The New Structural Economics: The Third Wave of Development Thinking

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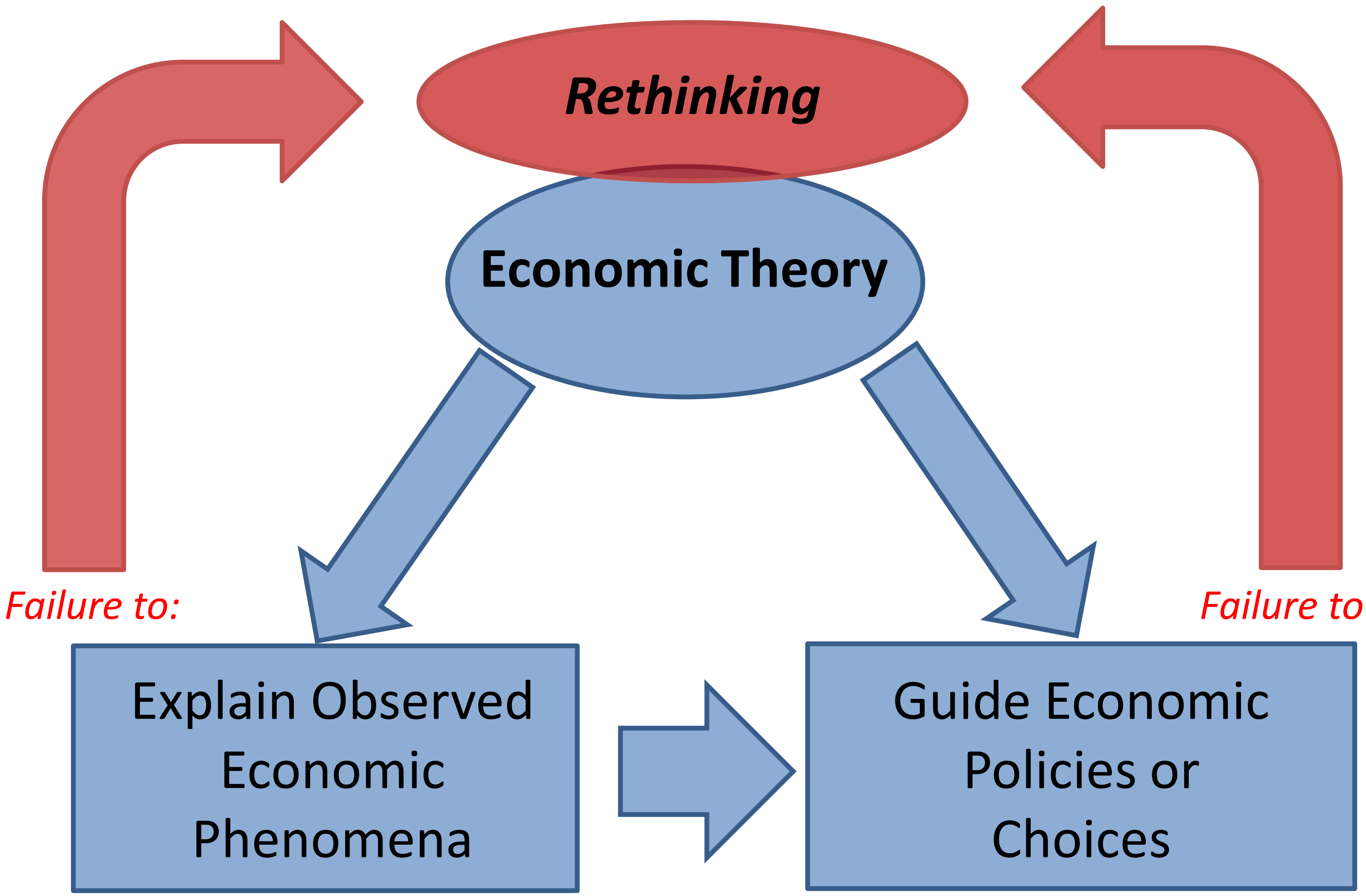
Overview of Presentation

- The Theoretical Foundation of New Structural Economics
  - The need for rethinking development Economics
  - The New Structural Economics
- The application of New Structural Economics
  - The Growth Identification and Facilitation: A new approach to Industrial Policy
- The theoretical insights and areas for further research
  - No one size fits all! Then how do we know what size fits what?
- Concluding remarks

WHY DO WE NEED TO RETHINK DEVELOPMENT ECONOMICS

Why Do We Need Rethinking?



Development theory is in need of rethinking

Successful East Asian Tigers: Export Promotion

China, Vietnam and Mauritius: Dual-track approach to transition

Market based economies with proactive role for government

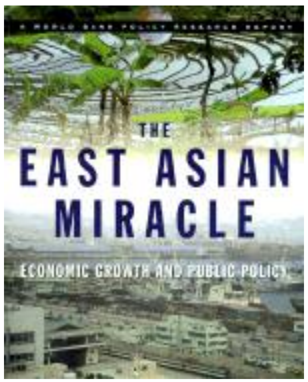
Rethink Development

Development Economics 1.0
Structuralism
Focus on Market Failures:
Import Substitution Strategy
Miserable results

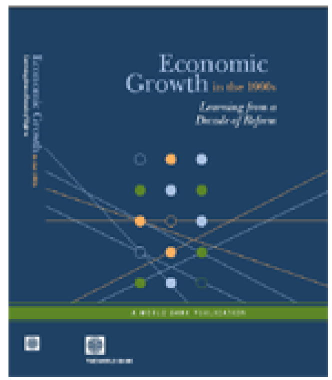
Development Economics 2.0
Washington Consensus
Focus on Government Failures:
Privatization and Marketization
Lost decades

1950 1960 1970 1980 1990 2000 2010

World Bank has been in the Process of Rethinking Economic Development



Export Orientation and Market-Friendly Government



No one-size fits all

(i) Openness;
(ii) Macro stability;
(iii) High rates of saving & investment;
(iv) Market mechanism;
(v) Committed, credible & capable government

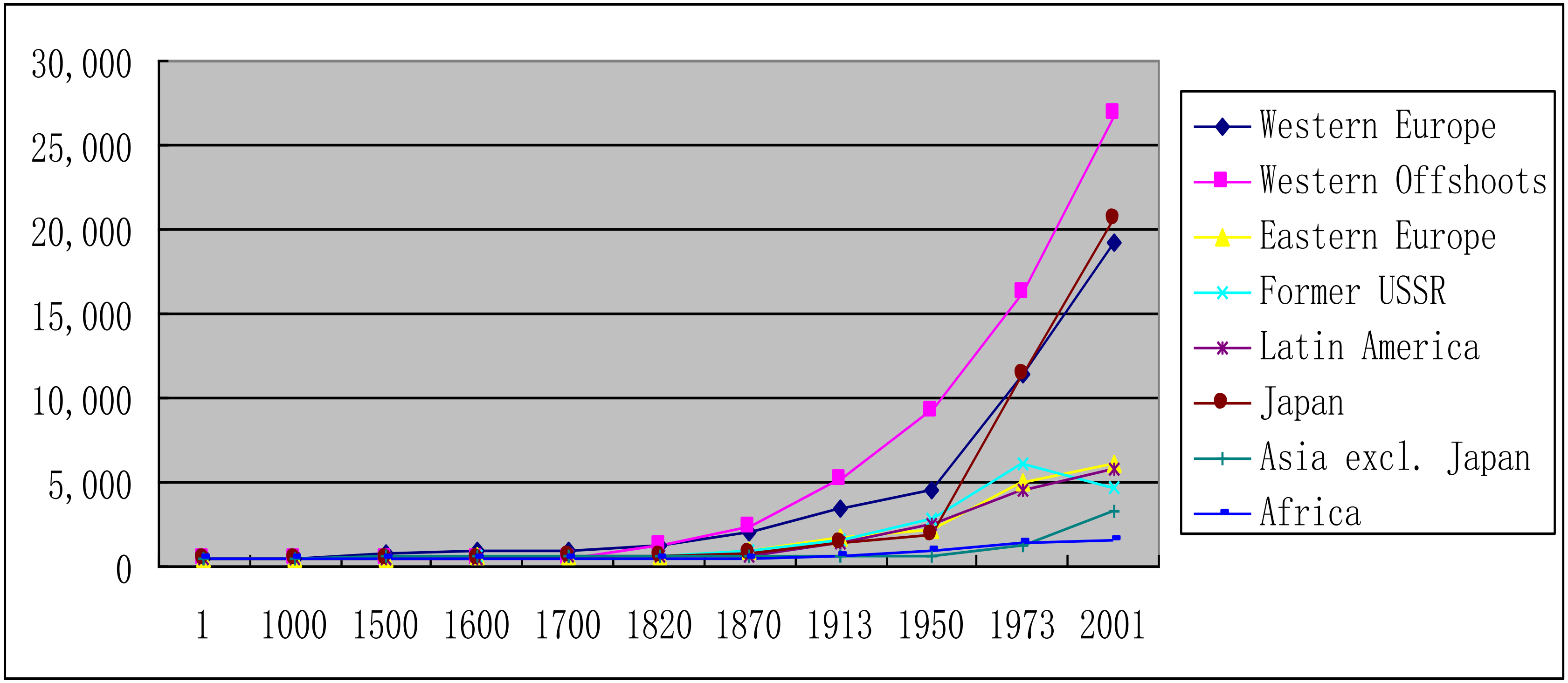
THE NEW STRUCTURAL ECONOMICS

Let’s go back to Adam Smith

- But not to ***The Wealth of Nations***, which reflects findings of Adam Smith’s research
- Let’s go back to Adam Smith’s methodology, that is, ***An Inquiry into the Nature and Causes*** *of the Wealth of Nations*

The Nature of Modern Economics

- The rapid, sustained income growth is a modern phenomenon



- The nature of modern income growth is a process of continuous changes in the structure of technologies, industries, and soft and hard infrastructure of the economy

New Structural Economics

- An application of neoclassical economic approach to study the determinates of **economic structure and its evolution** in development, which is the nature of modern economic growth
- **Why do I call this approach New Structural Economics?**
  - By convention, it should be called structural economics
  - Add “new” to distinguish it from structuralism

What Determines Structure and its Change?

- **The main hypothesis**. Industrial structure is endogenous to endowment structure, which is given at any specific time and changeable over time
  - This is a new angle
  - Most development policies failed because they neglect the endowments and its structure
- **Initial endowments.** Determine the economy's total budgets and relative factor prices at time t.
  - Comparative advantage
  - Optimal industrial structure (endogenous)
- **Dynamics**. Income growth depends on:
  - Upgrading industrial structure
  - Upgrading of endowments
  - Improvements in "hard" and "soft" infrastructure
- The low-income trap and the middle-income trap are both the result of a country's inability to have a dynamic structural change
- *Following comparative advantage (determined by the endowment structure) to develop industries is the best way to upgrade the endowment structure and to sustain industrial upgrading, income growth, and poverty reduction.*

The Market and the State

- Firms maximize profits…choice of technology and industries based on relative factor prices…

→ ***Need for a competitive market system***

- Industrial upgrading and diversification needs to:
  - Address externalities
  - Solve coordination problems

→ ***Need for a facilitating state***

NSE and The Growth Commission's Stylized Facts

Growth Report Stylized Facts:

- Policy Recommendation from NSE
  - Following comparative advantage : Conditions
    - Market economy #4
    - Facilitating State #5
- The results:
  - Openness and advantage of backwardness #1
  - Competitiveness and strong external as well as fiscal accounts: fewer home-grown crises and larger scope for countercyclical fiscal policies. #2
  - Large economic surplus and high returns to investment: high rate of savings and investment. #3
- The NSE's recommendations are consistent with the *East Asian Miracle's* findings.

NSE and the Failure of Structuralism

- Structuralism advised governments to develop industries that were **too far advanced** compared to their countries' level of development and went **against their comparative advantages**.
- The **firms were non-viable in competitive markets** and required government policy support for their initial investment and continuous operation.
- This led to **rent-seeking, corruption, and political capture**.

Country	Industry	Time	Main producer at Time	Real GDP pc Latecomer Country	Real GDP pc Leading Country	Income Ratio Follower versus Leader
China	Automobile	1950s	USA	577	10,897	5%
DRC	Automobile	1970s	USA	761	16,284	5%
Egypt	Iron, Steel, Chemicals	1950s	USA	885	10,897	8%
India	Automobile	1950s	USA	676	10,897	6%
Indonesia	Ships	1960s	Netherlands	983	9,798	10%
Senegal	Trucks	1960s	USA	1,511	13,419	11%
Turkey	Automobile	1950s	USA	2,093	10,897	19%
Zambia	Automobile	1970s	USA	1,041	16,284	6%

Source: Author's calculations based on data from Maddison (1995).

NSE and the Failure of the Washington Consensus

- All transitional economies started with many nonviable firms in their old priority sectors due to their **comparative advantage-defying development strategy**.
- The Washington Consensus **failed to recognize that the distortions were endogenous** when advocating for the protection of nonviable firms in the priority sectors and advised the government to eliminate all distortions immediately, which caused **the collapse of old priority sectors**.
- The Washington Consensus also **opposed that government play a proactive role in facilitating firm entry** into sectors consistent with the country's comparative advantages.
- The dynamically growing transitional economies adopted **a dual-track approach**:
  - The government continued to provide transitional support to nonviable firms in the old priority sectors and removed distortions only when firms in those sectors became viable or the sectors become very small.
  - The government facilitated private firms' entry to sectors that were consistent with the country's comparative advantage, which were repressed before the transition.

THE APPLICATION OF NEW STRUCTURAL ECONOMICS

Industrial Upgrading, State Facilitation and Industrial Policy

- A facilitating state is essential for rapid technological innovation, industrial upgrading, and economic diversification in a market economy because of the need to:
  - Address externalities
  - Solve coordination problems
- Industrial policy is a useful instrument for a facilitating state.
  - Contents of coordination may be different, depending on industries.
  - The government's resources and capacity are limited. The government needs to use them strategically.

Comparative Advantage Defying and the Failure of Industrial Policy

The sad fact is that almost all governments in the world attempted to use industrial policies to play the facilitating role, but most

The reason is that their governments targeted industries that went against their comparative advantages.

- The firms in the industrial policy's targeted sectors were **non-viable** in the competitive market.
- To support its initial investment and to ensure the firms' continuous operation, governments supported the non-viable firms through all kinds of subsidies and protections.
- Those measures led to a lack of competition and increased rent-seeking.
- As a result, the attempts to pick winners ended up picking losers.

Latent Comparative Advantage and Picking Winners

- For an industrial policy to be successful, it should target sectors that conform to the economy's latent comparative advantage:
  - The latent comparative advantage refer to an industry that the economy has low factor costs of production but the transaction costs are too high to be competitive in domestic and international markets
  - Firms will be viable and the sectors will be competitive once the government helps the firms overcome coordination and externality issues to reduce the risk and transaction costs.
- But how can the government pick the sectors that are in line with the economy's latent comparative advantages?

What Can Be Learned From History?

- Historical experience shows that successful countries' industrial policies, in general, targeted industries in countries with a similar endowment structure and somewhat higher per capita income:
  - Britain targeted the Netherlands' industries in the 16^{th} and 17^{th} centuries; its per capita GDP was about 70% of the Netherlands'.
  - Germany, France, and the USA targeted Britain's industries in the late 19^{th} century; their per capita incomes were about 60% to 75% of Britain's.
  - In Meiji restoration, Japan targeted Prussia's industries; its per capita GDP was about 40% of Prussia's. In the 1960s, Japan targeted the USA's industries; its per capita GDP was about 40% of the USA's.
  - In the 1960s-80s, Korea, Taiwan, Hong Kong, and Singapore targeted Japan's industries; their per capita incomes were about 30% of Japan's.
  - In the 1970s, Mauritius targeted Hong Kong's textile and garment industries; its per capita income was about 50% of Hong Kong's.
  - In the 1980s, Ireland targeted information, electronic, chemical and pharmaceutical industries in the USA; its per capita income was about 45% of the USA's.
  - In the 1990s, Costa Rica targeted the memory chip packaging and testing industry; its per capita GDP was about 40% of Taiwan's, which was the main economy in this sector.
- Unsuccessful industrial policies, in general, targeted industries in countries where their per capita GDPs were less than 20% of the targeted countries

Why target industries in dynamic countries with a similar endowment structure and somewhat higher income?

- Industrial upgrading is based on changes in comparative advantages due to changes in endowment structure.
- Countries that have a similar endowment structure should have similar comparative advantages.
- A dynamically-growing country's industrial development should be consistent with changes in the country's comparative advantages. Some of its industries will lose comparative advantage as the country grows and its endowment structure upgrades. Those industries will become the latent comparative advantage of the latecomers.
- For countries with a similar endowment structure, the forerunners' successful and dynamic industrial development provides a blueprint for the latecomers.

The existing tools and their drawbacks

- Business and Investment environment
  - The idea is based on Washington Consensus and its goal is to introduce a whole set of the first-best institutions
  - The issues are:
    - The government may not have the capacity to introduce all those changes
    - The first-best institutions may be different at different stage of development
    - No identification of industries with latent comparative advantages and no compensation for the first movers
- Growth Diagnostics
  - It focuses on binding constraints instead of the whole set of first best institutions
  - It relies on survey of existing firms. Many of them may be in industries where the country has no comparative advantages.
  - No firms will be in the new industries that the countries have latent comparative advantage
- Product Space
  - The idea is based on the fact that firms in existing sectors own tacit knowledge that is helpful for successful upgrading/diversification to nearby sectors in the product space
  - The existing sectors may be wrong sectors due to the wrong interventions in the past.
  - Some sectors that the country has latent comparative advantage may be totally new to the country and the tacit knowledge can be brought in with FDIs
- Randomized Control Trials
  - Searching for ingredients instead of a recipe

Growth Identification and Facilitation

Step 1

Find fast **growing countries** with similar endowment structures and with about 100% higher per capita income. **Identify dynamically growing, tradable industries** that have performed well in those countries over the last 20 years.

Avoid the government doing the wrong things or being captured by vested groups for rent seeking

Incorporate the idea of tacit knowledge

Step 2

See if some **private domestic firms** are already in those industries (existing or nascent). Identify constraints to quality upgrading or further firm entry. Take action to remove constraints

Growth Identification and Facilitation

Step 3

In industries where no domestic firms are currently present, **seek FDI** from countries examined in step 1, or **organize new firm incubation programs**.

Import or cultivate tacit knowledge

Benefit from opportunities arising from new technologies

Step 4

In addition to the industries identified in step 1, the government should also pay attention to **spontaneous self discovery** by private enterprises and give support to **scale up successful private innovations** in new industries.

Growth Identification and Facilitation

Play the coordination function in a pragmatic way

Step 5

In countries with poor infrastructure and bad business environments, **special economic zones or industrial parks** may be used to overcome barriers to firm entry, attract FDI, and encourage industrial clusters.

Address the externality issue

Step 6

The government may **compensate pioneer firms** identified above with:

- Tax incentives for a limited period
- Direct credits for investments
- Access to foreign exchange

NEW THEORETICAL INSIGHTS AND AREAS FOR FURTHER RESEARCH

New theoretical insights:
No one size fits all then what size fits what?

- Optimal Financial Structure
  - will vary across stages of development, due to different optimal industrial structures, firm sizes, capital requirements and nature of risks.
- Human capital Investment
  - Due to the same arguments as in optimal financial structure, the human capital requirement will differ across stages of development
  - Without dynamic growth, the return to human capital investment will be low.
  - Human capital investment takes a long gestation and has a lower costs at young. In a dynamic growing economy, the human capital investment should precede the industrial upgrading.
- Openness: good or bad?
  - Openness is a precondition for following the comparative advantages in development
  - In the transition from an import-substitution regime to a comparative-advantage following regime, some protections to old priority sectors would be desirable
- International Capital Flow
  - Foreign direct investments are more likely to be beneficial to developing countries
  - Portfolio flows are more likely to be harmful to developing countries
- Beyond Keynesianism
  - Ricardian equivalence holds unless fiscal stimulus finances productivity enhancing investment
  - In HICs, these investment opportunities are scarce, but they are more abundant in LICs/MICs
- Liquidity trap
  - Likely to happen in developed countries during the recession
  - Unlikely to happen in developing countries due to the possibility for industrial upgrading

Two additional points

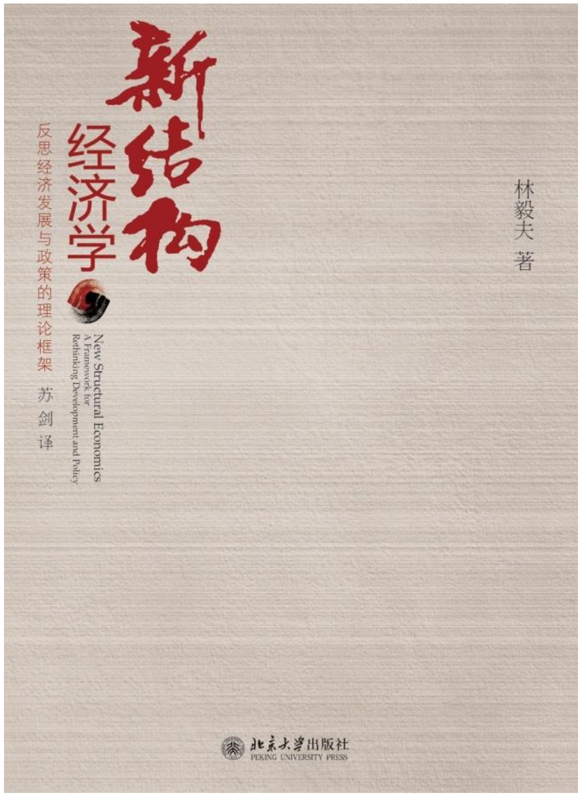
- Agricultural development is crucial for developing countries:
  - For poverty reduction, and
  - For providing capital and a market for industrial products.
  - Agricultural development also requires structural change in technology and product composition
- A resource-abundant country’s resources will be a blessing if:
  - It has a good management of resources. (E.g., some of it must be saved for future generations, and enclave rent capture avoided.)
  - It uses (part of) the wealth generated from resources to facilitate structural transformation.

Areas for Further Research

- Theoretical modeling
- Empirical testing

Concluding Remarks

- The New Structural Economics is a gold mine for research
- The New Structural Economics can provide hopes and helps to developing countries
  - Every developing country has the potential to grow dynamically for decades, and to become a middle-income or even a high-income country in one or two generations, as long as the government has the right industrial policy to facilitate the development of the private sector along the line of the country's comparative advantages and tap into the latecomer advantages.
  - For the government's industrial policy to achieve that desirable result, a change in development thinking is necessary:
    - In the past the development thinking used the advanced countries as references and advised the developing countries to develop what the advanced countries had but they did not have (modern large scale capital-intensive industries in the structuralism) or to do what the advanced countries could do relative well but the developing countries could not (business environment and governance in neoliberal Washington Consensus).
    - A third wave of new development thinking, the New Structural Economics, advises the developing countries to scale up what they could do well (their comparative advantages) based on what they have now (their endowments)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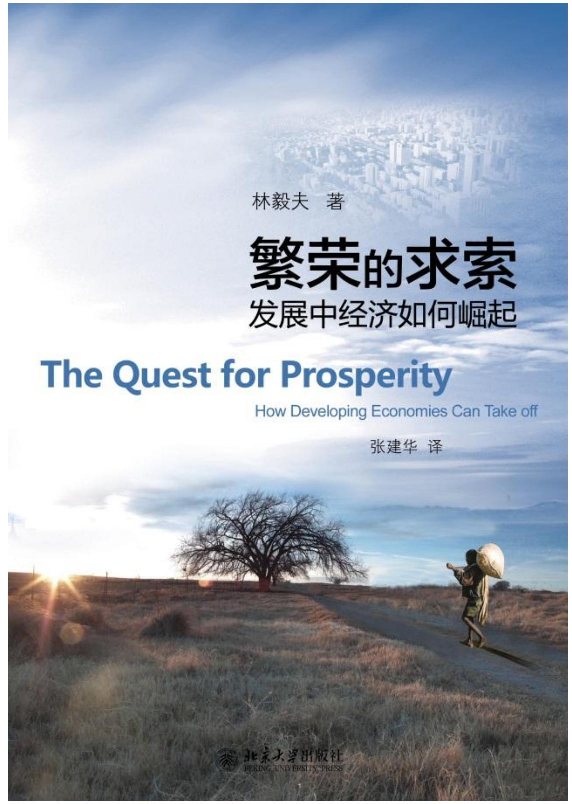
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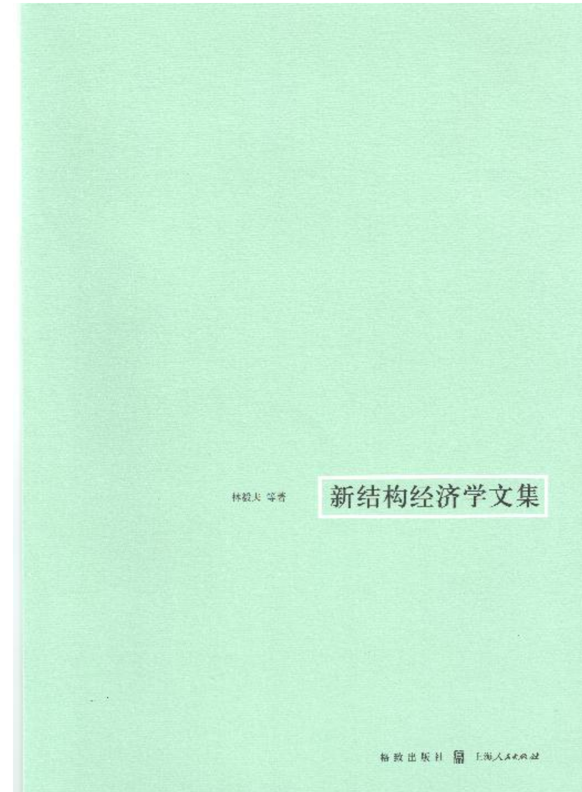
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