China's railway infrastructure

48,000 km for punctual trains travelling at 350 km/h

*by Dr Peter F. Mayer**

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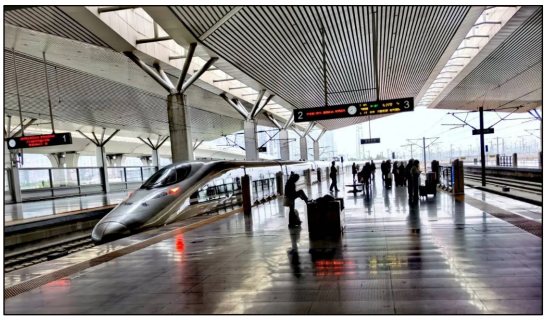
(Picture www.tkp.at)

I covered the nearly 1,000 kilometres from Zhengzhou to Shanghai in 3 hours and 45 minutes. Sixty train pairs travel the route every day. China's dense railway infrastructure is one of the cornerstones of its economic success, as economists such as Prof. Michael Hudson and Prof. Richard Wolff explain.



In China, many things are bigger than elsewhere in the world. This also applies to railway stations and the rail network – see picture below. In larger cities, such as the centrally located Zhengzhou, the station has 20 tracks for high-speed trains. Chinese trains travel at an average speed of 320–350 km/h, while European trains reach about half that speed. The Chinese system connects almost all major cities and reaches more than 90 per cent of the population.

The fastest train stops at two stations along the way, while slower trains stop at more stations.

The Japanese *Shinkansen* trains were undoubtedly the model for this. Just like them, the trains travel at different speeds on different sections of the route. On the first section, the speed was around 300 km/h, while on the other two sections of the three-part route, we reached speeds of around 350 km/h. The tracks are so perfectly constructed that even stations are passed through at undiminished or only slightly reduced speed.

Depending on the configuration, the trains can carry between 1,000 and 2,000 passengers. There are different classes, dining cars and small buffets in between, as well as service provided by train staff dressed in uniforms similar to those worn on aeroplanes. Here is a look inside a second-class carriage:

In addition to the high-speed lines, there is another, even denser network, often running alongside up to four other lines on different levels. Enormous quantities of concrete were used for the pillars alone.

China is not only doing this in its own country; with the *Belt and Road Initiative,* it is opening up large parts of Asia. This includes the route to

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Tehran and Bandar Abbas, the port at the mouth of the Persian Gulf, as well as countries such as Montenegro and many African states.

When the European Commission recently presented its €500 billion plan to connect the continent with high-speed trains, it did so with the usual fanfare. Modernisation, green transition, European integration – as always, the buzzwords were omnipresent. However, behind the hype lies a sad truth: Europe is not closing the gap on China's railway miracle but is falling further and further behind. Despite all its committees, communiqués and corridor maps, the European Union is anything but fast.

By 2024, China's high-speed network already covered around 48,000 kilometres – almost four times as much as the European lines built for comparable speeds. Beijing has set itself the goal of reaching 60,000 kilometres by 2030 and increasing this to around 70,000 kilometres by 2035. Europe, on the other hand, has so far built an estimated 8,500 kilometres of genuine high-speed lines, mainly concentrated in Spain, France and Italy.

The contrast is more in speed than distance. Chinese trains travel at an average speed of 320 to 350 km/h, while European trains only reach about half that speed, especially when crossing borders. On most *Intercity* routes under 500 kilometres, only a tiny fraction of trains travel faster than 150 km/h.

The irony here is that the trains for the high-speed routes come from Siemens, but from *Siemens China*. However, this is only the smaller part of the task; the larger and more crucial part is the expansion of the rail network, which requires political will and an understanding of economics rather than war and sanctions.

In less than two decades, China has built a network that connects almost all major cities, reaches more than 90 per cent of the population and transports hundreds of millions of people with exemplary efficiency. The country invested more than a trillion dollars in its railways between 2011 and 2021. In China, 96 per cent of all cities with more than 500,000 inhabitants are now connected by high-speed trains.

Incredibly, the People's Republic is estimated to have around 70 per cent of all high-speed railways worldwide. Beijing has achieved this by spending almost one per cent of its GDP on railway infrastructure every year. Europe spends about a third of that – and then complains that the continent is moving forward only slowly.

The European Commission's proposal to allocate half a trillion euros to the 27 member states over a period of twenty years is hardly ambitious. However, Europe's problem is certainly not a lack of resources. It is a lack of strategic skill. Together, the Union and its member states have spent about twice as much – around one trillion euros – on arms deliveries related to the war in Ukraine, energy rescue measures and economic aid since 2022. This shows that the continent is unable to put itself first. Simply put, Europe has lost the ability to invest in itself.

Professor Hudson explains what has made China rich: Of course, it is socialism, but it is also a socialism that follows exactly the same pattern that America, Germany and France followed in the 19th century. It is industrial capitalism and socialism at the same time, because the industrialists wanted an active public sector. They wanted an active public infrastructure to keep living costs and business costs low and to subsidise their production.[1]

In addition to the railway network, China is also investing in other infrastructure such as a dense, high-performance road network, cheap energy, free school and university education, excellent medical care, and research and science, including basic research. All of this reduces labour costs and makes Chinese products cost-effective compared to Western competitors.

Added to this is a 5- to 10-year plan for economic development. The plan for 2030 was adopted this week.

Source: https://tkp.at/2025/10/26/chinas-eisenbahn-infrastruktur-48-000-km-fuer-puenktliche-zuege-mit-350-km-h/, 26 October 2025

(Translation "Swiss Standpoint")

[1] *https://tkp.at/2024/08/08/die-verzweiflung-des-westens-und-die-unterschied-in-der-oekonomischen-grundlagen-zu-eurasien/*