Affirmative Action or Stratification: Chinese Financial Aid System at Crossroad

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OUTLINE

• Motivation: Tertiary expansion and higher education finance
• Expansion and student aid: Economics perspective
• Federalism in higher education and response to expansion
• Evolution of US and Chinese student aid system
• Missing target: Policy impact
Key challenges

- Prior economics analysis focuses on impacts of student aid (graduate debt)

- Lack of analysis of changes of student aid system and sources of variation

- Lack of analysis of responses of student aid system to tertiary expansion, even though high participation system research shows expansion influences governance, horizontal diversity, vertical stratification, equity, and society (Cantwell, Marginson, Smolentsev, forthcoming)
Key questions

- Purpose of this study is to investigate interaction among division of higher education duty, higher education governance, and finance

- It intends to address how tertiary expansion shapes the configuration of current student aid systems

- and how expansion is enlarging rather than mitigating stratification
Conclusion

• Global tertiary education expansion has shaped the configuration of current student aid system
  – Tertiary expansion brings huge fiscal pressure
  – Countries under various types of federalism in higher education response differently to such fiscal pressure
    • Decentralization or cooperation between governments
    • Use of cost-sharing policies
  – General trend towards revenue diversification and cost-sharing (resource mobilization); towards performance-based funding (institution funding); towards high-fee and high-aid system; towards outcome-oriented and decentralized system
Conclusion

• Evolution of national student aid systems implies tacit government action to reduce fiscal pressure related to tertiary expansion
  – As tertiary system moves towards phase, use of tuition fees increases; coverage of grants and scholarships is shrinking; use of student loan and market loan is increasing
  – Degree of subsidization decreases, more conditions put on aid programs; low-subsidy aid programs grow at the expense of high-subsidy aid
  – Recent changes of student aid policies reduce fiscal pressure on government, but adding attendance costs for students—paying tuition, receiving financial aid with less subsidy
Conclusion

• **Response of student aid system to tertiary expansion is enlarging rather than mitigating n stratification**
  
  – In the process of rapid tertiary expansion, China’s student aid system is incapable of coping with the growing financial needs
  
  – Targeting is distorted by student ability sorting and concentration of resources in elite institutions
  
  – Student aid in expanding tertiary systems tends to reinforce rather than minimize stratification
Motivation: Tertiary expansion and higher education finance
Point 1

world-wide tertiary expansion has brought about huge fiscal pressure on government, especially for central government
Higher education expansion and fiscal pressure

Increasing fiscal pressure due to expansion

- Gross tertiary enrollment ratio (%) (Margionson, 2016, Figure 1)
Higher education expansion and fiscal pressure

Increasing fiscal pressure due to expansion

- Annual public expenditure per student (Jongbloed and Vossensteyn, 2016, Figure 3)

Increasing public expenditure per student: $8000-9000 per student per year

Source: OECD Education at a Glance (various years)
USA: Total Undergraduate Student Aid by Source, 1996-97 to 2015-16, Selected Years

Source: The College Board, Trends in Student Aid 2017, Figure 2.
China: Total College Student Aid by Source, 2007-08 to 2015-16, Selected Years

Point 2

Significant change in structure of student aid system: unconditional high-subsidy aid (e.g. grant) is replaced by conditional low-subsidy aid (e.g. loan)
USA: Composition of Total Aid and Nonfederal Loans, 1996-97 to 2016-17

Undergraduate Students

Percentage of Total Funds

Source: The College Board, Trends in Student Aid 2017, Figure 5.
CHINA: Composition of Total Aid, 2016-17

Expansion and student aid: Economics perspective
Point 1

- In different phases of HE development, the nature of HE changes, so does the way government supports HE
- When higher education moves from individual good worthy good, HE funding model also changes
Trow’s three phases of higher education

- **Trow (1973) definition**
  - Elite system: Less than 15% of school leaver age group in higher education
  - Mass system: 15-50%
  - Universal system: Over 50%

- **Marginson (2017)**
  - High-participation system: Over 50%
  - Higher education becomes preeminent social differentiator and allocator
  - Maintaining a higher education system is one of the core duties of state, like airports and roads, clean water → social infrastructure
Different approaches to public/private

Public choice definition of ‘public’
e.g. by James Buchanan

- Public choice refers to the way in which people decide the demand for and the supply of public good through democratic political process
- Political willingness and fiscal feasibility determine the border of public and private good
Degree of excludable and consumption

- **Excludability**
  - **Common good**
  - **Individual good**

- **Feasible**
  - Food, cloth, housing, bottle water, higher education
  - Public transportation, electricity, tape water, Cable TV

- **Infeasible**
  - Sea fish, air, River, parking
  - Park, police, vaccination, National defense

**Common resources**

**Chargeable good**
Trow’s three phases of higher education

- Elite higher education
  - Individual good; privilege
- Mass higher education
  - Chargeable good; human right
- High participation
  - Worthy good; an obligation

Higher education as institution (Meyer et al. 2005); as social infrastructure (Marginson, 2017)
Point 2

- Elite phase: HE as individual good or club good; market provision in terms of charging tuition as user fees; or government provision in terms of free HE with living subsidy
- Mass phase: HE becomes chargeable goods and government introduces cost-sharing policy; and government subsidizes institutions and students
- High participation phase: HE becomes worthy good, government can directly subsidize students or private providers, or provide HE services. Extensive use of cost-sharing and alternative HE services such as online provision
Federalism in higher education and response to expansion
Point 1

- Division of higher education duty is determined by central-local relation in a particular country
- In federal countries, nations adopt competitive or cooperative federalism in higher education
- In non-federal country like China, central government adopts Commanding Heights Strategy
Federalism and higher education governance

• Competitive federalism model
  – Clear division of administrative duty between national and subnational government in higher education (as in U.S.A)
    • Higher education is mainly the responsibility of state governments and federal government provides supplementary support
    • States are responsible for regional tertiary institutions’ operating budgets; approval of new institutions; quality assessment; planning and coordination and the regulation of tuition fees
    • States are able to fulfil these functions because of their budgetary autonomy and a good match between administrative duty and rights to fiscal revenues
    • Federal government often offers financial support for research and student aid

Federalism and higher education governance

• Cooperative federalism model
  – Shared governance and responsibility (in Germany)
    • State (Länder) governments are in charge of higher education legislation, supervision and finance
    • In areas requiring nationwide coordination, there are two types of coordination—interstate and between federal and state governments. The areas of coordination are wide, including access and admission, accreditation, funding for research, funding for temporary policy areas and international activities
    • Federal–state coordination is inevitable and plays a relatively strong role. This relates to the constitutional belief in homogeneity of living conditions which requires equal access to tertiary education across regions
    • Federal government can utilize largescale intergovernmental transfers for regional equalization

Wang, R. & Yang, P. (Forthcoming) China: The “Commanding Heights’ Strategy Revisited
Teichler, U. (Forthcoming) Germany: Continuous Intergovernmental Negotiations
Federalism and higher education configuration

- Commanding Heights model
  - Unified leadership, decentralized management (in China)
    - Central government has claimed its rights to the most important elements of its tertiary sector in two ways—directly managing the commanding heights of the institutional hierarchy and controlling the commanding heights of mechanisms of intervention (Wang 2014)
    - Central authority has kept control over elite research universities and key resources for higher education development, while loosening its grip on the mass of higher education institutions and decentralizing them towards local governments
    - Political and personnel centralization, governance and finance decentralization

Wang, R. & Yang, P. (Forthcoming) China: The “Commanding Heights’ Strategy Revisited
Point 2

- Central and regional governments assume different roles under different models
- In competitive model, federal government subsidizes students but not institution
- In cooperative model, federal government shares research costs and student aid with states
- In Commanding Heights model, central government provides funds for its affiliated HEIs and student aid to all eligible students
Federalism and higher education finance

Competitive Federalism (U.S.)

Federal government
- Demand-side financing for student aid
- Demand-side financing for competitive research

State government
- Supply-side financing for public HEIs
- Demand-side financing for students in public & private HEIs
Federalism and higher education finance

Cooperative Federalism (Germany)

Federal government
- Sharing research cost with state governments
- Sharing student aid cost with state governments

State government
- Supply-side financing for public HEIs
- Demand-side financing for students (free or subsidized education)
Federalism and higher education finance

Commanding Heights Model (China)

Central government
- Supply-side financing for MOE affiliated national universities
- Demand-side financing for student aid

Provincial government
- Supply-side financing for regional public HEIs
- Demand-side financing for students in public & private HEIs
Point 3

- Competitive country refers to market mechanism to solve the excess demand for student aid (e.g. income-contingent loan)
- Cooperative country introduces cost-sharing (e.g. student fees) and performance-based funding
- CH country decentralizes non-selective HEIs to release fiscal pressure; and regions uses cost-sharing and revenue-diversification to release fiscal pressure

- General trend towards revenue diversification and cost-sharing (resource mobilization); towards performance-based funding (institution funding); towards high-fee and high-aid system; towards outcome-oriented and decentralized system
Cooperative

Competitive

Developed support system

Iceland, Norway, Sweden

Low fees

Commanding Heights

Less developed support system

Japan, Korea

High fees

Framework by Jongbloed and Vossensteyn (2016)
Cooperative vs. Competitive Approaches

Centralized approaches
- Incremental and formula funding driven by performance indicators

Commanding Heights
- Negotiation basis

Input orientation

Decentralized approaches
- Voucher performance contracts

Output orientation

Jongbloed and Vossensteyn, 2016
Evolution of US and Chinese student aid system
Point 1: USA

- Federal and state governments assume different roles in institution and student financing
- The role of federal government in student aid is expanding
- Degree of subsidization declines, but aid coverage increases
- Unconditional, highly subsidized aid is replaced by deferred payment or conditional, low-subsidy aid

Evolution of USA HE system

Figure 9.1. Higher education as a share of the 18–24-year-old cohort in the USA, 1870–1990

Cantwell, B. (forthcoming) Broad Access and Steep Stratification in the First Mass System: High Participation Higher Education in the United States of America. Figure 9.1
## Evolution of US Aid System

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1944</td>
<td>G.I. Bill (federal aid system started)</td>
</tr>
<tr>
<td>Late 1950s</td>
<td>Federal aid expended to all college students</td>
</tr>
<tr>
<td>1958</td>
<td>National Defense Education Act (NDEA)</td>
</tr>
<tr>
<td>1965</td>
<td>Title II: National Defense Student Loan Program</td>
</tr>
<tr>
<td>1972</td>
<td>Higher Education Act</td>
</tr>
<tr>
<td>1978</td>
<td>Education Opportunity Grant (Pell Grant)</td>
</tr>
<tr>
<td>1980</td>
<td>Federal Workstudy Program</td>
</tr>
<tr>
<td>1986</td>
<td>Guaranteed Student Loan (Stafford Loan Program)</td>
</tr>
<tr>
<td>1993</td>
<td>Education Amendment of 1972</td>
</tr>
<tr>
<td>1997</td>
<td>Basic Educational Opportunity Grants (BEOG)</td>
</tr>
<tr>
<td></td>
<td>State Student Incentive Grants (SSIG)</td>
</tr>
<tr>
<td></td>
<td>Student Loan Marketing Association (Sallie Mae)</td>
</tr>
<tr>
<td></td>
<td>GLS expanded to for-profit and vocational institutions</td>
</tr>
<tr>
<td></td>
<td>Middle Income Student Assistance Act</td>
</tr>
</tbody>
</table>

### Direct Federal Aid to Student

- Federal aid system started in 1944
- Expanded to all college students in the Late 1950s
- Title II of NDEA in 1958
- Higher Education Act in 1965
- Education Opportunity Grant (Pell Grant) in 1972
- Federal Workstudy Program in 1978
- Guaranteed Student Loan (Stafford Loan Program) in 1980
- Education Amendment of 1972 in 1986

### Federal Aid Expansion, Via Loan Program

- Basic Educational Opportunity Grants (BEOG)
- State Student Incentive Grants (SSIG)
- Student Loan Marketing Association (Sallie Mae)
- GLS expanded to for-profit and vocational institutions
- Middle Income Student Assistance Act

### Cost-Sharing, Public Aid Limited to Low-Income Students

- Higher Education Act Reauthorization
- Parent Loans for Undergraduate Students (PLUS)
- Supplemental Loans to Student (SLS)
- Federal Family Education Loan Program
- Taxpayer Relief Act
- Hope Scholarship Credit
- Lifetime Learning Credit

### Aid for Middle-Income Students

- Direct federal aid to student
- Expanded aid via loan programs
- Cost-sharing, public aid limited to low-income students
Point 2: China

- Centralization and decentralization cycles; central government role in student aid expands
- As tertiary system expands, tuition and aid policies changes accordingly
- Development of aid system is left behind tertiary expansion and cost-sharing policy
- Unconditional, highly subsidized aid is replaced by conditional, high-subsidy aid and low-subsidy aid
Evolution of Chinese HE governance

- **Federalism in Chinese higher education** (Wang & Yang, forthcoming)

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>Two-level management: Central and territory governments</td>
</tr>
<tr>
<td>1958</td>
<td>Decentralization towards provincial government</td>
</tr>
<tr>
<td>1963</td>
<td>Two-level management: Central and provincial governments</td>
</tr>
<tr>
<td>1969</td>
<td>Decentralized all HEIs to regional governments</td>
</tr>
<tr>
<td>1971</td>
<td>Two-level management: Regional governments; key institutions to central or provincial governments</td>
</tr>
<tr>
<td>1978</td>
<td>Two-level management: Central and provincial governments</td>
</tr>
<tr>
<td>1985</td>
<td>Three-level: central, provincial, and center city</td>
</tr>
<tr>
<td>1993</td>
<td>Two-level management: Central and provincial governments</td>
</tr>
<tr>
<td>1998</td>
<td>Two-level management: Central and provincial governments</td>
</tr>
</tbody>
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## Evolution of Chinese Aid System

<table>
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<tr>
<th>Year</th>
<th>Policy Event</th>
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<tbody>
<tr>
<td>1949-1952</td>
<td>Public funds for all</td>
</tr>
<tr>
<td>1952</td>
<td>People's Grant (uniform allocation)</td>
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<tr>
<td>1977</td>
<td>Free tuition for all</td>
</tr>
<tr>
<td>1983</td>
<td>Adjusting People's Grant coverage and level by SES</td>
</tr>
<tr>
<td>1985</td>
<td>Adjusting People's Grant coverage and level by major and SES</td>
</tr>
<tr>
<td>1987</td>
<td>Converting People's Grant to scholarship and student loan</td>
</tr>
<tr>
<td>1991</td>
<td>Interest-free student loan</td>
</tr>
<tr>
<td>1994</td>
<td>Dual-track tuition policy</td>
</tr>
<tr>
<td>1995</td>
<td>Revenue diversification policy</td>
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<tr>
<td>1997</td>
<td>Undergraduate tuition to 50 HEIS</td>
</tr>
<tr>
<td>1998</td>
<td>National workstudy program</td>
</tr>
<tr>
<td>1999</td>
<td>Undergraduate tuition to 246 HEIS</td>
</tr>
<tr>
<td>2004</td>
<td>Tuition waiver for low-income student</td>
</tr>
<tr>
<td>2005</td>
<td>Undergraduate tuition to all HEIs</td>
</tr>
<tr>
<td>2007</td>
<td>Higher Education Act</td>
</tr>
<tr>
<td>2008</td>
<td>Tuition+ student aid</td>
</tr>
<tr>
<td>2011</td>
<td>Commercial Bank Student Loan</td>
</tr>
<tr>
<td>2013</td>
<td>Subsidy for students with special difficulty</td>
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<td></td>
<td>National Development Bank student loan</td>
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<td></td>
<td>National Scholarship</td>
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<td></td>
<td>National Grant</td>
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<td></td>
<td>National Incentive Grant</td>
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<td></td>
<td>Residence-based student loan</td>
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<td></td>
<td>Tuition waiver for poverty reduction</td>
</tr>
</tbody>
</table>

Point 3:

- In different phase of tertiary expansion, government alternates tuition and aid policies
- Degree of subsidization decreases; more aid programs add conditions
- As low-subsidy aid expands, fiscal pressure on government decreases, but financial burden of students increases
# Evolution of aid system

<table>
<thead>
<tr>
<th>Tuition Policy</th>
<th>Introduction of tuition fees</th>
<th>Extensive use of tuition fees</th>
</tr>
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<tbody>
<tr>
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<tr>
<td>Grant</td>
<td>For all students</td>
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<td>Scholarship</td>
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</tr>
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<td>Government student loan</td>
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</tr>
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<td>Market loan</td>
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Missing target: Policy impact
Point 1: Increasing access and achievement

- Access to aid: need-based aid is allocated to low-income students; merit-based aid is allocated to high-ability, low-income students
- Mixed results: financial aid is sometimes positively related to college engagement, learning outcomes, and post-graduate employment
Access and achievement

• Yang (2010): A higher proportion of female and low-income students receive aid

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Complete sample</th>
<th>Low-SES sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of college student characteristics.</td>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>S.D.</td>
</tr>
<tr>
<td>Total public aid amount (RMB)</td>
<td>1714.79</td>
<td>4752.89</td>
</tr>
<tr>
<td>Total government aid amount (RMB)</td>
<td>1082.41</td>
<td>3616.18</td>
</tr>
<tr>
<td></td>
<td>(2974.83)</td>
<td>(4003.93)</td>
</tr>
<tr>
<td></td>
<td>(2563.69)</td>
<td>(3753.82)</td>
</tr>
</tbody>
</table>

• Liu et al. (2011) : Early Financial Aid Commitment Project, Random control trial: ECFA reduces enrollment in military and normal university; no difference in college matriculation rate

• Wei et al. (2009): Information intervention for high school graduates: receiving aid information significantly increases probability of college attendance or retaking college entrance exam
Access and achievement

- Yang (2009): Receiving aid is positively related to higher GPA and lower course failure, longer study time; getting grant instead of loan encourages more learning effort
- Wang et al. (2011): RCT, receiving 4000 yuan need-based aid has NO effect on psychological well-being; NO difference in time for part-time employment, campus activity and community services
- Cheng (2011): natural experiment due to policy change: students with GSSLP loan spent more on food, worked fewer hours of paid employment; NO effect anxiety or total education expenditure
- Li et al. (2015): Tsinghua University administrative data from 2011 to 2013: PSM: scholarship from previous year has positive effect on GPA, but grant fails to leverage learning outcomes
- Yang (2011): PSM of national college graduate sample: receiving aid increases likelihood of getting employment
Point 2: Inadequate and poorly targeted

- Financial aid coverage is low among needy students
- Targeting is not achieved: selection based on ability and institution selectivity
- Poverty reduction effect of college aid is very limited
- Prevalent use of market short-time cash flow indicate an unmet financial need of students
Inadequate and poorly targeted

- Yang (2010): public and government aid is biased towards students in selective institutions

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Student aid received by type of institution.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very selective 4-year</td>
</tr>
<tr>
<td>Percent of students who</td>
<td></td>
</tr>
<tr>
<td>Received any public grant</td>
<td>29.1%</td>
</tr>
<tr>
<td>Received any public loan</td>
<td>12.2%</td>
</tr>
<tr>
<td>Received any public aid</td>
<td>43.1%</td>
</tr>
<tr>
<td>Received any public financial aid</td>
<td>57.6%</td>
</tr>
<tr>
<td>Percent of students who</td>
<td></td>
</tr>
<tr>
<td>Received any government grant</td>
<td>8.3%</td>
</tr>
<tr>
<td>Received any government loan</td>
<td>11.3%</td>
</tr>
<tr>
<td>Received any government aid</td>
<td>18.2%</td>
</tr>
<tr>
<td>Received any government financial aid</td>
<td>28.0%</td>
</tr>
</tbody>
</table>
Inadequate and poorly targeted

- Wu et al. (2011): 47% of needy students received grant-in-aid; targeting error was 64%; need-based aid only reduces poverty rate by 2.6%, the poverty rate is still 79% among needy students after receiving aid

### 表6 大学生援助项目的减贫效果

<table>
<thead>
<tr>
<th>定义</th>
<th>贫困率</th>
<th>贫困差距指标</th>
<th>大学经济负担</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>奖助学金前</td>
<td>奖助学金后</td>
<td>助学金前</td>
</tr>
<tr>
<td>平均值</td>
<td>0.218</td>
<td>0.192</td>
<td>0.172</td>
</tr>
<tr>
<td>贫困生</td>
<td>1.000</td>
<td>0.884</td>
<td>0.791</td>
</tr>
<tr>
<td>城镇地区</td>
<td>0.099</td>
<td>0.090</td>
<td>0.082</td>
</tr>
<tr>
<td>农村地区</td>
<td>0.315</td>
<td>0.274</td>
<td>0.245</td>
</tr>
</tbody>
</table>
Inadequate and poorly targeted

Yang and Liu (2018): among MA students; low aid coverage among needy students; high omission rate and leakage rate, indicating targeting error; aid reduces poverty rate by 4-8%, 14% still in poverty

<table>
<thead>
<tr>
<th></th>
<th>Whole sample</th>
<th>Academic MA</th>
<th>Professional MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty rate</td>
<td>20.40%</td>
<td>20.60%</td>
<td>19.40%</td>
</tr>
<tr>
<td>Needy students with aid</td>
<td>11.90%</td>
<td>13%</td>
<td>8.90%</td>
</tr>
<tr>
<td>Non-needy students</td>
<td>35.30%</td>
<td>32.10%</td>
<td>44.80%</td>
</tr>
<tr>
<td>Needy students without</td>
<td>8.70%</td>
<td>7.90%</td>
<td>10.10%</td>
</tr>
<tr>
<td>Non-needy students</td>
<td>44.20%</td>
<td>46.90%</td>
<td>36.20%</td>
</tr>
<tr>
<td>Family burden</td>
<td>58.59%</td>
<td>56.55%</td>
<td>63.44%</td>
</tr>
<tr>
<td>Coverage of need-based</td>
<td>55%</td>
<td>58.70%</td>
<td>44.90%</td>
</tr>
</tbody>
</table>
Inadequate and poorly targeted

- Yang and Bai (2018): high proportion of undergraduates use online financial platform for short-term cash flow; relative poverty rate is 59%;

<table>
<thead>
<tr>
<th></th>
<th>Needy students</th>
<th>Non-needy students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student loan</td>
<td>18.10%</td>
<td>8.60%</td>
</tr>
<tr>
<td>Online lending from e-platforms</td>
<td>16.00%</td>
<td>23.50%</td>
</tr>
<tr>
<td>Borrow from others</td>
<td>8.70%</td>
<td>9.80%</td>
</tr>
<tr>
<td>Borrow from credit card</td>
<td>12.20%</td>
<td>15.30%</td>
</tr>
</tbody>
</table>
Conclusion
Conclusion

- Global tertiary education expansion has shaped the configuration of current student aid system
  - Tertiary expansion brings huge fiscal pressure
  - Countries under various types of federalism in higher education response differently to such fiscal pressure
    - Decentralization or cooperation between governments
    - Use of cost-sharing policies
  - General trend towards revenue diversification and cost-sharing (resource mobilization); towards performance-based funding (institution funding); towards high-fee and high-aid system; towards outcome-oriented and decentralized system
Conclusion

- Evolution of national student aid systems implies tacit government action to reduce fiscal pressure related to tertiary expansion
  - As tertiary system moves towards phase, use of tuition fees increases; coverage of grants and scholarships is shrinking; use of student loan and market loan is increasing
  - Degree of subsidization decreases, more conditions put on aid programs; low-subsidy aid programs grow at the expense of high-subsidy aid
  - Recent changes of student aid policies reduce fiscal pressure on government, but adding attendance costs for students—paying tuition, receiving financial aid with less subsidy
Conclusion

• Response of student aid system to tertiary expansion is enlarging rather than mitigating stratification
  – In the process of rapid tertiary expansion, China’s student aid system is incapable of coping with the growing financial needs
  – Targeting is distorted by student ability sorting and concentration of resources in elite institutions
    • Student aid system opens college access for some disadvantaged students; but distribution of aid favors high-ability students in selective institutions
    • Many needy students are not covered by aid system
    • Even among aided students, need-based aid is insufficient to reduce poverty
  – Student aid in expanding tertiary systems tends to reinforce rather than minimize stratification
Thank you!

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USA: Total Undergraduate Student Aid by Source and Type (in Billions US dollars), 2016-17

- Federal Work-Study (FWS) and Federal Supplemental Educational Opportunity Grants (FSEOG): $1.5 billion
- State Grants: $10.4 billion
- Private and Employer Grants: $10.8 billion
- Veterans and Military Grants: $11.5 billion
- Federal Education Tax Credits and Deductions: $16.1 billion
- Federal Pell Grants: $26.6 billion
- Institutional Grants: $46.1 billion
- Federal Loans: $58.1 billion

Source: The College Board, Trends in Student Aid 2017, Figure 2.
CHINA: Total Undergraduate & Graduate Student Aid by Source and Type (in Billions RMB), 2014-15

- Tuition waver (1.05%) 0.755
- Institutional aid (1.81%) 1.296
- Target aid for veteran, teacher, enlisted student, civil servants (3.1%) 2.219
- Workstudy (3.43%) 2.457
- Graduate TA/RA/AA program (4.02%) 2.884
- National scholarship (23.76%) 17.033
- National subsidized loan (27.3%) 19.575
- National grant (32.71%) 23.451

USA: Number of Recipients by Federal Aid Program (with Average Aid Received), 2016-17

Federal Aid Programs (with Average Aid per Recipient)

Source: The College Board, Trends in Student Aid 2017, Figure 6A.
Worthy goods

• Some of private good and chargeable good turns into common resources and common good in recent years
  – Positive externality related to consumption of worthy goods
  – All citizen desire such good, so the excludability is withdrawn
  – Consequence
    • Dramatic increase of common good consumption
    • Government direct subsidy for private providers, individuals, or direct service or good provision by government
    • Dynamic nature of certain goods, such as higher education, from individual good to common good
### Provision of common/worthy good

<table>
<thead>
<tr>
<th>Producer</th>
<th>Planner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public sector</td>
<td>Government service; Inter-government arrangement; Government sale</td>
</tr>
<tr>
<td>Private sector</td>
<td>Contract; charter; Subsidy; Free market; Volunteer; Self-service’ Voucher</td>
</tr>
</tbody>
</table>

Federalism in higher education

Arguments

A. Federalism in higher education varies across countries

B. Different types of federalism in higher education implies different division of labor between central and local governments, in terms of governance and finance

C. Countries response differently to fiscal pressure brought about by tertiary education expansion
Competitive vs. Cooperative Federalism

• **Competitive (or dual) federalism** can refer to state of affairs between regional government (horizontal competition) and between central and regional governments (vertical competition)

• **Cooperative federalism** is a concept of federalism in which national, state, and local governments interact cooperatively and collectively to solve common problems, rather than making policies separately but more or less equally (such as the dual federalism of the 19th-century United States) or clashing over a policy in a system dominated by the national government

Responses to fiscal pressure due to expansion

• Competitive federalism country
  – Federal government provides direct financial aid to students (Zhou and Mendoza, 2017)
    • Federal aid to students take various forms
    • Federal aid can be used in any HEIs, including private and vocational ones
    • Coverage of federal aid expands overtime, including needy and non-needy students
  – Universal cost-sharing in public and private HEIs
  – Shifting from input-based formula funding to performance funding
Reponses to fiscal pressure due to expansion

• **Cooperative federalism country**
  – Government increases cost-sharing (Jongbloed and Vossensteyn, 2016)
    • Shifting in financing from public to private sources
    • Introduction of student fees
  – Government moves towards performance-based funding
  – Moving from free HE to fee-paying HE

• **Commanding Heights Strategy** (Wang and Yang, forthcoming)
  – Central government increases control over national universities, through direct institution subsidy and student aid and research fund
  – Provincial governments introduce cost-sharing and revenue-diversification extensively
  – Shifting from input-based formula funding to performance-based formula funding
Evolution of US aid system

- Federalism in American higher education (Trow, 1993)
  - United States places the primary responsibility for education on the states rather than on the federal government
  - Federalism in the U.S. can be seen as the major determinants of the governance and finance of the nation’s system of higher education
    - Role of regional government in higher education
    - Role of private, non-governmental sources of support

Evolution of US aid system

- Federalism in American higher education (Trow, 1993)
  - Critical historical junctures
    - Failure of establishing a national university → Limiting role of federal government in shaping characteristics of American higher education
    - 1819’s Supreme Court decision on Dartmouth College case → Restricting right of state government in administration of private higher education
    - The Morrill Act of 1862, 1890 and Hatch Act of 1890 → Defining federal government’s role as land provider, not intervening the establishment and administration of public/private land-grant HEIs
    - G.I. Bill of 1944 → Providing federal support for college students, not institutions
    - Education Amendment of 1972 → Expanding federal support for students and researchers; protecting institutional autonomy by not providing direct subsidy for HEIs

USA: Total Grant Aid in 2016 Dollars by Source of Grant, 1996-97 to 2016-17

Source: The College Board, Trends in Student Aid 2017, Figure 3.
USA: Total Federal and Nonfederal Loans in 2016 Dollars, 1996-97 to 2016-17

Source: The College Board, Trends in Student Aid 2017, Figure 4.