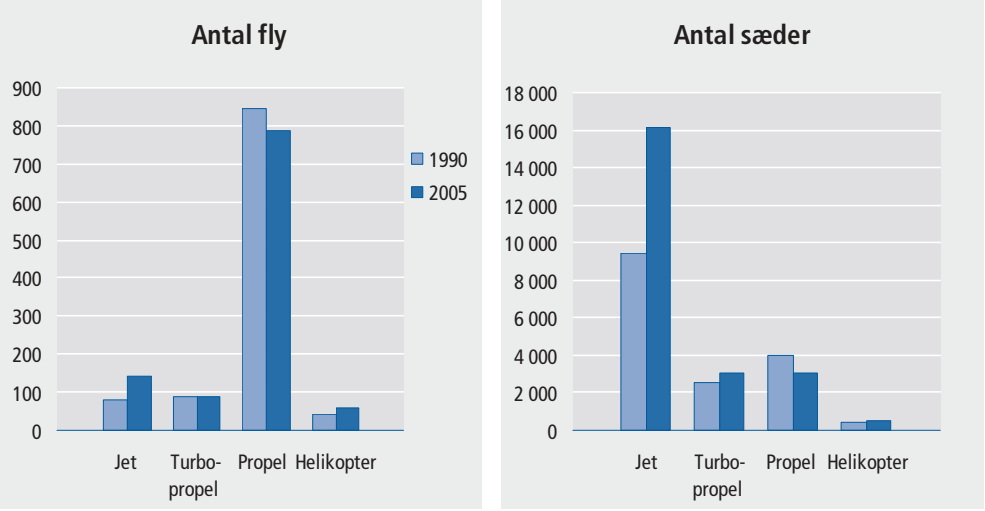
Figur 11. **Handelsflåden i EU-lande og Norge. 1. oktober 2004**



Kilde: Danmarks Rederiforening.

Danske fly

Figur 12. **Danske fly og deres siddepladser efter flytype**



Kilde: Statens Luftfartsvæsen

Flere og større fly

Pr. 1. januar 2005 var der indregistreret næsten 1.100 danske, motordrevne trafikfly. Størstedelen var mindre propelfly, især 1-motors, med få siddepladser. Antallet af dansk registrerede fly har stort set været uændret siden 1990, men der er kommet flere større jetfly til, således at det gennemsnitlige antal sæder pr. fly nu er 21 mod 16 i 1990, jf. figur 12.

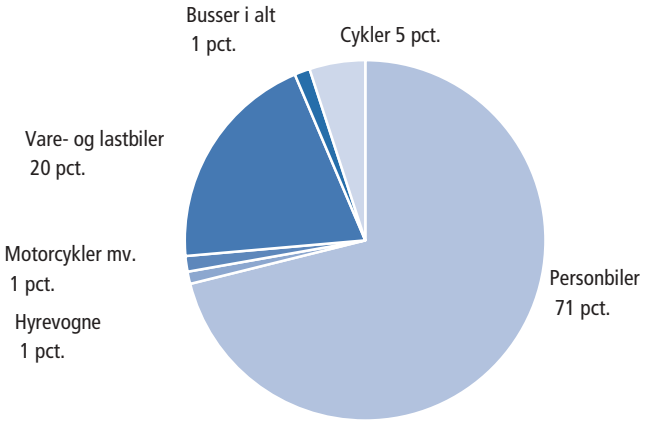
3. Trafik

Trafik på veje

Mest personbiltrafik

I 2003 udførte personbiler over 70 pct. af det samlede trafikarbejde på veje. Vare- og lastbiler dækkede 20 pct. Resten var stort set kørsel med cykel og knallert, jf. figur 13. Vejdirektoratet har indført en ny opgørelsesmetode, som viser, at man med den hidtidige metode har overvurderet det samlede trafikarbejde med 8 pct.

Figur 13. **Trafikarbejdet fordelt på transportmiddel. 2003**



Kilde: Vejdirektoratet

Årlig trafikvækst på 2 pct.

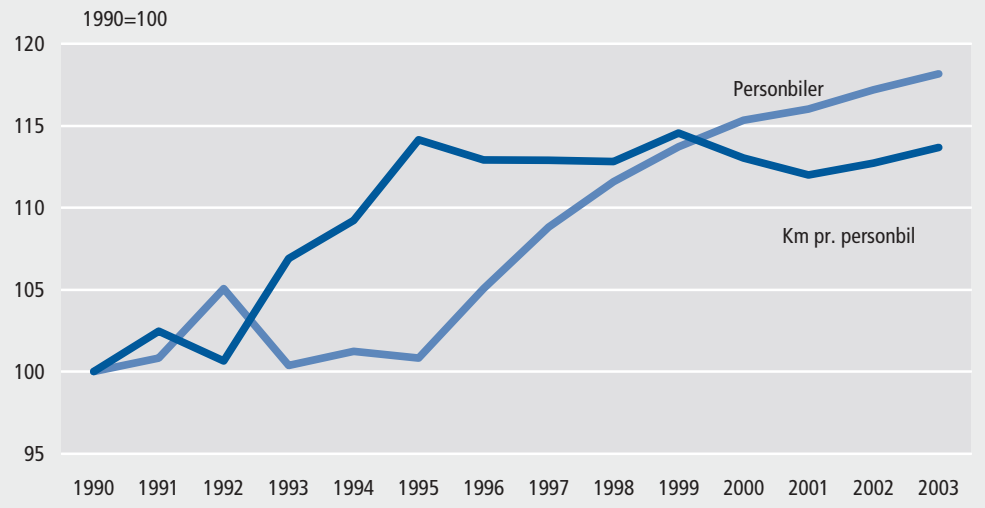
I 2003 blev der udført i alt næsten 47 mia. køretøjkm på danske veje, når cykeltrafikken medregnes. Fastholdes stigningstakten for 1990-2001 baseret på den tidligere opgørelsesmetode har der fra 1990 til 2003 været en vækst i trafikarbejdet på 33 pct., svarende til en gennemsnitlig årlig trafikvækst på 2 pct. Ses der bort fra cykeltrafikken, som er gået tilbage med 27 pct., blev der kørt i alt 45 mia. km af de motoriserede køretøjer i 2003. Fastholdes den hidtil opgjorte stigningstakt fra 1990 til 2001, har motorkøretøjer fra 1990 til 2003 haft en gennemsnitlig årlig trafikvækst på lidt over 2 pct. For personbilkørsel er trafikarbejdet øget med 35 pct. fra 1990 til 2003, svarende til en årlig vækst på 2,3 pct.

Trafikvæksten skyldes flere motorkøretøjer

Udviklingen i trafikarbejdet skyldes overvejende væksten i bestanden af motorkøretøjer, som er vokset med næsten 20 pct. siden 1990. Der er dog også sket en forøgelse af de kørte km pr. bil, jf. figur 14, som viser, at der navnlig i første halvdel af 90'erne var en forøgelse af personbilernes gennemsnitlige årskørsel som opgjort af Vejdirektoratet efter den tidligere opgørelsesmetode.

Trafikarbejdet på motorveje og motortrafikveje er øget markant i de seneste år. Det skyldes især, at en del af statsvejene er blevet udbygget til motorveje og motortrafikveje, som har aflastet de øvrige veje. Ifølge den seneste opgørelse fra 2003 foregik 30 pct. af trafikarbejdet med motorkøretøjer på statsveje.

Figur 14. **Udviklingen i antal personbiler og kørte km pr. personbil**



Anm.: Ny opgørelsesmetode for trafikarbejde fra 2001. Tallene er foreløbige.

Trafikintensiteten er steget

Trafikintensiteten, opgjort som køretøjkilometer pr. km vejnet pr. døgn, er størst for motorveje, hvor der i 2004 var næsten 30.000 biler pr. km pr. døgn. Det er 41 pct. mere end i 1990. For de øvrige stats- og amtsveje var der gennemsnitligt næsten 5.000 køretøjkilometer pr. bil pr. døgn, 28 pct. mere end i 1990. De øvrige veje, dvs. kommuneveje og private veje, havde derimod under 1.000 køretøjer pr. km pr. døgn, 16 pct. mere end i 1990.

Mest trafikerede strækninger

Vejdirektoratets tællinger af årsdøgntrafikken på udvalgte danske europavejstrækninger mv. viser, at de mest befærdede målesteder er Køgebugtmotorvejen ved Ølby, Holbækmotorvejen ved Vallensbæk Mose, Motorring 3 ved Husum, Amagermotorvejen og Helsingørmotorvejen ved Nærum, der alle passeredes af mere end 70.000 biler i døgnet. Opgørelserne viser samtidig, at intensiteten på de pågældende motorvejsstrækninger er steget med næsten 40 pct. over de seneste 10 år.

Bilpassager ved grænsen

Ved landegrænsen ved Frøslev passerede gennemsnitligt 12.400 biler pr. døgn i 2003, næsten dobbelt så mange som i 1990.

Storebælt og Øresund

Storebæltsbroen åbnede d. 14. juni 1998 for vejtrafik. I 2003 kørte der gennemsnitligt 22.700 biler over pr. døgn, 20 pct. mere end i 1998. Øresundsforbindelsen åbnede 1. juli 2000. I 2003 passerede 10.400 biler pr. døgn 20 pct. mere end i 2000.

Togtrafik

Mere trafikarbejde ...

... især over Storebælt

I 2004 tilbagelagde persontogene 71 mio. togkm i Danmark. Ses der bort fra den i 2002 etablerede Metro er togtrafikken steget med 29 pct. siden 1990. Der har især været fremgang for fjerntog, dvs. tog mellem Øst- og Vestdanmark, hvor trafikken er fordoblet, samt i noget mindre omfang for S-tog, jf. figur 15. Stigningen har især været markant efter åbningen af den faste forbindelse for tog over Storebælt i 1997. Regionaltogene, dvs. tog der kører på Banedanmarks skinner enten øst eller vest for Storebælt, har kørt færre togkm i 90'erne, men siden 1999 er trafikken intensiveret, bl.a. på Kystbanen.

Privatbanerne udførte 8 mia. togkm

Privatbanerne udførte et samlet trafikarbejde på næsten 8 mia. togkm i 2004. Deres andel af det samlede trafikarbejde med persontog er på 11 pct.

Metroen udførte 3½ mia. togkm

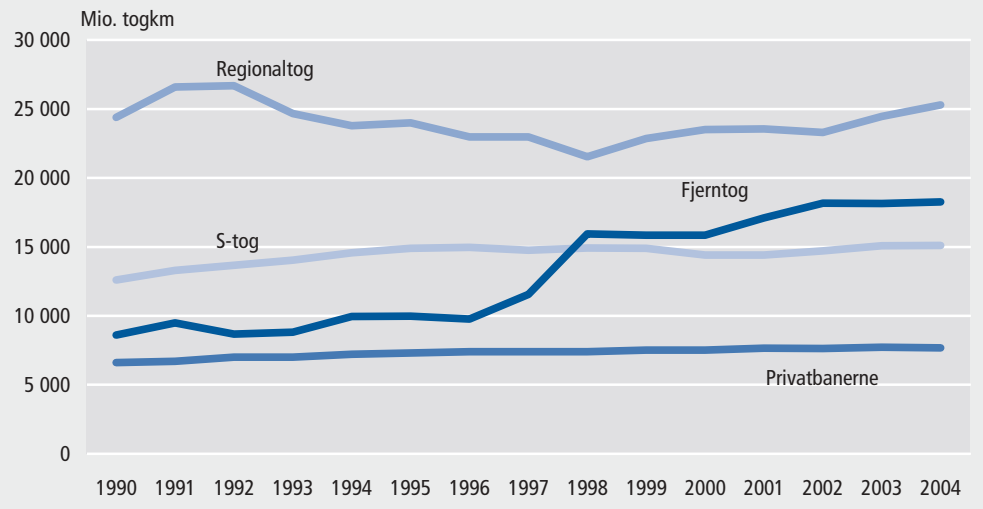
Metroen i København, der åbnede i 2002, udførte 3½ mia. togkm i 2004, svarende til 5 pct. af det samlede trafikarbejde med persontog.

Faldende trafik med godstog

For godstog har trafikarbejdet været faldende siden 1995. Trafikarbejdet med godstog udgjorde 6 pct. af det samlede trafikarbejde i 2004 mod det dobbelte i 1994.

Figur 15.

Kørte togkm



8 strækninger med over 200 tog i døgnet

Iflg. forårskøreplanen for 2004 var strækningen Hvidovre-Roskilde den mest befærdede banestrækning med 388 person- og godstog på et hverdagsdøgn, efterfulgt af København H-Østerport med 332 tog i døgnet. Den mest befærdede persontogstrækning var Hvidovre-Roskilde med 340 persontog i døgnet. Denne strækning havde også den største spidsbelastning med 16 person- og godstog i den mest travle time i døgnet. Mest befærdede godsstrækning var Taulov-Lunderskov med 54 godstog i døgnet. På 8 af de udvalgte banestrækninger kørte der mere end 200 tog i døgnet; heraf ligger de 6 i Københavnsområdet. Strækningen Nykøbing Falster-Gedser er fortsat den mindst befærdede med 2 tog i døgnet. På alle øvrige strækninger kørte mere end 20 tog i døgnet.

Skibstrafik på danske havne

543.000 skibsanløb i 2004

De danske havne havde 543.000 anløb af skibe for ud- eller indskibning af gods eller passagerer i 2004. Hovedparten var anløb af færger, der udgjorde 95 pct. af samtlige skibsanløb.

Fald efter åbningen af Storebæltsbroen

Antal færgeanløb har været stigende gennem 1990'erne fra 550.000 i 1990 til 591.000 i 1997, men faldt herefter, overvejende som følge af Storebæltsruternes ophør i juni 1998 efter åbningen af bilbroen over Storebælt.

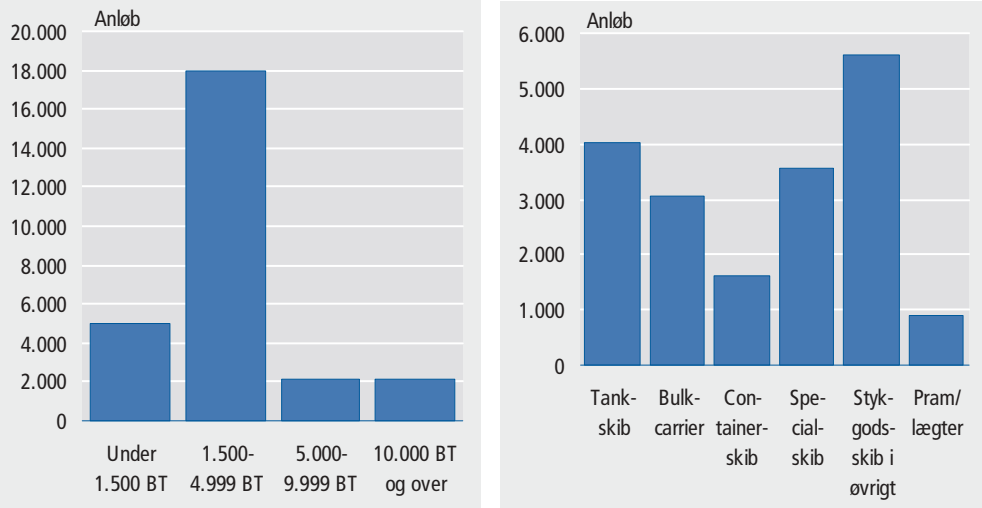
Mange mindre skibe

Størstedelen af havneanløbene er af mindre skibe. I 2004 var 43 pct. skibe med en bruttotonnage under 250 BT. Kun 10 pct. var skibe over 10.000 BT.

27.000 anløb af fragtskibe

Fragtskibe havde 27.000 anløb af danske havne i 2004 mod 38.000 i 1990. Der er navnlig blevet færre anløb af mindre skibe. I 2004 var 53 pct. af skibene på 1.500 BT eller mere, mod 24 pct. i 1990. Dette afspejles også af, at den gennemsnitligt ekspederede godsmængde pr. fragtskibsanløb er øget fra godt 1.700 ton i 1990 til næsten 2.800 ton i 2004. For industrihavnene, navnlig oliehavnene, er der relativt få anløb, men med forholdsvis store skibe.

Figur 16. **Fragtskibsanløb efter bruttotonnage (BT) og skibstype. 2004**



70 pct. af anløbene var på 21 større havne

I 2004 modtog de 21 større danske havne med en årlig godsomsætning på omkring 1 mio. ton eller mere 70 pct. af fragtskibsanløbene. Målt efter godsomsætning dækkede disse havne dog 90 pct. af det ekspederede fragtskibsgods.

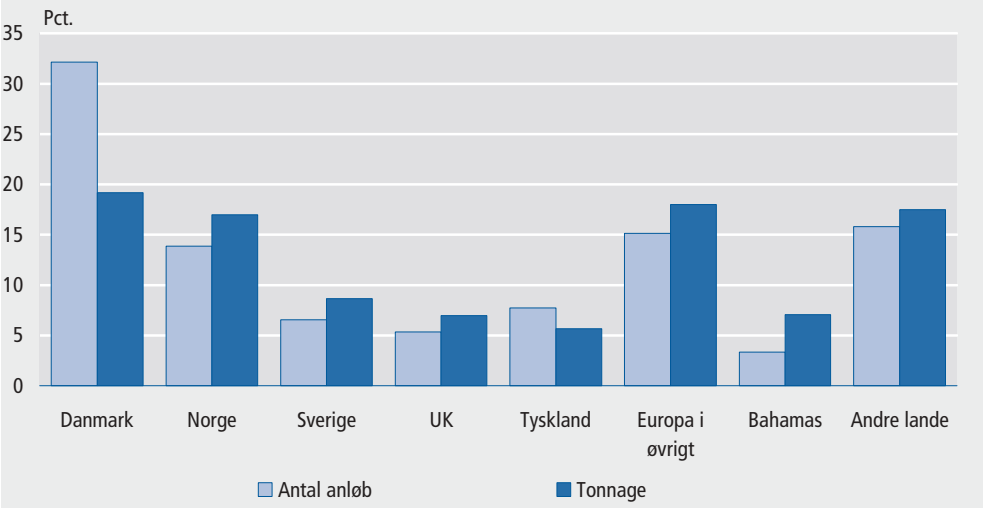
Af fragtskibsanløbene på de 21 større havne i 2004 udgjorde 21 pct. tankskibe, 16 pct. bulkcarriers, 9 pct. containerskibe, 19 pct. specialskibe, 30 pct. stykgodsskibe i øvrigt og 5 pct. pramme/lægtere, jf. figur 16.

32 pct. danske skibe ...

... men kun 19 pct. dansk bruttotonnage

Størstedelen af fragtskibsanløbene var af skibe, som var indregistreret i et udenlandsk skibsregister. I 2004 var bare 32 pct. af fragtskibsanløbene på de 21 større danske havne skibe med dansk flag, 49 pct. førte andet europæisk flag, mens 19 pct. var indregistreret i et ikke-europæisk skibsregister, de fleste i Antigua Barbuda, Bahamas og Panama. Målt efter bruttotonnage var den danske andel endnu mindre, nemlig 19 pct., mens ikke-europæiske skibe havde 25 pct., jf. figur 17.

Figur 17. **Fragtskibsanløb på 21 større danske havne efter skibets flagstat. 2004**



Øget trafik gennem Øresund

I 1990-erne har der været en markant stigning i skibstrafikken gennem Øresund. I 2004 gik der næsten 35.000 skibe på 50 BT gennem Øresund ved den nordlige indsejling mod 24.000 i 1990. Ved Øresunds sydlige indsejling observeredes der 39.000 skibe i 2004 mod 21.000 i 1990.

Mindre trafik gennem Storebælt

Skibstrafikken gennem Storebælt er derimod faldet fra 21.000 skibe i 1990 til 18.000 skibe i 2004.

Flytrafikken på betjente lufthavne

0,4 mio. flyoperationer med rute- og charterfly

Rute- og charterflytrafikken på offentlige, betjente, danske lufthavne steg gennem første halvdel af 90-erne fra 266.000 starter og landinger i 1990 til 393.000 i 1997, dvs. en fremgang på 48 pct. Fra 1998 faldt trafikken dog svagt til 369.000 i 2004, men aktiviteten er dog fortsat 39 pct. højere end i 1990.

1/4 mio. andre flyvninger

Bortset fra rute- og charterflyvninger blev der i 2004 udført 221.000 andre private flyvninger, herunder lokale operationer såsom skoleflyvning, svæveflyvning og faldskærmsflyvning. Heraf var de 94.000 andre flyvninger på mindre, offentlige, betjente lufthavne, dvs. lufthavne uden rutetrafik og med færre end 50.000 flyoperationer om året. Andre flyvninger dækkede 37 pct. af samtlige flyoperationer på de offentlige, betjente danske lufthavne i 2004 mod 49 pct. i 1990.

Københavns Lufthavn havde halvdelen af flyoperationerne

Københavns Lufthavn er landets største lufthavn. I 2004 havde den næsten halvdelen af samtlige flyoperationer på de danske lufthavne, men 84 pct. af samtlige flypassagerer. Målt efter flyoperationer er Roskilde Lufthavn den næststørste lufthavn. Hver ottende flyoperation foregik her, de fleste i forbindelse med anden flyvning end rute- og charterflyvning. Billund Lufthavn, der med 8 pct. af samtlige passagerer er landets næststørste lufthavn, havde næsten en tiendedel af samtlige flyoperationer i 2004.

4. Persontransport

Persontransport efter transportmåde

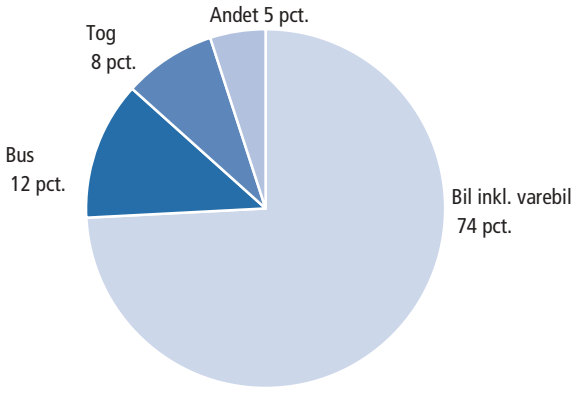
37 km pr. dag pr. dansker

Det samlede persontransportarbejde var i 2003 på 73 mia. personkm svarende til, at hver dansker tilbagelagde 13.500 km om året eller 37 km om dagen. Persontransportarbejdet er steget med 18 pct. siden 1990, hvor det lå omkring 13.000 km. pr. indbygger pr. år.

75 pct. var med bil

Bil er det helt dominerende transportmiddel. I 2003 blev 75 pct. af persontransportarbejdet udført med bil, mens 12 pct. var med bus, 7 pct. med tog og 3 pct. med cykel.

Figur 18. **Persontransportarbejde efter transportmidler. 2003**



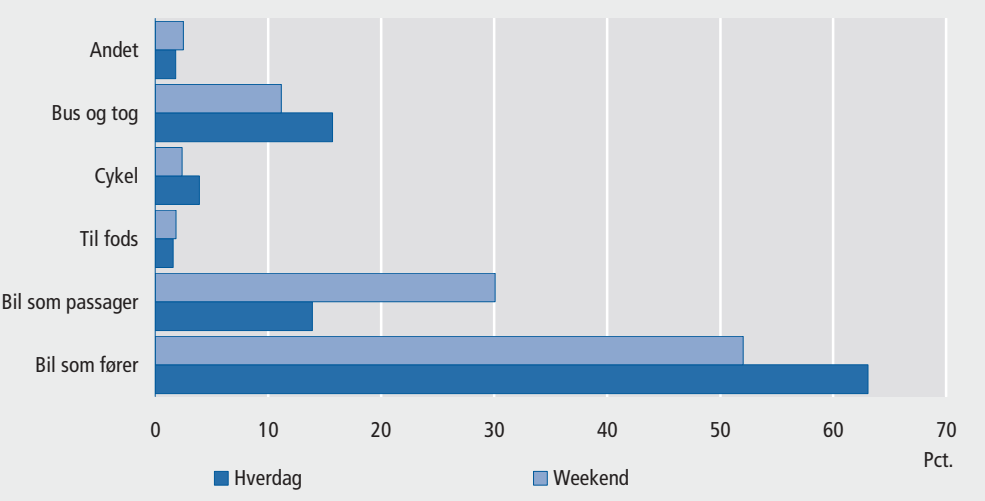
13.500 km pr. indbygger

Siden 1990 har der været en markant vækst i persontransportarbejdet med motorcykel og knallert45, hvilket hænger sammen med væksten i bestanden af disse køretøjer. For færger er persontransportarbejdet mere end halveret siden 1990, og for indenrigsfly har der været en nedgang på 40 pct. siden 1990. I begge tilfælde er årsagen åbningen af den faste forbindelse over Storebælt. Persontransportarbejdet med cykel inklusive knallert30 har været faldende frem til 2001, hvor udviklingen vendte. I forhold til 1990 er transport på cykel/knallert30 gået tilbage med 27 pct.

Transportmønster for personer på 10-84 år

Persontransportmønstret i 2003 belyses med udgangspunkt i rejsevaneundersøgelsen, som baserer sig på interview af personer i alderen 10-84 år.

Figur 19. **Fordeling af transportarbejdet på transportmåde. 2003**



Kilde: Danmarks Transportforskning

Transportarbejdet næsten ens på hverdage og i weekenderne

Transportarbejdet pr. person pr. dag var i 2003 næsten det samme på en gennemsnitlig hverdag som i en gennemsnitlig weekend, hhv. 37,3 km og 38,1 km. Forskellen på hverdag og weekend er, at der er færre men længere ture i weekenden i forhold til på hverdage. På hverdage er det gennemsnitlige antal ture pr. person 3,0 mod 2,3 i weekenden.

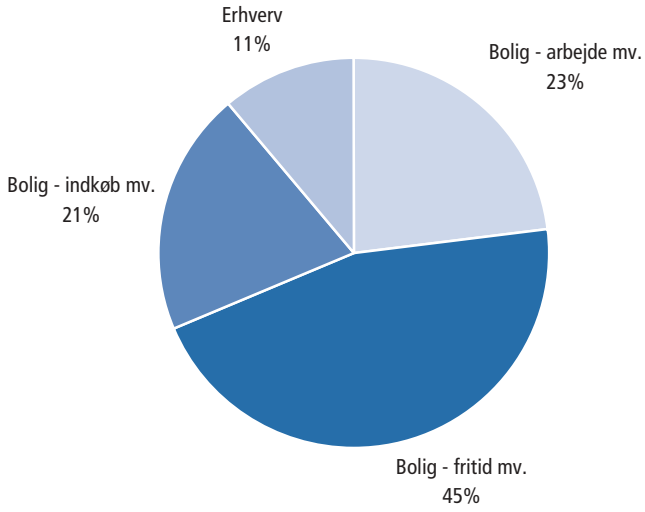
Turlængde og transportmåde

Fordelingen af hverdagenes og weekendernes transportarbejde på transportmåder er ikke ens.

Til hverdag udføres 63 pct. af transportarbejdet som fører af bil, mens transporten med bus og tog står for 16 pct., transporten som passager i bil står for 14 pct. og cykelturene for 4 pct.

I weekenderne er der færre biler, men de er fyldt mere op. 52 pct. af transportarbejdet udføres som fører af bil, mens transporten som passager står for 30 pct. Tog og bus udfører 11 pct. af weekendernes transportarbejde.

Figur 20. **Transportarbejdet fordelt efter formål. 2003**



Kilde: Danmarks Transportforskning

Turenes formål

Det daglige transportarbejde i forbindelse med bolig-arbejde (hverdag og weekend) udgjorde i 2003 i gennemsnit 8,7 km. Det svarede til 23 pct. af det samlede transportarbejde.

Transportarbejdet i forbindelse med bolig-fritid mv. var i gennemsnit 17,1 km (45 pct. af transportarbejdet), mens bolig-indkøb med 7,7 km (21 pct. af transportarbejdet) og erhvervskørsel med 4,1 km (11 pct. af transportarbejdet) udgør de øvrige kategorier.

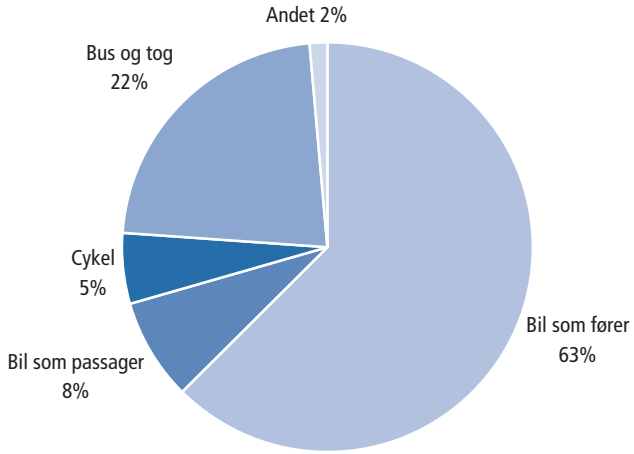
Transportformålenes udførelse

Bilen er til alle formål det dominerende transportmiddel hvad enten transportarbejdet udføres som fører eller passager.

Bolig-arbejde

Transporten bolig-arbejde er det formål, som er mindst domineret af bilen med 71 pct., mens bus og tog står for 22 pct. og cyklen for 5 pct.

Figur 21. **Transporten bolig-arbejde fordelt på transportmiddel. 2003**

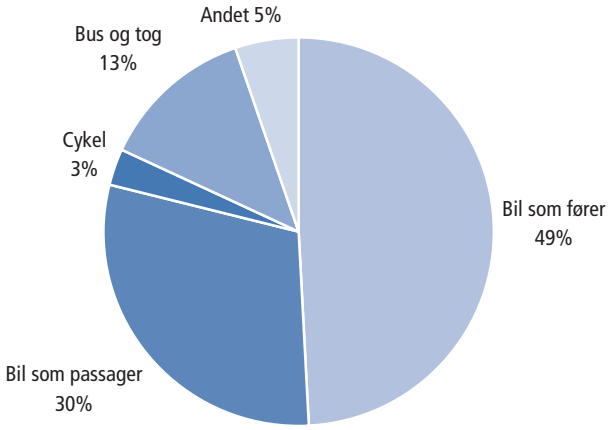


Kilde: Danmarks Transportforskning

Bolig-fritid

Bilen dominerer også transporten bolig-fritid med 79 pct., og heraf 30 pct. som passagertransport. Bus og tog står for 13 pct. og cyklen for 3 pct.

Figur 22. **Transporten bolig-fritid fordelt på transportmiddel. 2003**

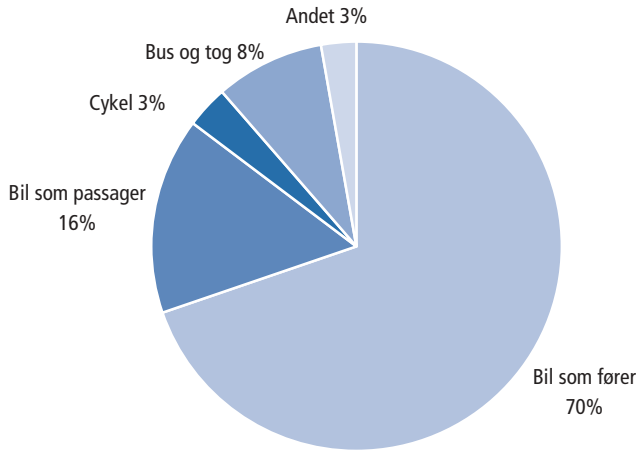


Kilde: Danmarks Transportforskning

Bolig-indkøb mv.

Ingen indkøb uden bil. 86 pct. af transporten bolig-indkøb udføres af vha. bilen, enten som fører eller som passager. Bus og tog står for 8 pct. og cyklen for 3 pct.

Figur 23. **Transporten bolig-indkøb fordelt på transportmiddel. 2003**

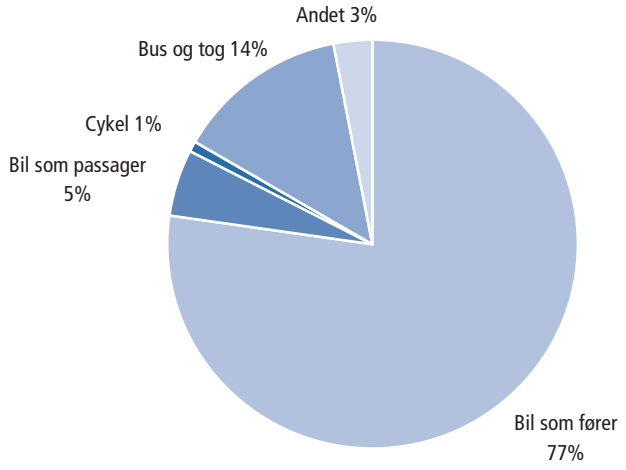


Kilde: Danmarks Transportforskning

Erhverv

Transporten i forbindelse med erhvervsudøvelsen er også fuldstændig domineret af bilen med 82 pct., mens bus og tog står for 14 pct. og cyklen for 1 pct.

Figur 24. **Transport ved erhvervsudøvelsen fordelt på transportmiddel. 2003**



Kilde: Danmarks Transportforskning

Persontransport med tog

Flere togrejser

Gennem de seneste år har antallet af togrejser på Banedanmarks landsdækkende net været voksende. I 2004 blev der foretaget 61 mio. rejser, 29 pct. flere end i 1990. Stigningen har især fundet sted efter 1997, hvor Storebæltsforbindelsen for jernbanetrafik blev åbnet. Der har dog også været markante stigninger for rejser med regionale tog på Banedanmarks net, bl.a. som konsekvens af hyppigere afgange og hurtigere tog.

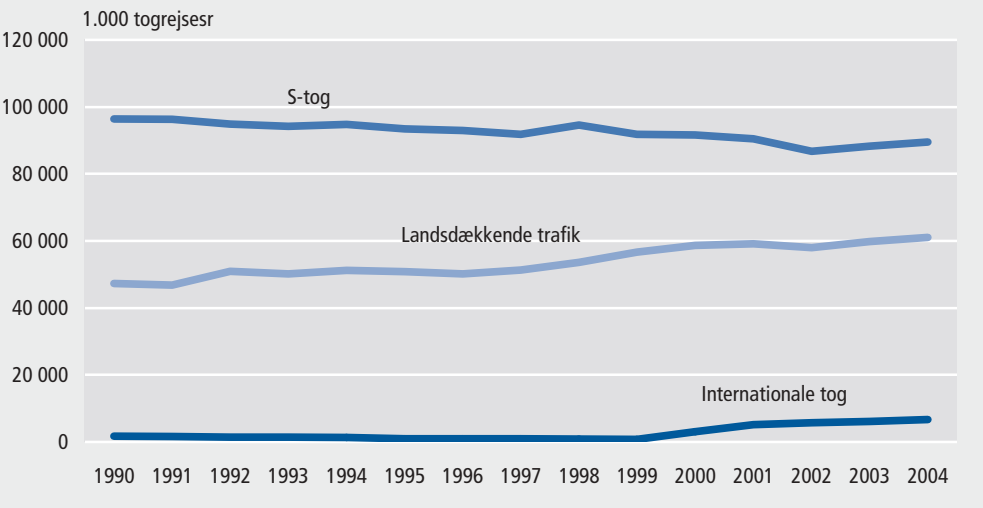
Færre S-togspassagerer frem til 2002

S-tog har derimod haft faldende passagertal frem til 2002, formentlig som følge af de omfattende anlægsarbejder med Ringbanen, tunnellen ved Nørreport Station og dobbeltsporet mellem Ballerup og Frederikssund. I de følgende år har der været en mindre fremgang.

Metro åbnede i 2002

Metroen, der åbnede 19. oktober 2002, havde 20 mio. passagerer i 2003 og 34 mio. i 2004. Væksten i 2004 skyldes især åbningen af strækningen Frederiksberg-Vanløse i oktober 2003.

Figur 25. **Rejser med tog**



6 mio. togrejser over Øresund

Stigningen i antal togpassagerer med internationale tog er ligeledes fortsat. Størsteparten af fremgangen hænger sammen med åbningen af Øresundsbroen i 2000. I 2004 var der 5,8 mio. togrejser over Øresundsbroen.

På de regionale jernbaner (de tidligere privatbaner) har antal rejser stort set ligget omkring 11-12 mio. rejser om året siden 1990.

Persontransportarbejdet med fjerntog er øget

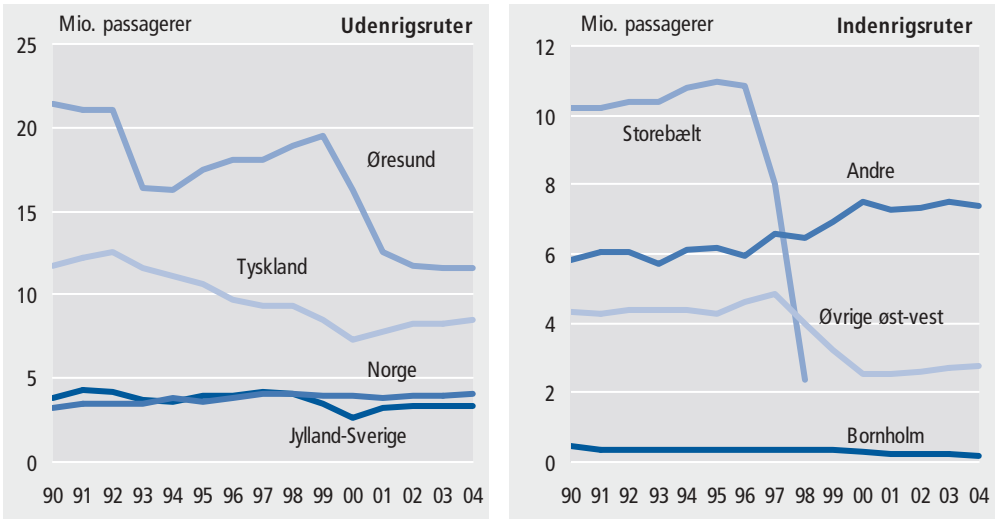
Persontransportarbejdet med tog steg med 20 pct. fra 1990 til 2004 til i alt 6,1 mia. personkm. Væksten skyldes overvejende flere togrejser på det landsdækkende net efter åbningen af den faste forbindelse over Storebælt.

Persontransport med passagerskib og færge

Flere indenlandske passagerer frem til 1996

Frem til 1996 har der været en lille stigning i antallet af overførte passagerer på de indenlandske ruter med passagerskibe og færger. Passagertallet lå i 1996 på knap 22 mio., 1 mio. højere end i 1990.

Figur 26. **Passagerer med passagerskib og færge**



Fald fra 1997 pga. Storebæltsbroen

Som følge af åbningen af den faste jernbaneforbindelse over Storebælt i maj 1997 faldt antal indenrigs passagerer til 20 mio. i 1997. Nedlæggelsen af Storebæltsruterne efter åbningen af den faste vejforbindelse over Storebælt i juni 1998 reducerede

yderligere antallet af passagerer til 13 mio. i 1998. Herefter har indenrigsruternes passagertal ligget omkring 10 mio.

Færre øst-vest passagerer på de resterende ruter

Efter lukningen af Storebæltsruterne er antallet af passager på de øvrige ruter mellem Øst- og Vestdanmark: Kalundborg-Århus, Sjællands Odde-Ebeltoft, Sjællands Odde-Århus og Tårs-Spodsbjerg, også faldet, nemlig fra 5 mio. i 1997 til 3 mio. i 2004.

På de øvrige indenrigs passager- og færgeruter er antal passagerer steget fra 6 mio. i 1990 til 7 mio. i 2004.

Udenrigsruterne

Udenrigsruterne domineres af trafikken over Øresund og af trafikken mellem Danmark og Tyskland, som i 2004 transporterede hhv. 42 og 31 pct. af passagererne.

Øresundsbroen næsten halverede antal passagerer

Øresundsruterne var i begyndelsen af 90'erne mærket af færre 1-dagsrejsende fra Sverige efter den svenske devaluering. Fra 1995 steg passagerantallet igen til 19,5 mio. i 1999; men efter åbningen af Øresundsbroen i juli 2000 er antal passagerer på øresundsruterne næsten halveret, jf. figur 26.

Færre passagerer på Tysklandsruterne

Tysklandsruterne har haft fald i persontrafikken frem til 2001, hvor udviklingen synes at have vendt. I 2004 blev der overført 8,5 mio. mod 11,7 mio. passagerer i 1990.

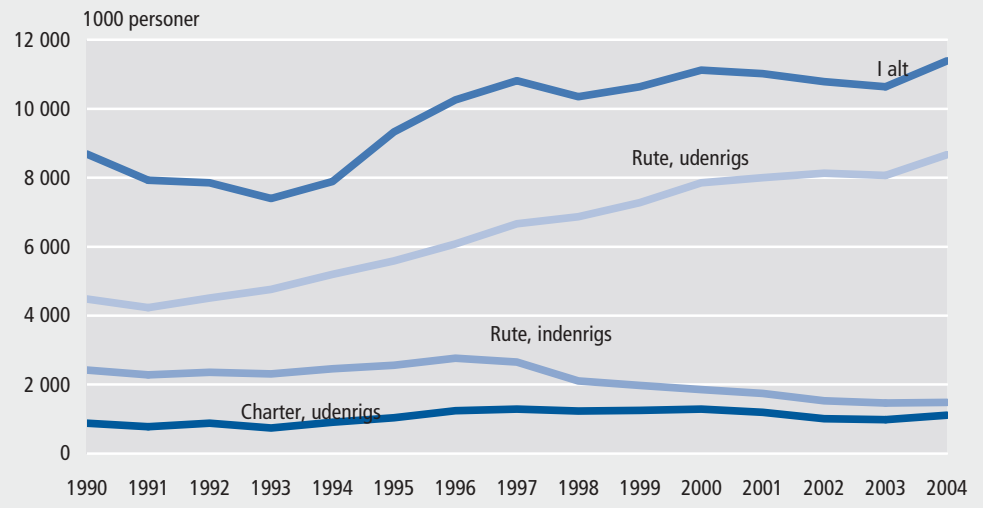
I 2004 var persontransportarbejdet med passagerskibe og færger på 2,0 mia. personkm. En ottendedel heraf var på indenrigsruterne.

Passagertrafikken på danske lufthavne

Markant flere flypassagerer

Antal afrejsende flypassagerer fra danske lufthavne har efter et markant fald i begyndelsen af 1990'erne som reaktion på Gulfkrigen stort set været voksende siden. Passagerer med udenrigsfly har været støt stigende siden 1992 med en kortere opbremsning i 2002, der formentlig skyldes krigen i Irak, frygt for terrorisme og SARS. Derimod førte åbningen af den faste forbindelse over Storebælt i 1997 til en halvering af antal indenrigsrejserne med fly. Den faldende udvikling for rejsende med indenrigsfly synes dog at være fladet ud i 2004.

Figur 27. **Afrejsende flypassagerer**



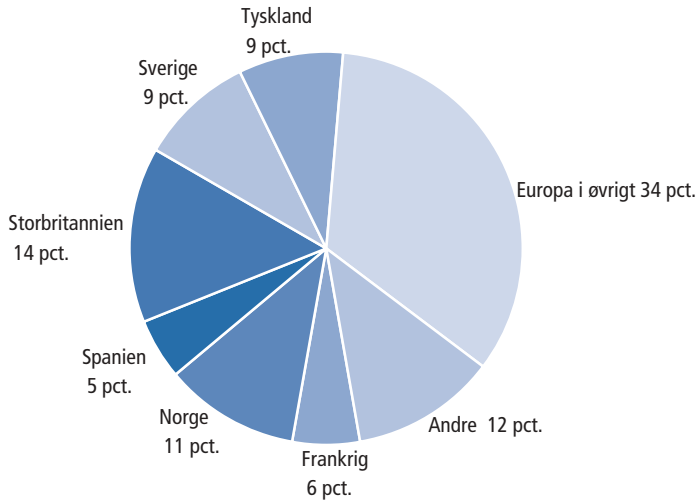
11,4 mio. afrejsende flypassagerer

I 2004 havde de større, offentlige, betjente danske lufthavne i alt 11,4 mio. afrejsende passagerer, 31 pct. mere end i 1990 og det højest opgjorte nogensinde. Heraf var 8,7 mio. med fly i international rutetrafik og 1,1 mio. med fly i international chartertrafik. Resten var stort set med indenlandske rutefly.

Udenrigstrafikken gik især fra København

Udenrigstrafikken domineres af Københavns Lufthavn, som i 2004 havde 93 pct. af de i alt 8,7 mio. afrejsende udenrigspassagerer med rutefly og 59 pct. af de i alt 1,1 mio. afrejsende passagerer med charterfly. Hovedparten af de øvrige udenrigspassagerer rejste fra Billund Lufthavn.

Figur 28. **Afrejsende udenrigsflypassagerer efter afrejse eller destinationsland. 2004**



Flest rejser til europæiske lande

De fleste udenrigsrejser går mellem Danmark og andre europæiske lande, når rejserne opgøres som rejser med samme fly(nummer) inkl. eventuelle mellemlandinger. Kun 12 pct. er til eller fra lande uden for Europa. Den lille andel af interkontinentale rejser skyldes, at der på længere flyrejser ofte skiftes fly i udenlandsk lufthavn.

Indenrigstrafikken går til og fra København

Størstedelen af indenrigspassagererne tog med rutefly, og næsten alle indenrigs flyrejser gik mellem København og provinsen. Lufthavnene i Aalborg og Århus er de mest benyttede provinslufthavne.

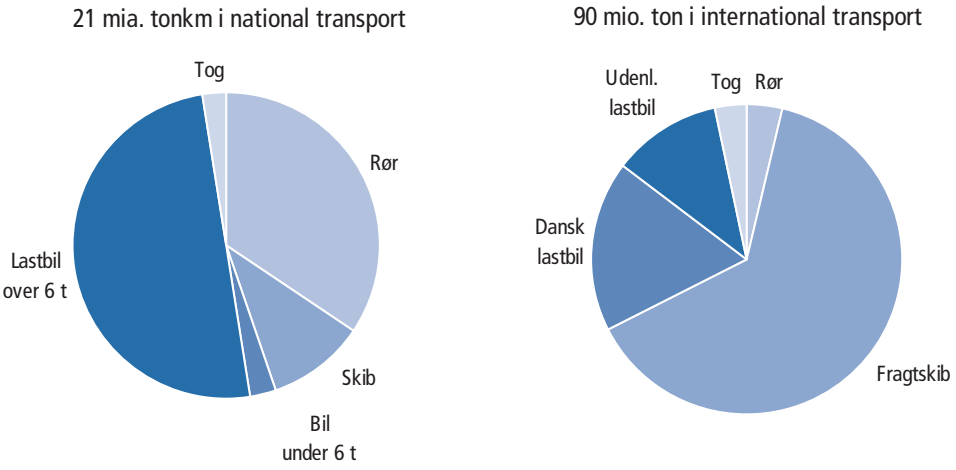
5. Godstransport

Godstransport efter transportmåde

Øget indenlandsk transportarbejde …

I 2004 blev der udført et godstransportarbejde på næsten 21 mia. tonkm ved national transport mellem danske på- og aflæsningssteder, 6 mia. tonkm mere end i 1990.

Figur 29. **Godstransport efter transportmåde. 2004**



… pga. mere rørtransport

Stigningen skyldes overvejende en markant vækst i rørtransport af olie og naturgas, som i 2004 udgjorde lidt over en tredjedel af det samlede nationale transportarbejde.

Lastbil mest brugt ved indenlandsk transport

Lastbilen er det dominerende transportmiddel i den indenlandske godstransport. I 2004 blev halvdelen af transportarbejdet udført med lastbil, jf. figur 29. Fraregnes transport i rørledninger, dækkede lastbilerne godt tre fjerdedele af det samlede nationale transportarbejdet.

Skib dominerer ved transport over grænsen

Ved godstransport mellem Danmark og udlandet er søtransporten den dominerende transportform. I 2004 blev der fragtet 90 mio. ton gods mellem Danmark og udlandet. Heraf var tæt ved 2/3 med fragtskib og resten stort set med lastbil, jf. figur 29. Transporten med lastbil mellem Danmark og udlandet foregik for det meste med dansk lastbil, som i 2003 havde en markedsandel på 59 pct.

Godstransport med lastbil

Liberalisering af EU-markedet gav fremgang for international vejgodstransport

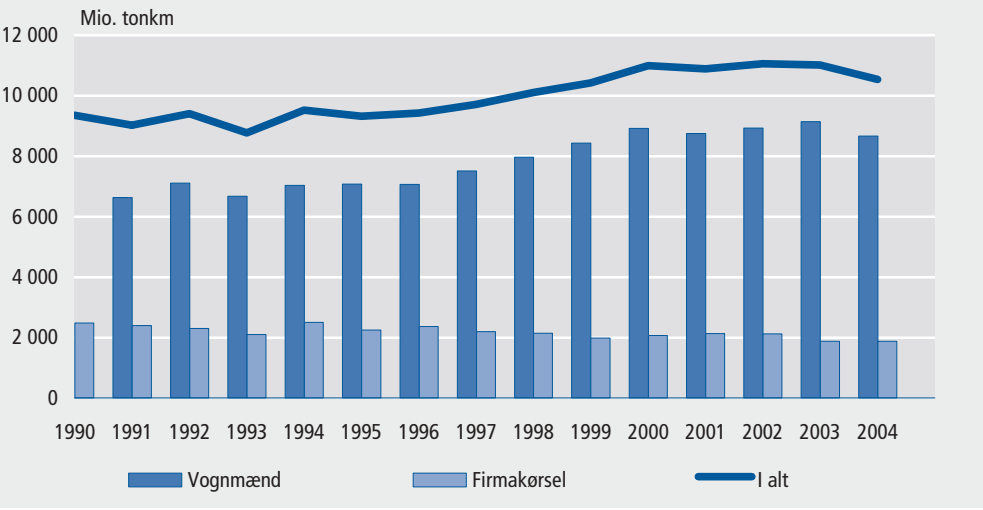
Transportarbejdet ved godstransport med danske lastbiler over 6 ton totalvægt lå i 2004 på over 23 mia. tonkm mod godt 18 mia. i 1990. Mens der stort set har været jævn vækst for national transport har der navnlig i begyndelsen af 90'erne været større fremgang for international godstransport, der har udnyttet liberaliseringen af EU-markedet efter bortfald af kvoteordningen og indførelse af fri adgang til cabotagekørsel i medlemslandene. Gennem de seneste 10 år har lidt over halvdelen af transportarbejdet med dansk lastbil været udført ved international transport. Målt efter den pålæssede godsmængde er national godstransport dog dominerende med omkring ni tiendedele af den fragtede godsmængde.

National vejgodstransport

Stagnation i transportarbejdet efter 2000

Transportarbejdet ved national godstransport med dansk lastbil stagnerede i begyndelsen af 90'erne, bl.a. som følge af afmatningen inden for boligbyggeriet. Efter 1995 har der igen været jævn vækst frem til 2000, hvor transportarbejdet fladede ud omkring 11,0 mia. tonkm om året, bl.a. som konsekvens af den afdæmpede vækst i privatforbruget, jf. figur 30.

Figur 30. **Transportarbejde ved national kørsel med dansk lastbil**



Øget andel med vognmandskørsel

Vognmændenes andel af transportarbejdet er øget siden 1990. Stigningen i transportarbejdet i sidste halvdel af 90'erne har således stort set udelukkende fundet sted inden for vognmandskørsel, dvs. kørsel mod betaling, mens transportarbejdet ved firmakørsel, dvs. kørsel for egen regning, har været vigende siden 1990. I 2004

udførte vognmandsvirksomhederne 82 pct. af det samlede nationale transportarbejde med lastbiler mod 73 pct. i 1990.

Samme udvikling for godsmængden

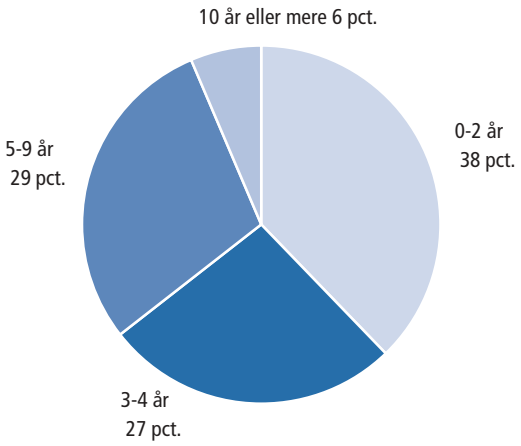
Udviklingen i den transporterede godsmængde har i stort omfang været den samme som for transportarbejdet. Dog viser afmatningen for bygge- og anlægsvirksomhed sig ved et forholdsvis større fald i den transporterede godsmængde, fordi transport af byggematerialer og jord, sten, sand og grus fortrinsvis sker over mindre afstande. Den transporterede godsmængde har siden 1990 ligget mellem 175 mio. ton (1993) og 207 mio. ton (2000). Hovedparten af godset, 79 pct. i 2004 mod 70 pct. i 1990, blev fragtet i vognmandskørsel.

Mere gods med vogntog

En større del af transporterne sker nu med vogntog. I 2004 blev 71 pct. af godset fragtet med vogntog mod 58 pct. i 1990. Hvor der tidligere især kørtes med påhængsvogntog, er sættevognstog nu lige så hyppige.

Sættevognstog anvendes noget mere end påhængsvogntog på længere strækninger og får derfor en større andel af det samlede transportarbejde. I 2004 blev 48 pct. af det samlede transportarbejde udført med sættevognstog. For påhængsvogntog var andelen på 34 pct. og for solovogne 19 pct.

Figur 31. **Nationalt transportarbejde efter bilens alder. 2004**



64 pct. med køretøjer under 5 år

I 2004 foregik tæt ved to tredjedele af det nationale transportarbejde på vej med lastbiler eller trækkere, som var under 5 år gamle. Kun 6 pct. af transportarbejdet var med biler, der var 10 år eller ældre, jf. figur 31.

Mest lokal transport

Det meste gods i national transport flyttes lokalt inden for samme amt, og transport over amtsgrænsen går typisk til et naboamt. Kun en mindre del af godset flyttes mellem landsdelene. I 2004 aflæssedes således 94 pct. af de i Jylland pålæssede godsmængder også i Jylland. For Sjælland mv. drejede det sig om 95 pct. og for Fyn 74 pct.

Transport over Storebælt eller Kattegat udgør 4 pct.

4 pct. af de transporterede godsmængder krydsede Storebælt eller Kattegat i 2004 mod 3 pct. i 1990. 59 pct. af disse godsmængder blev transporteret fra det vestlige til det østlige Danmark, mens 41 pct. kørte den modsatte vej.

Turlængden er steget markant

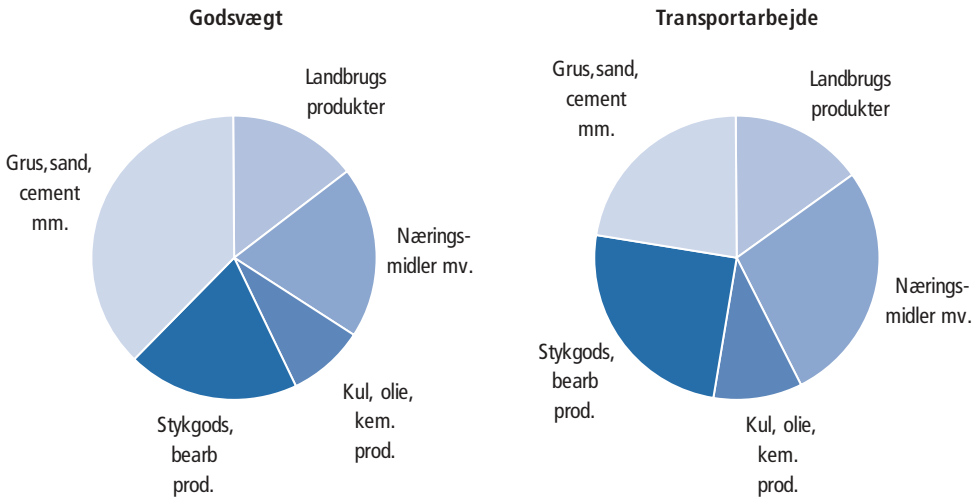
Den gennemsnitlige turlængde har været stigende, bl.a. som følge af den øgede specialisering og centralisering af produktionen. Den gennemsnitlige turlængde ved kørsel med læs var på 81 km i 2004 mod 56 km i 1990.

2/5 af godset var grus, jord, sten, sand, cement, mursten mv.

Omkring to femtedele af den samlede transporterede godsmængde var grus, sand, jord og sten samt salt og cement, mursten mv. Det er gods, som overvejende transporteres i vognmandskørsel over forholdsvis korte afstande. Transportarbejdet

udgjorde derfor kun omkring en fjerdedel af det samlede transportarbejde. Gods til bygge- og anlægsindustrien svinger med konjunkturerne og influerer på grund af sin store andel af godset på omfanget af den samlede transport med lastbil.

Figur 32. **National transport af varegrupper. 2004**



2/5 af godset var næringsmidler mv. og stykgods mv.

En femtedel af godset var næringsmidler og foder, som pga. gennemsnitligt længere transportafstande udgjorde en fjerdedel af transportarbejdet. Tilsvarende dækkede stykgods, halvfabrikata mv. en femtedel af godset, men en fjerdedel af transportarbejdet, jf. figur 32.

Kapacitetsudnyttelsen er faldet siden 1990

Den samlede kapacitetsudnyttelse, målt som udnyttelsen af det maksimalt mulige transportarbejde på de kørte ture, er for 2004 opgjort til 38 pct., det samme som året før. Udnyttelsen afhænger bl.a. af omfanget af kørsel uden læs. Ses alene på ture med læs, øges udnyttelsesgraden til 47 pct. Kapacitetsudnyttelsen har været svagt faldende over de seneste 15 år. I 1990 lå udnyttelsen på 55 pct. for kørsel med læs. Den faldende kapacitetsudnyttelse skyldes bl.a., at køretøjerne gennemsnitligt er blevet større og at den øgede specialisering og centralisering af produktionen fører til længere transportafstande.

1/4 af turene var uden læs

En fjerdedel af turene var uden læs (28 pct. i 2004). Andelen varierer bl.a. med omfanget af kørsel med grus, sand, jord og sten samt salt, hvor der som hovedregel ikke er mulighed for returkørsel med læs.

4 pct. af turene var med farligt gods

I 2004 var der farligt gods på 4 pct. af turene med læs. Der blev i alt pålæsset 10 mio. ton farligt gods, svarende til 5 pct. af det samlede gods i national transport. Det farlige gods bestod typisk af brandfarlige, flydende stoffer, såsom benzin mv., der i 2004 udgjorde 84 pct. af det farlige gods.

Udenlandske biler dækkede 1 pct. af den indenlandske transport

Udenlandske lastbiler fra EU-lande og Norge har adgang til at udføre indenlandsk transportarbejde i Danmark, den såkaldte cabotagekørsel. I 2003 blev 1 pct. af det samlede indenlandske transportarbejde med lastbil foretaget med udenlandske lastbiler, som overvejende var indregistrerede i Tyskland, Luxembourg og Holland.

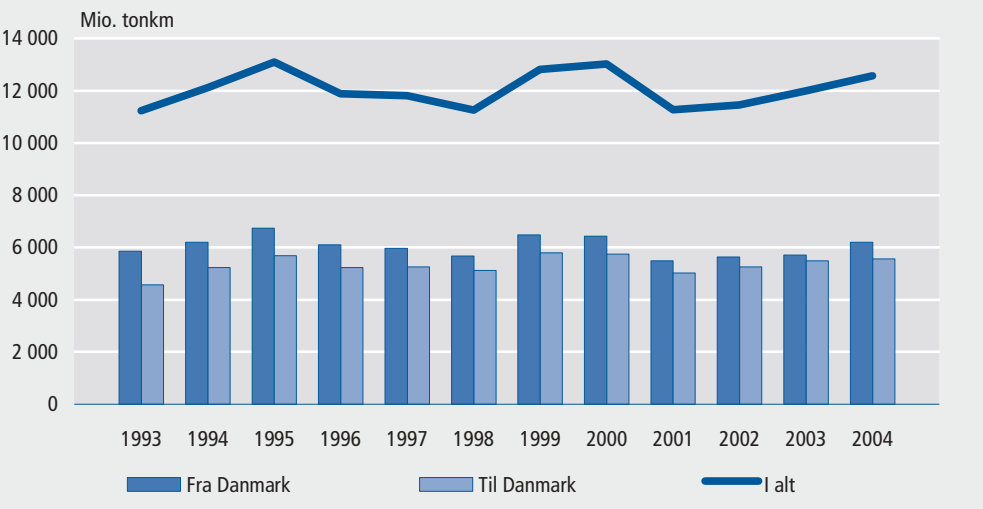
International vejgodstransport

På ny vækst i transportarbejdet efter 2001

Transportarbejdet ved international vejgodstransport med danske lastbiler har svinget mellem 11 og 13 mia. tonkm i de seneste år. I 2000 toppede det med 13 mia. tonkm, faldt derpå til godt 11 mia. i 2001, hvorefter det igen har været stigende, jf. figur 33.

Udviklingen i im- og eksportkørslen har fulgt samme mønster. Transportarbejdet ved kørsel fra Danmark til udlandet udgjorde 49 pct. af det samlede transportarbejde ved international transport med lastbil i 2004, og ved kørsel fra udlandet til Danmark lå det på 45 pct. Resten af den internationale vejgodstransport med dansk lastbil består af tredjelandskørsel, dvs. kørsel mellem to udlande (4 pct. i 2004), og cabotagekørsel, der er transport mellem to steder i samme udland (2 pct. i 2004).

Figur 33. **Transportarbejde ved international transport med dansk lastbil**



Stort set kun vognmandskørsel

Så godt som alt transportarbejdet ved international godskørsel foregår ved vognmandskørsel. Firmakørslens andel ligger under 1 pct.

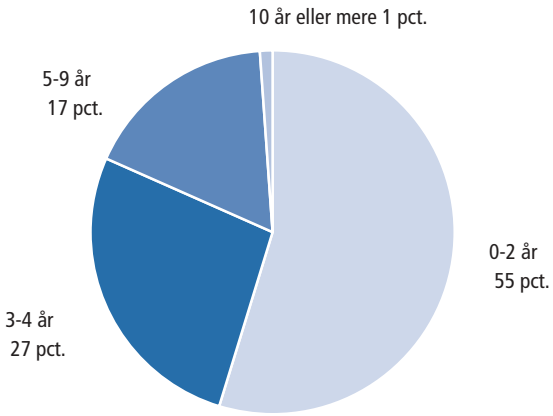
17 mio. ton gods, overvejende med sættevognstog

I 2004 blev der fragtet 17,0 mio. ton gods ved international kørsel med danske lastbiler. Transporten foregår overvejende med større vogntog. 86 pct. af godset blev således fragtet med sættevognstog og resten stort set udelukkende med påhængsvogntog.

Forholdsvis nye biler

De benyttede trækkere og lastbiler er af forholdsvis nyere dato. 82 pct. af transportarbejdet blev således udført med lastbiler eller trækkere, som var under 5 år gamle, og 55 pct. med biler, der var under 3 år gamle.

Figur34. **Transportarbejde efter bilens alder. 2004**



Kun 1 pct. af transportarbejdet blev udført med lastbiler eller trækkere, der var 10 år eller ældre.

Især gods til og fra Tyskland, Sverige Frankrig, Italien og Norge

Godstransporten mellem Danmark og udlandet gik hovedsagelig til og fra Tyskland, Sverige, Norge, Frankrig og Italien. I 2004 dækkede transporter mellem Danmark og de 5 lande hhv. 87 pct. af godsmængden og 78 pct. af transportarbejdet ved kørsel med dansk lastbil mellem Danmark og udlandet. Tredjelandskørsel, dvs. kørsel mellem to udlande, foregik især med Tyskland eller Sverige som på- eller aflæsningsland, og cabotagekørslen foregik især i Tyskland og Sverige.

Gods i container/veksellad

I 2004 var 13 pct. af godset fra Danmark til udlandet og 10 pct. af godset fra udlandet til Danmark lastet i containere eller veksellad. Disse lasttyper dækkede 6 pct. af det samlede transportarbejde.

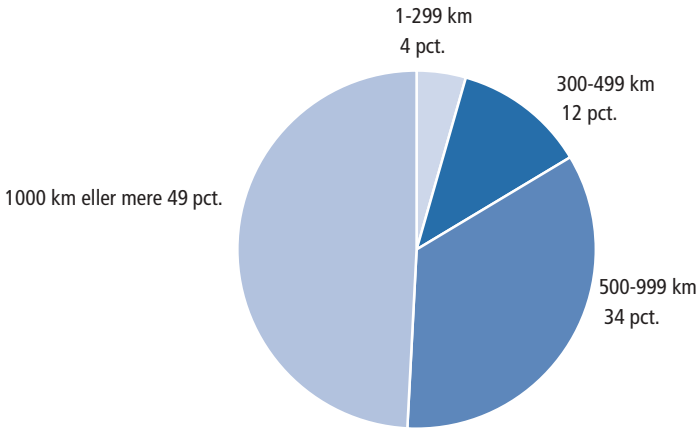
Kørselsdistance

Den gennemsnitlige turlængde ved kørsel med læs var i 2004 på 731 km. 57 pct. af turene med læs var på 500 km eller mere og 23 pct. var på mindst 1.000 km. For det transporterede gods er fordelingen efter turlængde nogenlunde tilsvarende. Transportarbejdet derimod er koncentreret på de længere ture. Halvdelen af transportarbejdet udføres således på ture på 1000 km eller længere, jf. figur 35.

Kapacitetsudnyttelse på 58 pct.

Kapacitetsudnyttelsen har været faldende i de senere år. I 1990'erne lå udnyttelsesgraden omkring 63 pct., men efter 2000 ligger kapacitetsudnyttelsen ved kørsel med læs 5 procentpoint lavere.

Figur 35. **Transportarbejdet ved international kørsel med dansk lastbil efter turlængde. 2004**



Udenlandske lastbiler havde 41 pct. af transporten mellem Danmark og udlandet.

En betydelig del af godstransport med lastbil mellem Danmark og udlandet foregår med køretøjer, der er indregistrerede i udlandet. I 2003 dækkede de udenlandske lastbiler 41 pct. af transportarbejdet med lastbil mellem Danmark og udlandet mod en andel på 28 pct. i 1998. De danske lastbilers markedsandel er størst ved transporter til udlandet, 66 pct. (77 pct. i 1998), mod 53 pct. ved kørsel til Danmark (67 pct. i 1998). Transport med tyske og hollandske lastbiler dækkede godt halvdelen af kørslen med udenlandske lastbiler.

Godstransport med tog

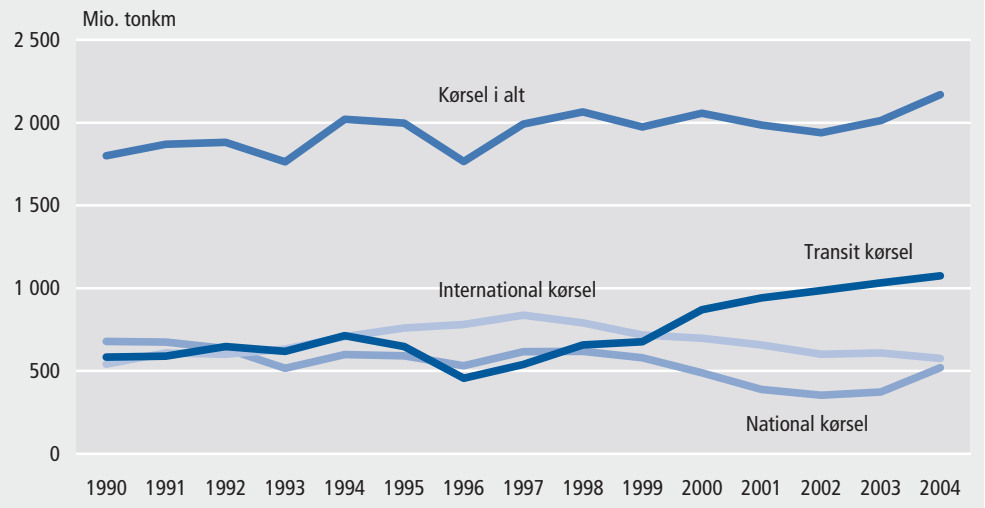
Svagt stigende godstransport

Godstransport med tog har trods fluktuationer været svagt stigende siden 1990. Transportarbejdet lå i 2004 på 2,2 mia. tonkm mod 1,8 mia. i 1990. Væksten er overvejende sket for godstransport i transit gennem Danmark, som næsten er fordoblet siden 1990 og nu dækker halvdelen af transportarbejdet med tog i Danmark.

Mere transitkørsel

Fremgangen for transitgods skyldes navnlig åbningen af de faste forbindelser over Storebælt og Øresund. Det har forøget kørestrækningen med omkring 100 km for transitgods mellem Sverige og Tyskland, fordi godstogene kører over Padborg mod tidligere over Rødby Færgehavn. Derudover har større godsmængde i transit fra 2000 også bidraget til væksten.

Figur 36. **Godstransportarbejde med tog**



International godstransport med tog mellem Danmark og udlandet har efter en fremgang i sidste halvdel af 90'erne været vigende i de seneste år og omfatter nu som i 1990 omkring 30 pct. af transportarbejdet med tog. Den nationale godstransport med tog har stort set været faldende siden 1990. Fra 2003 har der dog igen været fremgang. Den indenlandske transport med tog dækker nu over en femtedel af transportarbejdet med tog.

Godsmængderne i togtransport har efter et opsving i den internationale kørsel i begyndelsen af 90'erne stort set været vigende siden.

Gods i national transport går især over Storebælt

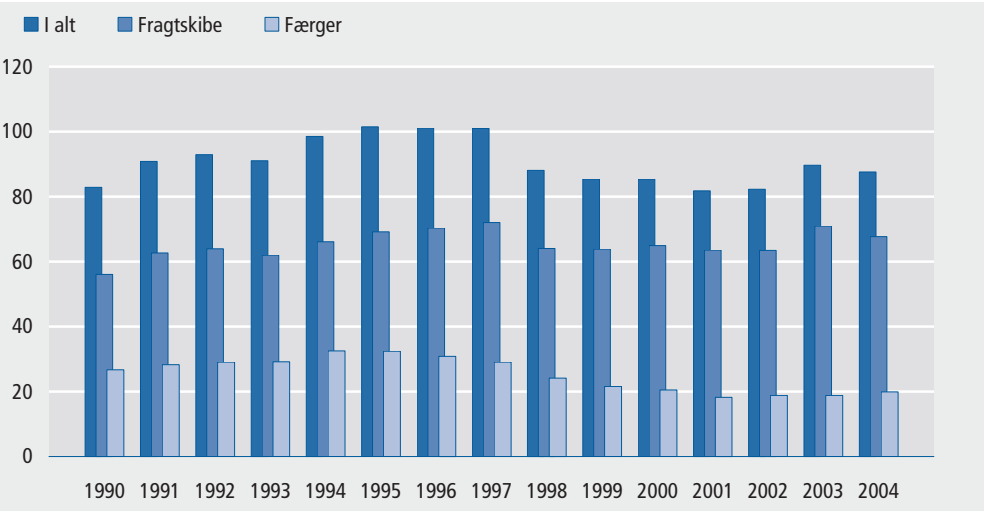
I den indenlandske godstransport transporteres hovedparten af godset over Storebælt, dvs. mellem Sjælland mv. og Fyn/Jylland. Resten bliver stort set kørt mellem stationer, der ligger vest for Storebælt. Den internationale godstransport går især mellem Danmark og Tyskland, Sverige og Italien.

Godstransport med skib over danske havne

Faste forbindelser førte til fald i skibstransporten

Godstransport med skib over dansk havn har været stigende i den første halvdel af 90'erne, men efter åbningen af de faste forbindelser over Storebælt i 1997/98 og Øresund i 1999 faldt godsomsætningen. Samtidig har mindre kulimport i 1998-2002 påvirket mængden af gods med fragtskib.

Figur 37. **Godstransport over danske havne. Mio. ton**



Godstransport mellem danske og udenlandske havne

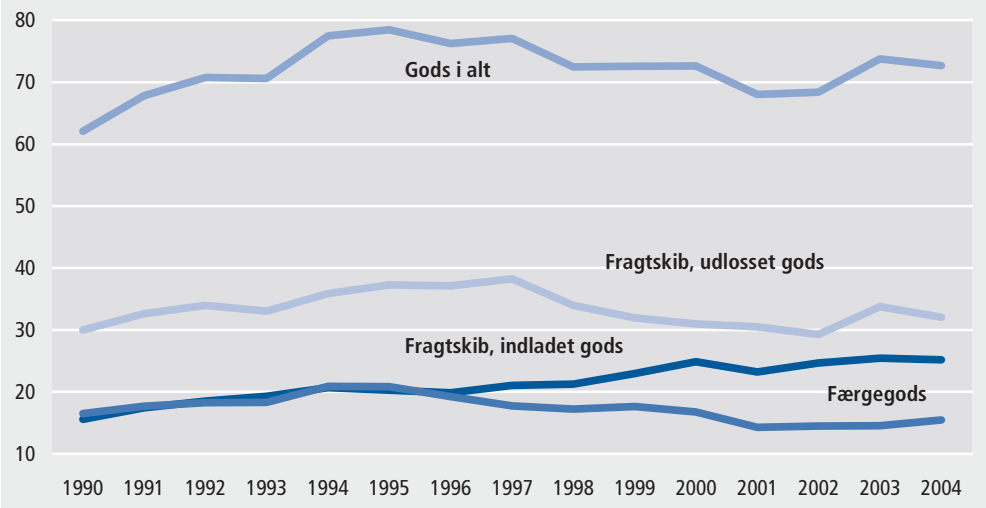
Stigning for skibsgods mellem Danmark og udlandet

Godsmængden i søtransport mellem Danmark og udlandet har været jævnt stigende fra 62 mio. ton i 1990 til 1995, hvor den toppede med 78 mio. ton. Herefter vendte udviklingen, og godsmængden faldt til 68 mio. ton i 2001, hvorpå der igen var stigning, jf. figur 38.

Vækst for fragtskibsgods afbrudt af fald i kulimport

Hovedparten af skibsgodset i udenrigstrafik transporteres med fragtskibe. Andelen har været stigende fra 73 pct. i 1990 til 79 pct. i 2004. Udviklingen skyldes en jævnt stigende mængde indladet gods til udlandet samt vækst i det udlossede gods til udlandet frem til 1998, hvor der indtrådte et fald i kulimporten frem til 2003.

Figur 38. **Godstransport med skib mellem Danmark og udlandet. Mio. ton**



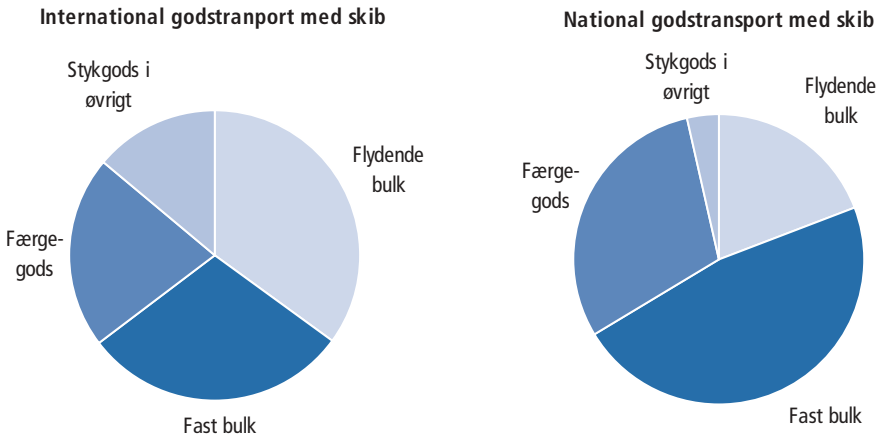
Transport med færge faldt efter 1995

Godstransport med færge mellem Danmark og udlandet har været støt stigende frem til 1995/1996. Herefter er udviklingen vendt, dels som følge af omlægningen af jernbanetransporten over Rødby-Puttgarden, så den nu går over Storebælt og Padborg, dels fordi Øresundsbroen har overtaget en stor del af godstransporten til og fra Sverige.

Udenrigs søtransport på 73 mio. ton

I 2004 blev der fragtet 72,7 mio. ton gods med skib mellem danske og udenlandske havne. Det er 17 pct. mere end i 1990. 56 pct. af godsomsætningen med udlandet var importeret gods, og 44 pct. var gods til udlandet.

Figur 39. **Godstransport efter godsart. 2004**



65 pct. bulk ...

... 35 pct. stykgods

Hovedparten af det ekspederede gods fra og til udlandet var bulk gods (styrtegods). I 2004 udgjorde flydende bulk 35 pct. af godsomsætningen. Det var især råolie og mineralske olieprodukter. 30 pct. var fast bulk, især kul, sten, sand og grus og foderstoffer. Resten, 35 pct. i 2004, var stykgods. Heraf var de 60 pct. færgegods og 25 pct. gods i containere og ro-ro-enheder i øvrigt, jf. figur 39.

10 pct. med dansk skib

For de 21 større havne kan fragtskibsgodset fordeles efter skibets flag. I 2004 blev kun 10 pct. af fragtskibsgodset mellem de større danske havne og udlandet transporteret med danske skibe.

91 pct. af godset kan fordeles på lande

91 pct. af havnenes godsomsætning med udlandet i 2004 kan fordeles efter modtager- og afsendelseslande. Det udlossede gods fra udlandet kom især fra Norge (22 pct.), Sverige (19 pct.), Tyskland (13 pct.), Baltikum (9 pct.) og Mellem- og Sydamerika (8 pct.). Det indladede gods til udlandet gik især til Sverige (34 pct.), Tyskland (18 pct.), UK (8 pct.), Norge (7 pct.), Holland (7 pct.) og Finland (7 pct.).

Godstransport mellem danske havne

Halvering af færgegodset

Udviklingen i den indenlandske godstransport med skib siden 1990 er i stort omfang præget af åbningerne af den faste forbindelse over Storebælt i 1997/98. Den indenlandske færgetransport af gods er således mere end halveret fra 10,2 mio. ton i 1990 til 4,4 mio. ton i 2004.

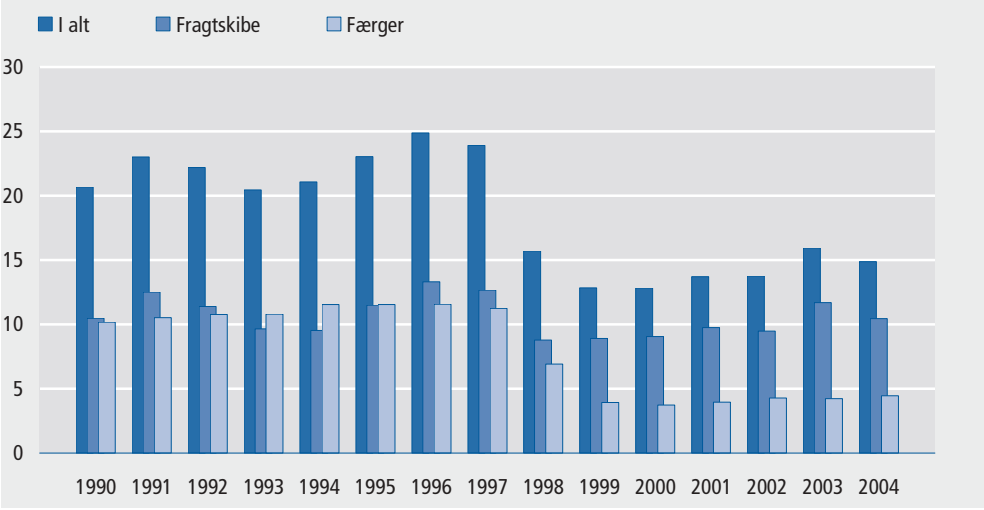
Mindre transport af kul

Fragtskibsfarten har i perioden ligget mellem 9 og 13 mio. ton gods. Udsvingene skyldes dels mindre kulimport i 1998-2002 og dermed mindre indenlandsk transport af kul fra Enstedværkets Havn, dels lukningen af Gulf-raffinaderiet i Skælskør i 1998.

Indenlandsk søtransport på 15 mio. ton

I 2004 blev der fragtet 14,9 mio. ton gods mellem danske havne inkl. transporter mellem danske havne og danske søområder. Det er 5,8 mio. ton eller 28 pct. mindre end i 1990 og 10,0 mio. ton eller 40 pct. mindre end i 1996, året før åbningen af Storebæltsforbindelsen.

Figur 40. **Indenlandsk godstransport med skib. Mio. ton**



66 pct. bulk gods

Hovedparten af den indenlandske skibstransport bestod af bulk (styrtegods). Fast bulk udgjorde 47 pct. af den indenlandske godsomsætning i 2004. Størstedelen heraf, 78 pct. i 2004, var kul og sten, sand og grus. Flydende bulk dækkede 19 pct. af den indenlandske godsomsætning. Det bestod især af mineralske olieprodukter og råolie. Resten, 34 pct. i 2004, var stykgods, der overvejende var færgegods, 89 pct. i 2004.

48 pct. med dansk skib

For de større havne kan fragtskibsgodset fordeles efter skibets flag. I modsætning til udenrigstransporterne foregår indenrigstransporterne i større omfang med danske

skibe. I 2004 blev 48 pct. af fragtskibsgodset mellem de danske havne transporteret med danske skibe.

Godstransport med fly

Indenrigsfragt reduceret efter Storebæltsbroen

Danske lufthavne ekspederede omkring 115.000 ton gods i 2004, når bortses fra gods omladet til eller fra andre fly. Godsmængden har stort set været stigende gennem 90'erne, men har herefter været svagt faldende, navnlig fordi Storebæltsforbindelsen næsten har udkonkurreret transport med indenrigsfly.

Mest gods til og fra Københavns lufthavn

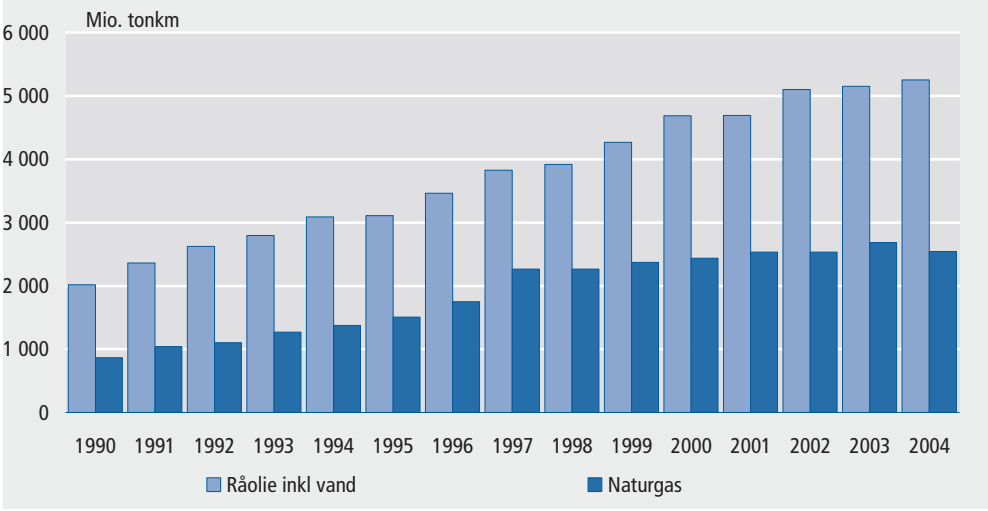
I 2004 blev der fragtet 2.000 ton med indenrigsfly, 93 pct. mindre end i 1990. Fra 1990 til 2004 steg fragtmængden med udenrigsfly derimod med tæt ved 80 pct. til 112.000 ton. Det meste gods til og fra udlandet ekspederes i Københavns Lufthavn. Det skal dog bemærkes, at en del af luftfragten de facto transporteres med lastbil til eller fra udenlandsk omladelufthavn.

Transport gennem rørledninger

Markant stigning over det seneste årti

Transport af olie og naturgas gennem rørledninger er steget markant siden 1990. I 2004 blev der i alt ledt 22,7 mio. ton råolie og naturgas gennem det danske rørledningsnet. Det samlede transportarbejde blev på 7,8 mia. tonkm mod 2,9 mia. i 1990. Heraf var to tredjedele ved transport gennem olierørledninger.

Figur 41. **Transport af olie og naturgas i højtryksrørledninger**



Kilder: DONG A/S, Gastra A/S og DUC

35 pct. af det indenlandske transportarbejde

For såvel olie- som for gastransport har der været tale om mere end en fordobling af omfanget siden 1990. I 2004 dækkede transport i rørledninger 35 pct. af det samlede indenlandske godstransportarbejde mod 19 pct. i 1990.

15,9 mio. ton råolie

I 2004 blev der i alt ført 15,9 mio. ton råolie inkl. medfølgende vand (ca. 3 pct.) fra Nordsøen til Fredericia. Transportarbejdet var på 5,3 mia. tonkm.

6,8 mio. ton naturgas

Der blev i alt sendt 6,8 mio. ton naturgas gennem transmissionsnettet i 2004. Heraf blev 3,2 mio. ton ført til udlandet. Transportarbejdet i gasrørledningerne var på 2,5 mia. tonkm i 2004.

6. Priser og afgifter

Priser på transport

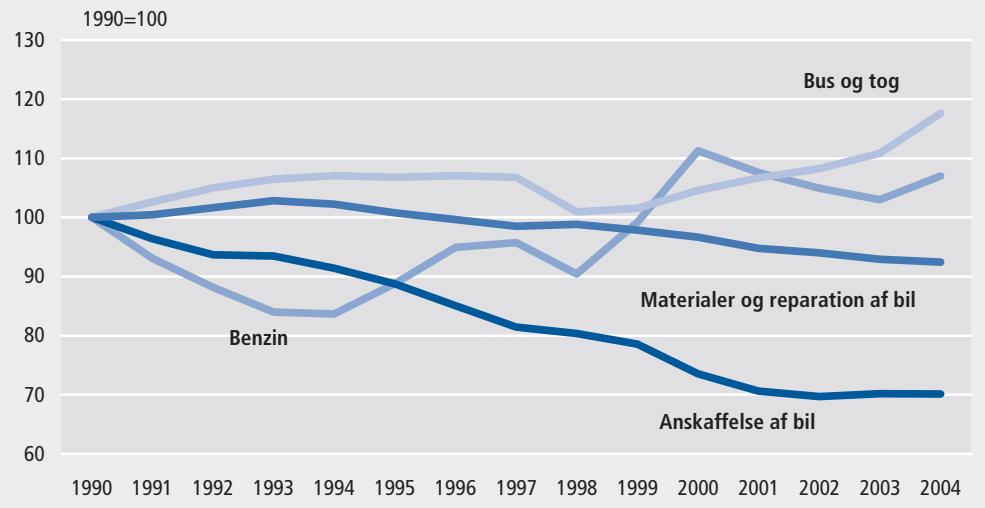
Årlig prisstigning på 2 pct. for transport

Fra 1990 til 2004 er forbrugerpriserne under ét steget jævnt med en gennemsnitlig årlig vækst på 2 pct. Indekset for transportydelser har i samme periode nogenlunde fulgt den almindelige prisudvikling.

Højere realpriser for kollektiv transport

Billetpriserne for kollektiv transport med bus og tog er steget mere end inflationen i det meste af perioden, trods statstilskud til nedsættelse af prisen i 1997.

Figur 42. **Realprisudviklingen for kollektiv transport og bilkørsel**



Realvækst for benzinprisen efter 1999

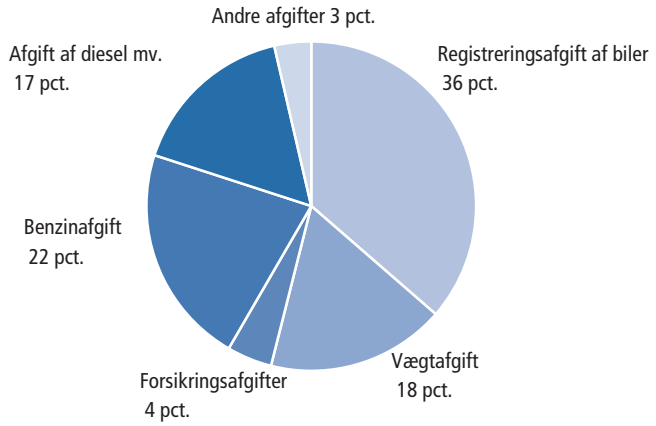
Derimod faldt prisen på benzin faldt frem til 1993, men er herefter steget igen, bl.a. pga. øgede afgifter samt højere priser på råolie, så der efter 1999 har været stigende realpriser for benzin. Realprisen for anskaffelse af bil og for reparation og vedligeholdelse af bil har begge været vigende i perioden, jf. figur 42.

Afgifter vedrørende transport

Afgiftprovenu: 7 pct. af skatter og afgifter

Det samlede provenu af afgifterne på transportmidler og transport er steget med 110 pct. fra 1990 til 2004, hvor afgiftsprovenuet var på næsten 48 mia. kr.

Figur 43. **Afgifter vedrørende transportmidler og trafik. 2004**



7 pct. af alle skatter og afgifter

Afgiftsprovenuet vedrørende transportmidler og trafik omfattede 7 pct. af landet samlede skatte- og afgiftsprovenu i 2004.

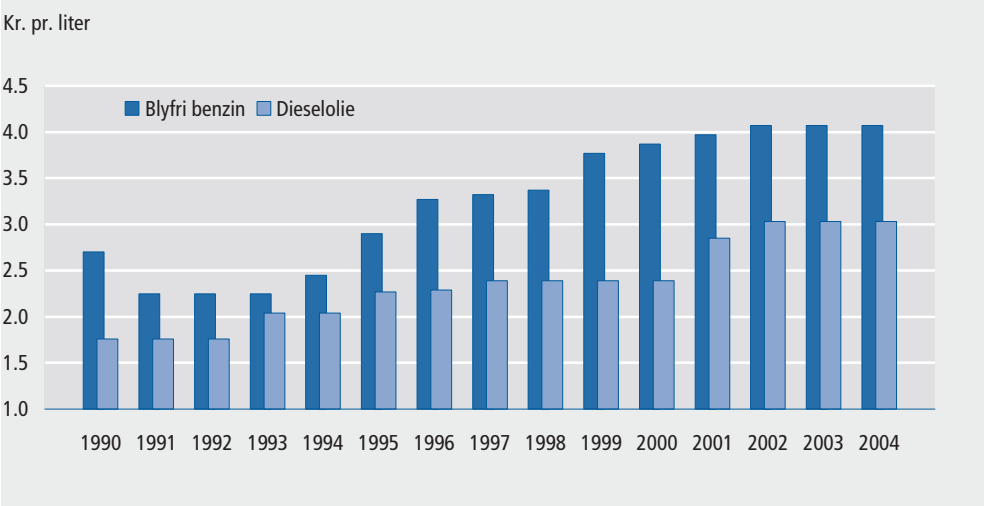
Registreringsafgift for biler

Registreringsafgifter udgør næsten en tredjedel af provenuet fra transportafgifter, jf. figur 44. Langt den største del vedrører registrering af biler. Provenuet af registreringsafgifterne har været markant stigende i 90'erne frem til 1998, hvor det var mere end dobbelt så stort som i 1990. Herefter har det igen været faldende frem til 2004 hvor det steg markant. Udviklingen har i stort omfang fulgt tilgangen af nyregistrerede person- og varebiler. Desuden har de gennemsnitligt højere salgspriser pga. større og bedre udstyrede biler bidraget til, at afgiftsprovenuet er steget stærkere end tilgangen af biler.

Vægtafgift er for nyere biler afløst af grøn ejerafgift

For personbiler, der er nyregistreret før 1. juli 1997, betales en halvårlig vægtafgift, som afhænger af bilens egenvægt. For personbiler, der er nyregistreret efter 30. juni 1997, er vægtafgiften erstattet af den såkaldte grønne ejerafgift, som er differentieret efter bilens brændstofforbrug pr. kørt kilometer. Provenuet af vægtafgift og ejerafgift udgør i 2004 næsten en femtedel af transportafgifterne, og 91 pct. mere end i 1990.

Figur 44. **Afgifter på blyfri benzin og dieselolie. Pr. 1. januar**



Afgifterne på benzin og diesel dækker hhv. 25 pct. og 18 pct. af det samlede provenu af transportafgifter. Provenuet er fordoblet siden 1990. Dette skyldes dels, at afgiftssatserne er øget, dels udviklingen i råolieprisen og dels den øgede bilkørsel. Fra 1. januar 1990 til 1. januar 2004 er afgiften på blyfri benzin således steget med 51 pct. til kr. 4,07 pr. liter pr. og afgiften for dieselolie til motorbrændstof er steget 72 pct. til kr. 3,03 pr. liter, jf. figur 44. I samme periode og navnlig efter 1999 er prisen på importeret råolie steget, så den ultimo 2003 lå omkring 60 pct. højere end i 1990. Moms er ikke medregnet som en speciel afgift vedrørende transportmidlerog trafik.

7. Trafikuheld og personskader

Udviklingen i antal uheld og implicerede transportmidler

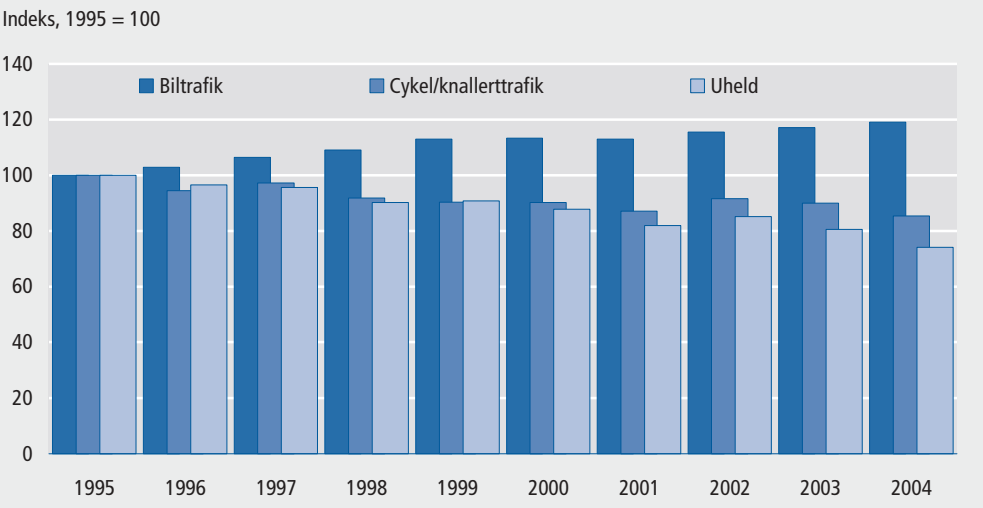
Stort fald i antal uheld fra 1995 til 2004 ...

Antallet af færdselsuheld med personskade er faldet med 26 pct. i perioden fra 1995 til 2004. Mens politiet i 1995 registrerede 8.373 uheld, var det tilsvarende antal i 2004 på 6.209 uheld.

... samtidig med stigning i biltrafikken

Faldet i antallet af uheld er sket samtidig med, at biltrafikken er steget med ca. 20 pct. Cykel/knallerttrafikken er til gengæld faldet med ca. 15 pct.

Figur 45. **Udviklingen i antal uheld og trafikindeks**



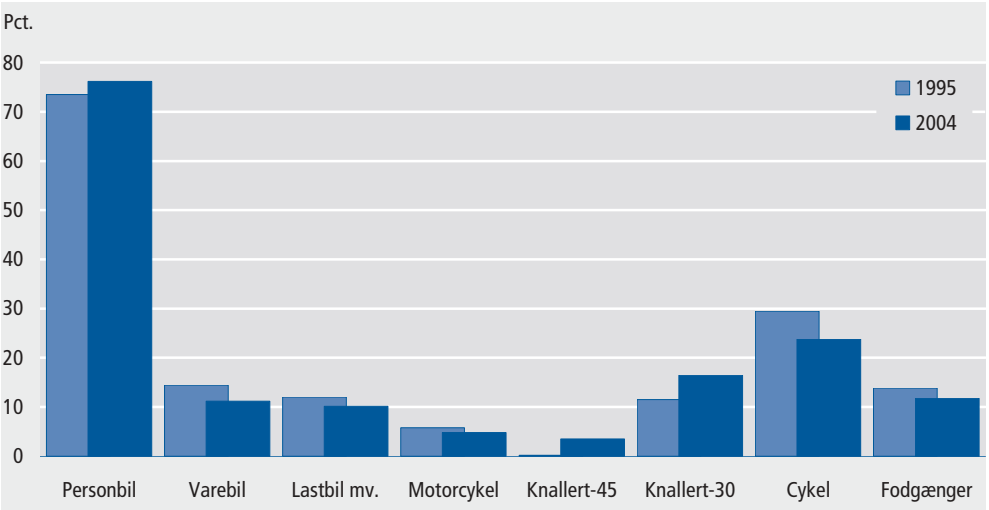
Mindst fald i antal implicerede personbiler

Antallet af implicerede køretøjer og fodgængere i uheld faldt fra 16.912 i 1995 til 12.757 i 2004, svarende til et fald på 25 pct. Det mindste fald er sket for personbiler med 23 pct. For de fleste øvrige transportmidler, inkl. fodgængere, har der været tale om et fald på omkring 40 pct. Knallert-30 er det eneste transportmiddel, hvor der har været en stigning i antallet af implicerede transportmidler, nemlig på 6 pct.

Personbiler med i tre fjerdedele af uheldene

I tre ud af fire uheld i 2004 var der personbiler impliceret. Det er en lidt højere andel end i 1995. Cyklister var impliceret i en fjerdedel af uheldene i 2004. Det er en lidt mindre andel end i 1995. Også for fodgængere var der en lidt mindre andel, der var impliceret i uheld i 2004 i forhold til 1995.

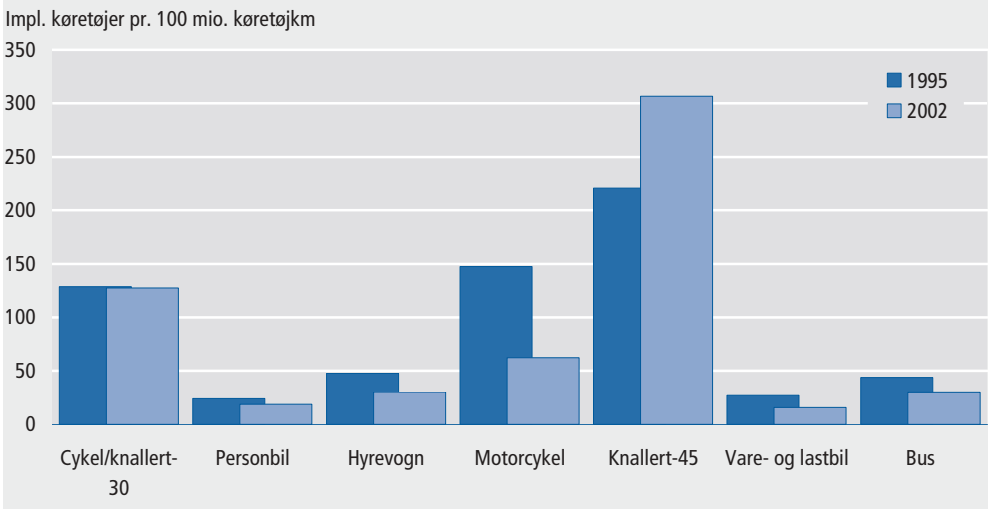
Figur 46. **Uheld fordelt efter implicerede transportmidler**



Tohjulede køretøjer har flest uheld pr. kørt kilometer

Cykler, knallerter-30, knallerter-45 og motorcykler har flest uheld pr. kørt kilometer. I 2002 var antallet af implicerede knallerter-45 pr. kørt kilometer således mere end 16 gange større end det var for personbiler. Knallert-45 var samtidig den eneste type transportmiddel, hvor der i 2002 var flere implicerede pr. kørt kilometer end i 1995.

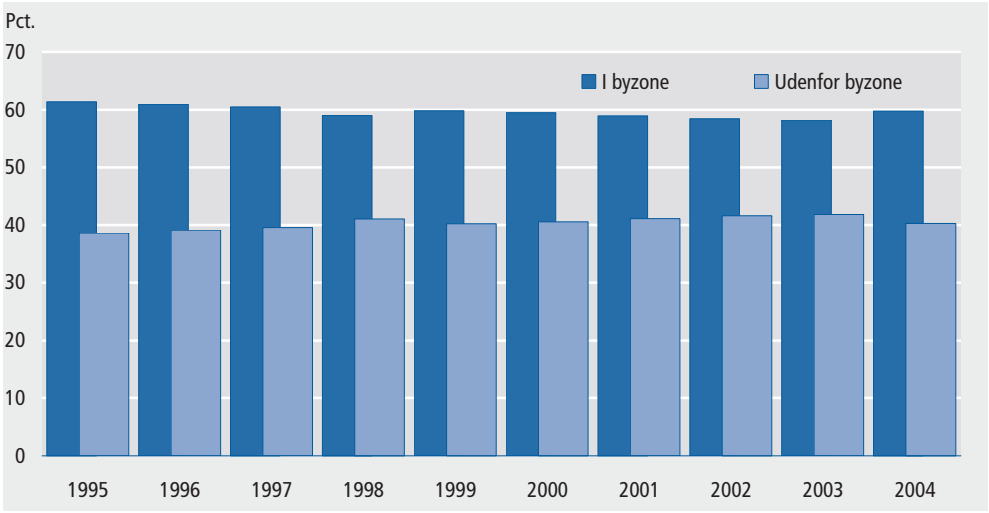
Figur 47. **Udviklingen i antal implicerede køretøjer pr. 100 mio. køretøjkm**



6 ud af 10 uheld sker i byzone

I 2004 skete 60 pct. af uheldene i byzone og 40 pct. uden for byzone. Denne fordeling af uheldene har stort set været uændret siden 1995.

Figur 48. **Uheld i og uden for byzone**



Udviklingen i antallet af personskader

Fald i antal tilskadekomne og dræbte

Antallet af trafikdræbte er faldet 37 pct. fra 582 i 1995 til 369 i 2004. I samme periode er antallet af alvorligt og lettere tilskadekomne tilsammen faldet fra 9.991 tilskadekomne til 7.546, hvilket svarer til et fald på 25 pct. Der er et brud i den relative fordeling af lettere og alvorligt tilskadekomne fra 1997, på grund af en ny definition af skadetype.

Lige stort fald i antal personskader for mænd og kvinder …

Udviklingen i antallet af personskader pr. 100.000 indbyggere viser, at faldet fordeles jævnt mellem mænd og kvinder. I 1995 var der 251 personskader pr. 100.000 mandlige indbyggere mod 182 i 2004, hvilket svarer til et fald på 28 pct. For kvindernes vedkommende er den tilsvarende nedgang også på 28 pct. fra 155 til 112.

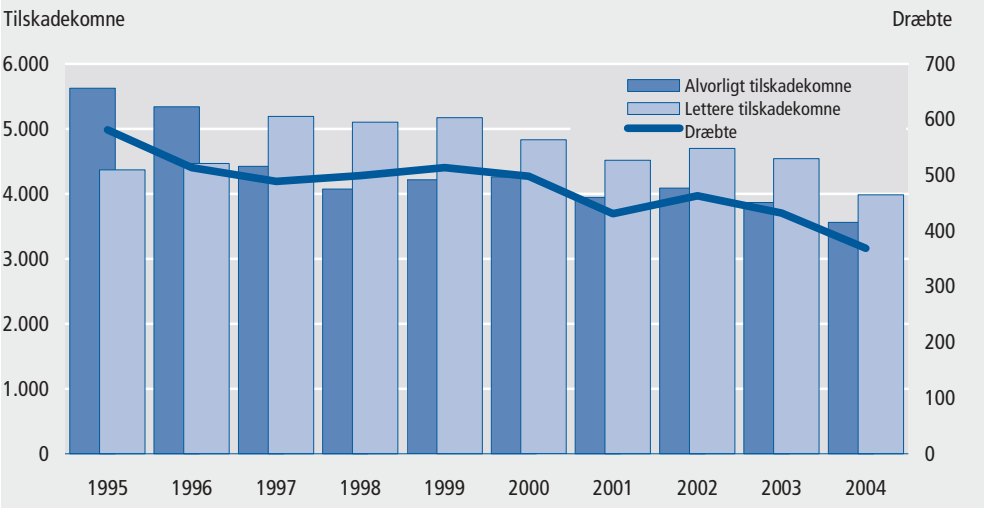
… men stor forskel mellem aldersgrupperne

Udviklingen i antal personskader pr. 100.000 indbyggere varierer derimod stærkt mellem aldersgrupperne.

Lille fald for 15-17 årige og 35-44 årige mænd

De 15-17 årige og 35-44 årige mænd har oplevet de mindste fald i antal personskader pr. 100.000 indbyggere i perioden 1995-2004, nemlig på henholdsvis 5 og 0,5 pct.

Figur 49. **Udviklingen i antal personskader**



Størst fald for børnene og de ældre

Der er sket en betydelig reduktion i antal personskader pr. 100.000 indbyggere blandt børn under 15 år og i de ældre aldersgrupper. For børn i alderen 7-14 år er der sket et fald på over 40 pct. For mænd og kvinder i aldersgrupperne over 54 år har der været fald på mellem 30 og 39 pct.

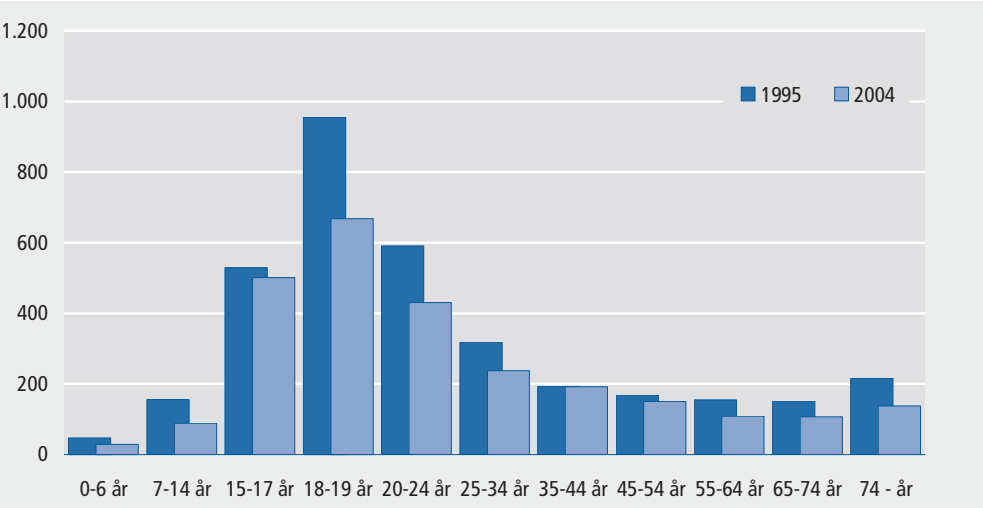
Mænd har flere personskader end kvinder ...

I forhold til indbyggertallet har mænd langt flere personskader end kvinder. I 2004 forekom der 182 personskader pr. 100.000 indbyggere blandt mænd mod 112 for kvinder. Samme forhold gjorde sig gældende i 1995, hvor der var 251 personskader for mænd og 155 for kvinder pr. 100.000 indbyggere.

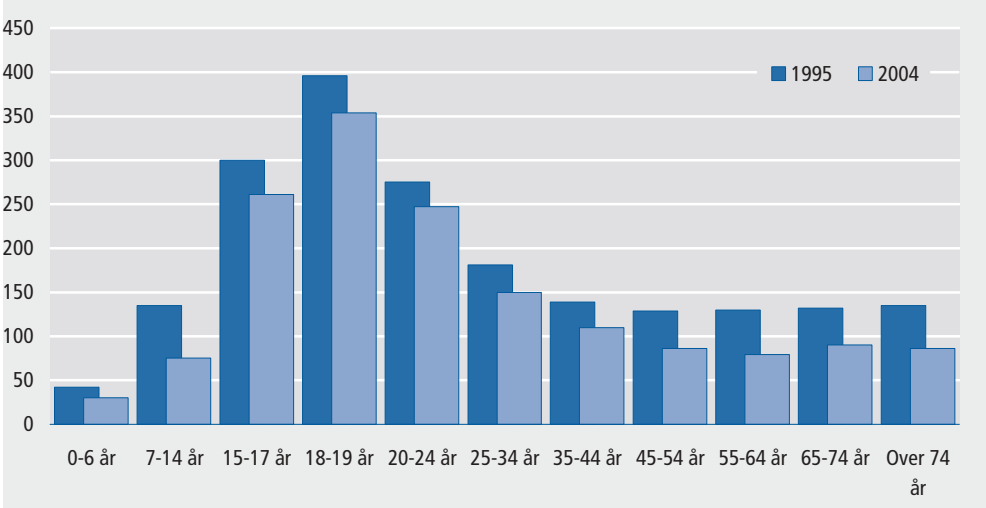
... og unge flere end ældre

Både i 1995 og 2004 havde de 18-19 årige det højeste antal personskader pr. 100.000 indbyggere. I 2004 havde 18-19 årige mænd således 668 personskader pr. 100.000 indbyggere mod gennemsnittet på 182 for alle mænd. Tilsvarende havde de 18-19 årige kvinder 354 personskader pr. 100.000 indbyggere mod gennemsnittet for alle kvinder på 112.

Figur 50. **Personskader pr. 100.000 indbyggere. Mænd**



Figur 51. **Personskader pr. 100.000 indbyggere. Kvinder**



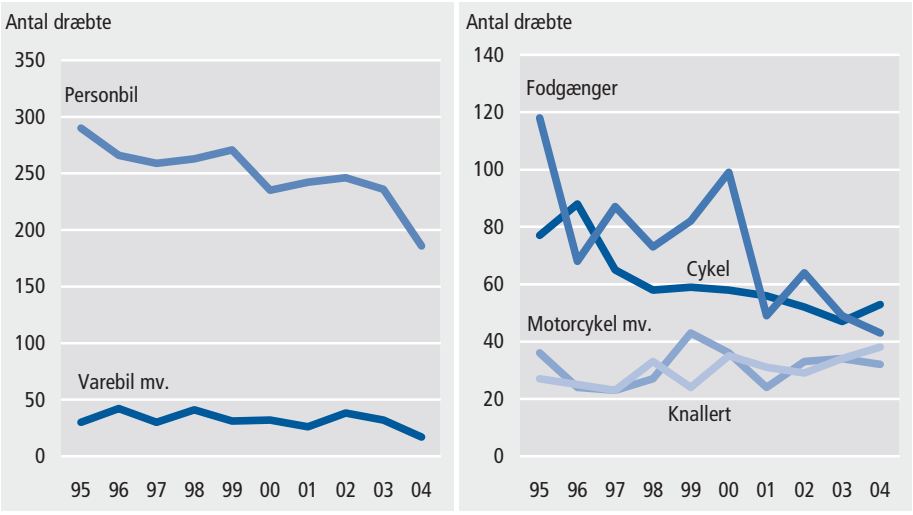
Stort fald i antal personskader for cyklister og fodgængere

1 2004 var antallet af personskader for cyklister og fodgængere henholdsvis 41 og 38 pct. lavere end i 1995. Også for varebilister (inkl. lastbiler og busser) skete der et stort fald på 43 pct. For personbilister var faldet på 21 pct. og for motorcyklister (inkl. registreringspligtig knallert) kun på 2 pct. Knallert-30 kørerne oplevede som den eneste trafikantgruppe en stigning i antal tilskadekomne fra 884 i 1995 til 977 i 2004. Det svarer til en stigning på 11 pct.

Antal dræbte fodgængere reduceret med to tredjedele

Fra 1995 til 2004 er det årlige antal dræbte fodgængere faldet med næsten to tredjedel fra 118 dræbte i 1995 til 43 i 2004. Antallet af dræbte cyklister og bilister faldt begge med ca. en tredjedel mens antallet af dræbte knallertkørere steg fra 27 til 38 personer.

Figur 52. **Udviklingen i antal dræbte efter transportmiddel**



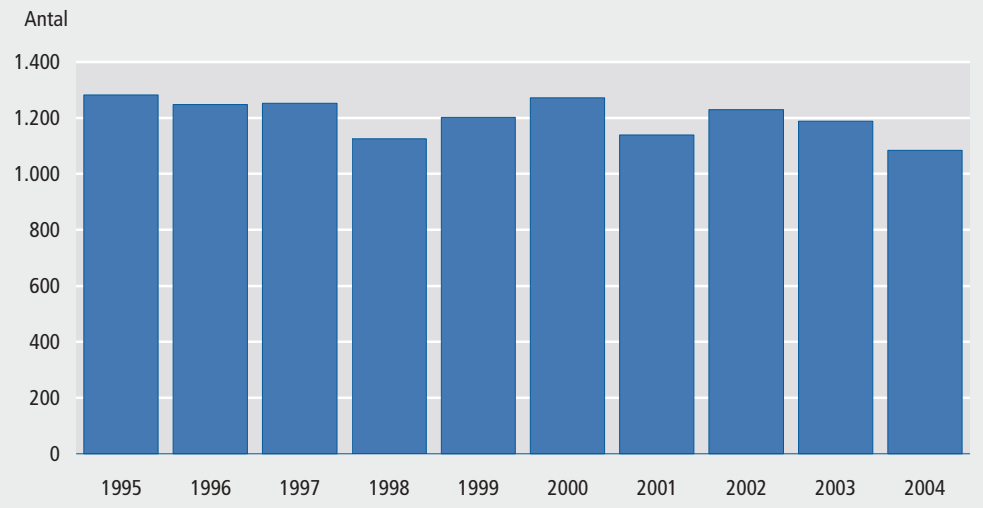
Anm.: Varebil mv. inkluderer også lastbiler og busser. Motorcykel mv. inkluderer også registreringspligtig knallert

Færdselsuheld med spirituspåvirkede personer involveret

Flere af uheldene er spiritusuheld

Spiritusuheld udgjorde 18 pct. af samtlige færdselsuheld med personskade i 2004. Det er en lidt større andel end i 1995, hvor spiritusuheldene udgjorde 15 pct. af alle uheld. Samlet set har der været et fald i antallet af spiritusuheld på 15 pct. fra 1995 til 2004, men der har været flere år med stigninger, senest i 2002.

Figur 53. **Udviklingen i antal spiritusuheld**



I mere end hvert fjerde knallertuheld er der spirituspåvirkede knallertkørere involveret

Antallet af uheld med spirituspåvirkede knallert-30 kørere udgjorde i 2004 27 pct. af samtlige uheld med knallert-30 kørere involveret. Tilsvarende var der involveret spirituspåvirkede fodgængere i 14 pct. af fodgængeruheldene og spirituspåvirkede motorcyklister i 13 pct. af motorcykeluheldene. Kun i 3 pct. af cyklistuheldene var der spirituspåvirkede cyklister.

Fald i antallet af personskader ved spiritusuheld

Antallet af personskader i spiritusuheld er faldet fra 1.672 i 1995 til 1.392 i 2004, svarende til 17 pct., og antallet af personskader blandt spirituspåvirkede førere og fodgængere faldt med 13 pct. Antallet af dræbte i spiritusuheld faldt med 14 pct. fra 123 i 1995 til 106 i 2004.

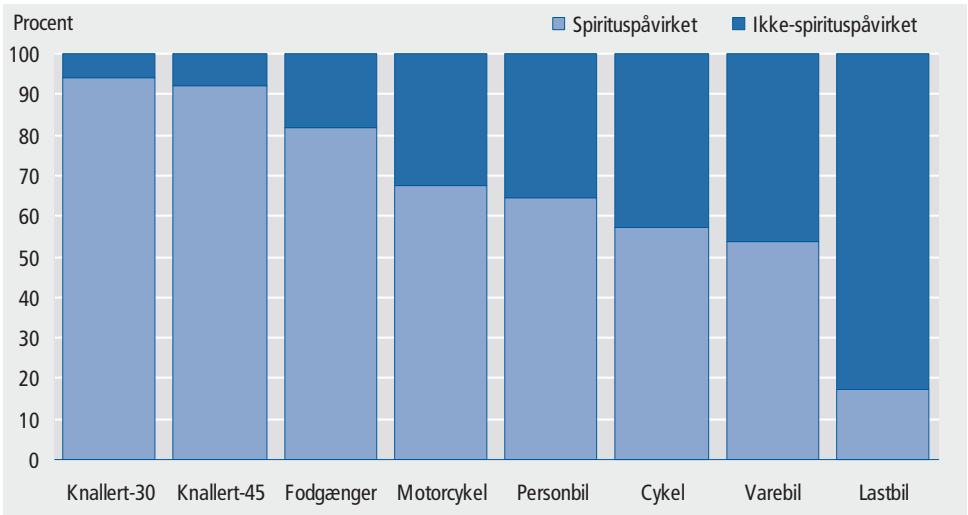
De fleste personskader er blandt spirituspåvirkede førere og fodgængere

I 1995 var 65 pct. af personskaderne og 69 pct. af de dræbte i spiritusuheld blandt de spirituspåvirkede førere og fodgængere selv. I 2004 var de tilsvarende andele 69 og 75 pct.

70 pct. af alle involverede førere og fodgængere i spiritusuheld var selv spirituspåvirkede

I 2004 var der 1.573 førere og fodgængere involveret i færdselsuheld. Af disse var 1.104, svarende til 70 pct., selv spirituspåvirkede. Størst andel af spirituspåvirkede var der blandt førere af knallert-45 og knallert-30, hvor mere end ni ud af ti var påvirkede. Blandt fodgængerne var det otte ud af ti, der var påvirkede af spiritus. Lavest andel var der blandt lastbilførerne, hvor 17 pct. af de involvere i spiritusuheld selv var spirituspåvirkede.

Figur 54. **Førere og fodgængere involveret i spiritusuheld**

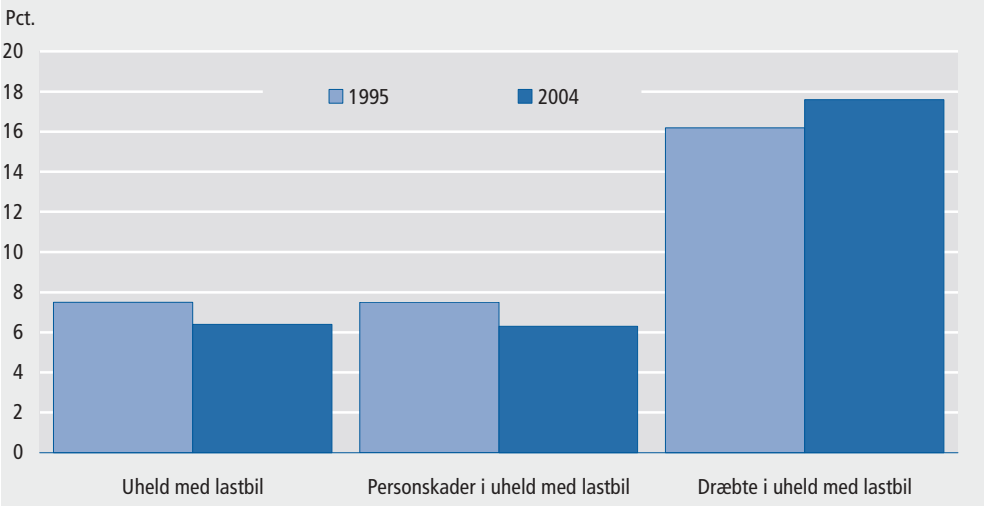


Uheld med lastbiler involveret

Uheld med lastbiler er de farligste ...

Uheld med lastbiler involveret er de farligste for de implicerede personer. I 1995 udgjorde uheld med lastbiler involveret 7,5 pct. af alle uheld, men de dræbte i lastbiluheld udgjorde 16,2 pct. af alle dræbte i færdselsuheld. I 2004 er dette mønster endnu tydeligere, idet uheld med lastbiler udgjorde 6,4 pct. og dræbte i lastbiluheld 17,6 pct.

Figur 55. **Uheld med lastbiler**



... især for cyklister og fodgængere

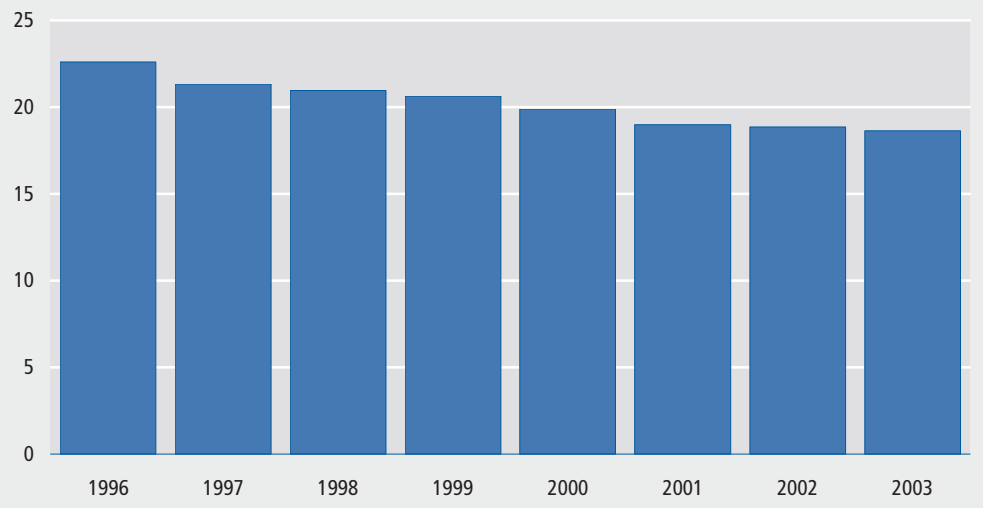
Uheld med lastbiler er især farlige for cyklister og fodgængere. I 2004 blev en tredjedel af de dræbte cyklister og en fjerdedel af de dræbte fodgængere dræbt i uheld med lastbiler, mens uheld med lastbiler involveret kun udgjorde 6 pct. af cyklistuheldene og 4 pct. af fodgængeruheldene.

Mørketal

Mørketal i uheldsstatistikken

Den officielle færdselsuheldsstatistik, der bygger på politiets indberetninger, dækker kun en begrænset del af det totale antal personskader ved færdselsuheld. Undersøgelser har vist, at statistikken har en høj dækningsgrad, når det gælder belysning af antal trafikdræbte, men at der sker en væsentlig underrapportering af de tilskadekomne, idet et væsentligt antal personskadeuheld slet ikke kommer til politiets kendskab.

Figur 56. **Politiindberetningernes andel af samtlige registrerede personskader ved færdselsuheld**

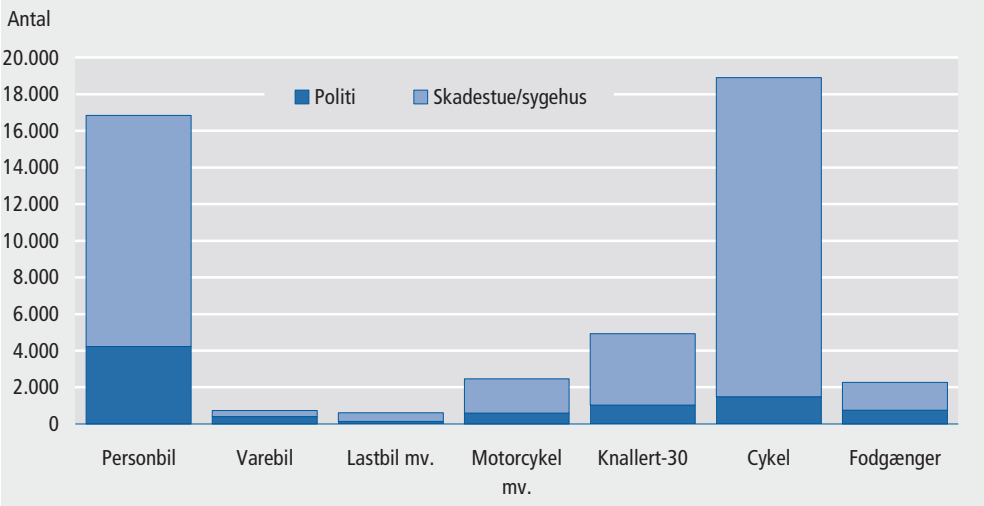


Anvendelse af skadestuernes registreringer

En betydelig del af de ikke rapporterede personskader, det såkaldte mørketal, kan imidlertid belyses ved at anvende data fra skadestuerne. Danmarks Statistik har derfor siden 1996 årligt gennemført en undersøgelse af forholdet mellem politiets og skadestuernes registrering af personskader ved færdselsuheld. Fra og med 2001 er analysen udvidet med oplysninger om sygehusindlæggelser forårsaget af færdselsuheld.

Figur 57

Personskader indberettet af politiet og skadestuerne/sygehusene. Fordeling efter transportform. 2003



Politiet registrerer en mindre andel af personskaderne

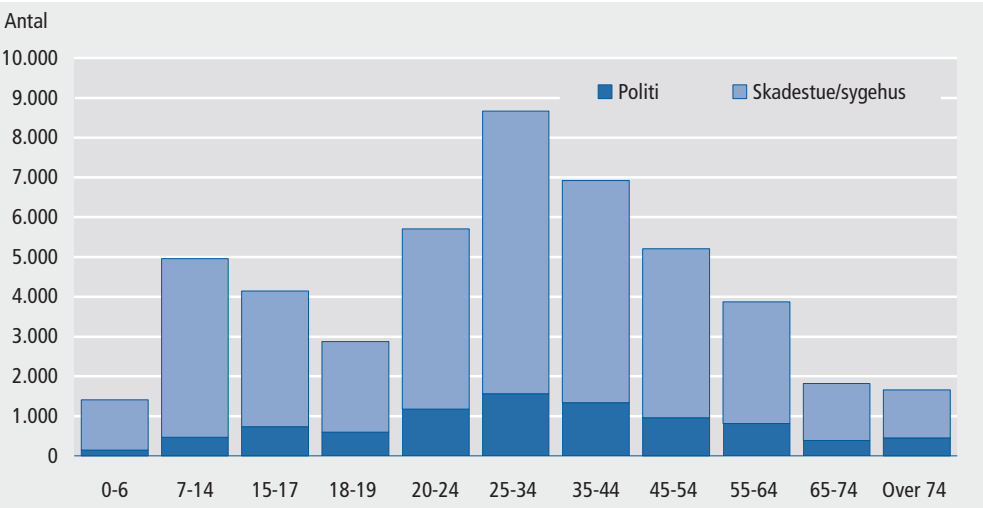
Analyserne viser, at den løbende færdselsuheldsstatistik, som alene er baseret på politirapporter, kun dækker ca. en femtedel af de personskader som tilsammen bliver registreret af politiet, skadestuerne og sygehusene. Desuden har politiets andel af de indberettede personskader været faldende i den undersøgte periode.

17.000 personskader blandt cyklister er ikke kendt af politiet

Undersøgelsen viser endvidere, at mørketallet var størst for cyklister, idet 17.426 personskader blandt cyklister ikke kom til politiets kendskab i 2003. Det svarer til 92 pct. af alle personskader blandt cyklister. For bilister var der et mørketal på 12.639 personskader, svarende til 75 pct. af alle personskader blandt bilister.

Figur 58.

Personskader indberettet af politi og skadestuer/sygehusene fordelt efter alder. 2003



Størst mørketal for de yngste

Mørketallet er højt i alle aldersklasser, men relativt størst for de unge under 15 år, og mindst for de ældre over 64 år. Blandt de 0-14 årige var der et mørketal på 5.755 personskader, hvilket svarer til, at 90 pct. af personskaderne i denne aldersgruppe ikke kom til politiets kendskab. 76 pct. af de 3.469 personskader blandt ældre over 64 år blev ikke rapporteret til politiet.

Personulykker ved jernbanetrafik

8 dræbte pr. år

I perioden 1995-2004 var der gennemsnitligt 18 alvorligt tilskadekomne eller dræbte personer om året i forbindelse med ulykker ved jernbanetrafik. Heraf var de 5 passagerer, 3 ansatte ved banen og 9 andre personer. Der var gennemsnitligt 8 dræbte personer ved jernbaneulykker om året. Heraf var 1 passager og 1 ansat ved banen.

Regnet i forhold det udførte transportarbejde i samme periode var der 0,2 alvorligt tilskadekomne og 0,1 dræbte personer pr. mia. personkm med tog.

Trafikuheld med danske fly

Overvejende uheld med mindre fly

I perioden 1990-2004 var der gennemsnitligt 29 havarier med dansk registrerede motorfly og helikoptere om året. Langt de flest havarier var af fly under 5.700 kg. Der omkom gennemsnitligt 5 personer om året ved flyulykker, og der var gennemsnitligt 3 tilfælde af alvorlig personskade om året.

Uheld til søs

8 omkomne om året ved ulykker med danske skibe

I perioden 1999-2004 er der gennemsnitligt sket 78 søulykker om året med danske og grønlandske skibe involveret. Næsten halvdelen af ulykkerne var ved kollision eller grundstødning, overvejende i danske farvande. Ved ulykkerne var der gennemsnitligt 8 omkomne om året, heraf 5 på handelsskibe og 3 på fiskerfartøjer. Udenlandske skibe har i perioden 1997-2004 haft gennemsnitligt 39 søulykker om året i danske farvande. Heraf var de 35 ved grundstødning eller kollision.

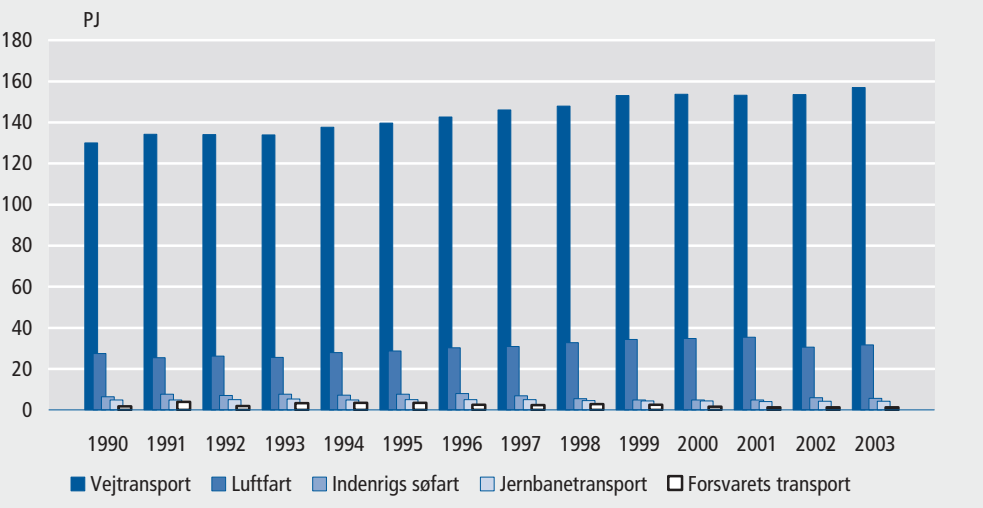
8. Transportens energiforbrug og miljøpåvirkning

Transportens energiforbrug

Afbrænding af fossilt brændstof

Energiforbruget til transport dækkes primært ved afbrænding af fossilt brændstof, som giver anledning til udslip af drivhusgasser, forsurende stoffer og en lang række af andre skadelige stoffer, fx ozonlagsnedbrydende stoffer. Transportens energiforbrug opgøres for vejtransport, jernbanetransport, indenrigs- og udenrigs lufttransport, samt for indenrigs søtransport. Derudover har forsvaret et mindre energiforbrug til dets transportaktiviteter.

Figur 59. **Endeligt energiforbrug til transport fordelt på transportform**



Kilde: Energistyrelsen.

Transporten stod for 31 pct.

Landets samlede endelige energiforbrug steg fra 592 PJ (1 petajoule=10^{15} Joule) i 1990 til 635 PJ i 2003 og toppede i 1999 med 644 PJ. I 2003 stod transporten for 31 pct. af det samlede endelige energiforbrug.

Transportens energiforbrug er steget 17 pct.

Transportens energiforbrug lå på 170 PJ i 1990 og var i 2003 vokset til 200 PJ (17 pct. stigning). Fra 2000 til 2002 var der et mindre fald, som bl.a. skyldes forbedret energieffektivitet og nedgang i forbruget til luftfart. I 2003 steg transportens energiforbrug igen, grundet en stigning i energiforbruget til udenrigsluftfart og vejtransport.

Vejtransporten

Fra 1990 til 2003 steg det samlede forbrug af energi til vejtransporten fra 130 PJ til 157 PJ (21 pct. stigning), hvilket bl.a. hænger sammen med væksten i trafikarbejdet.

Fordelingen af energiforbrug for vejtransporten

Vejtransporten stod for 79 pct. af transportens samlede energiforbrug i 2003. Energiforbruget til vejtransporten er hovedsageligt fordelt på gas/dieselolie og på motorbenzin.

Luftfartens energiforbrug

Luftfarten var den næststørste bidragyder til transportens samlede energiforbrug og bidrog med 16 pct. af dette i 2003. Luftfartens energiforbrug har været stigende i perioden 1990 til 2001 og steg fra 28 PJ i 1990 til 35 PJ i 2001, men fra 2001 til 2002 faldt luftfartens energiforbrug til 31 PJ, hvilket kan tilskrives den globale afmatning inden for luftfart efter 11. september katastrofen i 2001. I 2003 steg luftfartens samlede energiforbrug svagt til 32 PJ, pga. en lille stigning i energiforbruget til udenrigsluftfarten.

Indenrigs- og udenrigsfart

I 2003 stod indenrigsfarten for 4 pct. af det samlede energiforbrug til luftfart mod 11 pct. i 1990. Det er især efter åbningen af Storebæltsbroen i 1997, at energiforbruget til indenrigsflyvning er faldet. Energiforbruget til udenrigsfart steg jævnt i hele perioden frem til 2001, bortset fra nogle mindre fald i 1991 og 1993, hvorefter det faldt 13 pct. fra 2001 til 2002.

Luftfart har også en stor effekt på miljøet

Selvom luftfartens endelige energiforbrug, målt i energienheder, er betydeligt lavere end vejtransportens, har det vist sig, at klimaeffekten af luftfartens udledninger af CO_2 er op til tre gange større end en tilsvarende udledning fra vejtransporten, fordi udledninger direkte i atmosfæren er mere skadelige end udledninger på landjorden.

Jernbanetransport

Jernbanetransportens energiforbrug er faldet fra 4,8 PJ i 1990 til 4,2 PJ i 2003 (11 pct.), og stod for 2 pct. af transportens energiforbrug i 2003.

Indenrigs søtransport

Fra 1990 til 2001 faldt det endelige energiforbrug til indenrigs søtransporten fra 6,3 til 4,8 PJ, for derefter igen at stige til 5,7 PJ i 2003. Det samlede energiforbrug fra indenrigssøtransporten har været faldende efter åbningen af broforbindelser over Storebælt og Øresund, men er igen steget efter 2001. I 2003 udgjorde energiforbruget til indenrigssøtransporten knap 3 pct. af transportens samlede energiforbrug.

Søtransport bidrager til SO_2-udslip

Transport med skib giver anledning til store udslip af SO_2 for visse typer af skibsfart, og fx hurtigfærger kan være overordentligt energiforbrugende. Skibsfarten står for den største del af transportens samlede SO_2-udslip, da skibene bruger tung fuelolie med et stort svovludslip til følge.

Emissioner fra transport

Luftforurening er både lokal, regional og global

Luftforurening i forbindelse med trafik opstår ved forbrænding af fossile brændstoffer i transportmidlernes motorer, og består af udledninger af en række stoffer med både lokale, regionale og globale effekter på miljøet. De lokale effekter er fx transportens bidrag til luftforureningen i byerne. De regionale effekter er fx transportens bidrag til sur nedbør og til forurening af grundvandet. De globale effekter er fx transportens bidrag til drivhuseffekten.

Kræftfremkaldende stoffer

Transporten bidrager også til udslip af kræftfremkaldende stoffer, som fx polyaromatiske hydrocarboner (PAH'er), samt til udslip af tungmetaller. Derudover bidrager især den dieseldrevne transport til udledningen af de helt fine partikler, som menes at være særligt farlige.

Bidrager til den lokale luftforurening ...

Udslip af kulilte (CO), kvælstofilter (NO_x), flygtige organiske forbindelser (NMVOC) og partikler bidrager til den lokale luftforurening. NO_x bidrager både til lokale og regionale forureningsproblemer. Kulilte kan påvirke hjerte- og karsystemet, kvælstofilter øger risikoen for åndedrætssygdomme og kan skade træer og anden vegetation ved dannelse af ozon i den nederste del af atmosfæren, NMVOC påvirker lungefunktionen og kan være kræftfremkaldende og partiklerne kan irritere åndedrætsystemet, være giftige eller være bærende af kræftfremkaldende stoffer.

... til den regionale forurening

En mindre del af udslippet fra transporten består af svovldioxid (SO_2), der ligesom NO_x giver regional luftforurening gennem forsuring af nedbøren.

... og til drivhuseffekten

Emissioner af lattergas (N_2O) og kuldioxid (CO_2) bidrager til drivhuseffekten. Drivhusgasserne i atmosfæren absorberer en del af strålingen fra jorden og kan derved afstedkomme en global opvarmning. Langt den overvejende del af drivhusgasserne forekommer naturligt. Den menneskeskabte del er imidlertid stigende, hvilket især skyldes voksende afbrænding af fossile brændsler. Trafikkens bidrag til drivhuseffekten stammer næsten udelukkende fra udledningen af CO_2.

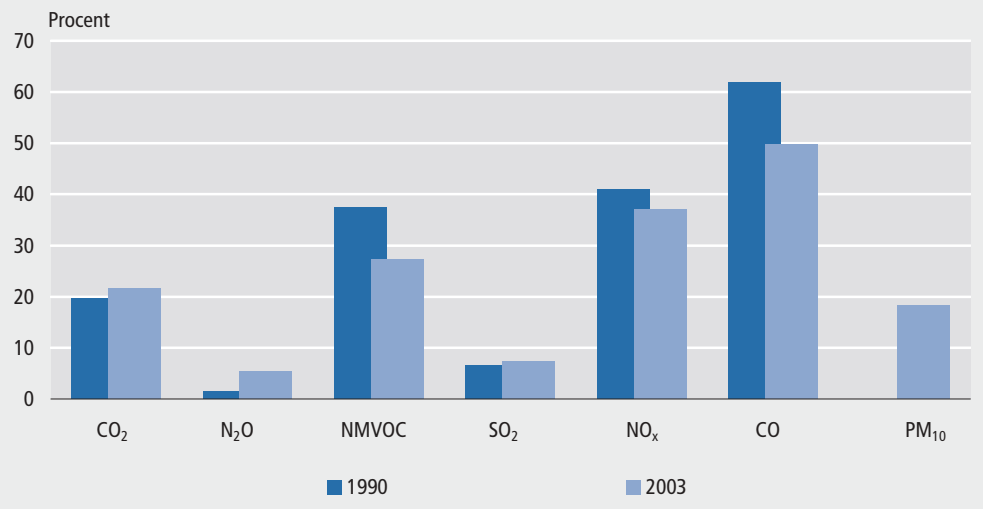
Større andel fra transporten af kuldioxid, svovldioxid og lattergas

I perioden 1990-2003 steg transportens andel af kuldioxid-, svovldioxid- og lattergasudslippet og var i 2003 på hhv. 22, 7 og 5 pct. af de samlede nationale udledninger. For de øvrige stoffers vedkommende faldt transportens andel af udslippet trods en stigende transportaktivitet. I 2003 stod transporten for hhv. 50, 37, 27 og 18 pct. af den nationale udledning af kulilte, kvælstofoxider, flygtige organiske forbindelser og mellemstore partikler (PM_{10}).

Den procentuelle udledning er ikke et mål for skadevirkningen

Det skal bemærkes, at andelene ikke siger noget om den absolutte udledning i tons. Fx er udledningen af kuldioxid den største rent mængdemæssigt. Og endelig siger udledningsmængden alene heller intet om skadevirkningerne på miljøet, hverken lokalt, regionalt eller globalt.

Figur 60. **Transportens andel af samtlige nationale udledninger**



Anm. : For PM_{10} er der kun data for 2003.
Kilde: Danmarks Miljøundersøgelser.

Vejtransporten er den største bidragyder

Med undtagelse af SO_2 bidrager vejtransporten for samtlige stoffers vedkommende med langt den største del af transportens emissioner. I 2003 kom 93 pct. af emissionerne af kulilte (CO), 73 pct. af emissionerne af flygtige organiske forbindelser (NMVOC) og 93 pct. af emissionerne af kuldioxid (CO_2) fra vejtransporten.

Transporten udledte 12,8 mio. tons kuldioxid i 2003

I 2003 var udledningen af kuldioxid fra transporten 12,8 mio. tons, lattergas stod for 1,4 tusinde tons, NMVOC stod for 43,2 tusinde tons, svovldioxid stod for 2,2 tusinde tons, kvælstofilter stod for 77,5 tusinde tons, kulilte stod for 294,4 tusinde tons, mens partikler (PM_{10}) stod for 5,6 tusinde tons.

Fald i emissionerne fra vejtransport siden 1990

Emissionerne fra vejtrafikken er blevet reduceret siden 1990, dels pga. anvendelse af katalysator i nye, benzindrevne biler, dels som følge af brug af mere svovlfattig dieselolie fra 1990.

Katalysatorer siden 1990

Fra og med 1990 skal alle nye personbiler opfylde nye normer for udstødningsgassernes indhold af kvælstofilter, kulilte og kulbrinter. Normerne opfyldes i benzindrevne biler ved installering af katalysatorer, der ilter kulbrinter og kulilte til vand og kuldioxid, og reducerer kvælstofilter til frit kvælstof. Anvendelse af katalysatorer har betydet en væsentlig reduktion i transportens luftforurening af stoffer, jf. figur 61.

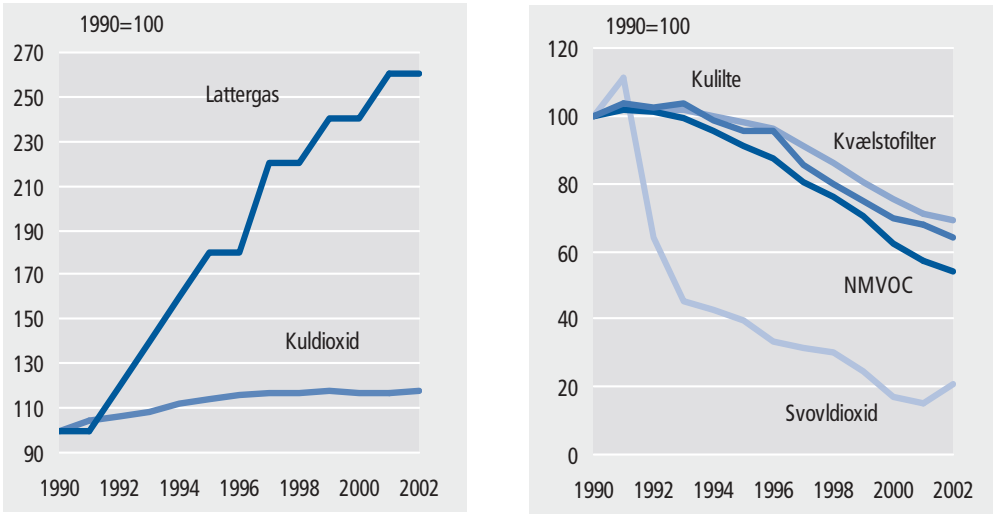
Søtransport har stor SO_2-emission

Søtransporten er kendetegnet ved en forholdsvis høj SO_2-emission, der skyldes et stort indhold af svovl i fuelolien. I 2003 kom 83 pct. af transportens emission af svovldioxid fra søtransport. Udslippet af svovldioxid fra den indenlandske søtransport var næsten fem gange så stort som udslippet fra vejtransporten i 2003. Årsagen til det store fald i det samlede udslip fra transporten, er bl.a., at det meste svovl i dieselolie er fjernet fra vejtransporten, fordi der er indført lovkrav om anvendelse af svovlfattige dieselolier i bilmotorer.

Jernbanerne har begrænset emissionen

Jernbaner giver et forholdsvis lille bidrag til emissionerne for transport og udledningen af svovldioxid er næsten ophørt efter anvendelse af svovlfattig diesel fra 1992-1993. Jernbanernes indirekte emissioner, som opstår i forbindelse med elproduktionen til el-drevne tog er dog ikke medregnet her.

Figur 61. **Emissioner fra transport**



Kilde: Danmarks Miljøundersøgelser.

Flere andre typer af samfundsmæssig aktivitet, fx inden for produktion og elforsyning bidrager også til væsentlige udledninger af de stoffer, der er fokuseret på her.

Luftkvaliteten i byerne

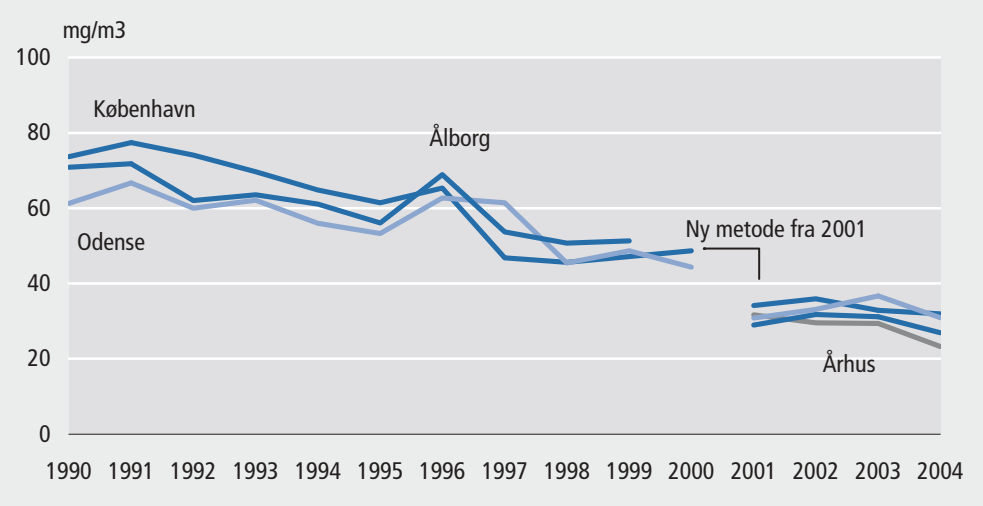
Markant forbedret luftkvalitet siden 1990

Målinger af luftforureningen i gadeniveau i København, Ålborg, Odense og Århus viser, at der er sket et markant fald i luftens indhold af skadelige stoffer siden 1990.

Indhold af partikler

Luftens indhold af partikler har udvist en faldende tendens fra 1990 til 2004 i både København, Ålborg og Odense (fra Århus siden 2001). Den årlige koncentration af partikler i luften har i alle fire byer ligget under den grænseværdi på 40 µg/m^3 (µg= milliontedel gram pr. kubikmeter), som er gældende fra 2005.

Figur 62. **Koncentrationen af partikler i byerne**



Anm : Der blev ikke foretaget målinger i Ålborg i 2000, Århus er først med fra 2001.
Kilde: Danmarks Miljøundersøgelser. Afdeling for Atmosfærisk Miljø.

I 2010 skal den årlige koncentration være nede på 20 µg/m^3. Det er primært dieseldrevne biler og busser samt ophvirvlet støv fra kørebanen, som sammen med brændeovne og støv fra byggeri er årsag til partikelforureningen.

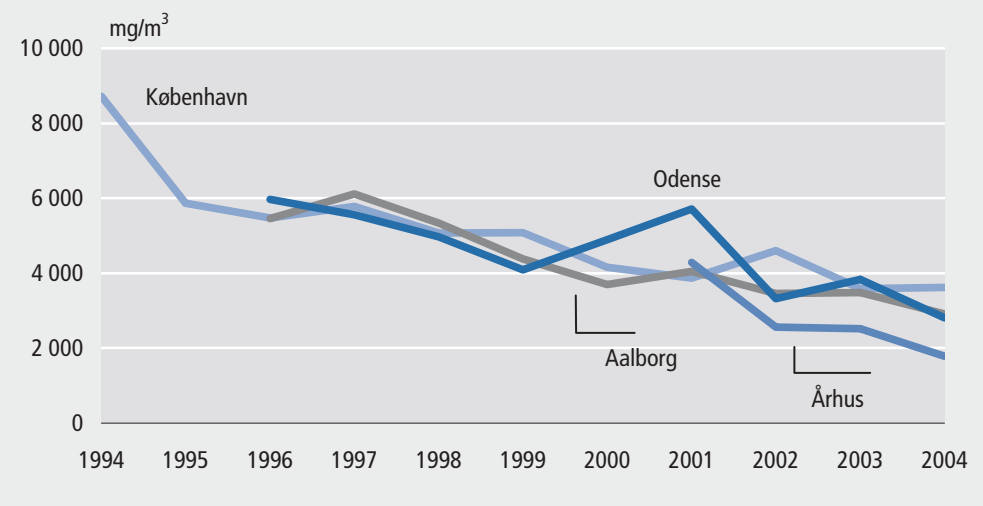
Benzen under grænseværdien

Vejtransport og opløsningsmidler er blandt de primære kilder til benzenudslip. Benzen findes i benzin og frigøres ved forbrænding i benzinmotoren. I 1996 gik man over til benzin med lavt benzenindhold. Fra 2010 må den årlige koncentration af benzen ikke overskride 5 µg/m^3. Denne grænseværdi har i de få år, hvor der har været foretaget målinger, kun været overskredet i København i 1998.

Ingen overskridelser af grænseværdien for kulilte

Kulilte (CO) er en giftig luftart, der primært udsendes fra benzinmotorer. Koncentrationen er højest i gader med høj trafiktæthed. Grænseværdien for kulilte i år 2005 er fastsat til 10.000 µg/m^3, opgjort som et 8-timers glidende gennemsnit.

Figur 63. **Koncentrationen af kulilte i byerne (højeste 8-timers glidende gennemsnit)**



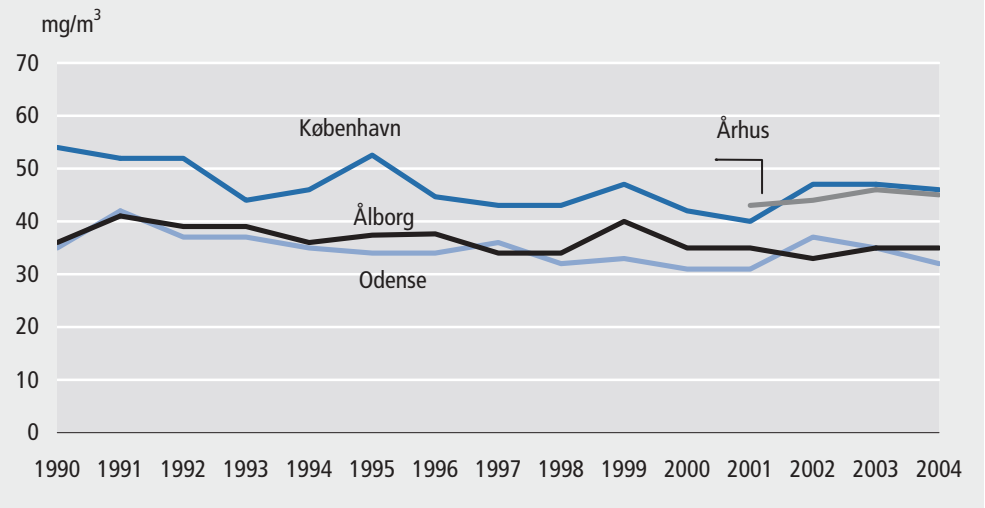
Kilde: Danmarks Miljøundersøgelser. Afdeling for Atmosfærisk Miljø.

For København, Århus, Ålborg og Odense har der ikke været tale om overskridelser af grænseværdien i perioden 1994 til 2004.

Katalysatorer har begrænset udslippet af kulilte

Indførslen af katalysatorer har betydet en væsentlig reduktion af kulilte. Udslippet af kulilte vil falde yderligere, efterhånden som gamle biler erstattes af nye med mere effektive katalysatorer. Det periodiske bilsyn, der indførtes i 1998 som følge af et EU-direktiv, er også en faktor til begrænsning af udslippet af kulilte.

Figur 64. **Koncentrationen af kvælstofdioxid i byerne**

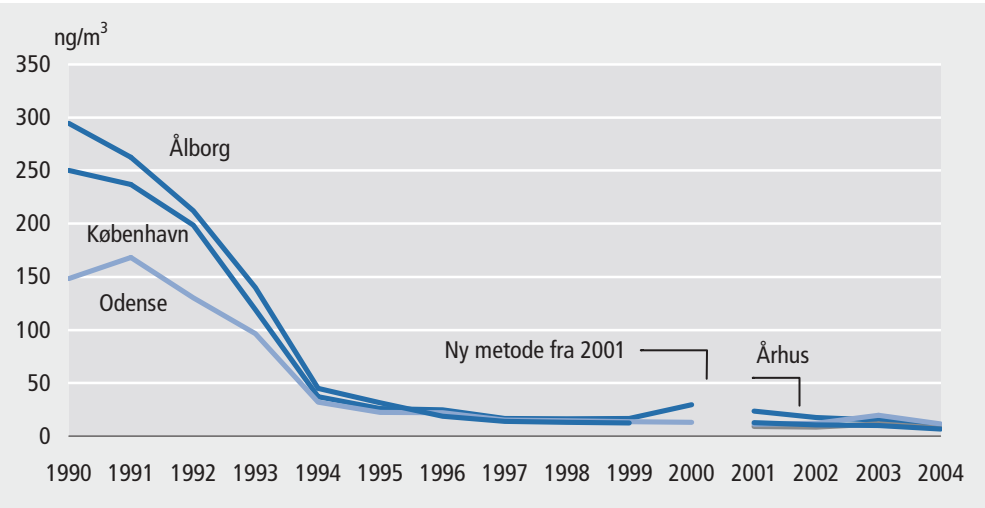


Anm.: Århus er med fra 2001.
Kilde: Danmarks Miljøundersøgelser. Afdeling for Atmosfærisk Miljø.

Grænseværdier for kvælstofdioxid over 2010-målet

Kvælstofoxider er fællesbetegnelsen for kvælstofilte og kvælstofdioxid. Kvælstofilte fra trafikkens udstødning reagerer med ozon og omdannes til kvælstofdioxid. Luftens indhold af kvælstofdioxid har udvist en faldende tendens siden 1990. I København og Århus var luftens indhold af kvælstofdioxid på hhv. 46 og 45 µg/ m^3 (milliontedel gram pr. kubikmeter) i 2004, hvilket på nuværende tidspunkt vil være over den grænseværdi for kvælstofdioxid, som er fastsat til 40 µg/m^3 i 2010.

Figur 65. **Koncentrationen af bly i byerne**



Anm. 1. Der blev ikke foretaget målinger i Ålborg i 2000 og Århus er med fra 2001.
Kilde: Danmarks Miljøundersøgelser. Afdeling for Atmosfærisk Miljø.

Ikke overskridelser for ozon

Ozon er en giftig luftart, der kan skade menneskers luftveje og plantevæksten, hvis den forekommer i store koncentrationer. Ved jordoverfalden stammer ozonen fra industri og trafik, men størstedelen af den ozon, der måles i luften i Danmark, stammer fra kilder uden for landets grænser, især fra det sydlige Europa. De største koncentrationer findes om sommeren i perioder med varmt og solrigt vejr. Koncentrationen af ozon har ikke overskredet de fastsatte grænseværdier.

Koncentrationen af bly er decimeret

Luftens indhold af bly er siden 1990 faldet med over 90 pct. i København, Ålborg og Odense som følge af et mindsket salg af blyholdig benzin. Efter 1994 sælges der ikke længere benzin tilsat bly i Danmark.

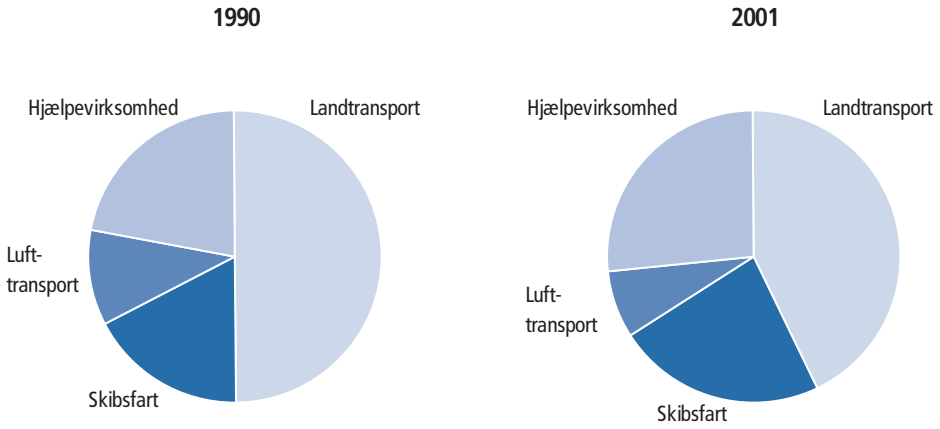
9. Transportens økonomiske udvikling og beskæftigelse

Transportsektorens bruttoværditilvækst

6 pct. af den samlede bruttoværditilvækst

Transportsektorens bruttoværditilvækst i løbende priser var i 2004 på 78 mia. kr., hvilket svarer til lidt over 6 pct. af hele økonomiens og 10 pct. af servicesektorens bruttoværditilvækst.

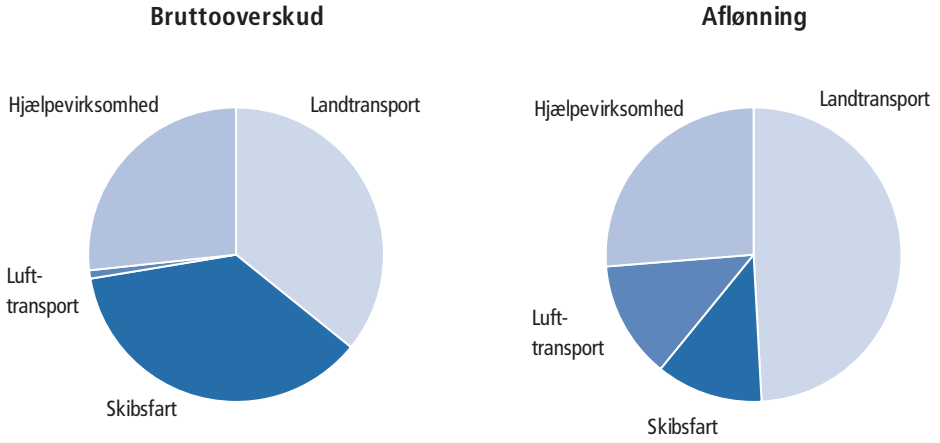
Figur 66. **Transportsektorens bruttoværditilvækst efter branchegrupper**



Vækst på 64 pct. fra 1990-2004

Opgjort i faste priser er transportsektorens bruttoværditilvækst vokset med 64 pct. fra 1990 til 2004. Fremgangen har især været betydelig fra sidste halvdel af 1990'erne, og den har navnlig fundet sted inden for skibsfart, hvor der er sket en specialisering i højteknologiske containerskibe og opkøb af udenlandske rederier, samt inden for hjælpevirksomhed. For vejtransport har der tilnærmelsesvis været stagnation.

Figur 67. **Transportsektorens bruttooverskud og aflønning af ansatte. 2001**



I 2001, som er det seneste år med opgørelser på detaljeret niveau, stod landtransport for 43 pct. af transportsektorens samlede bruttoværditilvækst, hvoraf fragtvognmandskørsel dækkede lidt over halvdelen. Skibsfart havde 23 pct. af sektorens

bruttoværditilvækst, lufttransport for 7 pct. mens godsbehandling og anden hjælpevirksomhed stod for 27 pct., mod hhv. 50 pct., 17 pct., 10 pct. og 22 pct. i 1990.

Transporterhvervets samlede produktionsværdi var i 2004 på 228 mia. kr. regnet i årets priser. Forbrug i produktionen til køb af råvarer og tjenester til anvendelse i produktionen samt udgifter til reparation og vedligeholdelse af kapitalapparatet udgjorde i alt 150 mia. kr., således at erhvervets samlede bruttoværditilvækst blev på 78 mia. kr.

Subsidier med fradrag af produktionsskatter beløb sig til 2 mia. kr. i 2004. Der blev herefter 40 mia. kr. til aflønning af ansatte og 40 mia. kr. til aflønning af selvstændige og til aflønning af kapitalapparatet samt til forbrug af realkapital (afskrivning).

Bruttoværditilvækstens andel af produktionsværdien har været aftagende fra omkring to femtedele i 1990 til en tredjedel i 2004. I samme periode er lønandelens andel af bruttoværditilvæksten reduceret fra tre femtedele til halvdelen. Udviklingen afspejler formentlig det øgede kapitalapparat i erhvervet.

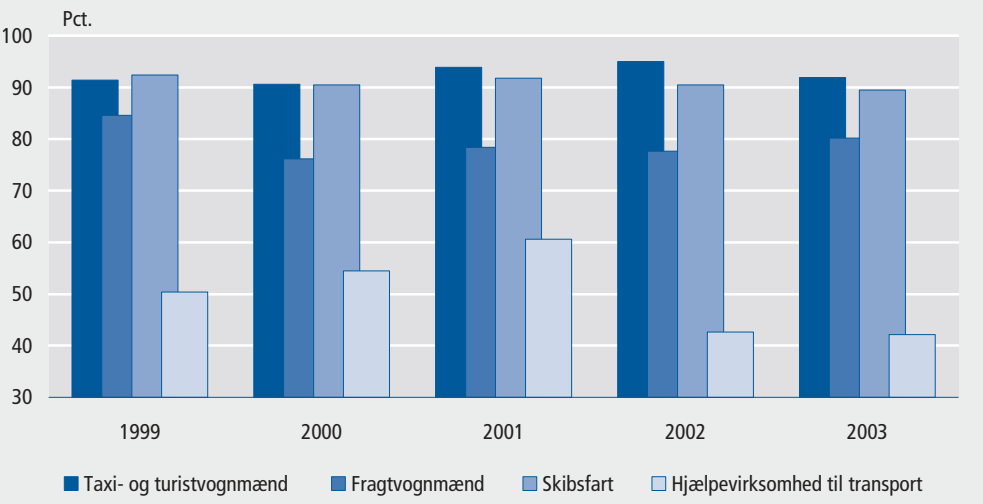
Regnskabsstatistik

For fire udvalgte transporterhverv, nemlig taxi- og turistvognmænd, fragtvognmænd og rørtransport, skibsfart samt hjælpevirksomhed til transport, kan man ud fra regnskabsstatistikken opstille nøgletal for erhvervenes indtægts- og omkostningsforhold. I det følgende vil tre nøgletal blive beskrevet.

Bruttoavance

Bruttoavancen, er bruttofortjenesten i pct. af omsætningen, hvor bruttofortjenesten er opgjort som omsætningen minus vareforbrug og køb af underentrepriser og lønarbejde, lå i perioden 1999-2003 omkring 90 pct. for brancherne taxi- og turistvognmænd og skibsfart, omkring 80 pct. for fragtvognmænd, mens den var væsentlig lavere for hjælpevirksomhed til transport, hvor den i perioden lå mellem 40-60 pct., jf. figur 68. Denne branche adskiller sig ved at have et langt højere vareforbrug mv. end de tre andre brancher. I vareforbrug mv. indgår bl.a. køb af transportydelser hos andre firmaer samt energiudgifter.

Figur 68. **Bruttoavance**

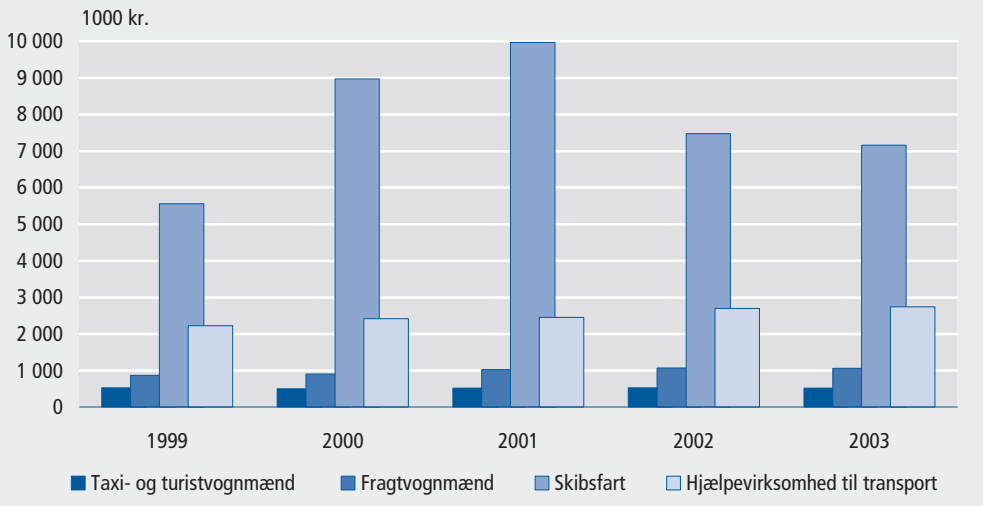


Omsætningen og andre driftsindtægter pr. beskæftiget

Omsætningen og andre driftsindtægter pr. beskæftiget, var i perioden 1999-2003 højst for skibsfart med 7 mio. kr. i 2003, næsthøjest for hjælpevirksomhed til transport med lidt under 3 mio. kr. i 2003 og lavest for brancherne taxi- og turistvognmænd og fragtvognmænd, var omsætningen og andre driftsindtægter pr. beskæftiget langt lavere, og lå i perioden 1999-2003 mellem 500.000 og 1 mio. kr. Dette afspejler forskelle i omkostningsstrukturen.

Mens omsætningen i taxi-, turist- og fragtmandsvognmands-branchen især skal dække arbejdskraftens aflønning, skal den mere kapitalintensive skibsfart også have dækket store omkostninger pr. beskæftiget til produktionsanlæg og maskiner, og hjælpevirksomhed til transport skal også have dækket store omkostninger pr. beskæftiget til vareforbrug fx brændstoffer.

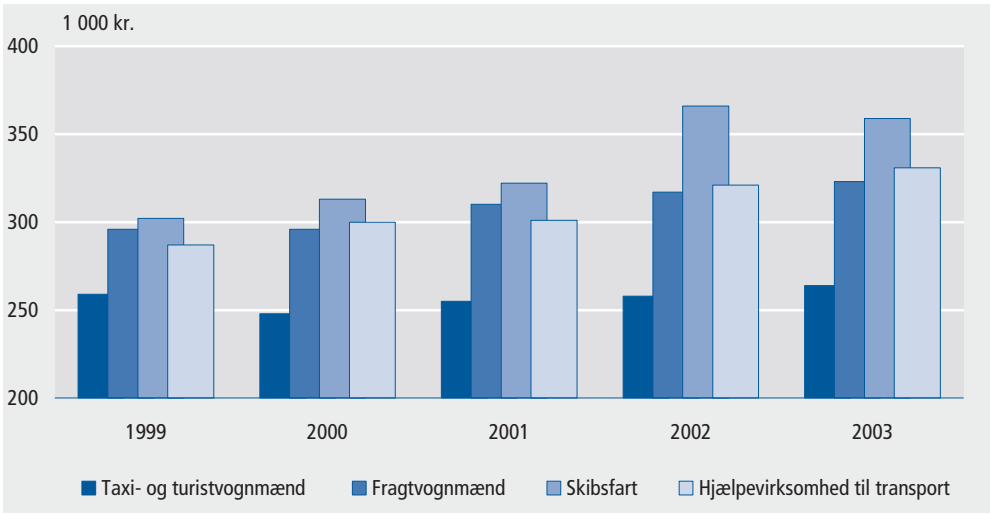
Figur 69. **Omsætning og andre driftsindtægter pr. beskæftiget**



Løn pr. ansat

For taxi- og turistvognmænd lå *lønnen pr. ansat* i perioden 1999-2003 omkring 250.000 kr., mens den for fragtvognmænd og hjælpevirksomhed til transport i samme periode lå på lidt højere niveau mellem 295.000-325.000 kr. For skibsfart var der tale om den højeste løn pr. ansat, med et niveau på 360.000 kr. i 2003, jf. figur 70.

Figur 70. **Løn pr. ansat**



Transportsektorens beskæftigelse

12.100 arbejdssteder og 132.200 beskæftigede

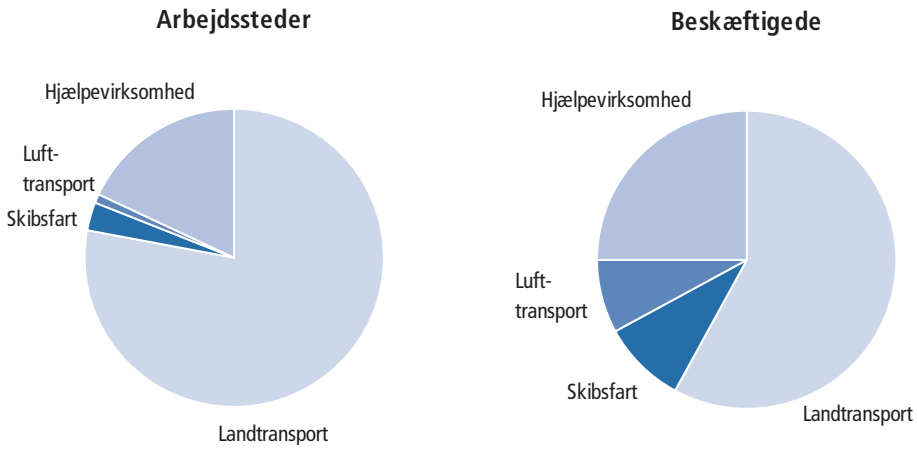
I 2003 var der 12.100 arbejdssteder med transport som hovedaktivitet. Disse arbejdssteder beskæftigede 132.200 personer, svarende til 5 pct. af den samlede beskæftigelse. 58 pct. af de beskæftigede inden for transportsektoren arbejdede ved landtransport, 25 pct. ved hjælpevirksomhed for transport, 9 pct. ved skibsfart og 8 pct. ved luftfart, jf. figur 71.

Små arbejdssteder inden for landtransport - store inden for lufttransport

Transportsektoren beskæftigede i 2003 gennemsnitligt 11 personer pr. arbejdssted. Landtransport og hjælpevirksomhed mv. havde relativt små arbejdssteder med gennemsnitligt 8 og 15 personer pr. arbejdssted, mens skibsfart og lufttransport

havde forholdsvis store arbejdssteder med gennemsnitligt hhv. 32 og 99 beskæftigede pr. arbejdssted.

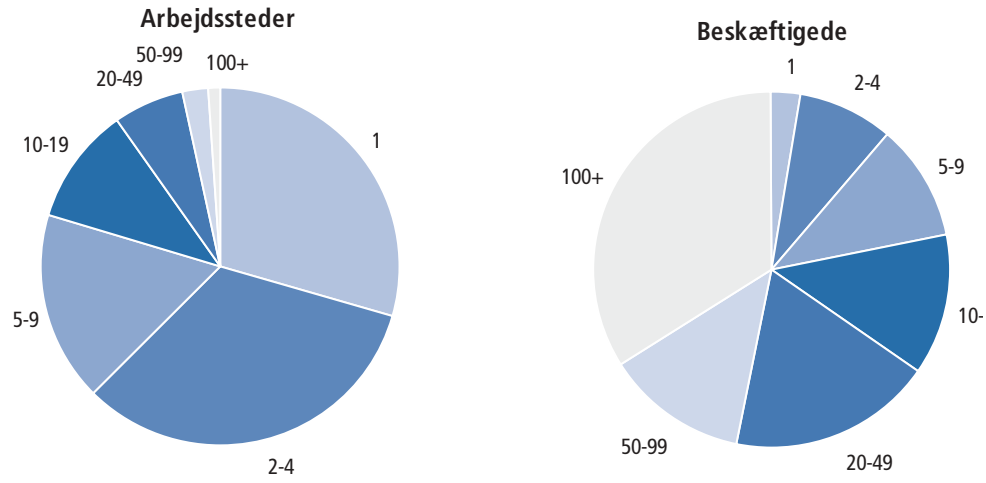
Figur 71. **Transportsektorens arbejdspladser og beskæftigede i 2003**



62 pct. af arbejdsstederne havde under 5 beskæftigede

Transportsektoren er generelt domineret af små virksomheder. 62 pct. af arbejdsstederne havde således under 5 beskæftigede, 17 pct. 5-9 beskæftigede og 20 pct. 10 eller flere beskæftigede i 2003. Kun 1 pct. af arbejdsstederne inden for transport havde 100 eller flere beskæftigede.

Figur 72. **Arbejdssteder og beskæftigede efter arbejdsstedets størrelse i 2003**



Men 78 pct. af de beskæftigede i transportsektoren var tilknyttet arbejdssteder med 10 eller flere beskæftigede, hvor den tilsvarende andel for hele økonomien var 86 pct.

Transport 2005

English version

Transport 2005

0. Scope of the transport statistics

Transport statistics

The transport field comprises all movements of means of transport, goods and passengers on the public networks of roads, railways, seaways, airways and pipelines. The transport statistics mainly illustrate physical transport activities in the form of volumes of traffic, freight and cargo volumes, passenger travel and transport performance. In this connection, also the infrastructure is described, that is, the transport network and the means of transport used. In addition, the transport statistics illustrate traffic-related energy consumption, environmental impacts and accidents.

Transport sector

This publication also includes surveys from the general business statistics on the economy and employment of the transport sector. The transport field is broader than the transport sector in the economic statistics defined as the sale of transport services and related services. The national accounts and the general economic business statistics thus do not count the transport activities of enterprises for their own account as part of the transport sector. The same applies to the transport activities of households.

1. Transport infrastructure

Investments in infrastructure

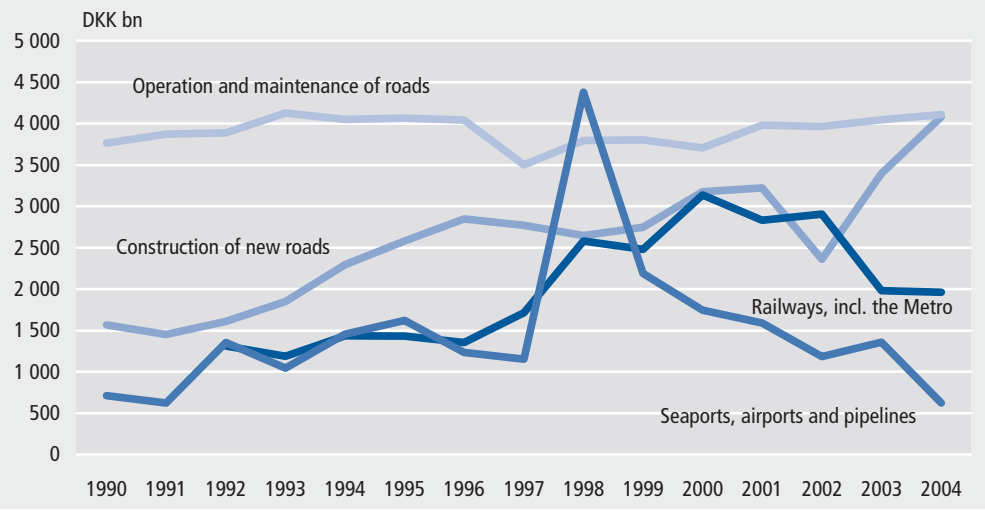
The Danish transport infrastructure consists of the road network, the railway network, pipelines, airports and seaports.

10 per cent of gross investments in buildings and plant in Denmark

In 2004, investments in the buildings and plant of the transport network amounted to about DKK 14 billion, or 10 per cent of Denmark's total gross fixed investments in buildings and plant. The investment expenditure fluctuates from one year to the next, cf. figure 1. In the period 1990-2004, investments in transport infrastructure averaged about DKK 11.5 billion annually at 1995 prices.

In the period 1990-2004, about half the investment expenditure on transport infrastructure was spent on the road network, one sixth on the railways, including the Copenhagen Metro, and one fifth on the Great Belt and Sound links.

Figure 1. **Investments in infrastructure at 1995 prices**



The marked increase in investments in airports, etc., in 1998 derived from renovation and expansion of Copenhagen Airport and increased investments in the new gas pipeline in the North Sea from the South Arne field to Nybro. The increased investments in railways from 1997 are mainly due to construction of the Copenhagen Metro.

Road network

Public road network increased by 2 per cent since 1990

At 1 January 2005, public roads in Denmark totalled 72,257 km, comprising 84 per cent municipal roads, 13 per cent county roads and 2 per cent state roads. Private common roads are estimated at 15,000 km. The road network distribution between state and counties changed at 1 January 1998, when about 2,900 km of state roads were transferred to county management.

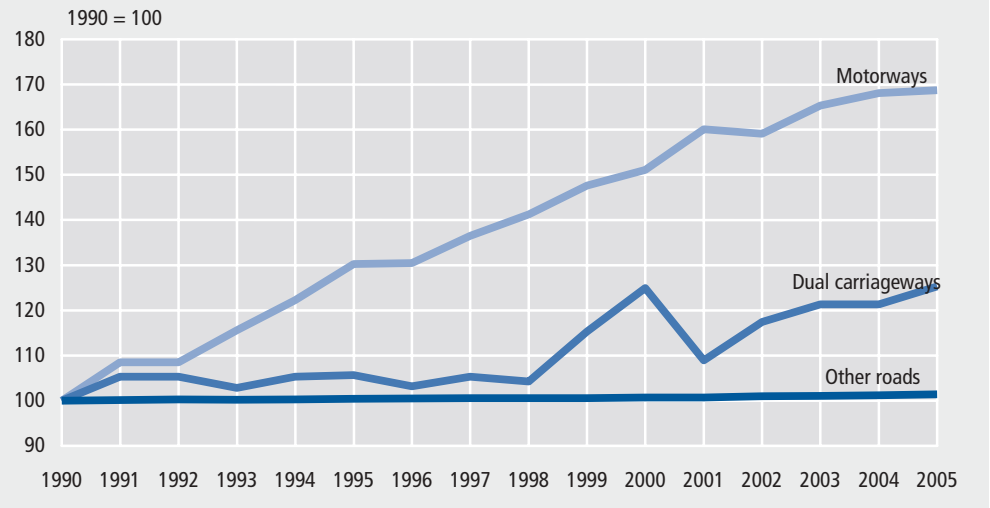
Net increase in municipal roads

The public road network grows slowly. Since 1990, its length has increased by 2 per cent, that is, almost 1,500 km. The increase has primarily been achieved by a net increase in municipal roads of more than 1,700 km. At the same time, the overall network of motorways and dual carriageways has been expanded by 500 km of new roads or expansion of existing roads. By contrast, the remaining state and county roads are more than 700 km shorter than in 1990.

Big increase in motorways and dual carriageways

The motorway network increased by 420 km or 69 per cent from 1990 to 2005. It now consists of 1,031 km of roads, corresponding to 1.5 per cent of the road network. During the same period, dual carriageways were increased by 71 km or 25 per cent to 352 km in January 2005.

Figure 2. **Length of road network at 1 January. 1990-2005**



10 per cent of the public road network is located in the Copenhagen area, 25 per cent on the islands other than the Copenhagen area, and the remaining 65 per cent in Jutland. The road network has been expanded evenly across Denmark. By contrast, the motorway network has particularly been expanded in the North Jutland, Ribe, Aarhus and Vejle Counties.

1.68 km of road per km²

Denmark had 1.68 km of public road per km² at 1 January 2005. The road density per km² was highest in the Copenhagen area with 2.47 km per km² and lowest in Viborg County with 1.35 km per km². If the road length is calculated per inhabitant instead, South Jutland County had the highest road density with 27 m per inhabitant, while the Copenhagen area had the lowest, with 4 m of road per inhabitant.

Railway network

2,644 km of railway network

At 1 January 2005, the total railway network extended over 2,644 km. Most of it, 2,132 km, is managed by Banedanmark, formerly the Danish National Railway Agency *(Banestyrelsen)*. The remaining network of 495 km mainly belongs to the regional railway companies (formerly the private railway companies). The Copenhagen Metro, which opened in 2002, has 17 km of railway.

Fewer km of goods railway

Since 1990, the railway network has been reduced by almost 200 km, mainly due to closure of goods railway sections of the Banedanmark network.

24 per cent of the railway network is electrified

At 1 January 2005, 636 km of the railway network were electrified, corresponding to 24 per cent of the total railway system.

82 per cent of the railway network has automatic train control

82 per cent of the total railway network is now equipped with automatic train control (ATC). 87 per cent of Banedanmark's network had ATC. The regional and S-train railways were fully equipped, while 92 per cent of the main railways and 79 per cent of the local railways had ATC. At the beginning of 2005, 61 per cent of the private railways were equipped with ATC.

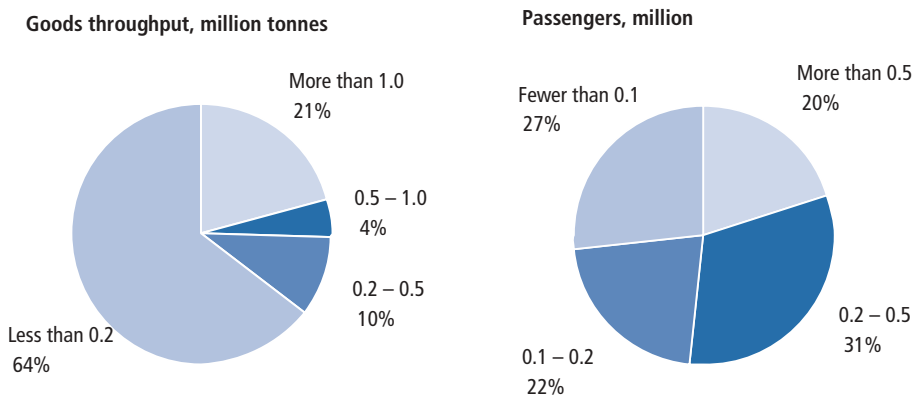
Denmark has 61 km of railway per 1,000 km^2. Compared with Sweden and Norway, the Danish state-owned railway network is two and four times as dense, respectively, but compared with most other European countries, the density of the Danish railway network is somewhat lower.

Seaports

119 seaports

In 2004 Denmark had 119 seaports, including separate ferry berths, in regular use for commercial handling of goods, vehicles or passengers. Other seaports only used occasionally for the loading or unloading of goods or passengers or exclusively used as fishing ports or yacht ports are not included in the transport statistics.

Figure 3. **Seaports by size. 2004**



Goods throughput concentrated on 25 seaports

Goods were loaded or unloaded at 118 seaports. However, most of them handled less than 0.2 million tonnes per year, cf. figure 3. The goods throughput is concentrated on the 25 largest ports handling at least 1 million tonnes per year. In 2004, 89 per cent of the total goods throughput of ports was handled by these ports.

Danish seaports relatively small

On a European scale, the Danish ports are relatively small. According to Eurostat, the 20 largest European ports each handled more than 30 million tonnes of goods per

year, while the two largest Danish ports, Fredericia Port and Aarhus Port, handle 17 and 10 million tonnes of goods per year, respectively (2004).

Passenger traffic concentrated on 11 seaports

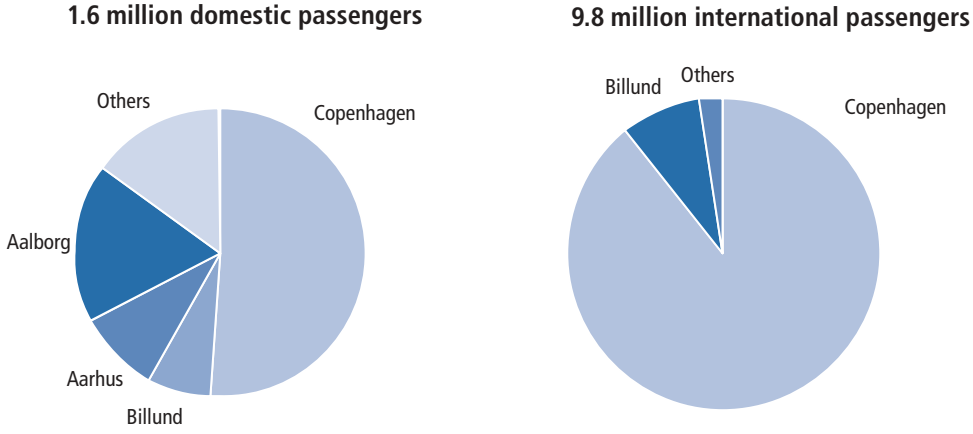
74 seaports had regular passenger services. Most of them had fewer than 0.5 million passengers per year, cf. figure 3. 11 ports, each with more than 1 million passengers, accounted for 73 per cent of the total number of passengers of the seaports.

Airports

23 manned airports

In 2004, Denmark had 23 public, manned airports, down from 28 in 1990. The Copenhagen and Roskilde Airports is a state-owned limited company. Bornholm Airport is operated by the state. The other provincial airports are operated by the local authorities. At the beginning of 2005, the 23 airports had a total of 36 runways, 11 of which were grass runways. At the beginning of 2005, 9 airports had runways of at least 1,800 metres and were thus capable of handling large aircraft.

Figure 4. **Airports by departing passengers. 2004**



International traffic via Copenhagen

Copenhagen Airport is by far Denmark's largest international airport. In 2004, 93 per cent of passengers on scheduled international flights departed from Copenhagen Airport, and 59 per cent of international charter passengers departed from Copenhagen. The remaining passengers on international scheduled and charter flights mainly used Billund Airport in Jutland.

Domestic traffic to and from Copenhagen

Practically all domestic traffic goes to or from Copenhagen Airport, which therefore has half the total number of domestic passengers. Concerning domestic flights, Aalborg and Aarhus were the largest provincial airports in 2004 with just over one quarter of the passengers on domestic scheduled flights.

In terms of the number of passengers, Copenhagen Airport was the 14th largest airport in the European Union in 2003.

Pipelines

DONG A/S owns and operates pipelines in the North Sea

DONG A/S, Dansk Olie- og Naturgas, owns the system of high-pressure transmission pipelines transporting most of the oil produced from the Gorm field in the North Sea across Jutland to the crude oil terminal at Fredericia via Filsø pump station on the west cost of Jutland. DONG also owns and operates the system of high-pressure transmission pipelines which has carried gas since 1982, first from the Tyra field, and from 1999 also from the Harald and South Arne fields in the North Sea via Nybro gas treatment plant at the west coast of Jutland to the nodal point at Egtved, from where the gas is distributed to the regions. The gas is redistributed from there to the Danish

end users in a low-pressure network consisting of about 17,000 km of distribution pipeline.

Gastra A/S owns and operates the landbased gas pipelines

Since 2003, the state-owned Gastra A/S has owned and operated the landbased gas transmission network, while DONG A/S still owns and operates the marine pipelines in the North Sea until Nybro. DONG also owns half of the gas pipeline which has connected the Tyra field with the Netherlands since 2004.

330 km of oil pipeline

The oil pipeline was constructed in 1982/83. It is 330 km long, 220 km of which is in the North Sea.

1,473 km of gas pipeline

The gas transport pipeline system consists of the North Sea pipelines of 576 km and the landbased transmission and distribution network of 862 km, including the pipelines under the Great and Small Belts. The 35 km of the pipeline located on the Danish continental shelf and leading to the Dutch pipeline system has also been included since 2004.

2. Means of transport

Road vehicles

Growth in number of road vehicles from 1990 to 2005

30 per cent growth in number of road vehicles from 1990 to 2005

The number of road vehicles passed 2.5 million units in 2005. That is 586,000 vehicles or 30 per cent more than in 1990. The number of private cars grew by 318,000 (54 per cent of total road vehicle growth), while there were 141,000 more vans (24 per cent of the growth). The number of mopeds 45 (mopeds with a maximum speed of 45 km/h) and motorcycles grew by 119,000 units (20 per cent of the growth).

The number of other vehicles passed 900,000 units in 2005. That is 341,000 vehicles or 60 per cent more than in 1990. The number of small trailers up to a gross vehicle weight of 2,000 kg rose by 352,000 units, while the number of caravans rose by 31,000. Since 1990, the number of tractors has fallen by 66,000 units.

Table 1. **Number of road vehicles in Denmark. 1 January 1990-2005**

	1990	1999	2001	2003	2005	1990 -2005
	1,000 units					%
Vehicles, total	**2 511.1**	**3 025.7**	**3 175.9**	**3 298.5**	**3 438.1**	**36.9**
Motor vehicles, total	**1 943.3**	**2 302.0**	**2 392.5**	**2 456.7**	**2 529.6**	**30.2**
Private cars	1 598.0	1 817.1	1 854.1	1 888.3	1 915.8	19.9
Buses	8.0	13.9	14.0	14.0	14.2	76.7
Vans	247.6	308.9	335.7	353.6	388.8	57.0
Lorries 3,501-6,000 kg	5.6	5.1	4.6	4.0	3.6	-35.9
Lorries 6,000 kg and over	34.5	33.2	33.0	31.7	30.7	-11.1
Road tractors for semi-trailers	6.3	10.5	11.6	12.4	13.0	108.1
Motorcycles	43.3	64.0	73.7	82.7	94.8	119.2
Mopeds 45	•	48.1	64.6	68.6	67.3	•
Fire and rescue vehicles[1]	…	1.2	1.3	1.3	1.3	•
Other vehicles, total	**567.9**	**723.7**	**783.4**	**841.8**	**908.5**	**60.0**
Semi-trailers	14.5	23.2	24.2	25.6	28.1	93.5
Trailers	289.4	473.3	531.3	589.2	651.3	125.0
Tractors	174.0	122.3	119.0	113.7	107.7	-38.1
Caravans	89.9	104.9	108.9	113.3	121.4	35.0

[1] Only vans and lorries.

First-time registrations of vehicles 1990-2005

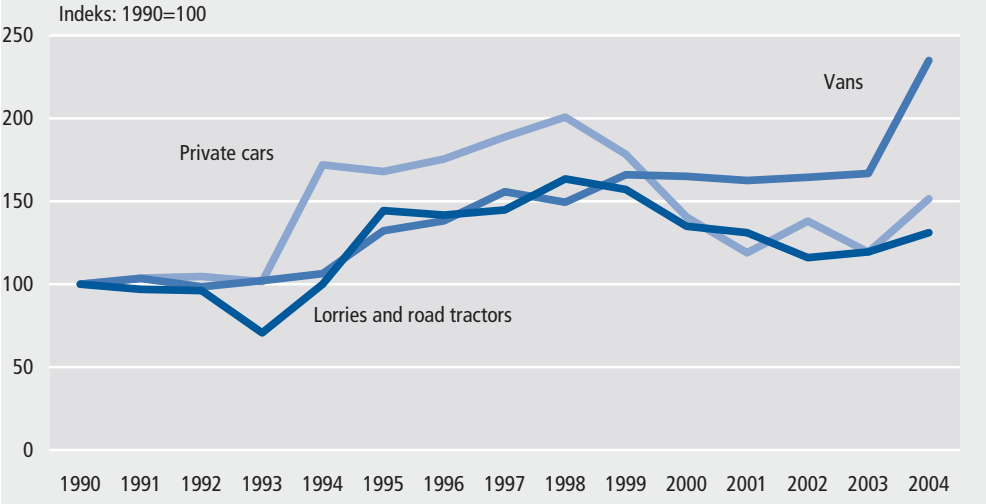
Development determined by car imports/exports and by scrapping

The development in the number of vehicles over a period is calculated as the net result of imports of new and second-hand cars less the scrapped or exported cars.

First-time registrations gathered speed in 1994

In the early 1990s, the imports of new and second-hand cars largely matched the number of scrapped and exported cars – numbers only increased slowly – but from 1994 to 1995, the number of first-time registrations rose steeply, and vehicle numbers started increasing somewhat faster.

Figure 5. **First-time registrations of private cars, vans and lorries 1990-2005**



Private cars

The most striking development is related to private cars with sales rising from an annual level of 80-90,000 cars from 1988 to 1993 to more than 130,000 new cars in 1994. With 1998 representing peak sales of just over 160,000 cars, sales remained at this level until 1999. From mid-1999, private car sales fell to an annual level of about 100-110,000 cars, but from early 2003, sales rose again and will reach 140-150,000 cars by 2005.

Since the 1960s, sales of private cars have moved in cycles peaking every 10 to 12 years and remaining high for 3 to 5 years. To some extent, this cyclical movement reflects the normal life of the vehicles, but the economic trends and various political measures have also played a part in increasing or reducing the consumption potential of private households and the propensity to invest of business and industry.

Vans

As for private cars, sales of new vans were low at 17-20,000 vans per year from 1988 to 1993, but from 1994 sales rose in the course of a few years to about 30-32,000 vans and remained at this level until 2003. In 2004, sales rose even more, one of the reasons being that an increasing number of households buy vans for private use.

Lorries and road tractors

Sales of lorries and road tractors dived in 1993 to somewhat under the level of the preceding years, only to double to more than 5,000 units from 1995 to 1999. From 2000, sales have remained at 4,100-4,800 units. However, trends for the two types of lorry have differed, with a rising proportion of road tractors and a decreasing proportion of lorries.

Private cars

20 per cent more private cars than in 1990 ...

At the beginning of 2005, the car register comprised 1,916,000 private cars, which is 20 per cent or 318,000 more cars than in 1990, largely all for personal use.

... and they have become heavier

While 35 per cent of private cars had an unladen weight of up to 800 kg in 1990, this only applied to 8 per cent in 2005. Conversely, cars in the weight group of 1,001-1,500 kg now make up 56 per cent of cars as against 22 per cent in 1990.

10 per cent run on diesel

The proportion of diesel cars has more than doubled since 1990, although it is still only at 10 per cent. If the current share of about 25 per cent of the new car sales remains the same, the diesel share will rise further in the coming years. The other private cars run on petrol.

Shift in age distribution from 1990 to 2005

While the average age has only risen slightly, the age distribution of private cars in 2005 is rather different from that in 1990. In 1990, 38 per cent of the cars were less than 5 years old, which only applied to 27 per in 2005. By contrast, 28 per cent were 5-9 years old in 1990, which applied to 36 per cent in 2005. The shifts in the age distribution are related to the cyclical movements in the first-time registrations, and 1990 came only about two years after a peak period, while 2005 comes 8-9 years after a peak.

More people have a car at disposal ...

The number of cars corresponded to 354 cars per 1,000 inhabitants in 2005 compared with 310 in 1993, a 14 per cent increase. The differences in the number of people having a car at disposal and the number of cars per 1,000 inhabitants between counties and municipalities were attributable to demographical differences of age, income and family types, differences in the business and industry structure in terms of localisation of enterprises and commuting patterns as well as geographical differences of urbanity and public transport coverage. Substantially fewer people in the municipalities of Copenhagen and Frederiksberg had a car at disposal.

... but the geographical distribution remains the same

Even though the growth has not been quite even over the period, the 2005 distribution of private cars between counties and regions is largely the same as in 1992.

Buses

Large growth in buses since 1990

At the beginning of 2005, there were 14,200 buses, about 6,200 more than in 1990. By far most of the growth consisted of small buses with a gross vehicle weight of up to 5,000 kg and 12 or fewer passenger seats, while the rest consisted of the largest buses with 60-79 seats.

1/3 of buses for scheduled services, 2/3 tourist coaches

The entire growth from 1990 to 2005 was registered as tourist coaches, and therefore buses for this use constituted two thirds of buses in 2005 compared with one third in 1990. Conversely, buses in scheduled services saw a reduction to one third of the total number of buses, although their number remained the same.

Buses run on diesel

88 per cent of buses ran on diesel in 2005 as against 99 per cent in 1990. Particularly the growth in the number of small buses has changed this percentage, as a fairly large proportion of them run on petrol. Fewer than 250 buses run on gas.

0.5 million passenger seats in buses

38 per cent of the buses have 50 or more passenger seats, while 54 per cent have fewer than 20 passenger seats. The total capacity was 510,000 passenger seats at the beginning of 2005, which is 18 per cent or 76,000 seats more than in 1990.

Older buses in 2005 than in 1990

The average age of buses in 2005 was 9.3 years. In 1990, 34 per cent of buses were less than 5 years old, which only applied to 25 per cent in 2005. Conversely, the share of buses more than 10 years old rose from 30 per cent in 1990 to 48 per cent in 2005.

Vans

Big increase in number of vans ...

There were 388,800 vans at the beginning of 2005, which is 57 per cent more than in 1990. This growth covers a large increase for vans with a gross vehicle weight of more than 1,500 kg and a decrease for lighter vans.

75 per cent of the vans run on diesel.

... and big increase in load capacity

The total load capacity was 374,700 tonnes in 2005, corresponding to a 115 per cent increase since 1990.

No change in average age

The average age of vans was 7.1 years in 2005. As for private cars, the first-time registration activity was high in the late 1980s, low in the early 1990s and high in the late 1990s. The 0 to 4-year-old vans made up 54 per cent of the total number in 1990, 34 per cent in 1995, and 42 per cent in 2005.

Lorries and road tractors for semi-trailers

Fewer small lorries ...

At the beginning of 2005, there were 3,600 small lorries (gross vehicle weight of 3,501-6,000 kg), 36 per cent fewer than in 1990. 44 per cent of the lorries had a gross vehicle weight of 5,001-6,000 kg, and 56 per cent a gross vehicle weight of 4,001-5,000 kg. Hardly any lorries had a gross vehicle weight of 3,501-4,000 kg.

The total load capacity of the small lorries was 7,800 tonnes in 2005, a 31 per cent decrease on 1990.

The average age of the small lorries was 9.1 years in 2005. The stock of these lorries was mainly renewed between 1998 and 2000. Otherwise, the age distribution is the same as for vans.

... and also fewer large lorries ...

At the beginning of 2005, there were 30,700 large lorries with a gross vehicle weight of 6 tonnes and over, that is, 11 per cent fewer than in 1990.

... but to make up for it they have become so much bigger ...

The reduced number has been compensated for by larger and heavier vehicles with a larger load capacity. As an example, the share of vehicles with three or more axles grew to 43 per cent of the total number in 2005 compared with 33 per cent in 1990.

... that the total load capacity has increased

The increase in the load capacity of the vehicles was sufficient to generate a 3 per cent increase in the total load capacity from 1990 to 2005, to a total of 288,500 tonnes.

Older vehicles in 2005 than in 1990

The lower growth in the number of new lorries during the period has resulted in an upward shift in the age distribution. The newest vehicles less than 5 years old thus only made up 33 per cent of all lorries in 2005 compared with 52 per cent in 1990, while vehicles older than 9 years made up 30 per cent of the all lorries in 2005 compared with 20 per cent in 1990.

Large increase in road tractors ...

While the number of lorries fell, the number of road tractors more than doubled from 1990 to 2005, when the number reached more than 13,000 vehicles.

90 per cent were used for road haulage (contractors for the account of others), while the rest were used by enterprises for their own account.

... results in a quite low average age ...

In 2005, the average age for road tractors was 4.2 years. Due to the large number of first-time registrations in recent years, 68 per cent of road tractors are less than 5 years old.

... and heavier and larger vehicles

Also the road tractors have become heavier and larger. The higher gross vehicle weights have made it possible to attach heavier semi-trailers.

Road tractors have gained on lorries

The trend for lorries and heavy trailers compared with the trend for road tractors and semi-trailers shows a clearly bigger preference in the transport sector for the more flexible transport mode of the road tractor/semi-trailer combination. In 2005 road tractors thus constituted 30 per cent of the total number of road tractors and heavy lorries as against 15 per cent in 1990.

Trailers and semi-trailers

Big increase in number of small trailers ...

The small trailers (trailers with a gross vehicle weight of 2,000 kg or less) more than doubled in number from 1990 to 2005 to 628,000 units, which also made up 96 per cent of all trailers. The vast majority of them are in private use, and in Denmark as a whole, every sixth family had a small trailer in 2005.

... but also of large trailers ...

There were 23,500 trailers with a gross vehicle weight exceeding 2,000 kg (mainly for commercial use) in 2005 as against 13,300 in 1990.

... and 95 per cent higher load capacity

The total load capacity of small and large trailers was 449,000 tonnes at the beginning of 2005, almost twice the load capacity in 1990. Trailers with a gross vehicle weight of 2,000 kg or less account for 58 per cent of the load capacity, while trailers with a gross vehicle weight exceeding 16,000 kg (slightly over 1 per cent) account for 30 per cent.

Big increase in number of semi-trailers ...

There were 28,100 semi-trailers at the beginning of 2005 as against 14,500 in 1990, an increase of 93 per cent. Most of the vehicles (83 per cent) had a gross vehicle weight exceeding 35 tonnes. The total load capacity doubled from 1990 to 2003 to a total of 743,700 tonnes.

... one of the reasons being standardisation

The growth in the number of semi-trailers for swap bodies or container transport also reflects the radical standardisation within the transport chains, ensuring rapid and safe transport.

Semi-trailers have become younger

With 54 per cent of semi-trailers less than 5 years old in 2005 compared with 43 per cent in 1990, and 17 per cent over 10 years old today compared with 34 per cent in 1990, semi-trailers have become somewhat younger since 1990.

Other vehicles

Fewer tractors ...

At the beginning of 2005, the number of tractors was 107,700 as against 138,100 in 1990. 90 cent of the tractors were not registered in 2005, but only approved for limited transport on public roads.

... but higher productivity

However, the increased unladen weight – 66 per cent of the tractors had an unladen weight of 3 tonnes or more in 2005 compared with 45 per cent in 1992 – indicates that the machines have become stronger and more efficient. So the reduction in number has been compensated for by the higher productivity of each vehicle.

High average age

In 2005, the average age for tractors was 17.9 years, and 70 per cent of the tractors was 10 years old or more.

Rise in the number of caravans ...

The caravan stock numbered 121,400 units at the beginning of 2005, 31,500 or 35 per cent more than in 1990. 62 per cent of the caravans were registered in Jutland.

... and they have become bigger ...

In 1990, 81 per cent of the caravans had a gross vehicle weight of up to 1,000 kg, but this only applies to 45 per cent of the current caravans, 55 per cent of which have a gross vehicle weight of 1,000 kg or more.

... and slightly older

The age distributions in 1990 and 2005 show that the caravans have become slightly older. In 1990, 29 per cent of the caravans were 0-4 years old compared with 22 per

cent in 2005, while the percentage of caravans 10 years old or more grew from 55 to 59.

Big increase in number of motorcycles ...

At the beginning of 2005, there were 94,800 motorcycles as against 43,300 in 1990, up by 119 per cent. The small motorcycles up to 150 kg constitute a somewhat smaller share today than in 1990, while motorcycles with an unladen weight of 151-250 kg now constitute a larger share – 72 per cent.

... and the old ones do not disappear

In 2005, 58 percent of the motorcycles were more than 14 years old, while this only applied to 30 per cent in 1990. In 2005, the average motorcycle was an aged machine 21.2 years old.

New vehicle on Danish (county) roads

The moped 45 was introduced on the Danish market in 1994. These light vehicles, largely all with an unladen weight of up to 100 kg and inexpensive to run, were registered in large numbers until about 2001, but since then the figure has stabilised at around 67-68,000 vehicles. The mopeds 45 have been relatively more popular outside the large towns and west of the Great Belt.

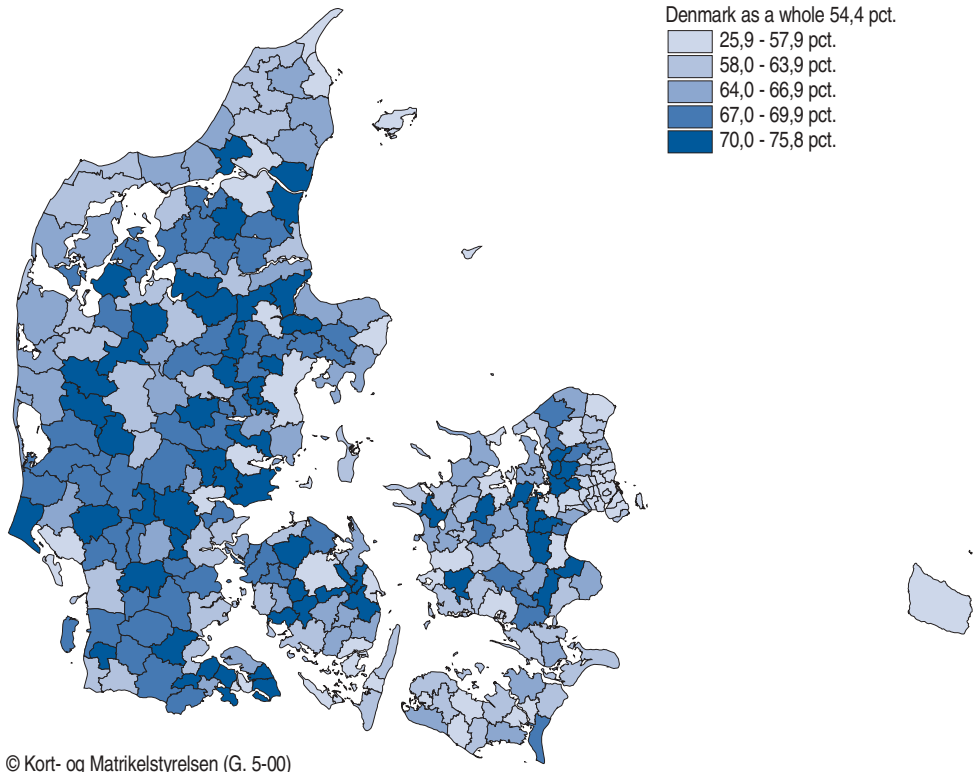
Families with car at disposal

The use concept

A family has a car at disposal when one or more of the following criteria are satisfied:

- One or more family members own one or more private cars
- One or more family members own a van for private goods transport, or
- One or more family members have the use of a company car.

Figure 6. **Families with a car at disposal at 1 January 2005**



Main characteristics relating to cars at disposal in 2000 and 2005

Moderate increase in the number of families with use of a car ...

The number of first-time registrations of private cars and vans for the period 1999-2004 was somewhat smaller than in the 1990s, and the number of families with a car at disposal has therefore increased moderately in recent years. While 1.49 million families or slightly under 52 per cent of all families had a car at disposal at 1 January 2000, 1.58 million families had a car at disposal at 1 January 2005, slightly over 54 per cent of all families.

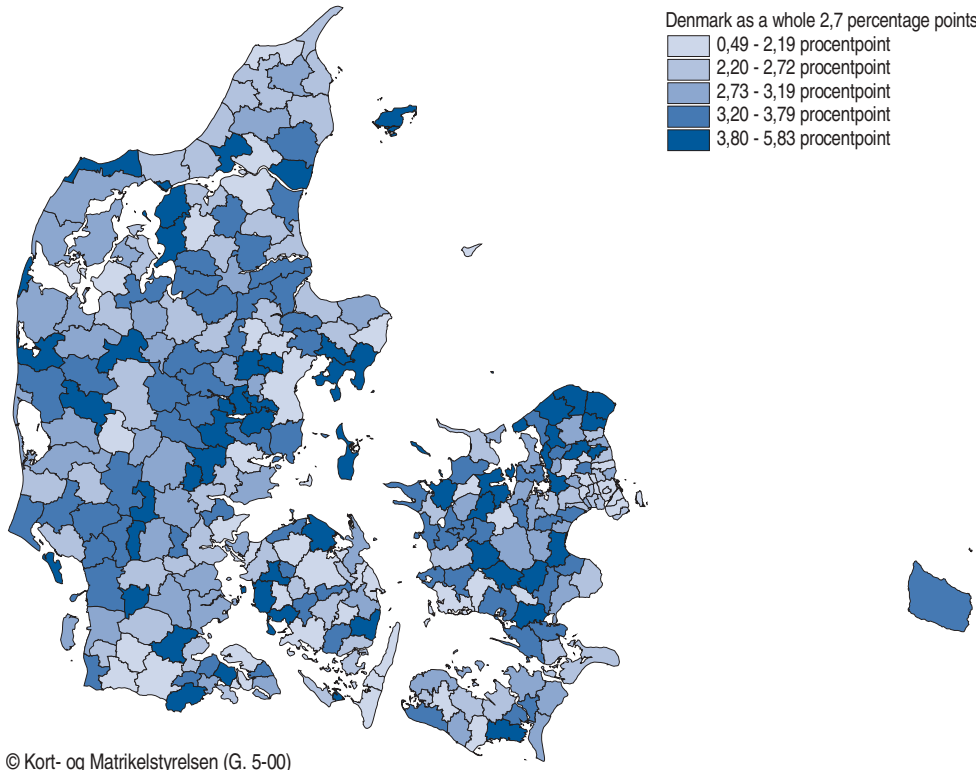
... but a slightly larger increase in the number of families with several cars

In relative terms, the development has been somewhat more pronounced for families with several cars at disposal. While 251,000 families or slightly fewer than 9 per cent of all families had several cars at disposal on 1 January 2000, 273,000 families or slightly over 9 per cent of all families had several cars at disposal in 2005.

Most families with use of car in Jutland ...

According to the map, the percentage of families having the use of a car in Jutland and on Funen is highest in the suburban municipalities of the major cities (Odense, Aarhus, Aalborg, Randers, Esbjerg, Herning, Silkeborg, Vejle, Sønderborg, etc.), while on Zealand it is highest in the municipalities around Roskilde, south of Køge and in West Zealand. In these municipalities, 70 per cent or more of the families have a car at disposal.

Figure 7. **Increase in number of families with a car at disposal at 1 January, 2000-2005**



... but the growth was highest on Zealand

Although the general growth of 2.4 percentage points from 2000 to 2005 in the proportion of families with the use of a car is moderate, the picture varies greatly from one municipality to the next. The high growth on Zealand and in eastern, mid- and south-western Jutland outside the major cities is characteristic, and it probably reflects an increased preference for using the car for commuting between country and city.

Family characteristics and cars at disposal

Different years for the family backgrounds

The family characteristics in terms of type of family date from 1 January 2005, while the data on income, employment, housing and education only date from 1 January 2004.

Couples and families with children more frequently have the use of a car

The various types of families with a car at disposal differ markedly. While 85 per cent of couples had a car in 2005 (82 per cent in 2000), the same only applied to 30 per cent of singles (26 per cent in 2000).

The differences are almost as pronounced for families with children compared to families without children. While 80 per cent of families with children had a car in 2005 (79 per cent in 2000), the same only applied to 47 per cent of the families without children (44 per cent in 2000).

High-income families more frequently have the use of a car and vice versa

Over the entire period, there is a clear correlation between income and disposal of a car; the higher the income, the more frequent the disposal of a car. The spread in the frequency of the use of a car in 2000 went from 38 per cent for the quarter of families with the lowest equivalence weighted incomes (under DKK 69,000) to 74 per cent for the quarter of the families with the highest equivalence weighted incomes (over DKK 331,000). In 2004, the percentage for the families with disposal of a car had dropped to slightly under 37 for the lowest quarter (under DKK 80,000), while for the top quarter (over DKK 391,000) the percentage had risen to 78.

People in employment more frequently have the use of a car than those without employment

The spread is also quite pronounced when it comes to the families with disposal of a car in relation to the employment/socio-economic classification of the family. There is a clear demarcation line between those in employment (and having an income), and those without. In 2000, 64-74 per cent of families in employment (self-employed and employees) had disposal of a car, while in 2004 they made up 67-75 per cent. In 2000, 32 per cent of families without employment had disposal of a car, while the figure in 2004 was 33 per cent.

Highest car frequency in families with owner-occupied homes (farm houses and detached houses)

The number of families with disposal of a car in relation to the family home varies with home ownership or tenancy, and with the actual type of home. The number of home owners with disposal of a car grew from 73 per cent in 2000 to 76 per cent in 2004, while the number of tenant families with disposal of a car grew from 31 per cent to 33 per cent. In terms of type of home, 72 per cent of families in farm houses and detached houses had disposal of a car in 2000, rising to 75 per cent in 2004. 51 per cent of families in semi-detached houses, linked houses and two-family houses had disposal of a car in 2000, rising to 53 per cent in 2004, while the figures for families in multi-storey buildings rose from 30 per cent in 2000 to 32 per cent in 2004.

Highest number of families with the use of a car among those with job-qualifying education or training

The number of families with disposal of a car varies according to whether the family has job-qualifying education or training or basic school education. About 70 per cent of families with job-qualifying education or training have disposal of a car, the percentage having grown by 1-2 percentage points from 2000 to 2004. In both years, 34 per cent of families with basic school education had disposal of a car.

Energy efficiency for private cars registered the first time

Background

Since 1 July 1997, a duty (green ownership duty) has been payable for newly registerred private cars according to their fuel consumption. For private cars registered the first time before this date, the weight duty system still applies.

The new duty system was introduced to reduce the air pollution from car exhaust as the duty depends on the energy efficiency of the car. By its exponential increase with an increasing fuel consumption per kilometre travelled (equalling declining energy efficiency), the duty system encourages car buyers to buy private cars with a lower fuel consumption.

In 2005, a new car ran 2.3 km longer per litre than a new car in 1998 …

The average energy efficiency was 15.6 km/l for new private cars in 2005 compared with 13.3 km/l for cars registered the first time in 1998, taking petrol and diesel and all uses as a whole. In 2005, the average unladen weight was 1,203 kg compared with 1,112 kg in 1998.

Table 2. **Average energy efficiency and unladen weight for new private cars**

	First year of registration								
	1998	1999	2000	2001	2002	2003	2004	2005 H1	1998 -2005
	km/l								%
Private cars, total	**13.3**	**13.8**	**14.2**	**14.5**	**14.8**	**15.0**	**15.3**	**15.6**	**17.7**
Private conveyance of passengers	13.3	13.9	14.3	14.6	14.9	15.1	15.4	15.7	18.4
In households	13.6	14.2	14.8	15.3	15.5	15.7	16.0	16.1	18.7
In business and industry	12.6	13.0	13.5	13.8	14.1	14.4	14.5	15.0	18.8
Taxi driving	13.0	13.7	13.6	13.6	13.6	13.6	13.5	13.5	4.3
Other uses[1]	9.0	9.5	10.0	9.7	10.0	10.0	10.5	10.8	20.5
	kg								
Private cars, total	**1 112**	**1 127**	**1 144**	**1 183**	**1 196**	**1 211**	**1 220**	**1 203**	**8.2**
Private conveyance of passengers	1 101	1 111	1 122	1 162	1 175	1 186	1 193	1 176	6.8
In households	1 073	1 079	1 080	1 114	1 139	1 149	1 149	1 143	6.5
In business and industry	1 175	1 187	1 195	1 229	1 233	1 237	1 263	1 247	6.1
Taxi driving	1 519	1 534	1 566	1 583	1 604	1 647	1 687	1 685	11.0
Other uses[1]	1 927	1 859	1 857	1 986	2 047	2 064	2 113	2 153	11.7
	km/l at 1,000 kg								
Private cars, total	**14.7**	**15.5**	**16.3**	**17.2**	**17.7**	**18.2**	**18.7**	**18.8**	**27.3**
Private conveyance of passengers	14.6	15.4	16.1	17.0	17.5	18.0	18.4	18.5	26.4
In households	14.5	15.3	15.9	17.0	17.6	18.0	18.4	18.4	26.5
In business and industry	14.8	15.4	16.1	16.9	17.3	17.8	18.3	18.7	26.1
Taxi driving	19.7	21.0	21.4	21.6	21.9	22.4	22.8	22.8	15.7
Other uses[1]	17.3	17.6	18.6	19.2	20.5	20.6	22.1	23.2	34.6

[1] Including ambulances, staff conveyance, housing and "special use".

... but technically it ran 3.7 km longer

The *technical* energy efficiency, which expresses the work performed when one litre of fuel is used to move 1,000 kg, rose from 14.7 km/l to 18.8 km/l or by 27.3 per cent. The reason why the development in the technical energy efficiency is not fully reflected in the figures for the cars actually sold is that part of the improvement is used to move heavier cars and to operate energy-demanding accessories, such as air-conditioning.

Rolling stock

Increase in multiple train units

Within the last 15 years, the stock of both diesel-powered and electrically powered multiple train units has been expanded and renewed. There are more electrically powered multiple train units, particularly IR4 trains and Sound train units, and to a great extent fourth-generation S-train units have replaced the old S-train units. Moreover, the Danish State Railways have continued its previous expansion of the stock of diesel-powered IC3 trains. Finally, the private railways have increased their number of train units.

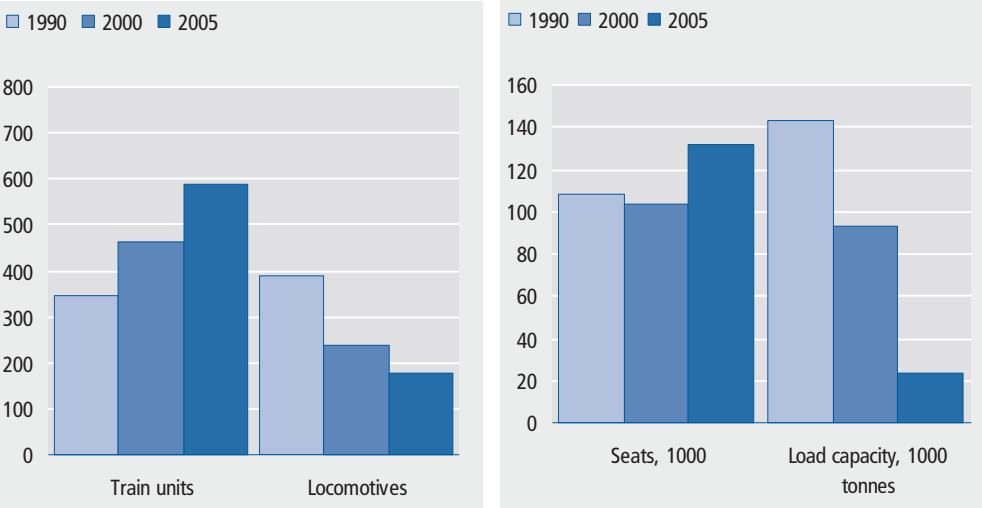
Fewer locomotives

At the same time, the number of locomotives has been halved. In particular, the number of diesel locomotives has gone down, while the stock of electrically powered locomotives has risen slightly. Consequently, there are also fewer conventional passenger carriages, while the number of carriages per train unit has grown.

More seats

One of the results of this transformation is that there were 21 per cent more seats in train carriages in 2005 than in 1990.

Figure 8. **Locomotives, multiple train units, seats and load capacity**



Fewer goods wagons and lower load capacity

The goods wagon stock of the railway companies fell from 4,677 wagons in 1990 to 514 in 2005. During the same period, the load capacity was reduced by 83 per cent. This reduction is due to the sale of the parcel division of the Danish State Railways in 2000 to Danske Fragtmænd, which then transferred parcels to lorries, and to the sale of the remaining freight division of the Danish State Railways to Railion Danmark in 2001.

Danish ships

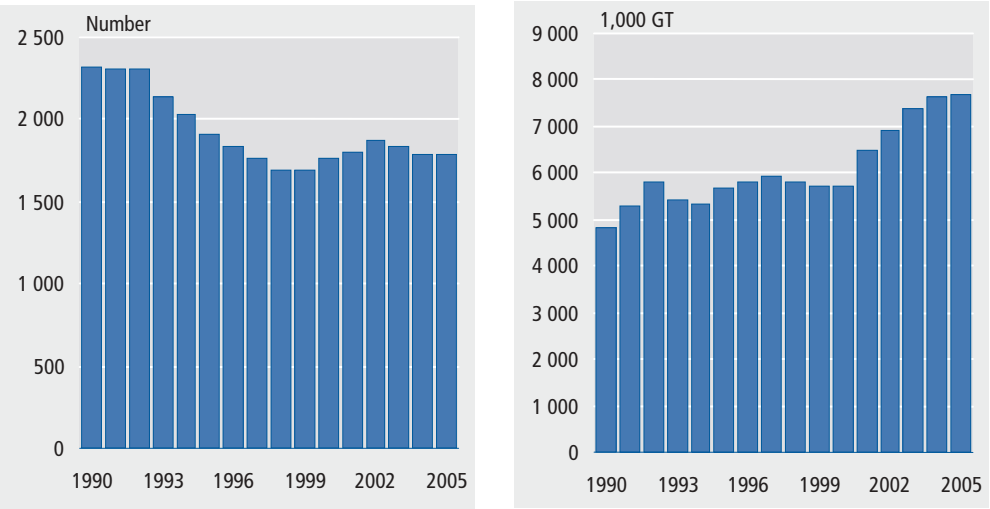
Reduction in number of ships in the 1990s ...

The number of ships registered in Denmark with a gross tonnage (GT) of at least 20 decreased in the 1990s, but stabilised at around 1,800 ships after 2000. At 1 January 2005, there were 1,792 Danish ships compared with 2,324 in 1990.

... but marked increase in gross tonnage

By contrast, since the creation of the Danish International Ship Register (DIS) in 1988, the gross tonnage of Danish ships has seen continued growth. At 1 January 2005, the Danish ship tonnage totalled 7.7 million GT. That is 2.9 million GT or 59 per cent more than in 1990 and the highest figure ever.

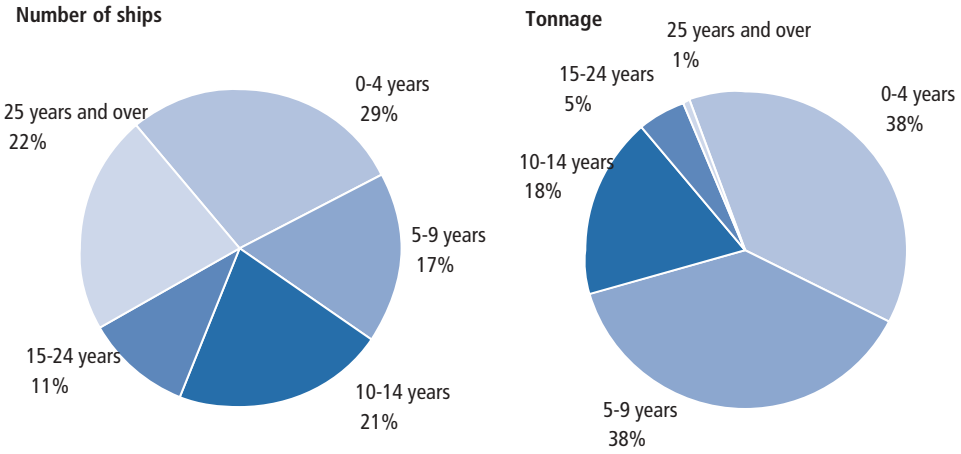
Figure 9. **Number of Danish ships and total tonnage at 1 January**



Still more gross tonnage in container ships

In 2005, tanker tonnage was almost 2.0 million GT, about the same as in 1990. However, dry-cargo tonnage has increased by 2.4 million GT, mainly due to more and, on average, larger container ships. At the beginning of 2005, the gross tonnage of container ships came to 4.4 million GT. This figure has more than doubled over the past 10 years. Container ships now account for more than half the total gross tonnage of Danish ships. The joint tonnage of the remaining dry-cargo ships came to 0.5 million GT in 2005.

Figure 10. **Danish tankers at 1 January 2005 by age**

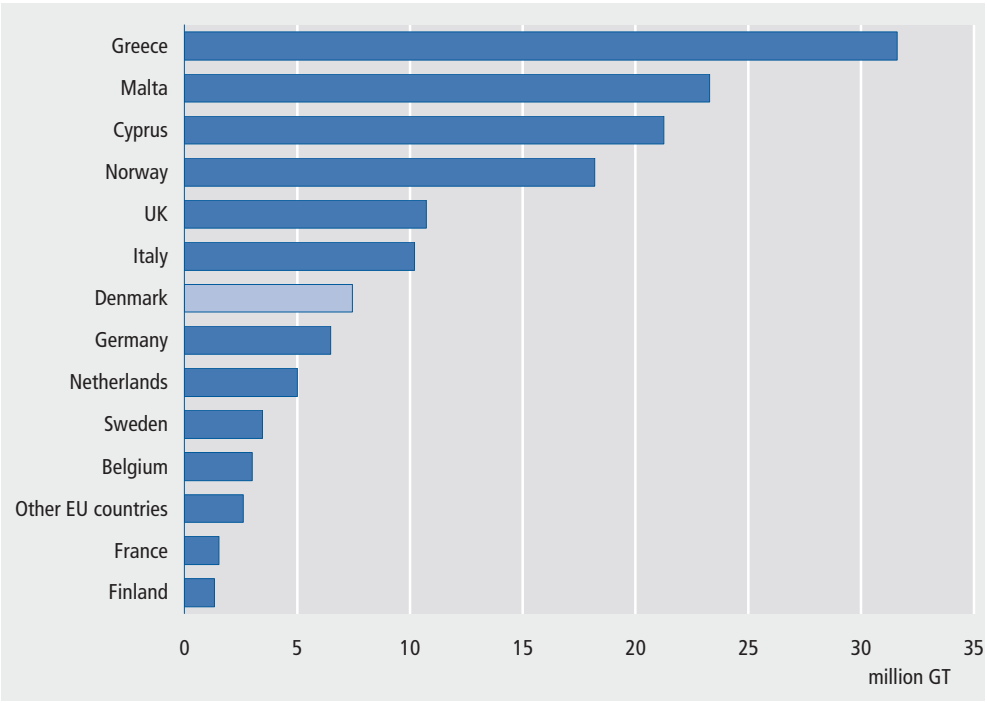


96 per cent of the ship tonnage was registered with the Danish International Ship Register, and just under 1 per cent of the tonnage was registered in Greenland.

Age distribution

At 1 January 2005, ships less than 10 years old accounted for 72 per cent of the total tonnage, ships 10-14 years old accounted for 12 per cent and ships 15-19 years old accounted for 9 per cent of the total tonnage. As regards tankers, ships less than 10 years old accounted for 76 per cent, and ships more than 24 years old only accounted for 1 per cent of the gross tonnage.

Figure 11. **Merchant fleet in EU countries and Norway. 1 October 2004**



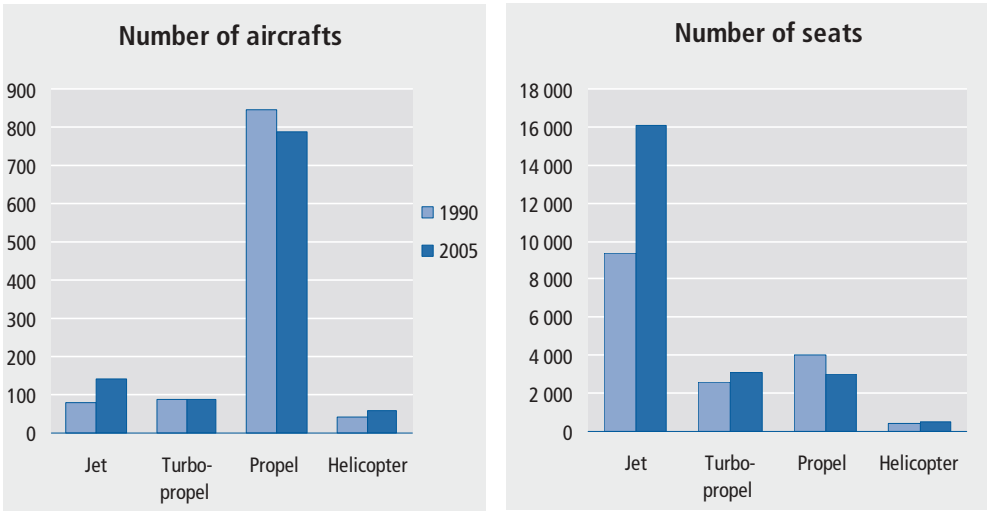
Source: Danish Shipowners' Association.

Merchant fleet at 7.3 million GT

The merchant fleet comprises cargo ships, ferries and passenger ships of at least 100 GT. At the beginning of 2005, the Danish merchant fleet numbered 457 ships totalling more than 7.3 million GT. The Danish merchant fleet accounted for 1.3 per cent of the total world tonnage for merchant ships (2004) and 6 per cent of the EU(25) countries' merchant ship tonnage. Denmark has the sixth largest merchant fleet in the European Union, exceeded only by Greece, Malta, Cyprus, the UK and Italy, cf. figure 11.

Danish aircraft

Figure 12. **Danish aircraft and their seats by type of aircraft**



Source: Civil Aviation Administration.

More and larger aircraft

At 1 January 2005, almost 1,100 Danish engine-powered passenger aircraft were registered, most of them small propeller aircraft, particularly with a single engine and few seats. The number of Danish registered aircraft has largely remained stable since 1990, but with more large jet aircraft, so that the average number of seats per aircraft has increased from 16 seats in January 1990 to 21 seats now, cf. figure 12.

3. Traffic

Road traffic

Most private car traffic

In 2003, private cars accounted for more than 70 per cent of the total road traffic performance. Vans and lorries accounted for 20 per cent. The rest was mainly performed by bicycles and mopeds, cf. figure 13. The Danish Road Directorate has introduced a new method of calculation showing that the method used so far resulted in an 8 per cent overestimate of total traffic performance.

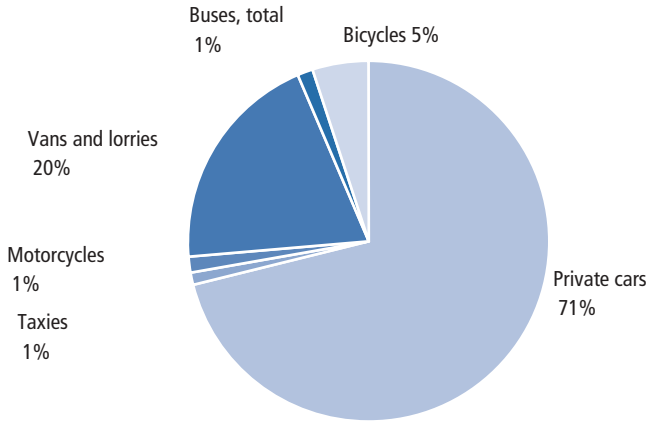
Annual traffic growth of 2 per cent

In 2003, vehicles, including bicycles, performed almost 47 billion kilometres on Danish roads. If the rate of growth for 1990 to 2001 based on the previous method of calculation is applied, the traffic performance from 1990 to 2003 increased by 33 per cent or by an annual average of 2 per cent. Disregarding bicycle traffic, which has declined by 27 per cent, motorised vehicles performed a total of 45 billion km in 2003. If the rate of growth from 1990 to 2001 is maintained as calculated, motor vehicles averaged an annual growth in traffic performance of slightly over 2 per cent from 1990 to 2003. As regards private car traffic, performance increased by 35 per cent from 1990 to 2003, corresponding to an annual growth rate of 2.3 per cent.

Growth in traffic performance due to more motor vehicles

The increased traffic performance is mainly due to the growth in the number of motor vehicles, which has grown by almost 20 per cent since 1990. However, also the number of kilometres performed per car has increased, cf. figure 14, which shows that particularly the first half of the 1990s saw an increase in the average annual performance by private cars as calculated by the Danish Road Traffic Directorate according to the previous method of calculation.

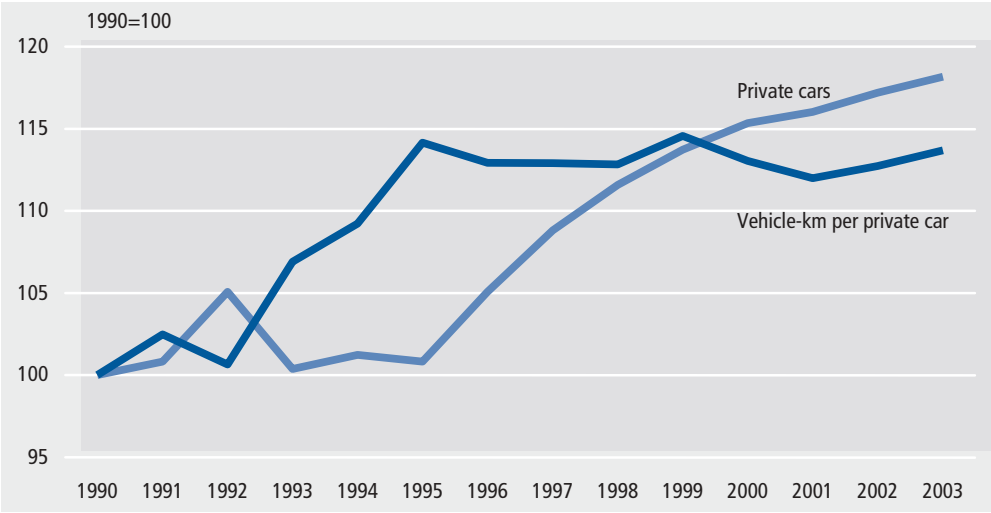
Figure 13. **Traffic performance, by means of transport. 2003**



Source: The Danish Road Directorate

The traffic performance on motorways and dual carriageways has increased markedly in recent years. This is mainly due to the expansion of some of the state roads into motorways and dual carriageways, which has relieved the pressure on the remaining roads. According to the most recent calculation from 2003, motor vehicles on state roads accounted for 30 per cent of the traffic performance.

Figure 14. **Development in number of private cars and vehicle-km performed per private car**



Note: New method of calculation of traffic performance from 2001.
Figures are preliminary.

Traffic intensity has increased

Traffic intensity, calculated as vehicle-km per km of road network per day, is highest on motorways, which had almost 29,000 cars per km per day in 2004, 41 per cent more than in 1990. The other state and county roads averaged almost 5,000 vehicle-km per car per day, 28 per cent more than in 1990. By contrast, the remaining roads,

namely municipal and private roads, had less than 1,000 vehicles per km per day, 16 per cent more than in 1990.

Most trafficked sections

The counts carried out by the Danish Road Traffic Directorate of the average daily traffic per year on selected Danish E-road network sections show that the most trafficked measuring points are located at the Køge Bugt motorway at Ølby, the Holbæk motorway at Vallensbæk Mose, the Ring 3 motorway at Husum, the Amager motorway and the Helsingør motorway at Nærum, which more than 70,000 cars passed every day. The calculations also show that the intensity of these motorway sections has increased by almost 40 per cent over the past 10 years.

Car passengers at the border

On average, 12,400 cars per day passed the national border at Frøslev in 2003, almost twice as many as in 1990.

The Great Belt and the Sound

The Great Belt Bridge was opened to road traffic on 14 June 1998. In 2003, on average 22,700 cars crossed the bridge per day, 20 per cent more than in 1998. The Sound Link opened on 1 July 2000. In 2003, 10,400 cars crossed it per day, 20 per cent more than in 2000.

Train traffic

Higher traffic performance ...

In 2004, passenger trains travelled 71 million train-km in Denmark. Disregarding the Metro, which was established in 2002, train traffic has grown by 29 per cent since 1990. The growth has particularly been concentrated on long distance trains, that is, trains between eastern and western Denmark, where traffic has doubled, and to a lesser extent on S-trains, cf. figure 15. The growth has been particularly noticeable after the opening of the fixed train link across the Great Belt in 1997. The regional trains, that is, trains running on Banedanmark's tracks either east or west of the Great Belt, travelled fewer train-km in the 1990s, but since 1999 traffic has intensified on the Coast Line *(Kystbanen)* and other lines.

... particularly across the Great Belt

Private railways performed 8 billion train-km

The private railways performed a total of almost 8 billion train-km in 2004. Their share of the total traffic performance by passenger trains is 11 per cent.

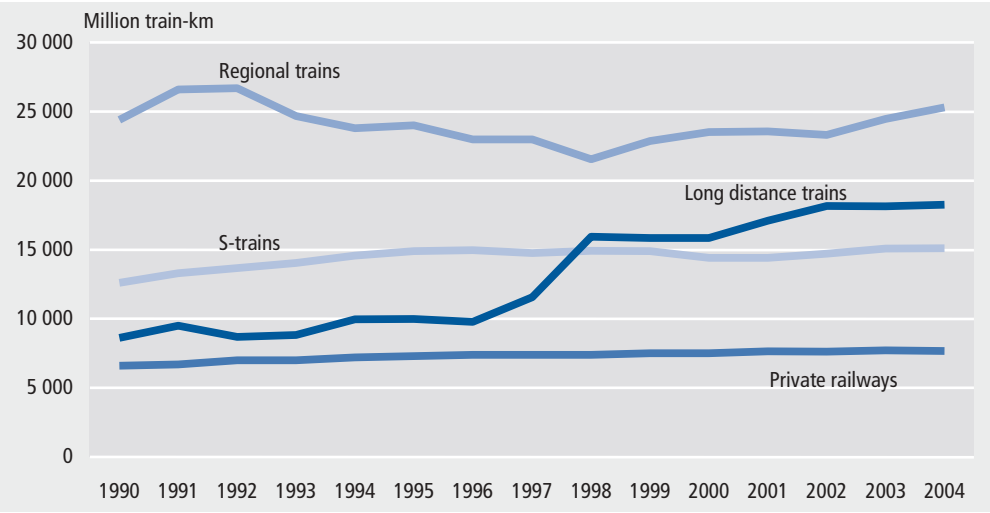
The Metro performed 3.5 billion train-km

The Copenhagen Metro, which opened in 2002, performed 3.5 billion train-km in 2004, or 5 per cent of the total traffic performance by passenger trains.

Fall in goods train traffic

Goods trains have seen a reduction in traffic performance since 1995. Goods trains accounted for 6 per cent of the total traffic performance in 2004 as against twice that figure in 1994.

Figure 15. **Train-km performed**



8 sections with more than 200 trains a day

According to the 2004 spring timetable, the section Hvidovre-Roskilde was the most trafficked rail section with 388 passenger and goods trains on a working day, followed by the Copenhagen Main Station-Østerport Station with 332 trains a day. The most trafficked passenger train section was Hvidovre-Roskilde with 340 passenger trains a day. This section also had the highest peak load with 16 passenger and goods trains in the busiest hour of the day. The most trafficked goods section was Taulov-Lunderskov with 54 goods trains a day. 8 of the selected rail sections had more than 200 trains a day; 6 of these sections are in the Copenhagen area. The section Nykøbing Falster-Gedser remains the least trafficked section with 2 trains a day. All other sections had more than 20 trains a day.

Traffic at Danish seaports

543,000 calls in 2004

In 2004, Danish ports received 543,000 ship calls to load or unload goods or passengers. Most of the calls, 95 per cent, were made by ferries.

Decline after opening of Great Belt Link

The number of ferry calls rose throughout the 1990s from 550,000 in 1990 to 591,000 in 1997, but then declined, mainly because the Great Belt services closed down in June 1998 after the car link across the Great Belt had opened.

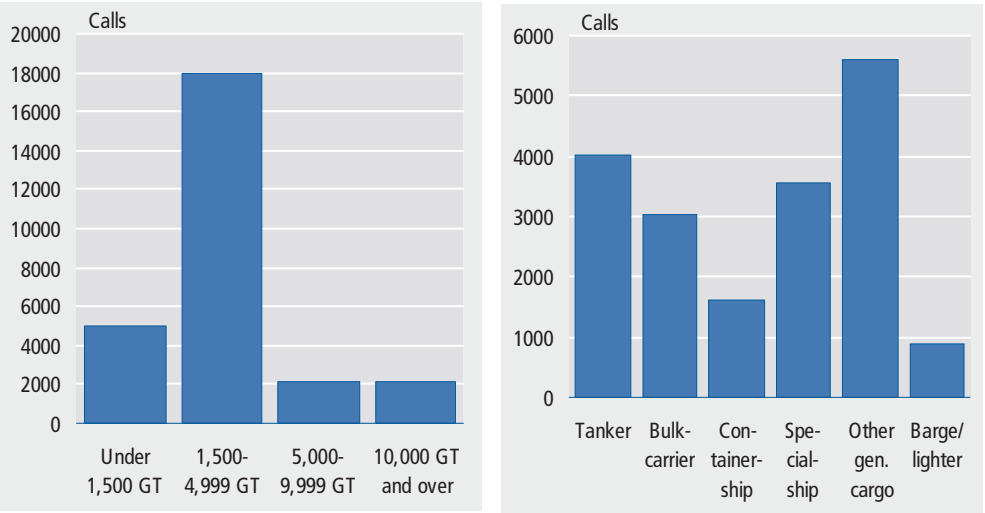
Many small ships

Most of the port calls are made by small ships. In 2004, 43 per cent of calls were made by ships with a gross tonnage of less than 250 GT. Only 10 per cent of the calls were made by ships of more than 10,000 GT.

27,000 cargo ship calls

In 2004, Danish ports received 27,000 calls by cargo ships as against 38,000 in 1990. In particular, fewer small ships called. In 2004, 53 per cent of the ships were of 1,500 GT or more compared with 24 per cent in 1990. This is also reflected by the increase in the average cargo volume handled per cargo ship call from just over 1,700 tonnes in 1990 to almost 2,800 tonnes in 2004. Industrial ports, particularly the oil ports, have relatively few calls, but by relatively large ships.

Figure 16. **Cargo ship calls by gross tonnage (GT) and type of ship. 2004**



70 per cent of calls were at 21 major ports

In 2004, the 21 major Danish ports with an annual throughput of goods of about 1 million tonnes or more received 70 per cent of the cargo ship calls. However, in terms of throughput of goods, these ports accounted for 90 per cent of the cargo ship goods handled.

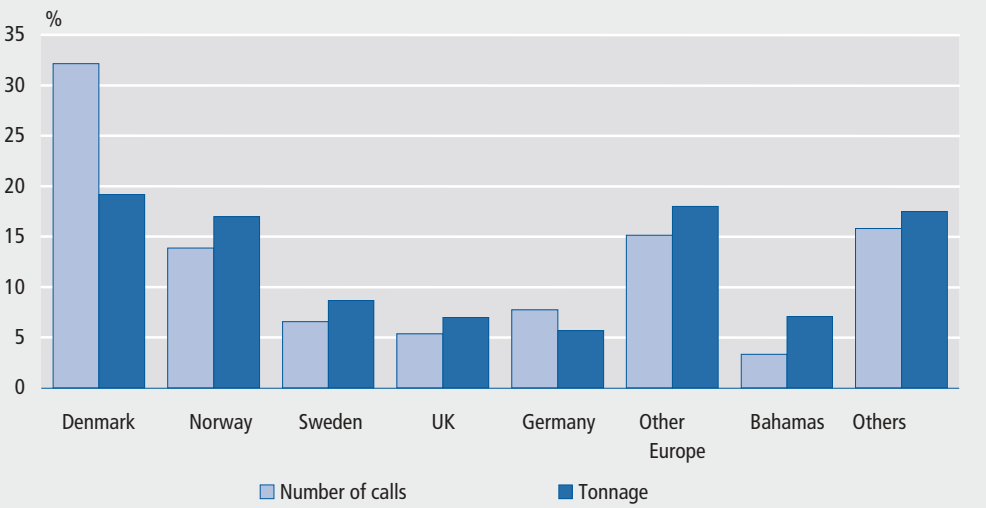
Of the cargo ship calls at the 21 major ports in 2004, 21 per cent were made by tankers, 16 per cent by bulk carriers, 9 per cent by container ships, 19 per cent by special ships, 30 per cent by other general cargo ships and 5 per cent by barges and lighters, cf. figure 16.

32 per cent Danish ships ...

... but only 19 per cent Danish gross tonnage

Most of the cargo ship calls were made by ships registered in a foreign ship register. In 2004, only 32 per cent of the cargo ship calls at the 21 major Danish ports were made by ships flying the Danish flag, 49 per cent were made by ships flying another European flag, while 19 per cent were made by ships registered in a non-European ship register, most of them in Antigua Barbuda, the Bahamas and Panama. In terms of gross tonnage, the Danish share was even smaller, namely 19 per cent, while non-European ships accounted for 25 per cent, cf. figure 17.

Figure 17. **Cargo ship calls at 21 major Danish seaports, by flag state of ship. 2004**



More traffic through the Sound

The 1990s saw a pronounced increase in the ship traffic through the Sound. In 2004, almost 35,000 ships of 50 GT passed through the Sound at the northern entrance compared with 24,000 in 1990. At the southern entrance to the Sound, 39,000 ships were observed in 2004 compared with 21,000 in 1990.

Less traffic through the Great Belt

By contrast, the ship traffic through the Great Belt has dropped from 21,000 ships in 1990 to 18,000 ships in 2004.

Aircraft traffic at manned Danish airports

0.4 million flight operations by scheduled and chartered aircraft

Through the first half of the 1990s, the scheduled and charter traffic at public, manned Danish airports rose from 266,000 takeoff and landing operations in 1990 to 393,000 in 1997, an increase of 48 per cent. However, since 1998 the traffic declined slightly to 369,000 in 2004, but activities were still 39 per cent higher than in 1990.

¼ million other flights

Apart from scheduled and chartered flights, 221,000 other private flights were performed in 2004, including local operations like school flights, gliding and parachuting flights. Of this number, 94,000 took place at small, public, manned airports, that is, airports with no scheduled traffic and with fewer than 50,000 flight operations per year. Other aircraft traffic accounted for 37 per cent of all flight operations at the public, manned Danish airports in 2004 compared with 49 per cent in 1990.

Copenhagen Airport accounted for half of the flight operations

Copenhagen Airport is the largest airport in Denmark. In 2004, it accounted for almost half of all flight operations in Danish airports, but for 84 per cent of all air passengers. In terms of flight operations, Roskilde Airport is the second-largest airport. Every eighth flight operation took place here, most of them in connection with traffic other than scheduled and charter traffic. Billund Airport, which is the second-largest airport in Denmark with 8 per cent of all passengers, accounted for almost one tenth of all flight operations in 2004.

4. Passenger transport

Passenger transport by mode of transport

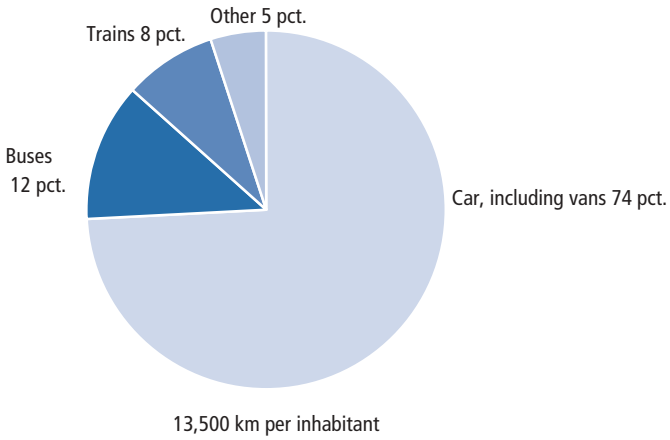
37 km a day per person

In 2003, total passenger transport performance was 73 billion passenger-km, equivalent to 13,500 km per year per person or 37 km per day. Total passenger transport performance per year per person has risen by 16 per cent from 12,000 km in 1990 to about 13,000 km per year per person in 2003.

75 per cent performed by car

The car is by far the primary mode of transport. In 2002, 75 per cent of all passenger transport was performed by car, while 12 per cent was performed by bus, 8 per cent by train and 3 per cent by bicycle.

Figure 18. **Passenger transport performance by mode of transport. 2003**



Since 1990, the passenger transport performed by motorcycle and moped 45 has increased markedly, which is related to the increase in the number of these vehicles. The passenger transport performed by ferry has decreased by more than 50 per cent since 1990, and the transport performance of domestic passenger flights by 40 per cent. In both cases, the decrease is due to the opening of the fixed link across the Great Belt. The passenger transport performed by bicycle, including moped 30, declined until 2001, and then the trend reversed. Compared to 1990, passenger transport performed by bicycle/moped 30 has declined by 27 per cent.

Transport pattern for persons aged 10 to 84 years

The transport pattern of 2003 is illustrated by means of the transport habits survey, which is based on interviews with people aged between 10 and 84 years.

Transport performance almost identical on workdays and weekends

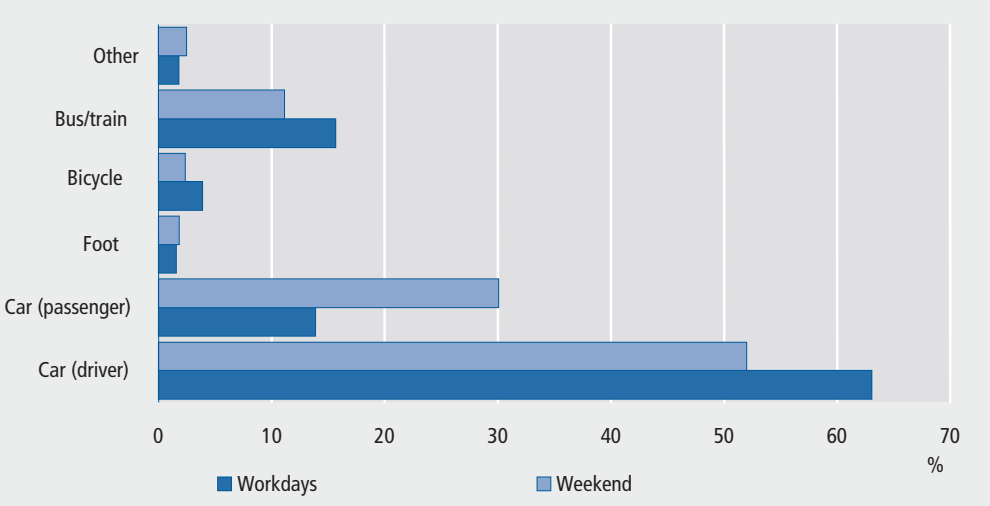
In 2003, the transport performance per day per person was almost the same on an average workday as on an average weekend day, that is 37.3 km and 38.1 km. The difference between workdays and weekends is that, on weekends, trips are fewer but longer than on workdays. On workdays, the average number of trips per person is 3.0, as against 2.3 during the weekend.

Trip distance and mode of transport

Transport performed on workdays is not distributed in the same way as transport performed on weekends.

On workdays, 63 per cent of transport is performed as a driver of a car, while transport by bus and train accounts for 16 per cent, transport performed as a passenger of a car for 14 per cent and bicycle trips for 4 per cent.

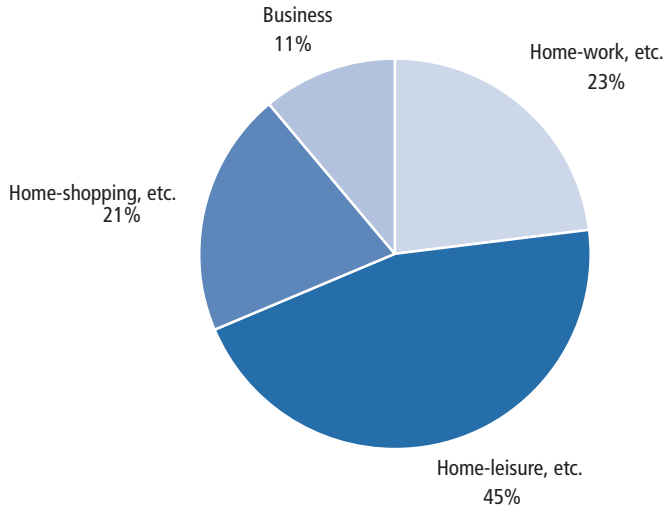
Figure 19. **Transport performance by mode of transport. 2003**



Source: The Danish Transport Research Institute

On weekends, there are fewer cars, but they carry more passengers. 52 per cent of the transport is performed as a driver of a car, while transport performed as a passenger of a car accounts for 30 per cent. 11 per cent of the transport performed on weekends is performed by train or bus.

Figure 20. **Transport performance by purpose of trip. 2003**



Source: The Danish Transport Research Institute

Purpose of trips

In 2003, transport performance between home and work (workdays and weekends) averaged 8.7 km or 23 per cent of total transport performance.

Transport performance between home and leisure, etc., averaged 17.1 km (45 per cent of total passenger transport performance), while the other categories comprised transport between home and shopping of 7.7 km (21 per cent of total passenger transport performance) and transport for business purposes of 4.1 km (11 per cent of total passenger transport performance).

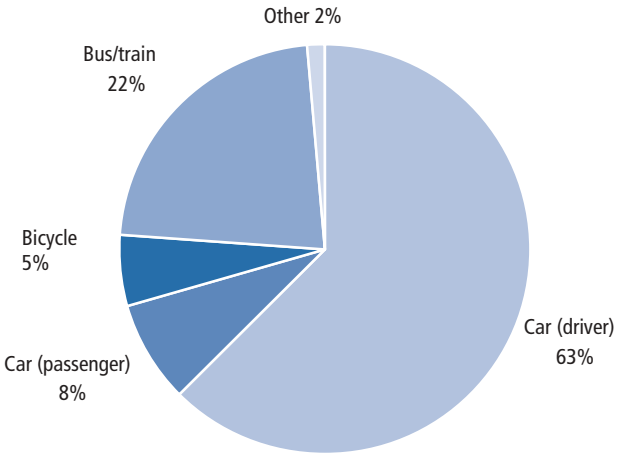
Performance of transport purposes

For all purposes, the car is the dominant mode of transport irrespective of whether transport is performed as a driver or as a passenger of the car.

Home-work

Transport between home and work is least dominated by the car (71 per cent), while transport by bus or train accounts for 22 per cent and transport by bicycle for 5 per cent.

Figure 21. **Transport home-work by mode of transport. 2003**

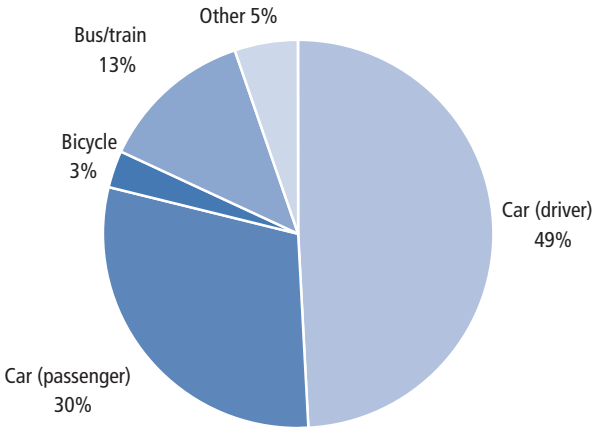


Source: The Danish Transport Research Institute

Home-leisure

The car also dominates the transport between home and leisure (79 per cent), of which passenger transport accounts for 30 per cent. Transport by bus or train accounts for 13 per cent and transport by bicycle for 3 per cent.

Figure 22. **Transport home-leisure by mode of transport. 2003**

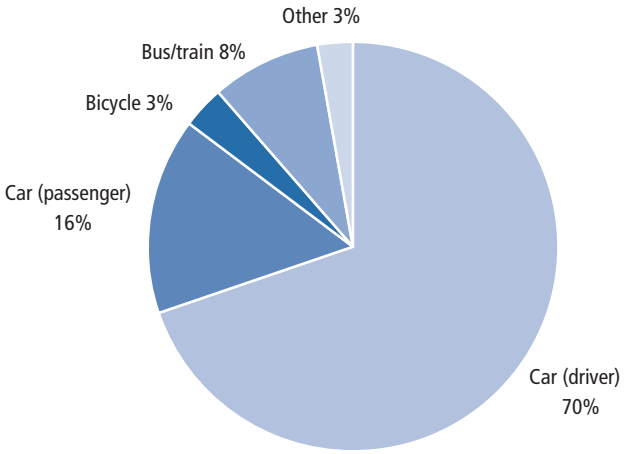


Source: The Danish Transport Research Institute

Home-shopping, etc.

No shopping without a car. 86 per cent of the transport between home and shopping is performed by means of a car, either as a driver or as a passenger. Transport by bus or train accounts for 8 per cent and transport by bicycle for 3 per cent.

Figure 23. **Transport home-shopping by mode of transport. 2003**

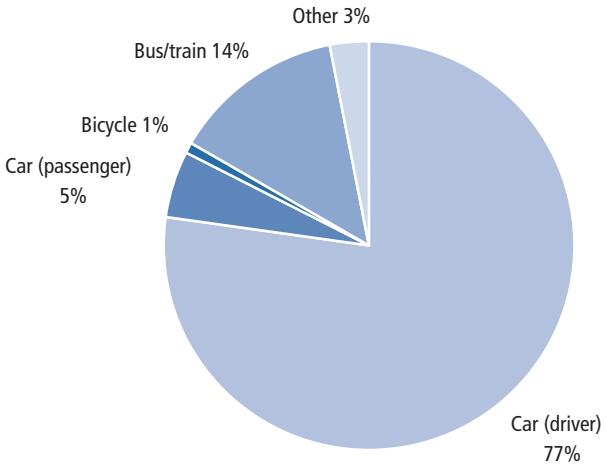


Source: The Danish Transport Research Institute

Transport for business purposes

Transport for business purposes is also completely dominated by the car (82 per cent), while transport by bus or train accounts for 14 per cent and transport by bicycle for 1 per cent.

Figure 24. **Transport for business purposes by mode of transport. 2003**



Source: The Danish Transport Research Institute

Passenger transport by train

More train journeys

In recent years, the number of train journeys on the Banedanmark national network has grown. 61 million journeys were made in 2004, a 29 per cent increase on 1990. The number of journeys has mainly increased after 1997, when the Great Belt Link opened up for transport by rail. The number of train journeys by regional trains on the Banedanmark network has also increased markedly as the result of more frequent departures and faster trains, etc.

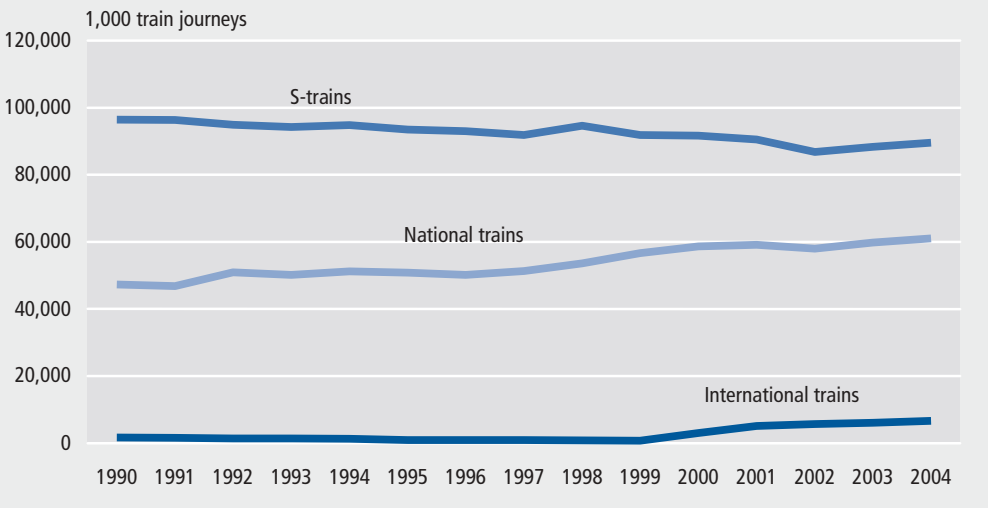
Fewer S-train passengers until 2002

By contrast, the number of S-train passengers declined until 2002, probably due to the extensive construction works on the Ring Line, the tunnel at Nørreport Station and the double-track between Ballerup and Frederikssund. In subsequent years, the number of S-train passengers has increased slightly.

The Copenhagen Metro opened in 2002

The Copenhagen Metro, which became operational on 19 October 2002, carried 20 million passengers in 2003 and 34 million in 2004. The growth in 2004 was mainly attributable to the opening of the Frederiksberg-Vanløse section in October 2003.

Figure 25. **Train journeys**



6 million train journeys across the Sound

The number of international train passengers also continued to increase. Most of the increase is attributable to the opening of the Sound Bridge in 2000. In 2004, 5.8 million train passengers crossed the bridge.

Since 1990, the number of travellers by regional trains (the former private railways) has remained constant, more or less, at about 11-12 million a year.

Passenger transport performance by long distance trains has increased

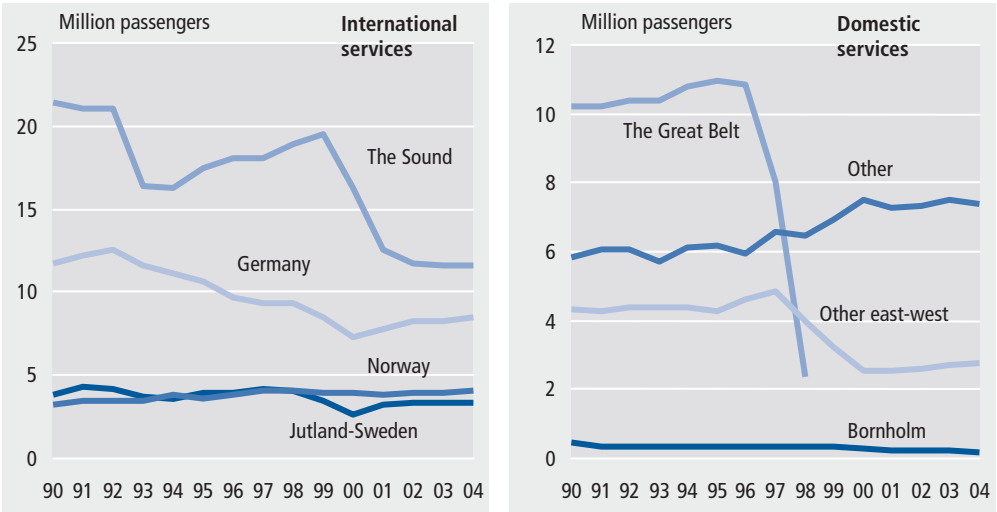
The passenger transport performance by train rose to 6.1 billon passenger-km from 1990 to 2004, a 20 per cent increase. The increase was mainly attributable to more passengers travelling on the national network after the opening of the Great Belt Link.

Passenger transport by ferry and passenger ship

More domestic passengers until 1996

Until 1996, the number of passengers conveyed by passenger ships and ferries on domestic routes rose slightly. The number of passengers was almost 22 million in 1996, one million higher than in 1990.

Figure 26. **Passenger transport by ferry and passenger ship**



Decline from 1997 caused by the Great Belt Bridge

Following the opening of the fixed railway link across the Great Belt in May 1997, the number of domestic passengers dropped to 20 million in 1997. The discontinuation of the Great Belt ferry services after the Great Belt Bridge opened up for road traffic in June 1998 further reduced the number of passengers to about 13 million in 1998. Since then, the number of domestic service passengers has remained around 10 million.

Fewer east-west passengers on the remaining routes

Following the discontinuation of the Great Belt ferry services, the number of passengers on the remaining routes between eastern and western Denmark: Kalundborg-Aarhus, Sjællands Odde-Ebeltoft, Sjællands Odde-Aarhus and Tårs-Spodsbjerg, declined too, from 5 million in 1997 to 3 million in 2004.

The number of passengers of the other domestic passenger and ferry services reached 7 million in 2004, up from 6 million in 1990.

International services

The international services are dominated by the traffic across the Sound and between Denmark and Germany, which in 2004 accounted for 42 and 31 per cent of the passengers, respectively.

The Sound Bridge reduced the number of passengers by nearly 50 per cent

In the early 1990s, the Sound ferry services saw the number of one-day travellers from Sweden drop as a result of the Swedish devaluation. From 1995 to 1999, the number of passengers picked up and reached 19.5 million in 1999, but after the opening of the Sound Bridge in July 2000, the number of passengers of the Sound services has declined by nearly 50 per cent, cf. figure 26.

Fewer passengers on the routes to Germany

The number of passengers on the routes to Germany declined until 2001, when the trend was apparently reversed. The number of passengers was 8.5 million in 2004, down from 11.7 million in 1990.

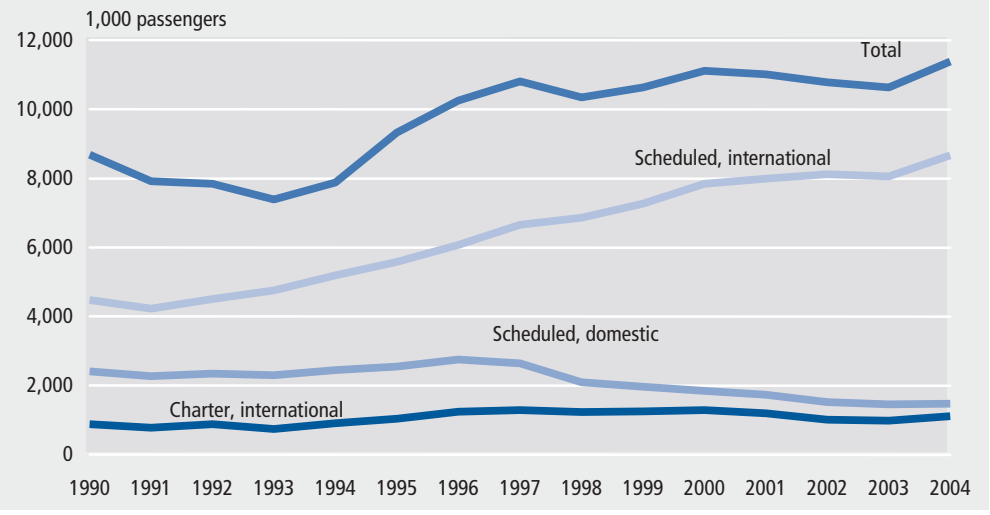
The passenger transport performed by passenger ships or ferries was 2.0 billion passenger-km in 2004, of which the domestic services accounted for one eighth.

Passenger transport via Danish airports

Marked increase in number of flight passengers

In the early 1990s, the Gulf War caused a heavy decline in the number of flight passengers departing from Danish airports, but since then the number of passengers has been constantly growing.

Figure 27. **Departing flight passengers**



From 1992, the number of domestic flight passengers increased steadily, except for a temporary slowdown in 2002 which was probably due to the war in Iraq and the fear of terrorism and SARS. In 1997, the number of domestic flight passengers was, however, reduced by 50 per cent due to the opening of the fixed link across the Great Belt. It seems, however, that the decreasing trend for domestic passengers levelled off in 2004.

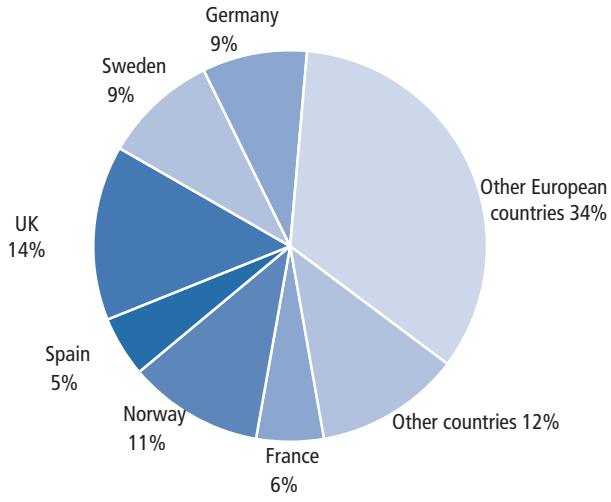
11.4 million departing flight passengers

In 2004, 11.4 million passengers departed from the major, public, manned Danish airports, a 31 per cent increase on 1990 and an all-time record. Of this number, 8.7 million were scheduled flight passengers and 1.1 million international charter flight passengers. Almost all the rest flew by domestic scheduled services.

International passengers mainly departed from Copenhagen

International traffic is dominated by Copenhagen Airport which, in 2004, accounted for 93 per cent of the 8.7 million departing international scheduled flight passengers and 59 per cent of the 1.1 million departing charter flight passengers. Most of the other international passengers departed from Billund Airport.

Figure 28. **Departing international flight passengers by country of departure or destination. 2004**



Most flights to European countries

Most international flights are between Denmark and other European countries if flights are defined as flights having the same flight (number), including any stopovers. Only 12 per cent of the flights are between Denmark and a non-European country. The small share of intercontinental flights is due to the fact that on long distance flights, passengers often have to change aircraft in an international airport.

Domestic traffic to and from Copenhagen

Most domestic passengers travelled by scheduled flights, and almost all domestic flights were between Copenhagen and the provinces. The airports of Aalborg and Aarhus are the provincial airports most frequently used.

5. Goods transport

Goods transport by mode of transport

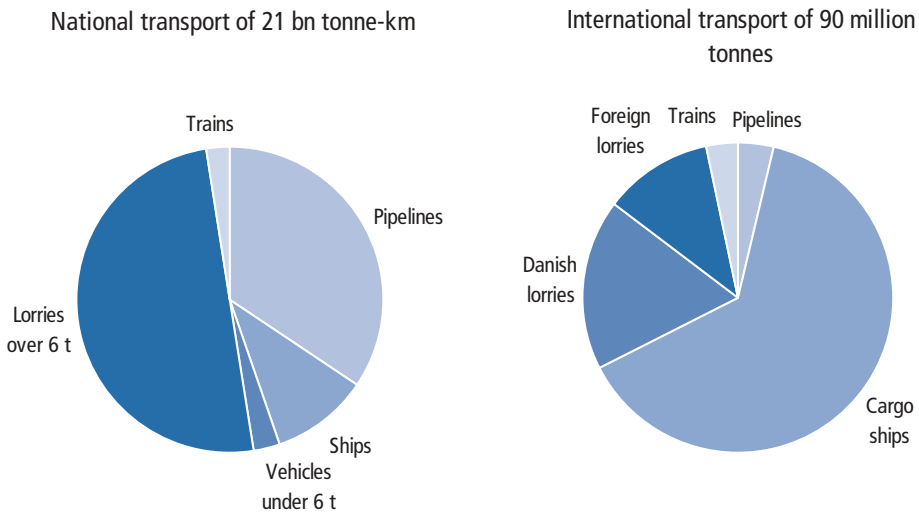
Increased national transport performance ...

In 2004, goods transport performance resulting from national transport between Danish places of loading and unloading reached just under 21 billon tonne-km, an increase of 6 billion tonne-km on 1990.

...due to more pipeline transport, etc.

The increase derived mainly from marked growth in pipeline transport of oil and natural gas, which accounted for slightly more than one third of the national transport performance in 2004.

Figure 29. **Goods transport by mode of transport. 2004**



Lorries used the most for domestic transport

Lorries are the most common mode of transport for domestic goods transport. In 2004, more than half the transport was performed by lorry, cf. figure 29. Excluding pipeline transport, lorries accounted for more than three quarters of total transport performance.

Ships dominate cross-border transport

For goods transport between Denmark and abroad, sea transport is the preferred mode of transport. In 2004, 90 million tonnes of goods were transported between Denmark and abroad. Of this figure, almost two thirds were transported by cargo ship and the rest mainly by lorry, cf. figure 29. Transport by lorry between Denmark and abroad was mainly performed by Danish lorries, which had a market share of 59 per cent in 2003.

Goods transport by lorry

Increased international road transport of goods due to deregulation of the EU market

The goods transport performance by Danish lorries having a gross weight over 6 tonnes exceeded 23 billion tonne-km in 2004, up from 18 billion tonne-km in 1990. While national goods transport basically grew steadily, international goods transport increased even more, especially in the early 1990s when operators profited from the deregulation of the EU market with the removal of the quota system and the introduction of free access to cabotage in the EU member states. For the past ten years, a little more than half of all transports by Danish lorries have been performed as international transports. In terms of volume of goods loaded, national goods transport dominates, however, accounting for about nine tenths of the volume of goods transported.

National road transport of goods

Stagnant transport performance after 2000

National goods transport performance by Danish lorries stagnated in the early 1990s due to the slowdown in the housing construction sector, etc. Growth was steady from 1995 to 2000 when the transport performance levelled off at about 11.0 billon tonne-km a year as a result of the moderate growth in consumer spending, etc., cf. figure 30.

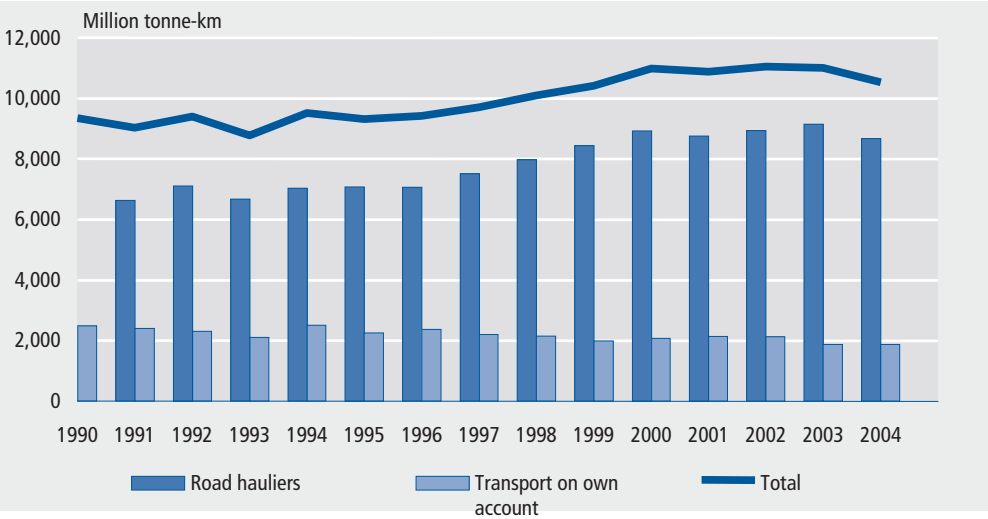
Increased share of road haulage

Road hauliers' share of the total national transport performance has increased since 1990. The growth of transport performance in the second half of the 1990s was almost exclusively attributable to road haulage, that is transport for hire or reward, whereas transport on own account has declined since 1990. In 2004, road hauliers accounted for 82 per cent of the total national transport performance, up from 73 per cent in 1990.

Same development in volume of goods

To a wide extent, the development in the volume of goods transported has been identical with the development in transport performance. However, due to the decline in building and construction activities, the volume of goods transported has been lower in relative terms since the transport of building materials, earth, stones, sand and gravel is mainly performed over short distances. Since 1990, the volume of goods transported has been between 175 million tonnes (1993) and 207 million tonnes (2000). Most of the goods, 79 per cent in 2004 as against 70 per cent in 1990, were transported by road hauliers.

Figure 30. **National goods transport performance by Danish lorries.**

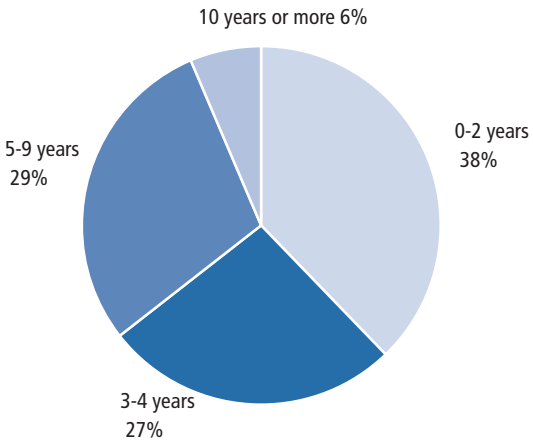


More goods transported by vehicle combinations

More goods are now transported by vehicle combinations. In 2004, 71 per cent of the goods were transported by vehicle combinations, up from 58 per cent in 1990. Previously, road hauliers mainly preferred to use lorry/trailer combinations, but today road tractor/semi-trailer combinations are just as frequently used.

Road tractor/semi-trailer combinations are more frequently used for long distance transport than lorry/trailer combinations and thus account for a higher share of total transport performance. In 2004, road tractor/semi-trailer combinations accounted for 48 per cent of total transport performance. The percentage for lorry/trailer combinations was 34 per cent and for solo trucks 19 per cent.

Figure 31. **National transport performance by age of vehicle. 2004**



64 per cent by vehicles under 5 years old

In 2004, almost two thirds of all national road transport was performed by lorries or road tractors under 5 years old. Only 6 per cent of the transport was performed by vehicles 10 years old or more, cf. figure 31.

Most local transport

As regards national transport, most goods are transported within the same county, and typically goods crossing the county limit are taken to a neighbouring county. Only a small part of the goods is transported between the various parts of Denmark. In 2004, 94 per cent of the goods loaded in Jutland were also unloaded in Jutland. The corresponding percentages for Zealand, etc., and Funen were 95 and 74.

Transport across the Great Belt or Kattegat accounts for 4 per cent

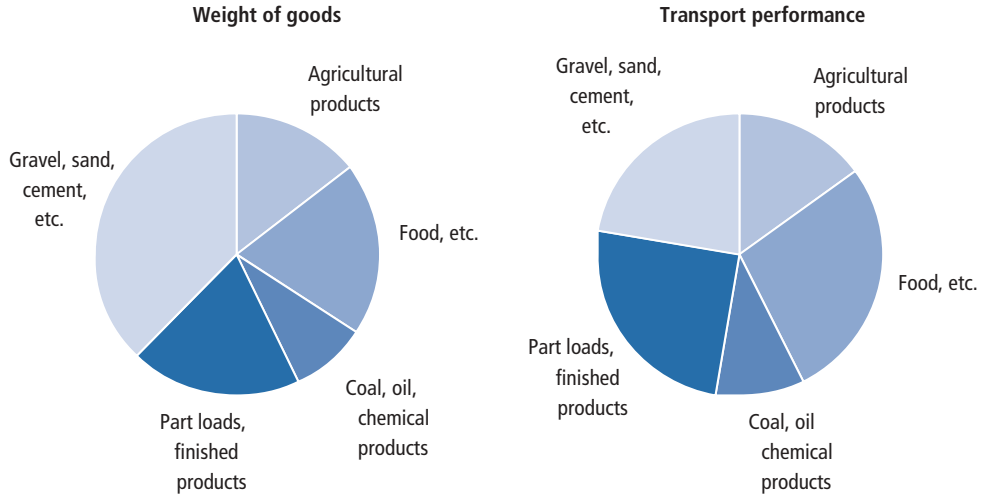
4 per cent of the goods transported crossed the Great Belt or Kattegat in 2004, as against 3 per cent in 1990. 59 per cent of the goods were transported from western to eastern Denmark, while 41 per cent moved in the opposite direction.

The average journey distance has been growing as a result of increased specialisation and centralisation of production, etc. For vehicles carrying loads, the average journey distance was 81 km in 2004, up from 56 km in 1990.

2/5 of the goods were gravel, earth, stones, sand, cement, bricks, etc.

About two fifths of the total volume of goods transported consisted of gravel, sand, earth and stones as well as salt, cement, bricks, etc. These goods are mainly transported by road hauliers over relatively short distances. The transport performance thus accounted for only about one fourth of the total transport performance. The transport of goods for the building and construction industry follows market trends and, due to its substantial share of the goods, it affects the total transport performance by lorry.

Figure 32. **National transport by product group. 2004**



2/5 of the goods were food, etc. and part loads, etc.

One fifth of the goods were food and animal feed, which accounted for one fourth of the transport performance due to a longer average transport distance. Similarly part loads, intermediate products, etc., accounted for one fifth of the goods, but one fourth of the transport performance, cf. figure 32.

Capacity utilisation has fallen since 1990

Total capacity utilisation, that is the utilisation of potential road transport performance on the journeys travelled, was 38 per cent in 2004, the same as the previous year. The rate of utilisation depends on the extent of no-load transport. If only vehicles carrying loads are considered, the rate of utilisation is 47 per cent. Capacity utilisation has fallen slightly over the past 15 years. In 1990, the rate of utilisation was 55 per cent for vehicles carrying loads. The decreasing rate of utilisation is due to the fact that the average size of vehicles has increased, that the increased specialisation and centralisation of production have resulted in longer transport distances, etc.

1/4 of transports were without load

One fourth of the transports were without load (28 per cent in 2004). The percentage varies with the extent to which vehicles transport gravel, sand, earth, stones, salt, etc., where vehicles are generally unable to carry loads on their return.

4 per cent of transports involved dangerous goods

In 2004, 4 per cent of the vehicles carrying loads carried dangerous goods. A total of 10 million tonnes of dangerous goods were loaded, that is 5 per cent of the total national transport of goods. The dangerous goods typically consisted of inflammable liquids, such as petrol, etc., which accounted for 84 per cent of the dangerous goods in 2004.

Foreign vehicles performed 1 per cent of national transport

Foreign lorries from EU member states and Norway are entitled to carry out national transports in Denmark, so-called cabotage. In 2003, 1 per cent of the total national road transports were performed by foreign lorries primarily registered in Germany, Luxemburg and the Netherlands.

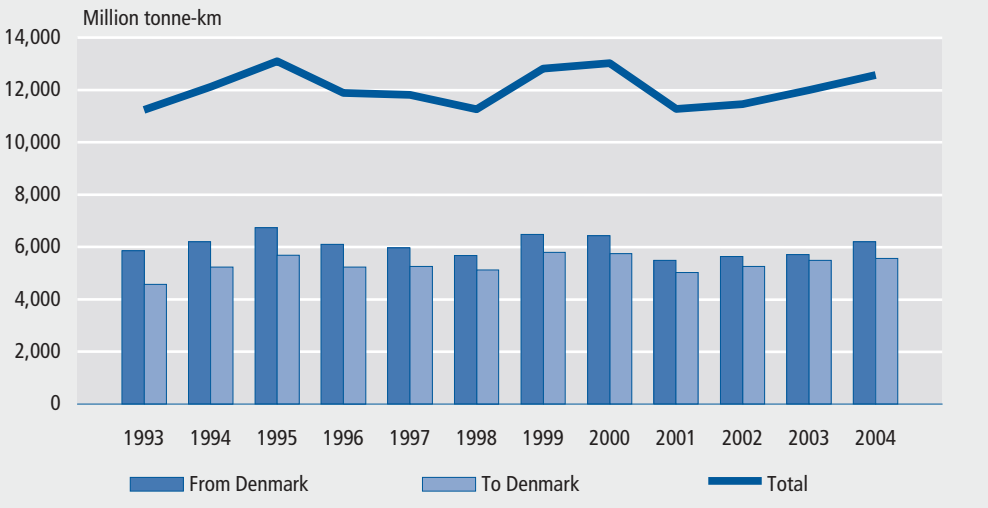
International road transport of goods

Renewed growth in transport performance after 2001

International road transport of goods performed by Danish lorries has varied between 11 and 13 billon tonne-km in recent years. In 2000, international road transport of goods peaked at 13 billion tonne-km, then fell to just over 11 billion in 2001, and has increased ever since, cf. figure 33.

The development in import and export transports has followed the same pattern. In 2004, transport performance relating to the road transport of goods from Denmark to abroad accounted for 49 per cent of total international transport performed by lorry, and the percentage for transports to Denmark from abroad was 45. The remainder of the international road transport of goods performed by Danish lorries consists of third-country transports, that is transports between two foreign countries (4 per cent in 2004), and cabotage, that is transports between two destinations in the same foreign country (2 per cent in 2004).

Figure 33. **International transport of goods by Danish lorry**



Mainly road haulage

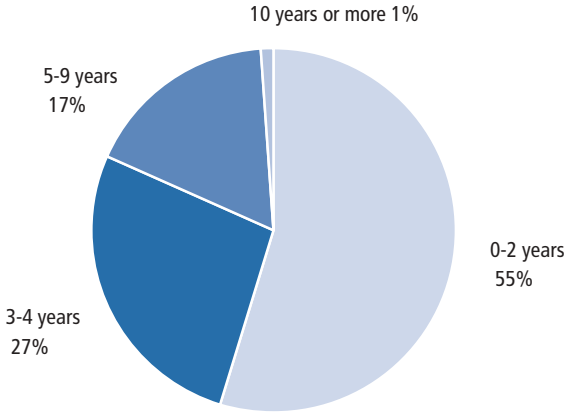
Nearly all international goods transport was performed by road hauliers. Transport on own account accounted for less than 1 per cent.

In 2004, 17.0 million tonnes of goods were transported internationally by Danish lorries, mainly by large vehicle combinations. 86 per cent of the goods were thus transported by road tractor/semi-trailer combinations and the rest by lorry/trailer combinations.

Relatively new vehicles

The road tractors and lorries used are relatively new. 82 per cent of the transport was thus performed by lorries or road tractors under 5 years old and 55 per cent by vehicles under 3 years old.

Figure 34. **Transport performance by age of vehicle. 2004**



Only 1 per cent of the transport performance was performed by lorries or road tractors 10 years old or more.

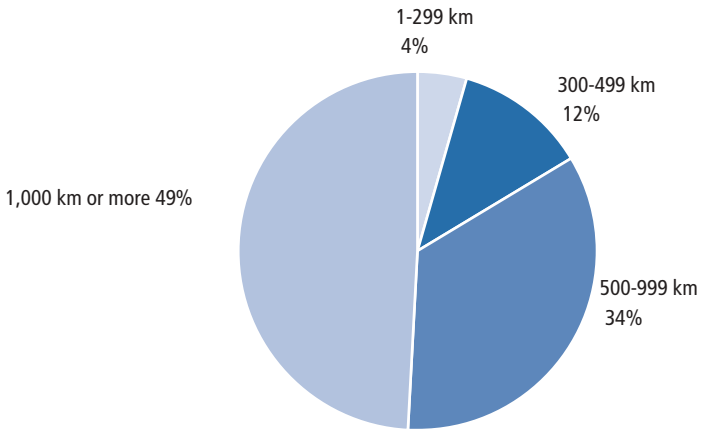
Goods mainly to and from Germany, Sweden, France, Italy and Norway

Goods transported between Denmark and abroad primarily came from or were carried to Germany, Sweden, Norway, France and Italy. In 2004, transports between Denmark and these five countries accounted for 87 per cent of goods and 78 per cent of transport performance by Danish lorries between Denmark and abroad. Third-country transports, that is transports between two foreign countries, were mainly performed with Germany or Sweden as the country of loading or unloading, and cabotage was mainly performed in Germany or Sweden.

Goods in containers/swap bodies

In 2004, 13 per cent of the goods transported from Denmark to abroad and 10 per cent of the goods transported from abroad to Denmark were carried in containers or swap bodies. These types of consignments accounted for 6 per cent of the total transport performance.

Figure 35. **Transport performance for international transport by lorry, by journey distance. 2004**



Journey distance

The average journey distance of vehicles carrying loads was 731 km in 2004. As regards 57 per cent of these journeys, the journey distance was at least 500 km and as regards 23 per cent of the journeys, the journey distance was at least 1,000 km. The distribution by journey distance is almost identical for the goods transported. The transport performance is, however, concentrated on the longest journeys. 50 per cent of the transport performance thus derives from journeys of at least 1,000 km, cf. figure 35.

58 per cent capacity utilisation

Capacity utilisation has fallen in recent years. In the 1990s, the rate of utilisation was about 63 per cent, but since 2000, the rate of utilisation for transports performed by vehicles carrying loads has been 5 percentage points lower.

Foreign lorries performed 41 per cent of the transports between Denmark and abroad

A considerable share of the goods transported by lorry between Denmark and abroad are transported by vehicles registered abroad. In 2003, foreign lorries performed 41 per cent of the transports by lorry between Denmark and abroad, up from 28 per cent in 1998. Danish lorries have the highest market share in respect of transports of goods going abroad, 66 per cent (77 per cent in 1998), as against 53 per cent for transports to Denmark (67 per cent in 1998). Transports performed by German and Dutch lorries accounted for well over half the transports performed by foreign lorries.

Goods transport by train

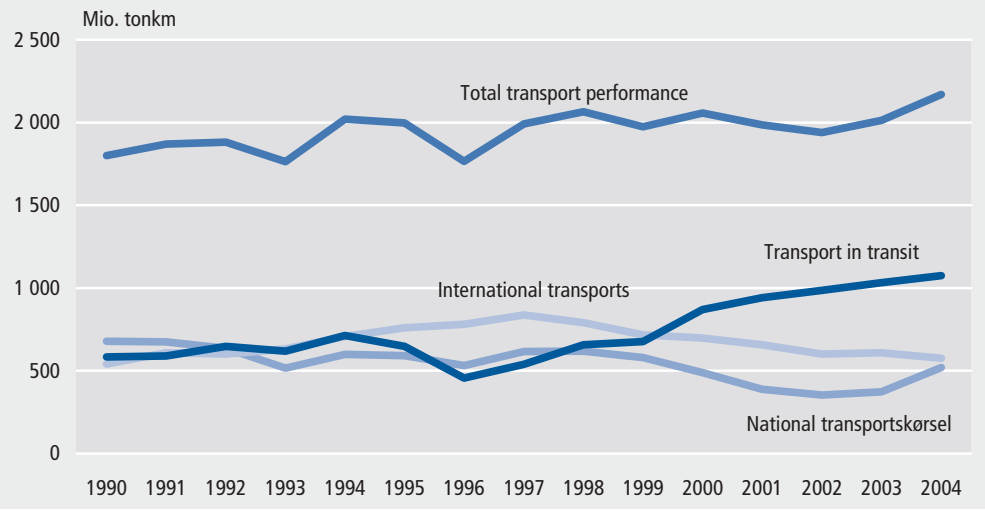
Slightly increasing goods transport

In spite of fluctuations, goods transport by train has increased slightly since 1990. In 2004, transport performance was 2.2 billion tonne-km, up from 1.8 billion tonne-km in 1990. The increase is primarily attributable to the transport of goods in transit through Denmark, which has almost doubled since 1990 and now accounts for half the transport performance by train in Denmark.

More goods in transit

The increased volume of goods in transit is mainly due to the opening of the fixed links across the Great Belt and the Sound. As a result, the distance that goods in transit between Sweden and Germany have to travel has increased by about 100 km because the goods trains travel via Padborg instead of Rødby Færgehavn as previously. In addition, part of the growth is also attributable to an increased volume of goods in transit since 2000.

Figure 36. **Goods transport performance by train**



International goods transport by train between Denmark and abroad increased in the second half of the 1990s, but in recent years it has declined and now accounts for about 30 per cent of the goods transport performance by train, just like in 1990. On the whole, national goods transport by train has declined since 1990. In 2003,

national goods transport started to pick up again. Domestic goods transport by train now accounts for well over one fifth of all transport performance by train.

Following an upswing in the international goods transport in the early 1990s, the volumes of goods transported by train have declined ever since.

Goods transported nationally mainly cross the Great Belt

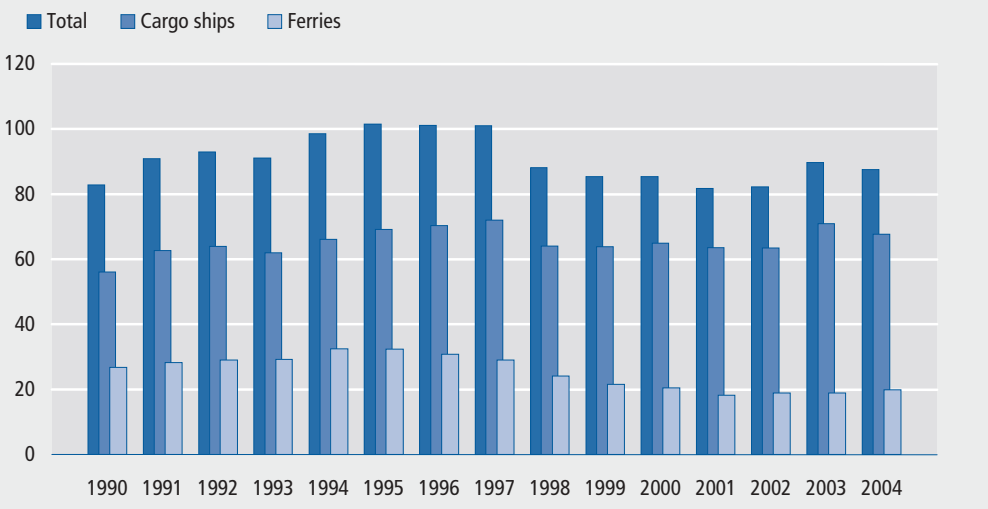
As regards the domestic goods transport, the main share of goods are transported across the Great Belt, that is between Zealand, etc., and Funen/Jutland. The remainder of the goods are almost exclusively transported between stations located to the west of the Great Belt. As regards international goods transport, goods are mainly transported between Denmark and Germany, Sweden and Italy.

Goods transport by ship via Danish seaports

Fixed links resulted in drop in transport by ship

From the first half of the 1990s, the goods transport by ship via Danish seaports increased, but since the opening of the fixed links across the Great Belt in 1997/98 and the Sound in 1999 the goods throughput fell. At the same time, reduced coal imports from 1998 to 2002 affected the volume of goods transported by cargo ship.

Figure 37. **Goods transport by ship via Danish seaports. Million tonnes**



Goods transport between Danish and international seaports

More goods by ship between Denmark and abroad

The volume of goods transported by sea between Denmark and abroad rose steadily from 62 million tonnes in 1990 to a peak of 78 million tonnes in 1995. After that, the situation changed, and the volume of goods fell to 68 million tonnes in 2001 and then increased again, cf. figure 38.

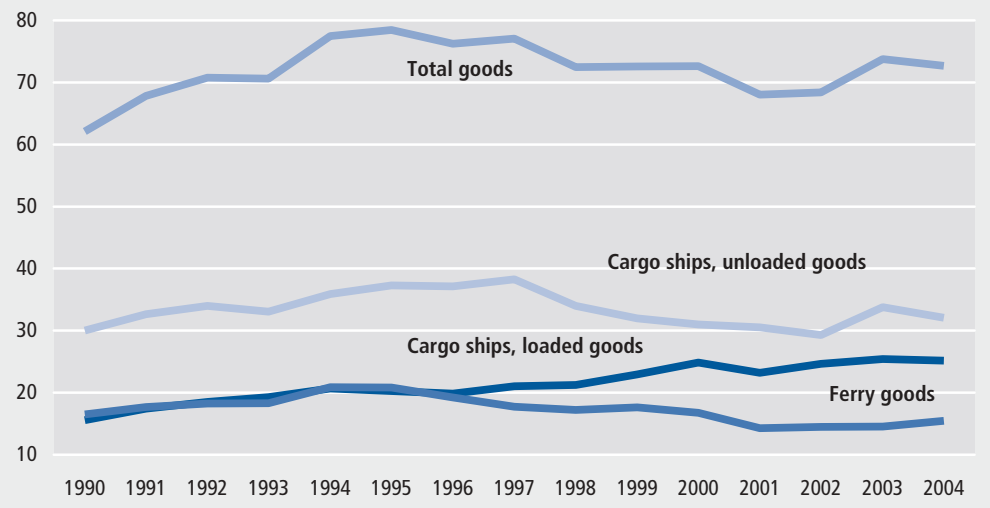
Growth in goods transported by cargo ship followed by drop in coal imports

As regards international transport by ship, most of the goods are carried by cargo ships. This share increased from 73 per cent in 1990 to 79 per cent in 2004. The increase is attributable to a steadily rising volume of goods loaded for transport abroad and an increase in the volume of goods unloaded from abroad until 1998 when coal imports started to fall, a fall which lasted until 2003.

Transport by ferry declined since 1995

The goods transport by ferry between Denmark and abroad increased steadily until 1995/1996. Then the situation changed, partly due to the redirection of the rail transport via Rødby-Puttgarden, which now takes place via the Great Belt and Padborg, and partly because the Sound Bridge has taken over a substantial part of the goods transport to and from Sweden.

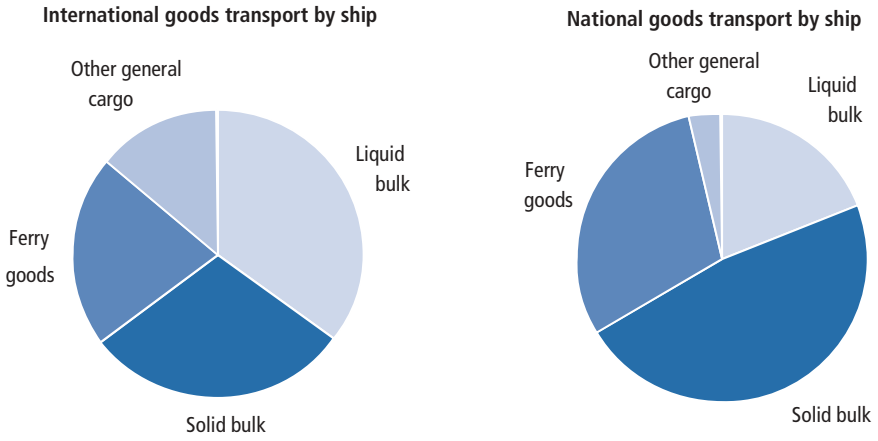
Figure 38. **Goods transport by ship between Denmark and abroad. Million tonnes**



International transport by sea of 73 million tonnes

In 2004, 72.7 million tonnes of goods were carried by ship between Danish and international seaports, an increase of 17 per cent on 1990. 56 per cent of the goods transported internationally were imported goods, and 44 per cent were goods destined for the international markets.

Figure 39. **Goods transport by product type. 2004**



65 per cent bulk goods ...

... 35 per cent general cargo

Most of the goods transported between Denmark and abroad were bulk goods (bulk cargo). In 2004, liquid bulk accounted for 35 per cent of the goods throughput, mainly crude oil and mineral oil products. 30 per cent consisted of solid bulk goods, especially coal, stones, sand, gravel and animal feed. In 2004, the remaining 35 per cent consisted of general cargo, of which 60 per cent ferry goods and 25 per cent goods in containers and other ro-ro units, cf. figure 39.

10 per cent by Danish ships

As regards the 21 major seaports, the goods carried by cargo ships may be broken down by flag state. In 2004, only 10 per cent of the goods transported between the major Danish seaports and abroad were carried by Danish ships.

91 per cent of the goods may be broken down by country

91 per cent of the goods throughput of the Danish seaports to or from abroad in 2004 may be broken down by export or import country. The goods unloaded from abroad mainly originated from Norway (22 per cent), Sweden (19 per cent), Germany (13 per cent), the Baltic countries (9 per cent) and Central and South America (8 per cent). The goods loaded for abroad were mainly destined for Sweden (34 per cent),

Germany (18 per cent), the UK (8 per cent), Norway (7 per cent), the Netherlands (7 per cent) and Finland (7 per cent).

Goods transport between Danish seaports

50 per cent less ferry goods

To a wide extent, the development in domestic goods transport by ship since 1990 has been characterised by the opening of the fixed link across the Great Belt in 1997/98. Domestic goods transport by ferry was thus reduced by more than 50 per cent from 10.2 million tonnes in 1990 to 4.4 million tonnes in 2004.

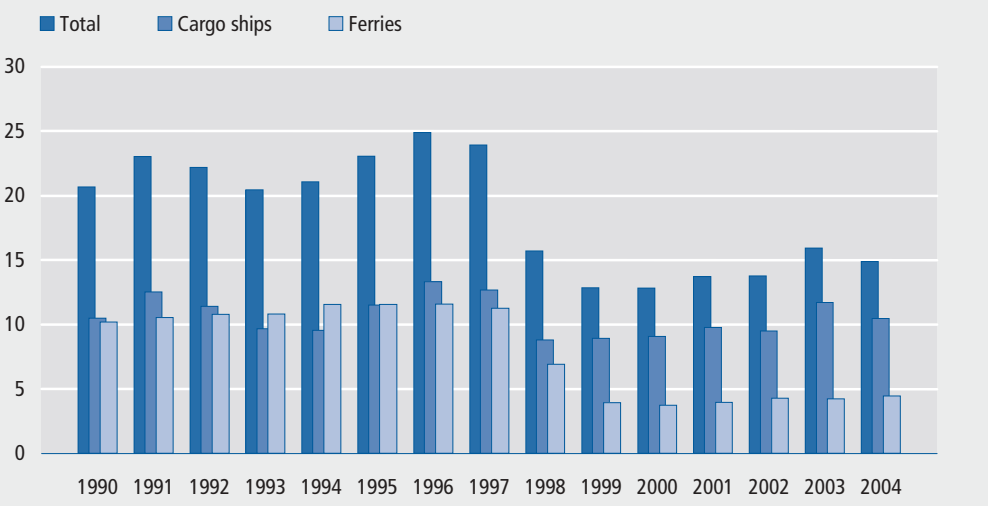
Fewer coal transports

During this period, 9 to 13 million tonnes of goods were carried by ship. The fluctuations were partly due to smaller coal imports from 1998 to 2002 and thus less domestic transport of coal from the port of Enstedværket and partly to the closing of the Gulf refinery at Skælskør in 1998.

Domestic transport by sea of 15 million tonnes

In 2004, 14.9 million tonnes of goods were transported between Danish seaports, including transports between Danish seaports and Danish territorial waters. That is 5.8 million tonnes or 28 per cent less than in 1990 and 10.0 million tonnes or 40 per cent less than in 1996, the year preceding the opening of the Great Belt Link.

Figure 40. **Domestic goods transport by ship. Million tonnes**



66 per cent bulk goods

Most of the domestic transport by ship consisted of bulk goods (bulk cargo). Solid bulk accounted for 47 per cent of the domestic goods throughput in 2004. Most of it, 78 per cent in 2004, was coal, stones, sand and gravel. Liquid bulk accounted for 19 per cent of the domestic goods throughput, mainly mineral oil products and crude oil. The remainder, 34 per cent in 2004, consisted of general cargo, primarily ferry goods (89 per cent in 2004).

48 per cent by Danish ships

As regards the major seaports, the goods carried by cargo ships may be broken down by flag state. As opposed to international transports, a larger proportion of goods transported nationally is carried by Danish ships. In 2004, 48 per cent of the goods transported between the Danish seaports were carried by Danish ships.

Goods transport by air

Domestic transport reduced after the opening of the Great Belt Bridge

Danish airports handled about 115,000 tonnes of goods in 2004, excluding goods transhipped to or from other aircraft. The volume of goods has generally increased throughout the 1990s, but since then the volume has decreased slightly, especially because the Great Belt Link has almost out competed transport by local aircraft.

Most goods to and from Copenhagen Airport

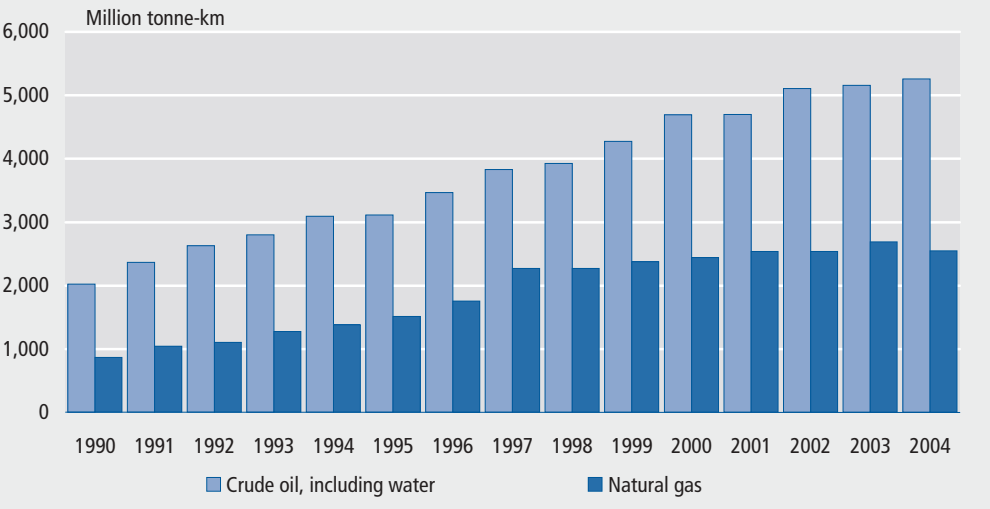
In 2004, 2,000 million tonnes of goods were transported by local aircraft, 93 per cent less than in 1990. From 1990 to 2004, the volume of goods carried by international aircraft rose by almost 80 per cent to 112,000 tonnes. Most of the goods to and from abroad are handled in Copenhagen Airport. It should be noted, however, that part of the air cargo is, in fact, transported by lorry to or from an international transhipment airport.

Transport by pipeline

Marked increase in the last decade

The transport of oil and natural gas by pipeline has risen markedly since 1990. In 2004, a total of 22.7 million tonnes of crude oil and natural gas were conveyed through the Danish transmission network. In 1990, the total transport performance was 7.8 billion tonne-km, up from 2.9 billion in 1990. Transport by oil pipelines accounted for two thirds.

Figure 41. **Transport of oil and natural gas by high pressure pipeline**



Sources: DONG A/S, Gastra A/S and DUC

35 per cent of domestic transport performance

The extent of both oil and gas transport has more than doubled since 1990. In 2004, pipeline transport accounted for 35 per cent of total domestic goods transport performance, up from 19 per cent in 1990.

15.9 million tonnes of crude oil

In 2004, a total of 15.9 million tonnes of crude oil, including accompanying water (about 3 per cent), was conveyed from the North Sea to Fredericia. The transport performance was 5.3 billion tonne-km.

6.8 million tonnes of natural gas

A total of 6.8 million tonnes of natural gas was conveyed through the transmission network in 2004, of which volume 3.2 million tonnes went abroad. The gas pipeline transport performance was 2.5 billion tonne-km in 2004.

6. Prices, taxes and duties

Transport prices

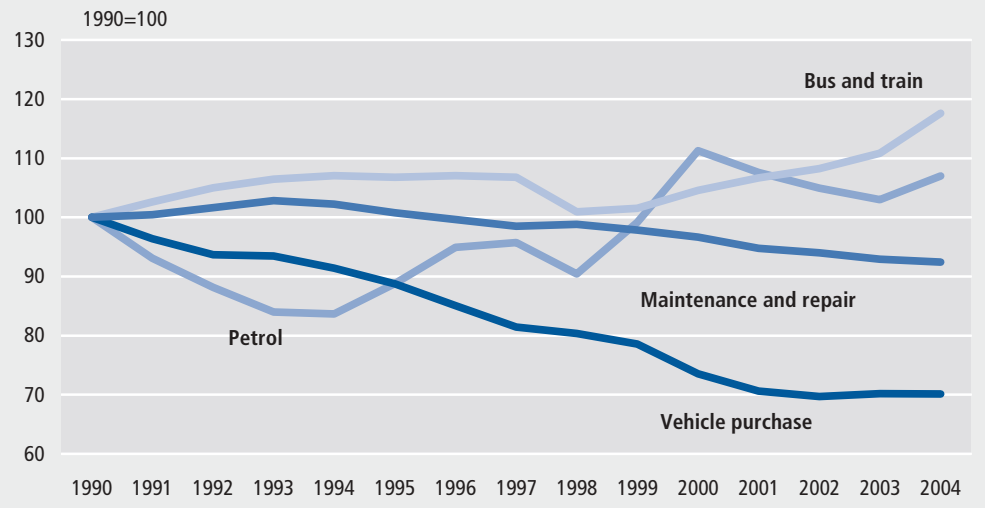
Yearly transport price rise of 2 per cent

From 1990 to 2004, consumer prices as a whole rose steadily by a yearly average of 2 per cent. In this period, the transport price index followed the general price development quite closely.

Higher real prices for public transport

Public transport ticket prices for bus and train have exceeded the general price development in most of the period, in spite of the fact that the price was reduced by means of a government grant in 1997.

Figure 42. **Real price development for public transport and for car driving**



Real growth in petrol price since 1999

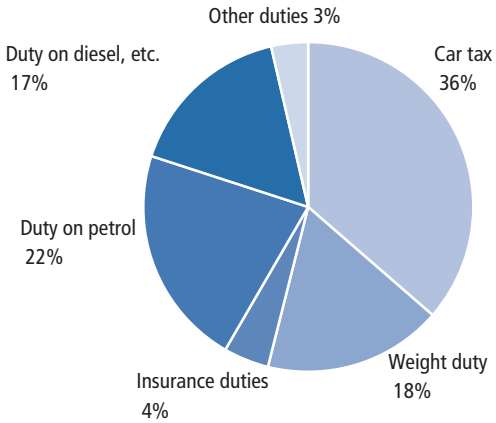
On the contrary the petrol price fell until 1993, but since then it has risen again due to increased taxes and duties and higher crude oil prices, etc., with the result that after 1999, real petrol prices have increased. Real prices for vehicle purchases and for maintenance and repair of private cars have declined since 1990, cf. figure 42.

Transport taxes and duties

Revenue from taxes and duties: 7 per cent of taxes and duties

Total revenue from taxes and duties on means of transport and transport rose by 110 per cent from 1990 to 2004, when the revenue from taxes and duties almost reached DKK 48 billion.

Figure 43. **Duties on means of transport and transport. 2004**



7 per cent of all taxes and duties

In 2004, the revenue from taxes and duties on means of transport and transport accounted for 7 per cent of Denmark's total revenue from taxes and duties.

Car tax

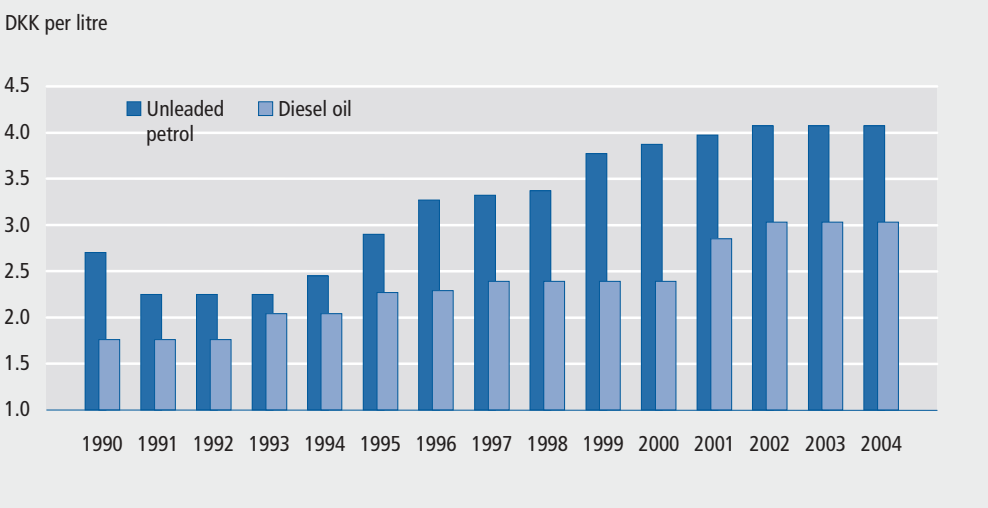
Cars taxes account for nearly one third of the revenue from transport taxes and duties, cf. figure 44. By far the largest share consists of car taxes. The revenue from

car taxes increased markedly in the 1990s until 1998 when the revenue was double the amount of 1990. After that, the revenue fell until 2004 when it rose markedly. To a wide extent, the development has followed the growth in first-time registrations of private cars and vans. Furthermore, the higher average sales prices due to larger and better equipped vehicles have contributed to making the revenue from taxes and duties grow faster than the growth in vehicles.

Weight duty for new cars replaced by green ownership duty

For private cars registered before 1 July 1997, a biannual weight duty is payable depending of the unladen weight of the car. For private cars registered after 30 June 1997, the weight duty has been replaced by the so-called green ownership duty which is differentiated according to the fuel consumption of the car per kilometre travelled. In 2004, the revenue from vehicle weight duties and ownership duties accounted for almost a fifth of the transport taxes and duties, a 91 per cent increase on 1990.

Figure 44. **Duties on unleaded petrol and diesel oil. As at 1 January**



The duties on petrol and diesel oil account for 25 and 18 per cent, respectively, of the total revenue from transport taxes and duties. The revenue has doubled since 1990, partly due to the fact that the rates of taxes and duties have increased, and partly due to the development in the crude oil price and the increased use of cars. From 1 January 1990 to 1 January 2004, the duty on unleaded petrol thus rose by 51 per cent to DKK 4.07 per litre, and the duty on diesel motor fuel rose by 72 per cent to DKK 3.03 per litre, cf. figure 44. During the same period and in particular after 1999, the price of imported crude oil rose so that by the end of 2003, the price was about 60 per cent higher than in 1990. Value added tax is not included as a special tax relating to means of transport and transport.

7. Traffic accidents and casualties

Development in number of accidents and means of transport involved

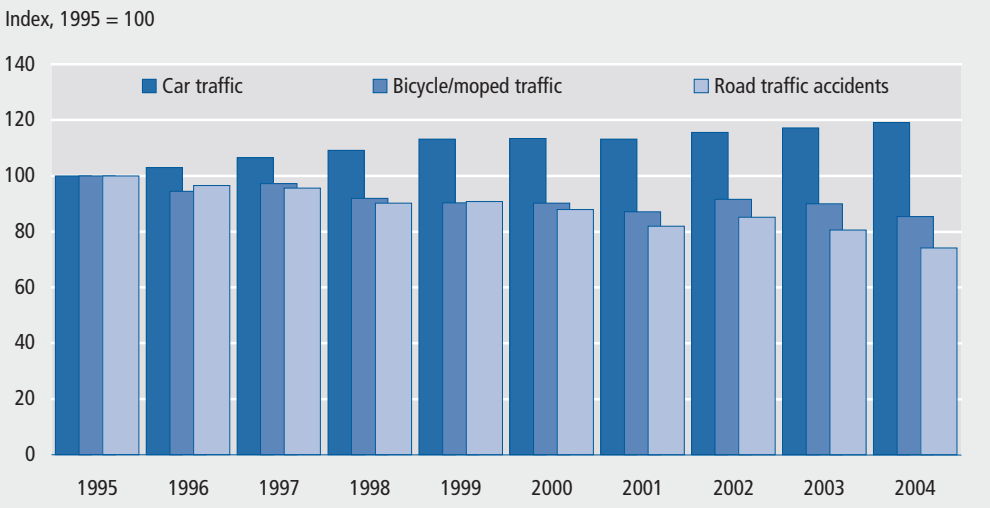
Large drop in number of accidents from 1995 to 2004 …

The number of road traffic accidents causing casualties decreased by 26 per cent from 1995 to 2004. While the police recorded 8,373 accidents in 1995, the corresponding number in 2004 was 6,209 accidents.

… simultaneously with increased car traffic

This reduction in the number of accidents was recorded simultaneously with an increase in car traffic of around 20 per cent. By contrast, bicycle/moped traffic dropped by around 15 per cent.

Figure 45. **Development in number of accidents and traffic index**



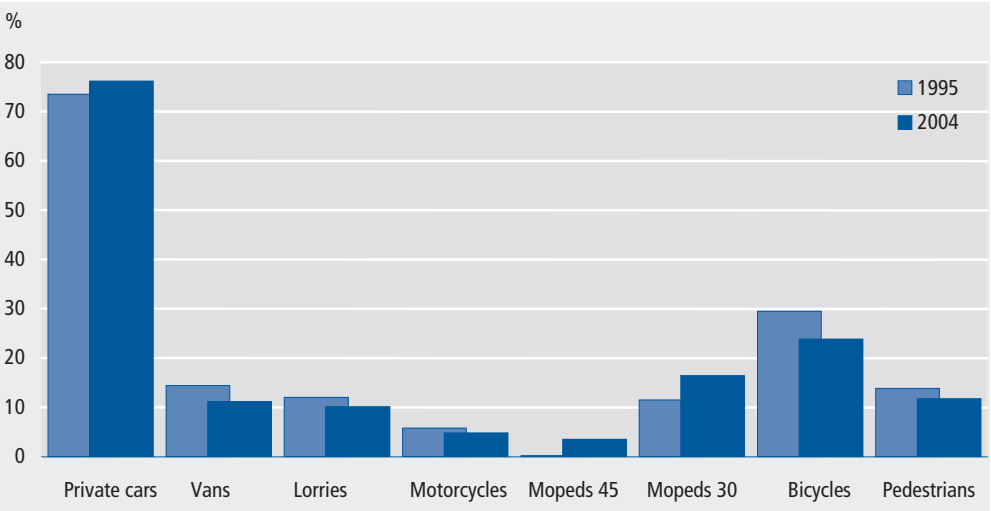
Lowest drop in number of private cars involved

The number of vehicles and pedestrians involved in accidents dropped from 16,912 in 1995 to 12,757 in 2004, corresponding to a decrease of 25 per cent. Private cars saw the smallest decrease of 23 per cent. Most other means of transport, including pedestrians, experienced a decrease of about 40 per cent. The moped 30 is the only means of transport which has experienced an increase in the number involved, namely of 6 per cent.

Private cars involved in 3/4 of accidents

Private cars were involved in three out of four accidents in 2004. This share is slightly higher than in 1995. Bicycles were involved in a quarter of all accidents in 2004. This share is slightly smaller than in 1995. Also the number of pedestrians involved in accidents in 2004 was a little lower compared with 1995.

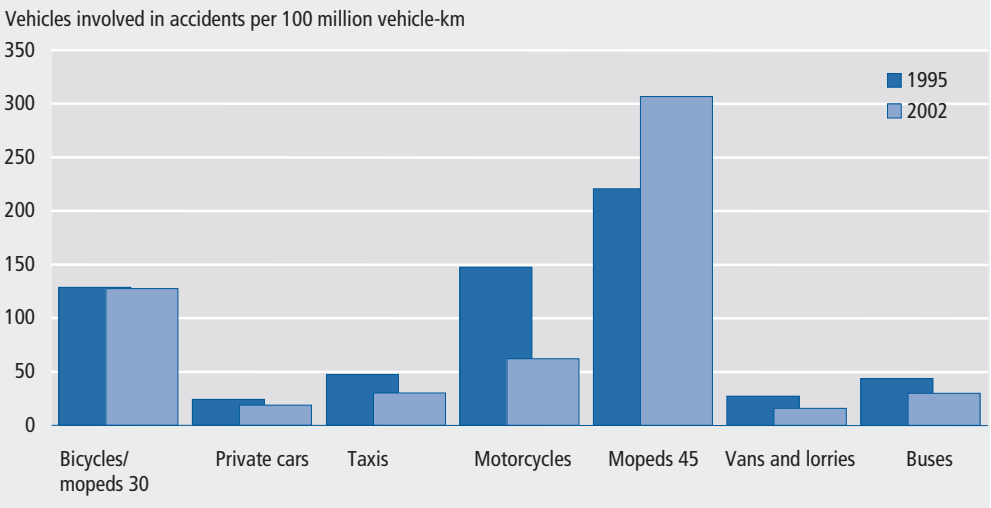
Figure 46. **Accidents by means of transport involved**



Two-wheeled vehicles have most accidents per kilometre travelled

Bicycles, mopeds 30, mopeds 45 and motorcycles have most accidents per kilometre travelled. In 2002, the number of mopeds 45 involved in accidents relative to the kilometres travelled thus exceeded that of private cars by more than 16 times. Mopeds 45 were also the only means of transport where the number of vehicles involved relative to the kilometres travelled was larger in 2002 than in 1995.

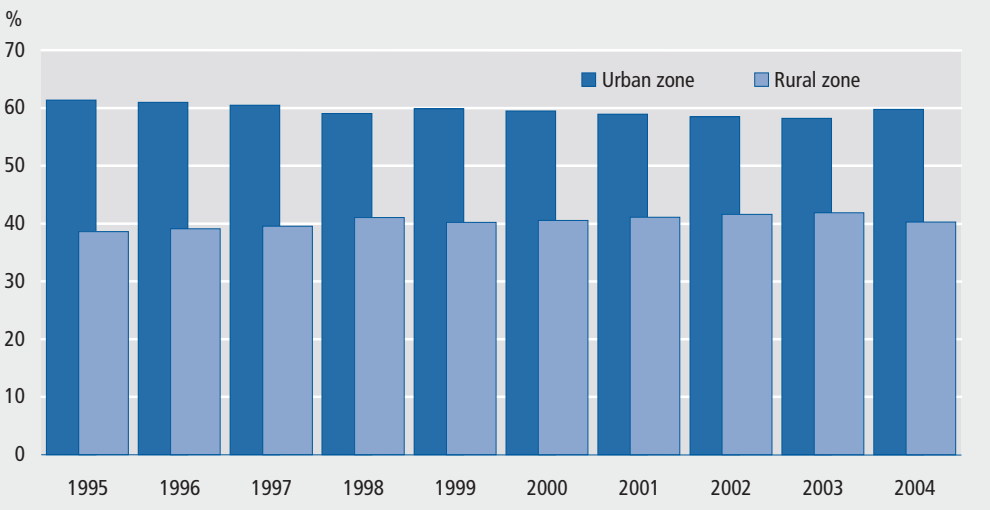
Figure 47. **Development in number of vehicles involved per 100 million vehicle-km**



6 out of 10 accidents occurred in urban zones

In 2004, 60 per cent of all accidents occurred in urban zones and 40 per cent in rural zones. This break-down has more or less remained constant since 1995.

Figure 48. **Accidents in urban and rural zones**



Development in number of casualties

Decrease in casualties and persons killed

The number of fatal casualties decreased by 37 per cent from 582 in 1995 to 369 in 2004. In the same period, the number of seriously and slightly injured persons decreased from 9,991 persons to 7,546 persons, corresponding to a decrease of 25 per cent. There is a shift in the relative distribution of slightly and seriously injured persons from 1997 due to a new definition of casualty categories.

Decrease in casualties equal for males and females …

The development in the number of casualties per 100,000 inhabitants shows an even distribution of the decrease between males and females. 1995 saw 251 casualties per 100,000 male inhabitants compared with 182 in 2004, which corresponds to a decrease of 28 per cent. For females the corresponding decrease was also 28 per cent from 155 to 112.

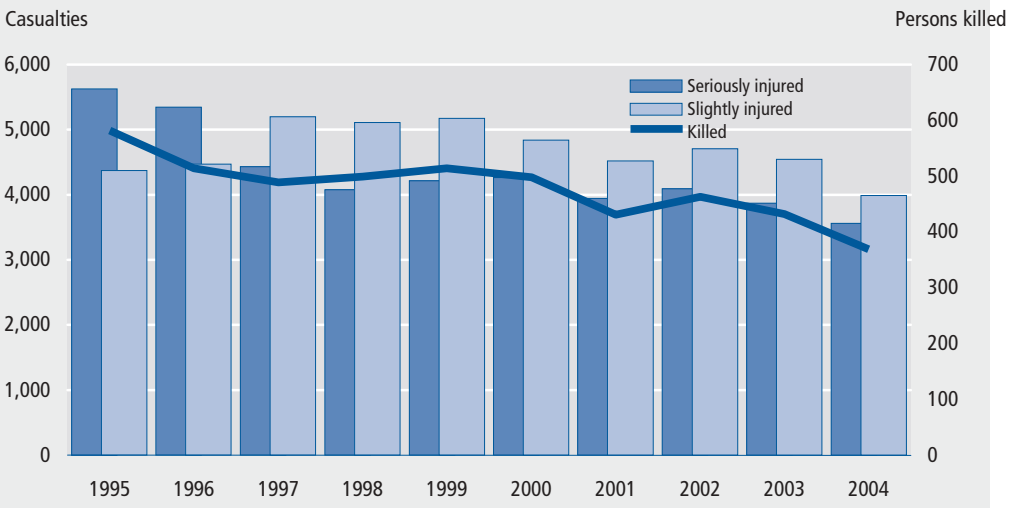
… but big difference between age groups

However, the development in the number of casualties per 100,000 inhabitants varies highly between the age groups.

Slight decrease for 15 to 17-year-old and 35 to 44-year-old males

15 to 17-year-old and 35 to 44-year-old males have seen the smallest decrease in the number of casualties per 100,000 inhabitants in the period 1995-2004, namely of 5 and 0.5 per cent, respectively.

Figure 49. **Development in number of casualties**



Largest decrease for children and elderly people

The number of casualties per 100,000 inhabitants has decreased considerably among children under 15 years of age and the oldest age groups. For children aged 7 to 14 years, the drop exceeded 40 per cent. The age groups of males and females over 54 years of age experienced a decrease of between 30 and 39 per cent.

Males involved in casualties more often than females …

Compared with the number of inhabitants, males were involved in far more casualties than females. In 2004, there were 182 casualties per 100,000 inhabitants for males compared with 112 for females. The same proportion was found in 1995 with 251 casualties for males and 155 for females per 100,000 inhabitants.

… and the young more often than elderly people

18 to 19-year-olds experienced the largest number of casualties per 100,000 inhabitants in both 1995 and 2004. In 2004, 18 to 19-year-old males thus had 668 casualties per 100,000 inhabitants compared with an average of 182 for all males. Correspondingly, 18 to 19-year-old females had 354 casualties per 100,000 inhabitants compared with an average for all females of 112.

Figure 50. **Casualties per 100,000 inhabitants. Males**

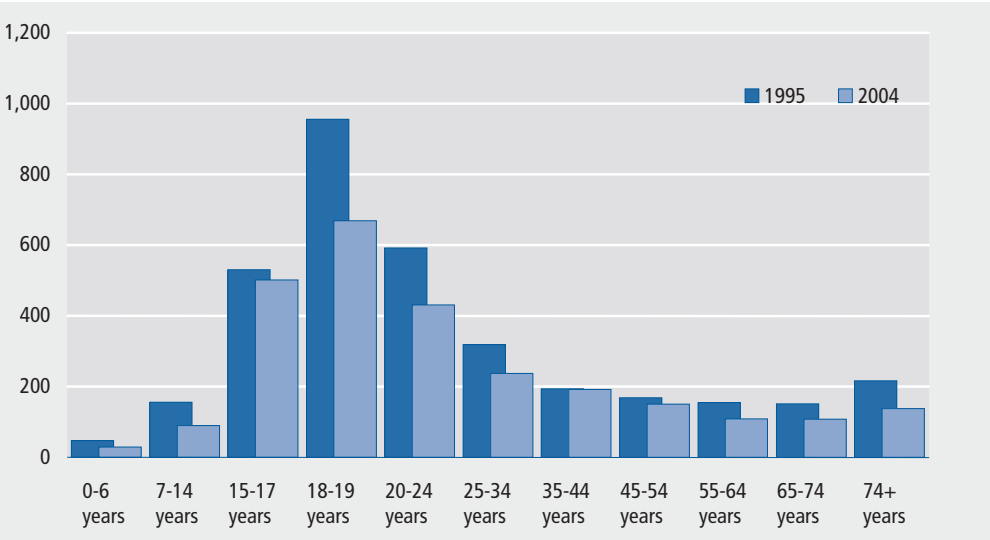
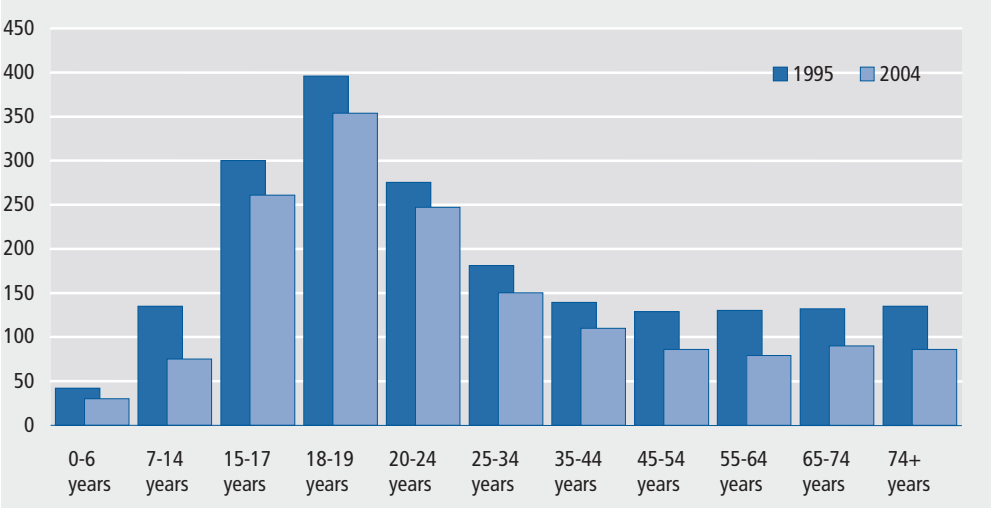


Figure 51. **Casualties per 100,000 inhabitants. Females**



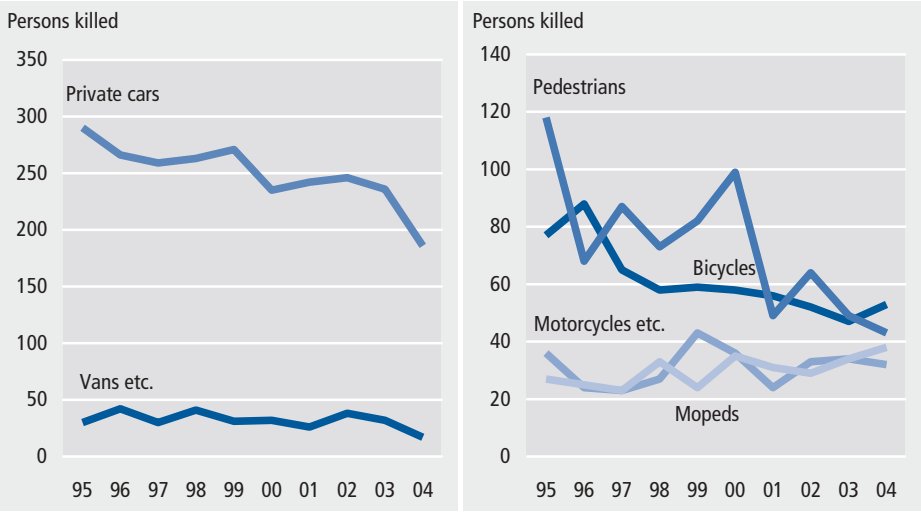
Big decrease in casualties for cyclists and pedestrians

In 2004, the number of casualties for cyclists and pedestrians was also lower than in 1995 by 41 and 38 per cent, respectively. Van drivers (including drivers of lorries and busses) also experienced a large decline of 43 per cent. The decrease for private car drivers was 21 per cent and for motorcyclists (including drivers of mopeds subject to mandatory registration) only 2 per cent. The only group of road users seeing an increase in casualties from 884 in 1995 to 977 in 2004 was drivers of mopeds 30, corresponding to an 11 per cent increase.

Number of pedestrians killed reduced by 2/3

From 1995 to 2004, the annual number of pedestrians killed dropped by almost two thirds from 118 in 1995 to 43 in 2004. The number of cyclists and car drivers killed decreased by about a third, while the number of moped drivers killed increased from 27 to 38 persons.

Figure 52. **Development in persons killed, by means of traffic**



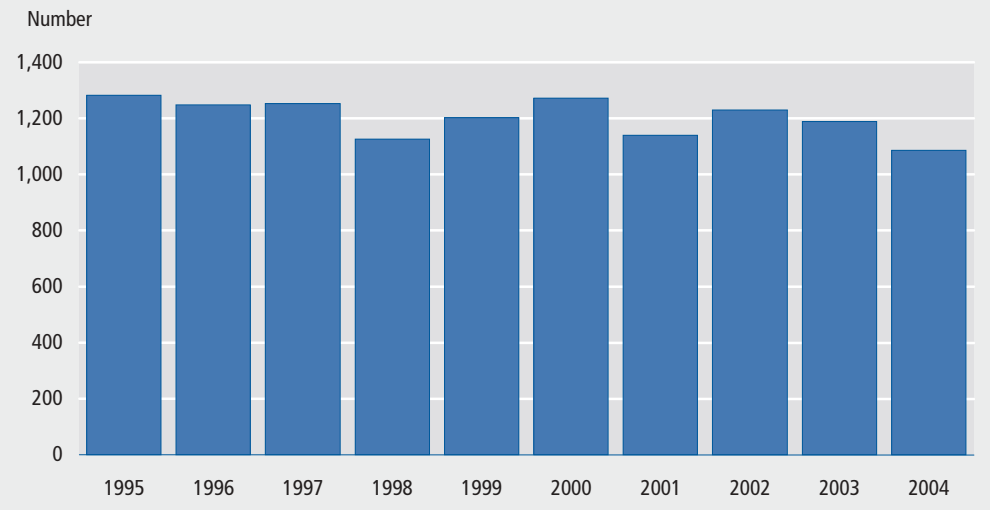
Note: Vans etc. includes lorries and busses. Motorcycles etc. includes mopeds subject to mandatory registration.

Accidents involving persons influenced by alcohol

More accidents involve alcohol

Accidents involving alcohol amounted to 18 per cent of all road traffic accidents causing casualties in 2004. This share is slightly higher than in 1995, when accidents involving alcohol amounted to 15 per cent of all accidents. Altogether a decrease of 15 per cent occurred in the number of accidents involving alcohol from 1995 to 2004, but several years have seen increases, most recently 2002.

Figure 53. **Development in number of accidents involving alcohol**



Moped drivers influenced by alcohol involved in more than 1/4 of all moped accidents

Accidents involving moped 30 drivers influenced by alcohol accounted for 27 per cent of all moped 30 drivers involved in accidents in 2004. Correspondingly, pedestrians influenced by alcohol were involved in 14 per cent of all pedestrian accidents, and motorcyclists influenced by alcohol were involved in 13 per cent of all motorcycle accidents. Only 3 per cent of bicycle accidents involved cyclists influenced by alcohol.

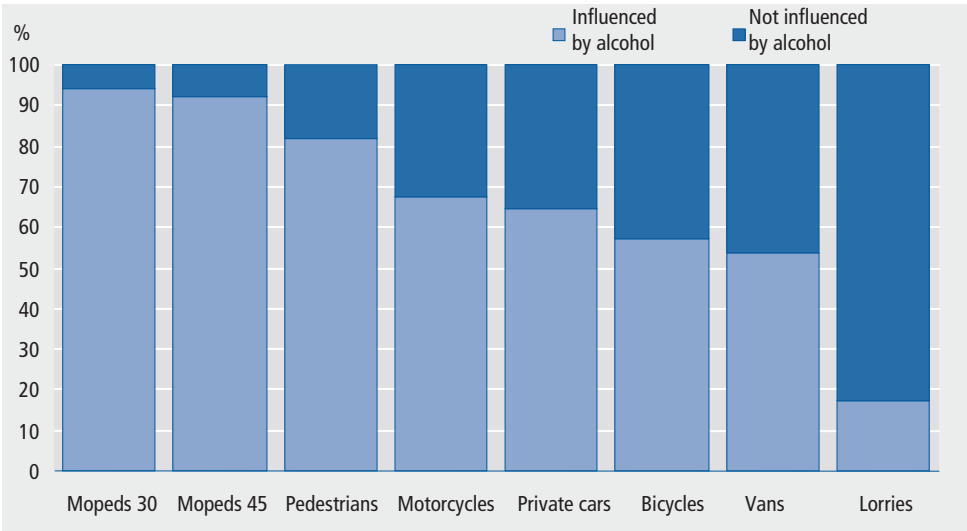
Drop in number of casualties in accidents involving alcohol

The number of casualties in accidents involving alcohol dropped from 1,672 in 1995 to 1,392 in 2004, corresponding to 17 per cent, and the number of casualties among drivers and pedestrians influenced by alcohol dropped by 13 per cent. The number of fatal casualties in connection with accidents involving alcohol decreased by 14 per cent from 123 in 1995 to 106 in 2004.

Most casualties among drivers and pedestrians influenced by alcohol

In 1995, 65 per cent of the casualties and 69 per cent of those killed in accidents involving alcohol were the drunk drivers and pedestrians themselves. In 2004, the corresponding figures were 69 and 75 per cent.

Figure 54. **Drivers and pedestrians implicated in accidents involving alcohol**



In accidents involving alcohol, 70 per cent of the drivers and pedestrians were influenced by alcohol

In 2004, 1,573 drivers and pedestrians were involved in road traffic accidents. 1,104 of them, corresponding to 70 per cent, were influenced themselves by alcohol. The largest share of those influenced by alcohol was found among drivers of mopeds 45 and mopeds 30, 9 out of 10 being influenced by alcohol. Among pedestrians, 8 out of 10 were influenced by alcohol. The lowest share was found among lorry drivers,

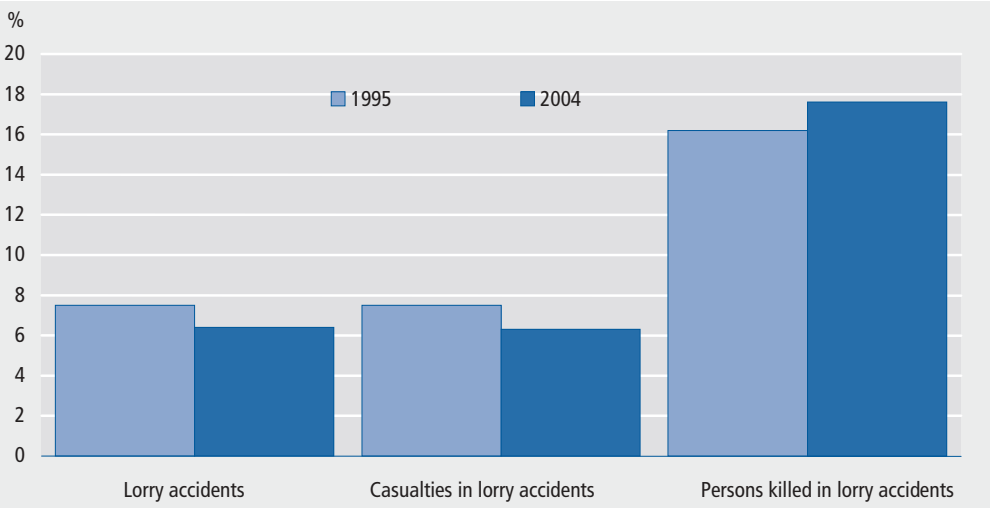
where 17 per cent of those implicated in accidents involving alcohol were under the influence of alcohol themselves.

Lorry accidents

Lorry accidents are the most dangerous ones …

Lorry accidents are the most dangerous ones for the persons implicated. In 1995, lorry accidents accounted for 7.5 per cent of all accidents, but 16.2 per cent of all persons killed in road traffic accidents were killed in a lorry accident. This pattern became even more pronounced in 2004 as lorry accidents constituted 6.4 per cent, whereas persons killed in lorry accidents totalled 17.6 per cent.

Figure 55. **Lorry accidents**



… particularly for cyclists and pedestrians

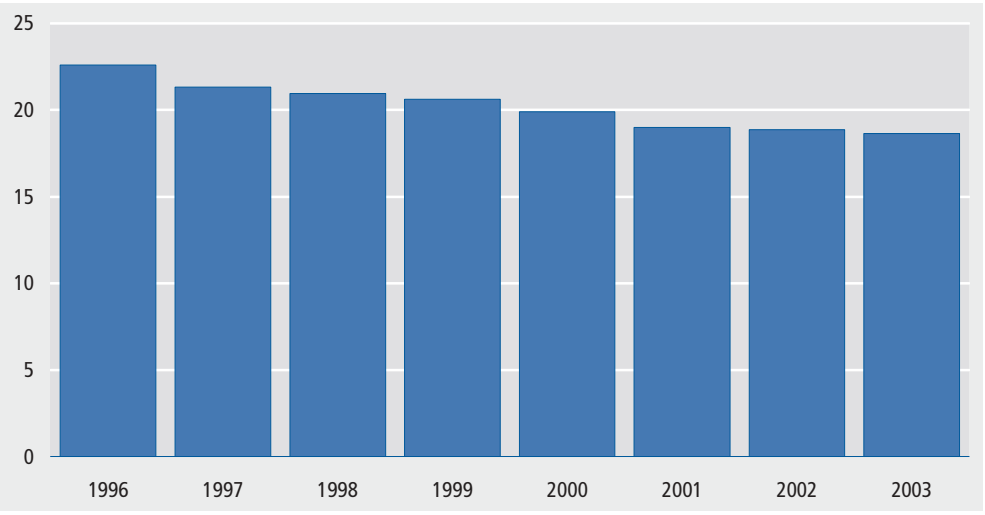
Lorry accidents are particularly dangerous for cyclists and pedestrians. In 2004, a third of the cyclists killed and a quarter of the pedestrians killed were killed in lorry accidents, although lorry accidents only accounted for 6 per cent of accidents involving cyclists and 4 per cent of accidents involving pedestrians.

Dark figures

Dark figures of accident statistics

The official statistics for road traffic accidents, which are based on police reports, only comprise a small share of the total number of casualties in road traffic accidents.

Figure 56. **Share of all registered casualties in road traffic accidents that are reported to the police**

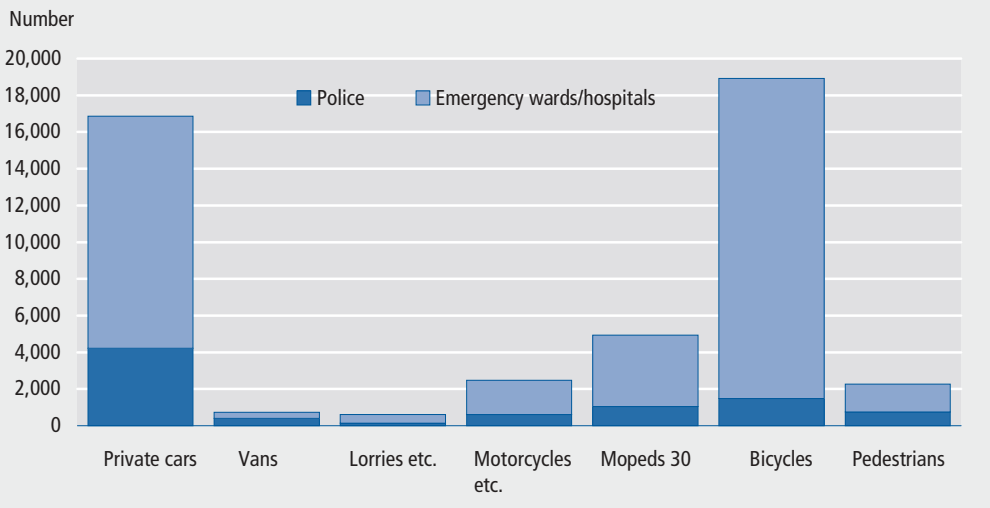


According to studies, statistics cover most fatal accidents, whereas other casualties are considerably underrepresented as a large part of the road traffic accidents in which persons are injured are never reported to the police.

Use of emergency ward registrations

However, a major share of non-reported casualties, the so-called dark figures, can be elucidated by using data from the emergency wards. Statistics Denmark has therefore carried out an annual study since 1996 to examine the ratio of the number of casualties in road traffic accidents registered by the police relative to the number registered by the emergency wards. As from 2001, this analysis has been extended to include data on hospitalisation as a consequence of road traffic accidents.

Figure 57. **Casualties registered by police and emergency wards/hospitals. Distribution by means of transport. 2003**



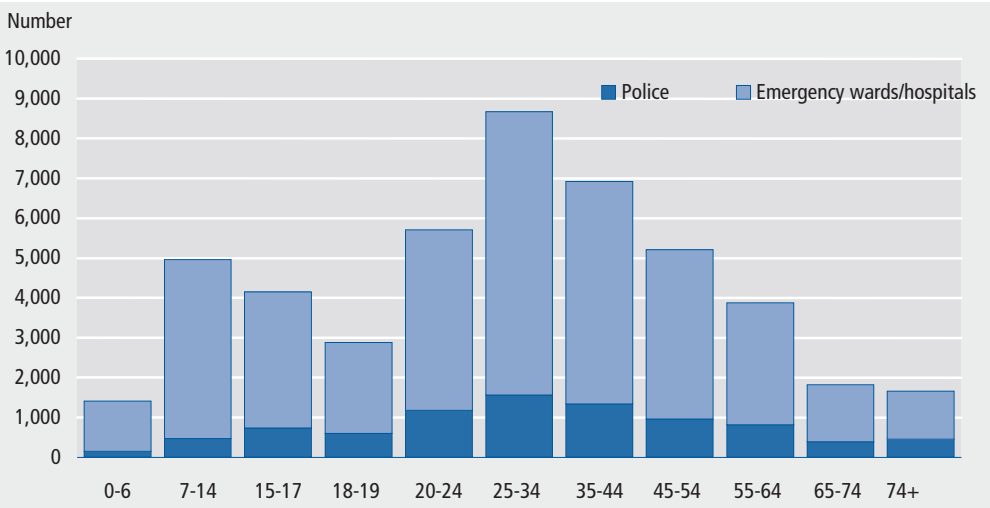
The police record a smaller share of casualties

The analyses show that the regular road traffic accident statistics, which are based solely on police reports, only comprise about one fifth of the total number of casualties registered by the police, emergency wards and hospitals. Moreover, the share of casualties reported to the police experienced a downward trend during the period under review.

17,000 casualties among cyclists not notified to the police

The study also reveals that the dark figure peaked among cyclists, 17,426 casualties among cyclist never being notified to the police in 2003, corresponding to 92 per cent of all casualties among cyclists. The dark figure among car drivers was 12,639 casualties, corresponding to 75 per cent of all casualties among car drivers.

Figure 58. **Casualties registered by police and emergency wards/hospitals, by age. 2003**



Dark figure largest for the youngest age groups

The dark figure is large in all age groups, but relatively largest for young people under 15 years of age and smallest for persons over 64 years of age. The dark figure among 0 to 14-year-olds was of 5,755 casualties, meaning that 90 per cent of all casualties in this age group were not notified to the police. 76 per cent of the 3,469 casualties among persons over 64 years of age were not reported to the police.

Casualties in rail traffic

8 killed each year

The period 1995-2004 saw an annual average of 18 persons seriously injured or killed in rail traffic accidents, 5 of whom were passengers, 3 were railway company employees and 9 were other persons. 8 persons on average were killed in rail accidents each year, 1 of whom was a passenger and 1 was a railway company employee.

In relation to the transport performance of the same period, there were 0.2 seriously injured person and 0.1 killed person per billion passenger-km by rail.

Danish aircraft involved in traffic accidents

Most accidents involve small aircraft

The period 1990 to 2004 saw an annual average annual of 29 accidents with aircraft and helicopters registered in Denmark. The vast majority of failures occurred to aircraft under 5,700 kg. An annual average of 5 persons died in aircraft accidents, and an average of 3 persons were seriously injured each year.

Accidents at sea

8 persons died each year in accidents involving Danish ships

An average of 78 accidents at sea involving Danish or Greenland ships occurred each year from 1999 to 2004. Nearly half of the accidents occurred by collision or grounding, mainly in Danish waters. An average of 8 persons died each year in these accidents, 5 on merchant ships and 3 on fishing vessels. An average of 39 accidents at sea involving foreign ships occurred in Danish waters each year from 1997 to 2004. 35 of these accidents occurred by grounding or collision.

8. Transport-related energy consumption and environmental effects

Transport-related energy consumption

Fossil fuel burning

The transport-related energy consumption is mainly covered by the burning of fossil fuels, which gives rise to emissions of greenhouse gases, acidifying pollutants and a number of other harmful substances, such as substances depleting the ozone layer. The transport-related energy consumption is calculated for road transport, rail transport, domestic and international air transport and domestic sea transport. Moreover, the armed forces consume a small quantity of energy for their transport activities.

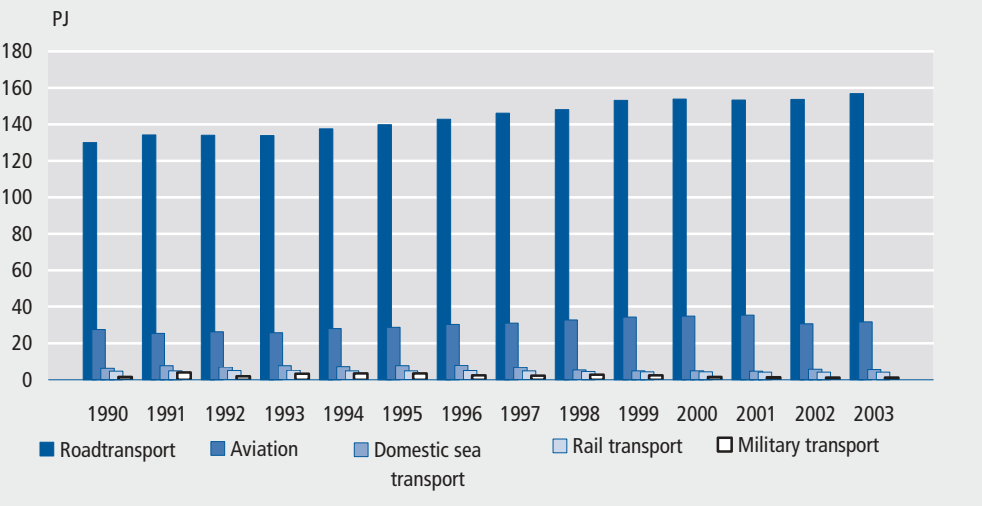
Transport accounted for 31 per cent

Denmark's total final energy consumption increased from 592 PJ (1 petajoule = 10^{15} joule) in 1990 to 635 PJ in 2003 and peaked in 1999 with 644 PJ. In 2003, transport accounted for 31 per cent of the total final energy consumption.

Transport-related energy consumption increased by 17 per cent

The transport-related energy consumption was 170 PJ in 1990 and had grown to 200 PJ in 2003 (an increase of 17 per cent). The period from 2000 to 2002 saw a minor fall, mainly attributable to improved energy efficiency and declining consumption for air transport. The transport-related energy consumption rose again in 2003 due to an increase in the energy consumption for international air transport and road transport.

Figure 59. **Final transport-related energy consumption, by means of transport**



Source: Danish Energy Agency.

Road transport

From 1990 to 2003, the total energy consumption for road transport increased from 130 PJ to 157 PJ (an increase of 21 per cent), which is related to the growth in traffic performance.

Breakdown of energy consumption for road transport

Road transport accounted for 79 per cent of the total transport-related energy consumption in 2003. The energy consumption for road transport can be broken down by gas/diesel fuel and petrol as the main elements.

Aviation energy consumption

Aviation was the second largest contributor to the total transport-related energy consumption, contributing 16 per cent in 2003. Aviation energy consumption showed an upward trend from 1990 to 2001, increasing from 28 PJ in 1990 to 35 PJ in 2001; but from 2001 to 2002 the aviation energy consumption dropped to 31 PJ, which is attributable to the global recession in aviation since the September 11 disaster in 2001. In 2003, the total transport-related energy consumption increased moderately to 32 PJ due to a small increase in the energy consumption by international air transport.

Domestic and international flights

In 2003, domestic flights accounted for 4 per cent of the total aviation energy consumption compared with 11 per cent in 1990. The energy consumption for domestic flights has decreased in particular after the opening of the Great Belt Link in 1997. The energy consumption for international flights increased steadily over the entire period until 2001, except for minor decreases in 1991 and 1993, and then decreased by 13 per cent from 2001 to 2002.

Aviation also has high environmental impact

Although the total final energy consumption for aviation, measured in energy units, is considerably lower than that of road transport, it has turned out that the climate effect of aviation emissions of CO_2 is up to three times larger than that of the corresponding emissions from road transport because emissions directly into the atmosphere are more harmful than emissions at ground level.

Rail transport

The rail transport energy consumption decreased from 4.8 PJ in 1990 to 4.2 PJ in 2003 (11 per cent) and accounted for 2 per cent of the total transport-related energy consumption in 2003.

Domestic sea transport

From 1990 to 2001, the final energy consumption for domestic sea transport decreased from 6.3 to 4.8 PJ, whereupon it increased again to 5.7 PJ in 2003. The total energy consumption from domestic sea transport experienced a downward trend following the opening of the bridges across the Great Belt and Øresund, but has increased again since 2001. In 2003, the energy consumption for domestic sea transport accounted for almost 3 per cent of the total transport-related energy consumption.

Sea transport contributes to SO_2 emissions

Certain types of sea transport give rise to large SO_2 emissions, and e.g. high-speed ferries can consume extremely large quantities of energy. The largest proportion of the total SO_2 emissions from transport is attributable to sea transport because ships use heavy fuel oil, which causes large sulphur emissions.

Emissions from transport

Air pollution is local, regional and global

Traffic causes air pollution by combustion of fossil fuel in transport engines. The pollution consists in emissions of a number of substances with local, regional and global environmental impact. Local impacts include the contribution by transport to air pollution in towns. Regional impacts include the contribution by transport to acid rain and ground-water pollution. Global impacts include the contribution by transport to the greenhouse effect.

Carcinogenic substances

Transport also contributes to emissions of carcinogenic substances, such as poly-aromatic hydrocarbons (PAHs), and to heavy metal emissions. Moreover, particularly diesel-powered transport contributes to the emission of very fine particles considered to be especially dangerous.

Contributes to local air pollution ...

Emissions of carbon monoxide (CO), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOC) and particles contribute to the local air pollution. NO_x contributes to both local and regional pollution problems. Carbon monoxide can affect the cardiovascular system, nitrogen oxides increase the risk of respiratory diseases and can harm trees and other vegetation by creating ozone in the lower stratosphere (troposphere), NMVOC affects the lung function and can be carcinogenic, and particles can irritate the respiratory system, or be toxic or carry carcinogenic substances.

... to regional pollution

A minor share of transport emissions consists in sulphur dioxide (SO_2), which contributes to regional air pollution, as does NO_x, through acid rain.

... and to the greenhouse effect

Emissions of nitrous oxide (N_2O) and carbon dioxide (CO_2) contribute to the greenhouse effect. Greenhouse gases in the stratosphere absorb part of the radiation from the earth, thereby potentially causing global warming. A very large majority of greenhouse gases occur naturally. However, the share of man-made gases is increasing, which is mainly due to the burning of ever larger quantities of fossil fuels. The contribution by transport to the greenhouse effect comes almost exclusively from CO_2 emissions.

Larger proportions of CO_2, SO_2 and N_2O from transport

The share of carbon dioxide (CO_2), sulphur dioxide (SO_2) and nitrous oxide (N_2O) caused by transport increased from 1990 to 2003, amounting to 22, 7 and 5 per cent, respectively, of the aggregate national emissions in 2003. As regards the other substances, the share of emissions caused by transport dropped in spite of increasing transport activities. In 2003, transport accounted for 50, 37, 27 and 18 per cent, respectively, of the national emissions of carbon monoxide, nitrogen oxides, non-methane volatile organic compounds and particles less than 10 microns (PM_{10}).

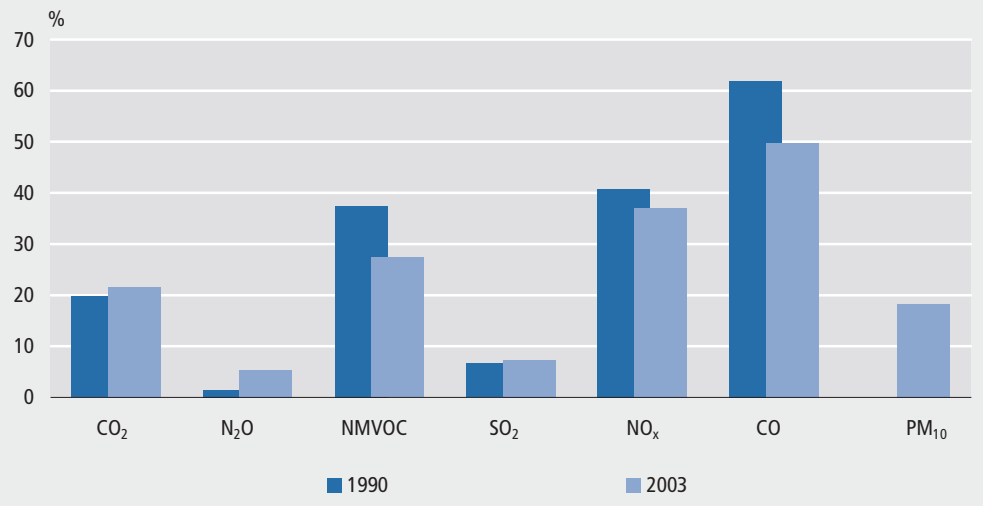
Emission percentage is no measure of harmful effect

It should be noted that these percentages do not reveal the absolute emission in tonnes. As an example, the carbon dioxide emission is the largest in terms of quantity. Moreover, the emission quantity alone does not give any notion about the harmful effects on the environment, locally, regionally or globally.

Road transport causes most emissions

Excluding SO_2, road transport contributes the vast majority of total emissions from transport of all compounds. In 2003, 93 per cent of carbon monoxide (CO) emissions, 73 per cent of emissions of non-methane volatile organic compounds (NMVOC) and 93 per cent of carbon dioxide (CO_2) emissions derived from road transport.

Figure 60. **The share of all national emissions caused by transport**



Note: PM_{10} data only covers 2003.
Source: National Environmental Research Institute of Denmark.

12.8 million tonnes of CO_2 emitted through transport in 2003

In 2003, emissions of carbon dioxide from transport accounted for 12.8 million tonnes, nitrous oxide for 1.4 thousand tonnes, NMVOC for 43.2 thousand tonnes, sulphur dioxide for 2.2 thousand tonnes, nitrogen oxides for 77.5 thousand tonnes, carbon monoxide for 294.4 thousand tonnes and particles (PM_{10}) for 5.6 thousand tonnes.

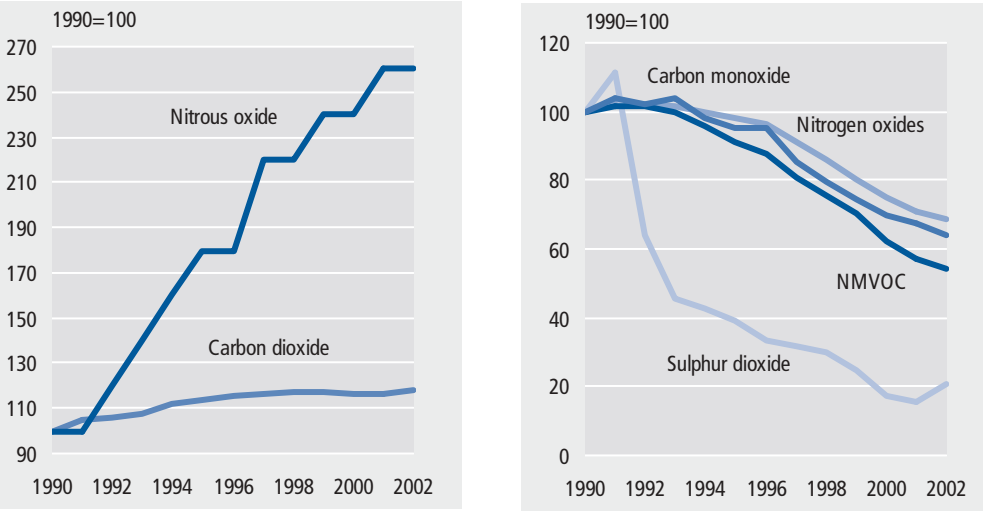
Emissions from road transport reduced since 1990

Emissions from road traffic have been reduced since 1990, partly due to the use of catalytic converters in new petrol-powered cars and partly due to the use of diesel fuel with less sulphur since 1990.

Catalytic converters since 1990

As from 1990, all new private cars must comply with new limits for the contents of nitrogen oxides, carbon monoxide and hydrocarbons in exhaust gases. In petrol-powered cars, these emission standards are met through the installation of catalytic converters that oxidise hydrocarbons and carbon monoxide into water and carbon dioxide and reduce nitrogen oxides to free nitrogen. The use of catalytic converters has caused a substantial reduction in the pollution of the air by transport-related substances, cf. figure 61.

Figure 61. **Emissions from transport**



Source: National Environmental Research Institute of Denmark

High SO_2 emissions from sea transport

Sea transport is characterised by relatively high SO_2 emissions because of the high sulphur content of the fuel oil. In 2003, 83 per cent of SO_2 emissions from transport derived from sea transport. Sulphur dioxide emissions from domestic sea transport were nearly five times as large as the emissions from road transport in 2003. A major reason for the large drop in the total emissions from transport is that most of the sulphur in diesel fuel has been removed from the road transport as a consequence of the statutory requirement of using low-sulphur diesel fuel in car engines.

Railways have limited emissions

The railways contribute a relatively minor part of the emissions from transport, and SO_2 emissions from rail transport have almost ceased since the introduction of low-sulphur diesel fuel in 1992-1993. However, this part does not include indirect emissions from railways occurring in connection with electricity production for electrically powered trains.

Several other types of societal activities, such as production and power supply, also contribute to substantial emissions of the substances in focus.

Air quality in towns

Notable improvement of air quality since 1990

Measurements of air pollution at street level in Copenhagen, Aalborg, Odense and Aarhus show a marked drop in harmful substances in the air since 1990.

Particle content

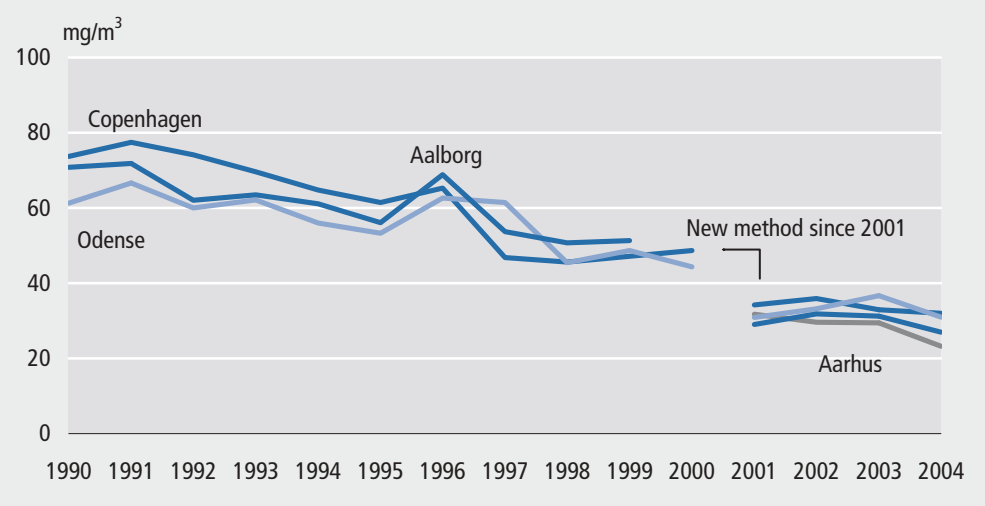
The particle content of the air experienced a downward trend from 1990 to 2004 in Copenhagen, Aalborg and Odense (and in Aarhus since 2001). In all four cities, the annual particle concentration in the air was below the emission limit of 40 µg/m^3 (µg = 1 millionth of a gram per cubic metre of air) applicable as from 2005.

By 2010, the annual concentration must be down to 20 µg/m^3. The major causes of the particle pollution are diesel-powered cars and busses and whirled-up dust from roadways combined with wood stoves and construction dust.

Benzene below emission limit

Road transport and solvents are some of the primary sources of benzene emissions. Petrol contains benzene, which is released through combustion in petrol engines. In 1996, low-benzene petrol was introduced. As from 2010, the annual benzene concentration may not exceed 5 µg/m^3. This emission limit has not been exceeded in the few years that measurements have been made, except in Copenhagen in 1998.

Figure 62. **Particle concentration in urban areas**

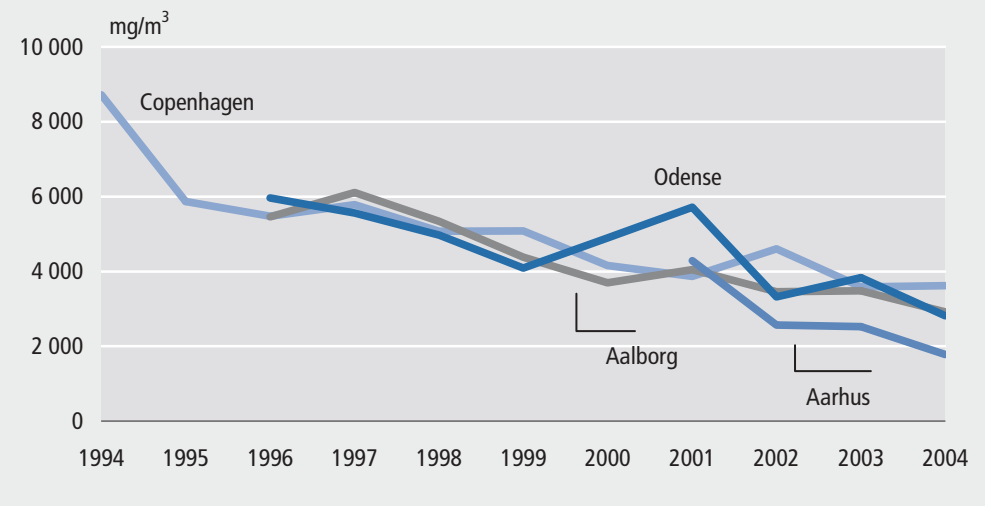


Note: No measurements were made in Aalborg in 2000, Aarhus is included as from 2001 only.
Source: National Environmental Research Institute of Denmark. Department of Atmospheric Environment.

Emission limit for CO not exceeded

Carbon monoxide (CO) is a toxic gas that is mainly exhausted from petrol engines. The concentration peaks in streets with high traffic density. The 2005 emission limit for carbon monoxide has been fixed at 10,000 µg/m^3, calculated as an eight-hour rolling average.

Figure 63. **Carbon monoxide concentration in urban areas (highest eight-hour rolling average)**



Source: National Environmental Research Institute of Denmark. Department of Atmospheric Environment.

The emission limit has not been exceeded in the period 1994-2004 in Copenhagen, Aarhus, Aalborg and Odense.

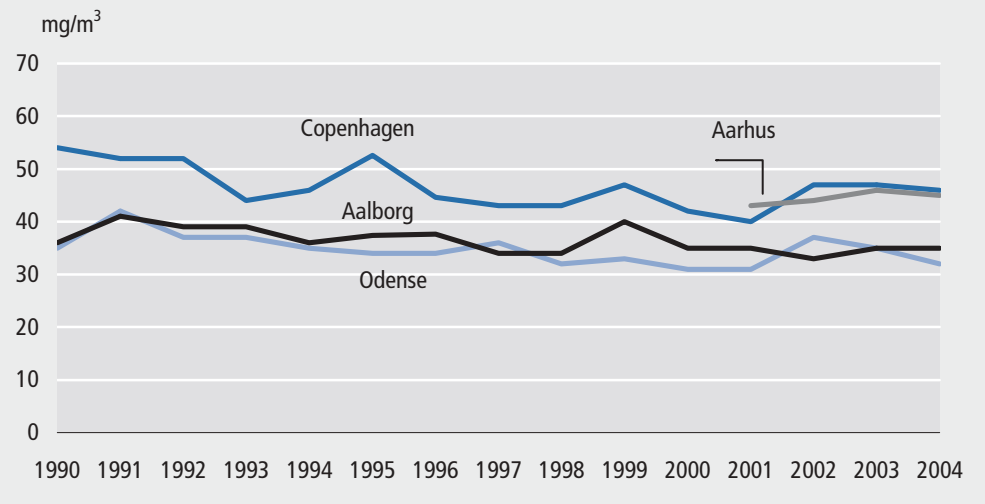
Catalytic converters have restricted CO emissions

The introduction of catalytic converters has caused a substantial reduction of carbon monoxide (CO) emissions, and emissions will decrease even more when old cars are replaced by new ones with more efficient catalytic converters. Periodic vehicle inspections, which were introduced in 1998 to implement an EU Directive, also contribute to a reduction of carbon monoxide emissions.

Emission values for NO_2 above 2010 target

Nitrogen oxides (NO_x) is a collective term for nitric oxide (NO) and nitrogen dioxide (NO_2). Nitric oxide from exhaust fumes reacts with ozone and is transformed into nitrogen dioxide. The nitrogen dioxide content of the air has shown a downward trend since 1990. In 2004, the nitrogen dioxide content of the air was 46 µg/m^3 in Copenhagen and 45 µg/m^3 in Aarhus, which content would exceed the 2010 nitrogen dioxide emission limit of 40 µg/m^3 if it had been in force today.

Figure 64. **Nitrogen dioxide concentration in urban areas**



Note: Aarhus is included as from 2001.
Source: National Environmental Research Institute of Denmark. Department of Atmospheric Environment.

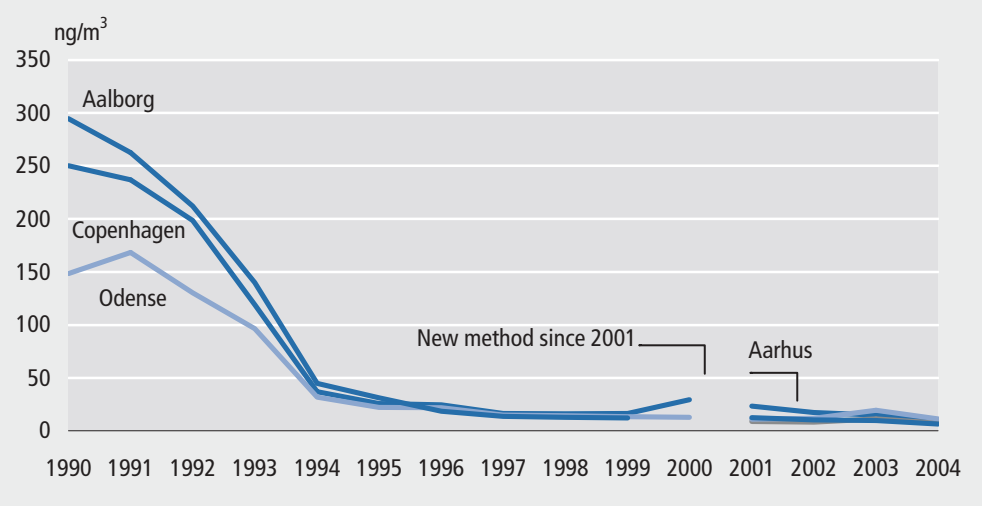
Ozone limits not exceeded

Ozone is a toxic gas that is harmful to the human respiratory system and plant growth in large concentrations. Most of the ozone at ground surface level originates from industry and traffic, although most of the ozone measured in the air in Denmark originates from sources outside the Danish borders, particularly from southern Europe. The largest concentrations are found during the summer in periods of hot and sunny weather. The ozone concentration has not exceeded the emission limits.

Lead concentration decimated

Since 1990, the lead content of the air has decreased by more than 90 per cent in Copenhagen, Aalborg and Odense due to reduced sales of leaded petrol. In 1994, the sale of leaded petrol in Denmark ceased.

Figure 65. **Lead concentration in urban areas**



Note1: No measurements were made in Aalborg in 2000, Aarhus is included as from 2001.
Source: National Environmental Research Institute of Denmark. Department of Atmospheric Environment.

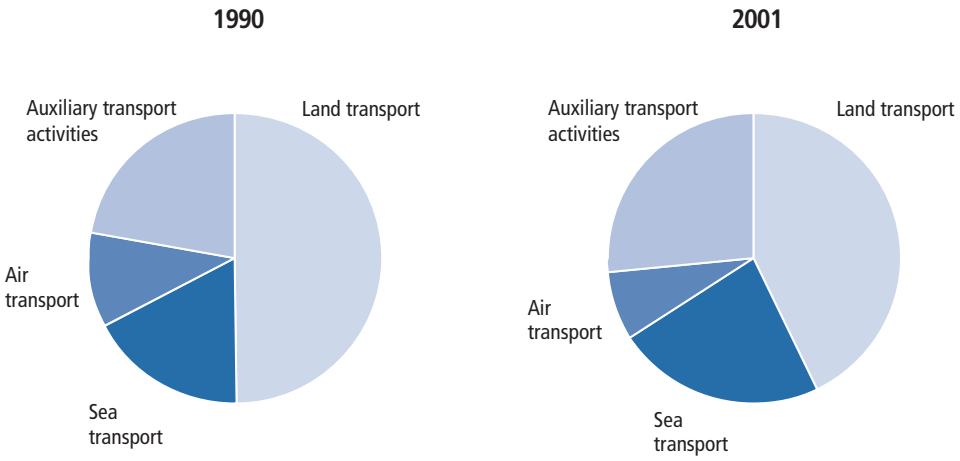
9. Economic trends and employment in transport

Gross value added in transport sector

6 per cent of total gross value added

The gross value added in the transport sector at current prices was DKK 78 billion in 2004, corresponding to a little more than 6 per cent of the gross value added of the entire economy and 10 per cent of the gross value added in the service sector.

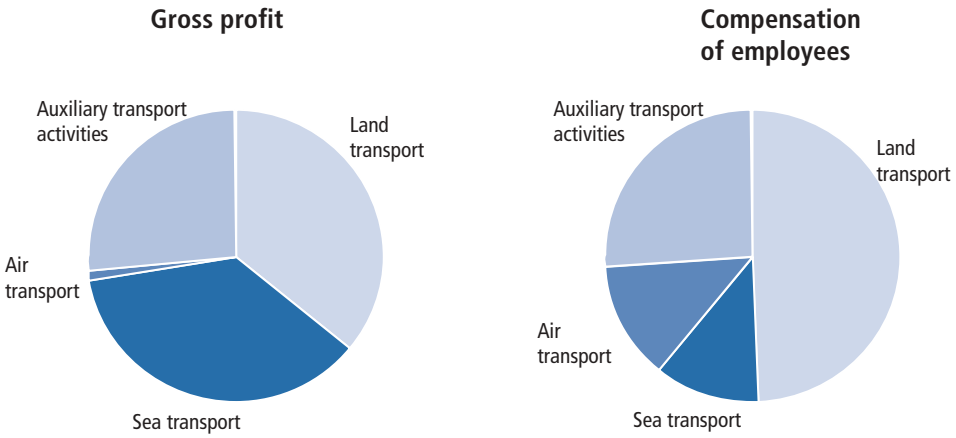
Figure 66. **Gross value added in transport sector, by activity**



64 per cent growth from 1990 to 2004

At fixed prices, the gross value added in the transport sector rose by 64 per cent from 1990 to 2004. The growth became substantial from the second half of the 1990s in particular, and especially in the field of sea transport, which has specialised in high-tech container ships and acquisition of foreign shipping companies, and in auxiliary transport activities. For road transport the trend has been more or less stagnant.

Figure 67. **Gross profit and compensation of employees of the transport sector. 2001**



In 2001, which is the latest year with detailed statistics, land transport accounted for 43 per cent of the total gross value added in the transport sector, road freight haulage accounting for a little more than half of the increase. Sea transport accounted for 23 per cent of the gross value added in the sector, air transport for 7 per cent and goods handling and auxiliary transport activities for 22 per cent, compared with 50, 17, 10 and 22 per cent, respectively, in 1990.

The total value of production in the transport industry amounted to DKK 228 billion in 2004 at current prices. The consumption in the production process for the purchase of raw materials and services for production use and expenses for repairs and maintenance of capital goods totalled DKK 150 billion, so that the total gross value added in the sector amounted to DKK 78 billion.

Subsidies less taxes on production amounted to DKK 2 billion in 2004, leaving DKK 40 billion for compensation of employees and DKK 40 billion for compensation of the self-employed, return on capital goods and consumption of fixed capital (depreciation).

The gross value added accounted for a falling share of the value of production from about two fifths in 1990 to a third in 2004. The payroll share of the gross value added was reduced in the same period from three fifths to half of the increase. It is presumed that this development reflects the increased capital stock of the sector.

Accounting statistics

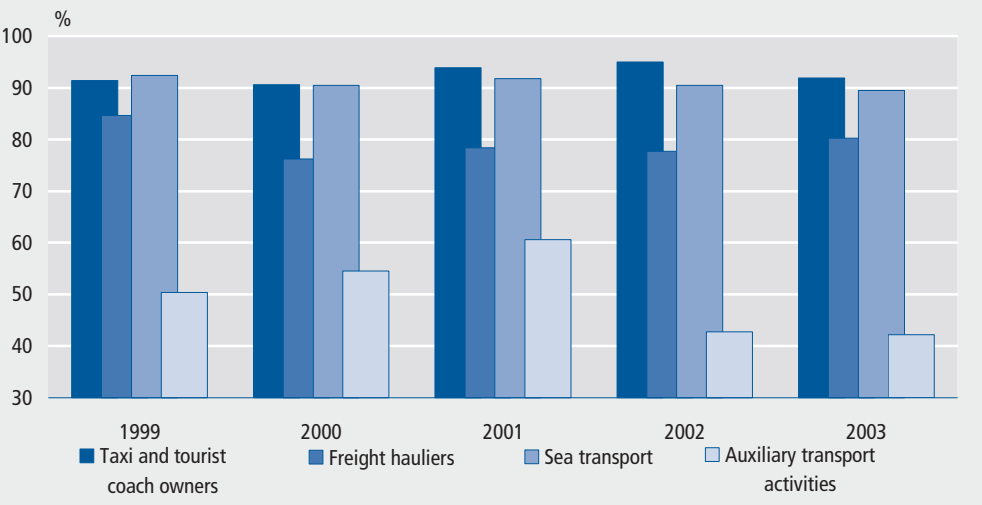
For four selected transport trades: taxi and tourist coach owners, freight hauliers and pipeline transport, sea transport, and auxiliary transport activities, it is possible to set out economic indicators for the earnings and costs of these trades on the basis of the accounting statistics. Three key indicators will be described below.

Gross margin

In the period 1999-2003, the *gross margin*, which is the gross profit seen as a percentage of revenue, gross profit being defined as revenue less cost of sales, payment for sub-contractors and payroll expenses, was around 90 per cent for taxi and tourist coach owners and sea transport, about 80 per cent for freight hauliers and

much lower for auxiliary transport activities, about 40-60 per cent, cf. figure 68. The latter trade differs from the other three trades by having far higher cost of sales, etc. Cost of sales, etc., also includes expenses such as transport services bought from other companies and energy costs.

Figure 68. **Gross margin**

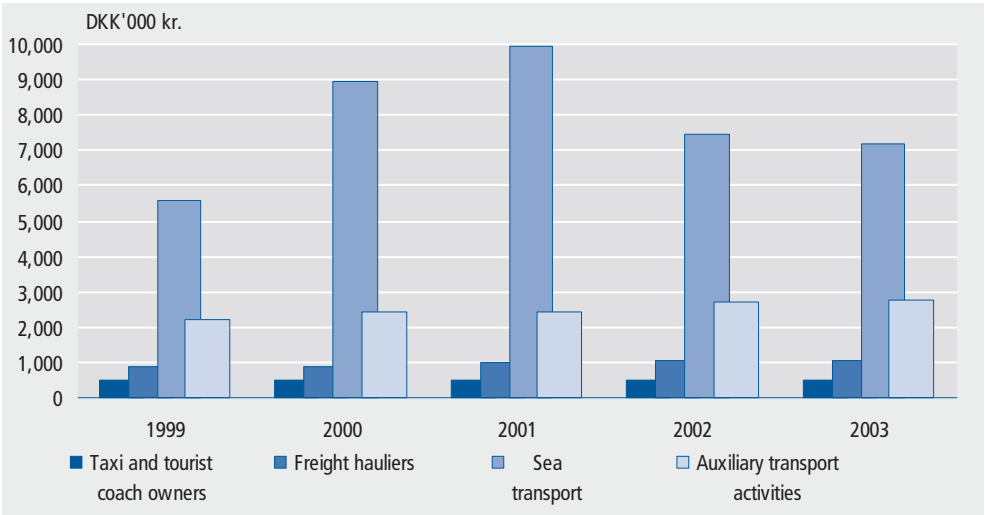


Revenue and other operating income per employee

Sea transport had the highest *revenue and other operating income per employee* in the period 1999-2003 of DKK 7 million in 2003. Auxiliary transport activities came next, totalling just under DKK 3 million in 2003, and taxi and tourist coach owners and freight hauliers came last, with revenue and other operating income per employee of between DKK 500,000 and 1 million in the period 1999-2003. These figures reflect differences in the cost structures.

The revenue of taxi and tourist coach owners and freight hauliers is mainly intended for compensation of employees, whereas the more capital intensive sea transport also requires high costs per employee for production plant and machinery, and auxiliary sea transport also requires funding of high costs per employee for cost of sales, such as fuel.

Figure 69. **Revenue and other operating income per employee**

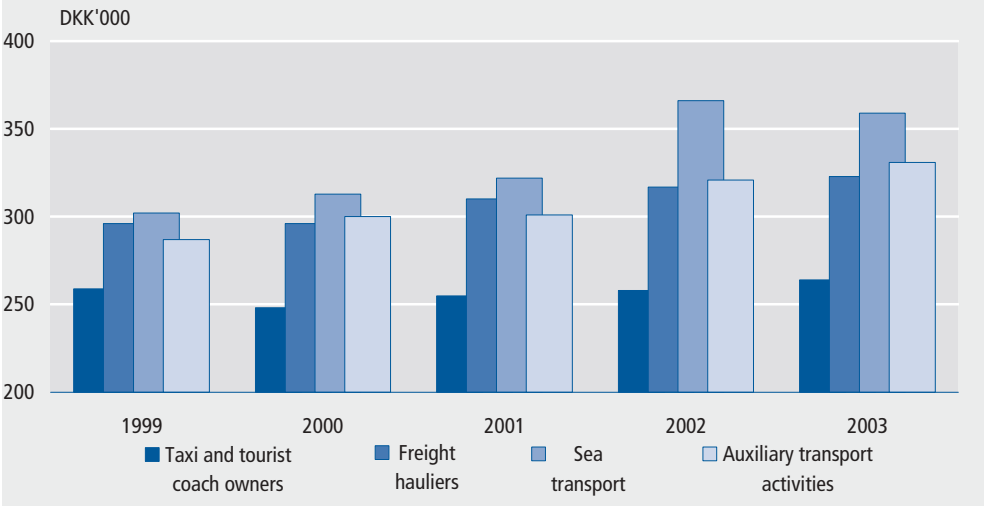


Payroll expenses per employee

Payroll expenses per employee amounted to around DKK 250,000 for taxi and tourist coach owners in the period 1999-2003, but were a little higher for freight hauliers and auxiliary transport activities, namely DKK 295,000-325,000. As regards sea

transport, this trade had the largest payroll expenses per employee, the level being DKK 360,000 in 2003, cf. figure 70.

Figure 70. **Payroll expenses per employee**



Employment in the transport sector

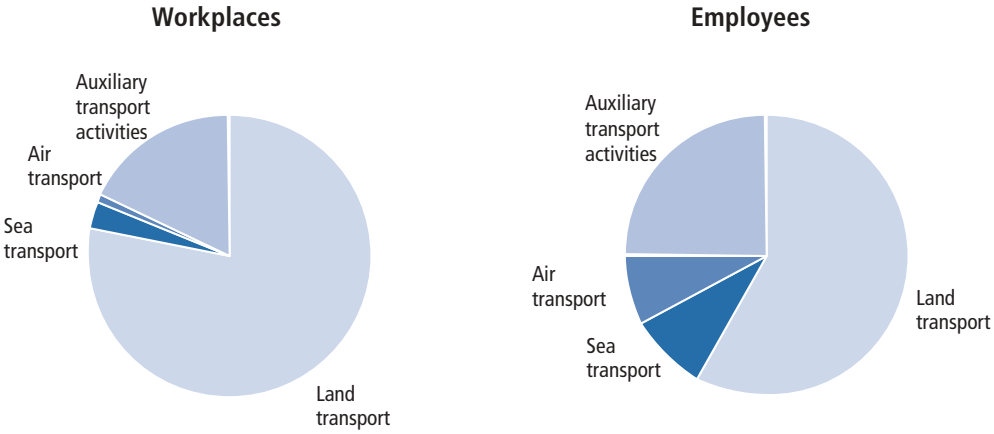
12,100 workplaces and 132,200 employees

In 2003, there were 12,100 workplaces having transport as their main activity. These workplaces employed 132,200 persons, or 5 per cent of the total employment figure. 58 per cent of the employees within the transport sector worked with land transport, 25 per cent with auxiliary transport activities, 9 per cent with sea transport and 8 per cent with air transport, cf. figure 71.

Small workplaces within land transport – large within air transport

The transport sector employed an average of 11 persons per workplace in 2003. Land transport and auxiliary transport activities had relatively small workplaces with an average of 8 and 15 employees per workplace, respectively, while sea transport and air transport had relatively large workplaces with an average of 32 and 99 employees per workplace, respectively.

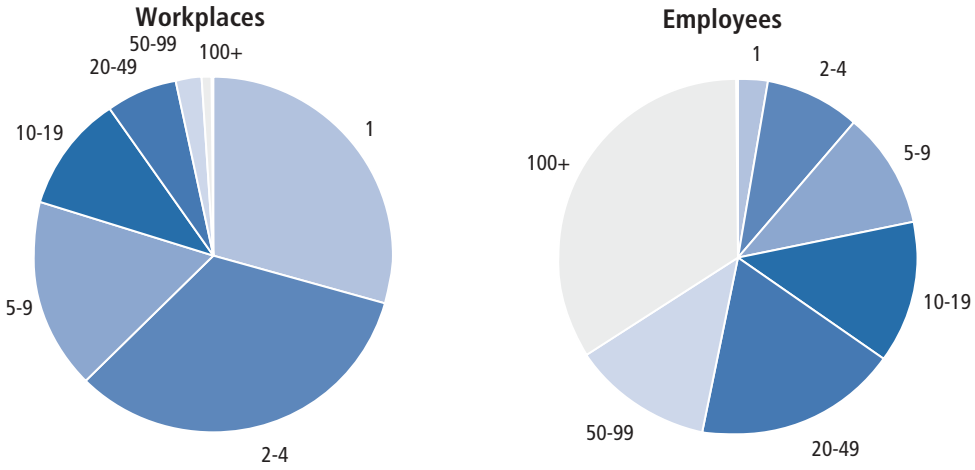
Figure 71. **Transport sector workplaces and employees in 2003**



62 per cent of workplaces had fewer than 5 employees

The transport sector is generally characterised by small enterprises. Thus, 62 per cent of the workplaces had fewer than 5 employees, 17 per cent had 5 to 9 employees and 20 per cent had 10 or more employees in 2003. Only 1 per cent of the workplaces in the transport sector had 100 or more employees.

Figure 72. **Workplaces and employees, by size of workplace in 2003**



However, 78 per cent of the transport sector employees worked in enterprises with 10 or more employees; the corresponding share of the entire economy being 86 per cent.