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The railway industry: the engine powering Austria's economy



More than 27,000 employees

work in the rail supply industry, either directly or indirectly. Of those, 15,000 work in the industry itself, helping to create an equivalent number of jobs elsewhere in Austria.



€1,831 m in exports

of rolling stock and associated equipment leave Austria by rail, making Austria the No. 1 exporter per capita, significantly ahead of Switzerland (€204 vs €114 per capita), and No. 4 in absolute terms.





€790 m in taxes

and public duties produced by the rail supply industry, generating a greater fiscal impact on the country than revenue from Austria's NoVa standardised consumption tax (€406 m) or land tax (€760 m).



17 times less CO₂

per passenger-kilometre in Austria compared to combustion engine passenger vehicles. The ${\rm CO_2}$ equivalent is 12.6 grams for railways, compared to 216.6 grams per passenger-kilometre for combustion engine vehicles.



Europe's undisputed R&D leader

in rolling stock construction is Austria, investing €13.1 in research and development per capita, ahead of €3.9 in Czechia and €3.3 in Germany. The number of patents held by the railway industry in Austria is also impressive:

Austria has the third-most patents of any country in Europe in absolute terms.



The railway industry: driving the Austrian economy

Jobs in 2021



- imes 15,010 directly
- $\stackrel{\wedge}{\scriptstyle{\sim}}$ 9,290 indirectly

27,845 total

Gross value added



- €1,629 m directly
- €792 m indirectly
- €250 m induced

€2,671 m total

As the need for sub-supplies rises and investments and spending continue to grow, the railway industry is responsible, directly and indirectly, for some 28,000 jobs and a total gross value added of nearly €2.7 billion. This leads to an employment multiplier which is above average, with nearly every job in the rail supply industry creating an additional job elsewhere in Austria.

The approximately 15,000 people directly employed in the rail supply industry enable Austria to generate gross value added (GVA) of more than €1.6 billion.

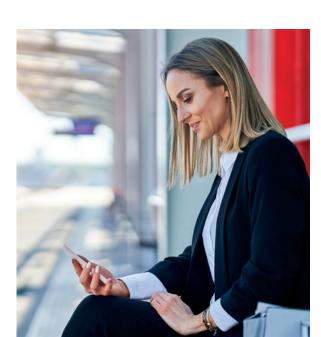
Taxes and government revenue

Railway industry Generated in the years 2019-2021

2019	€387.9 m	
2020	€390.1 m	
2021	€428.9 m	

2019-2021: + 10.6%

Source: Economica



Fiscal impact of the railway industry

The industry also has a significant impact on fiscal policy. The rail supply industry delivers €790.3 m to the state budget.

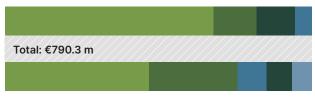
Around half of that goes towards social security, while roughly one in every three euros goes into the government coffers. The direct contribution made by the railway industry underwent enormous growth between 2019 and 2021, increasing by 10.6% in the space of three years.

Breakdown by revenue type

2021

Taxes on wages	€551.8 m
■ Int. revenue taxes	€115.1 m
Other production taxes	€102.5 m
Goods taxes	€42.6 m
Sales tax	-€21.7 m

Breakdown by revenue type



Distribution to public entities

Distribution to public entities

2021

■ Social security	€373.2 m	47.1%
■ Federal govt.	€225.7 m	28.6%
■ States	€66.4 m	8.4%
Local authorities	€74.7 m	9.5%
Other public entities	€50.3 m	6.4%

Source: Economica

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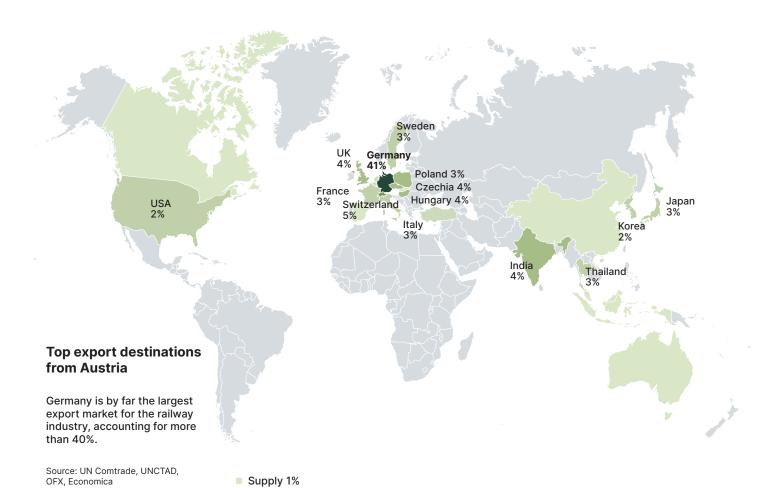
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The railway industry: a lighthouse for international trade

The railway industry is a real flagship for the export of Austrian goods and consistently makes a positive contribution to net international trade. Austria is No. 1 in the world per capita in the sub-industry "Rolling stock and associated equipment". Products include rail vehicles in Berlin, Tube trains in London and trams in the Australian Gold Coast Region.



In absolute terms, **Austria** is **No. 4** when it comes to the export of rolling stock and associated equipment, exceeded only by the global economic superpowers of Germany, China and the USA.

International exports in 2021

Rolling stock and associated equipment Source: UN Comtrade, UNCTAD, OFX, Economica

Germany	€3,190 m
China	€2,246 m
USA	€1,843 m
Austria	€1,831 m

The relevance of Austrian businesses in this sub-industry is also evidenced by the rapid increase in their share of the global market which has grown from around 5% in 2018 to nearly 8% in 2021 – an outstanding achievement considering that Austria's population accounts for just 0.11% of the global population.

Austria's share in the global market

for rolling stock and associated equipment

2018	5.1%
2019	5.3%
2020	6.9%
2021	7.9%

Source: UN Comtrade, UNCTAD, OFX, Economica

Exports from Austria year-on-year comparison

of rolling stock and associated equipment

2018	€1,066 m
2019	€1,366 m
2020	€1,462 m
2021	€1,831 m

Source: Statistics Austria, Economica



Railway industry = the industry of climate action

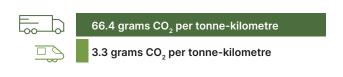
Numerous studies show that railways are one of the most environmentally friendly modes of transport for people and goods alike. A look at figures for CO₂ consumption, in particular, makes it clear that **the mobility revolution needs railways**:

The same distance covered by train produces 17 times less CO_2 per passenger-kilometre than an average combustion engine vehicle and 7 times less than an electric car over the same distance. For freight traffic the reduction is even 20 times higher for railways compared to cars.

Rail is more eco-friendly and more cost-effective than HGV transport

Source: Environment Agency Austria 2021

Railways 20 times more eco-friendly



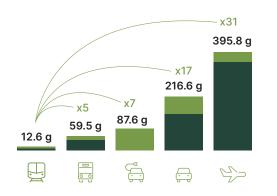
External costs three times higher for HGVs than for rail transport



Lower emissions from public transport

 CO_2 equivalents in grams per passenger-kilometre in Austria

Source: Environment Agency Austria 2021



■ indirect■ direct

Rail transport is also the solution when it comes to soil sealing which is progressing at a significant rate in Austria. Transporting 20,000 people per hour in a single direction in a city requires just one railway line but 12 vehicle lanes. Even when compared to the 9 bus lanes that would be required to transport this many people, the railway still leaves significantly more room for green spaces.



Public transport creates space for active mobility

In order to transport 20,000 people per hour and direction, a city needs:



12 vehicle lanes



9 bus lanes









Source: VCÖ 2022



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On-track innovations: Made in Austria!

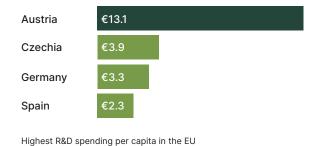
Austria is also a trailblazer when it comes to innovations in railway transport. The Austrian rolling stock construction industry is the **front runner** in spendings on research and development. It is a hugely innovative sector, especially in comparison to other EU countries, spending €13.1 per capita on R&D, or **more than three times** what all other countries in Europe spend.

This high level of spending is also reflected in the number of patents. In absolute terms, Austria ranks third among the EU-27 in number of patents and is again outranked only by France and Germany, two significantly larger countries.

R&D spending internationally

C30.2 Manufacture of railway locomotives, per inhabitant 2019

Source: Eurostat, Statistics Austria, Economica



Railway patents in the EU

2011-2021, per year Source: Economica



Intensity of R&D in Austria

Austrian NACE categories

Railway industry

(C30) Manufacture of other transport equipment

(C28) Manufacture of machinery and equipment

(C27) Manufacture of electrical equipment

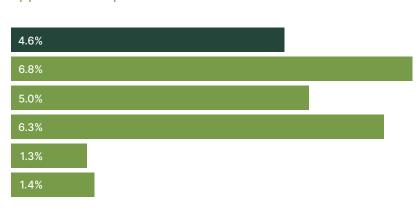
(C25) Manufacture of fabricated metal products

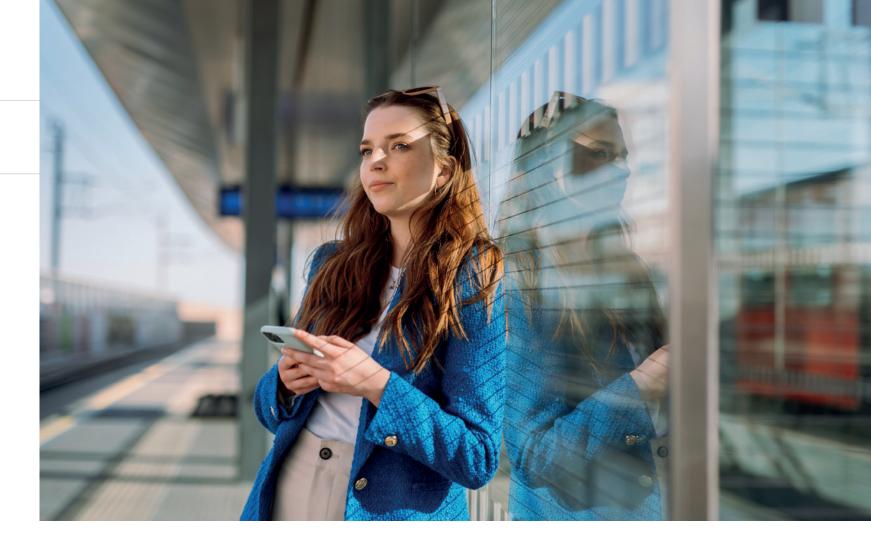
(C24) Manufacture of basic metals

Source: Statistics Austria. Economica

Intensity of R&D 2019
Intensity of R&D = R&D spending as percentage of turnover

For every €100 in turnover, approx. €5 is spent on R&D.





About the ARI

Founded in 2005 as an independent industry association, the **Verband der Bahnindustrie** (ARI; Austrian Rail Industry) is the largest professional organisation of rail supply operators in Austria. Its duties are to **represent**, **position and speak on behalf** of its **40-plus member companies**. At a European level, the ARI represents Austria's interests within the Association of the European Rail Supply Industry (UNIFE, www.unife.org) through its Committee and Management.

The rail supply industry comprises "Manufacture of other transport equipment" according to the ÖNACE, the statistical classification of economic activities in Austria, plus a wide range of other (sub-) industries, such as the manufacture of basic metals and the manufacture of electrical equipment and rubber and plastic goods. All our member companies are engaged in production and development and create innovative solutions for a variety of railway systems worldwide. These solutions range from complex rail vehicles, to security, control and communications systems, and individual vehicle components.



Legal notice

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