

China's Low Carbon Development Scenarios

Miao Ren, Jiang Kejun, Hu Xiulian
Energy Research Institute, China



Introduction

China is the biggest developing country in the world, and also the biggest GHG emission country. Realizing low carbon and environmental friendly development, is the main task of China's new government. Especially under the pressure of heavy haze, some counter measures have been taken to reduce the coal consumption.

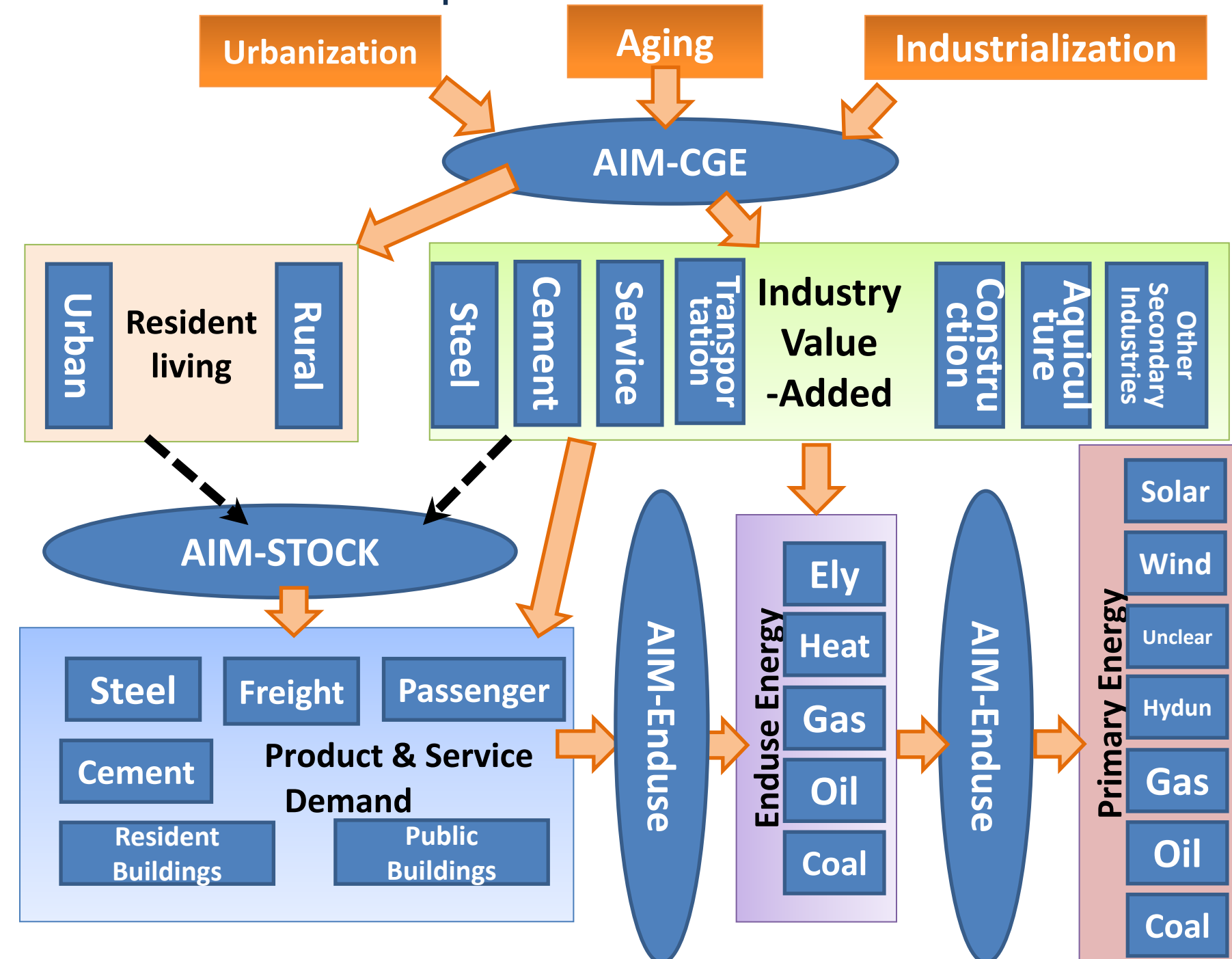
However, it must be realized that: the increasing energy consumption and GHG emission is a developing problem. In process of Urbanization and Industrialization, there are a lot of rigid driving force from the infrastructure, the living improvement. Until now, no country has escaped from the historical principle.

In order to investigate low carbon development pathway, several uncertainties must be considered: economic upgrade, technology improvement, and clean energy development. By applying the AIM models, complex problem can be simulated, including the scenarios of China's economic transformation, the rational development of consumption and infrastructure, the technologies improvement and so on. To set the exogenous parameters reasonably, the international comparison are also considered.

This poster are partial of our research results. And a lot of follow-up study are needed. Please give us more help and suggestions. Thank you!

Methodologies

Three AIM models are applied to investigate China's Low Carbon development:

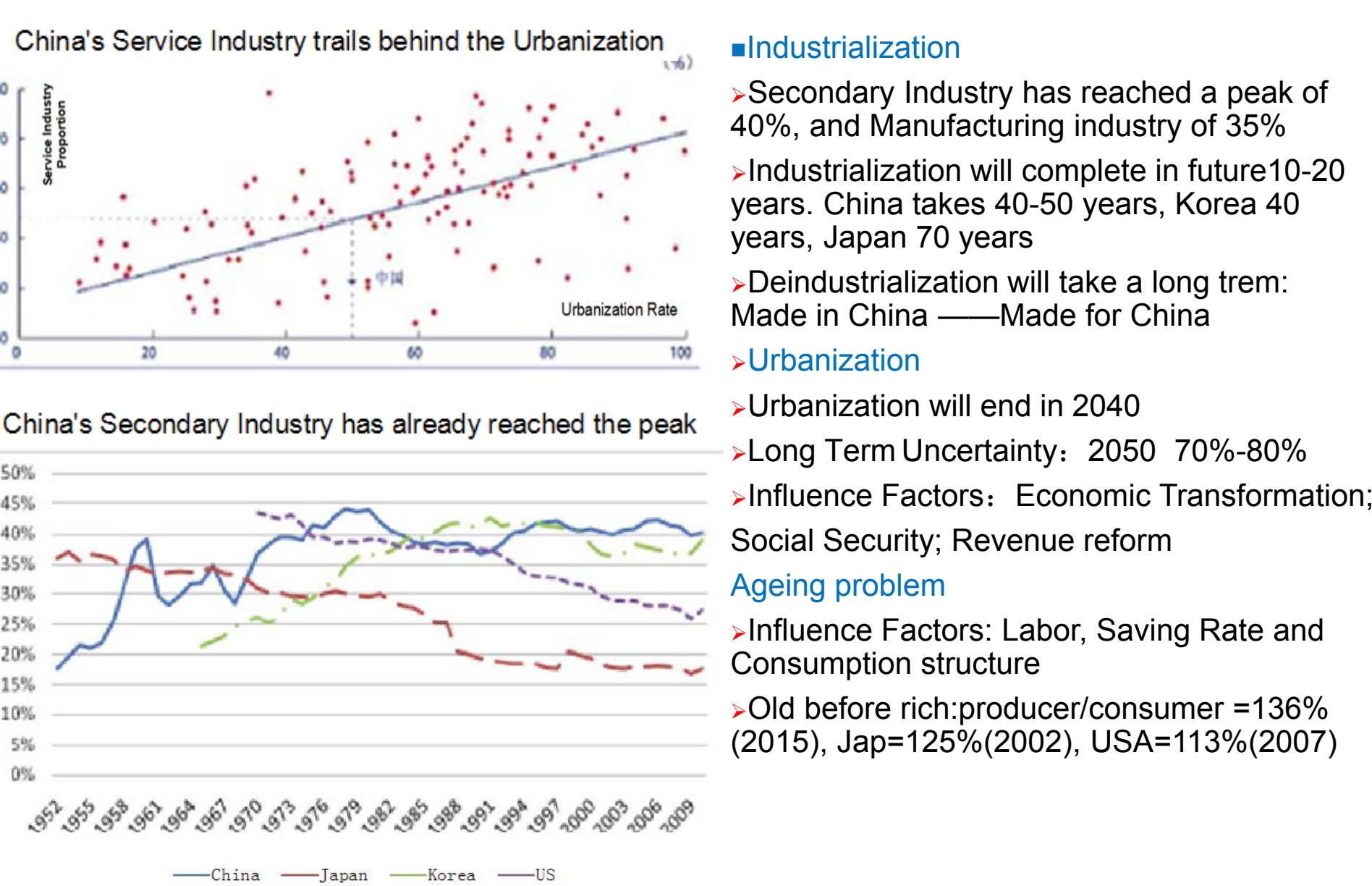


Scenarios Settings

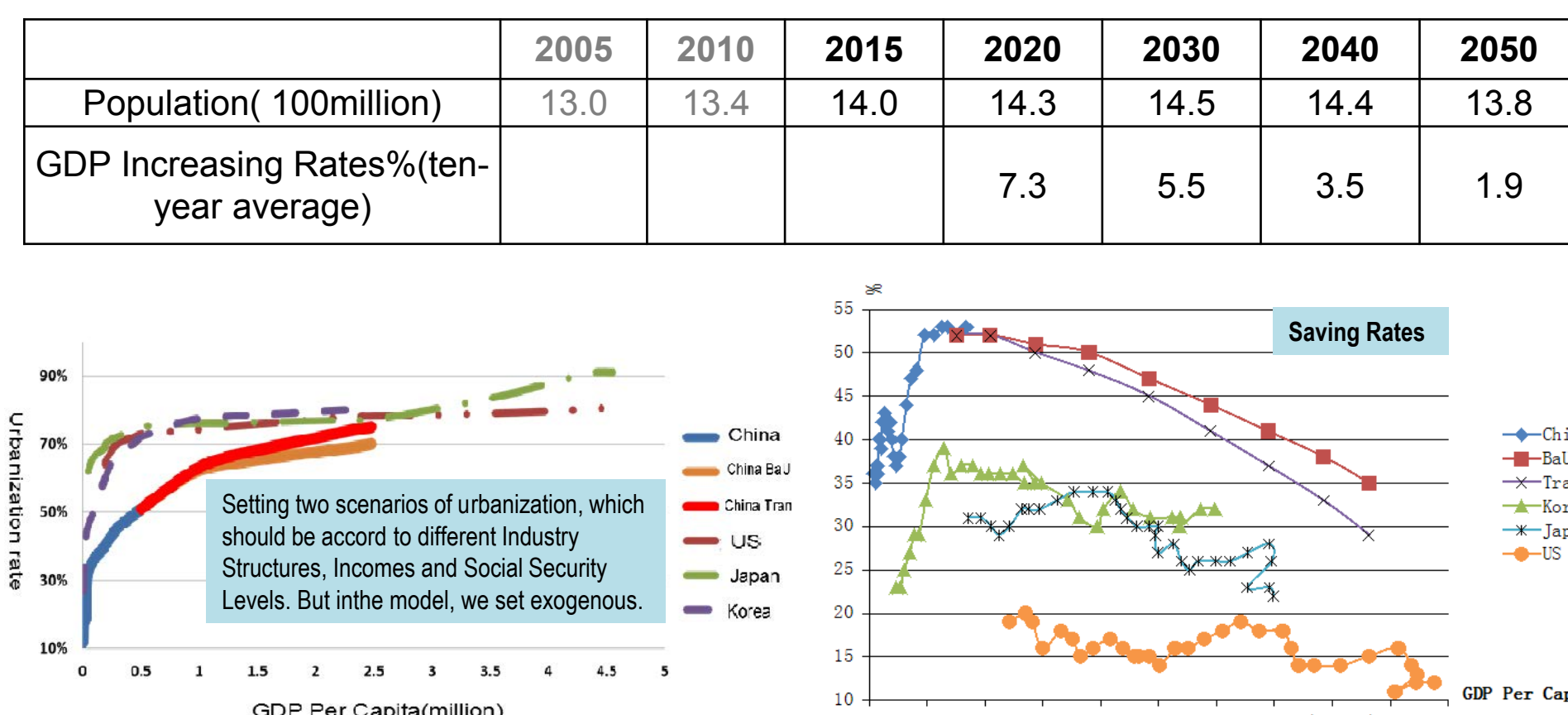
Four Scenarios are defined by two levels: **Economic Scenarios** and **Technology Scenarios**

Economy	Slow Economic Transformation		Accelerate Economic Transformation	
	BaU		Tran	
Technology	Technological advances slowly	Technological advances steadily	Technology revolution	
	Tech1	Tech2	Tech3	
Scenario	BaU	CM1	CM2	CM3

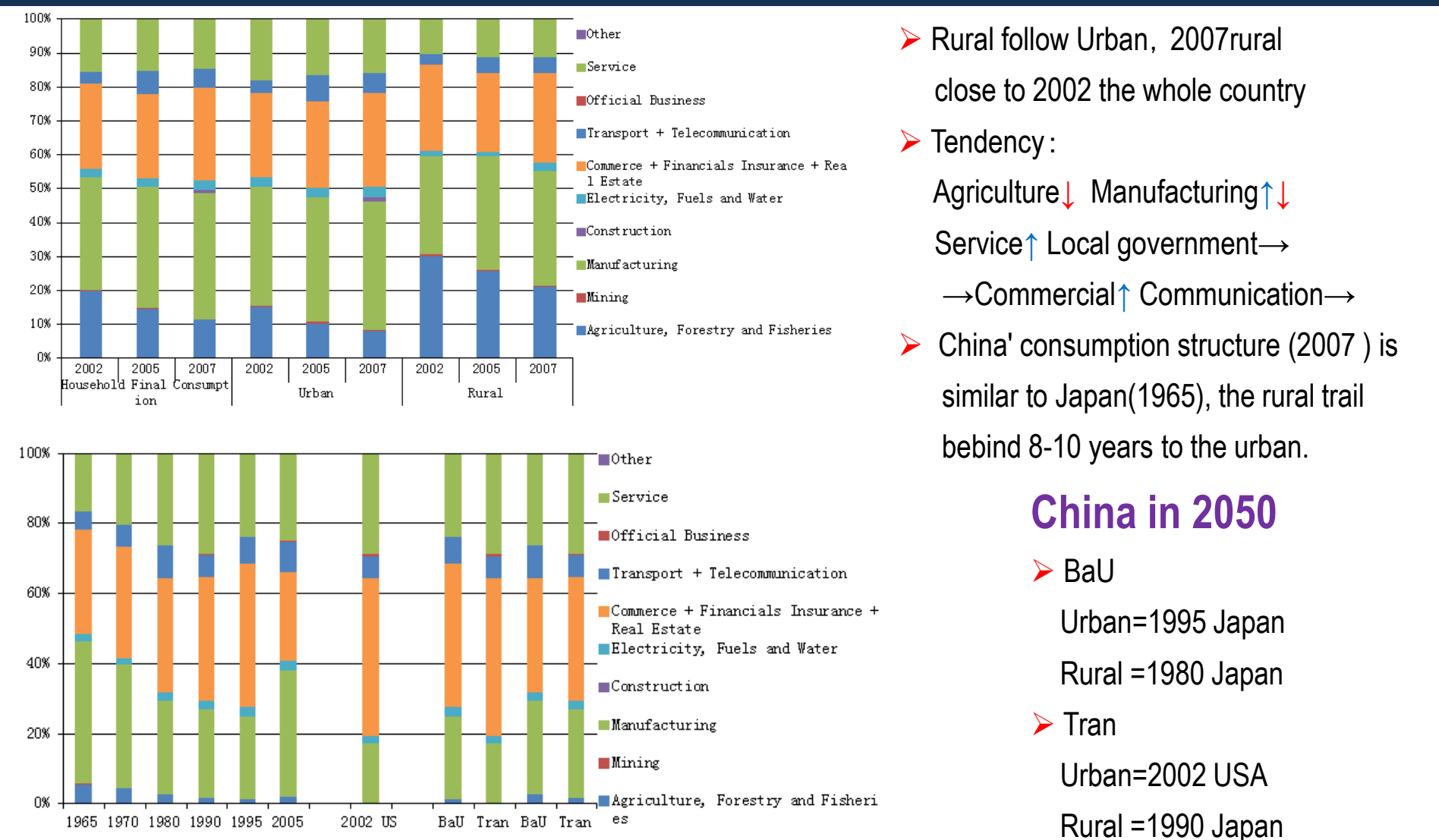
Economic Background



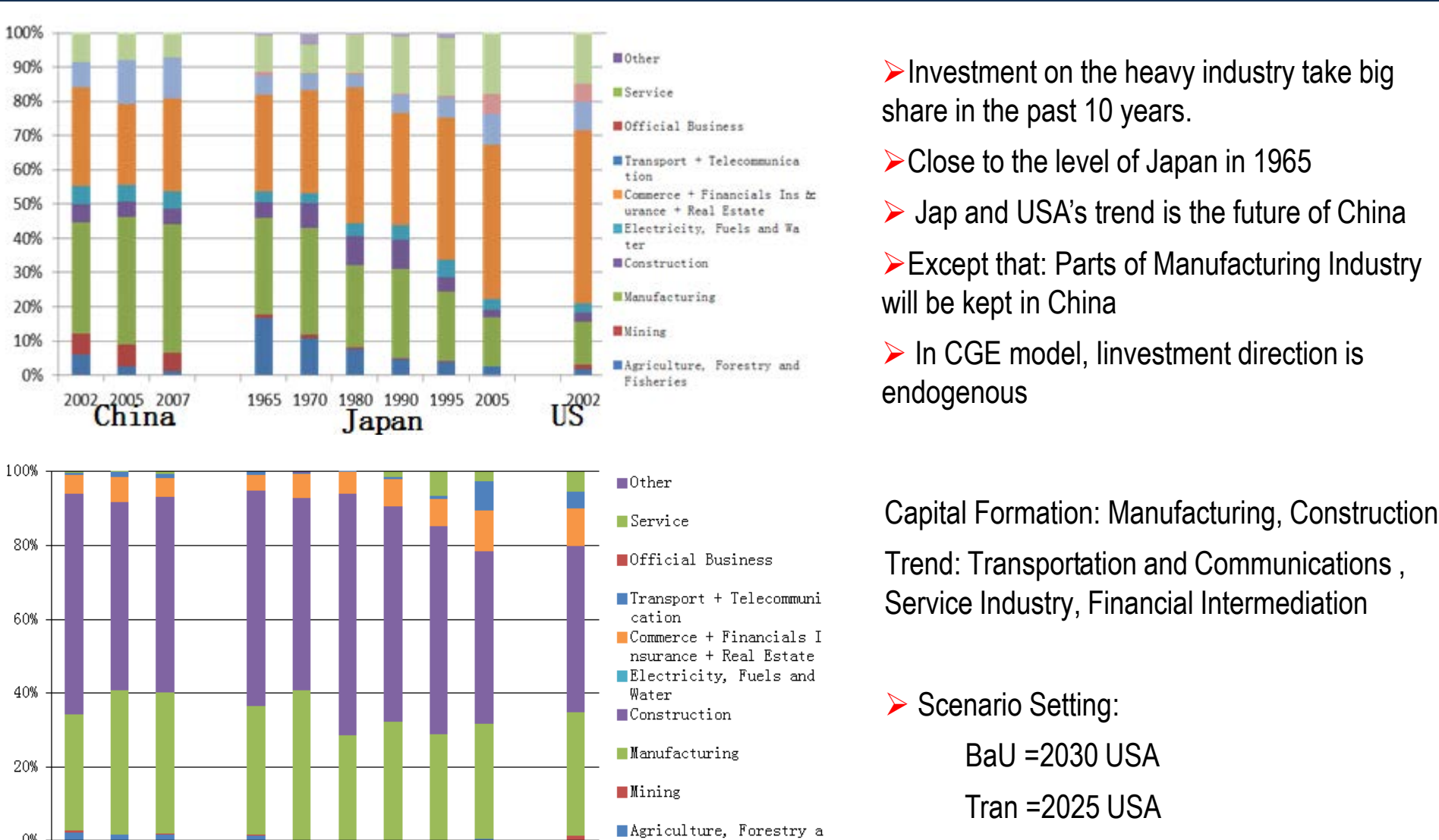
Macroeconomic Scenario



Consumption Structure



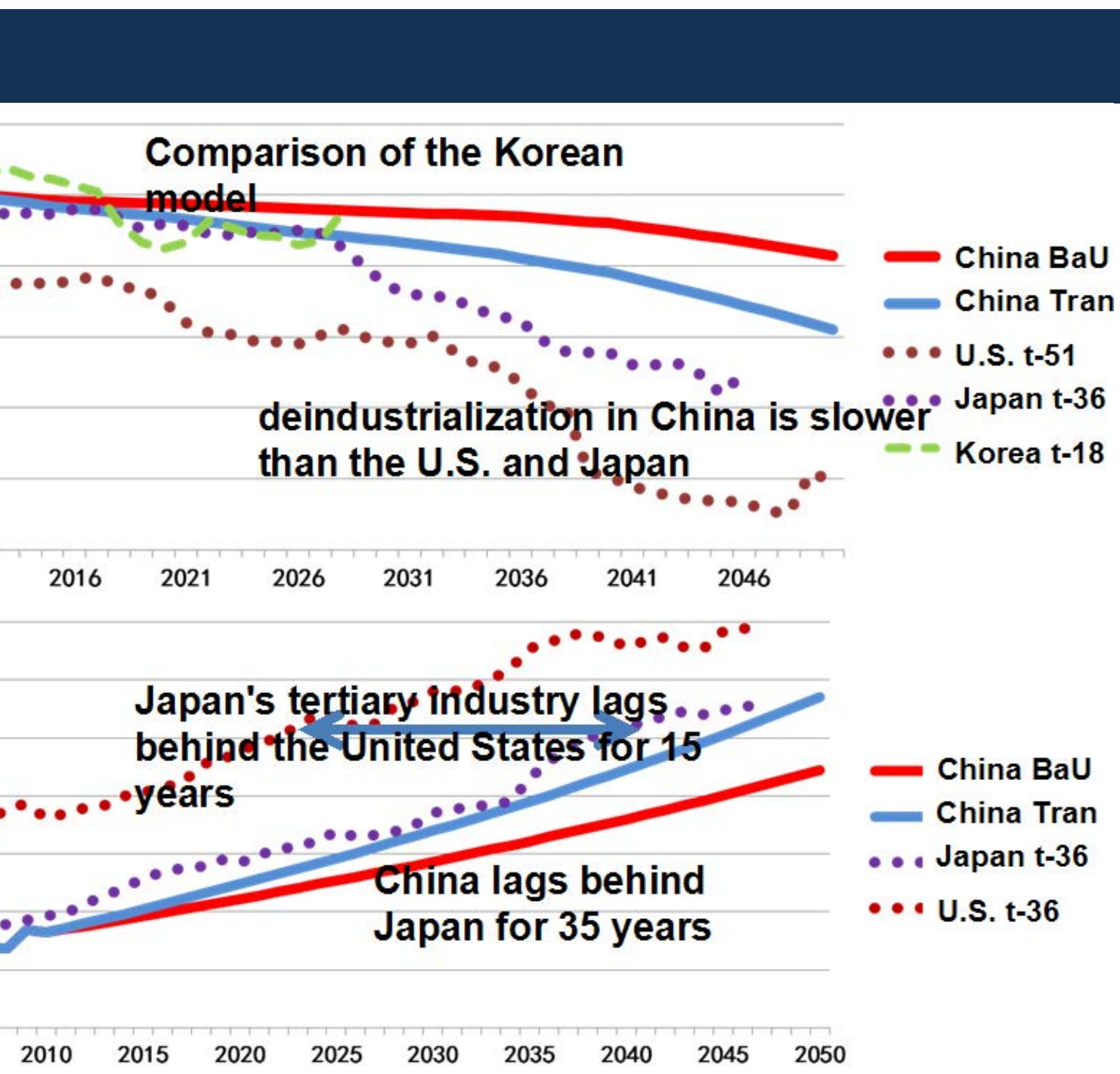
Investment & Capital Formation



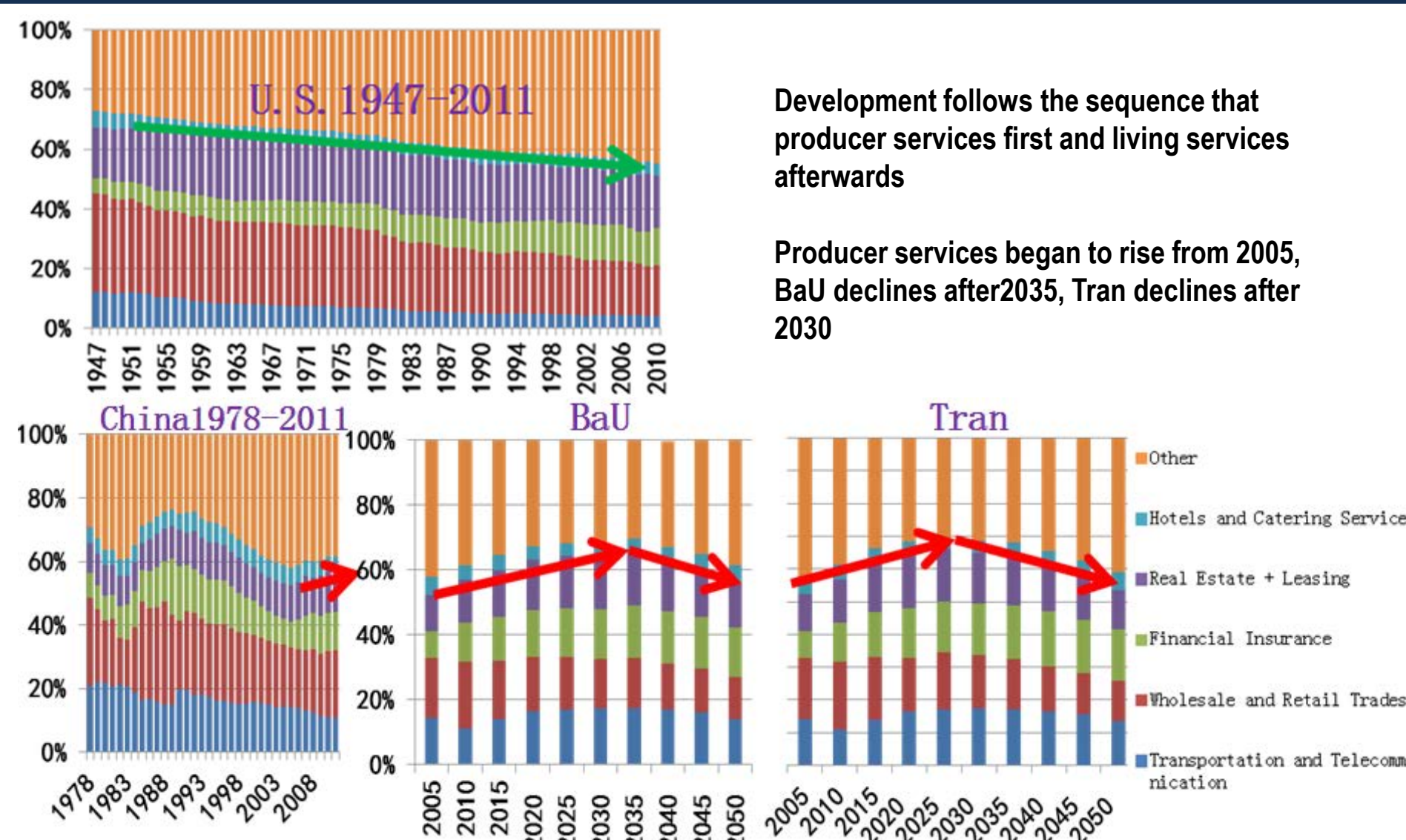
Industry Structure in Future



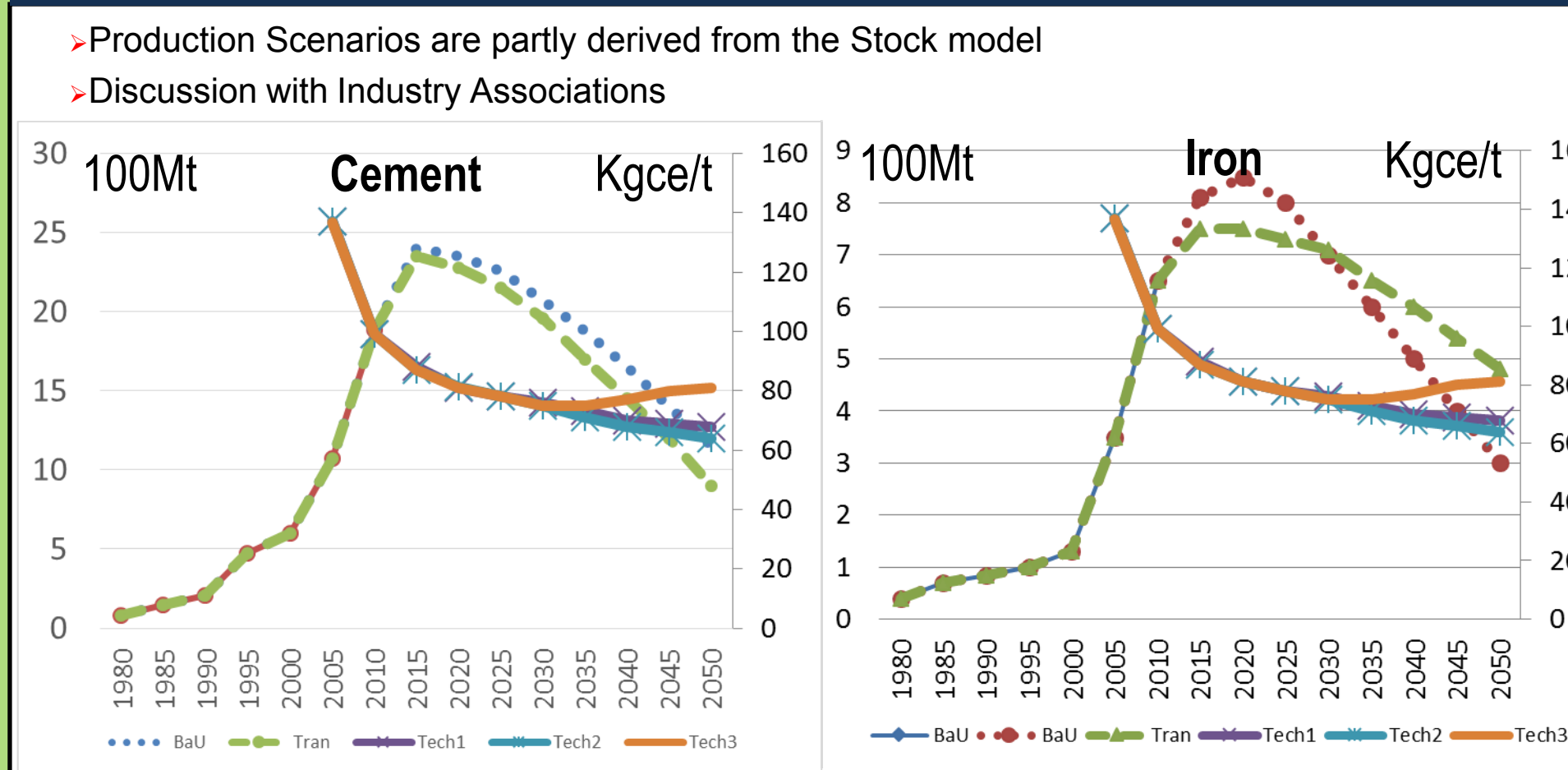
Comparison of the Korean model
deindustrialization in China is slower than the U.S. and Japan
Japan's tertiary industry lags behind the United States for 15 years
China lags behind Japan for 35 years



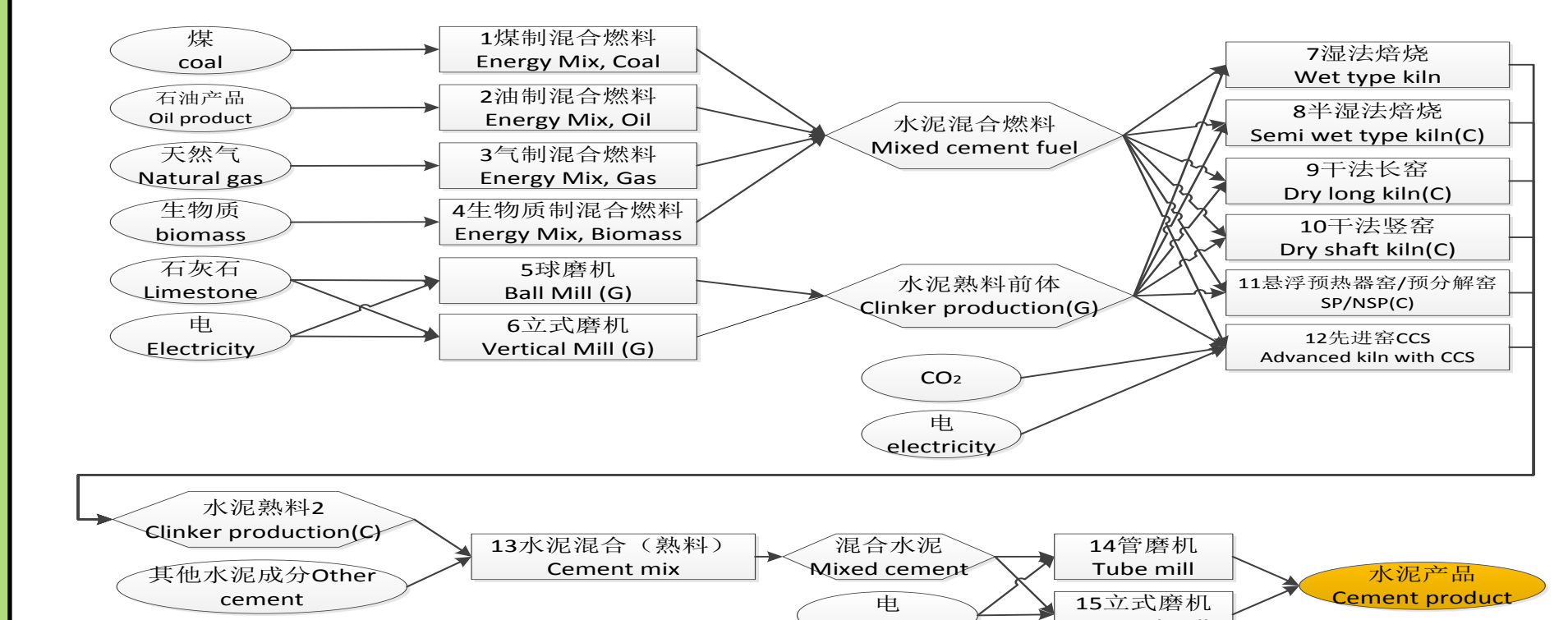
Tertiary Industry' Development



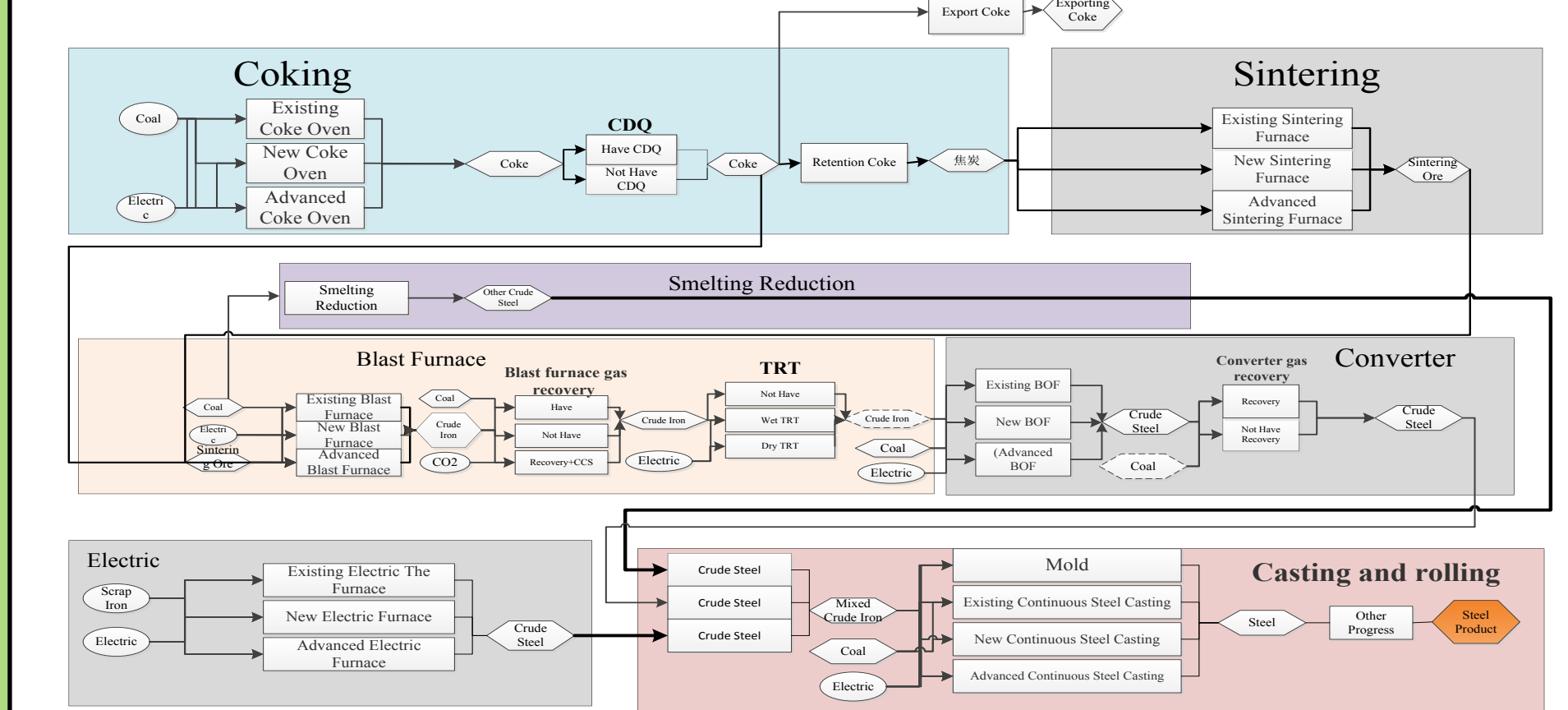
Cement and Iron/Steel Sector



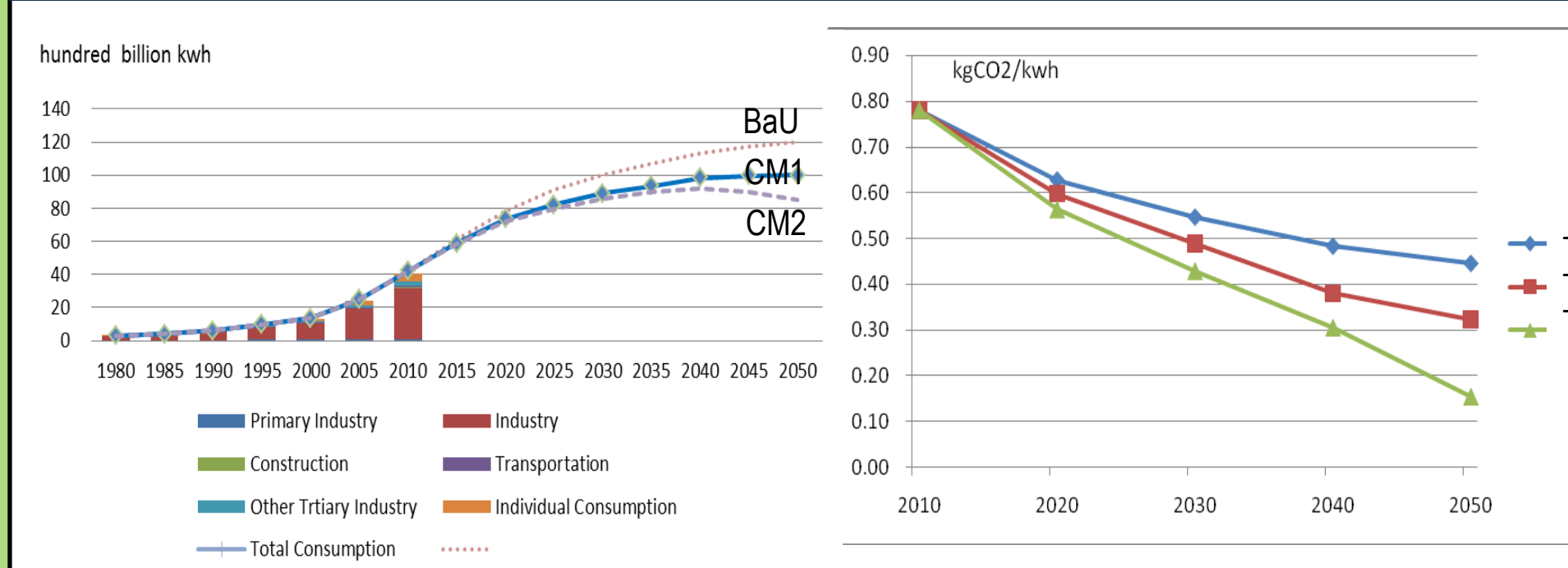
Device Setting of Cement Sector



Device Setting of Iron/Steel Sector



Power Supply



Device Setting of Power Sector

Primary Energy and CO₂ Emission

