

Introduction

According to the United Nations, Northern European countries are Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden and the United Kingdom.

The following table shows that the detail of total cars that move on the roads of each countries.

Country	Population	Total Cars on the roads
UK	66,181,585	34,348,242.62
Sweden	9,910,701	5,153,564.52
Finland	5,523,231	3,656,378.92
Norway	5,305,383	3,098,343.67
Denmark	5,733,551	2,752,104.48
Ireland	4,761,657	2,442,730.04
Lithuania	2,890,297	1,618,566.32
Estonia	1,309,632	623,384.83
Latvia	1,949,670	621,944.73



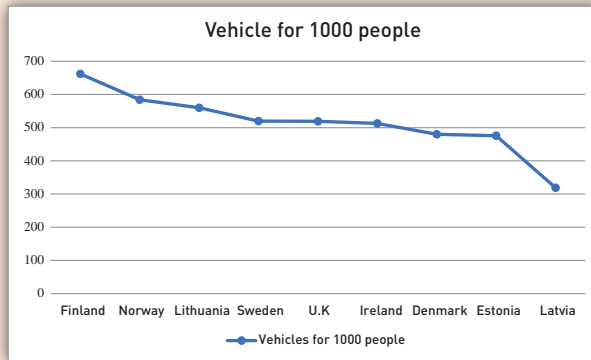
Car Manufacturing in N. Europe and Its Influence on Fastener Demand

北歐汽車生產及對扣件需求影響

by Behrooz Lotfian

The right table shows that more than 66% of Finnish people have a car, making Finland ranked in the first place, and about 32% of Latvian people have a car, making Latvia ranked in the last place. The right graph shows a harmony in the North European countries, 50% to 60% of people in the most countries in this region have a car.

Country	Vehicles for 1000 people
Finland	662
Norway	584
Lithuania	560
Sweden	520
UK	519
Ireland	513
Denmark	480
Estonia	476
Latvia	319

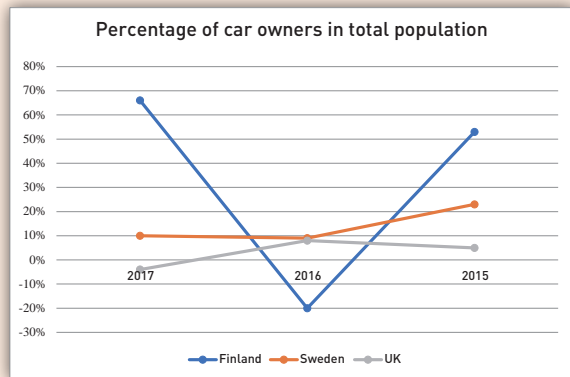


Car Manufacturing Countries in North Europe

UK, Sweden and Finland are three main car manufacturing countries in this region.

Unit in vehicle

Ranking in the world	Country	2017	2016	2015	2014	2013
40	Finland	91,598	55,280	69,053	45,035	7,703
32	Sweden	226,000	205,374	188,987	154,173	161,080
13	UK	1,749,385	1,816,622	1,682,156	1,598,879	1,597,433



UK Automotive Industry

Based on SMMT.co.uk statistics, the automotive industry is a vital part of the UK economy accounting for more than £77.5 billion turnover. With some 169,000-people employed directly in manufacturing and in excess of 814,000 across the wider automotive industry, it accounts for 12.0% of total UK export of goods and £4 billion investment each year in automotive R&D. More than 30 manufacturers build in excess of 70 models of vehicles in the UK supported by 2,500 component providers and some of the world's most skilled engineers. On the other hand, 1.75m cars built in the UK in 2017, a decline of 4.0% with production for domestic demand down 9.8%. UK car exports remain at a historically high level, down just 1.1% with 1.34m shipped worldwide – 79.9% of total production. British engine manufacturing at record-ever levels, with 2.72m produced, up 6.9% from 2016. SMMT restates need for urgent clarity on Brexit transition, as new calculations show over 10% of exports could be at risk on 30 March 2019 unless we secure all current trading arrangements.

Swedish Automotive Industry

Based on fkg.sk statistics, The Swedish automotive industry is an essential part of Sweden's economy. It generates half a million jobs of which about 136,400 are employed directly. 82,400 of them are found in the supply chain, which constitute almost 30% of Sweden's engineering industry. In total, it is estimated that the exports of the Swedish automotive industry are worth 180 billion Swedish kronor, which is equivalent to 12% of its total exports. Internationally, Sweden is also a unique country which, despite its modest size, has three vehicle manufacturers who are in many ways leading both in manufacturing and development- Scania, Volvo and SAAB. More than 350 subcontractors in the automotive industry are represented by the Scandinavian trade association FKG; the Scandinavian Automotive Supplier Association.

Finnish Automotive Industry

Vehicle manufacturing industry and related areas employ almost 7,000 persons in Finland. Valmet Automotive in Uusikaupunki produces new passenger cars and Sisu-Auto Oy in Karjaa produces heavy trucks. Additionally, there are several smaller companies manufacturing buses, taxis, trailers and special vehicles. Finland depends on imports of cars and other vehicles.

The Fastener Industry in North European Region

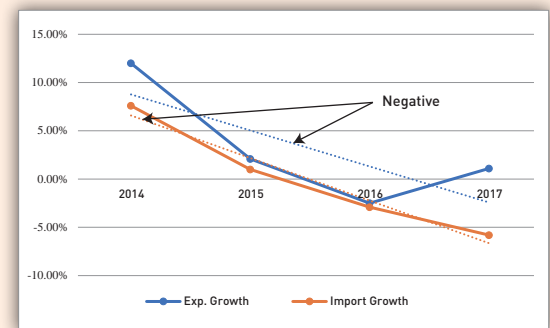
The following table shows the volume (unit: 1,000 USD) of fasteners traded in the 3 main car manufacturing countries in N. Europe. It is predictable that UK is the biggest market for fastener trade and in 2017 its market size (export + import) was over 2 billion USD. In the same period Sweden's market size was about 854 million USD and Finland's market size was more than 213 million USD.

Country	2013	2014	2015	2016	2017
Finland	187,792	207,890	174,698	170,173	213,386
Sweden	827,276	904,979	763,534	740,536	844,656
UK	2,110,895	2,306,052	2,124,299	2,035,233	2,026,437

UK Fastener Industry

UK export in the fastener sector is 35% lower than its import, which means UK fastener producers cannot support their local needs. The right graph shows that the growth trends of sectors (imported fasteners and exported fasteners) are both negative.

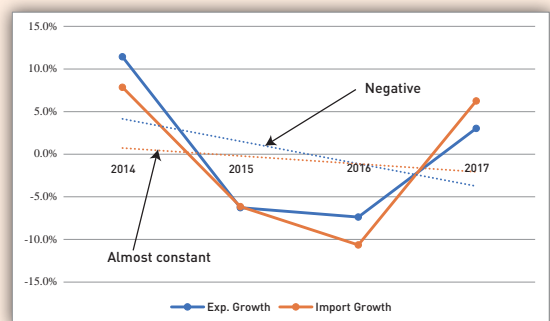
Unit: Thousand USD		2013	2014	2015	2016	2017
UK	Export	796,626	891,927	803,905	766,624	794,446
	Import	1,314,269	1,414,125	1,320,394	1,268,609	1,231,991
	Export / Import	60.6%	63.1%	60.9%	60.4%	64.5%



Swedish Fastener Industry

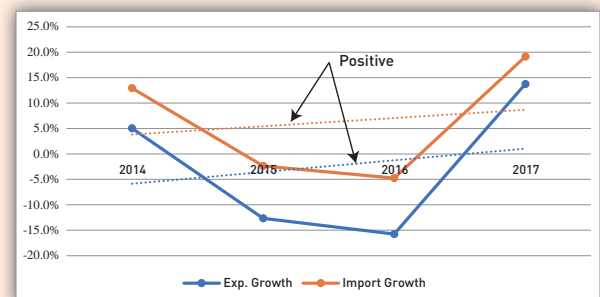
Sweden's export in the fastener sector is 28% lower than its import, which means Sweden fastener producers, like their counterparts in UK, cannot support their local needs. The right graph shows that the growth trend of imported fasteners is almost constant, and on the other hand, the growth trend of exported fasteners is negative.

Unit: Thousand USD		2013	2014	2015	2016	2017
Sweden	Export	355,804	396,462	326,253	322,777	356,229
	Import	471,472	508,517	437,281	417,759	488,427
	Export / Import	75.5%	78.0%	74.6%	77.3%	72.9%



Finnish Fastener Industry

Finland export in the fastener sector is 63% lower than its import, which means Finland's fastener producers, like their counterparts in UK & Sweden, cannot support their local needs. The statistics show that their imported fastener value is about 3 times bigger than their exported fastener value which means Finland is still a country depending on foreign import in this sector. The right graph shows that the growth trends of imported fasteners and exported fasteners are both positive, which can be translated to the growth in Finland's car manufacturing sector.



Unit: thousand USD		2013	2014	2015	2016	2017
Finland	Export	53,585	56,294	46,303	44,853	58,070
	Import	134,207	151,596	128,395	125,320	155,316
	Export / Import	39.9%	37.1%	36.1%	35.8%	37.4%