

Forest Reforms and Forest Products Trade in China

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WORLD
FORESTRY
CENTER

Outline

- ❖ About me
- ❖ Introduction to Beijing
- ❖ Forest Resources in China
- ❖ Research interests

About me

- ❖ About my name: Lanhui Wang
- ❖ Wang (King in English, the #1 family name in China, 7% of the total population)
- ❖ Lan is an orchid, one of the traditional Chinese favorites with a fragrant smell
- ❖ Hui is parents expectation

My family



My work

- ❖ Department of Statistics
School of Economics & Management
Beijing Forestry University since 2002
- ❖ Job Description
 - Teaching (Statistical theory and application)
 - Researching
 - Studying

My research

- Forest Development Report for State Forestry Administration annually since 2003
- Evaluation of Grain for Green project in China (sponsored by China Reform Research Fund)
- Sampling Survey about the loss from Technical Barrier of Trade for Ministry of Commerce of China

On-going project

- International Forestry and Forest Product Market Modeling in cooperation with the University of British Columbia
 - ↪ Forecasting of China's forest product demand and supply
 - ↪ Analysis of forest product trade with China
 - ↪ Tariff and taxation impacts on domestic market



About Beijing Forestry U.

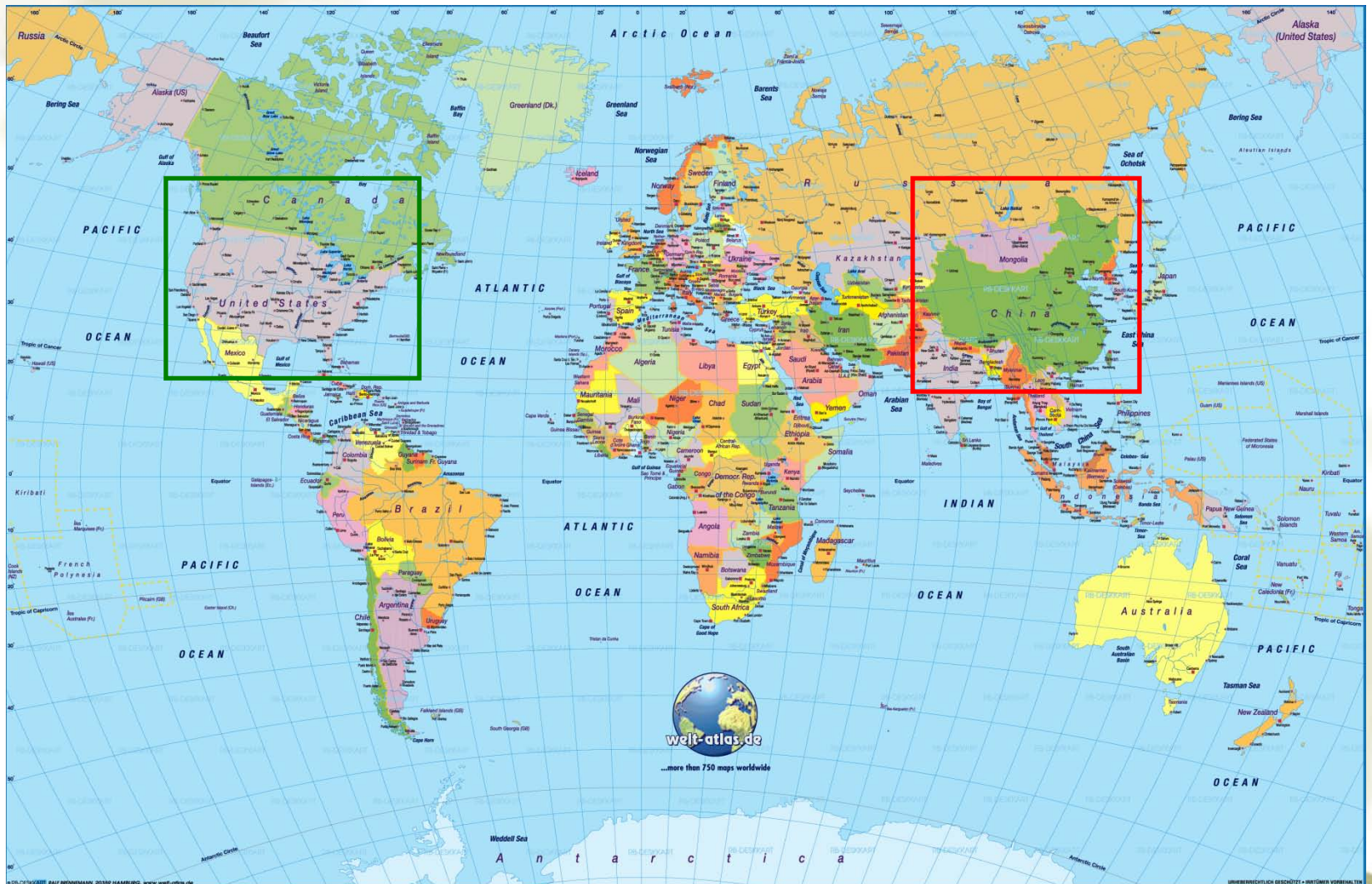
- 🇨🇳 > 30,000 students
- 🇨🇳 956 full-time teachers

15 schools, including:

- Forestry
- Biological Science
- Landscape Architecture
- Engineering
- Economics & Management



About China and Beijing



Location of **Beijing** heart of the rooster

中华人民共和国地图

政区版



About Beijing (Peking)

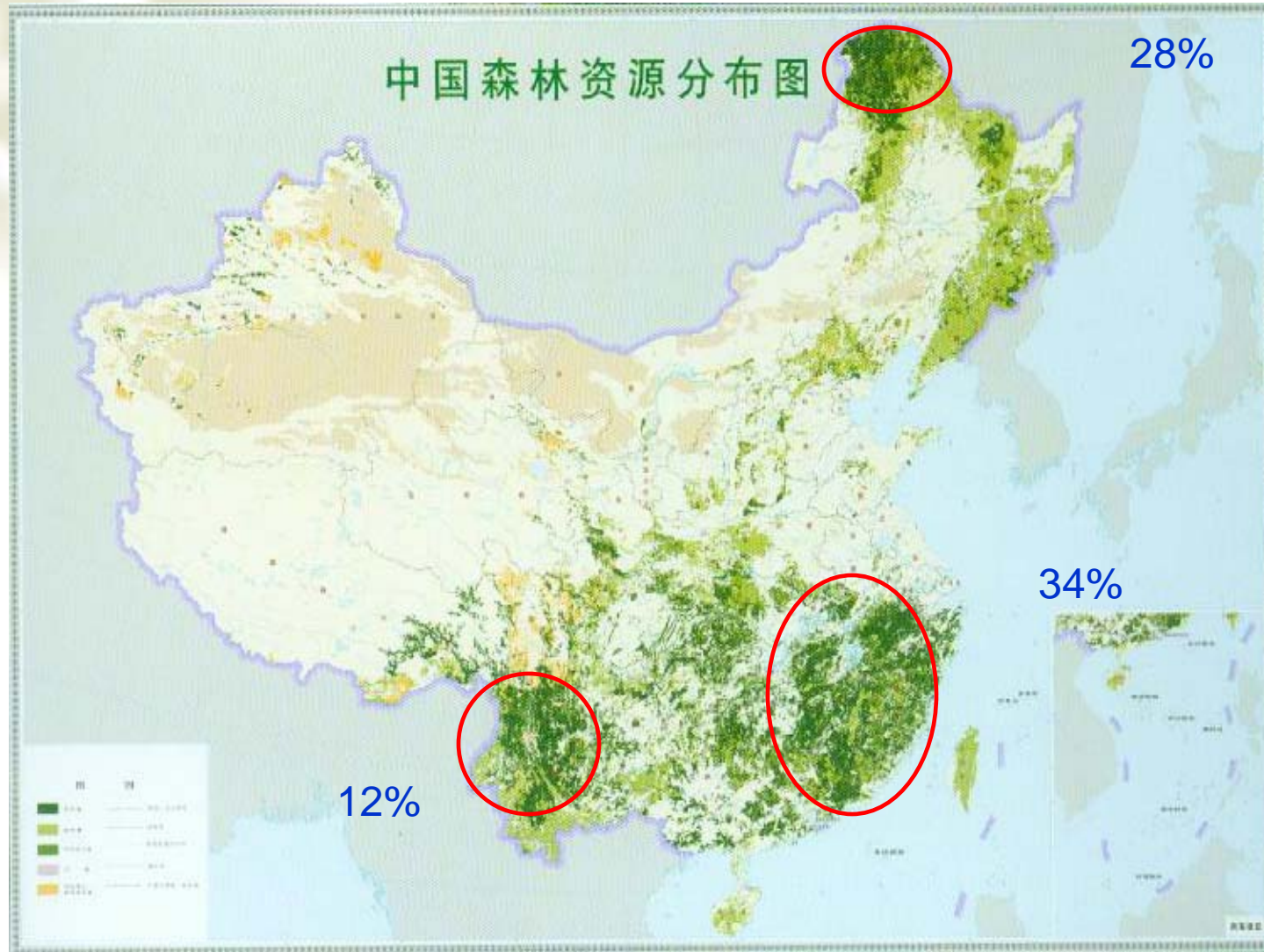
What's your impression of Beijing?

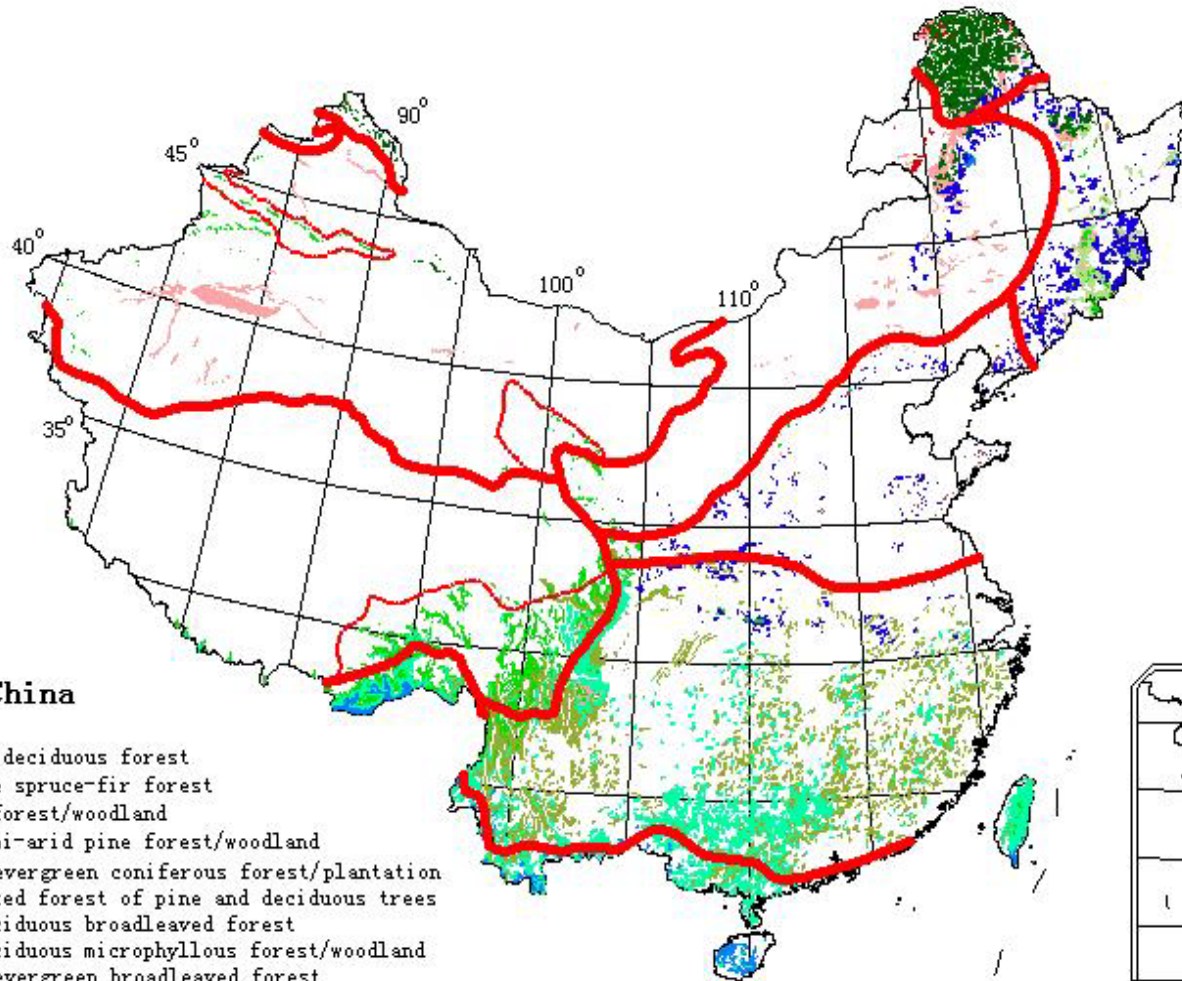
- ❖ Capital of China
- ❖ Tourism resorts & political center
- ❖ Location of 2008 Olympics
- ❖ Metropolis with over 12 million population

Something more

- ❖ Capital of six dynasties in history
- ❖ Traditional Chinese features: Hutong, Siheyuan, Gourmet

Distribution of China Forest

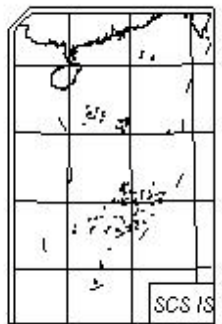




Forests in China

- Boreal Larix deciduous forest
- Boreal/alpine spruce-fir forest
- Boreal pine forest/woodland
- Temperate semi-arid pine forest/woodland
- Subtropical evergreen coniferous forest/plantation
- Temperate mixed forest of pine and deciduous trees
- Temperate deciduous broadleaved forest
- Temperate deciduous microphyllous forest/woodland
- Subtropical evergreen broadleaved forest
- Tropical monsoon rainforest/secondary forest

Borders for Chinese Vegetation Divisions



Forest Facts for China

Forest cover ranks
#130 in the world
Average = 29.6%
US = 33.1%

Forest coverage	18.2%
Forest land area	284.9 million ha
Total Forest Area	174.9 million ha
Forest per capita	0.13 ha
Natural Forest Area	115.8 million ha
Plantation Forest Area	53.3 million ha
Forest Inventory	12.5 billion m ³
Forest inventory per capita	9.4 m ³

US=0.84

What's going on in China's forests?

Reforms over the last 20 years have focused on:

- ❖ Protecting China's natural forests
- ❖ Increasing its domestic wood supply and processing capacity
- ❖ Opening up regulations and markets for forests and forestry

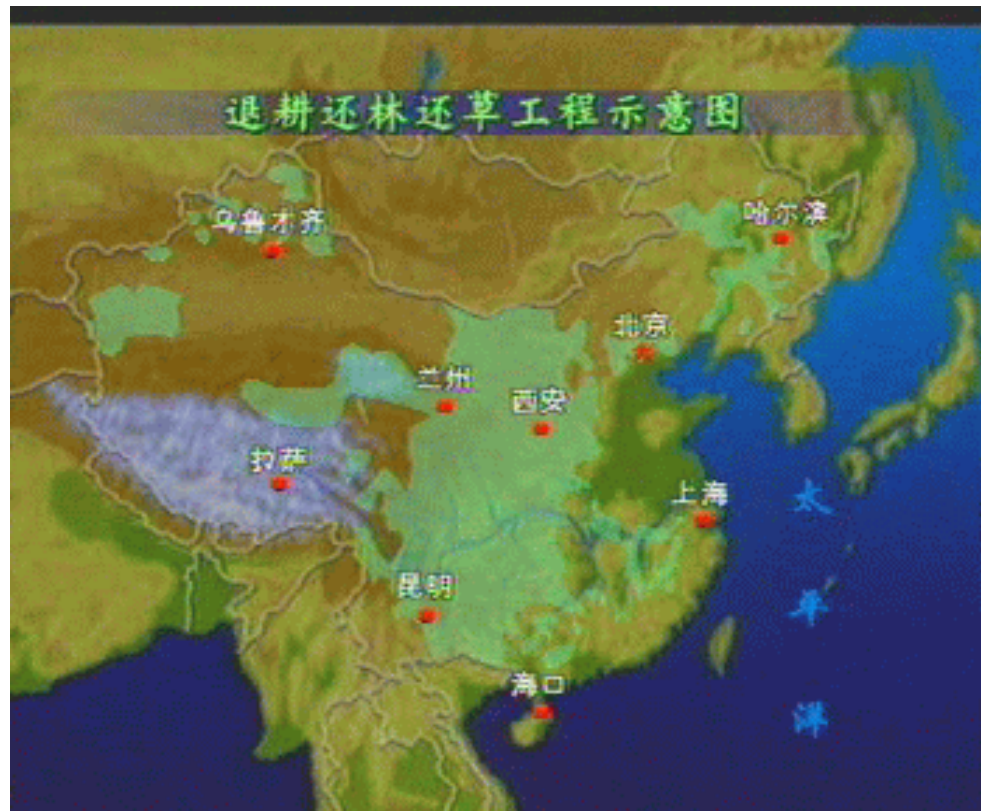
Grain for Green Project

- ❖ Farmland slope > 25 degrees (since 1999)
- ❖ Government provides seedlings for free
- ❖ Trees provide ecological and economic benefits but not timber (e.g. soil stabilization, fruits)
- ❖ Government pays farmers to replace crops with trees

Grain for Green Project



Grain for Green Project



Grain for Green Project

- ❖ Different subsidy standards (grain and cash for seedling)
 - Yangzi watershed 125 Yuan/mu/yr (mu=1/15 ha)
 - Yellow river 75 Yuan/mu/yr
 - Subsidy term depends on the conversion type
- ❖ 24 million ha land converted to forest land
- ❖ Investment =130 billion Yuan by 2006



Grain for Green Project



before



after

Grain for Green Project

- ❖ Environmental improvement
- ❖ Economic benefits
- ❖ Social aspect
 - Employment opportunities
 - Education





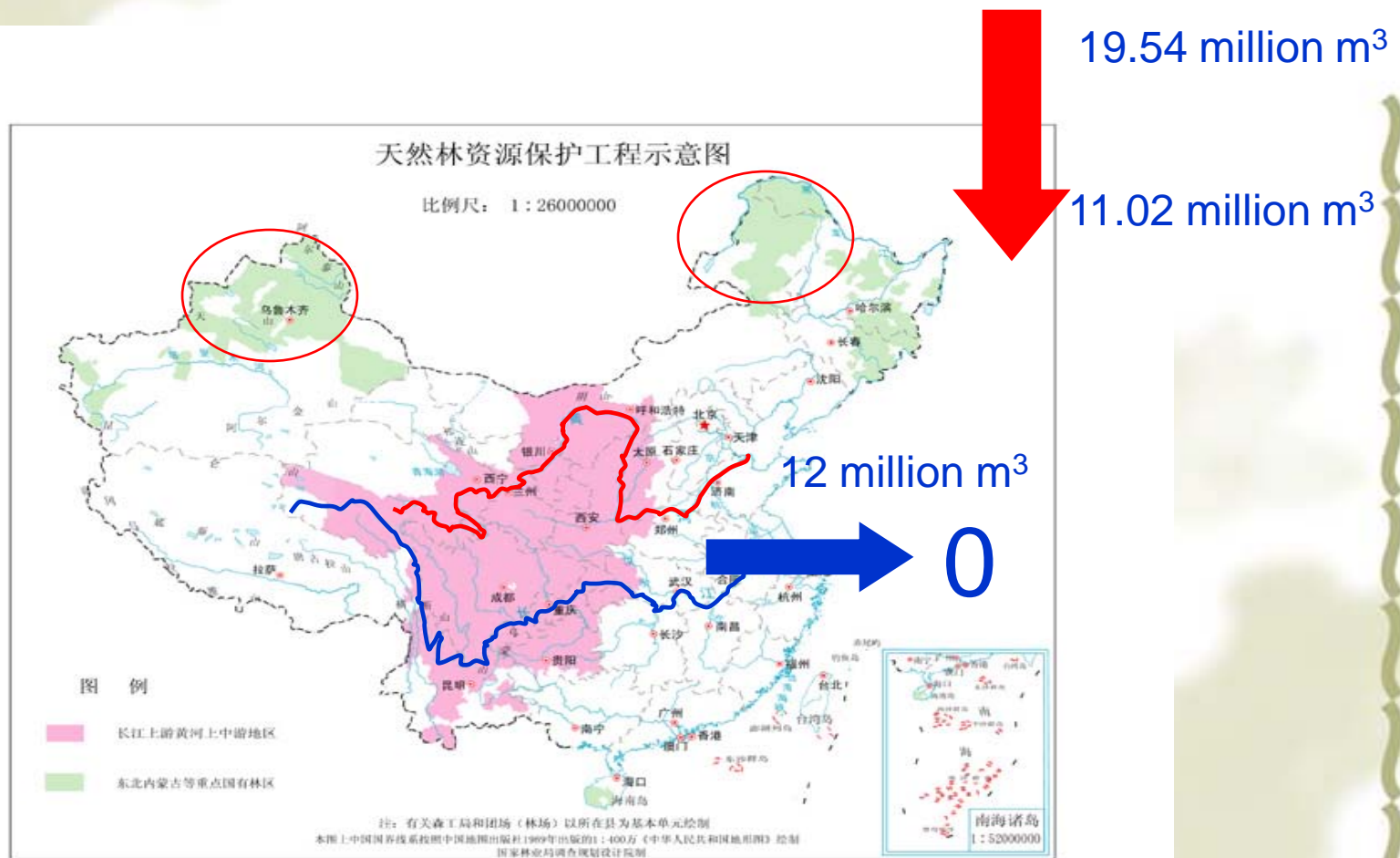
The Question is:

What will farmers do with the
land after subsidies end?

Natural Forest Protection Project

- ❖ Began in 1998
- ❖ It protects natural forestlands, mainly along parts of the Yangzi and Yellow rivers, and northeast ,northwest state-owned forest,

Natural Forest Protection



Natural Forest Protection

- ❖ Effectively removes productive forestland from future harvest
- ❖ Imposes great impacts on domestic wood production
- ❖ 68 million ha forest protected
- ❖ Promotes consciousness of natural forest protection and legal harvest



Forest Land Tenure Reforms

Started in 2003:

- ❖ 70 year leases
- ❖ Not ownership, but transferable user rights
- ❖ Private companies may purchase
- ❖ Encourages investment
- ❖ Promotes forestry productivity



Forest Land Tenure Reforms

- ❖ Similar to the "Household Responsibility System" in 1978
- ❖ The second revolution in rural areas
- ❖ Market economy in forestland

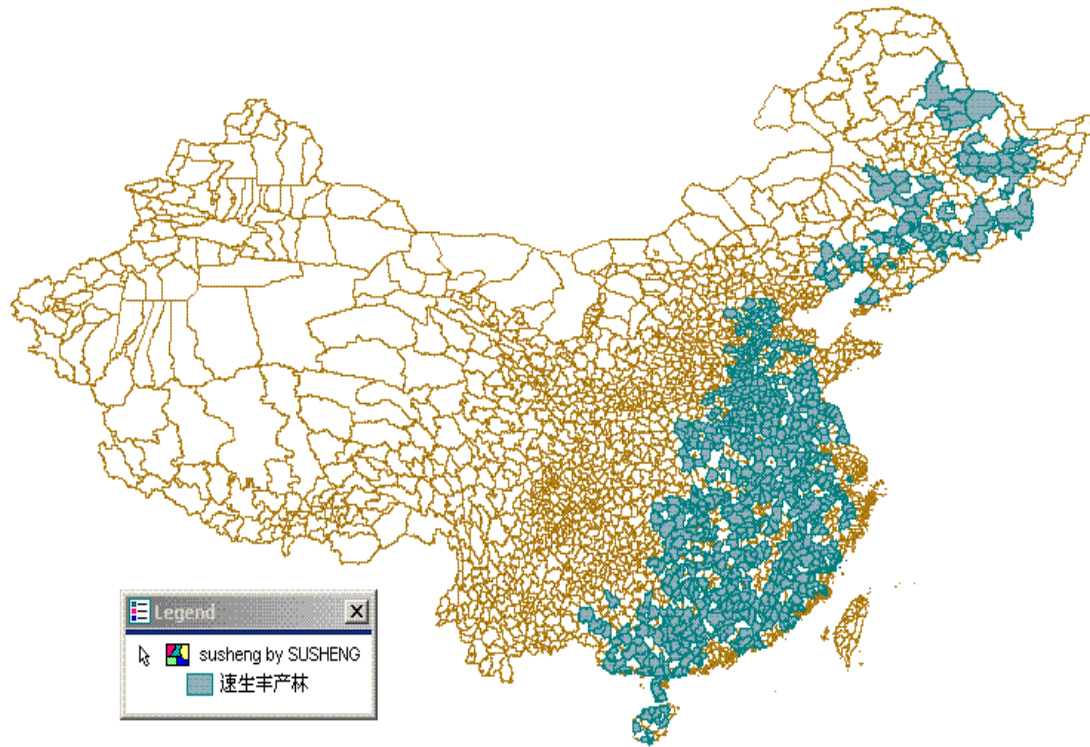


Hope they can keep smiling.

Fast Growth Forest Program

- ❖ Establishes fast-growing plantations to substitute for natural forests in 18 provinces
- ❖ Goal is to build up 13 million ha by 2015 (40% of total consumption)
- ❖ Currently only planted 3.7 million ha (underperforming)

Fast Growth Forest Distribution



Source: China Academy of Forestry

Fast Growth Forest Program

- ❖ Goal is very ambitious and may not be achievable within the time frame
- ❖ Wood shortfall is still severe and thus imports continue to rise

Summary of the programs

- ❖ Grain for Green Project
- ❖ Natural Forest Protection Program
- ❖ Forest Land Tenure Reforms
- ❖ Fast Growth Forest Program

My Research Interests:

Forest Products Market Modeling

- ❖ China is the #1 forest products trading country (in value) in the world since 2005

Smile curve “both ends outside”

- ❖ Largest plywood, furniture and resin exporter
- ❖ Largest roundwood importer

Production

Log production declines post-1998 following harvest bans

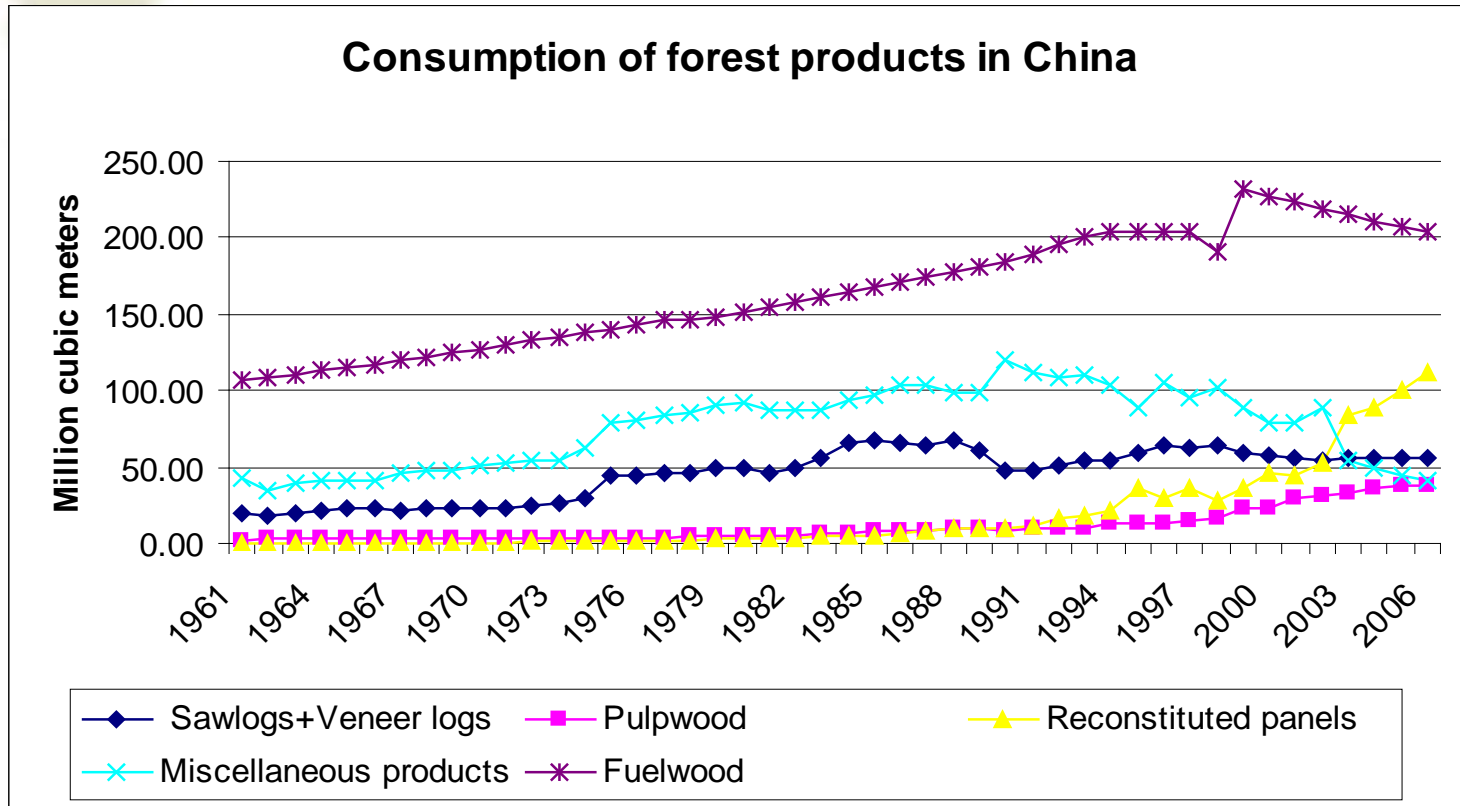


Small scale factories are the majority of producers

Datasource: FAO database

Consumption

Fuelwood: statistical disparity



Datasource: FAO database

Imports



Exports

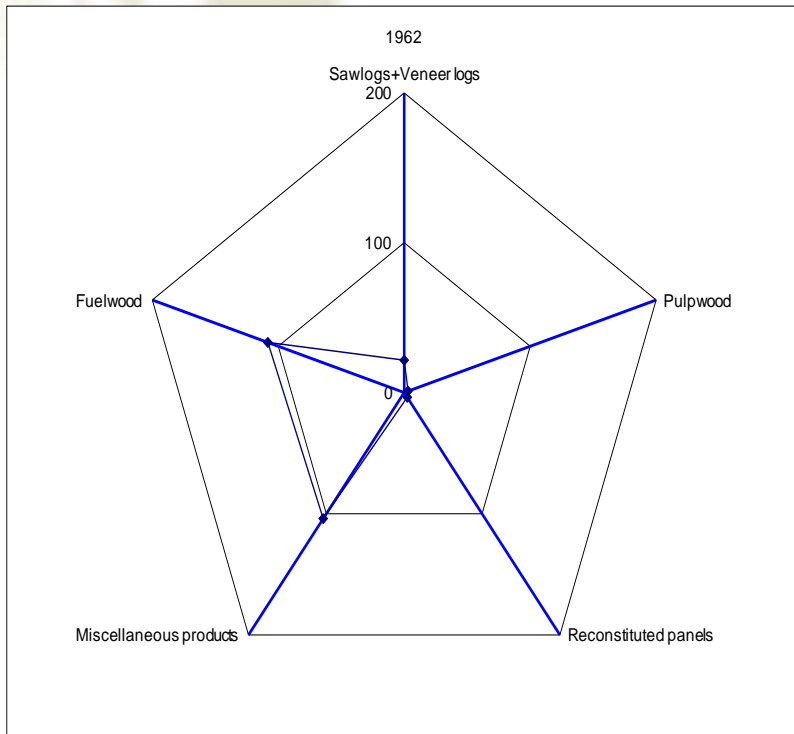
1. Bad debt from the US, fund chain broken for export-oriented companies, several hundred million owed by the US for the furniture industry
2. Bankruptcy of some furniture factories in South China
3. Labor cost rises

Will the rapid
increase continue?

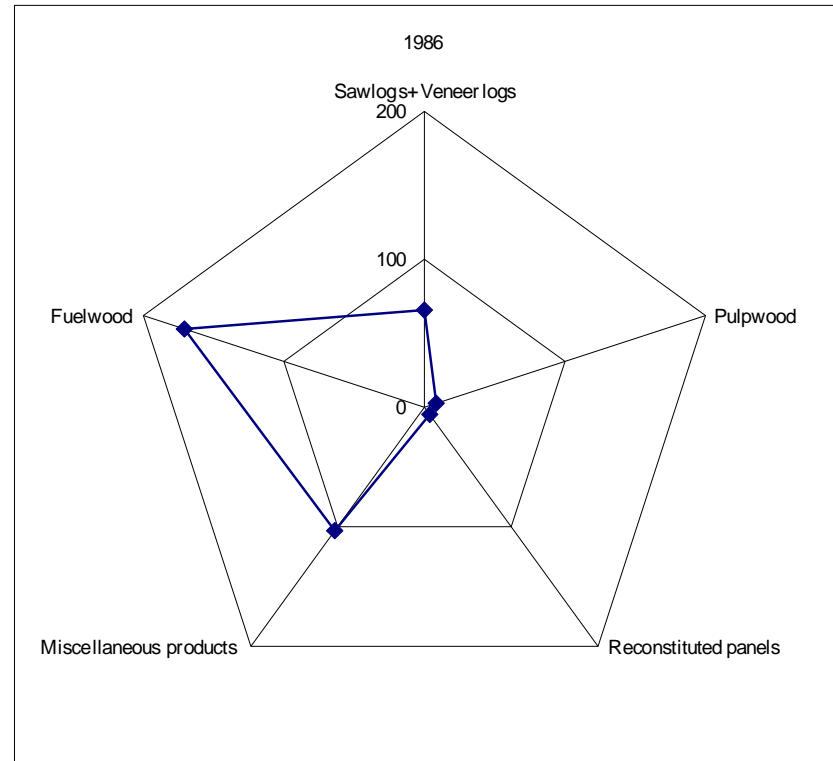
What are the factors affecting timber consumption?

- ❖ Population?
- ❖ Macro-economy (GDP, disposable income)?
- ❖ Industry capacity?
- ❖ Price?
- ❖ Currency exchange rate?
- ❖ Technical change?
- ❖ Something else?

Structure analysis: timber consumption structure

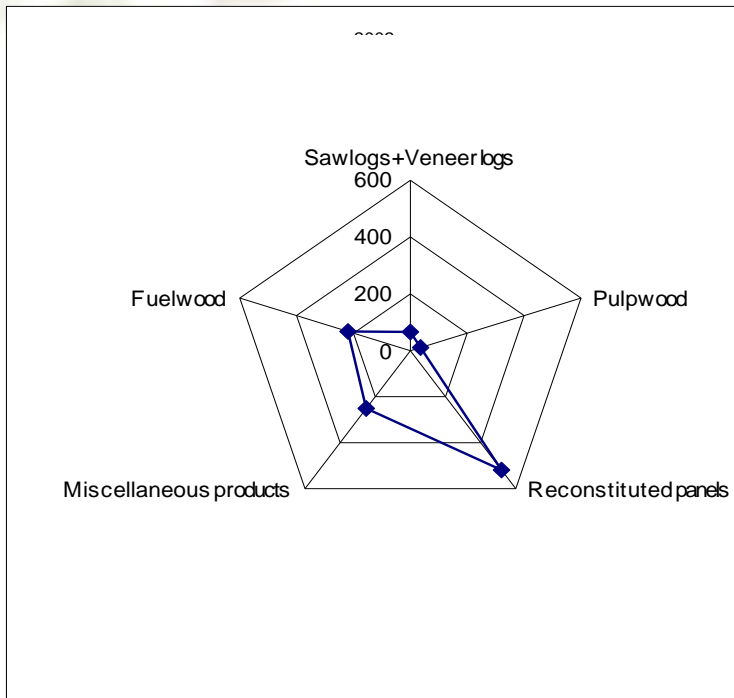


1962

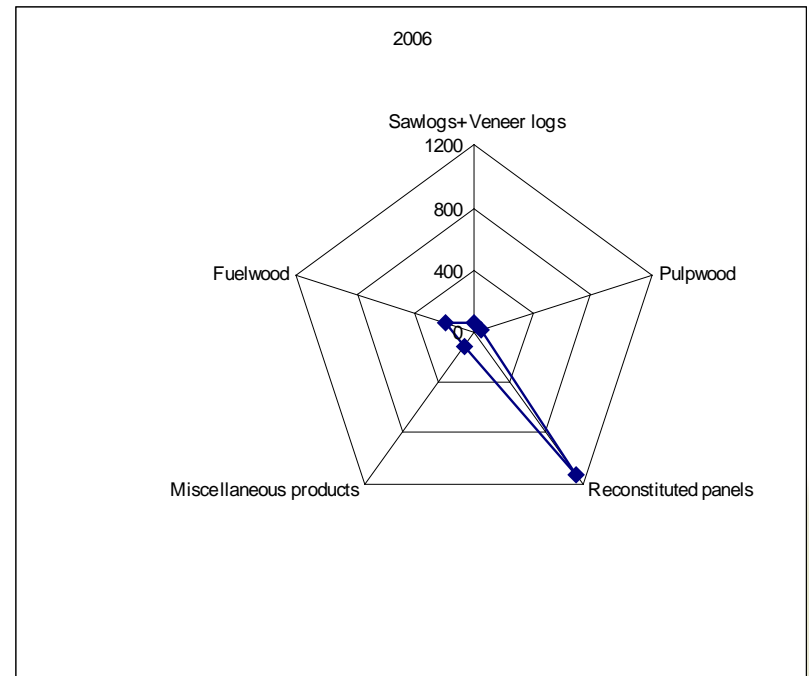


1986

Timber consumption structure



1992



2006

What drives structural change over time?

- ❖ Policy?
- ❖ Environmental consciousness?
- ❖ Price or income?
- ❖ Substitutions?

How do we capture these factors?

Areas of Interest:

What is the future trend for forest products trade in China?

- What will be the trend for plywood, newsprint and some other major products?
- What will be the trade potential between China and its main trade partners, eg US and Russia?
- Who will be the main suppliers for logs to China?
- Who will buy China's forest products (plywood, furniture, coated paper) and at what levels?

Areas of Interests

- Given the economic uncertainty and US slowdown, what impact will this have on Chinese wood industry and trade?
- Will China be able to stay competitive even as its labor costs increase?
- What regulatory policies impact forest products trade with China, from the Chinese side (fees, taxes, harvesting quotas) and the key partner side (tariffs, import quotas, interest rates)?
- How can we measure these impacts and apply them to supply/demand forecasts?

Some findings

- ❖ Factors affecting timber consumption in China
 1. Output value of timber manufacturing industry
 2. Paper and paper board production

China timber consumption is largely concentrated in the timber manufacturing industry.

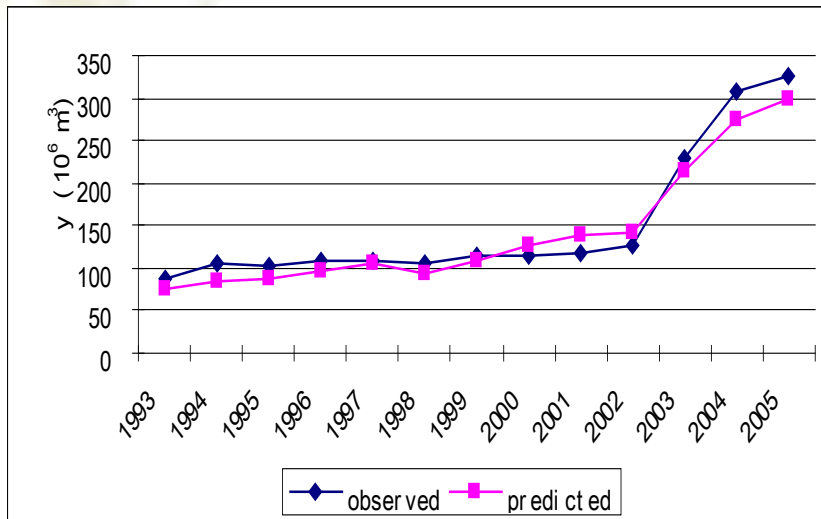
Some findings

- ❖ Factors affecting timber consumption in US
 1. GDP per capita
 2. Population
 3. Single family housing starts

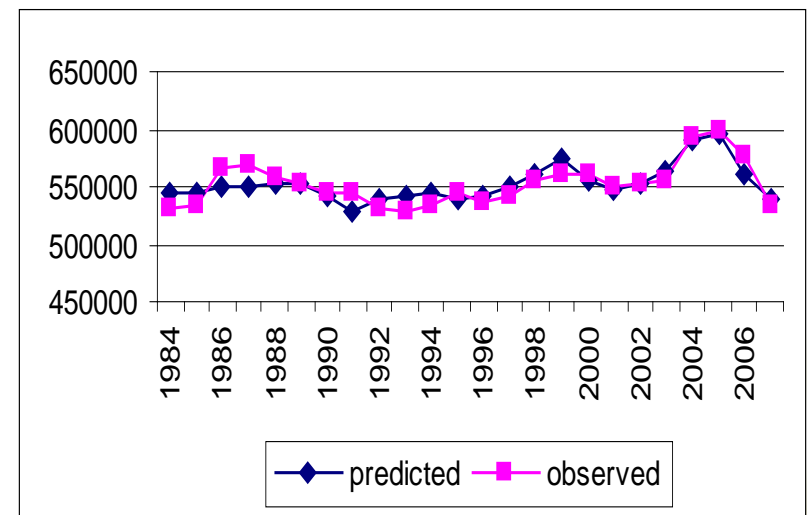
Methods

- ❖ PLS regression of multi-block variables based on the Schmidt transformation (2 steps)
 1. Variable selection
 - ❖ Multiblock variables to group independent variables into different blocks according to physical meanings.
 - ❖ Schmidt transformation to reduce duplicative information between variables
 2. PLS regression
 - ❖ PLS to reduce the collinearity problem between variables selected.

Some findings (fitting chart)



China



US



Thank you !

