

## **Modernizing European transport infrastructure in the early 19th Century**

Historians consider infrastructure for transport as a basic condition for modernization. As more British railroads were built around 1830, the owners of the turnpike toll roads lost traffic volume. To regain their income they established stone tramways on their roads, where wagon trains moved by road locomotives might offer competition to the iron railway trains. Similar tramways had been used for many years in European mines and harbors.

The Norwegian engineer G.D.B. Johnson saw the stone tramways on Thomas Telford's Holyhead Road in 1838. As national Director of Canals and Harbors he proposed in 1843 to establish a similar solution for timber transport between lake Øyeren and the Capital. In Johnson's opinion the stoneway would be cheaper than the iron railway and he found support in German *Allgemeine Bauzeitung* 1844. In England Parliament tightened the operational regime for road locomotives to the point where they became unprofitable. In Norway British interests won public and popular support for Stephenson's competing railway project.

In 1964 the American historian R.W. Fogel published research on the role of railways in the economic development of the American society. He finds that comparable growth could have occurred by developing the waterways. Fogel's work diminishes the position of railways as dominating force of modernization during the first Industrial Revolution.

Based on Fogel's study I intend to pose the following questions:

- Were stone tramways a viable technical solution to contemporary transport challenges.
- Were stone tramways economically competitive to railways?
- How has historians treated stone tramways and their proponents?

**Keywords: modernization infrastructure transport railway tramway**

### **Contact details:**

Hans Seland  
Tømmerstien 3B  
4639 Kristiansand

Telephone: +47 90667790  
Email: [hansings@me.com](mailto:hansings@me.com)