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Shipping Air
The Global Shipping of New and Used Cars

A Beresford, K-Y Choi, P Nieuwenhuis
Cardiff University, Cardiff, Wales, UK

Introduction (i)

- Global field study 1998-9; 1st of its kind
- Regular updates 2000-2006
- Main focus:
  - **Europe**
  - **Far East**
  - **Australasia**
  - **East & West Africa**
  - **North America**
- Published & unpublished data
- Interviews, field observations
- New vehicle data widely available; used vehicle information sensitive and often jealously guarded

Key question: can ship space be better filled by matching new and used unit movements?

Introduction (ii)

- Here, we summarise:
  - New vehicle production patterns
  - Vehicle shipping and trade
  - Used vehicle exports from Japan & Korea
- Car manufacturers are heavily reliant on shipping
- Typically 2000-6500 cars per carrier
- Bigger vessels on longer routes, e.g.:
  - Far East to North America
  - Far East to Europe
- Some manufacturers own & operate ships, some do not
- Others contract out to specialists, e.g. MOL, Wallenius-Wilhelmsen

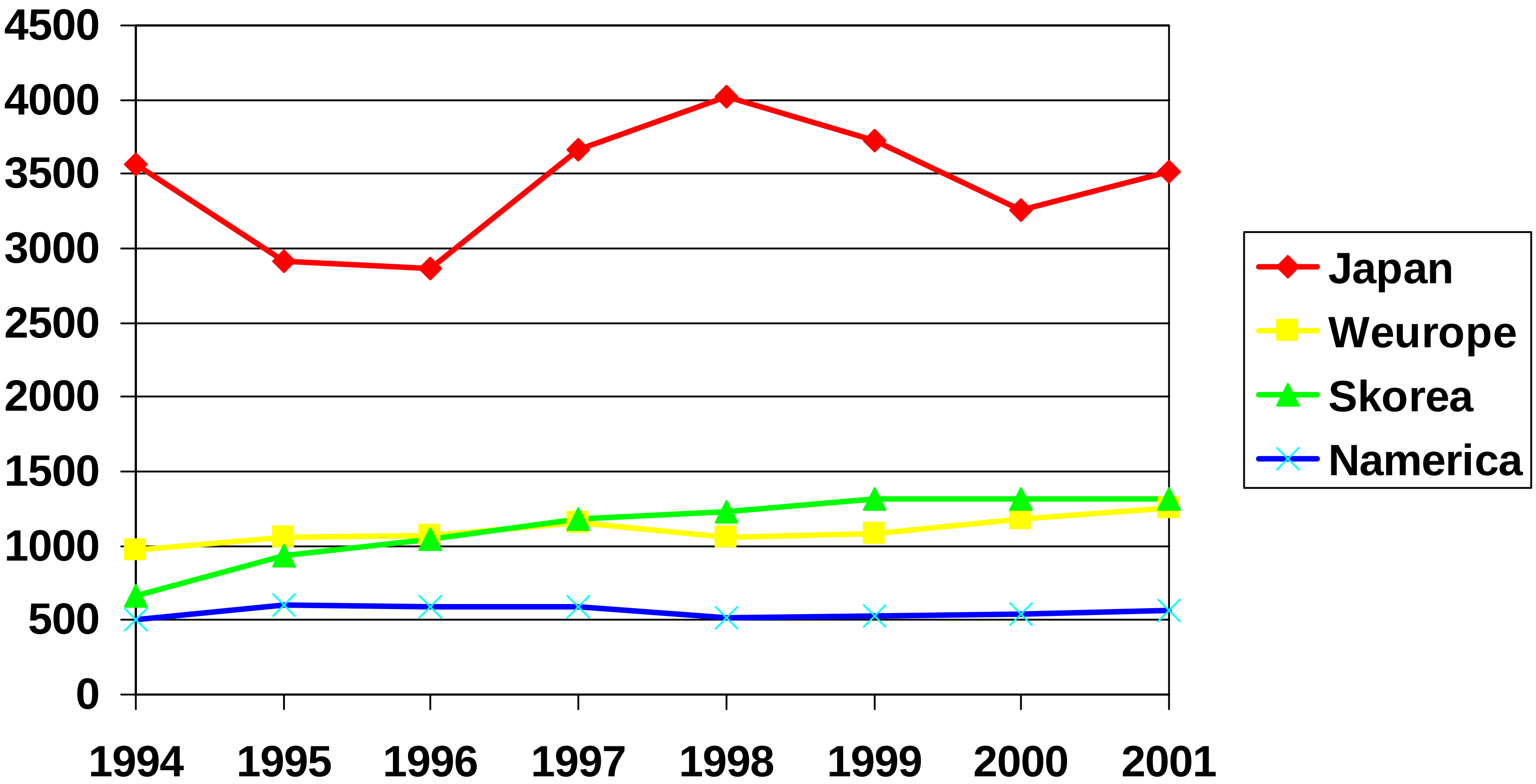
Introduction (iii)

- Margins often better on used vehicles:
  - Not bound by tight contracts
  - Often critical return cargo
  - Sometimes critical ‘make-up’ cargo
- Used vehicles can improve vessel utilisation
- During 1990s and to date, global trade in new and used vehicles grew faster than production or consumption
- Shifts in production capacity and price attractiveness of used vehicles has caused stresses between demand and supply
- Localisation (transplant) strategies - producing close to markets
- Japan & Korea over-producing, also feeding used vehicle market

Introduction (iv)

- New car shipments mainly driven by high production in Asia-Pacific:
  - 23 million units produced (2004)
  - 16.8 million units sold (2004)
- Japan dominates; China & India still small importers and few exports
- Hyundai-Kia-Asia sole surviving independent Korean manufacturer boosting Korean exports
- Small export volume by Renault-Samsung, though growing exports by Daewoo-Chevrolet
- Dominant market: US; still importing large volumes despite transplant production
- Korean focus increasingly on EU and Eastern Europe as well
- Success of one model can be critical to overall shipping volumes

New Car Exports by Region 1994-2001



Worldwide new car transport volume
(*-forecast)

year	1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007*
1000 units	7107	7792	8602	8454	8890	9627	10734	11105	11575	12050
% change	n/a	+9.6	+10.4	-1.7	+5.2	+8.3	+10.5	+3.5	+4.2	+4.1

Used Cars (i)

- Exports of used cars, buses, trucks, cranes, etc. have grown rapidly over 20 years
  - Lower volumes than new vehicles
  - Less concentrated flows
  - More diverse vehicle mix
- Overall, flows do not fit well with new vehicle movements
- Many identified flows are north-south, rather than east-west
- No official figures available for global used vehicle shipments
- Some figures for ex-Japan and Korea movements

Principal used car flows

From	To	Main recipient markets
Japan/Korea	Asia-Pacific	Vietnam, New Zealand, Russia, Sri Lanka, Bangladesh, etc.
Japan/Korea	South and Central America	Peru, Chile (transit), Costa Rica (part transit)
Japan/Korea	Middle East and Meditteranean	Gulf states, Cyprus
Japan/Korea	Africa	all
Japan	Europe	Ireland, UK
US/Canada	Central America and Carribean	most
US/Canada	Middle East	Gulf states

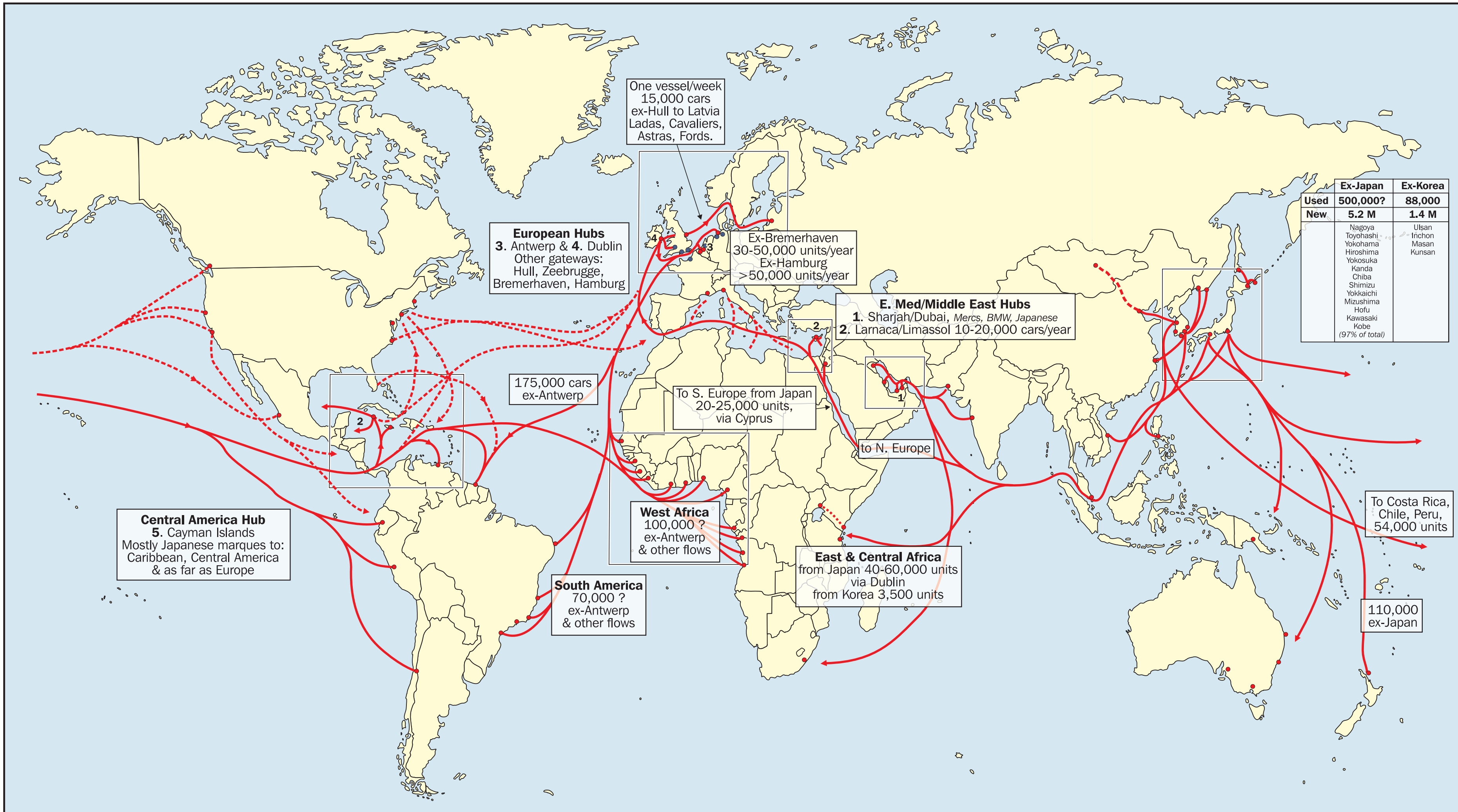
Used Cars (ii)

- Several big overland flows:
  - US to Mexico
  - UAE to Iran & Pakistan
  - EU to Eastern Europe & Russia
  - Gulf/Saudi Arabia to East Africa (transit from Japan/Korea)
  - Flows within West Africa from gateway ports
- Officially, 313,000 used vehicles from Japan in 1998
- 87,000 used vehicles from Korea in 1998 – rapid growth since then
- Classic markets: SE Asia, Latin America, Oriental Russia, Africa, Middle East & New Zealand

Used Cars (iii)

- South Korea now generating high volumes
- Quality high, but less so than Japanese
- EU exports rising, e.g. to/through Poland
- Prestige vehicles (BMW, Merc.) shipped to Middle East and African hubs (some overland to Africa)
- West Africa served by Abidjan, Dakar, Lagos
- East Africa, Iran, Iraq served by UAE conduit, via Aqaba, and directly

World used car shipping flows



Used Cars (iv)

- Push and pull factors at work:
  - Used exports are profitable
  - Expanding markets growing and maturing
- Some colonial legacies; e.g. British vehicles to East Africa, Peugeots to (Francophone) Africa
- Some vehicles shipped in containers, esp. collectables
- Some vehicles ‘stacked’ on trucks under one waybill
- Often vehicles contain parts or consumer durables (fridges, computers, photocopiers, beds, furniture)

Japan (i)

- Easily the world's biggest exporter of cars
- Meteoric rise in volumes 1960s-1980s
- Localising of production near markets flattened-out exports of new units from late 1980s
- Around 4-6million new exports annually

Year	Cars	Trucks	Buses	Total
1950	7	5,409	93	5,509
1960	7,013	31,028	768	38,809
1970	725,586	351,611	9,579	1,086,776
1980	3,947,160	1,953,685	66,116	5,966,961
1990	4,482,130	1,309,121	39,961	5,831,212
2000	3,795,854	617,870	41,163	4,454,887
2004	n/a	n/a	n/a	4,859,663

Japan (ii)

- Used exports approaching 1m a year
- Durable, desirable, globally acceptable
- RHD not an obstacle
- Main markets: Oceania, Europe, Asia
- Traditional short replacement cycle due to ‘shaken’ test: 3,5,7 years
- 5 and 7 year peaks are main feeders of export market

Japan (iii)

- Used trucks far fewer in number
- Most go to Dubai & Jebel Ali for Gulf
- Other markets:
  - Philippines
  - South Africa
  - Singapore
  - Sri Lanka
  - N Korea
  - Russia
  - New Zealand
  - Oceania

- Trucks often carry cars – thus cars undercounted
- Singapore important as truck distribution hub, but not for car/bus movements

Principal markets for Japanese used vehicles 2004

Recipient market	buses	cars	trucks	total
UAE	2,433	103,912	32,758	144,103
New Zealand	1,299	124,384	9,368	135,049
Russia	17	111,132	11,025	122,174
UK	21	56,868	221	57,110
South Africa	1,676	28,074	8,154	37,904
Philippines	531	21,247	11,160	32,938
Chile	616	23,842	2,962	27,420
East Africa	255	23,778	4,681	28,714
Thailand	109	13,128	1,653	14,890

Japan/Korea

- Japanese used exports 30% of world total
- Industry estimate of 700,000-800,000 units shipped annually
- Also around 300,000 units from South Korea every year and growing
- Japan+ Korea = 40% of world total
- Car ports handle new and used, some shipping lines mix new and used, others do not
- Close ties between car plants, ports and carriers
- 50 RHD markets (e.g. Japan); 143 LHD markets (e.g. Korea)
- Japanese vehicles shipped to both with or without conversion

South Korea (i)

- Rapid growth in demand from Russia (Vladivostok)
- $45m estimated market value in 2004
- UAE growth is strong – mainly as onward distribution hub
- Components bank and maintenance expertise growing

Importing region	Volumes shipped
Middle East	236,000
Asia	51,000
Latin America	15,000
Russia	10,000
Africa and Others	8,000

South Korea (ii)

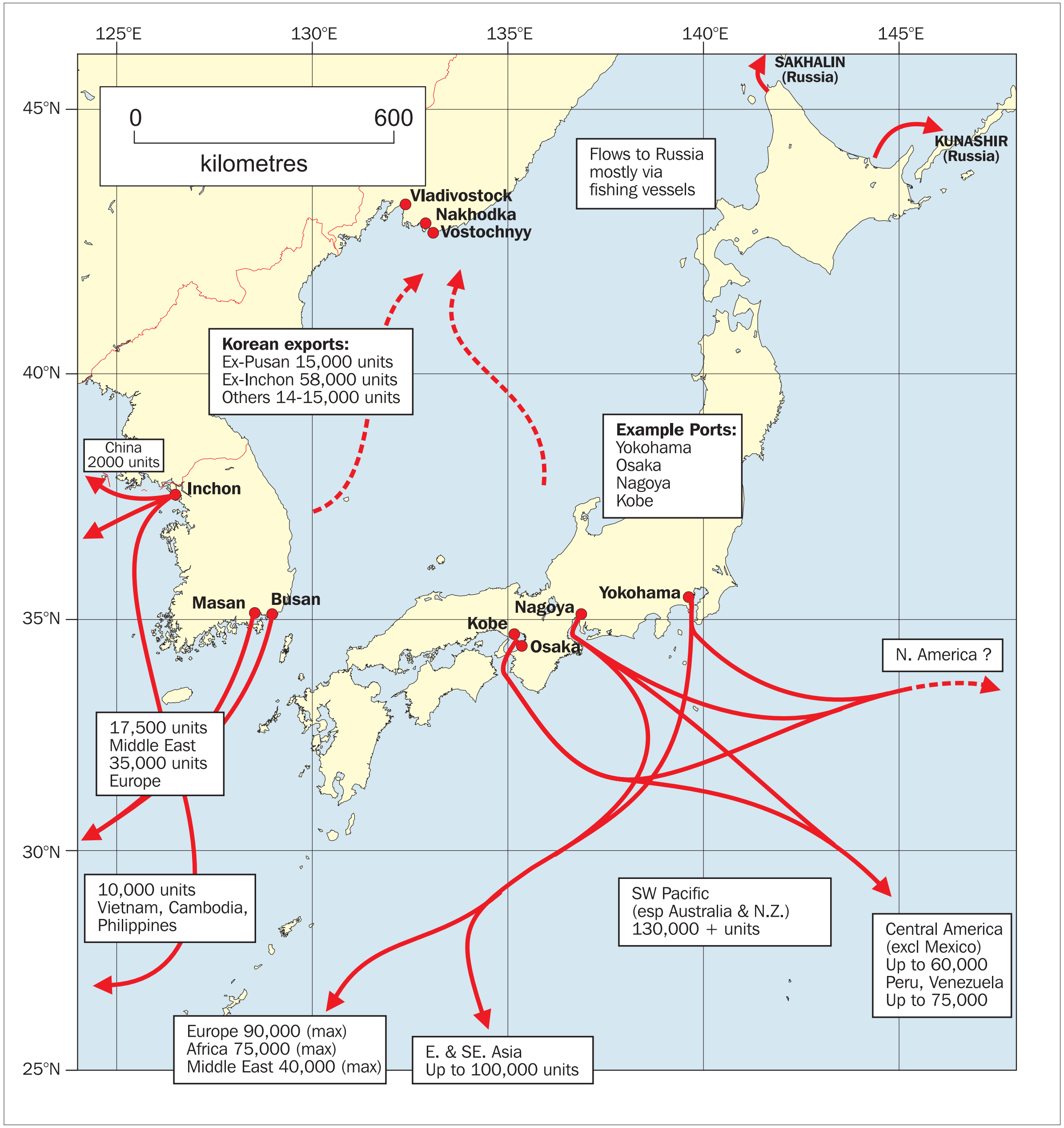
- Jordan and Costa Rica act as local distribution hubs, respectively for:
  - Iraq, Syria and other Middle East
  - Central America, Caribbean, northern South America

- Korean SUVs especially valued (even 12,931 exports to Germany in 2004)
- Jordan and Syria have benefited from Iraq recovery

Korea & Japan

Japan used Exports: 837,782 (2004)

South Korea: 319,629 (2004)



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New Zealand (i)

- Historically the world's largest used vehicle importer
- From 2,000 units in 1981 to 135,000 in 2004
- New car market is only 75,000 a year
- Use of reefers exporting kiwifruit to bring in vehicles as backload
- Few barriers to imports
- Several local shippers specialise in used vehicle trade
- Flexible and mature operators (e.g. Kiwi Car Carriers)

New Zealand (ii)

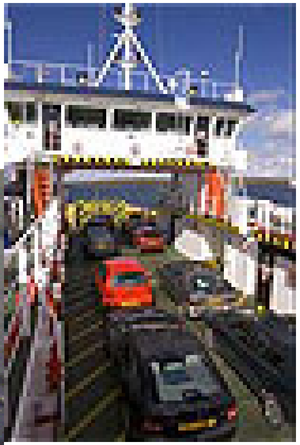
- Ships are chartered, mainly from Greek agents and Koreans (formerly HMM)
- Full shipments of used vehicles
- Some crashed cars for cannibalising
- NZ dealers among first to buy via online auctions in Japan
- Following online bidding, shipment is via local agents & specialist carriers (e.g. KCC)

Vehicle Shipping (i)

- Demand for vehicle shipping still high, generally exceeding vessel supply
- Ships still getting bigger and moving towards PCTCs for deck-height flexibility
- Cross-trading and mixing new and used help load factors
- Flexible sea-borne and on-shore portfolios now very important
- EUKOR one of market leaders with new buildings and wide market coverage
- Most newbuilding is replacement, some is expansion

Vehicle Shipping (ii)

- As in container shipping, car carrying consolidation increasing
- Move towards global service provision
- Increased bargaining power with scale
- Nearly 90% of deck-metres and 87% of vessels owned by top 7 operators



Major operator ranking 2004

(source: Lloyds List 2005)

Ranking	Operator	Vessels	%	Capacity (cars)	%
1	NYK Line	80	17.8	383,740	18.4
2	EUKOR	72	16.0	335,102	16.0
3	“K” Line	63	14.0	294,446	14.1
4	MOL	63	14.0	287,718	13.8
5	Wallenius Wilhelmsen	48	10.7	263,450	12.6
6	HUAL	33	7.3	169,816	8.1
7	Grimaldi	31	6.9	120,504	5.8
	Others	60	13.3	235,549	11.3
	Totals	450	100.0	2,090,355	100.0

Vehicle Shipping (iii)

- Feedering via big hubs likely to increase
- Ships are shallower draught than biggest container ships, so water depth limits not a major problem
- Hub ports offer value adding opportunities from economies of aggregation and scope (e.g. vehicle preparation)
- Mixing new and used units may increase, but lines’ and customers’ policies vary
- Capacity utilisation remains key driver

Vehicle Shipping (iv)

(source: Lloyds List 2005)

carrier	Key strategies
MOL	**Fleet enlargement, aggressive growth, development of ‘4 continents’ service**
NYK	**Match supply to demand, focus on largest vessels, develop hub & spoke system**
WalleniusWilhelmsen	**Regular frequent services on key routes, match capacity to demand, flexibility of schedules & vessel deployment**
UECC	**Expansion of services, increase coverage, land facilities, IT systems, tracking/tracing/performance measurement**
“K” Line	**Aggressive expansion, upgrade north & south Atlantic services, shuttle and Scandinavian services**
EUKOR	**Strengthen fleet, upgrade service quality, managed steady growth**

Vehicle Shipping (v)

- As yet, no line explicitly targetting used vehicles to balance new car flows or raise load factors
- Only some used flows fit well with new shipments
- As used flows rise, critical volumes are reached on more routes
- Used flows indirectly influencing strategies
- Most used flows still fragmented due to fragmented markets

Future prospects (i)

- Both new and used vehicle markets manipulated by suppliers & agents
- Older vehicles growing in number
- Internal ‘churning’ insufficient to absorb oversupply
- EU ELV Directive starting to impact
- Export of used vehicles attractive option:
  - Boost residual values
  - Boost new car sales
  - Some cross-border land flows
  - Large volume shipped

Future prospects (ii)

- Mature markets offload used vehicles onto less demanding, less regulated markets (environmental dumping?)
- Largely north => south business; bad fit with new vehicles east => west flows
- Used vehicles can be promising business opportunity, but need careful management
- Used vehicle trade volatile suiting more entrepreneurial players, rather than conventional shipping firms


The End