

Report Finland

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1. A Description of the Status Quo for Reuse Packaging

Reuse primary packaging is only used in Finland for beverages and vinegar. Reuse packaging for non-liquid food and non-food is restricted to only a few refill systems in drug stores (body shops) or in green shops which are not very common anyway in Finland.

Table FIN-1: Consumption of beverages in Finland in l per capita, a

	Beer	Soft drinks	Mineral water	Alcohol	Milk
1990	84	42	7	18	0
1991	86	42	7	17	
1992	89			16	
1993	87			15	
1994	84			16	
1995	83	53		19	203
1996	82	55	7	20	204
1997	84	60	9	23	199

Source: (1)

Finland is EU-champion in milk drinking. Nearly 200 litres of milk every Fin drinks per year. Drinking juices is as well very popular, while beer and soft drinks consumption is in the midfield. Wine consumption is very little the same with bottled water. To drink tap water is very common as in the other Nordic countries.

1.2 The Actual Market Share of Reuse Packaging for Beverages

In Finland there are four breweries which run the beer and soft drinks market which also handles a very small volume of bottled water. The leading company (HARTWALL) controls more than 50% of the market share and is a contractor to Coca Cola. The second company is KOFF which is also a franchise partner of Pepsi Co. The third and fourth (PUP Oy and OLVI) are regional breweries outside of the Helsinki area.

These four companies produce and distribute more or less all of the beverages except wine and alcoholic drinks which is within the domain of PRIMALCO, the formerly state-owned alcohol monopoly. This company produces, imports and bottles foreign and domestic alcoholic beverages, wine and vinegar.

The actual reuse share for beverages is:

beer	95 %
soft drinks	99 %
alcohol beverages	76 %

Source: Panimoliitto, Primalco

2. How reuse developed

2.1 Beer

Reusing bottles in breweries started in 1916. Nowadays there are left only four big breweries left who use the same reuse bottles and crates.

As Table FIN-1 shows, one quarter of the consumed beer is distributed as draught beer. More than 93% of the bottled beer is distributed in reuse bottles, while cans account for only 6,7%. One-way glass is rarely used in Finnish shops. Most of the cans are imported.

The overall consumption of beer went up in the last decade very quickly, while the market shares for bottled beer remained very stable. One-way cans never went higher than 7 % of the market share.

Much like the other Nordic countries, the high taxes on alcohol are the driving force behind extensive private importing (smuggling) of alcoholic beverages and a kind of drinking tourism which occurs primarily on the ferryboats which travels to and from Estonia, Russia, Germany and Sweden.

2.2 Soft drinks and mineral water

Reuse packaging is only used for carbonised soft drinks. Juices are filled into beverage cartons.

The market share of draught / post mix is actually around 10% having increased from 6 % in the early 1990's.

Cans only account for 1%, since imports of canned soft drinks are not very great. 89% of the carbonised soft drinks are sold in reuse bottles. Since 1994, the breweries have started to use REF-PET-bottles and the market share of this part of the reuse system is growing steadily.

Table FIN-2: Packaging Mix for Soft Drinks

Year	REF-PET		reuse glass		glass	Alu can	Pre-and Postmix
	1,5 l	1,0 l	0,5 l	0,33 l	all sizes		
1990	0	50	0	42	92	1	7
1991	0	56	0	37	93	1	6
1992	0	62	0	31	93	1	6
1993	0	64	0	28	92	1	7
1994	21	43	22	5	91	1	7
1995	31	38	18	4	90	1	9
1996	36	35	16	3	89	1	10
1997	45	25	15	3	89	1	10

Source: Panimoliitto Oy, Hartwall Oy

There are also 0,5 one-way PET-bottles, but their share has been under one percent. Consequently, Hartwall has given up using them.

2.3 Alcoholic beverages

60 % of the alcoholic beverages sold in bottles originate from domestic production, 40 % from foreign production. All of the beverages of domestic origin have been packed in reuse packaging, with the exception of sparkling wine, since the very beginning of the state's monopoly on alcohol beginning in 1932. Back then, wine or spirits could only be bought in ALKO shops if an empty bottle was brought back in exchange.

One third of the imported products are imported in bulk tanks and bottled in Finland in reuse glass bottles. The other two thirds, mainly wine and sparkling wine, is imported in bottles.

A minimal quantity of clear vinegar which is produced in Finland is bottled in reuse glass bottles.

Year	Reuse bottles	Draught	One-way packaging
1996	71	1	28

Source: Primalco.

2.4 Previous Reuse packaging

Reuse bottles were used for milk and cream in Finland beginning in the 50's until the late 60's. Still, in the beginning of the 1960's, 60 % of the consumed milk was sold to customers using their own bottles or churns, only about 20 % was sold in glass bottles and another 20% in beverage carton (with wax inside).

There was one bottle for milk (1 litre) and one for cream (3 dl). The dairy products sold in shops until the 1950's consisted of butter, a couple of types of cheese, usually one kind of milk, cream and occasionally sour milk. The one litre bottle weighed 0,5 kg.

It has been said that one reason reuse bottles were given up is because the filling machinery for the plastic pouches and beverage cartons, which replaced the bottles, were less expensive.

Other reasons were that consumers were more than willing to profit from lighter packaging, they were pleased that they wouldn't have anything to return to the shop and there was a need to raise the level of hygiene. Certainly, there isn't any scientific proof that hygienic conditions would have been worse with the reuse bottle system, in comparison to plastic bags. Similarly, there is no evidence that consumers demanded lighter packaging.

3. Legal Laws for Reuse Packaging

Taxes for the packaging of beer and soft drinks are included in the taxes for alcohol. Taxes for the soft drink packaging is included in the excise tax for confectionary and soft drinks. These taxes are:

Table FIN-3: Taxes on packaging

	FMK/l	ECU
reusables	0	0
recyclables	1	0,17
other packaging	4	0,69

The Ministry of Environment gives permission for organising a reuse system which is prerequisite for tax reduction. The following aspects are matter of the permission:

- 1 Is the packaging meant for reuse or recycling?
- 2 The amount of deposit.
- 3 Volume, weight and material used.
- 4 Estimated number of circulation per packaging and estimate of the amount of new packaging brought to market annually.
- 5 How is the retake and redistribution systems working ?
- 6 The target for retake (meaning recycling) and the timetable for reaching it.
- 7 What are the products that will be packed or imported in the packaging.
- 8 How the retake and recycling is going to be followed up.
- 9 Other necessary things needed to estimate the functioning of the system

The Ministry of Environment will approve the application if

- 1) the retake system is organised sufficiently, is effective and covers the area of distribution, and the packaging is reused or recycled to a adequate extent.
- 2) the packaging of the soft drinks and alcoholic beverages are usually retaken by the same retail place where they are sold, with kiosks being the exception to the rule.
- 3) the retaken packaging is either refilled or, when this is not possible, recycled. The applicant makes an effort to organise the recovery and proves that it is being done.
- 4) the deposit is at the minimum of 0,50 FMK (0,09 ECU)
- 5) the recycling system of packaging other than reusable packaging does not weaken the reuse system of the reusable packaging
- 6) The reuse or recycling system is regulated and controlled.

The Ministry of Environment can include into it's terms for decision: a target for the reuse or recycling rate, a timetable, a deposit etc.

The return rate for alcoholic beverages bottles is set at 80 % and for beer and soft drinks bottles at 85 %, in some cases, it's even 95 %. Deposits are compulsory for reusable and recyclable drink packaging for which the tax has been reduced. The minimum deposit is set at 0,50 FMK (0,09 ECU). The following chart shows the deposits in use:

Table FIN-4: Deposit fees for reuse packaging

	Type of packaging	Deposit
BOTTLES: alcohol beverages (A-pullo) beer and soft drinks (Breweries)	all bottles	0,50 FMK (0,09 ECU)
	0,33 and 0,5 litre bottles	0,50 FMK (0,09 ECU)
	bottles over 0,5 litre	2,50 FMK (0,45 ECU)
CRATES:	crates for 0,33 litre bottles	14 FMK (2,52 ECU)
	crates for 0,5, 1,0 and 1,5 l. bottles	25 FMK (4,5 ECU)
PALLETS:	brewery pallets	120 FMK (21,6 ECU)
	Euro pallets	40 FMK (7,2 ECU)
	1/2 Euro pallets	30 FMK (6,4 ECU)
	pallets used by A-Pullo	32 FMK (6,76 ECU)

4 The Distribution / Redistribution of Reuse Packaging

4.1 Soft drinks and beer:

Beverages and beer are distributed by the breweries. There are 4 big breweries and only about 10 very small ones (pub breweries) in Finland.

The bottles are distributed in reuse crates supplied by the brewery-owned logistics directly from the breweries to the retail shops and the restaurants/pubs.

The bottles are able to be retaken in about 4.800 retail shops and in 260 ALKO shops. In 60 % of the retail shops (about 3.500 shops) and in almost all of the ALKO shops, there is an automatic machine for retaking empty bottles. The biggest shops have retake automatic machines which are also for the crates. In the small shops, the personnel handles the retake.

The breweries transport the bottles to the retailer and back again to the breweries. The breweries have clearings (5-6 meetings/year) about the purchases, the discards and the stocks of the reuse packaging.

A standardised reuse system (Type C) exists for beer, soft drinks and water. There are:

- three glass bottles for beer (0,33 / 0,5 CC and 1,0 l MCA)
- two glass bottles for soft drinks (0,33 / 0,5 CC and 1,0 l MCA (green / clear)
- one REF-PET 1 l light blue bottle for water

All reuse bottles are distributed in unique plastic crates for each type of bottle.

For soft drinks, there are also 1,5 and 1,0 litre REF-PET bottles in use confirming to the company owned systems of PEPSI and COCA COLA:

PullopooLi (Bottle pool owned by a Finnish beer and beverage industry) is an open pool. PullopooLi commands 99 % of the filling capacity of the beer and soft drinks produced in Finland. PullopooLi has 200 million bottles circulating about five times per year.

The participation fee for PullopooLi is either 100 000 FMK paid once or 20 000 FMK per year. In addition, the member pays a fee and a deposit according to the number and the quality of the used packaging.

Members:

- Hartwall, Helsinki
- Olvi Iisalmi
- Pirkanmaan uusi panimo - PUP Oy, Nokia
- Oy Sinebrychoff, Kerava

PullopooLi has just approved or is in the process of approving the membership of companies, which produce small amounts of usually less than 200.000 litres of beer or soft drinks. It has not been determined yet whether or not they will all be able to join the pool.

- Sahti Mafia (beer factory working), Jalasjärvi
- Mallaskoski (the beer factory will start 1.1.1999), Vesitorninkatu 1
- Laitilan Wirvoitusjuomatehdas, Laitila

The pool system works in two parts:

a) between the breweries and the retailer shops, the breweries transport and pay the retailer for the handling of the bottles, crates and the pallets. (0,15 - 0,17 FMK/bottle) The costs are 0,08-0,30 FMK/bottle (1) for the retail shop..

b) clearings between the four breweries: 5-6 meetings/year about the purchases, discards and stocks

4.2 Alcoholic drinks:

ALKO has a monopoly in the retail of alcoholic beverages with 260 retail shops covering 90 % of the sales of alcoholic drinks. The 2000 licensed restaurants command 10 % of the sales. There are 15 wholesalers of alcoholic beverages, 3 of them are dominant operations. They are allowed to sell only to the restaurants and pubs. All of them, as well as Primalco, have their own direct transportation to the retail/restaurants. Primalco uses reuse crates. The other wholesalers use primarily one-way packaging.

Within the PRIMALCO pool system there are twelve glass bottles of different shapes and colours:

- 3 cork mouth 0,75 l green and clear glass bottles
- 4 MCA 0,75 l green and clear glass bottles
- 2 MCA 0,7 l clear glass bottles
- 1 MCA 0,5 l clear glass bottle
- 2 MCA 0,35 l clear glass bottles
- 1 MCA 0,373 l clear glass bottle

All of the bottles are distributed in two very modern standardised pool crates which can also be used as store shelves where bottles can be taken right out from the crates while they are stocked.

The retake of the bottles for alcohol occurs in 260 Alkos shops all over the country. After being taken by an automatic machine to the backroom of the shops, the personnel then separates the bottles by colour and size into the reuse crates. From the shops, the bottles are taken to the A-PULLO separation centre. From there, the bottles are sent to different fillers. The most important filler, PRIMALCO is just next door to A-PULLO and gets about 80% of the bottles coming back.

There is no participation fee in the A-PULLOs system, but from each 0,75 litre bottle, the participant has to pay a deposit of 0,41 FMK plus a service fee for retake in the ALKO-shops, for the sorting and redistribution to A-PULLO in the amount of 0,74 FMK per bottle. The deposit is charged to the customers separately and is given back when retake occurs. The fee is part of the selling price. For the crates the deposit is 35 FMK.

Bottles and crates for alcohol:

A-Pullo (joint venture of the Finnish alcohol industry)
Tallberginkatu 2 A
00180 Helsinki

members:

Primalco, Helsinki
Chymos Juomat Oy, Helsinki
Marli Oy, Turku
Ranin Gust. Oy, Kuopio

In addition, there are some smaller companies that have permission from A-pullo to use new (pool)bottles and pay a fee to A-pullo instead of having to take the old bottles and wash them. Examples of those companies are Lignell & Piispanen (produces liquors and wines), Sahti Mafia (produces original Finnish-style beer and beer) and some small wine producers.

A-Pullo is a contract pool (Type C). The members are all alcohol producers in Finland. The pool has almost 100 % of the filling capacity of the alcoholic beverages produced in Finland and about 35 % of the alcoholic beverages imported from abroad.

5 The Number of Trips for Reuse Packaging

The return rate for beer and soft drink bottles is 96-98 %. Glass bottles can last for 40 circles and plastic bottles for 20 circles, while small ones can last for 7-8 years and big ones can run for 5-6 years. The bottles make about 4-7 circles/year. The amount that has to be replaced of the packaging/year is about 10 % for the beer and soft drink bottles.

The numbers have been calculated by Panimoliitto by dividing the total sales of soft drinks and beer with the number of bottles in use.

The return rate for alcohol beverage bottles is 80 %. The reuse bottles are filled 7-8 times during their lifetime. 20 % of the packaging has to be replaced each year. 1-2 % of the alcohol bottles end up being thrown into the natural surroundings, 2-3 % are disposed of into the community waste and 15 % of the reuse bottles are put into the bins for glass recycling.

Crates (made of plastic):

Crates circulate for 15-20 years, usually being taken from the market only when the bottle selection is changed. Consequently, the return rate is almost 100 %.

The figures are from A-PULLO and based on total sales and the number of packaging in the market.

6 Marking systems for reuse

There is only one reuse - marking used by A-PULLO on the label of its' bottles. The marking has only recently been put into use in order to make it easier for the retail shop personnel to separate the reuse from the one way bottles. Reuse marking is not compulsory by law.

Sources:

- 1 Panimoliitto (Pullopöytä), Federation of the brewing and soft drinks industry, Pasilankatu 2, Helsinki
- 2 Primalco, Antti lehmussaari, Tallberginkatu 2 A, 00180 Helsinki
- 3 A-PULLO Ltd., Seppo Tolvanen, Valta-akseli, 05200 Rajamäki
- 4 Laitilan Wirvoitusjuomatehdas Uusikaupunki-Turku
- 5 CBMC, Confédération des Brasseurs du Marché Commun, Brüssel
- 6 Ministry of environment, Sirpa Salo-asikainen Ratakatu 3, Helsinki