Higher Education Stratification in China

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Outline

- Existing analytical frameworks
- Federal system of higher education in China
- Empirical evidence of stratification
- Conclusion

Summary of whole presentation in two charts
Central-local government relation

Central & local governments’ provision of higher education

Higher education stratification at domestic & institution level

Asymmetric institution pattern

Pro-stratification policies
Part I: Existing analytical framework
Marginson revisit

  - Economic demand is NOT sufficient to explain the overall expansion
  - High participation will come along with stratification
    - Globalization fosters WCUs, while exacerbating stratification within national systems
    - Globalization also exacerbates stratification between systems as only some nations can support WCUs
    - *Bifurcated systems*—rising elite WCUs coupled with mass institutions in throes of a worsening crisis of quality
Marginson revisit

• Marginson (2013) “Universal Higher Education in the Global Era”
  – Marketization and especially competition manage unequal outcomes and legitimate stratification between institutions
  – Marketization facilitates state retreat from direct economic responsibility for social outcomes
  – Marketization places downward pressure on public good functions
Implication of Marginson’s work

• Three levels of stratification
  – Global level
    • Competition of global research universities (Altbach, 2009; Brendan Cantwell & Barrett J. Taylor, 2013; Marginson, 2010)
  – Domestic level
    • Institution hierarchy (Cantwell & Taylor, 2013)
    • Bifurcated system: Research-intensive vs. mass higher education institution (Marginson, 2013)
  – Institution level
    • R&D vs. humanities (Barrett J. Taylor, Brendan Cantwell, Sheila Slaughter, 2013)

Inter-institutional stratification is a hierarchical differentiation among universities both globally and nationally (Cantwell & Taylor, 2013)
Extension of Marginson’s work

- Driving forces of stratification

- **Globalization and ranking** (Marginson, 2013; Altbach, 2009)

- **Academic capitalism and marketization of higher education** (Cantwell & Taylor, 2013; Taylor, Cantwell, Slaughter, 2013; Slaughter & Cantwell, 2012; Slaughter & Rhoades, 2004)
Extension of Marginson’s work

**Puzzle:** Extent of and mechanisms of stratification (structural, financial, regulatory, etc.) vary by country (Marginson, 2013)

- **Question**
  - Why do different countries respond differently?
- **The missing link in existing discussion**
  - Federal system of higher education as a driving force of stratification
Extension of Marginson’s work

- To understand stratification within a national system, one must consider three levels of stratification and their respective driving forces

<table>
<thead>
<tr>
<th>Level</th>
<th>Globalization &amp; Ranking</th>
<th>Academic capitalism and marketization of HE</th>
<th>Federal system of higher education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global level</td>
<td>YES</td>
<td>MAYBE</td>
<td>MAYBE</td>
</tr>
<tr>
<td>Domestic level</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Institution level</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>
Part II: Federal system of higher education in China
Central-local government relation

• Purpose
  – Understand how multi-level government provides public goods
  – Understand how the institutional pattern affects the provision of public goods by national and sub-national government
  – Explore the role of central and local government in higher education
How multi-level government provides public goods?

<table>
<thead>
<tr>
<th>Nature of public goods</th>
<th>National</th>
<th>local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beneficiary</td>
<td>National</td>
<td>local</td>
</tr>
<tr>
<td>National (national defense)</td>
<td>Shared responsibility (compulsory education)</td>
<td></td>
</tr>
<tr>
<td>local</td>
<td>Shared responsibility (vocational secondary education)</td>
<td>local government (community hospital)</td>
</tr>
</tbody>
</table>
How multi-level government provides public goods?

• To adequately, equally and effectively provide public goods to citizens, multi-level government must
  – Vertical decentralization: share duty and finance between national and sub-national government
  – Horizontal decentralization: share duty and finance among different line ministries within central government
How multi-level government provides public goods?

• Division of duty and fiscal responsibility is a critical part of multi-level governance structure

• Institutional pattern describes the way in which duty and fiscal responsibility are divided between national and sub-national government (Wei, 2015)
Institutional Pattern

- Division of duty
- Responsibility of sub-national government
- Match between duty and rights to fiscal gains
- Relation between rights to fiscal gains and division of rights to fiscal legislation
Highly consistent, duty and legal supervision belong to the same government

Sub-national government enjoys relatively large budgetary autonomy; having more independent duties

High level of match between duty and rights to fiscal gains

Well adaption between rights to fiscal gains and division of rights to fiscal legislation

Symmetric Institutional Pattern

Eg. U.S., Canada
Asymmetric Institutional Pattern

Eg. Germany, Japan

- less consistent, duty and legal supervision belong to different levels of government
- limitations for sub-national government's budgetary autonomy; large-scale inter-governmental transfer
- Low level of match between duty and rights to fiscal gains
- Maladaptation between rights to fiscal gains and division of rights to fiscal legislation; centralized
China: a variation of asymmetric model

• Constitutional structure and government levels
  • Five levels of government: central, province, prefectural, county, township

• Division of duty and fiscal responsibility
  – Without a constitution base for central-local relation
    • While other countries listed the division of duty and budget in their constitutions
    • In China only the “Common Principle” (1954) had a clear division of duty and fiscal responsibility between central and provincial government, subsequent constitutions and their amendments overlooked it
    • Budget Act of 1994 separated rights to budget between central and provincial government; granted other fiscal rights to the State Council
China: a variation of asymmetric model

• Division of duty and fiscal responsibility
  – Without constitution base for central-local relation
    • Solution: “Decentralization Chinese Style”
      – “Franchise model”
        » Central government decentralized certain duty and responsibility for fiscal expenditure to sub-national government, instead of adjusting the rights to fiscal gains among multiple levels of government
        – Local governments have no rights to fiscal legislation, so they have to find loopholes to generate revenue, such as off-budget revenue
China: a variation of asymmetric model

– Solution: “Decentralization Chinese Style”

• Not positioning as Symmetric or Asymmetric country, but having certain characters of asymmetric system
  – Established a “Tax Sharing Regime” since 1994
    » Set guidelines for division of duty and responsibility for fiscal expenditure between central and provincial government
      • Central is responsible for national security, foreign affairs, regional redistribution and etc.; provincial provide funding for regional development and service
    » Divide income between central and regional government
      • Separate tax levy rights between central and provincial government, and define shared taxes
    » Create tax returns and intergovernmental transfer regime
  – Established Income Tax Sharing regime in 2002
    » Creating revenue base for intergovernmental transfer program for fiscal equalization
China: a variation of asymmetric model

– Solution: “Decentralization Chinese Style”

• Not positioning as Symmetric or Asymmetric country, but having certain characters of asymmetric system
  – Reinforce the fiscal capacity for central government and vertical imbalance
    » Central government income share was 49.6% in 2013, central government expenditure for own level was 14.6%, so vertical fiscal imbalance rate is 32% (the rate was 28% for Germany and 20% for Japan, 13% for US and 7% for Canada)
– Emergence of strong intergovernmental transfer program
  » Share of central’s transfer as % of local’s fiscal expenditure is increasing, ranging from 40-50%
  » Similar to Germany (43.8%) and Japan (37.2%), which was 29.6% for US and 19.8% for Canada
China: a variation of asymmetric model
--Central vs. local fiscal capacity

Central's share in general budget income
Local's share in general budget income
China: a variation of asymmetric model
--Central vs. local fiscal capacity

- Central's share in general budget expenditure
- Local's share in general budget expenditure

China: a variation of asymmetric model

--Central income vs. expenditure

Central's share in general budget income

Central's share in general budget expenditure
China: a variation of asymmetric model
--Local income vs. expenditure

Local's share in general budget income
Local's share in general budget expenditure
How does the INSTITUTIONAL PATTERN of multi-level governance affects the provision of higher education by national and sub-national government and higher education stratification?

- Multi-level governance
- Central & local provision of higher education
- Higher education stratification
Analytical Framework

Central government incentive & capacity

Intergovernmental transfer program

Perception of HE as public goods

Local government incentive & capacity

Role of Ministry of Education
How does institution pattern shape HE provision?

• Perception of higher education as public goods
  – Higher education becomes localized public goods, its provision and finance are largely controlled by local governments
    • Provincial governments support public 4-year institutions
    • Provincial, prefectural, some county government support public 3-year institutions
  – However, MOE affiliated institutions become club goods, enjoyed by students from high SES background, which are paid by public tax money and supported by MOE
How does institution pattern shape HE provision?

• Intergovermental transfer increases overtime, which may distort incentive and capacity of local government to provide higher education
  – General grant
  – Categorical grant
  – Block grant
How does institution pattern shape HE provision?

- Decreasing the “wealth neutrality” in higher education finance, which implies developed regions wish and could afford to provide more access to tertiary education.

How does institution pattern shape HE provision?

- Local higher education development reflects the taste and capacity of local government

» Privation vocational colleges across region (2013)
How does institution pattern shape HE provision?

• Relative position of Ministry of Education increases and it forms a political coalition lobbying for higher education—realization of commanding heights in higher education (Wang Rong’s presentation)
  – Horizontal decentralization from state council to line ministries
  – Existence of shared duties between central and local government, coordinated by MOE
  – MOE as agency with self-interest: function as technical and political institutions
How does institution pattern shape HE provision?

• Higher education stratification is strengthened, which leads to inequality among HEIs and inequality in higher education development among regions
  – Prioritizing the position of MOE affiliated institutions and research intensive universities
  – local institutions pursue comprehensive strategies
  – Vocational higher education institutions are marginalized
• What is the current division of duties and fiscal responsibility for higher education provision between central and local government?
Central-local relation in higher education

• Regulatory
  – Content
    • Setting the vision and goals for the HE system
    • Setting HE policies and objectives
    • Agreeing on the size and shape of the system
    • Assessing the quality of Teaching and Research
  – MOE is in charge of setting national regulation for both national (MOE affiliated, research-intensive universities) and local (provincial and local) institutions
  – Provincial governments are responsible for regulating provincial institutions
Central-region relation in higher education

• Provision
  – Content
    • Licensing new institutions (public and private)
    • Agreeing on universities’ strategic plans
    • Support with governance and management
  – MOE is in charge of licensing all new 4-year institutions; but in terms of agreeing on universities’ strategic plans and support with governance and management, only for MOE affiliated institutions
  – Provincial governments grant license for local 3-year vocational colleges; but in terms of agreeing on universities’ strategic plans and support with governance and management, only for province-affiliated institutions
Central-region relation in higher education

• Finance
  – Content
    • Allocating resources (operational budget)
    • Allocating resources for special programs
    • Monitoring university performance and auditing
  – MOE is in charge of allocating operation budget for MOE affiliated institutions, but inter-governmental transfers from central to local institutions and monitoring performance of all institutions
  – Provincial governments allocates operation budget for province affiliated institutions, but inter-governmental transfers from provincial to local institutions and monitoring performance of local institutions
<table>
<thead>
<tr>
<th>Key Functions</th>
<th>Central Government</th>
<th>Provincial Government</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ministry of Education</td>
<td>Other Ministries</td>
</tr>
<tr>
<td>Regulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting the vision and goals for the HE system</td>
<td>For nation</td>
<td>For province</td>
</tr>
<tr>
<td>Setting HE policies and objectives</td>
<td>For nation</td>
<td>For province</td>
</tr>
<tr>
<td><strong>Agreeing on the size and shape of the system</strong></td>
<td>For nation</td>
<td>For nation</td>
</tr>
<tr>
<td>Assessing the quality of Teaching and Research</td>
<td>For nation</td>
<td>For province</td>
</tr>
<tr>
<td>Provision</td>
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</tr>
<tr>
<td>Licensing new institutions (public and private)</td>
<td>For 4-year universities</td>
<td>For 3-year colleges</td>
</tr>
<tr>
<td>Agreeing on universities’ strategic plans</td>
<td>For MOE affiliated</td>
<td>For province</td>
</tr>
<tr>
<td>Support with governance and management</td>
<td>For MOE affiliated</td>
<td>For province</td>
</tr>
<tr>
<td>Financing</td>
<td></td>
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</tr>
<tr>
<td>Allocating resources (operational budget)</td>
<td>For MOE affiliated</td>
<td>For province</td>
</tr>
<tr>
<td>Allocating resources for special programs</td>
<td>For nation</td>
<td>For nation</td>
</tr>
<tr>
<td>Monitoring university performance and auditing</td>
<td>For nation</td>
<td>For province</td>
</tr>
</tbody>
</table>
Part III: Empirical evidence
Altbach (2009) on Chinese stratification

“China has moved **consciously** towards a differentiated academic system, having so far paid special attention to the top of the system, especially to the 150 or so research universities that are the responsibility of the central government. Most of China’s approximately 1700 universities are funded by and are responsible to the provincial governments and in some instance to municipal authorities. These universities tend to be in the middle and toward the bottom of the academic hierarchy. There is currently a move to expand the non-baccalaureate sector in ways fairly similar to American community colleges” (Altbach, 2009, pp.15-16)
Federal system of higher education in China

Graduate Education
- 985/211 Institutions
- Academy of Science Graduate School

Basic Research
- Sino-Foreign Joint Institutions

Regional University
- New established local HEIs
- Professional Graduate Schools

Undergraduate Education
- Vocational Colleges
- Applied Research
Analytical framework

Institutional setting

Key player

Mechanisms for stratification

Policy instrument

Measurement of stratification

Asymmetric institution pattern

Ministry of Education

Central Government

Local Government

Structural

Financial

Regulatory

A

B

C

Enrollment

Major

Degree

Funding
Pro-stratification policy

• **Key university/discipline construction**
  – Initiated by MOE on behalf of central government
  – Policy measures
    • 4-year: As early as 1954; Project 211 in 1993; Project 985 in 1998; Project 2011 in 2011
    • 3-year: Demonstrative Vocational College project in 2006 and Key Vocational College project in 2010
  – Influence on stratification
    • Affecting enrollment, discipline/major, degree, funding
  – Impact on local government
    • Incentive: distort local preference
    • Capacity: sometimes local gov had to provide matching grant, diluting their investment for local ones
Rise of institution hierarchy

Number of Key Universities
Project 211 HEIs
Project 985 HEIs

Rise of Key HEIs

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Shared responsibility between central and regional HEIs

– Central ministry-affiliated institutions: focusing on research
– Regional institutions: research productivity increase

<table>
<thead>
<tr>
<th>Year</th>
<th>Other Ministries' affiliated HEIs</th>
<th>MOE affiliated HEIs</th>
<th>Regional HEIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>1.32</td>
<td>0.65</td>
<td>0.34</td>
</tr>
<tr>
<td>1998</td>
<td>0.81</td>
<td>0.6</td>
<td>0.35</td>
</tr>
<tr>
<td>1999</td>
<td>0.78</td>
<td>0.7</td>
<td>0.38</td>
</tr>
<tr>
<td>2000</td>
<td>0.57</td>
<td>0.59</td>
<td>0.41</td>
</tr>
<tr>
<td>2001</td>
<td>0.59</td>
<td>0.52</td>
<td>0.43</td>
</tr>
<tr>
<td>2002</td>
<td>0.78</td>
<td>0.55</td>
<td>0.5</td>
</tr>
<tr>
<td>2003</td>
<td>0.78</td>
<td>0.57</td>
<td>0.55</td>
</tr>
<tr>
<td>2004</td>
<td>0.98</td>
<td>0.63</td>
<td>0.68</td>
</tr>
<tr>
<td>2005</td>
<td>1.11</td>
<td>0.68</td>
<td>0.72</td>
</tr>
<tr>
<td>2006</td>
<td>1.16</td>
<td>0.72</td>
<td>0.73</td>
</tr>
<tr>
<td>2007</td>
<td>1.23</td>
<td>0.73</td>
<td>0.77</td>
</tr>
<tr>
<td>2008</td>
<td>1.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>1.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Shared responsibility between central and local HEIs

– Local institutions: focusing on undergraduate teaching
– Central ministry-affiliated institutions: focusing on graduate education

Graduate Enrollment Share (2003-2007)

- % of MA educated by Ministry affiliated HEIs
- % of MA educated by regional HEIs
- % of PHD educated by Ministry affiliated HEIs
- % of PHD educated by regional HEIs

<table>
<thead>
<tr>
<th>Year</th>
<th>% of MA</th>
<th>% of MA Ministry</th>
<th>% of MA Regional</th>
<th>% of PHD</th>
<th>% of PHD Ministry</th>
<th>% of PHD Regional</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>63.7</td>
<td>84.3</td>
<td>15.6</td>
<td>36.27</td>
<td>63.7</td>
<td>36.27</td>
</tr>
<tr>
<td>2004</td>
<td>61.8</td>
<td>83.1</td>
<td>16.92</td>
<td>38.82</td>
<td>61.8</td>
<td>38.82</td>
</tr>
<tr>
<td>2005</td>
<td>58.4</td>
<td>83</td>
<td>16.97</td>
<td>41.58</td>
<td>58.4</td>
<td>41.58</td>
</tr>
<tr>
<td>2007</td>
<td>55.09</td>
<td>82.35</td>
<td>17.65</td>
<td>44.91</td>
<td>55.09</td>
<td>44.91</td>
</tr>
</tbody>
</table>
Proportion of undergraduates in Engineering is high and the share in Humanities & Social Sciences rises after last expansion.
Pro-stratification policy

• **Cost sharing and revenue diversification**
  – Initiated by MOE on behalf of central government
  – Policy measures
    • *China Outline for Education Reform and Development*, announced in 1993 to “charge tuition and fees in non-compulsory education stage” as an investment scheme of raising education funds through multiple channels
    • *The Higher Education Law* promulgated in 1998
  – Influence on stratification
    • Affecting funding and enrollment and discipline
  – Impact on local government
    • Incentive: great impetus for expanding HE at others’ expenses
    • Capacity: providing addition funding for expanding local institutions, to various degrees
• Shares of higher education revenues from government, tuition & service charge, and other sources
Distribution of the resources between national and regional levels of the HE system

- Revenue for Institutions Affiliated to Regional Government
- Revenue for Institutions Affiliated to Central Government
– Financial disparity: per student expenditure for central vs. regional HEIs

Funding gap increases over time
Pro-stratification policy

• **Higher education expansion**
  – Initiated by MOE on behalf of central government
  – Policy measures
    • In 1999, China started a decade-long higher education expansion
    • Provincial government gained the right to accredit 3-year vocational institution
  – Influence on stratification
    • Affecting funding, degree, enrollment and discipline
  – Impact on local government
    • Incentive: great impetus for expanding independent colleges and vocational colleges
    • Capacity: local governments were empowered
— Number of tertiary Institutions and enrollment

No of HEI institutions

Total Tertiary Enrollment (in 10,000)

Three Tertiary Expansions
Shared responsibility between central and regional HEIs

- Regional institutions: focusing on undergraduate teaching
- Central ministry-affiliated institutions: focusing on graduate education

### Undergraduate Enrollment (1991-2006)

- **Number of students in Regional-affiliated HEIs**
- **Number of students in Central-affiliated HEIs**

Regional HEIs educated most undergraduates
Part IV: Conclusion
Preliminary conclusions

• Stratification is a process, which unfolds at global, domestic and institution level

• Unique central-local government relation shapes the central-local government provision of higher education

• How central and local governments provide higher education produces profound influences on stratification at domestic and institution level
Thank you!

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Model of institutional pattern

• Symmetric vs. asymmetric model (Wei, 2015)

<table>
<thead>
<tr>
<th></th>
<th>Symmetric model</th>
<th>Asymmetric model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of duty</td>
<td>Highly consistent, duty implementation and legal supervision belong to the same government</td>
<td>less consistent, duty implementation and legal supervision belong to different levels of government</td>
</tr>
<tr>
<td>Match between duty and rights to fiscal gains</td>
<td>High level of match</td>
<td>Low level of match</td>
</tr>
<tr>
<td>Relation between rights to fiscal gains and division of rights to fiscal legislation</td>
<td>Well adaptation</td>
<td>Maladaptation, rights to fiscal legislation is relatively centralized</td>
</tr>
<tr>
<td>Responsibility of sub-national government</td>
<td>Sub-national government enjoys relatively large budgetary autonomy; having more independent duties; national government does not provide emergence aid when sub-national governments are deeply in debt</td>
<td>Certain limitations for sub-national government's budgetary autonomy; national government is accountable for sub-national government debt crisis; existing large-scale intergovernmental transfer for equalization</td>
</tr>
</tbody>
</table>
# Model of institutional pattern

- **Symmetric vs. asymmetric model (Wei, 2015)**

<table>
<thead>
<tr>
<th>Constitutional structure and government levels</th>
<th><strong>Symmetric model (U.S)</strong></th>
<th><strong>Asymmetric model (GERMANY)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Three levels: federal government, state government, and local government</td>
<td>Three levels: federal government, state government, and local government</td>
<td></td>
</tr>
<tr>
<td>Division of duty and responsibility for fiscal expenditure</td>
<td>Federal government: macro issues, national public goods provision such as national defense, foreign affairs, R&amp;D, and pay for related affairs; State and local government: micro issues related to local interests, and pay for education, welfare, highway, police and etc.</td>
<td>“Subsidiarity principle”; federal gov: national defense, foreign affairs, civil rights; federal and state jointly provide health and social welfare; state gov in charge of culture, education, university; local gov provides local highways, sport and etc; each government pays for their own affairs, and share the burden for joint affairs</td>
</tr>
<tr>
<td>Rights to fiscal gains</td>
<td>Symmetric model (U.S)</td>
<td>Asymmetric model (GERMANY)</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Federalgov relies on income tax, state gov relies on sales tax, localgov relies on property tax</td>
<td>Almost all important taxes are shared by federal and state government, such as local sales tax, income tax, value added tax, tax on interests and dividend</td>
<td></td>
</tr>
<tr>
<td>Rights to fiscal legislation</td>
<td>Federalgov has power over tax levy; stategov doesn’t need federalgov’s approval for tax levy, they can decide their own tax base, tax rate and other rules</td>
<td>Federalgov in charge of tariff and proprietary activities and jointly shared legislative power with state for shared taxes; state and localgov have some legislative rights for local taxes</td>
</tr>
<tr>
<td>Rights to fiscal collection</td>
<td>Three levels of government have independent rights and agencies</td>
<td>Federaland stategovernment have independent rights and agencies; localgov cannot collect their own taxes</td>
</tr>
<tr>
<td>Budgetary power</td>
<td>All three levels ofgov have rights to make their own budgets</td>
<td>Federaland stategov can make their own budget, but state has very limited autonomy (68% of taxes are shared and controlled by federalgov)</td>
</tr>
<tr>
<td>Intergovernmental transfer</td>
<td>Federal provides grant for state and local; state provides grant for local; including general grants, categorical grants, and block grants</td>
<td>“uniformity of living conditions principle” leads to Financial Equalization Law, achieved through redistribution of VET, interstate equalization, federal supplemental grants</td>
</tr>
<tr>
<td>Coordination for disputes</td>
<td>No coordination</td>
<td>Federalassembly is formal coordination agency, with intergovernmental councils</td>
</tr>
</tbody>
</table>