


Diversification or Homogenization



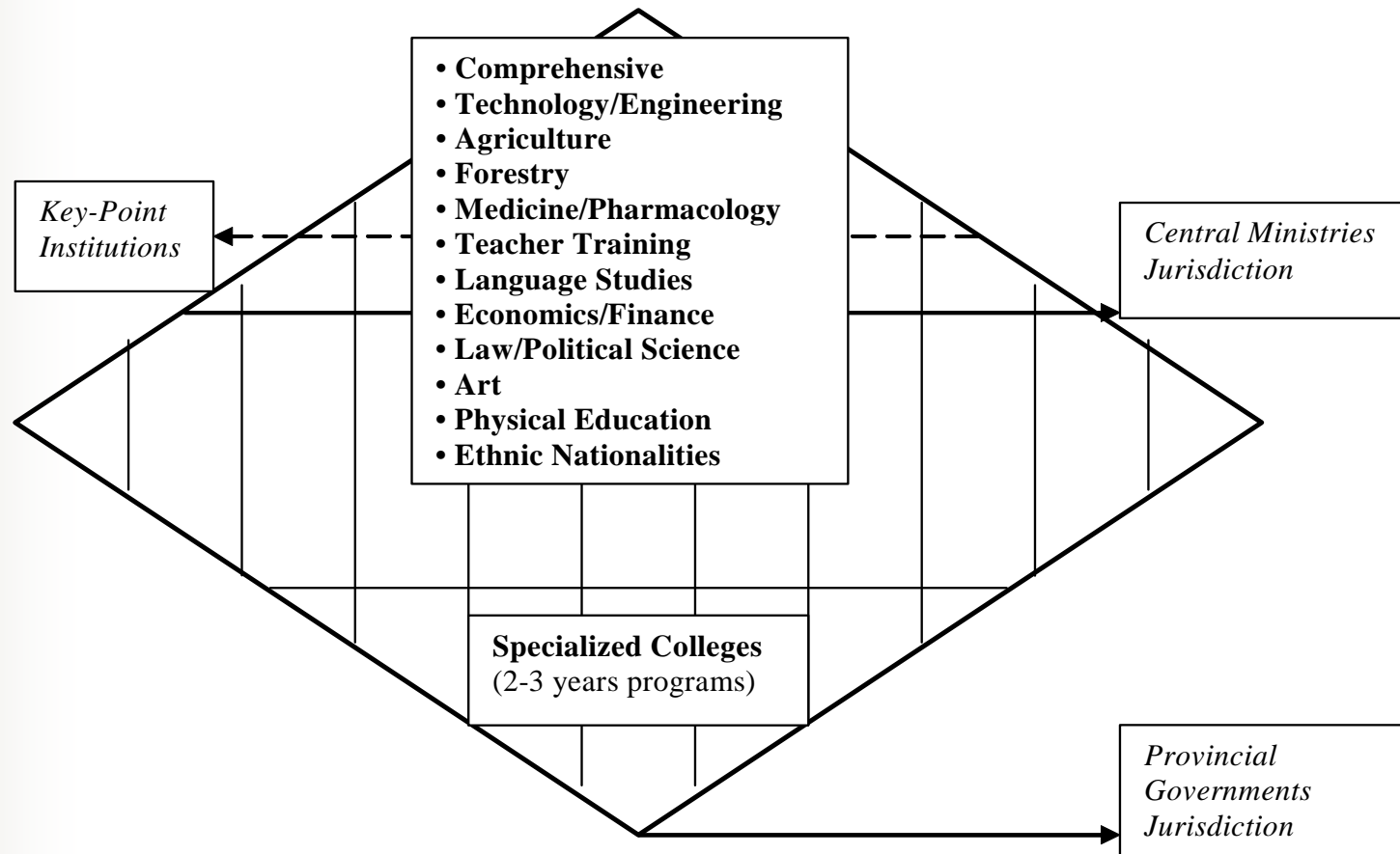
**How Governments and Markets Have Combined to
(Re)Shape Chinese Higher Education in Its Recent
Massification Process**

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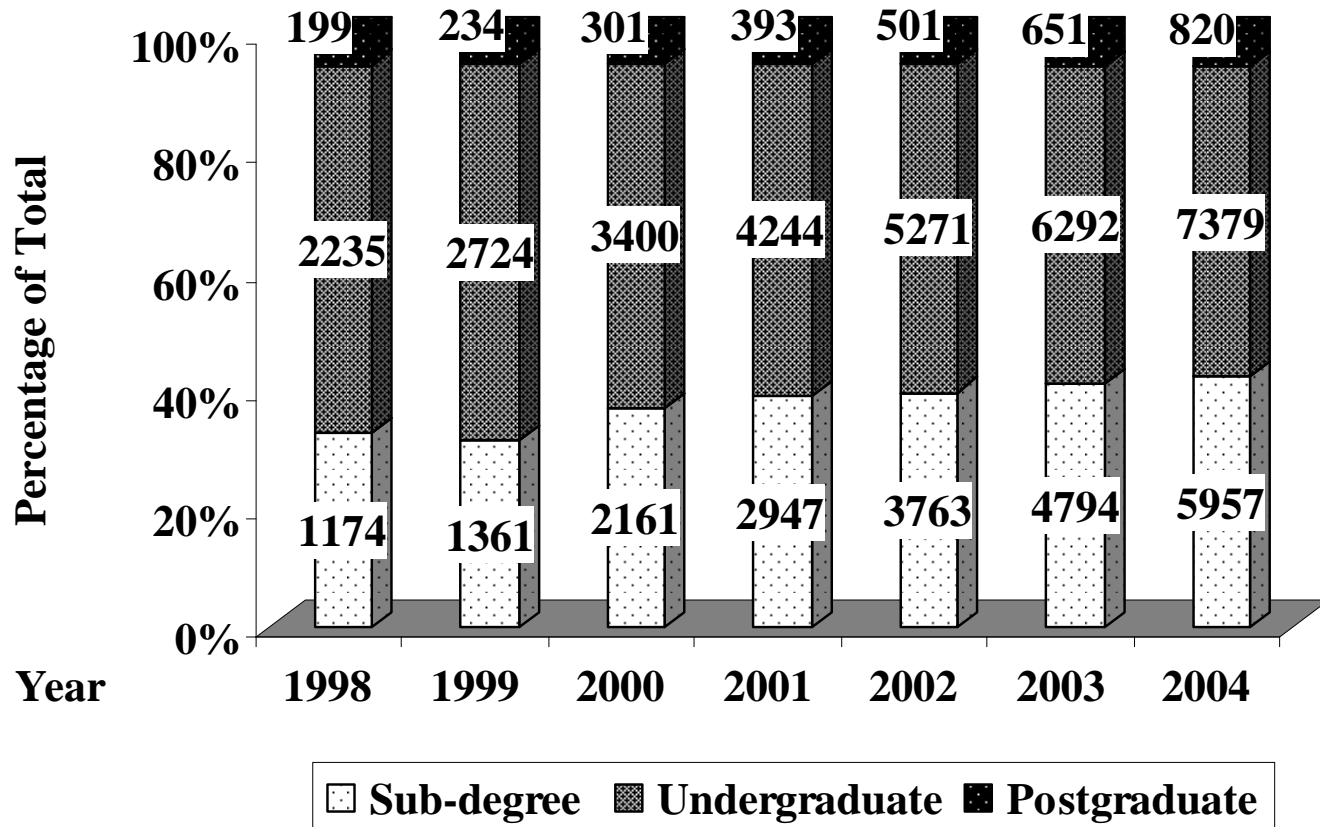
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- **A central characteristic of mass higher education systems worldwide is differentiation. Differentiation and diversity have become important policy issues in the re/structuring of contemporary higher education systems.**
 - **The expansion and diversification of higher education are twin phenomena that have been associated with the development of higher education in many countries around the world.**
 - **This study attempts to use enrolment expansion as a lens to examine the effects of governmental intervention and market forces on diversification of the Chinese system.**

Systemic and Structural Diversity of the Chinese Higher Education: 1950s-1990s



Higher Education Enrolment Expansion in China: 1998-2004 ('000 students)



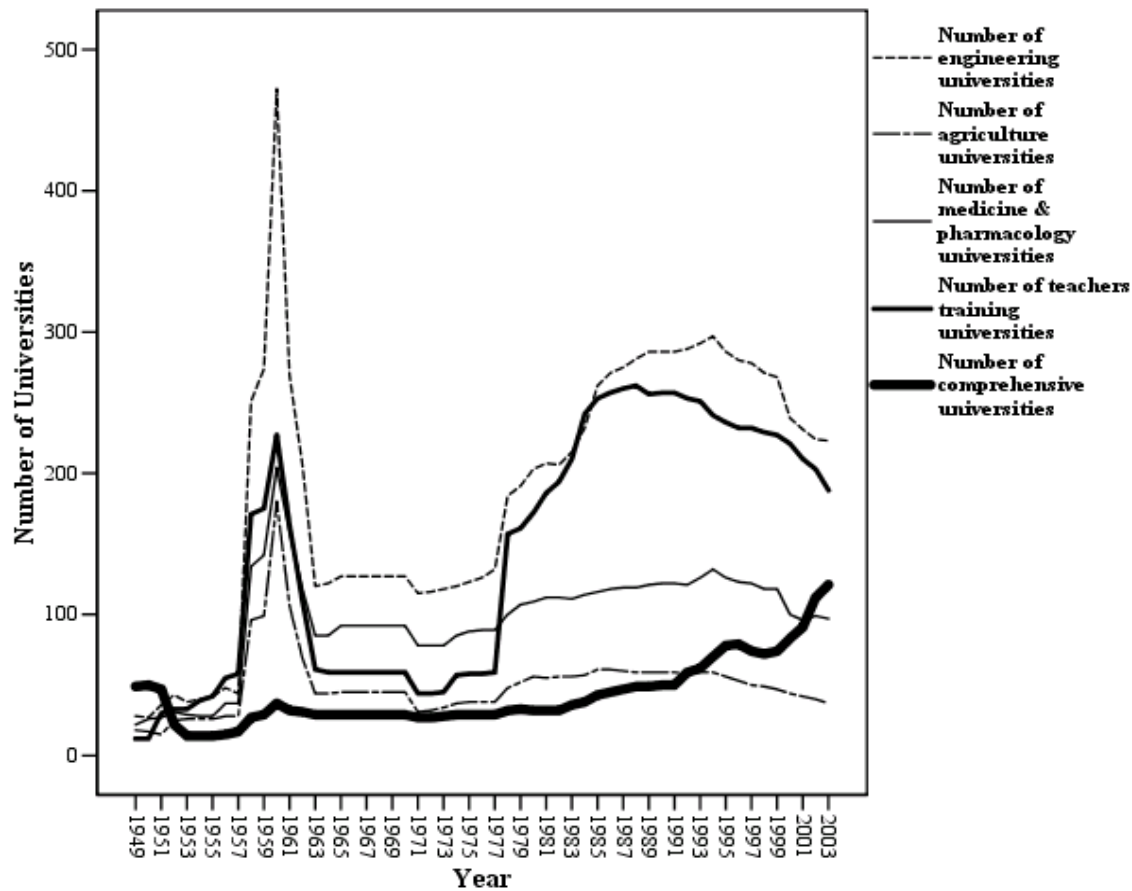
The Changing Scenario

Average Size of Higher Education Institutions: 1990-2004

	1990	1996	1997	1998	1999	2000	2001	2002	2003	2004
Number of HEI	1075	1032	1020	1022	1071	1041	1225	1396	1552	1731
Average Size	1919	2927	3112	3335	3815	5289	5870	6471	7143	7704
Student/Teacher		10.4	10.9	11.6	13.4	16.3	18.2	19.0	17.0	16.2

- **The strip-block isolation of the system is thus being broken down, and boundaries among different types of institutions have become blurred, with universities being now allowed to add programs/specializations at their own choices.**
- **The most striking results have been that many genuine comprehensive universities of multi-disciplines have emerged by means of mergers and adding new specializations.**

Trends of Change in Differentiation of Comprehensive, Engineering, Teacher Training, Agriculture and Medicine Universities: 1949-2003





The Research Questions

- **What distinctive features characterize diversity and diversification in the recent expansion of Chinese higher education?**
- **What factors can explain the increases (or decreases) in diversity in the Chinese higher education?**



Changing Government Regulations and Emerging Market Forces

- In general, the government has been gradually moving away from a centralized model, in which it controlled the detailed operations of higher education institutions.
- Universities are now allowed to set their own strategic goals, define their own academic focus (including establishment of new specializations) in order to respond to the increasing competition, and control their resources.
- The state continued to provide core funding, though, it now strategically concentrates resources on a small number of elite universities, while encouraging all other institutions to mobilize local resources through student fees and income-generating activities.

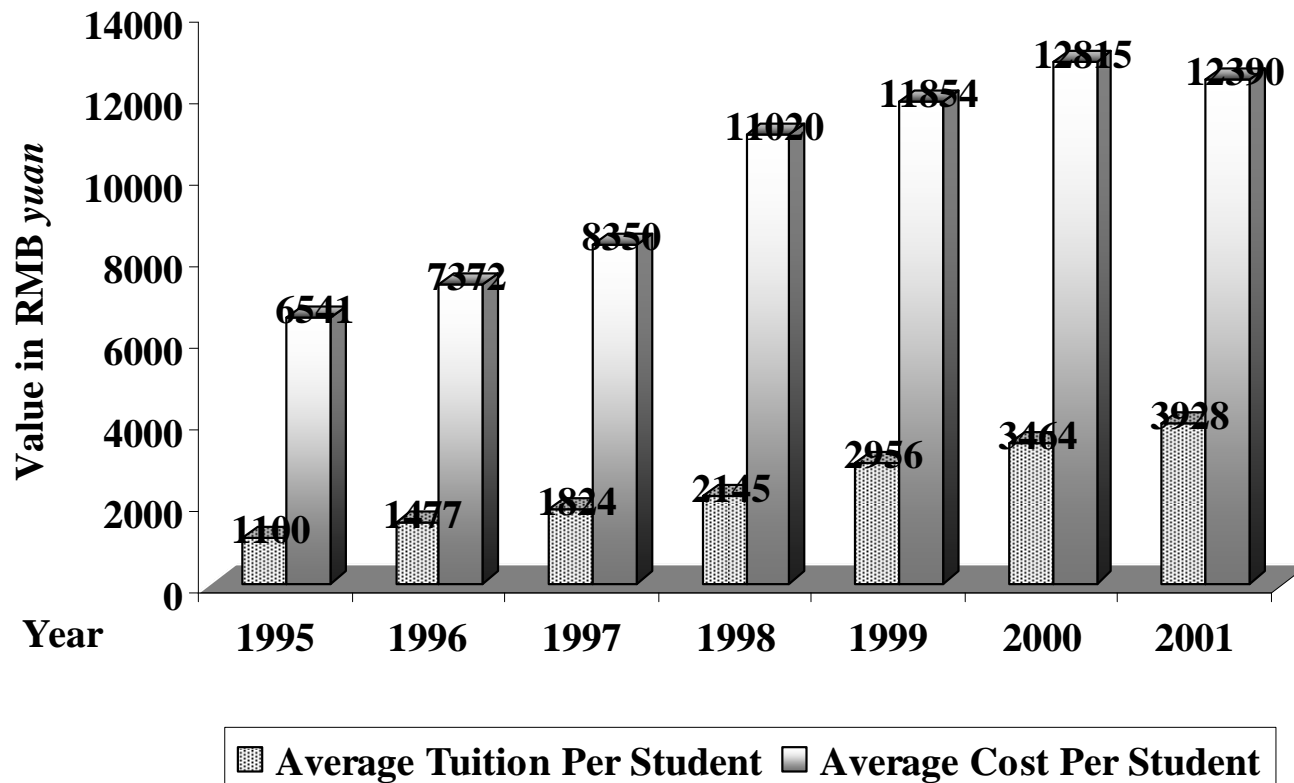


Decentralization of the System and Expansion of University Autonomy

- **Institutionalizing a two-tiered structure of governance of higher education: the central government would directly administer a number of “backbone” institutions,**
- **provincial governments would take up the major role of coordinating higher education development.**
- **Universities themselves would gradually gain autonomy over decisions regarding admission, specialization establishment, staff appointment, professional development, compensation standards, and the expenditure of funds.**

Diversification of Higher Education Finance

Average Tuition vs. Average Cost in Regular Higher Education Institutions: 1995-2001 (in RMB yuan)



Diversification of Higher Education Finance (contd.)

Revenue Composition of Regular Higher Education Institutions: 1990-2001 (%)

Year	Total	Fiscal Funding				Educational Revenue		Endowment	Other
		Subtotal	Budgeted	Education Tax	Transfer from Affiliated Enterprises & Social Service Income	Subtotal	Tuition		
1990	100.0	93.5	83.4	—	10.1	2.8	0.5	—	3.7
1991	100.0	90.6	75.1	—	15.4	5.6	2.8	—	3.8
1992	100.0	90.6	75.1	—	15.4	5.6	2.8	—	3.8
1993	100.0	91.8	82.4	0.1	8.6	6.1	6.1	0.7	1.3
1994	100.0	82.2	72.6	0.3	8.9	11.8	11.8	1.3	4.7
1995	100.0	80.5	69.6	0.3	9.7	13.6	13.6	1.6	4.3
1996	100.0	78.8	67.8	0.9	8.7	14.4	14.4	1.7	5.2
1997	100.0	76.4	65.0	1.0	8.7	15.7	15.7	2.3	5.6
1998	100.0	64.9	49.6	1.4	2.1	26.6	13.4	2.1	6.4
1999	100.0	62.8	49.4	1.0	1.8	29.9	17.2	2.3	5.0
2000	100.0	58.5	47.9	0.9	1.8	34.7	21.3	1.7	5.1
2001	100.0	55.0	46.7	0.6	1.4	38.0	24.7	1.5	5.5



The Analytical Framework

- Drawing on three mutually related theoretical perspectives from organizational theory: the population ecology perspective, the resource dependency perspective and the institutional isomorphism perspective.
- Considering the higher education system as a network of interacting individuals, located within an environment consisting of the social, political and economic actors on whom they are dependent for a supply of crucial resources, and that they come to accept certain values and adapt to structures and processes judged to be important by the environment.
- In order to survive, higher education institutions need to secure a continuous and sufficient supply of resources from the environment, and thus will set in motion a reaction to restore the balance when they become more dependent on the environment.



When the level of dependency increases, balancing operations are set in motion to restore the balance.

- **Withdrawal refers to the fact that the actor in increasing dependency may withdraw from the exchange relationship, thereby reducing its level of dependency.**
- **Network extension points to establishing another exchange relationship with a new member, which will make the dependency become more diffused in the network.**
- **Coalition formation is an effective way of enhancing bargaining power.**
- **Status enhancement means finding ways to increase importance or distinctiveness relative to other actors in the environment. (Emerson, 1972)**



The Research Design

- The strategy of network extension appears potentially most profitable, as the other strategies either are forced (withdrawal), or require strict conditions and competition (status enhancement), or don't fundamentally change the amount of resource supply (coalition formation).
- In the current policy context within which the Chinese universities operate, if a university tends to decrease the level of dependency, the network extension—the establishment of other exchange relationships—seems to be the most viable option.
- In operational terms, it means the establishment of new specializations, or a process of programmatic differentiation. The level of dependency is considered to be largely determined by the change of proportion of governmental funding in the total revenue of the institution.
- A change that results in increased dependency sets in action the strategy of network extension to restore the balance—a process of programmatic differentiation that adds new specializations to the university in order to attract more students.



The Sample, Data and Time Span

- **Population: 594 universities out of the total 597 listed on the website of China National Ministry of Education in the end of 2001.**
- **Three sources are explored to collect data regarding the variables of this study: government policy papers and working documents, scholarly publications both in China and the West, and Internet-based data.**
- **The period in examination, 2000 to 2003, did witness a total of 9,321 new specializations added to Chinese universities.**



The Hypotheses

- **There are significant exchange relations among such variables as change of proportion of governmental appropriation in the total of institutional revenue, the addition of new study programs and change in university enrolment.**
- **The number of new specializations in “soft” disciplines added to Chinese universities over the period of examination should be greater than in “hard” disciplines.**

The Results: Testing the Hypotheses

Partial Correlation Coefficients between Enrolment Expansion, Programmatic Differentiation and Change of Governmental Funding of Chinese Universities

	Enrolment Expansion	Programmatic Differentiation	Change of Governmental Funding
Enrolment Expansion	1.000	0.487 ^{**}	-0.073
Programmatic Differentiation	0.487 ^{**}	1.000	-0.116 [*]
Change of Governmental Funding	-0.073	-0.116 [*]	1.000

Notes: ^{*} $p < .01$; ^{**} $p < .001$

Means and Standard Deviations of New Specializations in “Soft” and “Hard” Disciplines Installed by the Chinese Universities

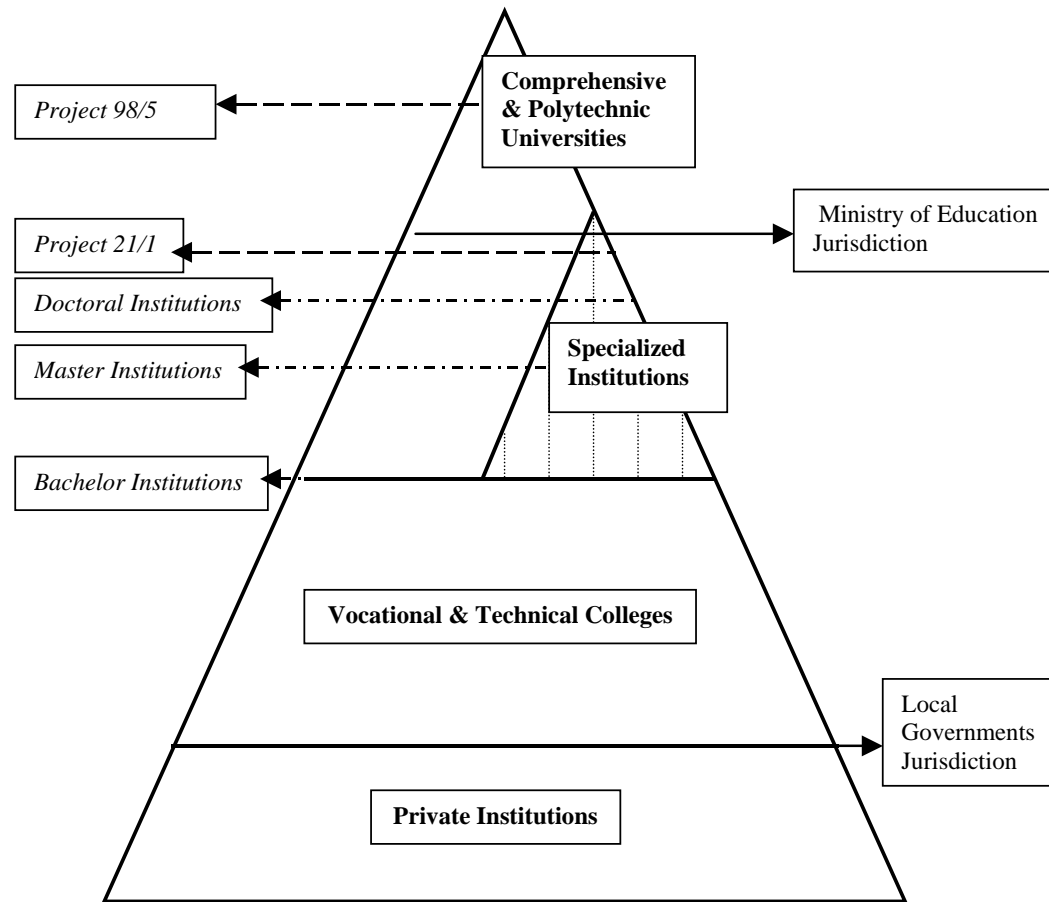
Discipline	N	M	SD
Soft	594	7.61	4.815
Hard	594	6.47	4.993

Status enhancement is also evident among Chinese universities

Proportion of Project 21/1 Universities' Major Resources out of National Total: 2003

Resource	Project 21/1 Universities' Proportion (%)
Library book volume	25.7
Assets of instrument & equipment	38.7
Doctoral student enrolment	86.0
Master student enrolment	69.1
Bachelor/sub-degree student enrolment	18.3
International student enrolment	58.2
Ratio of full professors (national average 9.8)	18.9
Ratio of faculty with doctoral degrees (national average 7.14)	19.2
Research funds	70.1
National key laboratories	100.0
National key programs	83.6
Patent registration	72.8

The Results: Current Systemic and Structural Diversity of Chinese Higher Education





The Conclusions

- A result of these changes is the impulse towards more comprehensive patterns of knowledge, with all higher education institutions seeking to broaden their curricular coverage. This has involved quite a remarkable development of social sciences and humanities programs in institutions originally designated as highly specialized technical institutes.
- Paralleling this pattern of institutional convergence, higher education institutions are being structured in a hierarchical way according to functions and goals. On the top are the national elite universities that focus on research. They are supposed to be stable in scale, and of a high standard. They educate the majority of doctoral students. The goal is to make the quality and academic level of these universities close to the world-class. The universities at the second rank are oriented to both research and teaching, mainly educating master's and bachelor students, with doctoral students only in a few specific disciplines. The universities at the third rank are those that are fundamentally teaching oriented, training mainly undergraduates. Finally, there are the professional and vocational training institutions, providing only 2-3 year programs. The last two categories constitute the majority of institutions.