



What if BAU would come true?

Scanning transport CO₂ emissions in the EU

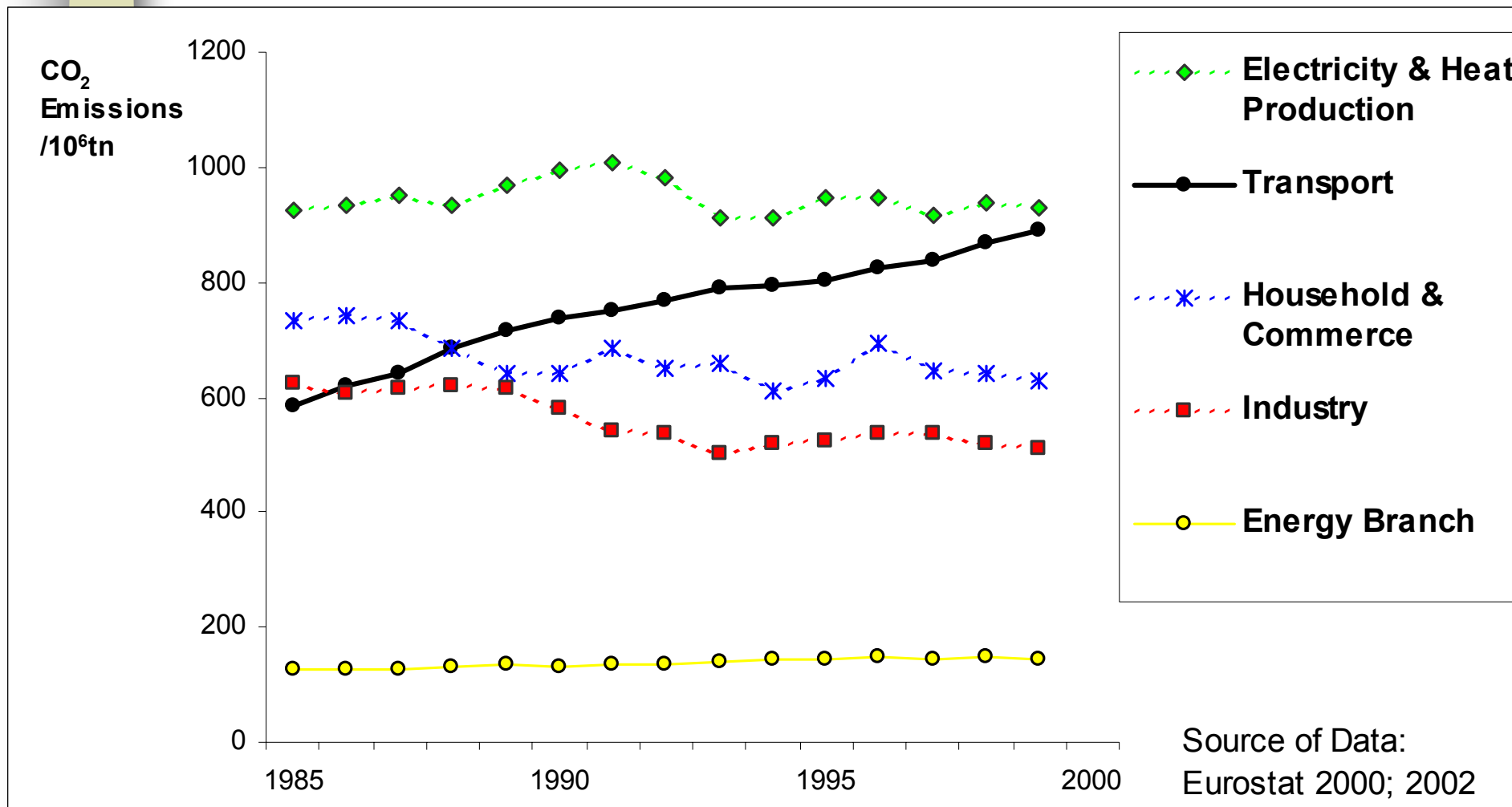
Petri Tapio & Jyrki Luukkanen
Finland Futures Research Centre

The approach

- Introduction of general trends on EU15 level
 - GDP
 - Transport CO₂ emissions
- Historical CO₂ data by country
 - 1960-1999
- Future extrapolations CO₂ by country
 - 2000-2012
- Historical transport CO₂ intensity of the economy by country
 - CO₂/GDP 1960-1999
- Future extrapolation of intensity by country
 - 2000-2012
- Comparison with USA and Japan
 - history 1960-1999
 - 2000-2012
- Discussion

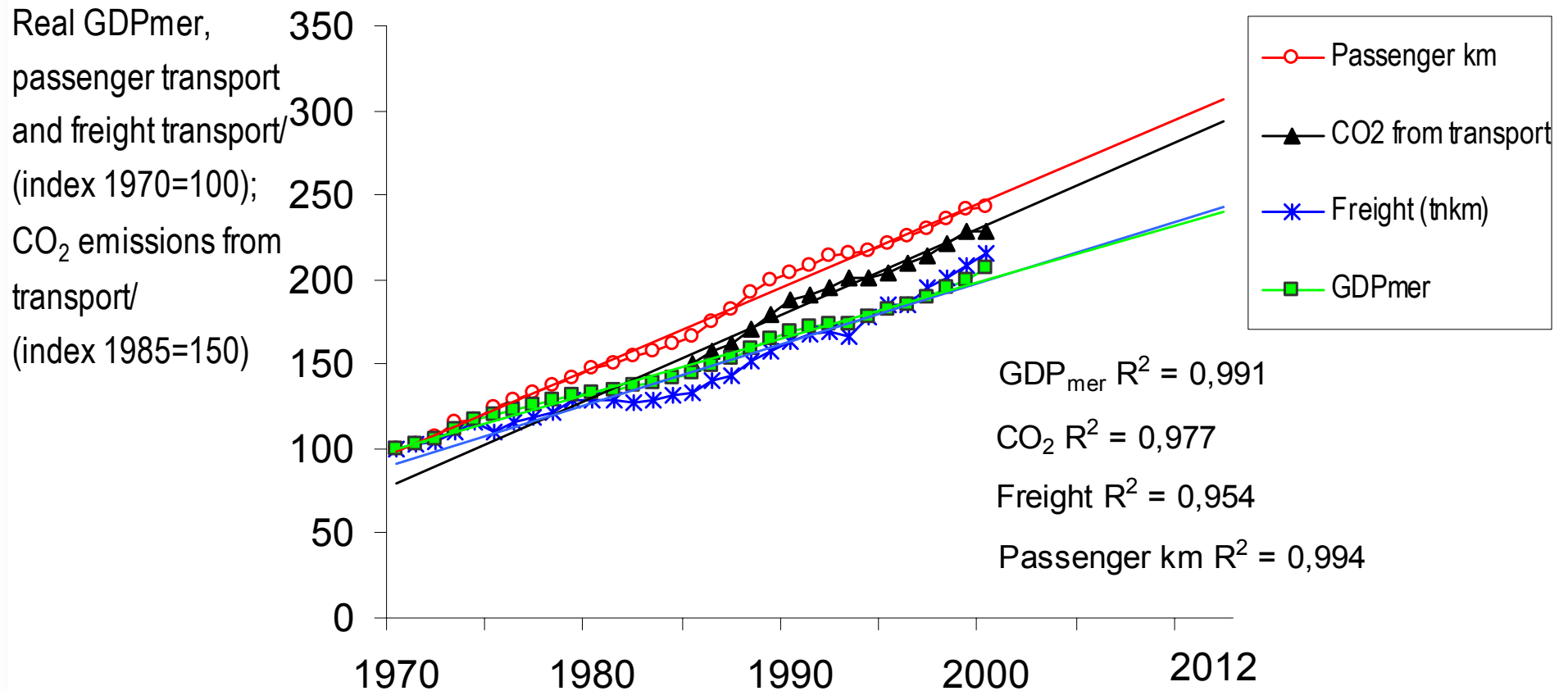


CO₂ emissions by sector in EU15 1985-1999



GDP, passenger traffic, freight and traffic CO₂ in EU15 in 1970-2000, scanning for 2012

Source: Eurostat



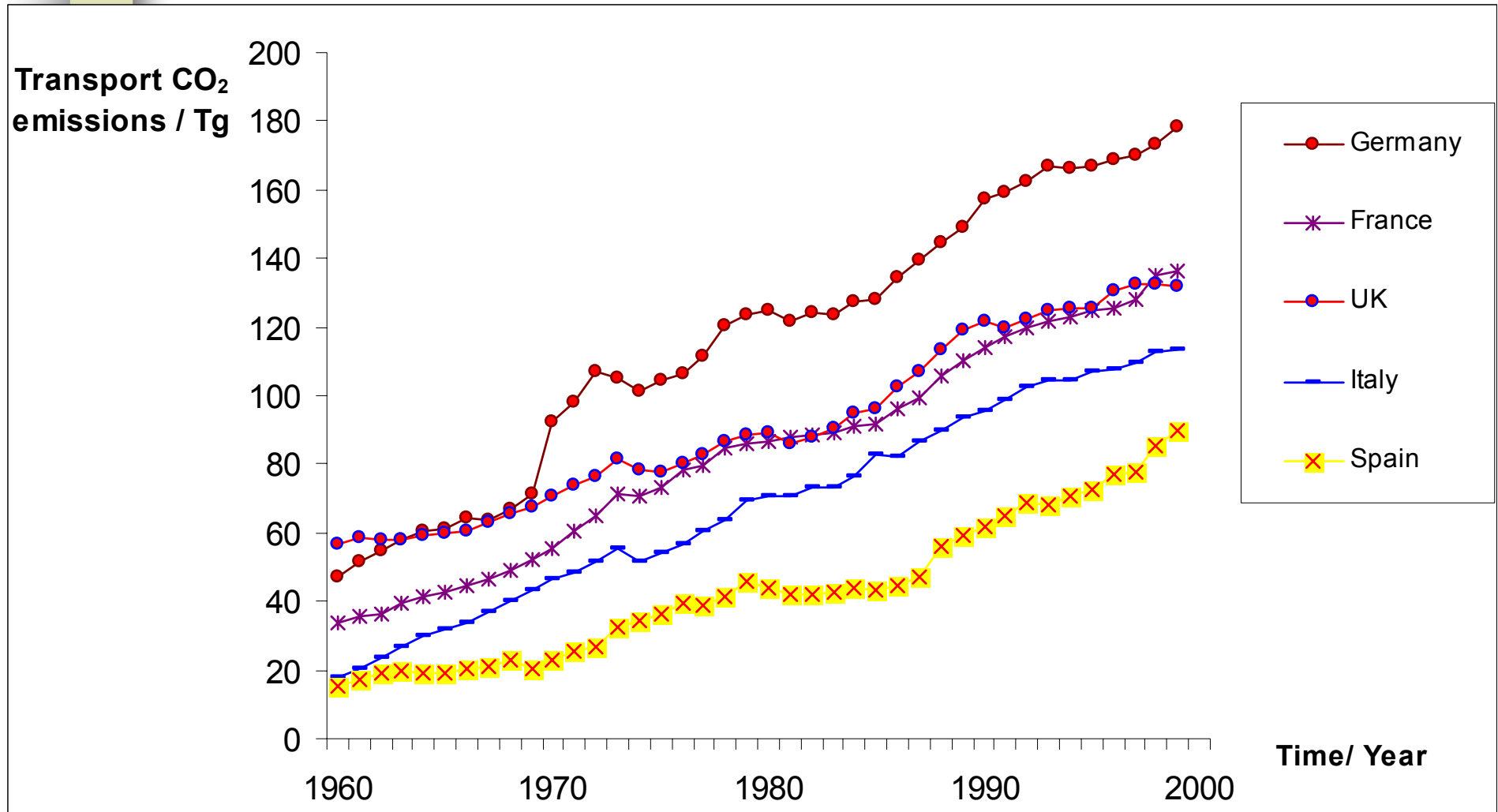


Transport CO₂ emissions by country – EU15

- **Big countries**
 - France, Germany, Italy, Spain, UK
- **Little central and southern countries**
 - Austria, Belgium, Greece, Ireland, Luxemburg, Netherlands, Portugal
- **Nordic countries**
 - Denmark, Finland, Sweden

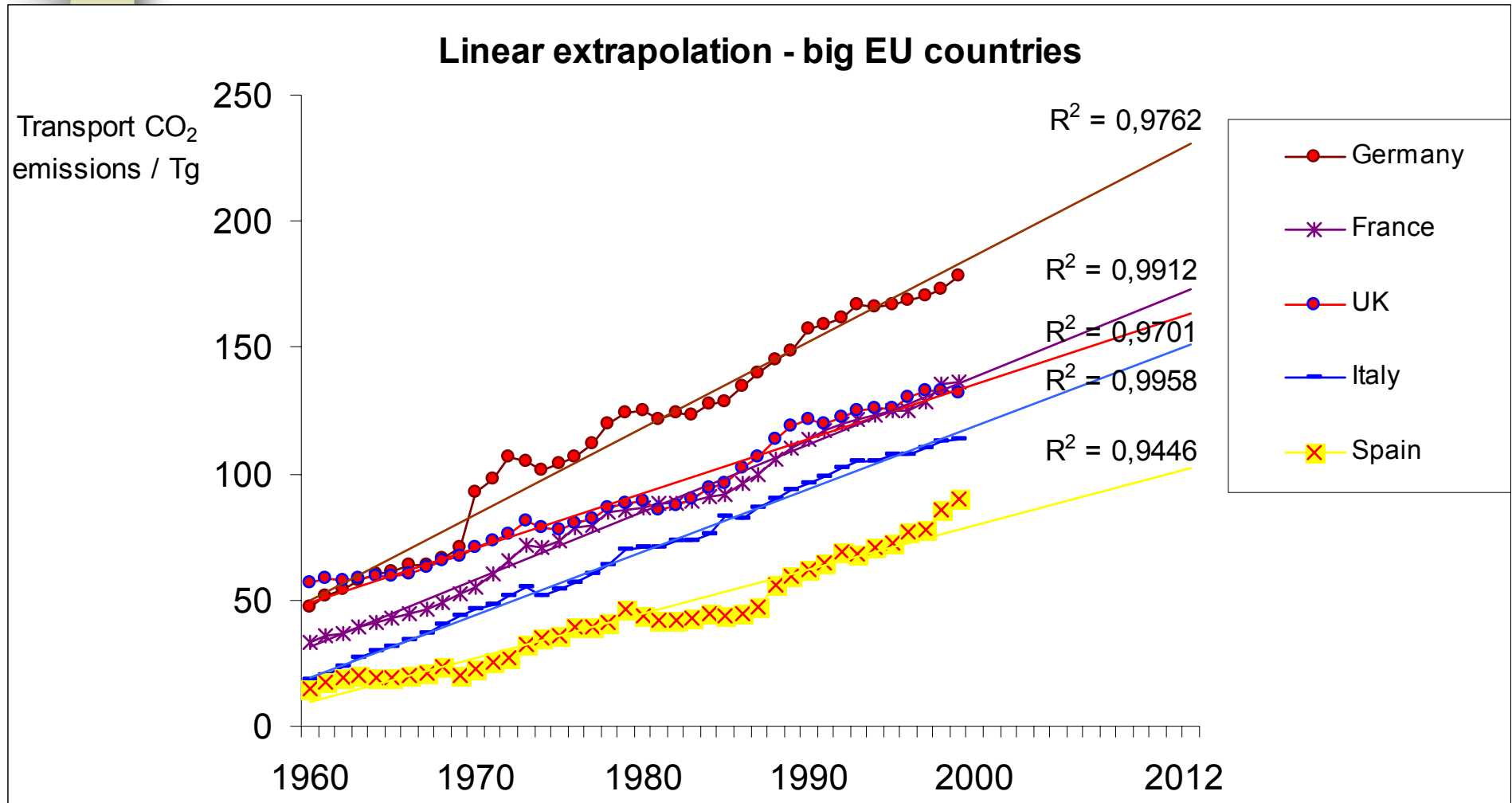
History 1960-1999: Big EU countries

■ Source: IEA



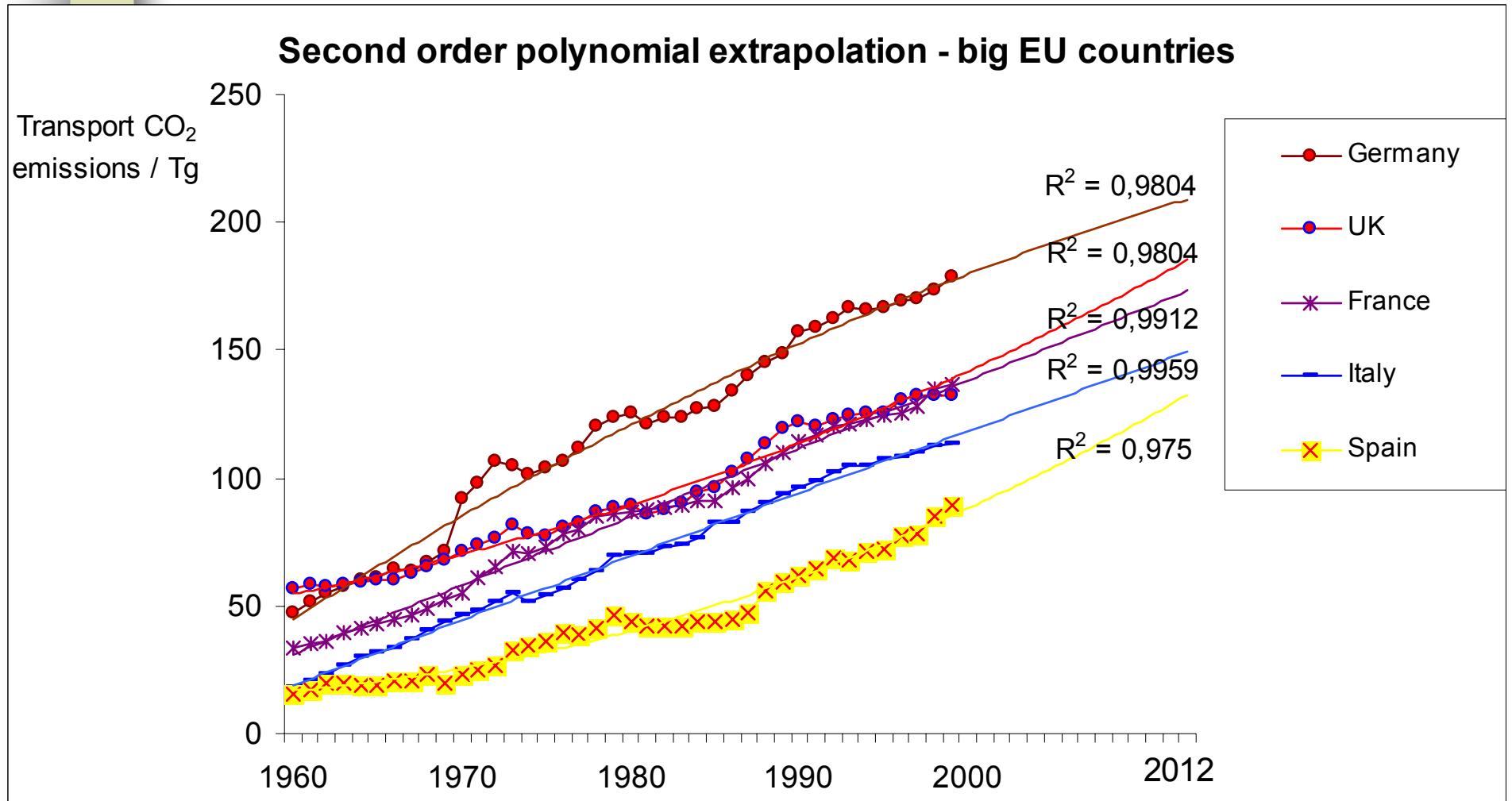
Future 2012 – big countries

■ Source: IEA



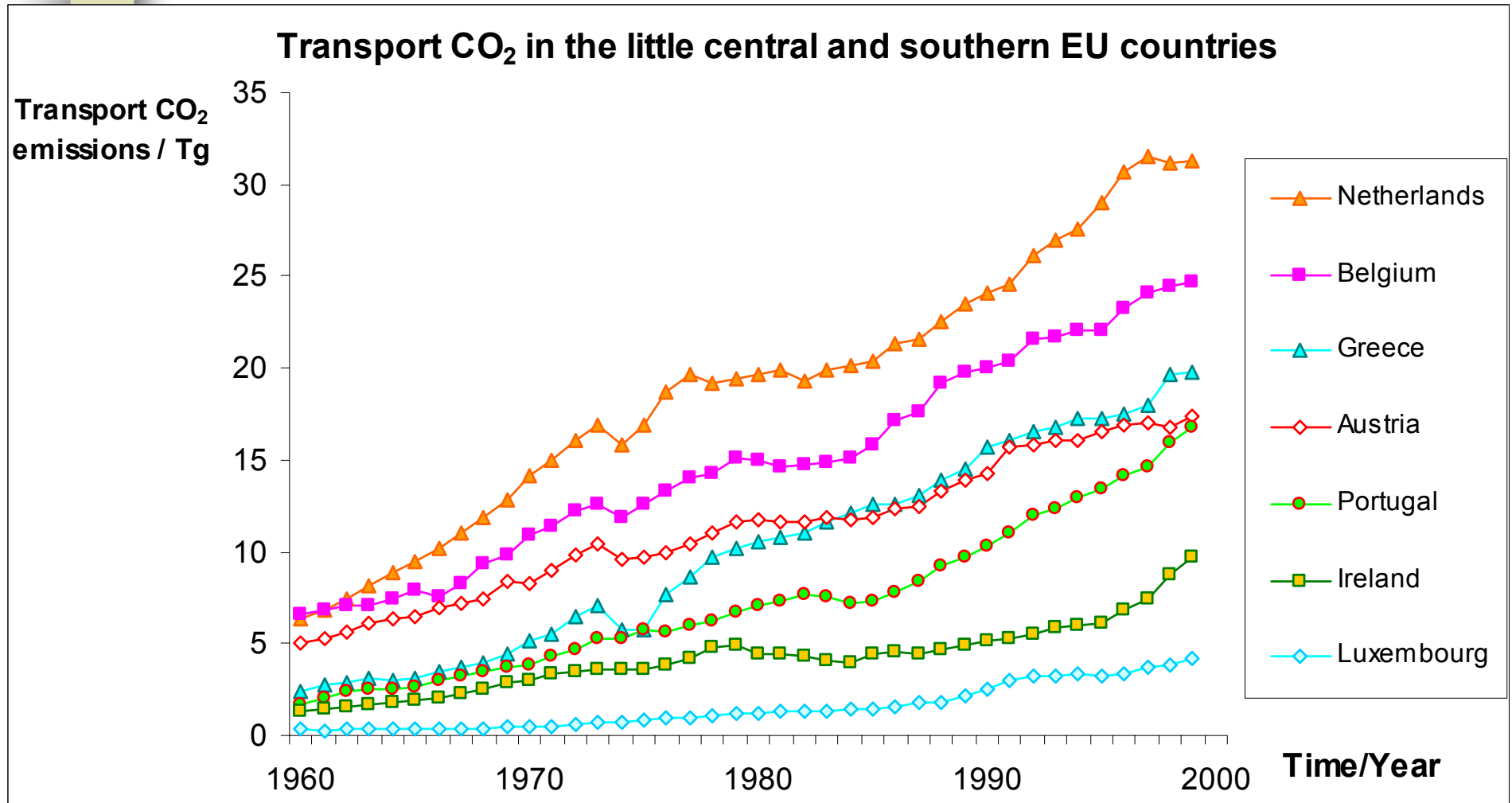
Future 2012 – big countries

■ Source: IEA



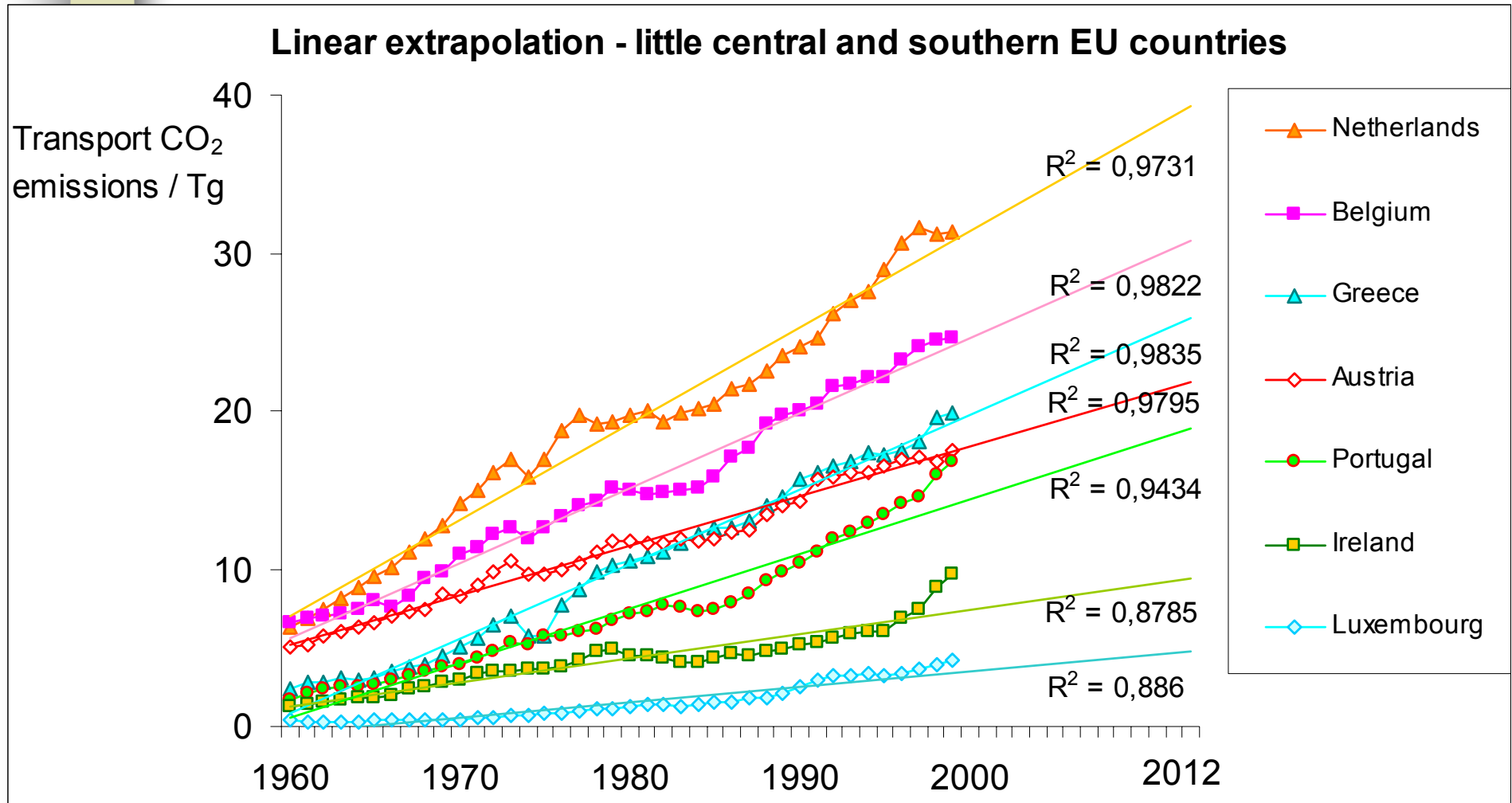
History: Little central and southern countries (1960-1999)

■ Source: IEA



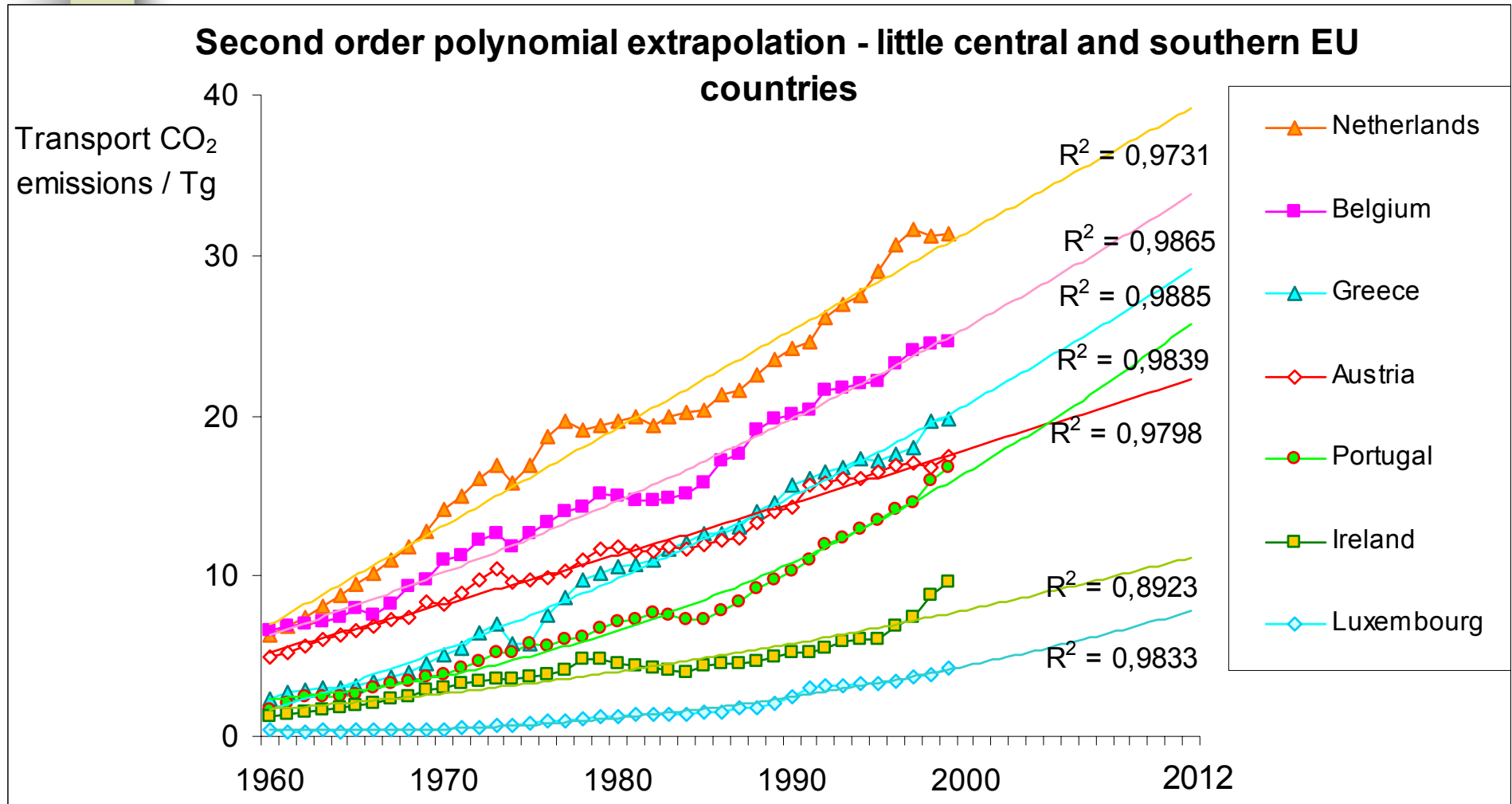
Future 2012 – little central and southern countries

■ Source: IEA



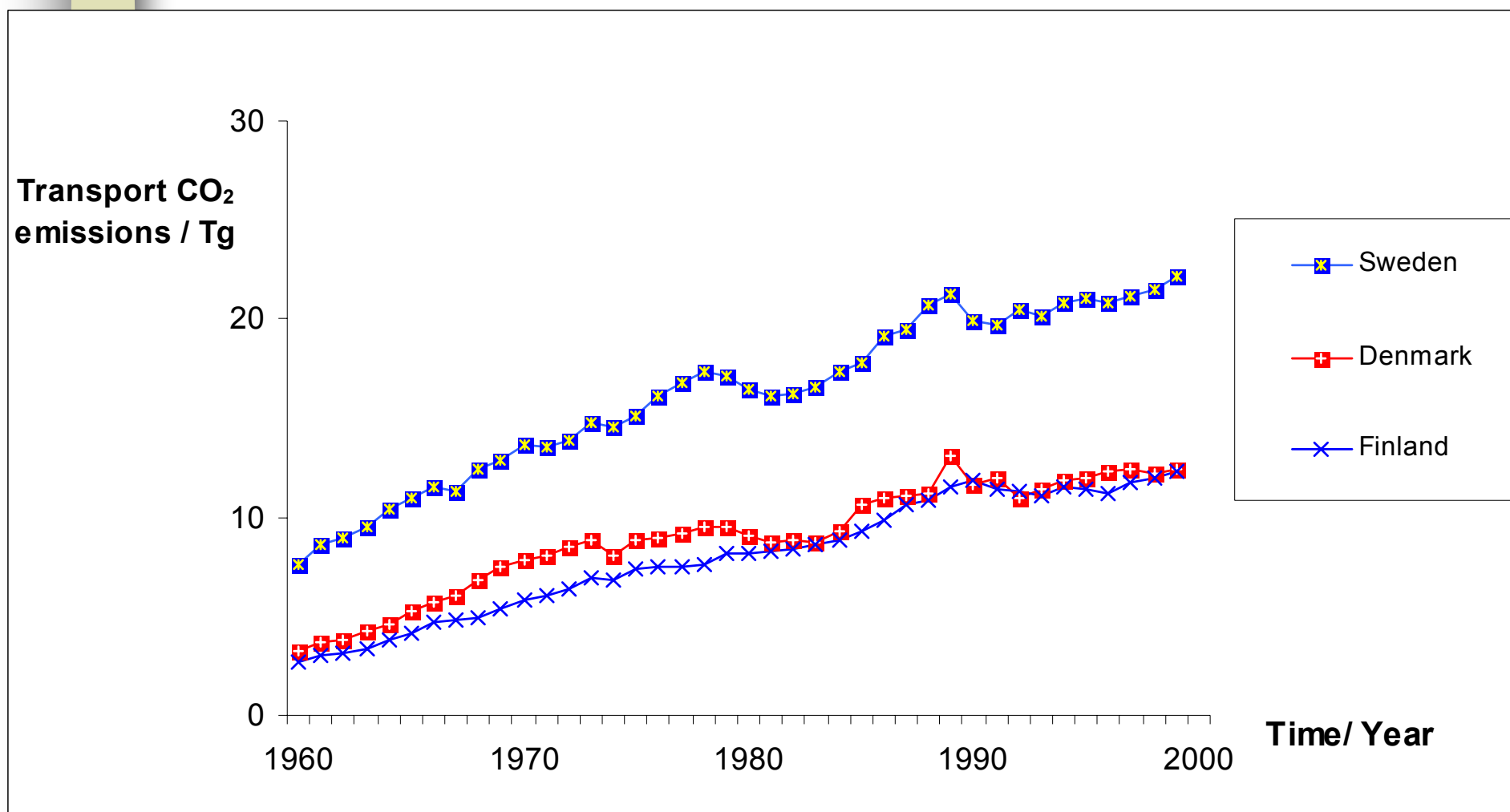
Future 2012 – little central and southern countries

■ Source: IEA



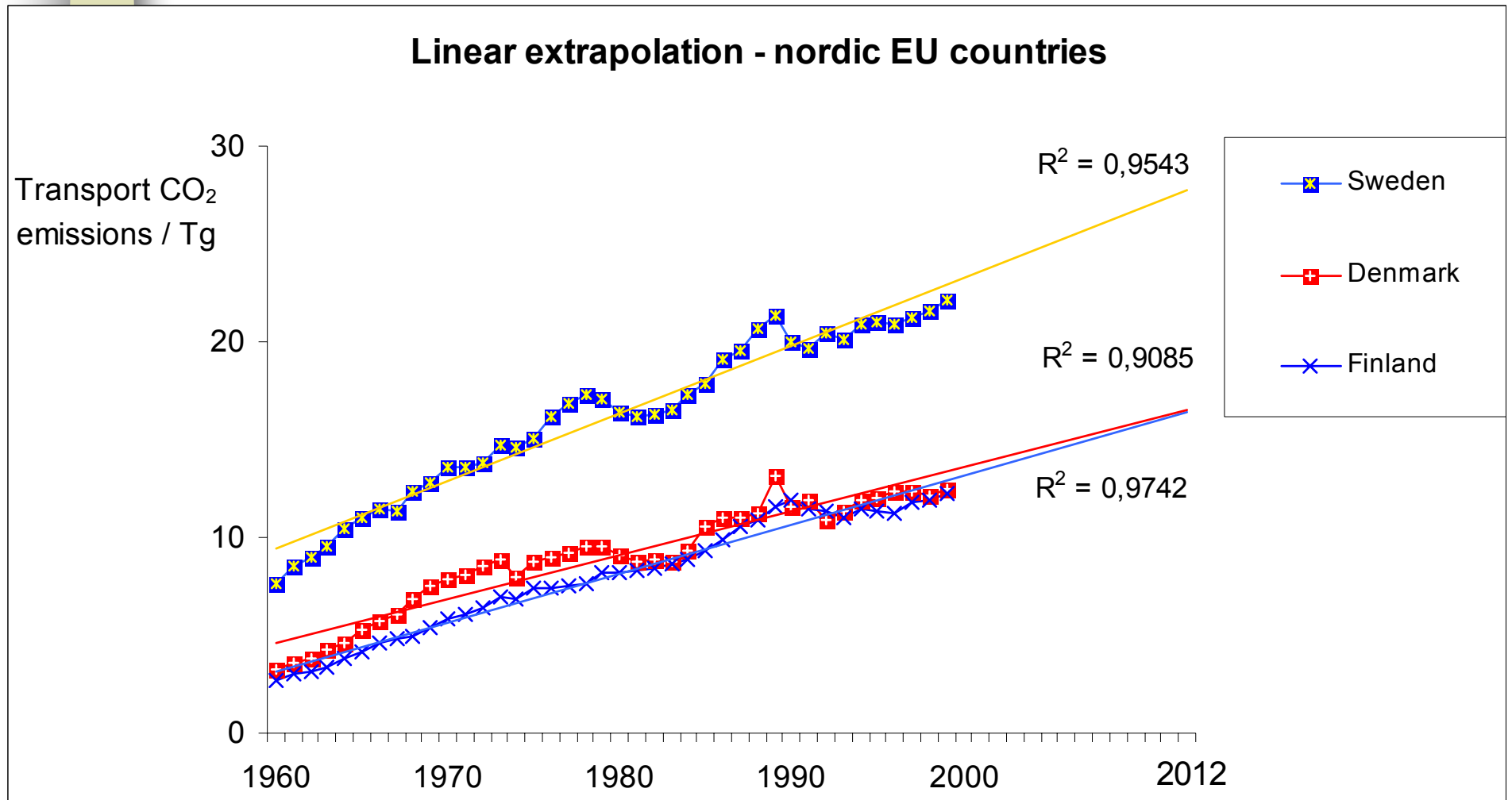
History 1960-1999: Nordic countries

■ Source IEA



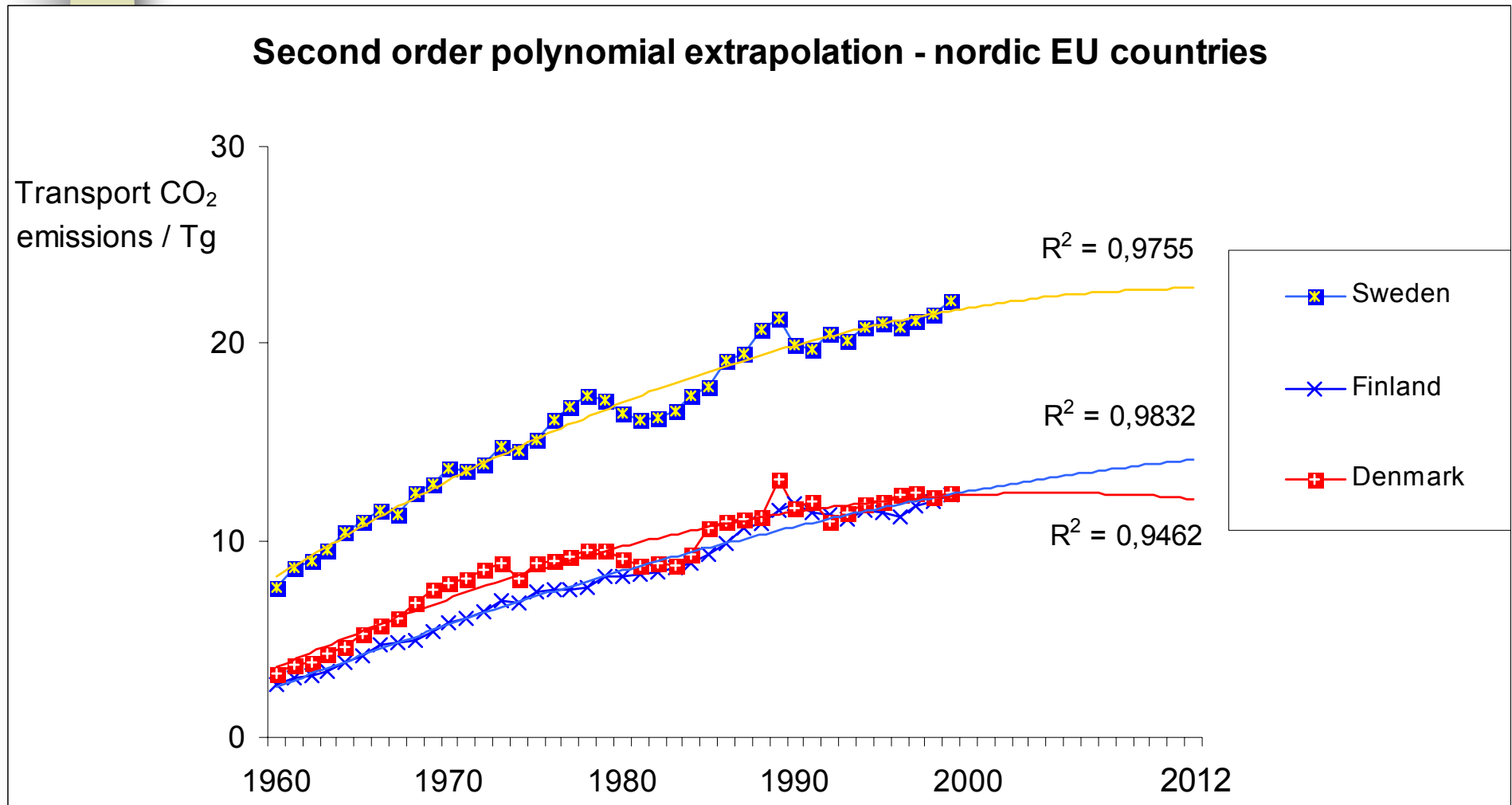
Future 2012 – nordic countries

■ Source: IEA



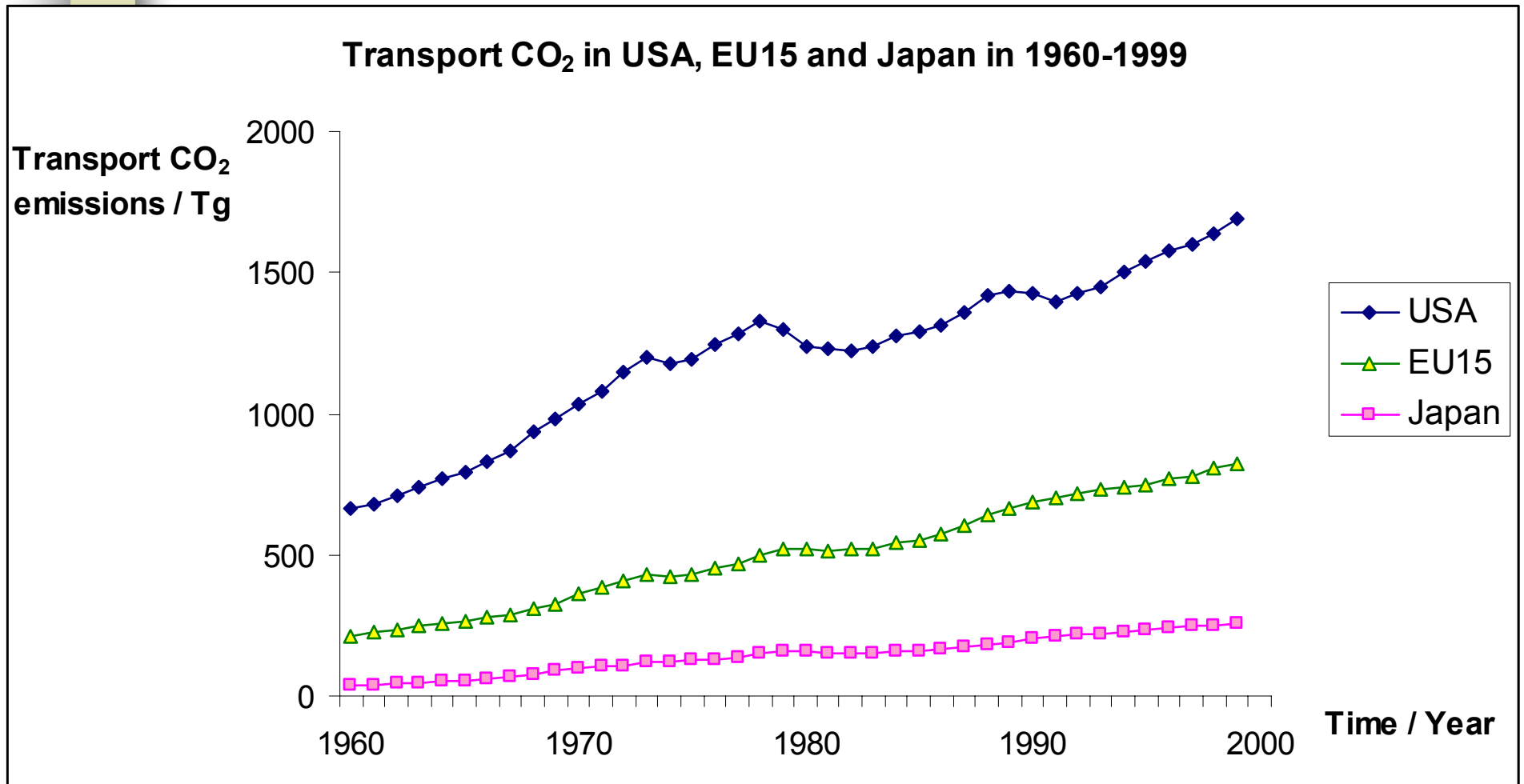
Future 2012 – nordic countries

■ Source: IEA



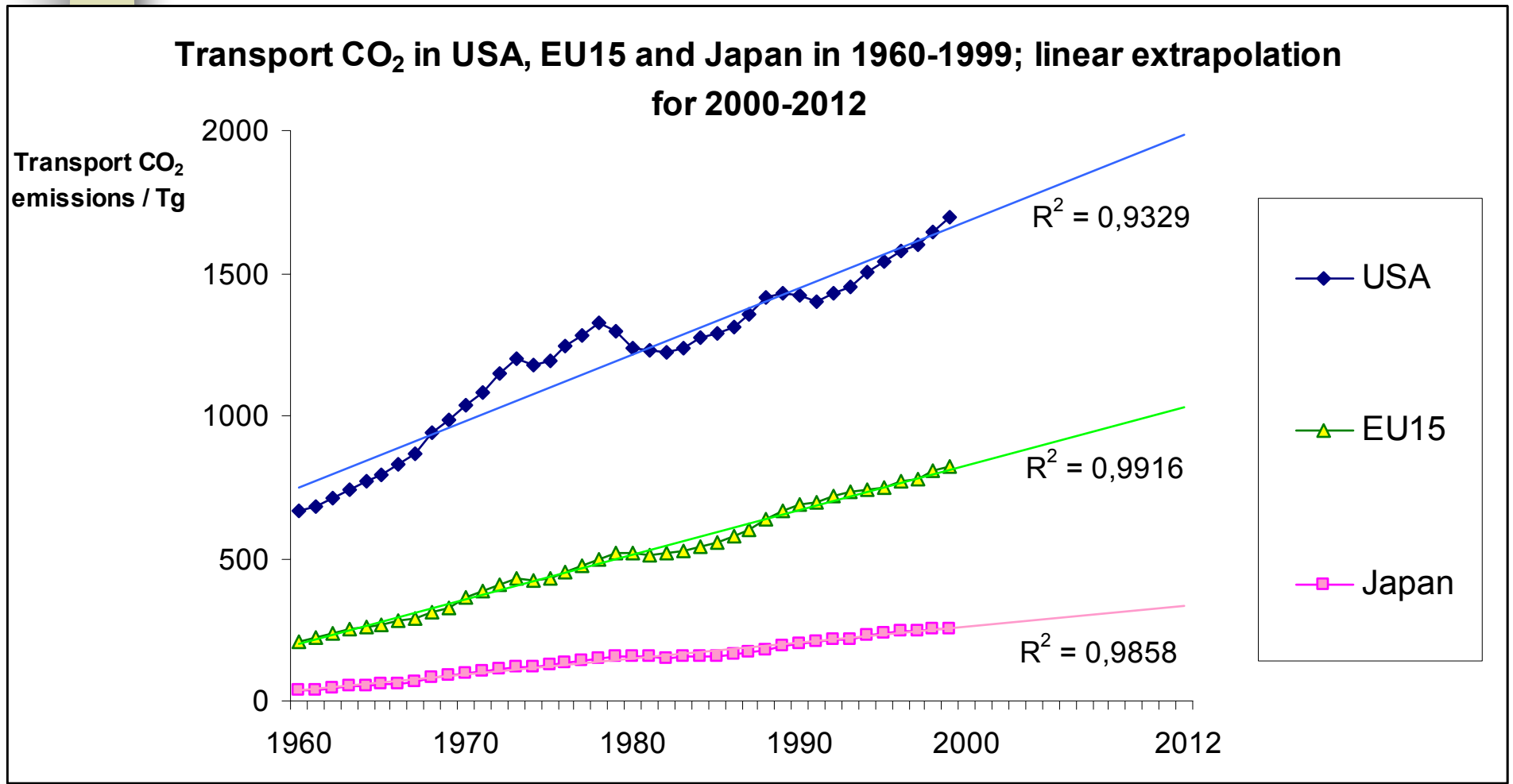
History 1960-1999: USA, Japan and EU15

■ Source: IEA



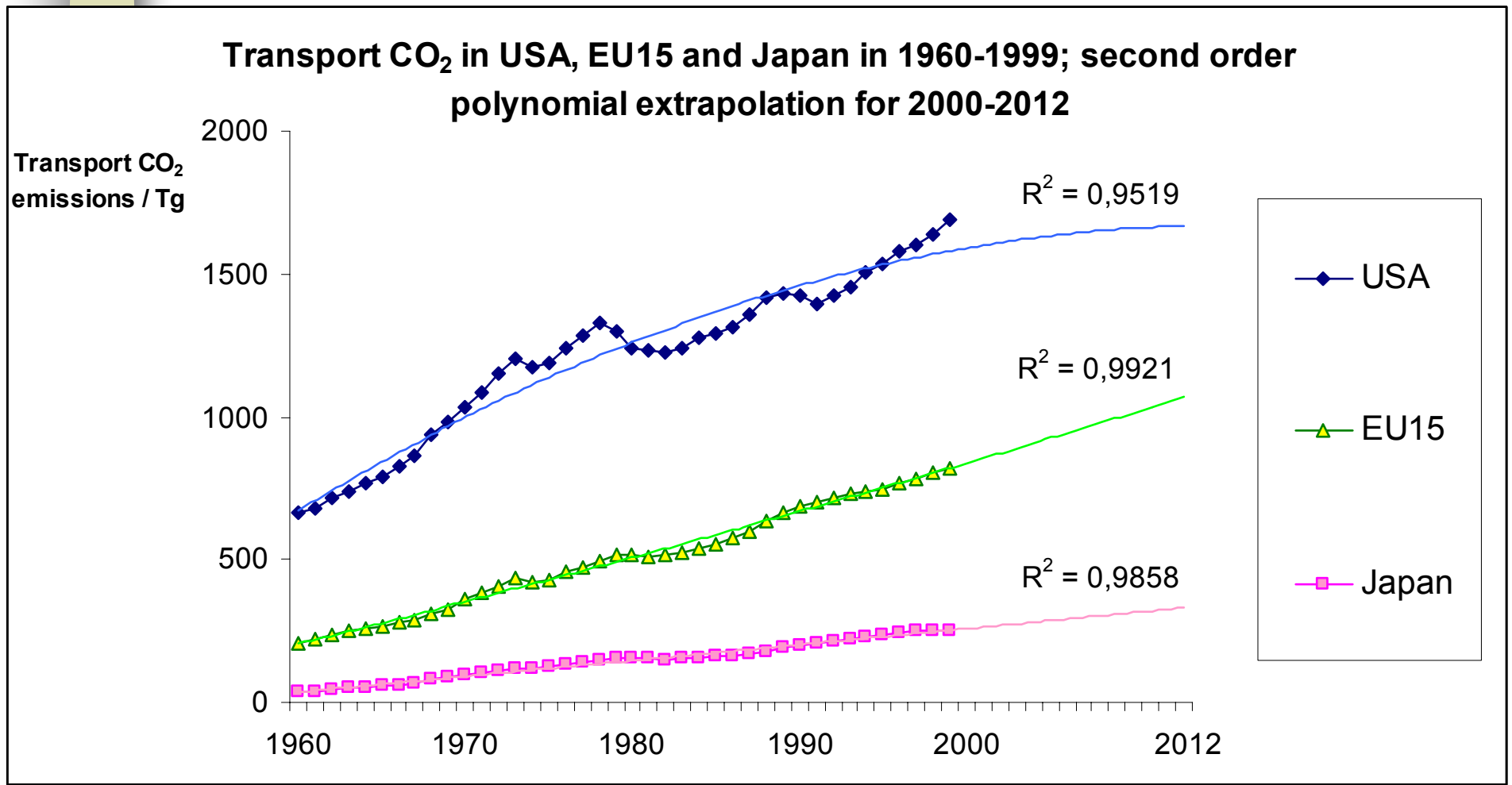
Future 2012 - EU15, USA and Japan

■ Source: IEA



Future 2012 - EU15, USA and Japan

■ Source: IEA



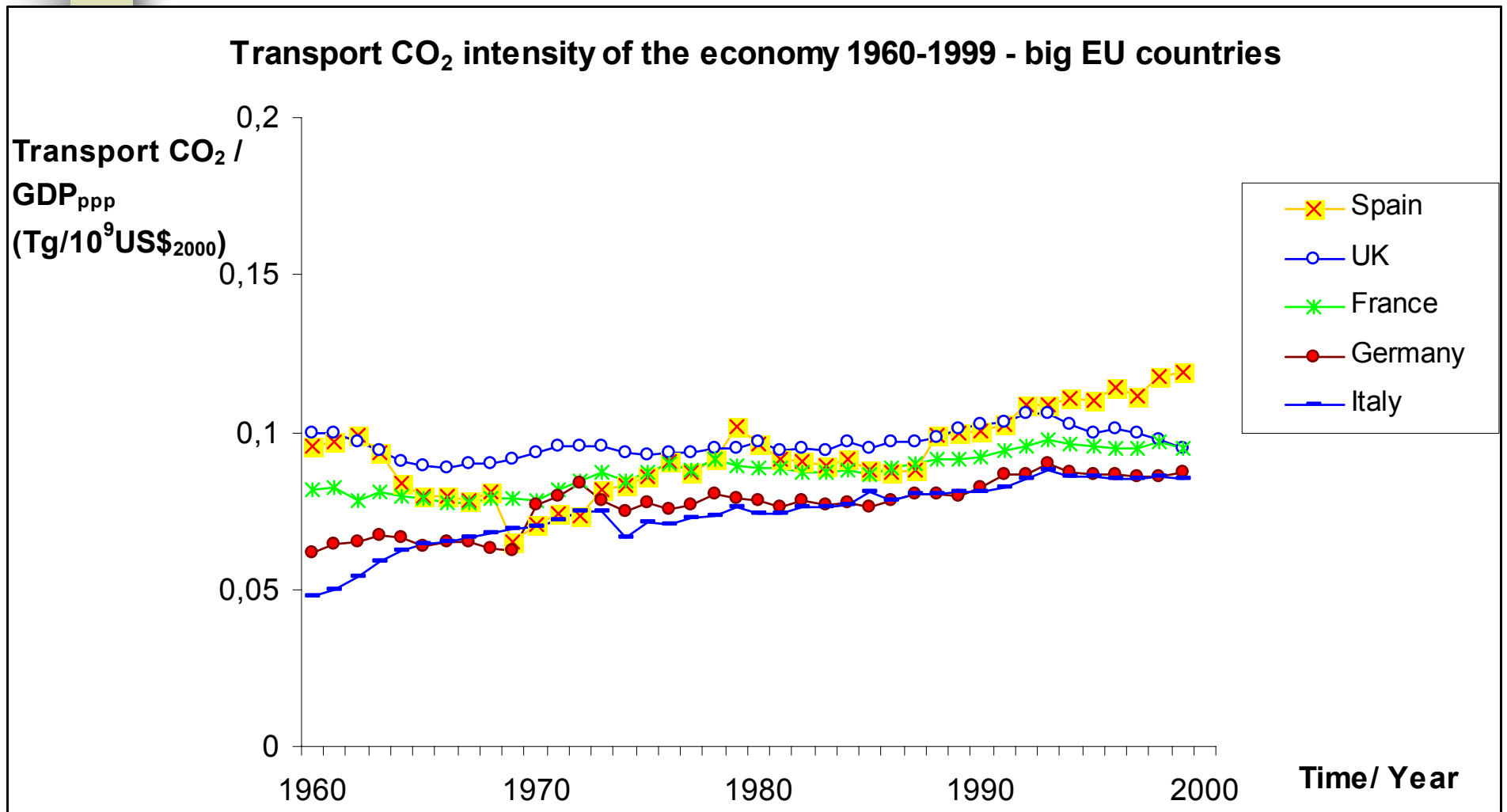


Transport CO₂ intensity of the economy

- Grouping as above
- CO₂/GDP by country
- History 1960-1999
- Future 2000-2012

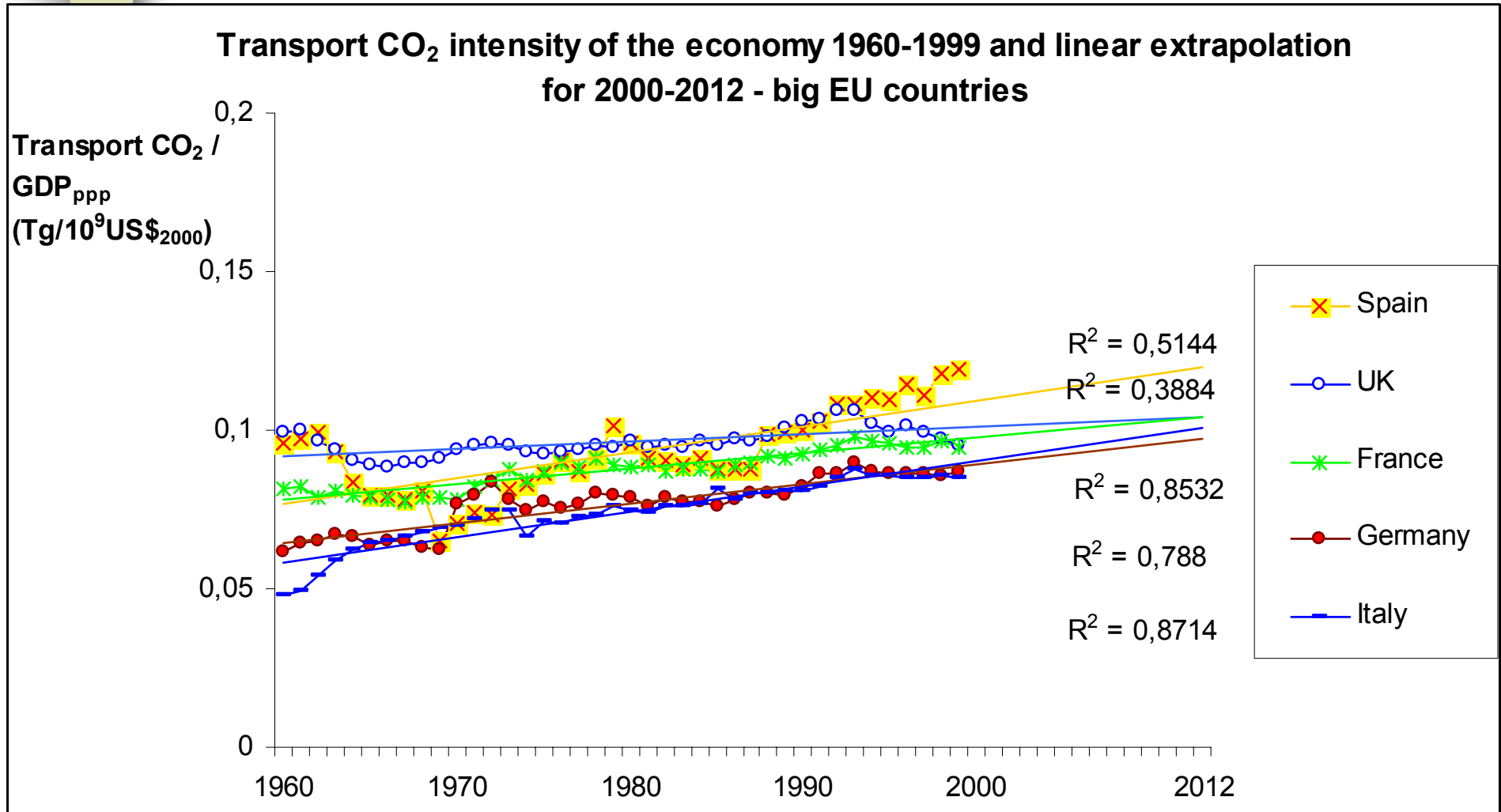
History 1960-1999: Big countries

■ Source: IEA



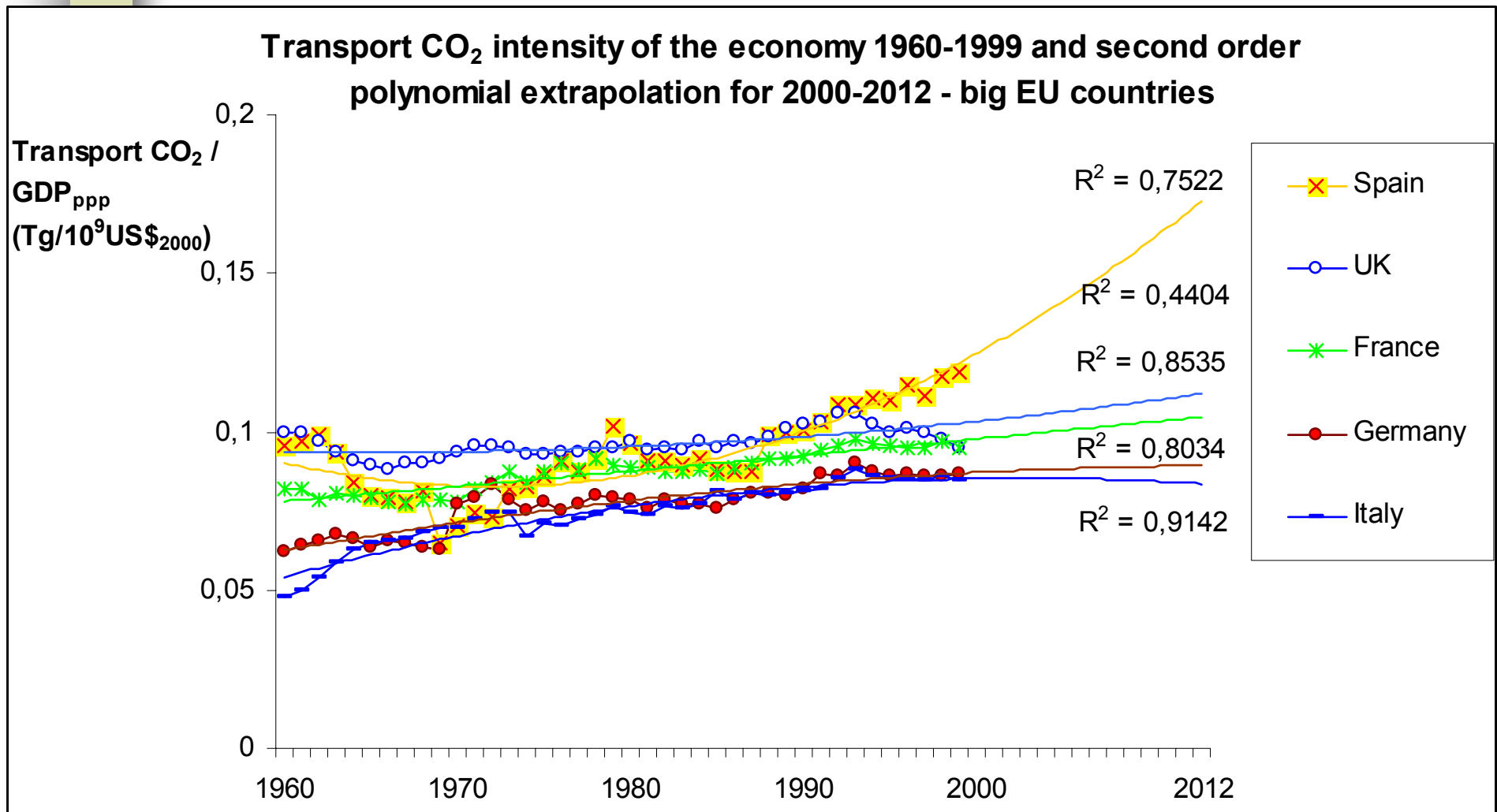
Future 2012 – big countries

■ Source: IEA



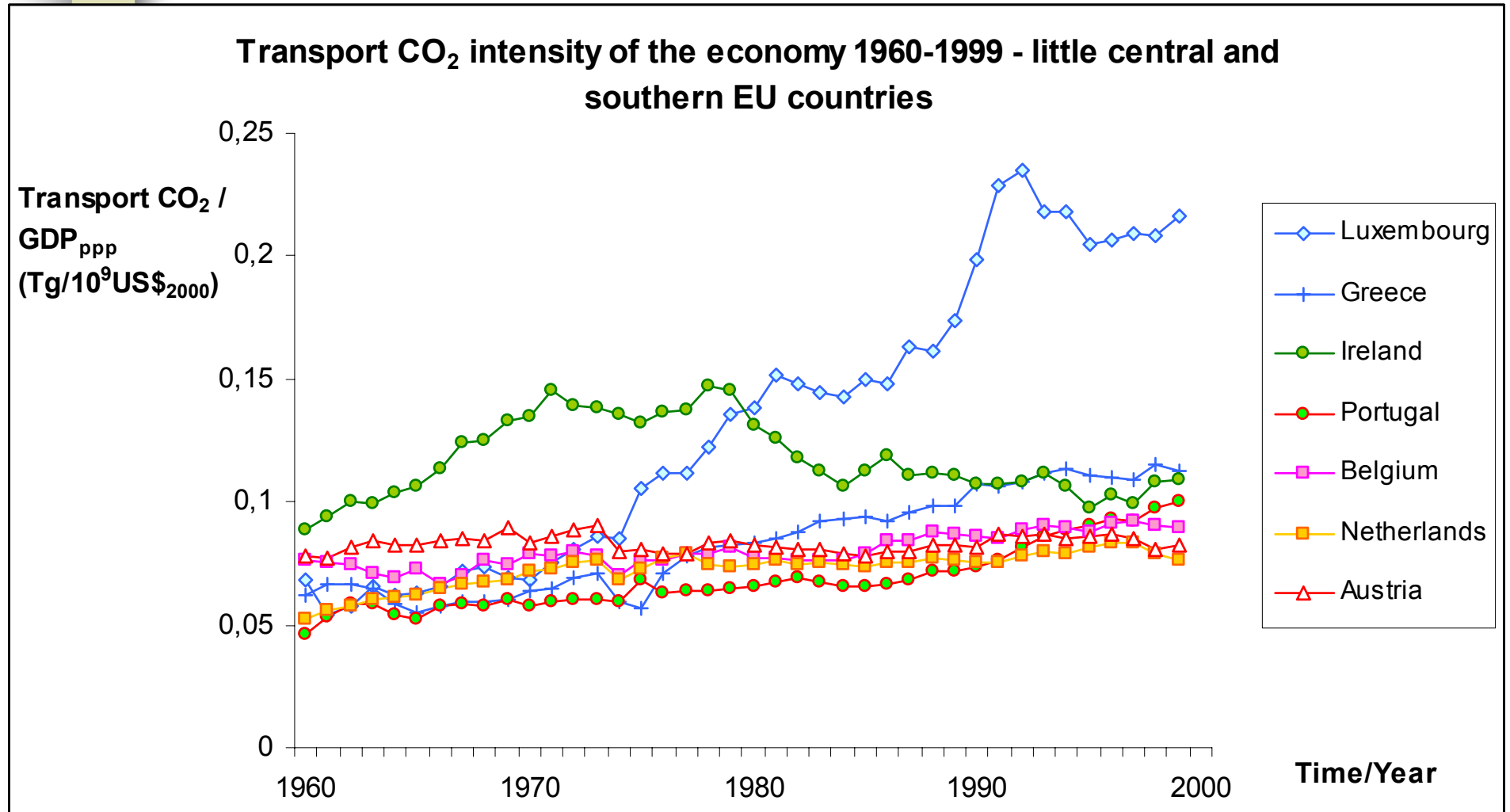
Future 2012 – big countries

■ Source: IEA



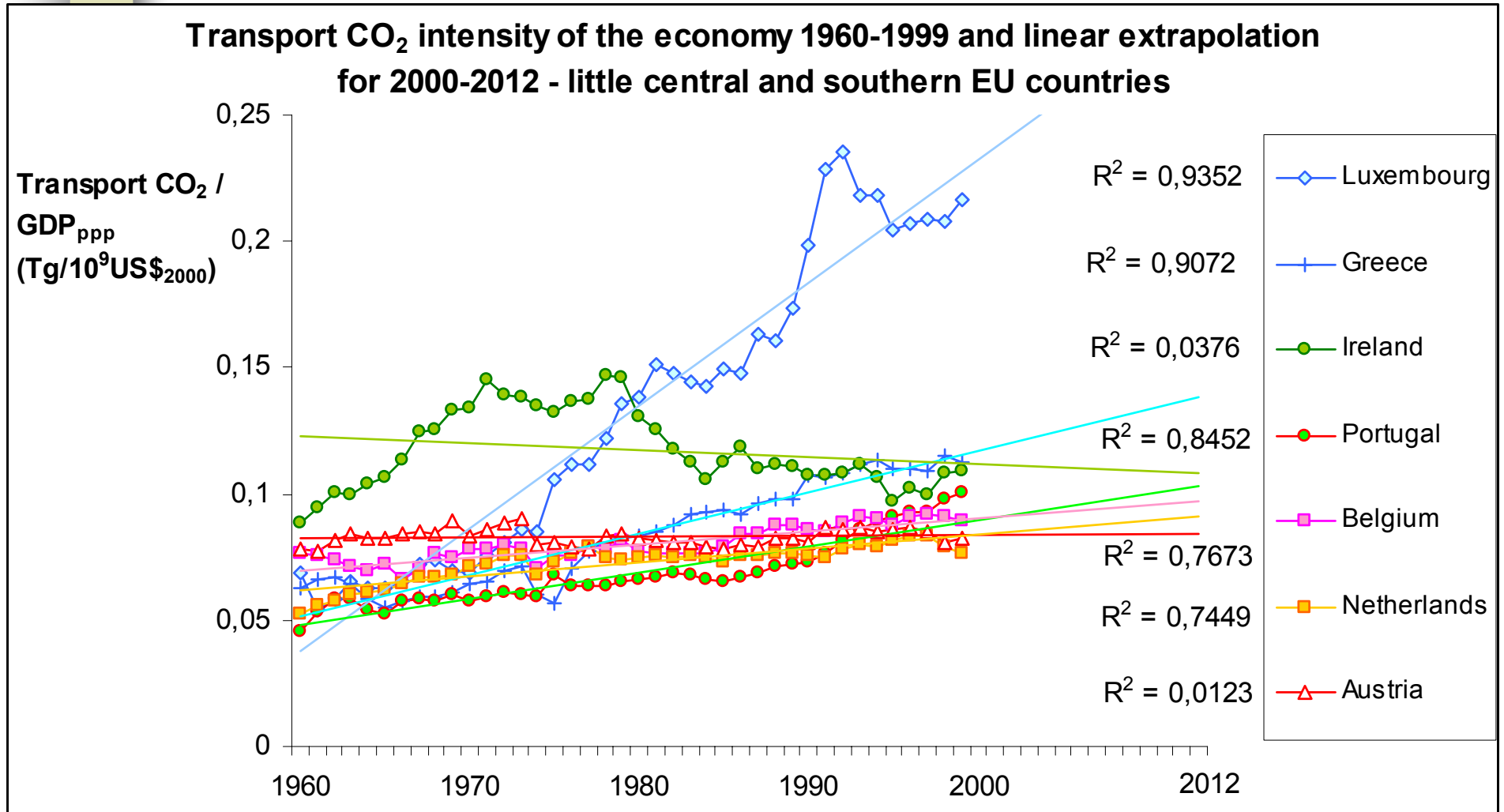
History 1960-1999: Little central and southern countries

■ Source: IEA



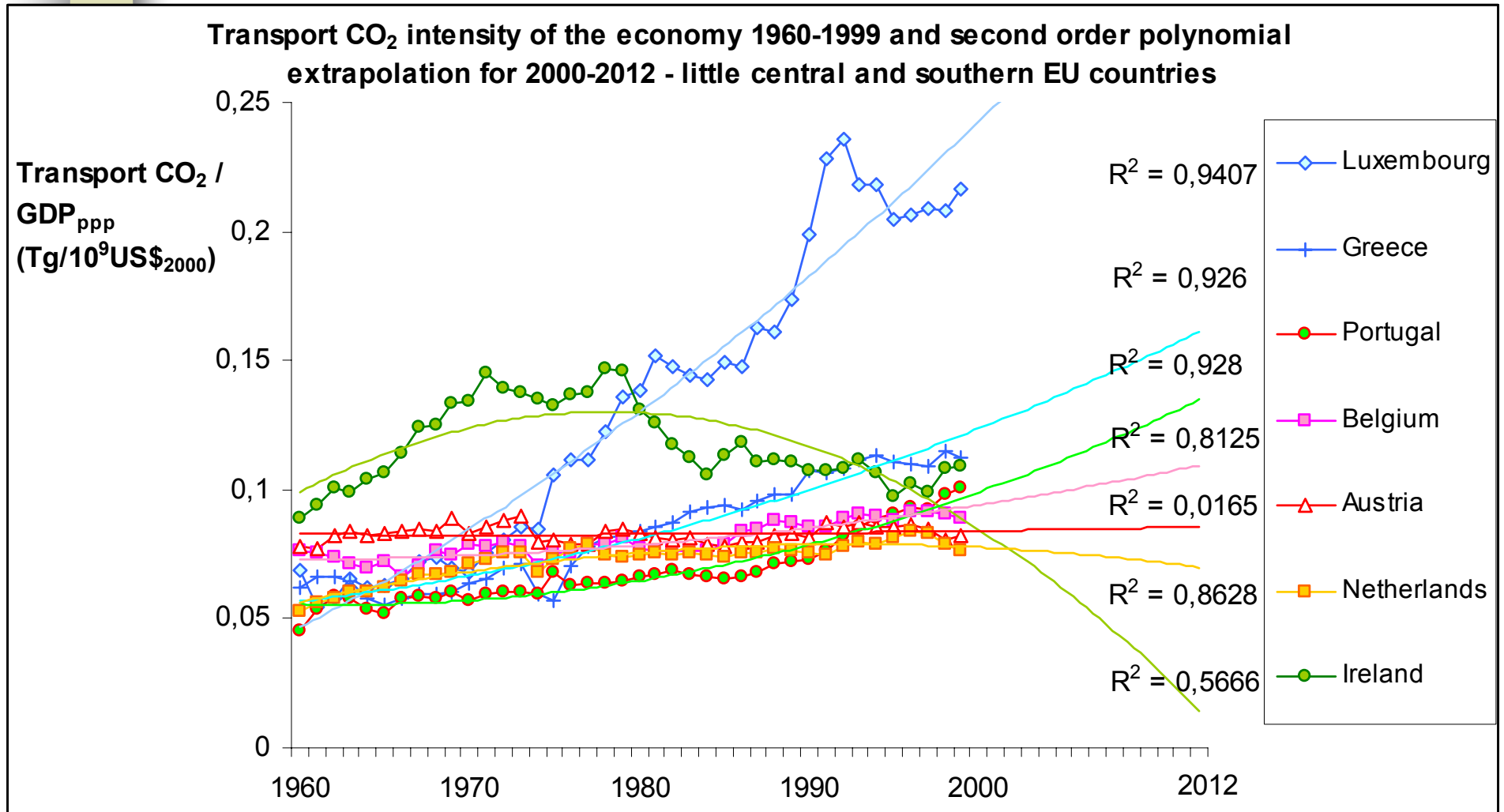
Future 2012 – little central and southern countries

■ Source: IEA



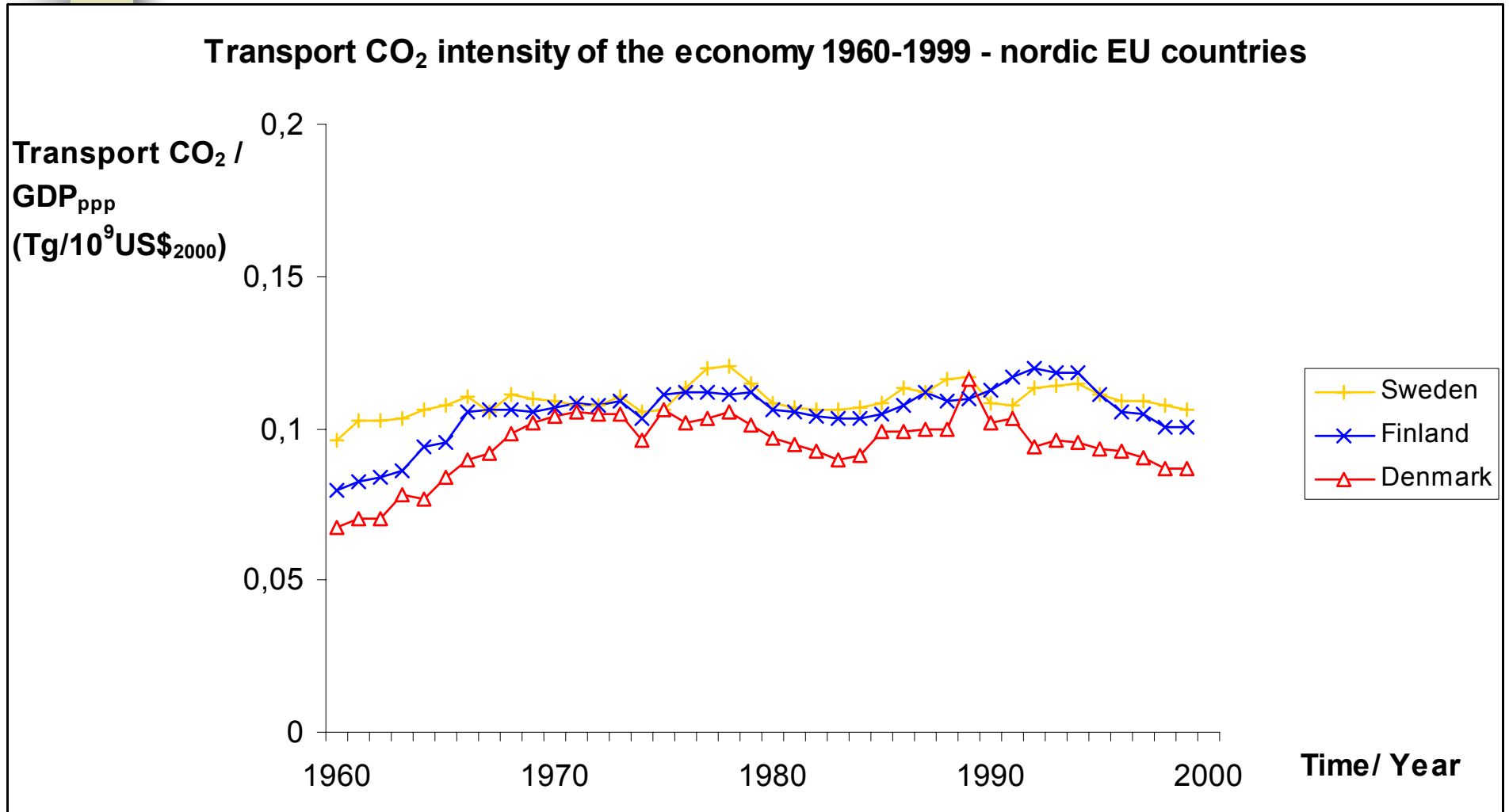
Future 2012 – little central and southern countries

■ Source: IEA



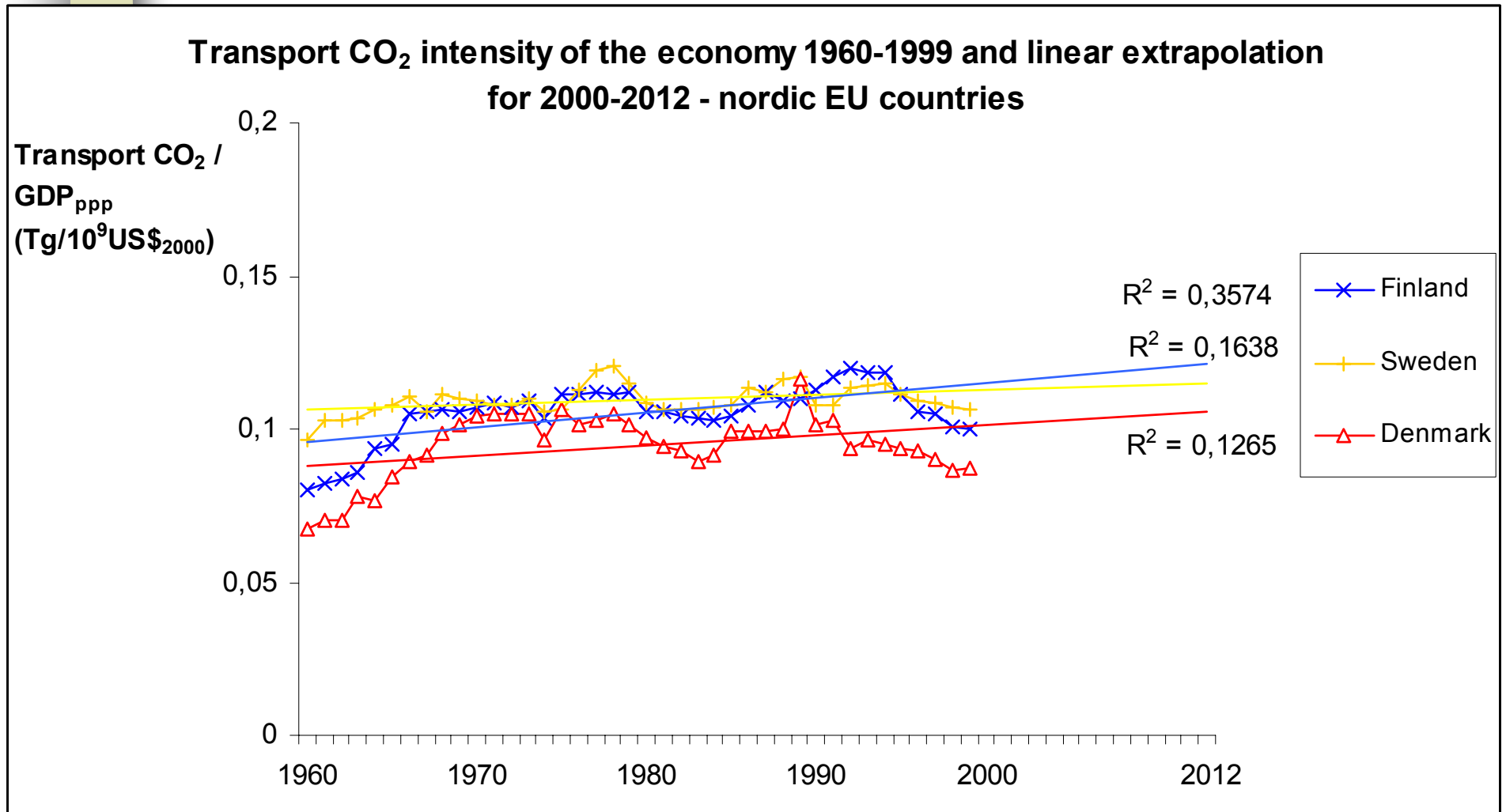
History 1960-1999: Nordic countries

■ Source: IEA



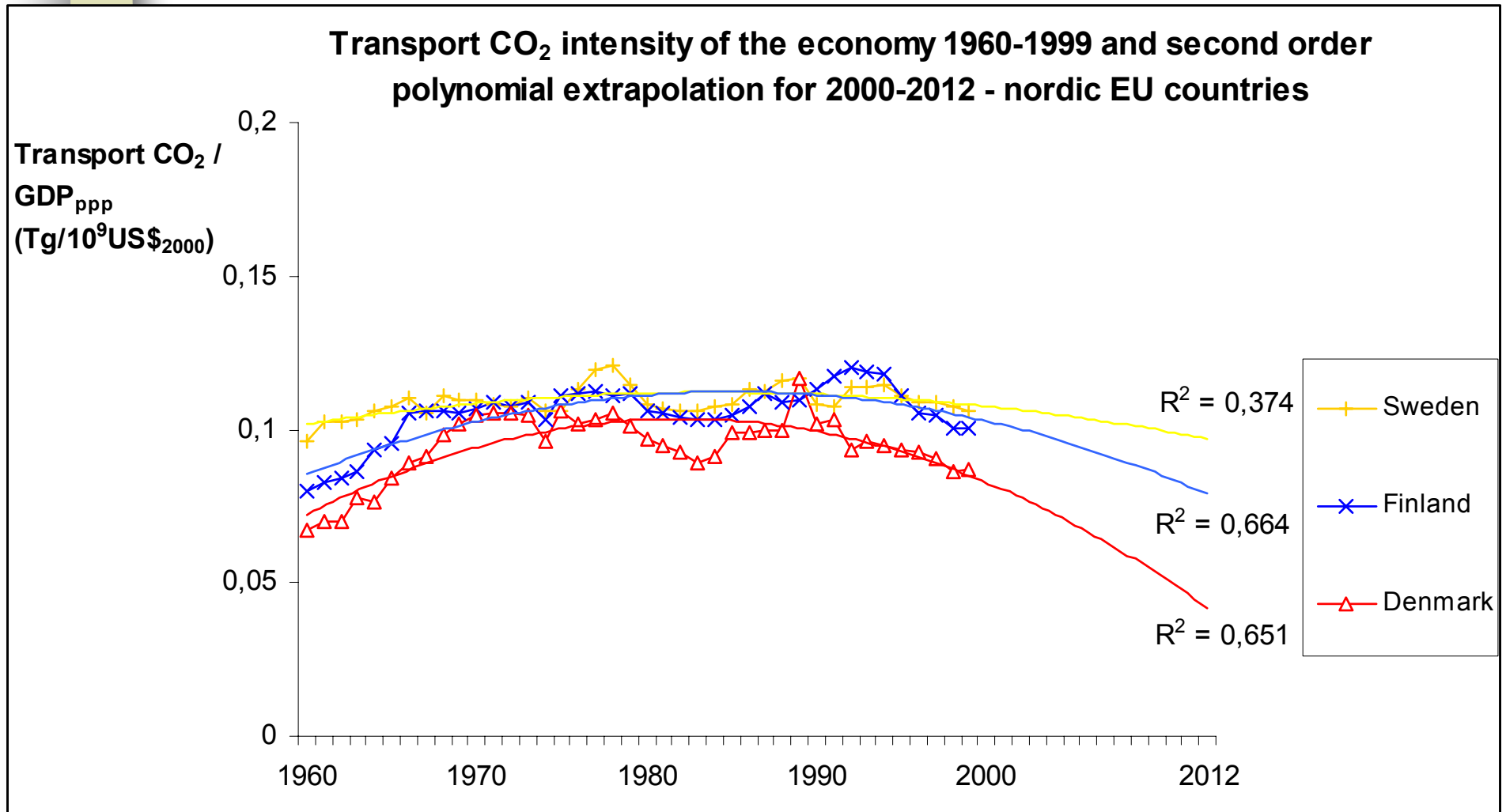
Future 2012 – nordic countries

■ Source: IEA



Future 2012 – nordic countries

■ Source: IEA



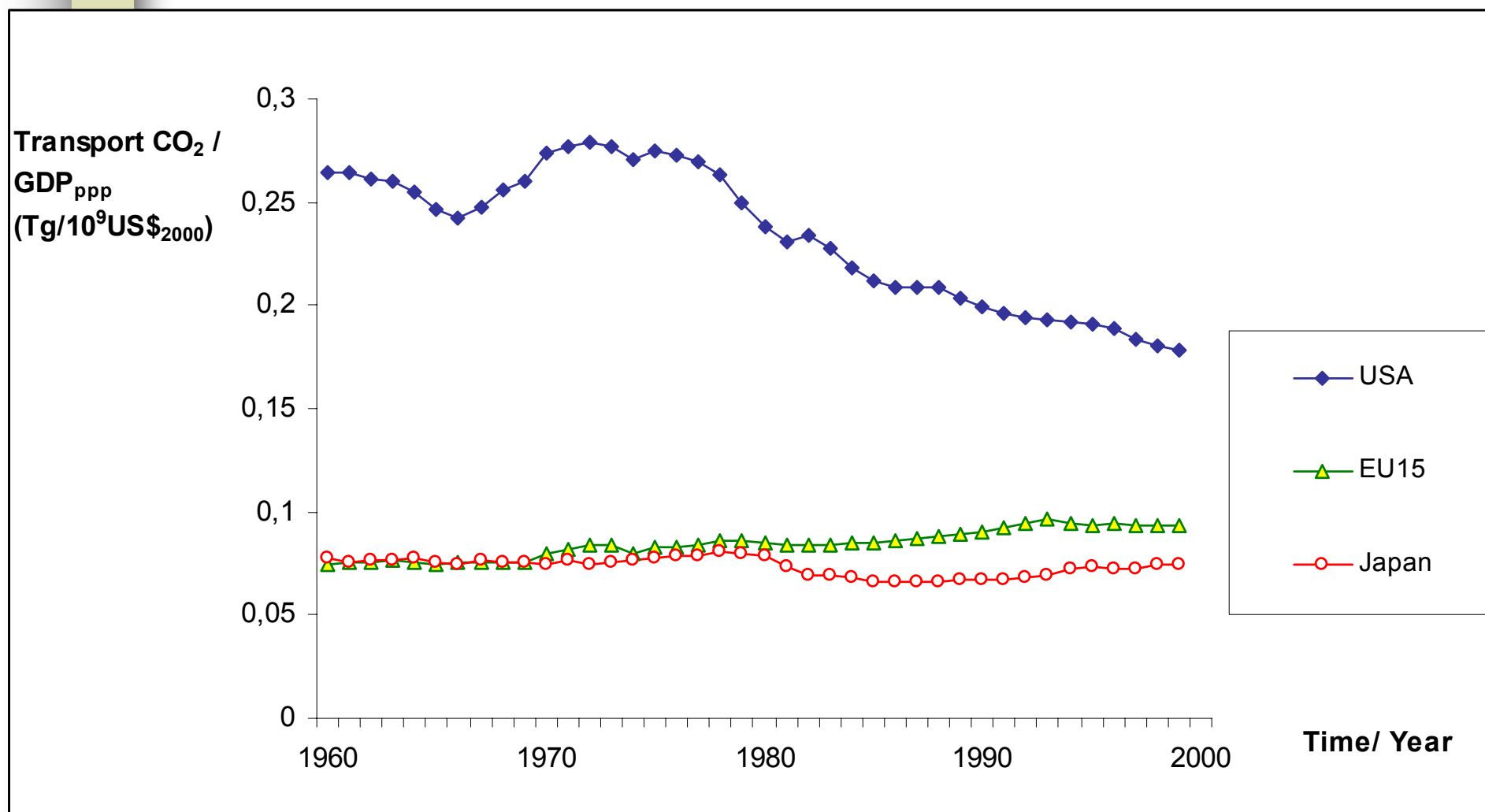


Comparison of EU15, USA and Japan

- Transport CO₂ intensity of the economy
- History 1960-1999
- Future 2000-2012

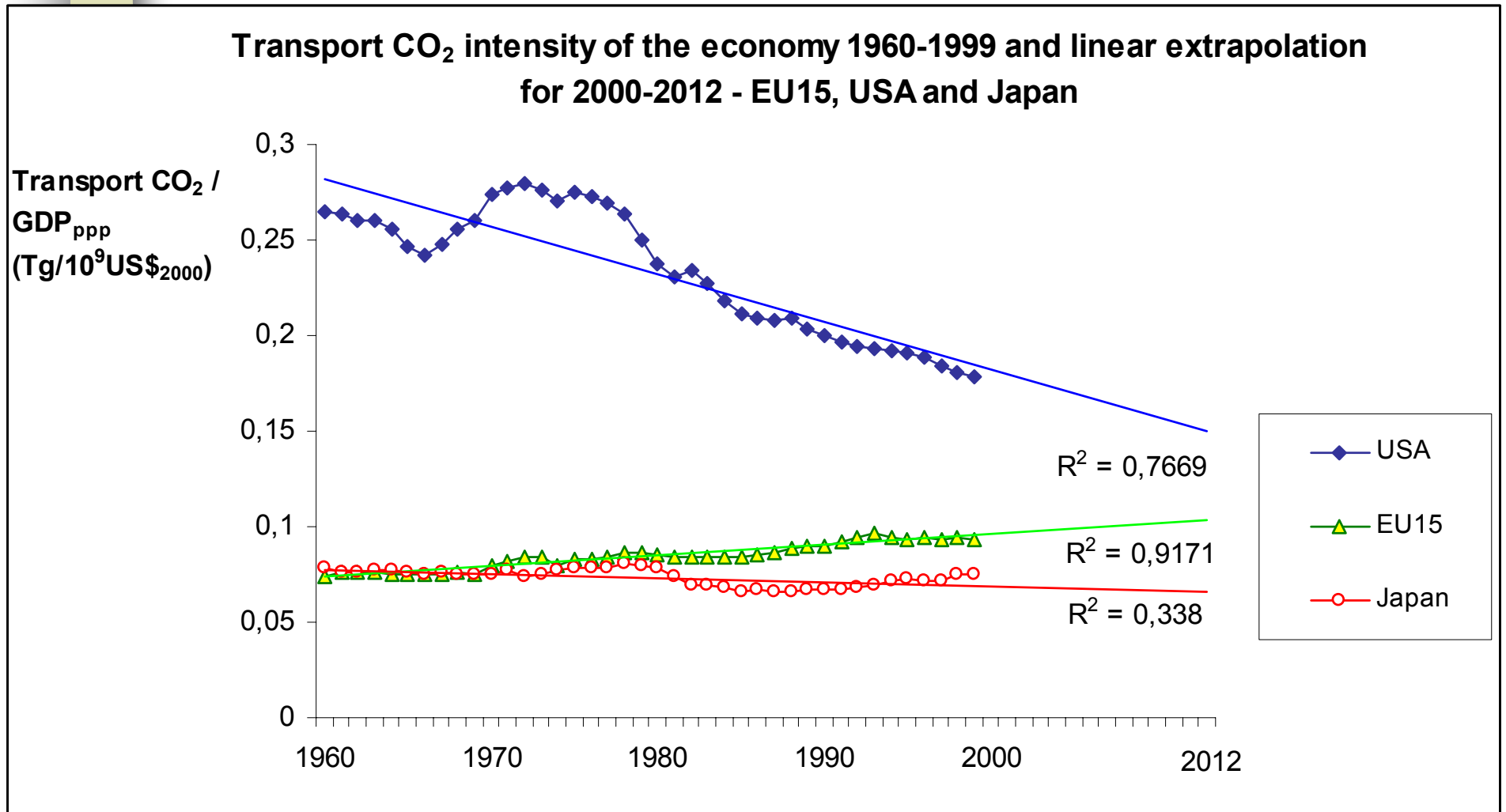
History 1960-1999: EU15, USA and Japan

■ Source: IEA



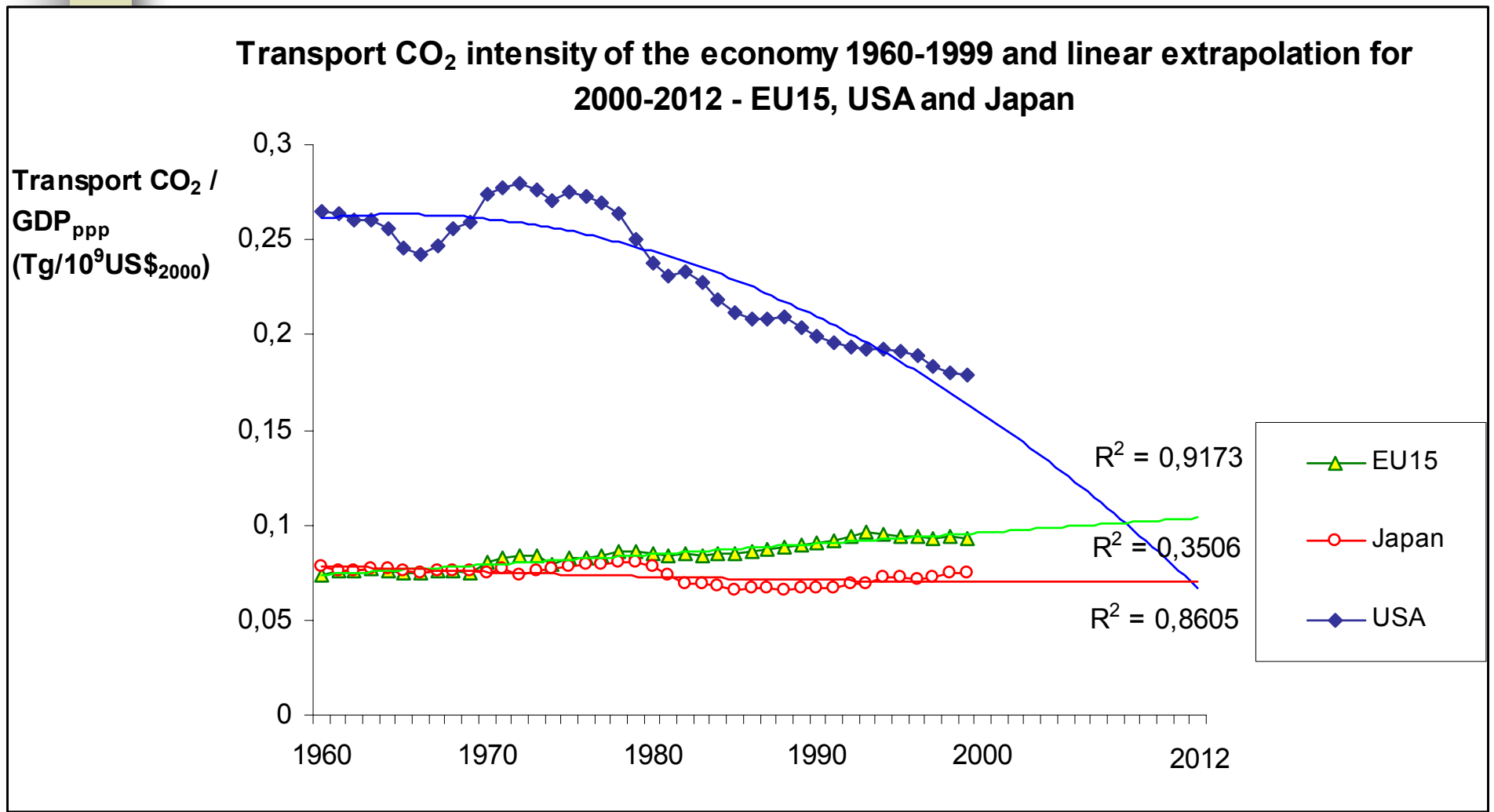
Future 2012 - EU15, USA and Japan

■ Source: IEA



Future 2012 - EU15, USA and Japan

■ Source: IEA





Discussion

■ Substance

- Transport is an exceptional sector as the CO₂ intensity of the economy has not decreased
- The countries receiving a lot of EU structural funding have had high CO₂ growth rates
- USA has had decreasing transport CO₂ intensity figures but was still twice as high as EU15 in 1999

■ Methodology

- Extrapolation should be used very cautiously even in what...if studies and even with BAU analyses





Petri Tapio & Jyrki Luukkanen: Finland futures research centre