

K E D I - W o r l d B a n k I n t e r n a t i o n a l F o r u m

2005 KEDI-World Bank 국제 포럼 :

지식기반 사회의 고등교육 재정 개혁

Financing Reforms for
Tertiary Education in the
Knowledge Economy

일 시 (Dates)| 2005. 4. 6 (수 · Wed) ~ 8 (금 · Fri)

장 소 (Venue)| 서울 교육문화회관 · Seoul Education and Culture Center

주 최 (Hosted by)| 한국교육개발원 (KEDI), 세계은행 (World Bank)

후 원 (Sponsored by)| 교육인적자원부 (MOE&HRD), 한국개발연구원 (KDI)



초대의 글

한국의 고등교육은 양적인 면에서는 세계적 수준을 자랑하고 있으나 고등교육의 경쟁력은 국제적 수준과는 큰 격차가 있습니다. 정부는 고등교육의 경쟁력을 높이는 것이야말로 국가 경쟁력을 높일 수 있는 지름길이라는 인식 하에, 고등교육의 구조조정 사업을 추진하고, 질적 수준을 높이는 다양한 정책을 펴 나가고 있습니다. 그러나 이러한 사업들은 큰 재정 투자를 요구하는 것이며, 효율적인 재정운용 체제의 뒷받침이 없이는 불가능한 것입니다. 현재 한국 고등교육의 시급한 과제는 영세한 고등교육 재정규모를 증대하는 것이며, 안정적인 재원을 확보하고, 확보된 재정을 효율적으로 활용할 수 있는 제도적 장치를 마련하는 것이라고 할 수 있습니다.

이러한 중요성을 인식하여 한국교육개발원에서는 World Bank와 공동으로 “지식기반사회에서의 한국고등교육 재정개혁”을 주제로 국제 포럼을 개최하게 되었습니다. 고등교육에 대한 재정확보의 문제는 비단 우리나라 뿐 아니라 선진국, 개발도상국을 막론하고 국가적 차원의 중요한 정책과제가 되고 있습니다. 이러한 점에 착안하여, 이번 포럼에서는 우리나라 고등교육 재정의 현황 진단을 통해 쟁점을 도출하고, 재원확보-배분-운용체제 전반에 대한 우리의 경험과 주요국의 경험을 교환하고자 합니다. 이 기회를 통해 고등교육 재원의 확보방안 및 재정 효율화를 위한 돌파구를 마련할 것으로 기대합니다.

이 포럼에는 우리나라를 포함하여 World Bank, OECD 관계자, 선진국 및 개발도상국의 고등교육재정 전문가가 참석하여 열띤 토론을 벌일 것입니다. 우리나라 고등교육의 경쟁력 제고와 고등교육 재정 확보 및 운용체제의 합리적 개선·구축을 고민하는 이 자리에 초대하오니, 바쁘신 중이라도 고등교육의 발전을 도모하는 본 행사에 꼭 참석하시어 귀한 의견을 주시기를 부탁드립니다. 감사합니다.



2005년 4월
한국교육개발원장 이 중 재

Invitation

Although the higher education of Korea is world-class, there exists a visible discrepancy when it comes to the competitiveness of its higher education. Recognizing the important role the competitiveness of higher education plays in enhancing national competitiveness, the government of Korea has been pursuing a number of measures to restructure as well as improve the quality of its higher education. But these measures require considerable financial investment, and it would not be viable without an efficient financial management system. Currently, the foremost and the biggest challenge of Korea's higher education are to permanently increase its financial scale, to secure a source of stable funding, and to come up with an institutional framework that will effectively utilize these funds.

Therefore, the Korean Educational Development Institute is hosting an international forum, cosponsored by World Bank Group, on "Financing Reforms for Tertiary Education in the Knowledge Economy." We recognize the fact that securing funding for higher education poses a major national challenge to not only Korea, but also to advanced and developing countries worldwide. So through this forum, it is our goal to get to the root of the problem by assessing the current finances of Korea's higher education and to come up with a breakthrough in measures for acquiring funding and higher financial efficiency for its higher education by exchanging the experiences of Korea and other major countries in securing funding, dissemination, and management system of their higher education.

Experts on higher education funding from Korea, the World Bank Group, OECD officials, advanced and developing countries will be participating and debating in this forum. We would like to invite you to discuss with us in improving Korea's higher education in the area of competitiveness, funding and management system. All those who are interested in advancing Korea's higher education are welcome to attend and share with us their invaluable opinions. Thank you.



Chong Jae Lee
President of KEDI
April 2005

프로그램

4월 6일 수요일 (첫째날) 장소 _ 거문고홀

8:30~9:00	등록	
9:00~10:00	개회식 환영사	사회 : 공은배 (한국교육개발원)
	축사	- 이종재 (한국교육개발원 원장) - Jamil Salmi (세계은행 교육분과 위원장) - 김진표 (부총리 겸 교육인적자원부 장관) - 황우여 (국회 교육위원회 위원장) - 김종수 (한국개발연구원 원장)
10:00~10:30	휴식	
	세션 I : 교육재정 쟁점 조망	좌장 : 김광조 (교육인적자원부 인적자원총괄국장)
10:30~11:00	주제발표 1 : 고등교육 재정의 주요 영역	Jamil Salmi (세계은행)
11:00~11:30	주제발표 2 : 한국의 고등교육재정 현황과 과제	이 영 (한양대학교)
11:30~12:30	토론 자유토론	박정수 (국회)
12:30~14:00	점심	
	세션 II : 고등교육재정 배분 방식(I)	좌장 : John Fielden (세계은행)
14:00~14:30	주제발표 3 : 포물라 펀딩 방식	Richard Yelland (OECD 교육분과)
14:30~15:00	주제발표 4 : 말레이시아의 포물라 펀딩	Hassan Said (말레이시아 교육부)
15:00~15:30	토론 자유토론	김정민 (기획예산처)
15:30~15:45	휴식	
	세션 III : 고등교육재정 배분 방식(II)	좌장 : 임천순 (세종대학교)
15:45~16:15	주제발표 5 : 바우처를 통한 펀딩	Art Hauptman (세계은행)
16:15~16:45	주제발표 6 : 콜로라도주의 바우처 제도	Rick O'Donnell (미국 콜로라도주 학교구)
16:45~17:30	토론 자유토론	천세영 (충남대학교)
18:00~ 20:00	만찬	

Program

Wednesday 6 April (1st day) Venue _ Gumungo hall

8:30~9:00	Registration	
9:00~10:00	Opening	Chair : Eun-bae Kong (KEDI)
	Welcoming Address	
	- Chong Jae Lee (President, Korean Educational Development Institute)	
	- Jamil Salmi (Acting Director, World Bank)	
	Congratulatory Remarks	
	- Jin-Pyo Kim	
	(Deputy Prime Minister and Minister of Education and Human Resources Development)	
	- Woo Yea Hwang (Chair, Educational Committee of the Korean Parliament)	
	- Choongsoo Kim (President, Korea Development Institute)	
10:00~10:30	Coffee Break	
	Session I : Overview of Financing Issues	
		Chair : Gwang-jo Kim (MOEHRD, Korea)
10:30~11:00	Presentation 1 : Major dimensions of higher education financing	
		Jamil Salmi (World Bank)
11:00~11:30	Presentation 2 : The Korean situation (evolution and challenges)	
		Young Lee (Hanyang University, Korea)
11:30~12:30	Discussion	Jung-soo Park (Korean Parliament)
	Open Discussion	
12:30~14:00	Lunch	
	Session II : Allocation Mechanisms (I)	
		Chair : John Fielden (World Bank)
14:00~14:30	Presentation 3 : Formula funding	
		Richard Yelland (OECD/ IMHE)
14:30~15:00	Presentation 4 : New funding formula in Malaysia	
		Hassan Said (MHE, Malaysia)
15:00~15:30	Discussion	Jung-min Kim (Ministry of Planning and Budget, Korea)
	Open Discussion	
15:30~15:45	Coffee Break	
	Session III : Allocation Mechanisms (II)	
		Chair : Chon Sun Ihm (Sejong University, Korea)
15:45~16:15	Presentation 5 : Funding through vouchers (demand and supply-side)	
		Art Hauptman (World Bank)
16:15~16:45	Presentation 6 : The Colorado voucher system	
		Rick O'Donnell (Colorado, USA)
16:45~17:30	Discussion	Se-young Chun (Chungnam University, Korea)
	Open Discussion	
18:00~ 20:00	Dinner	

프로그램

4월 7일 목요일 (둘째날) 장소 _ 가야금홀

세션 IV : 고등교육재정 배분 방식 (III)

좌장 : 천세영 (충남대학교)

9:00~9:20

주제발표 7 : 경쟁을 통한 재정 배분

Lauritz Holm-Nielsen (세계은행)

9:20~ 9:40

주제발표 8 : 두뇌한국 (BK21) 사업

유현숙 (한국교육개발원)

9:40~ 10:00

주제발표 9 : 누리 (NURI) 사업

백성준 (한국직업능력개발원)

10:00~10:20

주제발표 10 : 성과중심 펀딩

Art Hauptman (세계은행)

10:20~10:45

토론 김명수 (한국교원대학교)

자유토론

10:45~11:00

휴식

세션 V : 고등교육재정 배분 방식 (IV)

좌장 : Richard Yelland (OECD)

11:00~12:30

패널 토의 (국가사례 발표 및 토의)

12:30~14:00

점심

세션 VI : 기관단위 수입 자원 (I)

좌장 : 김명수 (한국교원대학교)

14:00~14:25

주제발표 11 : 기관단위 자원 확보 전략

Jamil Salmi (세계은행)

14:25~14:50

주제발표 12 : 기금 조성 전략

Kai-ming Cheng (중국 홍콩대학교)

14:50~15:30

토론 김영철 (한국교육개발원)

자유토론

15:30~15:45

휴식

세션 VII : 기관단위 수입 자원 (II)

좌장 : Lauritz Holm-Nielsen (세계은행)

15:45~16:10

주제발표 13 : 일본의 대학 개혁이 재정개혁에 주는 시사점

Motohisa Kaneko (일본 도쿄대학교)

16:10~16:35

주제발표 14 : 기관단위 자원 확보를 위한 한국의 경험

안종석 (한국조세연구원)

16:35~17:15

토론 이종갑 (교육인적자원부 인적자원관리국장)

자유토론

18:00~20:00

만찬

Program

Thursday 7 April (2nd day) Venue _ Gayageum hall

Session IV : Allocation Mechanisms (III)

Chair: Se-young Chun (Chungnam University, Korea)

9:00~9:20

Presentation 7 : Competitive funds

Lauritz Holm-Nielsen (World Bank)

9:20~ 9:40

Presentation 8 : Brain Korea 21 project

Hyun Sook Yu (KEDI)

9:40~ 10:00

Presentation 9 : NURI

Sung-joon Paik (Korea Research Institute for Vocational Education and Training)

10:00~10:20

Presentation 10 : Performance-based funding

Art Hauptman (World Bank)

10:20~10:45

Discussion Myung-soo Kim (Korea National University of Education)

Open Discussion

10:45~11:00

Coffee Break

Session V : Allocation Mechanisms (IV)

Chair : Richard Yelland (OECD)

11:00~12:30

Panel with participants from other countries :

presentation and discussion of

experiences with competitive funds in different country settings

12:30~14:00

Lunch

Session VI : Income Generation at the Institutional Level (I)

Chair : Myung-soo Kim (Korea National University of Education)

14:00~14:25

Presentation 11 : Review of income generation strategies

Jamil Salmi (World Bank)

14:25~14:50

Presentation 12 : Fundraising strategies

Kai-ming Cheng (Hong Kong University, China)

14:50~15:30

Discussion Young-chul Kim (KEDI)

Open Discussion

15:30~15:45

Coffee Break

Session VII : Income Generation at the Institutional Level (II)

Chair : Lauritz Holm-Nielsen (World Bank)

15:45~16:10

Presentation 13 : Financial implications of the autonomy reform

Motohisa Kaneko (Tokyo University, Japan)

16:10~16:35

Presentation 14 : The Korean experience with income generation

Jong-seok An (Korea Institute of Public Finance)

16:35~17:15

Discussion Jonggap Lee (MOEHRD, Korea)

Open Discussion

18:00~20:00

Dinner

프로그램

4월 8일 금요일 (셋째날) 장소 _ 가야금홀

세션 VIII : 학자금 융자 (I)

좌장 : Motohisa Kaneko (일본 도쿄대학교)

9:00~9:30

주제발표 15 : 학생 학자금 융자 방식의 조망

Bruce Chapman (호주국립대학교)

9:30~9:50

주제발표 16 : 한국의 학생 학자금 융자제도

김안나 (이화여자대학교)

9:50~10:10

주제발표 17 : 중국의 학생 학자금 융자제도

Wen-li Li (중국 북경대학교)

10:10~10:45

토론 이재경 (국민대학교)

자유토론

10:45~11:00

휴식

세션 IX : 학자금 융자 (II)

좌장 : 이 영 (한양대학교)

11:00~12:30

패널 토의 (국가사례 발표 및 토의)

- Norman LaRocque (뉴질랜드)

- Medhi Krongkaew (태국)

12:30~14:00

점심

세션 X : 재정투자 성과 측정 및 모니터링

좌장 : Jamil Salmi (세계은행)

14:00~14:30

주제발표 18 : 성과측정 지표의 구성과 활용

John Fielden (세계은행)

14:30~15:00

주제발표 19 : 정부의 고등교육재정 지원 성과분석

김태중, 이삼호 (한국개발연구원)

15:00~15:30

토론 변기용 (OECD 교육분과)

자유토론

15:30~15:45

휴식

세션 XI : 고등교육재정 운용 기구

좌장 : Art Hauptman (세계은행)

15:45~16:10

주제발표 20 : 고등교육재정 운용 기구의 역할

John Fielden (세계은행)

16:10~ 16:35

주제발표 21 : 한국의 고등교육평가 기구의 구상과 역할

김신복 (서울대학교)

16:35~ 17:00

토론 이병식 (한국교육개발원)

자유토론

17:00~ 17:30

종합

사회 : 공은배 (한국교육개발원)

- Jamil Salmi (세계은행 교육분과 위원장)

- 서남수 (교육인적자원부 차관보)

- 이종재 (한국교육개발원 원장)

Program

Friday 8 April (3rd day) Venue _ Gayageum hall

Session VIII : Student Loans (I)

Chair : Motohisa Kaneko (Tokyo University)

9:00~9:30

**Presentation 15 : Overview of student loan mechanisms,
including income contingent loans**

Bruce Chapman (Australiana National University)

9:30~9:50

Presentation 16 : The Korean student loan experience

Anna Kim (Ewha Womens University, Korea)

9:50~10:10

Presentation 17 : Chinese student loan

Wen-li Li (Peking University, China)

10:10~10:45

Discussion Jaekyung Lee (Kook min Univrsity, Korea)

Open Discussion

10:45~11:00

Coffee Break

Session IX : Student Loans (II)

Chair : Young Lee (Hanyang University, Korea)

11:00~12:30

**Panel : presentation and discussion on student loan experiences in
different country settings**

- Norman LaRocque (New Zealand)

- Medhi Krongkaew (Thailand)

12:30~14:00

Lunch

Session X : Measuring and Monitoring Performance

Chair : Jamil Salmi (World Bank)

14:00~14:30

Presentation 18 : Constructing and using performance indicators

John Fielden (World Bank)

14:30~15:00

Presentation 19 : Analyzing effectiveness of higher education funding in Korea

Tae-jong Kim & Sam-ho Lee (Korea Development Institute)

15:00~15:30

Discussion Kiyong Byun (OECD / IMHE)

Open Discussion

15:30~15:45

Coffee Break

Session XI : Intermediary Bodies

Chair : Art Hauptman (World Bank)

15:45~16:10

Presentation 20 : The role of buffer bodies

John Fielden (World Bank)

16:10~ 16:35

Presentation 21 : The role of Korea higher education evaluation center

Shin-bok Kim (Seoul National University)

16:35~ 17:00

Discussion Byung-shik Rhee (KEDI)

Open Discussion

17:00~ 17:30

Wrap-Up Session

Chair : Eun-bae Kong (KEDI)

- Jamil Salmi (Acting Director, World Bank)

- Namsoo Seo (Deputy Minister, Ministry of Education and Human Resource Development)

- Chong Jae Lee (President, KEDI)

Financing Reforms for Tertiary Education in the Knowledge Economy

4월 6일
수요일 (Wed)

- | | |
|-----------|--|
| Session 1 | 교육재정 쟁점 조망
Overview of Financing Issues |
| Session 2 | 고등교육재정 배분 방식(I)
Allocation Mechanisms (I) |
| Session 3 | 고등교육재정 배분 방식(II)
Allocation Mechanisms (II) |

4월 7일
목요일 (Thu)

- | | |
|-----------|--|
| Session 4 | 고등교육재정 배분 방식 (III)
Allocation Mechanisms (III) |
| Session 5 | 고등교육재정 배분 방식 (IV)
Allocation Mechanisms (IV) |
| Session 6 | 기관단위 수입 자원 (I)
Income Generation at the Institutional Level (I) |
| Session 7 | 기관단위 수입 자원 (II)
Income Generation at the Institutional Level (II) |

4월 8일
금요일 (Fri)

- | | |
|------------|---|
| Session 8 | 학자금 융자 (I)
Student Loans (I) |
| Session 9 | 학자금 융자 (II)
Student Loans (II) |
| Session 10 | 재정투자 성과 측정 및 모니터링
Measuring and Monitoring Performance |
| Session 11 | 고등교육재정 운용 기구
Intermediary Bodies |

오시는길 Venue



서울교육문화회관 / Seoul Education and Culture Center

서울시 서초구 양재2동 202

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■ 지하철

- ▶ 3호선 양재역 7번출구 → 서초구민회관 앞 → 서틀버스이용 (매시정각, 20분, 40분)
- ▶ 3호선 양재역 7번출구 → 마을버스 승차장 → 서초 08번 이용

■ 시내버스

- ▶ 분당, 성남방면 : 4421, 4423, 66-1, 4422
(양재2동사무소, 양재 꽃시장 하차 → 횡단보도 건너 도보5분 소요)
- ▶ 강남방면 : 4421, 4423, 66-1, 4422, 4312, 4424, 9202
(AT센터, 양재 꽃시장 하차 → 도보5분 소요)
- ▶ 과천, 안양방면 : 4424, 11-6, 11-3, 4312, 4424, 9202
(화물터미널 또는 양재 꽃시장 하차 → 횡단보도 건너 도보5분 소요)
- ▶ 잠실방면 : 11-3, 11-6 (AT센터, 양재 꽃시장 하차 → 도보5분 소요)



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Congratulatory Remarks:

KEDI-World Bank International forum on Tertiary Education Financing Reforms

Chong jae Lee

President, KEDI

"고등교육재정 국제학술포럼"에 참석해 주신 전문가여러분, 특히 멀리 외국에서 참석해 주신 여러분, 그리고 이 국제학술 포럼의 정책적 의의와 의미에 대하여 말씀해 주시는, 존경하는 김진표 부총리겸 교육인적자원부 장관님, 황우여 국회 교육위원회의 의장님, 한국개발연구원 김종수 원장님,

한국교육개발원과 저의 직원을 대신하여 감사의 말씀을 올립니다.

저희 한국교육개발원은 세계은행의 "교육·인적자원개발국"과 공동으로 고등교육재정에 관한 국제학술포럼을 개최하게 된 것을 매우 기쁘게 생각합니다. 한국교육개발원과 세계은행은 중요한 교육정책 문제와 과제에 대하여 공동으로 협의하고 국제적으로 협력하는 동반자관계를 발전시켜 왔습니다. 2004년 2월에는, "지역균형발전을 위한 지방대학의 역할"을 주제로 하여 학술세미나를 가졌고 이 결과를 국가균형발전위원회에 전달한 바 있습니다.

교육인적자원부는 2004년에 "대학구조개혁 방안"을 발표하였고 2005년부터 고등교육의 구조개혁을 추진할 계획으로 있습니다. 우리가 논의하려는 고등교육에 대한 재정지원과 재정운영은, 대학의 구조개혁 차원에서 검토를 요구하고 있습니다.

한국의 경우에 고등교육에 대한 재정지원의 규모는 GDP대비 2.7%로서 OECD 국가 평균치 1.8%에 비하여 높은 수준에 있습니다. 그러나 정부의 지원은 0.4%로서 OECD국가 평균치의 50%수준에 있습니다. 고등교육 투자의 85%는 민간부담에 의한 것입니다.

고등교육에 대한 정부의 지원을 보면, 약 70%가 국립대학의 운영비로 쓰이고, 30%정도가 고등교육의 개혁과 발전을 지원하기 위한 목적지원사업에 쓰이고 있습니다. 여기에는 연구중심대학 육성을 위한 BK21 Project와 지방대학 혁신역량강화를 위한 NURI (New university for Regional Innovation) Project등이 포함되어 있습니다.

대학의 구조개혁 차원에서 볼 때, 고등교육재정은 두 가지 측면에서 검토를 요하고 있습니다. 하나는 고등교육재정 그 자체에 대한 개혁의 문제이고, 다른 하나는 대학의 구조개혁을 지원하기 위한 방법으로서 고등교육재정을 활용하는 문제입니다.

고등교육재정 측면에서 볼 때, 국립대학의 운영방법은 개선을 요한다고 볼 수 있습니다. 국립대학의 경쟁력을 높이고, 특히 지방의 거점대학의 위치에 있는 지방소재 국립대학이 지역혁신센터의 역할을 수행할 수 있도록 하기 위해서는 국립대학의 운영이 새로워져야 할 것입니다. 이를 위해서 국립대학에 대한 재정지원방식과 대학운영방식에 대한 검토가 필요합니다. 대학운영의 자율성과 책무성을 제고하는 방향에서 재정지원방식의 개선이 요구됩니다. 일본의 국립대학의 법인화 개혁과 대학의 통합은 새로운 변화가능성을 보여주고 있습니다.

교육인적자원부가 추진하고자 하는 대학의 개혁과 구조조정을 위해서는, 정부가 해야 할 일과 대학이 해야 할 일을 구분하고, 서로 협력하고 지속적으로 추진하는 개혁의 과정이 필요할 것입니다. 대학의 개혁과 구조조정은 우리가 하고 있는 일을 되돌아보고, 반성하고, 기대수준에 미달하는 부분을 잘라내기도 해야 하는 힘들고 때로는 고통스러운 과정이 될 것입니다.

이를 위해서는 대학의 구조조정과 개혁에 대한 방법론이 설정되어야 할 것입니다. 대학의 개혁과 구조조정의 주체는 대학이 되어야 할 것입니다. 정부가 해야 할 일은 대학이 이러한 일을 해 낼 수 있도록 유도하고 지원하는 일이 될 것으로 전망합니다. 이 점에서 고등교육재정지원과 운영방식은 정부가 대학개혁을 하기 위한 중요한 방법이 될 수 있습니다.

재정운영을 통하여 대학의 구조조정을 지원하기 위해서는 이것을 뒷받침하는 “상황조건”을 구비해야 할 것입니다. 이 조건으로서, 우리 대학의 실상을 공개하고, 대학의 실적을 평가하고, 그리고 대학간에 공정하게 경쟁할 수 있는 구조를 만들어 주는 일이라고 생각합니다. 이 맥락에서, 여러 가지 재정지원의 방식을 검토하는 이번의 학술포럼에 대해서 높은 관심과 기대를 갖게 됩니다.

이 학술포럼을 통하여 세계 여러 곳에서 진행되고 있는 고등교육재정 개혁에 관한 논리와 경험을 나누게 되길 기대합니다. 지금 이곳은 서울의 봄을 느낄 수 있는 시기이기도 합니다. 좋은 시간 보내시기 바랍니다.

끝으로, 고등교육정책을 주제로 하여 한국교육개발원과 세계은행이 공동으로 두 번째의 국제학술포럼을 개최할 수 있도록 지원해주신 교육·인적자원개발국의 Jamil Salmi 박사님께 감사의 인사를 드립니다.

교육을 통하여 인재를 육성하고 이것이 개인의 보람있는 삶의 여정과 국가의 Well-Being에 기여하는 정책의 틀을 만들어 가는 일에, 국제적으로 함께 일할 수 있는 것을 매우 기쁘게 생각합니다.

감사합니다.

Opening Address:

***KEDI - World Bank international forum on
tertiary education financing reforms***

Jamil Salmi

Acting Director

Education Department, the World Bank

Dr. Nam-Soo Seo, Deputy Minister, Ministry of Education and Human Resources Development, the Honorable Woo Yea Hwang, Chair of the Educational Committee of the Korean Parliament, Dr. Chong Jae Lee, President of KEDI, the Korean Educational Development Institute, Dr. Choongsoo Kim, President of KDI, the Korean Development Institute, dear colleagues, ladies and gentlemen,

It is an honor and a privilege to welcome you today to this international forum on behalf of the World Bank. I would like to start by expressing my deep appreciation to our Korean hosts for this initiative, for their guidance in the preparation of the event, and for the generous financial support which has made it possible to invite many of you from all corners of the world. It is my pleasure to recognize especially Dr. Lee, Chong Jae, President of KEDI; the Korean Educational Development Institute, Dr. Kim, Gwang-jo, Director General of Human Resources Development at the Ministry of Education, and Dr. Yu, Hyun-Sook, Director of the Higher Education Research Department of KEDI, who have made this conference possible.

I would also like to welcome the resource persons and the participants who have traveled from far away to take part in the forum, including our colleagues from Ghana, Palestine, Morocco, Georgia, Chile, China, Nepal, Sri Lanka, Bangladesh, Vietnam, the

Philippines, Thailand and Malaysia. Finally, allow me to thank my World Bank colleagues who have worked hard behind the scenes to make our participation possible.

Korea and the World Bank have been important partners for four decades. First, Korea had a long history of Bank loans in many sectors to support its successful development strategy. Of the 15 education loans financed by the Bank, 5 of them were dedicated to support for tertiary education. Second, since it stopped borrowing from the Bank in 1994, Korea has maintained close links with our institution as part of its knowledge acquisition efforts to keep abreast of international trends. For example, in the last three years, Korean policy analysts and researchers organized three international conferences jointly with the World Bank, one on the knowledge economy, one on human resources development, and one on the role of universities in regional development. This week's event is another milestone in the long list of joint endeavors, symbolic of the exceptionally fruitful collaboration between the Republic of Korea and the World Bank.

This is only my fourth visit to Korea, and each time I learn to appreciate more the richness and complexity of your society, the great achievements of the past three decades, and the challenges you face each day. Above all, I have been impressed with the continuous drive to learn from international experience and the constant efforts to reform the education system and improve its contribution to the economic and social development of your country.

By creating a Ministry of Human Resources Development and designating its Minister as Deputy Prime Minister, the Government of Korea has explicitly emphasized the central role of education as a key driver of development. As Korea becomes one of the most advanced knowledge-driven economies, the need to train graduates with advanced skills who can contribute to technological innovation and productivity increases is a major development priority. Investment in human resources development, therefore, is a critical success factor and the availability of resources necessary to finance this investment can be either a bottleneck or a favorable feature of the authorizing environment.

The Government of Korea recognizes the importance of funding as a critical issue affecting, sometimes even constraining the development of a high quality tertiary education system. Having sufficient resources, and deploying and using existing resources in the most effective manner are two essential dimensions of the performance of the tertiary education system. Of course, Korea is not alone in facing this challenge—I am sure that our colleagues from the other countries represented here will talk to us about the resources gaps and challenges that they too face. Indeed, funding may be the one single issue that all countries, rich or poor, large or small, are struggling with, even though the magnitude of the problem and needs may differ significantly from one country to the other. Indeed, funding may be one of the most vexing political issues that governments and tertiary education institutions have to deal with. I have yet to meet a university president or rector who tells me that he/she has enough funding, and I have yet to meet a Minister of Higher Education or head of the University Grants Council who tells me that the universities are using their money wisely.

In this context, our forum purports to explore key dimensions concerning the mobilization, allocation and utilization of resources for the development of tertiary education by drawing on both national and international experience. Hopefully, the results of our deliberations will enrich the current debate and provide some useful guidance for all participants.

Let me conclude by thanking again Dr. Lee and his KEDI staff for coordinating and organizing this event; and all the speakers, discussants and participants who, without any doubt, will make this forum an outstanding experience. I know that collectively you have the unique capacity to shape the intellectual landscape of the institutions that you lead or where you work and, consequently, contribute to the technological, economic and social development of your own country. To achieve that, we must remember that we are not here to lecture each other, but to share information and insights so that we might all learn from one other with an open mind. Whenever I take part in this kind of international encounter, I am reminded of the words of the famous French writer, Marcel Proust, who once said that “the true journey of exploration does not consist in visiting new countries

but in looking at the world with new eyes”. So thank you all for giving us this unique opportunity to look at the issues of financing with new eyes. “Gam-Sa-Ham-Ni-Da”

Congratulatory Remarks:

KEDI-World Bank International forum on Tertiary Education Financing Reforms

Jinpyo Kim

Deputy Prime Minister and

Minister of MOE&HRD

지식기반 사회에서의 고등교육의 역할에 대한 관심이 점증하고 있는 이때, 각 국의 전문가가 함께 모여 경험과 사례를 같이 나눌 수 있는 귀한 자리를 마련한 한국교육개발원과 세계은행 관계자 여러분께 감사드립니다.

멀리 외국에서 오신 전문가 여러분, 국회 교육위원회 황우여 위원장님, 세계은행 Jamil Salmi 박사님, 한국개발연구원 김중수 원장님, 그리고 내·외빈 여러분,

오늘 “지식기반경제하의 고등교육 재정혁신” 국제 포럼에 참여해 주신데 대하여 감사드립니다.

21세기에 들어서 지식기반 사회가 본격적으로 전개되고 무역자유화의 확대에 따라 국가간 경쟁이 치열해지는 등 우리는 인류 역사상 전례 없는 변화를 겪고 있는 있습니다.

지속적인 국가경쟁력 확보를 위해서 유럽 국가들의 고등교육혁신 및 평생학습 시스템 구축(Bologna Process), 일본의 국립대학 통폐합 및 구조개혁, 싱가포르 및 인도의 고등교육 개방 정책 등에서 볼 수 있듯이, 많은 나라들이 새로운 지식·기술의 창출과 우수 인적자원 양성의 원천인 고등교육의 혁신 노력을 경주

하고 있습니다.

한국의 경우, 지난 1970년 이래 35년간 온 국민이 교육에 많은 노력을 기울여 초·중등교육 이수율은 거의 100%에 달하고, 고등학교 졸업자의 대학진학율도 80%를 상회할 정도로 세계에 유래가 없는 빠른 속도로 고등교육이 보편화되었으며,

인적자원 외에 자원이 부족한 한국으로서는 이러한 교육기회의 확대는 1970년 이래 35년 동안 경제규모는 세계 10위권에 진입하고 국민 1인당 GDP가 100배 성장하게 되는 국가발전의 원동력이었습니다.

지금 급속히 전개되는 지식기반 사회에서도 교육을 통하여 개인의 행복한 삶을 영위할 수 있는 토대를 마련하고 지식기반사회가 요구하는 인적자원을 육성하는 등 교육이 국가발전의 원동력이 될 것입니다.

이러한 인식하에 1990년대 이후 우리나라는 교육개혁을 추진하고 있으며, 상당한 성과도 거두었습니다.

초·중등 교육의 국제학업 성취도 평가에 있어서 PISA(2003년)의 경우 문제해결력 1위, 읽기 2위, 수학3위 및 과학4위를 달성하고, TIMSS(2003)의 경우 수학 2위, 과학 3위 등 우수한 성과를 달성하여 교육의 형평성과 효율성을 동시에 달성한 나라로 인정받고 있습니다.

그러나, 고등교육의 경우에는 지난 35년 동안 고등교육기관은 152개교에서 358개교로, 학생수는 19만명에서 295만명으로 증가할 정도의 양적인 성장에 비하여, 질적으로는 각종 고등교육 국제평가에서 상위권에 드는 대학이 전무할 정도로 열악한 실정입니다.

저출산 경향에 의한 인구고령화가 급속히 진행되어 대학진학 자원이 감소하고 있고, 특히, 지식기반 사회에서 국가경쟁력 유지를 위해서는 고등교육의

질적 수준을 제고해야 한다는 인식하에 고등교육 구조개혁을 강도 높게 추진하고 있습니다.

우리나라 고등교육의 질적 수준 제고를 통하여 연구역량을 획기적으로 증가시키고 세계와 경쟁할 수 있는 우수한 인적자원을 양성하기 위해 “대학 구조개혁 방안”을 2004년에 마련하여 추진하고 있습니다.

대학 경쟁력을 강화하기 위한 정책방안으로 첫째, 2010년까지 세계적 수준의 연구중심대학을 집중 육성하고 국립대학의 통·폐합 및 사립대학간 M&A촉진 등 대학의 구조개혁을 위한 제도적 기반을 마련하고 각 대학의 교육여건을 획기적으로 개선할 것이며,

둘째, 대학의 사회적 책무성을 강화하고 고등교육 수요자인 학부모·학생 및 기업의 수요가 대학교육에 적절히 반영될 수 있도록 기술이전·취업률 등 대학의 정보를 선진국 수준으로 공개하는 등 대학간 경쟁체제를 강화해 나갈 계획입니다.

셋째, 고등교육의 질 관리 체제 구축을 위하여 외국의 대학평가 전문기관과 연계하여 대학평가체제를 혁신하고 대학평가를 전담할 수 있도록 독립적이고 전문성 있는 평가기구를 설립하여 국내외 대학평가기관과의 연계를 강화해 나갈 계획입니다.

넷째, 대학경쟁력 강화를 위한 다양한 방안을 추진할 수 있도록 고등교육 재정지원 제도를 혁신하고 대학에 대한 투자를 대폭 확대할 계획입니다.

종전 모든 고등교육기관에 일률적으로 배분하던 재정지원제도를 2004년부터 대폭 정비하여 “선택과 집중”의 원칙을 강화하여 성과를 중심으로 한 평가를 통하여 우수대학에 집중 지원하여 재정투자의 효율성을 제고하고,

부족한 고등교육 재원을 확충하기 위해 BTL(Build-Transfer- Lease)방식을 도입하는 등 민간의 여유 자본이 고등교육의 질적 수준 제고를 위해 투자될 수 있도록 제도 개선을 적극 추진하고 있습니다.

이와 아울러, 종전 공급자 위주로 지원(supply-side financing)되던 재정지원 제도를 개선하여 수요자 지원(demand-side financing)을 확대해 나갈 계획입니다.

우선 학자금 지원제도를 개편하여 가계곤란자에 대한 무상장학금을 확대하고, 학생에 대한 금융기관의 학자금 융자에 대하여 정부가 지불 보증하는 제도를 2005년 하반기부터 도입하여 수혜대상자수 및 금액을 확대하며,

경제적 형편이 어려운 학생이 일과 학습을 병행할 수 있도록 대학이 일자리를 제공하고 국가가 장학금을 지원하는 “근로장학제도”를 2005년도에 도입하였습니다.

재정제도 개선과 함께, 우리나라의 고등교육에 대한 공공투자의 비중(GDP 대비 0.4%)이 OECD국가(1%)에 비하여 상당히 낮은 수준임을 감안하여 고등교육에 대한 국가의 재정투자도 획기적으로 확대할 계획입니다.

우선, “고등교육 구조조정 사업”을 금년부터 시작하여 금년 800억원, 2006년부터 연간 3,000억원의 재원으로 투자하여 국립대학 통폐합, 사립대학의 구조조정을 통한 교육여건 확충, 교육프로그램 개발 등을 적극 추진토록 하며,

세계적 연구중심대학 육성을 위해 지난 '99년부터 7년간 시행되었던 Brain Korea 21사업의 후속 사업을 2006년부터 2012년까지 연간 4,000억원(총 2조 8천억원)을 투자하여 15개 정도의 국내대학이 세계적 연구중심대학으로 발돋움 하도록 지원할 예정입니다.

이와 아울러, 지방대학이 지역자치단체, 산업체, 문화단체 등과 협력하여

지역에서 필요로 하는 우수 인적자원을 공급하고 지역의 경제·문화·복지 등 지역발전의 중심역할을 수행할 수 있도록 2004년부터 5년간 1조 4천억원으로 “지방대학 혁신역량 강화(New University for Regional Innovation) 사업”을 추진하고 있습니다.

이러한 재정지원 사업을 포함하여 국가의 고등교육에 대한 재정투자가 OECD 국가의 평균수준으로 안정적으로 확보될 수 있도록 법제화 하는 방안을 검토 중에 있습니다.

우리나라의 고등교육에 대한 국가의 재정투자와 관련하여 여전히 해결해야 할 많은 논점들이 제기되고 있습니다.

오늘 2005 KEDI-World Bank 국제포럼이 다루고 있는 주제가 고등교육에 대한 재정책확충 및 지원제도 개선의 제반 문제를 다루고 있어 우리에게 많은 시사점을 줄 것으로 생각하며,

참여한 각 국가의 고등교육이 처해 있는 상황이 다르기는 하지만, 국제포럼에서 다루어질 내용들이 각 국가의 고등교육 발전 및 재정지원 제도 개선에도 많은 도움이 되기를 바랍니다.

이와 아울러, 지금 우리가 추진 중인 고등교육 재정 확보 및 배분, 대학 구조 혁신, 그리고 고등교육 질 보장 및 평가시스템에 대하여 전문적, 객관적 입장에서 많은 조언을 주기를 바랍니다..

각 국의 고등교육 재정과 관련한 제반 이슈들을 점검하고 각 국의 사례를 통해 서로 배울 수 있는 장을 마련해 주신 한국교육개발원과 세계은행에 다시 한번 감사드리며,

국제협력 관계가 이번 국제포럼 일회에 그치지 않고 계속되어 고등교육 분야에 있어서 서로 협력할 수 있는 분위기를 만들어 주시기를 부탁드립니다.

귀중한 경험을 서로 나누기 위해 사례를 제시하고 토론에 참여해 주실 각국의 대표자 여러분, 그리고 바쁜 일정 속에서도 포럼에 참여해 주신 국내 전문가 여러분께 감사드리며, 여러분 모두의 건승을 기원합니다.

감사합니다.

2005. 4. 6.

부총리 겸 교육인적자원부장관 김진표

Congratulatory Remarks:

KEDI-World Bank International forum on Tertiary Education Financing Reforms

Woo yea Hwang

Chair, Educational Committee of
the Korean Parliament

교육인적자원부 김진표 장관님, 한국교육개발원 이종재 원장님, 한국개발연구원 김중수 원장님, 세계은행의 Dr. Jamil Salmi, 그리고 국내·외에서 오신 귀빈 여러분,

오늘 “지식기반경제하의 고등교육 재정혁신” 국제 포럼에서 축하를 하게 된 것을 영광으로 생각하며, 행사를 마련해 주신 교육인적자원부, 한국교육개발원 및 세계은행 관계자 여러분께 감사드립니다.

21세기에 접어들어 우리는 전례 없이 빠르게 변화하고 있는 세계에 살고 있습니다.

우선 과학기술의 비약적인 발전에 따라 기술·제품의 생존주기가 단축되고 신기술의 개발 및 상업화 속도가 빨라지는 것을 특징으로 하는 지식기반 경제가 확대되고 있고,

종래 상품을 대상으로 하는 무역자유화가 WTO 체제의 출범에 따라 서비

스 분야에 까지 확대되어 사회 각 분야의 경쟁력 확보를 위한 국가간 경쟁이 치열하게 전개되고 있습니다.

이와 아울러, 세계 각 국은 국민 개개인의 소득수준 향상에 따른 삶의 질 향상 요구, 고등교육 수요의 증대 및 소득 양극화 문제 등 다양한 문제에 대한 해결을 요구받고 있습니다.

각 국은 지식기반 경제하에서의 국제경쟁력 제고 및 다양한 사회문제의 해결책으로 교육이 중요함을 인식하고 질 높은 교육서비스 제공에 많은 노력을 기울이고 있는 것으로 알고 있습니다.

특히, 고등교육은 사회를 이끌어갈 인적자원을 양성하고, 사회발전에 필요한 지식·기술을 창출하며 사회에서의 계층이동을 촉진하여 소득 양극화에 따른 문제를 해결해 줄 수 있는 기제로 각광을 받고 있으며,

많은 나라들이 사회의 수요를 보다 많이 반영하여 운영되는 고등교육 체제로 발전할 수 있도록 혁신 노력을 기울이며, 고등교육 발전을 위한 합리적인 재정지원 제도 마련을 위해 노력하고 있습니다.

고등교육의 발전 및 재정지원 제도와 관련한 각 국가의 노력에 비하여, 각국의 경험, 이슈 및 사례를 국제적으로 공유할 수 있는 기회가 매우 부족했습니다.

이러한 점에서 고등교육 재정에 대한 국제적인 경향을 조망하고, 각국이 겪었던 경험과 직면해 있는 문제점 및 해결방안, 새롭게 시도하고 있는 사례들에 대해 함께 공유할 수 있는 국제 포럼을 가지게 된 것은 매우 좋은 기회라고 생각합니다.

아직 고등교육 체제가 구축되어 있지 않아 국민의 고등교육 수요를 전적으로 외국에 의존하고 있는 경우, 고등교육 체제가 구축되어 있지만 폭증하는 수요를

충족시키지 못해 대응방안을 강구하고 있는 경우, 양적인 수요는 충족시키고 있지만 질적인 측면에서의 혁신이 필요한 경우 등 각국이 처한 상황은 많이 다를 것으로 생각합니다.

각기 다른 고등교육 환경에도 불구하고, 많은 나라들이 고등교육 발전을 위한 재원을 어떻게 마련할 것인가의 문제,

마련된 재원을 공급자에게 배분할 것인가 아니면 수요자인 학생에게 지원할 것인가의 문제,

고등교육기회의 형평성 제고를 위한 효율적인 방안은 무엇인가의 문제,

그리고 고등교육의 질적 수준을 제고하기 위한 재정지원 방식은 무엇인가 등의 문제에 대해서 정책대안 마련을 위해 노력하고 있는 것으로 보입니다.

금번 국제 포럼을 통해 이러한 문제에 대한 각국의 경험을 공유하고, 새롭게 시도하고 있는 혁신 사례 등에 대해 심도 있는 토론을 통해 서로가 배울 수 있는 기회를 가지기를 기대합니다.

한국의 경우, 비교적 짧은 기간에 고등학교 졸업자의 80% 정도가 대학에 진학할 정도로 고등교육이 보편화되었습니다.

고등교육 보편화가 이루어진 배경에는 자녀의 교육에 소요되는 비용을 기꺼이 부담하고자 하는 학부모의 높은 교육열과 국가의 고등교육에 대한 재정투자가 있습니다.

많은 재정투자가 이루어져 왔지만, 고등교육의 질적 수준을 제고하기 위해서는 더 많은 투자가 이루어져야 한다는 필요성을 모두 공감하고 있는 실정입니다.

다만, 사회 복지, 환경 개선 및 문화 발전 등 국가 재정 투자를 필요로 하는 분야가 많이 대두되고 국가 재정 확충은 한계가 있어, 다양한 외국의 고등교육 재원 확보 사례를 검토하고, 우리의 실정에 맞는 방안을 도출하기 위해 노력하고 있

습니다.

이와 아울러, 투자된 국가 재정의 성과에 대한 일반 국민의 책무성 요구가 증가하고 있습니다.

교육에 대한 투자는 여타 다른 부분과는 달리 성과를 내기에는 장기간이 소요되고, 계량적으로 성과를 측정하기 어렵다는 특성이 있긴 하지만,

국민의 부담으로 조성된 재원에 대한 사회적 책무성을 제고하기 위한 방안을 국민의 대표기관인 국회 차원에서 검토하고 있습니다.

국제 포럼을 통해서 고등교육 재원 확보와 책무성 제고에 대한 각국의 사례가 검토될 수 있는 기회가 있기를 바랍니다.

고등교육 분야에 있어서 국제협력이 그 동안 학생의 해외 유학, 교수의 교류 및 공동 프로그램의 운영 등 개인 및 개별 기관 차원에서 주로 이루어져 왔지만,

금번 국제포럼을 통하여 국가 차원에서 국제협력을 할 수 있는 기회가 마련되기를 기원하며, 고등교육과 관련한 다양한 이해당사자의 정책토론을 통하여 합리적인 재원확보 및 배분방안 등이 도출될 수 있기를 바랍니다.

국제포럼에 참여하기 위해 외국에서 오신 국제기구 및 각국의 전문가 여러분, 그리고 국내 참여자 여러분, 즐겁고 지식교류가 충만한 국제 포럼이 되기를 기원하며, 건승을 빕니다.

2005. 4. 6.

국회 교육위원회 위원장 황우여

Congratulatory Remarks:

2005 KEDI-World Bank International Forum:
***Financing Reforms for Tertiary Education in the
Knowledge Economy***

Choongsoo Kim

President

Korea Development Institute

The Honorable Jin-Pyo Kim, Deputy Prime Minister and Minister of Education and Human Resources Development;

The Honorable Woo Yea Hwang, Chair of the Educational Committee of the Korean Parliament;

Dr. Jamil Salmi, Acting Director of the World Bank;

Dr. Chong Jae Lee, the President of the Korea Educational Development Institute;

Distinguished speakers,

Ladies and Gentlemen,

On behalf of the Korea Development Institute, I would like to express my honor and great pleasure in welcoming all of you who have gathered here to take part in the KEDI-World Bank conference on “Financing Reforms for Tertiary Education in the Knowledge Economy.” I would like to congratulate both KEDI and the World Bank on successfully organizing this important conference.

Let me begin my remarks by saying a few words on how the Korea Development Institute, known predominantly as an economic think tank, has in

fact been involved in education and social policy issues.

It has been over three decades since KDI was established in 1971 as a government-funded research institute to address the economic and social policy needs of Korea. In the earlier stage of KDI's evolution, the institute mainly focused on economic policy issues, preparing and drafting the Five-Year Economic Development Plans, which served as a basis for economic management.

As Korea was undergoing its democratic transition in the 1980s, social issues such as welfare and balanced regional growth came to the fore, and were accorded greater weight in KDI's research agenda. This shift in the institute's focus was in line with KDI's mission of becoming a policy-oriented research institution devoted to Korea's "development" in the broad sense of the term.

Among the wide range of research carried out at KDI, education and human resources development have been an important area of policy research. We know that the accumulation of human capital is an essential ingredient for stable economic growth. This is particularly the case for Korea, given the country's lack of natural resources. A strong and focused commitment to education therefore is *the* crucial factor for success. As is widely acknowledged, Korea's rapid economic growth to date has been achieved on the back of its abundant and well-equipped labor force.

The issue of education, especially tertiary education, is taking on greater significance as Korea endeavors to transition from an input-driven to a knowledge-based economy. In Korea's case, more than 80% of high school graduates enter college or university. Quantity and accessibility in providing higher education are not the problem. The issue therefore, concerns focusing on

qualitative improvements in the education sector. Indeed, Korea faces a critical juncture in its development, where the value of higher educational institutions as providers of advanced knowledge and human resources, has become ever more important in ensuring economic prosperity.

With the future changes in Korea's demographic structure expected to reduce the number of students seeking a tertiary education, and tuition being the main source of financing with limited government financial support, the impacts to the bottom line for financing higher educational institutions are expected to be substantial. Not only will this affect the viability of some institutions, but considerable structural changes in tertiary education will be brought about. Faced with these challenges, careful and close consideration of reform measures on tertiary education is urgently needed.

The first and critical step to a successful transformation of Korea's tertiary education requires securing the necessary financial resources, which will then lay the foundation for further reforms.

With the aim of disseminating new knowledge and stimulating discourse, the organizers of this conference have set out a broad and ambitious range of topics on financing reforms in tertiary education. One area of great importance that will be covered addresses the issue of allocation mechanisms, since public financial support for tertiary education requires efficiency in allocating funding. And one of the ways to ensure efficiency in the allocation of public funds is by monitoring and measuring the performance of institutions.

Also, the conference will focus on the importance of fostering an environment, where institutions are able to secure financial resources on their own. Lastly, since public support for education can take different forms,

particularly, direct support to individual students, student loans will be examined by sharing the experiences of various countries.

I firmly believe this conference will provide a tremendous opportunity to gain knowledge and insight for all those participating, and serve as a stepping-stone to Korea's successful transition to a more knowledge-based economy. Once again, I would like to extend my warmest welcome to all the honorable participants. I wish you all an informative and productive conference.

Thank you.

Major Dimensions of Financing Reforms



Constructing Knowledge Societies
New Challenges for Tertiary Education

Financing Reforms for Tertiary Education in the Knowledge Economy

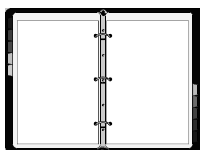
Seoul, 6-8 April 2005

 **KEDI**
Korean Educational Development Institute

EDUCATION
THE WORLD BANK

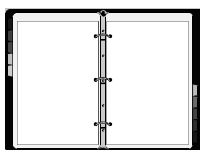


outline of the presentation...



- key financing questions
- new financing challenges
- reform and innovation trends

outline of the presentation...

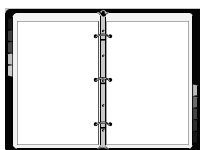


- key financing questions

financing questions

- resource mobilization
 - ◆ how much should be spent on tertiary education? (macro-level)
 - ◆ income generation at institutional level
 - ◆ who should pay, and what share?
 - ◆ when and how?
 - ◆ is it affordable? (student aid)
- resource utilization
 - ◆ how should public resources be allocated?
 - ◆ how efficient and effective are institutions?

outline of the presentation...



- key financing questions
- new financing challenges



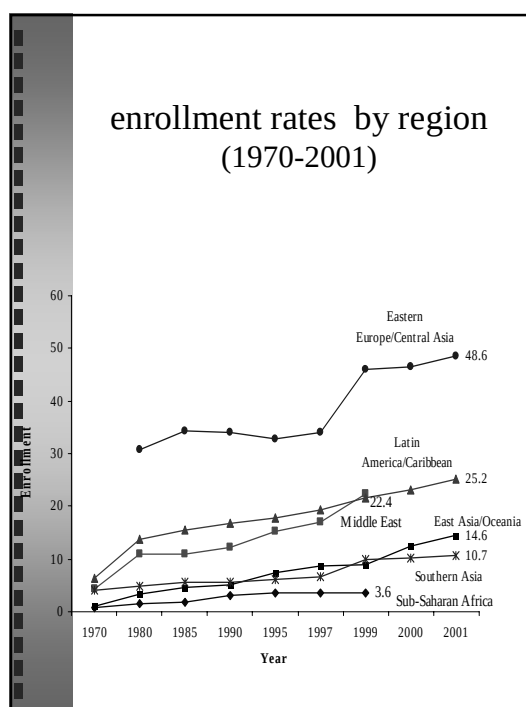
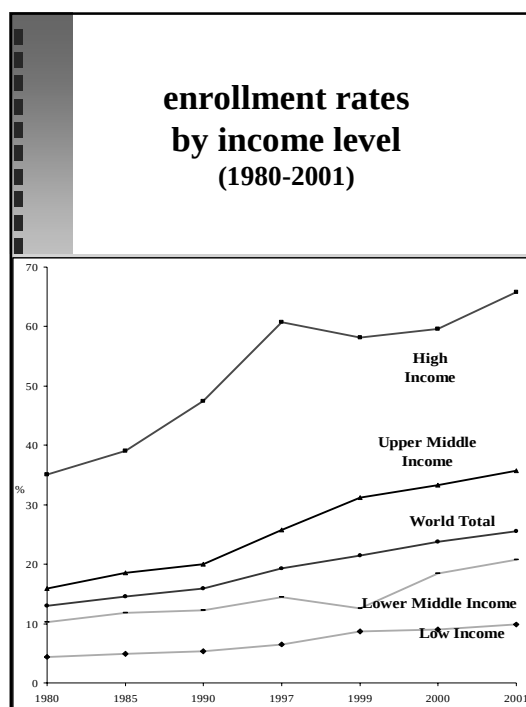
financing challenges for developing countries

- long-standing challenges
- emerging challenges

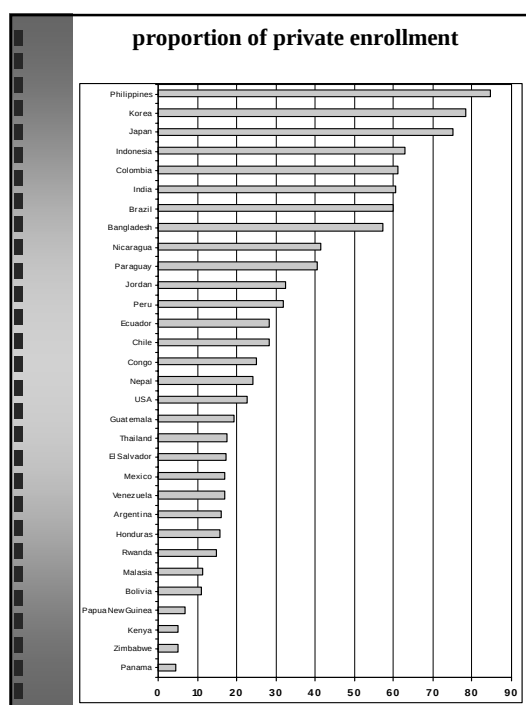
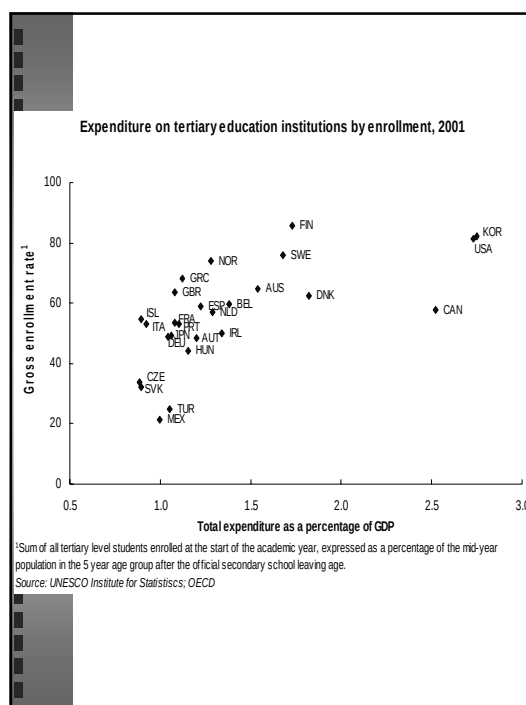


long-standing challenges

- financially sustainable
expansion



Presentation 1: Major dimensions of higher education financing – Jamil Salmi



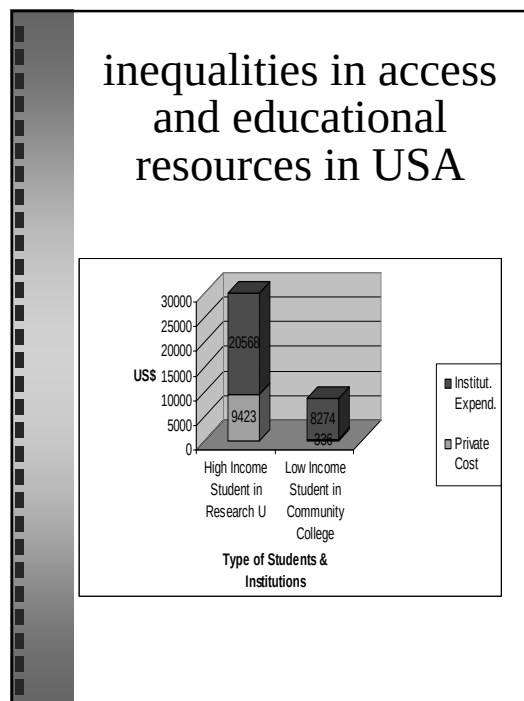
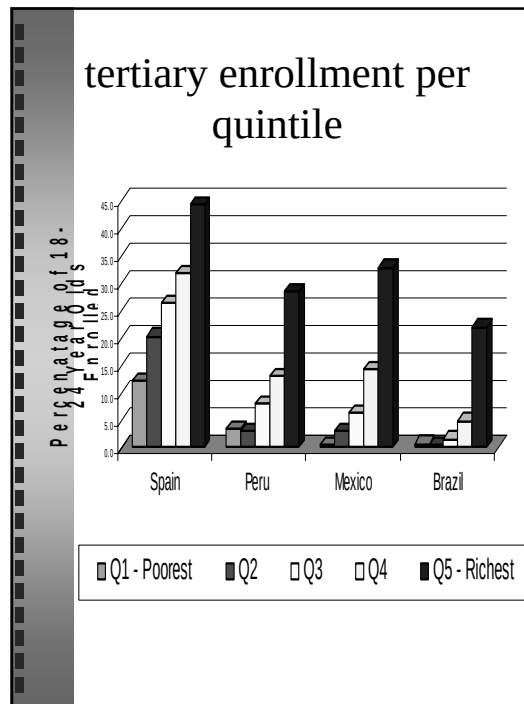
long-standing challenges

- financially sustainable expansion
- equity in access

elusive equity

Mexico (2005)

- ◆ only 1% of 15-24 year old from poorest quintile attend tertiary education
- ◆ 32% from richest quintile
- USA: probability to access Ivy League university is
 - ◆ 8.3% for lowest quintile
 - ◆ 50% for richest quintile
- France: probability to access Grande Ecole is
 - ◆ 6% for lowest quintile
 - ◆ 15% for middle quintile



long-standing challenges

- financially sustainable expansion
- equity in access
- internal efficiency

internal efficiency

- proportion of enrolled students who never finish their studies:
 - ◆ 75% in Argentina
 - ◆ 60% in Morocco
 - ◆ 30% in Australia
- proportion of students who graduate on time:
 - ◆ 13% in Italy

long-standing challenges

- financially sustainable expansion
- equity in access
- internal efficiency
- quality and relevance

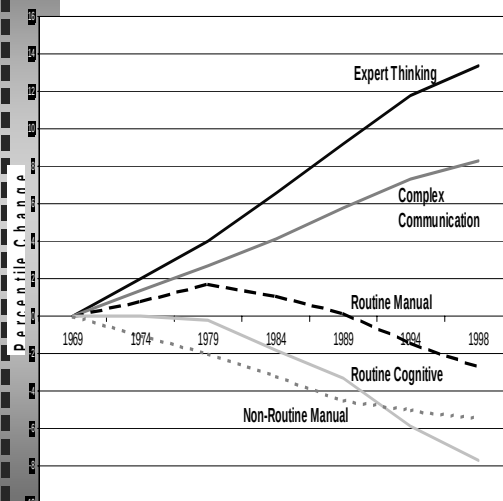
new challenges

- shrinking student population
- education and training needs
- cost of ICT
- increased competition

client needs

- knowledge-driven economic growth (and aging population) requires higher labor productivity, which means in turn
 - ◆ increased demand for skilled workers
 - ◆ changing education and training needs (methodological skills and updating of knowledge)
 - ◆ more diverse clients (lifelong learning perspective)

Changes in Job Task-Skill Demands (USA, 1960-1998)



Source: Autor, Levy, and Murnane (2003) "The Skill Content of Recent Technological Change: An Empirical Exploration," *Quarterly Journal of Economics*.

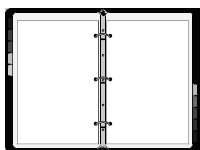
opportunity to tap potential of ICT



increased competition

- public / private
- new providers
 - ◆ long distance competition
 - ◆ franchise universities
 - ◆ corporate universities
 - ◆ media companies, libraries, museums & secondary schools
 - ◆ education brokers
- alliances and partnerships

outline of the presentation...



- key financing questions
- new financing challenges
- reform and innovation trends

funding sources (macro)

from

public funding

to

cost sharing

funding sources (institutional level)

from

dependence on public
funding

to

diversified funding

allocation mechanisms (public funding)

from

direct funding

to

indirect funding

&

from

untied funding

to

performance-based funding

student aid options

from

mortgage loans for students

to

income-contingent loans for
graduates

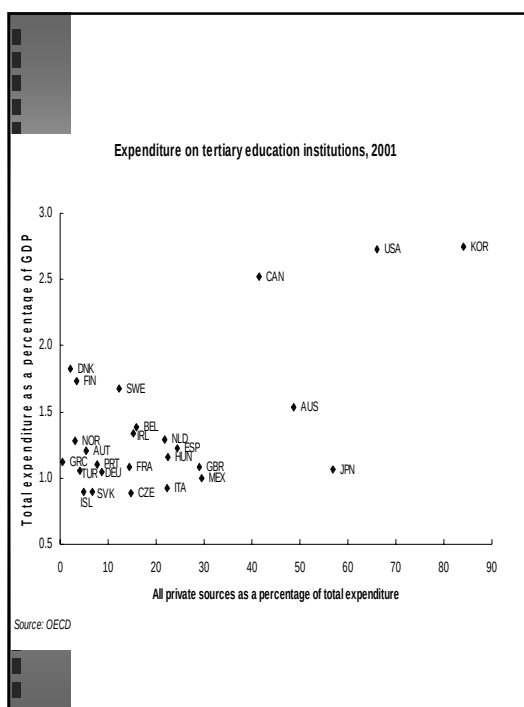
funding sources (macro)

from

public funding

to

cost sharing



who can pay?

- the State
 - central / federal government
 - provincial / state gvt
 - municipal gvt
- students / families
- firms
- society (taxes)

rationale for cost-sharing

- private benefits
- need for additional revenues
- equity concerns
- efficiency promotion

cost-sharing

- living expenditures
 - dormitories
 - food
 - transportation
- tuition fees

fees

- for everybody / dual track
- undergraduate / postgraduate
- national policy / individual institutions
- special category students (repeaters, mature, part-time, continuing ed, foreign, out of state)
- one fee or program-linked?
- ceiling / freedom to set

optimal fees policy

- universal
- reasonable level (10 to 30%)
- associated with student aid
- adjusted to cost of living index

political economy

- consultation and consensus building
- decentralization / autonomy

funding sources (institutional level)

from

dependence on public
funding

to

diversified funding

allocation mechanisms (public funding)

from
direct funding
to
indirect funding

&
from
untied funding
to
performance-based funding

direct funding to institutions

- set guidelines
- negotiated budgets

let us make a deal...



direct funding

- formula funding
 - ◆ input-based
 - ◆ output-based
- competitive funding
- benchmarking funding
- performance funding
- matching fund
- charge back

indirect funding

- vouchers
- scholarships
- tax credits
- matching grants
- student loans
- human capital contracts

Allocation Mechanism	Teaching	Research	Living Expenses	Service and Cultural Activities	Investment
Direct Funding					
Negotiated Budget	x	x	x	x	x
Formula Funding					
Input-based	x	x	x		
Performance-based	x	x			
Competitive Funding	x	x			x
Benchmarking Funding	x				
Performance Funding	x	x		x	x
Matching Fund		x			x
Charge Back	x				
Indirect Funding					
Vouchers	x				
Scholarships	x		x		
Tax Credits	x		x		
Matching Grants	x		x		
Student Loans	x		x		
Human Capital Contracts	x		x		

Allocation Mechanism	Public	Private
Direct Funding		
Negotiated Budget	x	x
Formula Funding		
Input-based	x	
Performance-based	x	
Competitive Funding	x	x
Benchmarking Funding	x	
Performance Funding	x	
Matching Fund	x	
Charge Back	x	
Indirect Funding		
Vouchers	x	x
Scholarships	x	x
Tax Credits	x	x
Matching Grants	x	
Student Loans	x	x
Human Capital Contracts	x	x

student aid options

from

mortgage loans for students

to

income-contingent loans for graduates

conclusion

the end

themes of the forum

- allocation mechanisms at the national level
- income generation at the institutional level
- student aid mechanisms
- measuring performance
- buffer bodies

Tertiary Education Finance and Reform in Korea: Achievements and New Challenges

April 6, 2005

Young Lee

Hanyang University

Organization of talk

- 1. Introduction**
- 2. Finance for Primary and Secondary Education**
- 3. Tertiary Education Finance**
- 4. Allocation and effectiveness of Government Research Grants**
 - Who Receive Gov't Research Grants?
 - Do Grants Improve Research Performance?
- 5. Recent Key Policy Issues on Tertiary Education Finance in Korea**
- 6. Summary and Reform Agenda**

1. Introduction

- Purpose of presentation:
 - overview Korea's education finance system
 - overview key issues
- Rapid expansion of education in Korea
 - Primary and secondary education: Table 1
 - HS students tripled from 1970 to 1990
 - virtually 100% entrance rate to MS and HS
 - Tertiary education: Table 2
 - More rapid expansion
 - entrance rate to TS increased from 40% to 84%
 - 2002: 87%
 - quality of education did not improve.

Table 1. Expansion of Primary and Secondary Education in Korea, 1970~2000

	Elementary school		Middle school		High school	
	No. of students	Entrance rate	No. of students	Entrance rate	No. of students	Entrance rate
1970	5,749,301	66.1	1,318,808	70.1	590,382	40.2
1975	5,599,074	77.2	2,026,823	74.7	1,123,017	41.5
1980	5,658,002	95.8	2,471,997	84.5	1,696,792	39.2
1985	4,856,752	99.2	2,782,173	90.7	2,152,802	53.8
1990	4,868,520	99.8	2,275,751	95.7	2,283,806	47.2
1995	3,905,163	99.9	2,481,848	98.5	2,157,880	72.8
2000	4,019,991	99.9	1,860,539	99.5	2,071,468	83.9

Source: KEDI(2000)

Table 2. Expansion of Tertiary Education in Korea, 1970~2000

	No. of schools	Enrollment	No. of Teachers	Student-teacher ratio
1970	232	201,436	10,435	19
1975	286	238,719	13,981	17
1980	357	601,494	20,900	29
1985	456	1,277,825	33,895	38
1990	556	1,490,809	41,920	36
1995	754	2,343,984	58,977	40
2000	1,184	3,363,549	79,136	43

Source: Kim (2001).

1. Introduction - continued

- Rapid expansion implies larger spending
 - Educational Exp/GDP increased from 4.6% in 1977 to around 8% in 2001.
- Compared to other OECD countries, Korea spend more on education: Table 3
 - Public spending is smaller but private spending is larger mainly due to a large private expenditure in tertiary education
- Expenditure on private tutoring is very large and quadrupled from 0.7% to 2.9% (1998)

Table 3. Trend and Structure of Education Finance of Korea

Type of education	Level of education	Finance method	Korea							OECD Avg	USA	Japan
			1977	1985	1990	1994	1998	2000	2001	2001	2001	2001
Public	All levels		4.60	5.73	4.86	5.14	6.84	7.1	8.2	5.6	7.3	4.6
		Public	2.44	3.13	2.97	3.29	4.32	4.3	4.8	5.0	5.1	3.5
		Private	2.16	2.60	1.89	1.85	2.52	2.8	3.4	0.7	2.3	1.2
	Pre-primary		0.00	0.07	0.09	0.12	0.15	0.5	0.1	0.4	0.40	0.75
		Public	0.00	0.02	0.02	0.03	0.05					
		Private	0.00	0.05	0.07	0.09	0.10					
	Primary & secondary		3.82	3.98	3.44	3.47	4.21	4.0	4.6	3.8	4.1	3.03
		Public	2.22	2.59	2.47	2.73	3.37	3.3				
		Private	1.60	1.39	0.97	0.74	0.84	0.7				
	Tertiary		0.78	1.68	1.33	1.55	2.48	2.5	2.7	1.4	2.7	1.1
		Public	0.22	0.52	0.48	0.53	0.90	0.6	0.4	1.0	0.9	0.5
		Private	0.56	1.16	0.85	1.02	1.58	1.9	2.3	0.3	1.8	0.6
Private			0.70	0.90	1.20	1.80	2.90					

1. Introduction - continued

- Key characteristics of Korea's education system
 - Primary and secondary education
 - emphasis on equity: Korean are very egalitarian
 - centralized finance and management system
 - low autonomy and responsibility of school
 - very limited school choice
 - Tertiary education
 - small government grants + large private spending
 - rapid expansion since the early 1990s
 - heavy reliance on private schools

2. Primary and Secondary Education Finance

- The size of expenditure for primary and secondary education in Korea (4.6%) is larger than OECD average (3.8%).
 - Implying that reform is more important than increasing the amount
 - Private (public) spending is larger than other OECD
- The central government financed 84% in 2000 and 73% in 2001
 - general educational grants: equalizing grants 60%
 - Very weak incentive for local gov'ts to finance education
 - educational taxes 40%

Table 4. Finance for Primary and Secondary Education (unit: trillion won, %)

	2000	2001
Total Expenditure	19.0 (100%)	22.6 (100%)
Central Government	16.0 (84%)	16.6 (73%)
Grants	9.1	13.0
Educational taxes	5.9	3.6
Local Government	1.1 (6%)	4.9 (22%)
Grants	1.1	1.4
Educational taxes	-	3.5
Tuition and Local Gov't Bond	1.9 (10%)	1.1 (8%)
Tuition	0.8	0.8
Local Gov't Bond	1.1	0.3

Source: Ministry of Planning and Budget (2001).

3. Tertiary Education Finance

- Rapid Expansion but poor condition
 - Student per teacher increased from 20 in 1970 to over 40 in the early 2000
 - Educational expanse per student relative to OECD average is 66%, (primary and secondary: 78%)

Table 2. Expansion of Tertiary Education in Korea, 1970~2000

	No. of schools	Enrollment	No. of Teachers	Student-teacher ratio
1970	232	201,436	10,435	19
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2000	1,184	3,363,549	79,136	43

Source: Kim (2001).

Table 4. Educational expanse per student

(ppp-based US \$, 2001)

Country	Primary	Secondary	Tertiary
Australia	5,052	7,239	12,688
France	4,777	8,107	8,837
Germany	4,237	6,620	10,504
Japan	5,771	6,534	11,164
Korea	3,714 (77%)	5,159 (79%)	6,618 (66%)
Sweden	6,295	6,482	15,188
Switzerland	6,889	10,916	20,230
UK	4,415	5,933	10,753
USK	7,560	8,779	22,234
OECD Average	4,850	6,510	10,052

Source: Education at a Glance, OECD (2004)

3. Tertiary Education Finance – cont.

- Compared to US and UK, Korea ... :
 - small government support to tertiary education
 - heavy reliance on private expenditure, i.e. tuition,
 - very small scholarship and student loans
 - coordination mechanism among various ministries are lacking
 - Korea system is closer to US than to UK system

Table 5. Sources of Finance for Universities and Colleges

	Korea(1999)		USA(1995)		United Kingdom(1999)
	Public University	Private University	Public University	Private University	
Government funds	57.5	4.8	51.0	16.4	53.3
Education			37.6	0.6	48.5
Research			13.4	15.9	4.7
Tuition fees	42.5	66.8	18.8	43	11.9
Private gifts, grants, and contracts		9.0	4.1	9.1	10.7
Endowment income		11.2	0.6	5.2	
Sales and services		2.1	22.2	21.0	17.0
Other sources		6.1	3.3	5.3	7.0

Table 6. Financial Support to Tertiary Education from the Central Government, Korea and US

	Korea(2000)			USA(2000)	
	Amount	Share		Amount	Share
	(In 100 million won, %)			(In million dollar, %)	
Total	31,558	100%	Total	40,903	100%
M of Education & HRD	23,595	73%	Dept. of Education	16,524	40%
Operating costs for public U	12,747	36%	Student financial assistance	9,363	23%
Research and others	10,848	31%	Family Education Loan Program	4,031	10%
M of Science & Technology	3,030	9%	Dept. of Health and Human Services	10,210	25%
Operating costs for public U	885	3%	Dept. of Energy	3,945	10%
Research and others	2,145	6%	NSF	2,896	7%
M of Commerce, Ind & Ener	1,855	6%	Dept. of Defense	2,615	6%
Operating costs for public U.	30	0%	NASA	2,163	5%
Research and others	1,825	5%	Dept. of Veterans Affairs	1,143	3%
M of Labor	1,096	3%	Dept. of Agriculture	505	1%
Operating costs for public U	1,066	3%	Other agencies	902	2%
Research and others	30	0%			
Other agencies	1,982	6%			

Source: 1) Ministry of Planning and Budget, various issues.

2) US Dept. of Education, Federal Support for Education Fiscal Years 1980 To 2000.

3. Tertiary Education Finance - continued

- US system: market-based system
 - no general subsidy to private university + research grants to individual researchers $\Rightarrow$ efficiency in correcting externality
 - states schools, governmental scholarship $\Rightarrow$ equity
 - heavy reliance on sales and services
- UK system: less market-based system
 - HEFC: general subsidy to schools
 - research grants to institutions (not directly to researchers)

3. Tertiary Education Finance - continued

- Lee and Woo (2001) estimate that the Korean government invested around 3.3 trillion won (2.5 billion dollars)
 - M of Education and HRD: 2.4 trillion won = 1.3 for operating cost of public schools + 1.1 for research grants and related expense
 - Other ministries: 0.9 trillion won = 0.34 + 0.53

4.1. Who Receive Gov't Research Grants?

- Co-variables / determinants of government research grants using school-level data
 - dependent variables: total outside research grants, government research grants (total, M of Edu, other ministries)
 - independent variables: public school dummy, Seoul metropolitan area, no. of students, no. of professor, no. of years since establishment, no. of SCI article per professor
 - 128 universities, figures in 2000.

Table 7. Summary Statistics, n=128.

Description of variable	Notation	mean	st. dev	min	max
Research grant received per professor (including private and public sources)	TT/Pf	14.98	26.19	0	264.17
Government research grants and related subsidies per professor	Gv/Pf	14.08	17.25	1.08	123.39
Research grants and related subsidies from ministry of education and HRD per professor	Ed/Pf	10.99	14.84	0.58	119.45
Among them, general programs	EdG/Pf	7.65	10.32	0.58	95.53
Among them, special programs	EdS/Pf	3.34	7.36	0	65.99
Research grants and related subsidies from ministries other than ministry of education and HRD per professor	OT/Pf	3.09	4.49	0	34.56
Dummy for public college/universities	State	0.20	0.40	0	1
Dummy for Seoul metropolitan area	Met	0.41	0.49	0	1
Number of student enrollment	StEnr	10,175	7,816	122	33,472
Number of professor	Pf	362	281	15	1482
Number of years since establishment	Year	29	18	4	99
Number of SCI article per professor	SCI	0.12	0.21	0	1.97

4.1. Who Receive Gov't Research Grants?

● Regression results

- research grants from M of Edu is more concentrated on public schools than that from other ministries and that from the private sector
- the location of university in metro area is not significant
- large universities received larger grants
- SCI is very strongly correlated with research grants:
research grants from the private sector > that from other ministries > that from special programs from M of Edu > that from general programs from M of Edu

Table 8. Co-variables of Government Research Grants, 2000, OLS

	(1) ln(TT/Pf)	(2) ln(Gv/Pf)	(3) ln(Ed/Pf)	(4) ln(EdG/Pf)	(5) ln(EdS/Pf)	(6) ln(OT/Pf)
Public university	0.510 (0.167)**	1.059 (0.115)**	1.117 (0.112)**	0.962 (0.102)**	1.182 (0.157)**	0.529 (0.131)**
Metropolitan area	0.076 (0.139)	0.003 (0.096)	-0.021 (0.094)	0.063 (0.085)	-0.190 (0.131)	0.045 (0.109)
Established year	-0.005 (0.005)	-0.001 (0.003)	0.000 (0.003)	0.000 (0.003)	0.001 (0.004)	0.000 (0.004)
Log (no. of student)	0.655 (0.077)**	0.195 (0.053)**	0.088 (0.052)+	0.046 (0.047)	0.199 (0.072)**	0.377 (0.060)**
SCI	2.349 (0.306)**	1.524 (0.209)**	1.237 (0.205)**	0.516 (0.186)**	1.877 (0.287)**	1.980 (0.239)**
Constant	-3.898 (0.618)**	0.283 (0.423)	1.012 (0.415)*	1.247 (0.375)**	-1.250 (0.579)*	-2.696 (0.482)**
Observations	128	128	128	128	128	128
Adjusted R-squared	0.648	0.638	0.600	0.487	0.571	0.630

Standard errors in parentheses

+ significant at 10%; * significant at 5%; ** significant at 1%

4.2. Do Research Grants Improve Performance?

- Performance Measure: NCR per professor
 - $NCR = SCI + SSCI + AHCI$
 - Looking at Changes in NCR from 1998 (or 1995) to 2002
- Sample: 172 universities in Korea
 - NCR: 0.08->0.18->0.29
- Improved more in the following universities
 - Universities in the Seoul Met area improve more
 - Universities with better research environment perform better: students per professor
 - Public universities perform better: only sig at 10% level

Table 9. Summary statistics for performance regressions

Variable	Notation	sum	mean	St. dev.	min	max
NCR per professor, 2002	NCR02R	-	0.29	0.70	0	6.72
NCR per professor, 1999	NCR99R	-	0.18	0.46	0	4.14
NCR per professor, 1995	NCR95R	-	0.08	0.28	0	3.14
Change in NCR per professor	NCR0299	-	0.11	0.35	-0.11	4.35
Dummy for public university	D_State	35	0.20	0.40	0	1
Dummy for Seoul	D_Met	61	0.35	0.48	0	1
Dummy for general	D_Gen	154	0.90	0.31	0	1
Dummy for industry university	D_Ind	18	0.10	0.31	0	1
No. of students	StEnr	1,406,344	8,176	7,527	28	33,479
Student per professor	StuProf		29.59	10.42	1.44	52.15
No. of professor	NoProf	47,427	275	278	7	1,660
Fraction of professor, natural science	NoProfA	-	13.91	12.74	0	81.82
Fraction of professor, engineering	NoProfB	-	23.11	22.91	0	100
Fraction of professor, social science	NoProfC	-	43.90	24.52	0	100
Fraction of professor, art and athlete	NoProfD	-	12.29	16.51	0	100
Fraction of professor, medical	NoProfE	-	6.78	15.07	0	97.87

4.2 Do Research Grants Improve Performance? – cont.

- Programs positively correlated with performance
 - M of Education: Sci & Tec from BK 21
 - Other Department research grants
 - KRF research grants
- But general institution-based research grants and other programs are not correlated with performance
- Implying researcher- or team-based financing better than institution-based financing

Table 11. Regressions for research performance regressions, for each program

	(1)	(2)	(3)	(4)
	'02 NCR -'99NCR	'99 NCR	'02NCR	'02 NCR -'95NCR
M of Edu BK21 total, 2000	0.009 (0.002)**	0.034 (0.006)**	0.025 (0.005)**	0.020 (0.004)**
M of Edu BK21 total, 2001	0.011 (0.002)**	0.038 (0.006)**	0.027 (0.005)**	0.023 (0.004)**
M of Edu BK21 total, 2002	0.011 (0.002)**	0.038 (0.006)**	0.027 (0.005)**	0.023 (0.004)**
BK21- natural science, 2000	0.013 (0.003)**	0.073 (0.006)**	0.059 (0.005)**	0.039 (0.005)**
BK21-social and humanity, 2000	0.008 (0.004)+	0.029 (0.010)**	0.021 (0.009)*	0.017 (0.008)*
BK21-regional university, 2000	0.002 (0.003)	-0.018 (0.007)*	-0.020 (0.006)**	-0.007 (0.005)
BK21-core, 2000	0.007 (0.003)*	0.036 (0.007)**	0.029 (0.006)**	0.014 (0.005)**
BK21-specialization, 2000	0.005 (0.004)	0.009 (0.010)	0.004 (0.008)	0.007 (0.007)

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BK21-core, 2000	0.007	0.036	0.029	0.014
	(0.003)*	(0.007)**	(0.006)**	(0.005)**
BK21-specialization, 2000	0.005	0.009	0.004	0.007
	(0.004)	(0.010)	(0.008)	(0.007)
KRF-general+specialization, 2000	0.008	0.023	0.014	0.016
	(0.003)**	(0.008)**	(0.007)*	(0.006)**
KRF-general+specialization, 2001	0.008	0.015	0.007	0.013
	(0.003)*	(0.009)+	(0.007)	(0.006)*
KRF-general+specialization, 2002	0.007	0.023	0.016	0.017
	(0.003)*	(0.008)**	(0.006)*	(0.006)**
Excellent researcher	0.013	0.028	0.016	0.023
	(0.003)**	(0.008)**	(0.007)*	(0.006)**
Joint research projects	0.012	0.026	0.013	0.021
	(0.003)**	(0.007)**	(0.006)*	(0.005)**
Base science	0.004	0.024	0.021	0.015
	(0.003)	(0.007)**	(0.006)**	(0.005)**
Protected science	0.003	0.009	0.007	0.005
	(0.003)	(0.008)	(0.007)	(0.006)
Regional university	-0.004	-0.035	-0.030	-0.016

Graduate school	0.005	0.008	0.003	0.007
	(0.004)	(0.010)	(0.008)	(0.007)
M of Edu -Diversity and specialization, 2000	-0.008	-0.066	-0.059	-0.036
	(0.005)	(0.012)**	(0.010)**	(0.009)**
M of Edu –facility for private universities, 2000	-0.007	0.003	0.009	0.000
	(0.004)	(0.010)	(0.009)	(0.008)
M of Edu – experiment facility for national uni	-0.011	-0.070	-0.059	-0.039
	(0.005)*	(0.012)**	(0.010)**	(0.009)**
M of Edu – research institute, 2001	0.004	0.016	0.012	0.008
2001	(0.003)	(0.007)*	(0.006)*	(0.005)+
M of Edu – performance pay to national uni, 2000	-0.013	-0.086	-0.073	-0.047
	(0.006)*	(0.015)**	(0.012)**	(0.011)**
M of Edu – specialization for regional uni, 2000	-0.002	-0.010	-0.008	-0.004
	(0.003)	(0.007)	(0.006)	(0.005)
M of Edu – educational reform, 2000	0.002	0.016	0.013	0.007
	(0.003)	(0.007)*	(0.006)*	(0.005)

Table 11. Regressions for research performance regressions, for each program

	(1)	(2)	(3)	(4)
	'02 NCR -'99NCR	'99 NCR	'02NCR	'02 NCR -'95NCR
MoST, designated research institute, 2000	0.007	0.031	0.024	0.016
	(0.003)*	(0.008)**	(0.007)**	(0.006)**
MoST, designated research institute, 2001	0.009	0.035	0.026	0.020
	(0.003)**	(0.008)**	(0.007)**	(0.006)**
MoST, designated research institute, 2002	0.006	0.030	0.024	0.016
	(0.003)+	(0.008)**	(0.007)**	(0.006)**
MoIC, research support, 2001	0.004	0.005	0.001	0.004
	(0.002)+	(0.005)	(0.004)	(0.004)
M of Health – research support, 2000	0.012	0.036	0.024	0.022
	(0.004)**	(0.009)**	(0.008)**	(0.007)**
M of Health – research support, 2001	0.010	0.033	0.023	0.019
	(0.004)**	(0.009)**	(0.007)**	(0.007)**
M of Health – research support, 2002	0.009	0.019	0.010	0.012
	(0.003)**	(0.008)*	(0.006)	(0.006)*

5. Issues on Tertiary Education Finance in Korea

- 1) rapid expansion of tertiary education budget
 - Poor condition + need to improve the competitiveness of tertiary education system
 - ⇒ around 50% annual increases are planned from 1.2 billions in 2005, to 3.1 billions in 2008

5. Issues on Tertiary Education Finance in Korea – cont.

- 2) restructuring of tertiary education finance
 - Intense controversy on how to restructure finance
 - This conference is held for very this reason
 - Recent main program
 - NURI (New University for Regional Innovation) program
 - the 2nd stage BK 21 (Brain Korea 21 century) program
 - Reasonably well performed: perhaps from long-term (7 yrs), team-unit support (vs. university-unit), interim evaluation
 - Specialization Grants to colleges

5. Issues on Tertiary Education Finance in Korea – cont.

- 3) restructuring of universities and colleges
 - no. of high-school graduates < no. of freshmen
 - Structural adjustment is necessary
 - Role of government and MOE???
- 4) set-up of coordination mechanism for HRD-related public finance
 - Chaired by minister of M of E, consists of 8 ministries
 - Closely tied to public finance reform
 - * Three main reforms in public finance: Performance-based budgeting; Multi-year budget; Top-down system
 - Committee for HRD becomes key budget coordination mechanism for HRD budget under new top-down system

6. Summary and Reform Agenda

- Knowledge-based economy needs
 - primary and secondary education focusing more on excellence, creativity, and diversity than on generality
 - tertiary education that can provide competitive high-quality education and research
- The paper
 - documents education finance in Korea
 - conducts comparative study among Korea, US, and UK tertiary education finance system
 - investigates allocation and effectiveness of government research grants using school-level data
 - Overview recent issues in Korea

6. Summary and Reform Agenda - continued

- Tertiary education system needs
 - Larger budget!
 - Not supply-side, but demand-side finance: US system
 - [demand-side financing for tertiary education I] scholarship and student loans instead of general grants to private universities
 - * Introduction of *Salli Mae* – type loans is not urgent
 - high default rate risk: education is a merit good in Korea
 - general subsidy, better to have targeted support for low-income + current interest-subsidy program
 - not consistent with recent public finance reform: finance role of government needs to be reduced.

6. Summary and Reform Agenda - continued

- [demand-side financing for tertiary education II]
research grants to individual researcher or research team
 - peer-group review process
 - government program for restructuring need to be very cautious.
- [committee for HRD] coordination mechanisms for supports from various ministries

Presentation 2:

Tertiary Education Finance in Korea: Achievements and New Challenges

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Abstract

The paper documents the evolution of the tertiary education finance system and review recent policy issues in Korea. The Korean education system has successfully provided educated workers necessary for the rapid industrialization of the past 40 years. However, confidence in the education system has deteriorated rapidly since the mid-1990s, and deterioration of public primary and secondary schools, and low competitiveness of colleges/universities has become a serious social problem. We suggest that overall size of tertiary education budget needs to be expanded. We also argue that demand-side financing, such as scholarship and research grants, instead of supply-side financing, need to be expanded, and that a coordination mechanism for government financing for human resource development from various ministries be set up.

1. Introduction

We will review how human resource has developed in Korea during the last half century, focusing on the role of the government. Forty years ago, Korea was one of the least developed countries. Now Korea becomes a rare example of countries that successfully transformed to developed countries. Behind this successful economic development, human resource development has played the key role.

The Korean education system has successfully provided educated workers necessary for the rapid industrialization of the past 40 years. General education at the primary school level supported by the Korean government played a great role.

Now Korea faces a new challenge to improve the quality of education. We need to improve the quality of public primary and secondary schools, and competitiveness of colleges/universities. Further decentralization of education finance, and introduction of a weak form of school choice are argued to be the main elements of education reform for primary and secondary education. For tertiary education, we suggest that scholarship and student loans and research grants need to be expanded, and that a coordination mechanism for tertiary education finance from various ministries be set up.

Korea achieved rapid expansion of education during the past 30 years. The number of high school students tripled from 590,000 in 1970, to 2,100,000 in 2000, and the number of students in post-secondary education increased from a mere 150,000 to 1,670,000 during the same period. Nearly all elementary students have continued on to middle school since the early 1980s, and virtually all middle school students have advanced to high school since the early 1990s (Table 1). Expansion of tertiary education is even more remarkable. As of 2000, the entrance ratio of general high school students to colleges and universities is 84%, which is the highest rate in the world. With the expansion of schooling, expenditure on education has increased dramatically, especially in the 1990s. The ratio of educational expenditure to GDP increased by 2% in the 1990s; from 4.9% in 1990 to 6.8% in 1998. Except for Denmark, Korea spends more money on education than any other OECD countries.

Table 1. Expansion of Primary and Secondary Education in Korea, 1970~2000

	Elementary school		Middle school		High school	
	No. of students	Entrance rate	No. of students	Entrance rate	No. of students	Entrance rate
1970	5,749,301	66.1	1,318,808	70.1	590,382	40.2
1975	5,599,074	77.2	2,026,823	74.7	1,123,017	41.5
1980	5,658,002	95.8	2,471,997	84.5	1,696,792	39.2
1985	4,856,752	99.2	2,782,173	90.7	2,152,802	53.8
1990	4,868,520	99.8	2,275,751	95.7	2,283,806	47.2
1995	3,905,163	99.9	2,481,848	98.5	2,157,880	72.8
2000	4,019,991	99.9	1,860,539	99.5	2,071,468	83.9

Source: KEDI(2000)

Table 2. Expansion of Tertiary Education in Korea, 1970~2000

	No. of schools	Enrollment	No. of Teachers	Student-teacher ratio
1970	232	201,436	10,435	19
1975	286	238,719	13,981	17
1980	357	601,494	20,900	29
1985	456	1,277,825	33,895	38
1990	556	1,490,809	41,920	36
1995	754	2,343,984	58,977	40
2000	1,184	3,363,549	79,136	43

Source: Kim (2001).

Korea invests a vast amount of resource on education. According to OECD's *Education at a Glance 2001*, the ratio of educational expenditure to GDP of Korea in 1998 is 7%, which is 1.3% higher than the OECD average.¹ Large private expenditure financing the rapid expansion of tertiary education has been the main factor that makes Korea a country spending a large sum on education.

¹ Since the definition of education in OECD(2001) is more broad, the ratio in OECD(2001) is higher than KEDI(1998).

Table 3. Trend and Structure of Education Finance of Korea

Type of education	Level of education	Finance method	Korea							OECD Avg	USA	Japan
			1977	1985	1990	1994	1998	1998	2000	1998	1998	1998
Public	All levels		4.60	5.73	4.86	5.14	6.84	7.03	7.1	5.66	6.43	4.72
		Public	2.44	3.13	2.97	3.29	4.32	4.07	4.3	5.00	4.82	3.55
		Private	2.16	2.60	1.89	1.85	2.52	2.96	2.8	0.66	1.61	1.17
	Pre-primary		0.00	0.07	0.09	0.12	0.15	0.10	0.5	0.40	0.40	0.75
		Public	0.00	0.02	0.02	0.03	0.05					0.43
		Private	0.00	0.05	0.07	0.09	0.10					0.32
	Primary & secondary		3.82	3.98	3.44	3.47	4.21	3.95	4.0	3.71	3.74	3.03
		Public	2.22	2.59	2.47	2.73	3.37	3.15	3.3	3.47	3.40	2.78
		Private	1.60	1.39	0.97	0.74	0.84	0.80	0.7	0.35	0.35	0.25
	Tertiary		0.78	1.68	1.33	1.55	2.48	2.51	2.5	1.33	2.29	1.03
		Public	0.22	0.52	0.48	0.53	0.90	0.44	0.6	1.06	1.07	0.43
		Private	0.56	1.16	0.85	1.02	1.58	2.07	1.9	0.29	1.22	0.60
Private			0.70	0.90	1.20	1.80	2.90					

Source: KEDI(1977), KEDI(1982), KEDI(1985), KEDI(1990), KEDI(1994), KEDI(1998), OECD(2001).

For primary and secondary education, with aim to achieve equity and generality, a heavily centralized system was established in Korea. Local units of the education system were established under the Ministry of education and HRD, not closely linked to local governments. Local governments provide less than 10% of the budget for primary and secondary education. Primary and secondary schools, responsible to deliver a standard, general education, were not independent institutes with responsibility and autonomy, but a lower unit of the Ministry of education and HRD without autonomy.

Two main functions of college/universities education and research have an externality problem. Without internalizing this externality, there would be less college/university education and research than the optimal amount. To correct this externality related to university education and to promote equity, governments of many countries provide subsidies to private schools, either a direct subsidy to a school based on the number of students, as in the UK , or indirect subsidies through government scholarships and student loans. In addition to these types of subsidy to university education, governments of many countries also subsidize university research.

In Korea, private colleges/universities play a significant role in education and research.

Private colleges/universities educate three fourths of students and perform around half of government supported research. However, government subsidies for education at private universities, and government scholarships and student loans have been very small. As a result, private universities are heavily dependent on tuition for their revenue and some face financial difficulties. There exists near consensus as to the need for expansion of government finance for universities, but the specific form of government support is very controversial. The choice of the specific form from general, grants, scholarships, or student loans is critical in determining the future of the tertiary education system.

As society transitions from industrial mass production to a knowledge-base, demand for education also changes from standard, general education; to education emphasizing quality, creativity, and diversity. This transition to a knowledge-based economy increases the importance of tertiary education institutions because they are the leading institutions for generating and disseminating new ideas, knowledge, and information. Unfortunately, the education system of Korea is not currently making a smooth transition, and we can frequently read news articles about the public education crisis. It is still true, though, that Korea's education system successfully supplied human capital for the modernization of Korea, and that a centralized education system emphasizing a general, standard education is more effective for growth and prosperity in the early period of industrialization. This inertia of the current education system to new demand caused by vested interests and lack of human capital necessary for the new institutions (Lanyi and Lee, 2001; Lim 2001).

The rest of the paper is organized as follows. In Section 2, we document education finance for primary and secondary education. In Section 3, we overview education finance for tertiary education in Korea and compare it with the US and the UK. In Section 4, we report summary of preliminary research on allocation of research grants and the effect of government supports. Section 5, we discuss recent government reform efforts on human resource development in Korea. In Section 6, we summarize and discuss policy options.

2. Finance for Primary and Secondary Education in Korea

The size of expenditure for primary and secondary education in Korea is comparable to those of other OECD countries. Public (private) share of expenditure is relatively smaller (larger) in Korea than in other OECD countries. Smaller public expenditure for primary and secondary education, and relatively poor school facility/equipment environment imply a need

for increasing public investment for primary and secondary education. It should be noted, however, that education reform improving efficacy of public spending is much more critical than simply increasing public spending.

Table 4. Finance for Primary and Secondary Education (unit: trillion won, %)

	2000	2001
Total Expenditure	19.0 (100%)	22.6 (100%)
Central Government	16.0 (84%)	16.6 (73%)
Grants	9.1	13.0
Educational taxes	5.9	3.6
Local Government	1.1 (6%)	4.9 (22%)
Grants	1.1	1.4
Educational taxes	-	3.5
Tuition and Local Gov't Bond	1.9 (10%)	1.1 (8%)
Tuition	0.8	0.8
Local Gov't Bond	1.1	0.3

Source: Ministry of Planning and Budget (2001).

The key characteristic of primary and secondary education system in Korea is that it is highly centralized. More than 80% of the budget for primary and secondary education was financed by the central government in 2000. Local governments provided only 6% of the budget; the rest comes from tuition and others. Around 60% of the central government's budget for primary and secondary education is general educational grants which are transferred to local education units. The education grants have increased from 11.8% of internal taxes² to 13% in 2001. Basically, educational grants are equalizing grants, though equalization of expense per pupil occurs partially due to the fact that the total amount of the grants is fixed at 13% of internal taxes. The remaining 40% of the central government's budget for primary and secondary education is from educational taxes. Educational taxes take the form of surtaxes on liquor, a special excise tax, registration, property, etc. In 2001, around half of centrally administrated educational taxes were delegated to local governments, providing the initial step for decentralization. Actual decentralization to local governments, however, will not occur until the linkage between local governments and local education units are strengthened. Not only do local governments provide insignificant amount of finance to schools, but also they are not

² Internal taxes is all national taxes excluding customs duties and ear-marked taxes such as transportation tax, education tax, and special tax for rural development. Internal taxes include income tax, corporate tax, inheritance tax, gift tax, valued added tax, etc.

tightly linked to local education units. Local educational units are semi-independent entities in charge of primary and secondary education in their locality. From consideration of political independence and specialization, local education units are not tightly linked to local governments, and local governments provide minimum amount of finance to education, usually only up to the amount of legal obligation. Considering that education is a local public good, strengthening the linkage between local education units and local government is essential, and local governments need to take greater responsibility in providing at least in facility and equipment.

3. Tertiary Education Finance of Korea

Financial support for tertiary education from the government has been relatively small, and private expenditure, mainly tuition, has been the main financing source for a rapid expansion of tertiary education in Korea. Table 5 documents the structure of tertiary education finance for Korea, the US, and the UK. In Korea, more than half of the finance for public colleges/universities is accounted for by government support, while less than 5% of finance for private schools is accounted for by government support. In the United States, public finance of colleges/universities' heavily depend on government support, around half of the finance is accounted for by government grants. Private colleges/universities in the US also receive considerable financial support from the government. Note, however, that virtually all the financial support for private schools is in the form of research grants, not general grants. Unlike the US, the UK government provides a general subsidy to universities using a formula based on the number of students, subject-related factors, student-related factors, and institution-related factors (HEFCE, 2000).³ Both in the US and the UK, colleges/universities finance around 20% of their income from affiliated enterprises and hospitals.

In Korea, tertiary education finance from the government has not been systematic, and even basic statistics regarding the amount and composition are not readily available. Lee and Woo (2001) estimate that the government invested around 3.3 trillion won, or 2.5 billion dollars, for tertiary education in 2000. The Ministry of education and HRD invested around 2.4 trillion won, 73% of the total amount. The Ministry of education and HRD provides not only operating costs to public colleges/universities (1.3 trillion won), but also research grants and related expenses to public and private colleges/universities (1.1 trillion won).⁴ Other ministries also provide 0.9 trillion won, or 27% of the total government finance for tertiary education.

³ The United Kingdom maintains a very centralized government finance system for tertiary education.

⁴ This research grants and related expenses include not only research grants but also subsidies for facilities and equipment. We are forced to use this combined item since many government programs have research grant element and subsidies for facilities and equipment at the same time.

Interestingly, other ministries not only provide research grants and related expenses to colleges/universities, but also have colleges/universities under them and provide considerable amount of financing to the colleges/universities.

This involvement of a number of ministries in financing tertiary education can be also observed in the United States. The US government financing of tertiary education, however, is more systematic, and an area for each agency is much more clearly established. Table 6 compares government education finance for tertiary education in Korea and the US by the related ministry/agency. As mentioned earlier, both Korea and the US, unlike the UK have a diversified system and several ministries/agencies are financing tertiary education. However, scrutiny reveals several distinctions. First, the Ministry of education and HRD of us does not provide research grants, and almost all expenditure is scholarships and student loans. The Ministry of education and HRD delegated research finance to an independent agency, the National Science Foundation. Second, most recipients of research grants in the US are individual researchers, while the government of Korea provides research grants to universities or research institutes.

Table 5. Sources of Finance for Universities and Colleges

	Korea(1999)		USA(1995)		United Kingdom(1999)
	Public University	Private University	Public University	Private University	
Government funds	57.5	4.8	51.0	16.4	53.3
Education			37.6	0.6	48.5
Research			13.4	15.9	4.7
Tuition fees	42.5	66.8	18.8	43	11.9
Private gifts, grants, and contracts		9.0	4.1	9.1	10.7
Endowment income		11.2	0.6	5.2	
Sales and services		2.1	22.2	21.0	17.0
Other sources		6.1	3.3	5.3	7.0

Table 6. Financial Support to Tertiary Education from the Central Government, Korea and US

	Korea(2000)			USA(2000)	
	Amount	Share		Amount	Share
	(In 100 million won, %)			(In million dollars, %)	
Total	31,558	100%	Total	40,903	100%
M of Education & HRD	23,595	73%	Department of Education	16,524	40%
Operating costs for public U Research and related expense	12,747	36%	Student financial assistance Family Education Loan Program	9,363	23%
	10,848	31%		4,031	10%
M of Science & Technology	3,030	9%	Department of Health and Human Services	10,210	25%
Operating costs for public U Research and related expense	885	3%	Department of Energy	3,945	10%
	2,145	6%	NSF	2,896	7%
M of Commerce, Ind & Eng	1,855	6%	Department of Defense	2,615	6%
Operating costs for public U Research and related expense	30	0%	NASA	2,163	5%
	1,825	5%	Department of Veterans Affairs	1,143	3%
M of Labor	1,096	3%	Department of Agriculture	505	1%
Operating costs for public U Research and related expense	1,066	3%	Other agencies	902	2%
	30	0%			
Other agencies	1,982	6%			

Source: 1) Ministry of Planning and Budget, Budget, various issues.

2) US Dept. of Education, Federal Support for Education Fiscal Years 1980 To 2000.

4. Allocation and effectiveness of Government Research Grants

In this section, we examine how well government research grants are allocated and how effective these government grants are in encouraging better performance in university research, using university-level data. The analysis in this section is an example of research-based reform approach.

4.1 Allocation of research grants

In this section, we investigate co-variates/determinants of government research grants in Korea. We are interested in which, and to what extent, characteristics of a university are associated with the amount of research grants from the government. Characteristics examined are ownership (dummy for public universities), location (dummy for universities in Seoul metropolitan area), school age, school size (proxied by the number of students), and research performance (proxied by the number of SCI articles per professor). The dependent variables are the total amount of external research grants from both government and the private sector, the amount of total government research grants and related expenses, and the amount of government grants and related expenses by the Ministry of education and HRD, and that by other ministries.

The unit of observation in our analysis is the university, and the sample year is 2000. After dropping observations with missing values for any of the variables used in the analysis, we end up with 128 universities. This sample covers almost all large 4-year universities and around 75% of total government research grants and related expenses. Table 7 reports basic summary statistics for variables. The average amount of total research grants per professor from government and the private sector is 15 million won with a standard deviation of 26 million won. The average amount of government research grants and related subsidies per professor is 14 million won with a standard deviation of 17 million won. As mentioned earlier, government research grants and related expense include general grants for facilities and equipment, which are not included in government research grants in the balance sheet of universities. Around 70% of government research grants and related expenses come from the Ministry of education and HRD. Among the 128 universities in the sample, 25 universities are public, and 52 are located in the Seoul metropolitan area. On average, 360 professors teach around 10,000 students. The number of SCI articles per professor in 1997 was 0.12 with variation from 0 to 1.97.

Table 7. Summary Statistics, n=128.

Description of variable	Notation	mean	st. dev	min	max
Research grant received per professor (including private and public sources)	TT/Pf	14.98	26.19	0	264.17
Government research grants and related subsidies per professor	Gv/Pf	14.08	17.25	1.08	123.39
Research grants and related subsidies from ministry of education and HRD per professor	Ed/Pf	10.99	14.84	0.58	119.45
Among them, general programs	EdG/Pf	7.65	10.32	0.58	95.53
Among them, special programs	EdS/Pf	3.34	7.36	0	65.99
Research grants and related subsidies from ministries other than ministry of education and HRD per professor	OT/Pf	3.09	4.49	0	34.56
Dummy for public college/universities	State	0.20	0.40	0	1
Dummy for Seoul metropolitan area	Met	0.41	0.49	0	1
Number of student enrollment	StEnr	10,175	7,816	122	33,472
Number of professor	Pf	362	281	15	1482
Number of years since establishment	Year	29	18	4	99
Number of SCI article per professor	SCI	0.12	0.21	0	1.97

Table 8 reports OLS regression results of research grants on various characteristics of school. In general, the public university dummy, school size, and SCI are estimated to be significant in regressions. Comparison of regression results reveals several interesting patterns about differences among various types of research grants. First, research grants and related expenses from the Ministry of education and HRD are more concentrated on public schools than that from other ministries and that from the private sector.⁵ Second, once we control for other characteristics, the location of a university in the Seoul metropolitan area is not significantly associated with the amount of research grants. Third, large universities tend to receive larger grants, perhaps indicating that several large universities are developing into a research university. Fourth, school research performance as represented by SCI per professor is strongly associated with the amount research grants. This tendency is stronger in the order of research grants from the private sector, research grants and related expense from other ministries, those from special programs of Ministry of education and HRD, and those from general programs of Ministry of education and HRD. This order is exactly what we expected.

⁵ One can infer the coefficient for the private sector by comparing the coefficient for the total amount from the government and the private sector in column (1) and the amount from the government in column

Table 8. Co-variates of Government Research Grants, 2000, OLS

	(1) ln(TT/Pf)	(2) ln(Gv/Pf)	(3) ln(Ed/Pf)	(4) ln(EdG/Pf)	(5) ln(EdS/Pf)	(6) ln(OT/Pf)
Public university	0.510 (0.167)**	1.059 (0.115)**	1.117 (0.112)**	0.962 (0.102)**	1.182 (0.157)**	0.529 (0.131)**
Metropolitan area	0.076 (0.139)	0.003 (0.096)	-0.021 (0.094)	0.063 (0.085)	-0.190 (0.131)	0.045 (0.109)
Established year	-0.005 (0.005)	-0.001 (0.003)	0.000 (0.003)	0.000 (0.003)	0.001 (0.004)	0.000 (0.004)
Log (no. of student)	0.655 (0.077)**	0.195 (0.053)**	0.088 (0.052)+	0.046 (0.047)	0.199 (0.072)**	0.377 (0.060)**
SCI	2.349 (0.306)**	1.524 (0.209)**	1.237 (0.205)**	0.516 (0.186)**	1.877 (0.287)**	1.980 (0.239)**
Constant	-3.898 (0.618)**	0.283 (0.423)	1.012 (0.415)*	1.247 (0.375)**	-1.250 (0.579)*	-2.696 (0.482)**
Observations	128	128	128	128	128	128
Adjusted R-squared	0.648	0.638	0.600	0.487	0.571	0.630

Standard errors in parentheses

+ significant at 10%; * significant at 5%; ** significant at 1%

4.2 effectiveness of research grants

Ultimate goal of research grants to universities is to encourage researchers in universities to improve their research performance. In this section, we empirically examine how research performance measured by the number of publications in academic journals is correlated with government research grants. Note that some government grants have multiple purposes better education, occupational training, industry-university cooperation as well as research.

We examine how changes in research performance from 1999 to 2002 as measured by the number of NCR publication per professor is correlated with government grants in 2000. Data limitation forces us to use government grants in 2000, instead of 1999. Note that we examine the changes in research performance not the level of performance to disentangle the effect of government grants. NCR is an combined measure of SCI for engineering and natural science, SSCI for social science, and AHCI for humanity.

As independent variables, in addition to the amount of government grants we include various school characteristics: location of university, dummy for public university, type of university, student per professor, size of school represented by (the log of) the number of student. Summary statistics are reported in table 9. The dependent variable, the number of NCR per professor, increased dramatically from 0.08 in 1995, 0.18 in 1999, to 0.29 in 2002. The variation

(2).

in NCR per professor across schools are very large. Main regression results in tables 10 and 11 can be summarized as follows. First, universities in the Seoul Metropolitan area improved their research performance more than others. Second, universities with better research environment in terms of students per professor perform better. Third, public universities improved more, though significant only at 10%. Finally, some programs are positively correlated with improvement in performance, while others not. **Natural science support program of BK 21, KRF research grants, and research grants from other ministries are positively correlated with changes in research performance. General institution-based research grants and other programs are not correlated with performance improvement, implying researcher-based financing better than institution-based financing.**

Table 9. Summary statistics for performance regressions

Variable	Notation	sum	mean	St. dev.	min	max
NCR per professor, 2002	NCR02R	-	0.29	0.70	0	6.72
NCR per professor, 1999	NCR99R	-	0.18	0.46	0	4.14
NCR per professor, 1995	NCR95R	-	0.08	0.28	0	3.14
Change in NCR per professor	NCR0299	-	0.11	0.35	-0.11	4.35
Dummy for public university	D_State	35	0.20	0.40	0	1
Dummy for Seoul	D_Met	61	0.35	0.48	0	1
Dummy for general	D_Gen	154	0.90	0.31	0	1
Dummy for industry university	D_Ind	18	0.10	0.31	0	1
No. of students	StEnr	1,406,344	8,176	7,527	28	33,479
Student per professor	StuProf		29.59	10.42	1.44	52.15
No. of professor	NoProf	47,427	275	278	7	1,660
Fraction of professor, natural science	NoProfA	-	13.91	12.74	0	81.82
Fraction of professor, engineering	NoProfB	-	23.11	22.91	0	100
Fraction of professor, social science	NoProfC	-	43.90	24.52	0	100
Fraction of professor, art and athlete	NoProfD	-	12.29	16.51	0	100
Fraction of professor, medical	NoProfE	-	6.78	15.07	0	97.87
M of Edu, BK21, 2000	Ed30_00	195,186	1,135	7,332	0	94,700
M of Edu, BK21, 2001	Ed30_01	164,487	956	5,126	0	64,800
M of Edu, BK21, 2002	Ed30_02	130,312	758	3,300	0	39,500
M of Edu, BK21 – natural sci.	Ed302_00	11,000	64	269	0	2,040
M of Edu, BK21 – facility	Ed303_00	86,952	506	3,440	0	42,200
M of Edu, BK21 – social & hum	Ed304_00	50,000	291	3,812	0	50,000
M of Edu, BK21 – regional univ.	Ed305_00	10,000	58	308	0	2,520
M of Edu, BK21 – core research	Ed306_00	48,234	280	692	0	3,313
M of Edu, BK21 – specialization	Ed301_00	37,954	221	583	0	3,870
M of Edu, KRF, 2000	Ed11_00	110,251	641	1,317	0	8,107
M of Edu, KRF, 2001	Ed11_01	150,878	877	8,575	0	113,000
M of Edu, KRF, 2002	Ed11_02	169,559	986	2,113	0	17,300
Excellent research, 2002	Ed113_02	25,185	146	290	0	2,271
Joint research, 2002	Ed114_02	36,600	213	412	0	2,226
Base science, 2002	Ed115_02	94,834	551	1,248	0	10,800
Protected sci, 2002	Ed116_02	4,684	27	54	0	442
Regional uni, 2002	Ed117_02	3,233	19	38	0	277
Graduate school, 2002	Ed118_02	10,958	64	274	0	2,020
Diversity and specialization, 2000	Ed12_00	41,449	241	274	0	1,400
Facility for private uni, 2000	Ed13_00	72,427	421	486	0	2,000
National uni, experiment	Ed14_00	101,706	591	1,667	0	10,900
University research institute	Ed22_01	14,850	86	237	0	2,170
Performance pay to national uni	Ed25_00	18,005	105	304	0	2,239
Specialization for regional uni	Ed27_00	14,475	84	211	0	900
Educational reform	Ed28_00	14,650	85	225	0	780
MOST, designated res ins, 2000	ST17_00	16,760	97	392	0	3,758
MOST, designated res ins, 2001	ST17_01	26,548	154	641	0	6,039
MOST, designated res ins, 2002	ST17_02	22,414	130	576	0	6,446
MOIC, research support, 2001	IC15_01	47,951	279	458	0	2,275
MoH, research support, 2000	HM14_00	26,506	154	717	0	7,743
MoH, research support, 2001	HM14_01	35,024	204	938	0	10,800
MoH, research support, 2002	HM14_02	30,173	175	723	0	7,770

Table 10. Baseline regressions for research performance regressions

<i>Dependent variable is ...</i>	NCR2002- NCR1999	NCR 2002	NCR 1999	NCR 1995	NCR2002- NCR1995
Dummy for public university	0.033	0.088	0.055	0.026	0.062
	(0.019)+	(0.048)+	(0.040)	(0.029)	(0.035)+
Dummy for Seoul metro	0.027	0.083	0.056	0.023	0.060
	(0.015)+	(0.037)*	(0.031)+	(0.022)	(0.027)*
Dummy for general university	0.054	0.127	0.073	0.039	0.088
	(0.025)*	(0.062)*	(0.052)	(0.038)	(0.046)+
Log(students)	0.005	0.076	0.072	0.049	0.027
	(0.008)	(0.020)**	(0.017)**	(0.012)**	(0.015)+
Student per professor	-0.002	-0.012	-0.010	-0.007	-0.006
	(0.001)+	(0.003)**	(0.002)**	(0.002)**	(0.002)**
Fraction of professor, engineering	0.000	0.000	0.000	0.000	0.000
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
Fraction of professor, social science	-0.002	-0.004	-0.003	-0.001	-0.003
	(0.001)**	(0.002)**	(0.001)*	(0.001)	(0.001)**
Fraction of professor, art and athlete	-0.002	-0.005	-0.004	-0.002	-0.003
	(0.001)*	(0.002)**	(0.001)*	(0.001)+	(0.001)**
Fraction of professor, medical	0.000	-0.003	-0.003	-0.002	-0.001
	(0.001)	(0.002)	(0.002)	(0.001)*	(0.001)
Constant	0.111	0.045	-0.065	-0.092	0.137
	(0.082)	(0.206)	(0.172)	(0.124)	(0.151)
No. of obs	172	172	172	172	172
R-squared	0.277	0.432	0.359	0.229	0.351

Table 11. Regressions for research performance regressions, for each program

	(1)	(2)	(3)	(4)
	'02 NCR -'99NCR	'99 NCR	'02NCR	'02 NCR -'95NCR
M of Edu BK21 total, 2000	0.009 (0.002)**	0.034 (0.006)**	0.025 (0.005)**	0.020 (0.004)**
M of Edu BK21 total, 2001	0.011 (0.002)**	0.038 (0.006)**	0.027 (0.005)**	0.023 (0.004)**
M of Edu BK21 total, 2002	0.011 (0.002)**	0.038 (0.006)**	0.027 (0.005)**	0.023 (0.004)**
BK21- natural science, 2000	0.013 (0.003)**	0.073 (0.006)**	0.059 (0.005)**	0.039 (0.005)**
BK21-social and humanity, 2000	0.008 (0.004)+	0.029 (0.010)**	0.021 (0.009)*	0.017 (0.008)*
BK21-regional university, 2000	0.002 (0.003)	-0.018 (0.007)*	-0.020 (0.006)**	-0.007 (0.005)
BK21-core, 2000	0.007 (0.003)*	0.036 (0.007)**	0.029 (0.006)**	0.014 (0.005)**
BK21-specialization, 2000	0.005 (0.004)	0.009 (0.010)	0.004 (0.008)	0.007 (0.007)
KRF-general+specialization, 2000	0.008 (0.003)**	0.023 (0.008)**	0.014 (0.007)*	0.016 (0.006)**
KRF-general+specialization, 2001	0.008 (0.003)*	0.015 (0.009)+	0.007 (0.007)	0.013 (0.006)*
KRF-general+specialization, 2002	0.007 (0.003)*	0.023 (0.008)**	0.016 (0.006)*	0.017 (0.006)**
Excellent researcher	0.013 (0.003)**	0.028 (0.008)**	0.016 (0.007)*	0.023 (0.006)**
Joint research projects	0.012 (0.003)**	0.026 (0.007)**	0.013 (0.006)*	0.021 (0.005)**
Base science	0.004 (0.003)	0.024 (0.007)**	0.021 (0.006)**	0.015 (0.005)**
Protected science	0.003 (0.003)	0.009 (0.008)	0.007 (0.007)	0.005 (0.006)
Regional university	-0.004 (0.004)	-0.035 (0.009)**	-0.030 (0.008)**	-0.016 (0.007)*
Graduate school	0.005 (0.004)	0.008 (0.010)	0.003 (0.008)	0.007 (0.007)
M of Edu -Diversity and specialization, 2000	-0.008 (0.005)	-0.066 (0.012)**	-0.059 (0.010)**	-0.036 (0.009)**
M of Edu –facility for private universities, 2000	-0.007 (0.004)	0.003 (0.010)	0.009 (0.009)	0.000 (0.008)
M of Edu – experiment facility for national uni	-0.011 (0.005)*	-0.070 (0.012)**	-0.059 (0.010)**	-0.039 (0.009)**
M of Edu – research institute, 2001	0.004 (0.003)	0.016 (0.007)*	0.012 (0.006)*	0.008 (0.005)+
M of Edu – performance pay to national uni, 2000	-0.013 (0.006)*	-0.086 (0.015)**	-0.073 (0.012)**	-0.047 (0.011)**
M of Edu – specialization for regional uni, 2000	-0.002 (0.003)	-0.010 (0.007)	-0.008 (0.006)	-0.004 (0.005)
M of Edu – educational reform, 2000	0.002 (0.003)	0.016 (0.007)*	0.013 (0.006)*	0.007 (0.005)

Table 11. Regressions for research performance regressions, for each program

	(1)	(2)	(3)	(4)
	'02 NCR -'99NCR	'99 NCR	'02NCR	'02 NCR -'95NCR
MoST, designated research institute, 2000	0.007	0.031	0.024	0.016
	(0.003)*	(0.008)**	(0.007)**	(0.006)**
MoST, designated research institute, 2001	0.009	0.035	0.026	0.020
	(0.003)**	(0.008)**	(0.007)**	(0.006)**
MoST, designated research institute, 2002	0.006	0.030	0.024	0.016
	(0.003)+	(0.008)**	(0.007)**	(0.006)**
MoIC, research support, 2001	0.004	0.005	0.001	0.004
	(0.002)+	(0.005)	(0.004)	(0.004)
M of Health – research support, 2000	0.012	0.036	0.024	0.022
	(0.004)**	(0.009)**	(0.008)**	(0.007)**
M of Health – research support, 2001	0.010	0.033	0.023	0.019
	(0.004)**	(0.009)**	(0.007)**	(0.007)**
M of Health – research support, 2002	0.009	0.019	0.010	0.012
	(0.003)**	(0.008)*	(0.006)	(0.006)*

5. Recent Key Policy Issues on Tertiary Education Finance in Korea

5.1 rapid expansion of tertiary education budget

Recognizing poor condition of tertiary education relative to primary and secondary education and the need to enhance the competitiveness of tertiary education system, the central government recently has increased the tertiary education budget. A very rapid expansion of tertiary education budget for the next 4 years is also proposed by Ministry of Education and HRD. The budget is planned to increase from 1.2 billions in 2005, to 1.8 billions in 2006, 2.3 billions in 2007, 3.1 billions in 2008, implying around 50% annual increases.

5.2 restructuring of tertiary education finance

This very conference is initiated from government's keen interest in restructuring tertiary education finance in Korea. As the total budget allocation to tertiary education increases, there has been intense debate on where the budget should be used. Recent main programs include NURI (New University for Regional Innovation) program for regional universities, the second-stage BK 21 (Brain Korea 21 century) program for supporting HRD in the area of science and technology in leading universities, grants to colleges for encouraging specialization, and a large increase in student loans and scholarship including new student assistance to engineering students. The first-stage BK 21 program, ending this year, appears to be reasonably successful from the following reasons. The BK 21 program provides support to team instead of university, which makes it easier to specify the goal of the program and to measure the

performance. The program is a long-term program, which encourages long-term perspective of the selected teams. Interim evaluations also provide incentives to the selected teams to perform better.

As discussed in section 3, tertiary education finance system in Korea takes a mixed form of the US and the UK system. We think that Korea should position itself more toward the US system. Contrary to our this expectation, the Ministry of Education and HRD considers to set up research evaluation unit similar to UK's RAE(Research Assessment Exercise).

The Korean government plans to introduce a large-scale *Salli Mae* – type student loans program. We have some reservations about this plan, worrying about a possible very high default rates and limitation of general subsidy (relative to programs targeted to low- and middle-income families).

5.3 restructuring of universities and colleges

As the number of high-school graduates becomes smaller than the official number of freshmen, closing of less competent universities and colleges becomes inevitable in Korea. To induce restructuring of universities the government plans to provide financial incentives to university merge. There still exists controversy about what is the best way to induce restructuring without causing too much inefficiency from government involvements in the process.

5.4 set-up of coordination mechanism for HRD-related public finance

In 2000, coordination committee for human resource development (Committee for HRD) was formed. This committee is chaired by minister of ministry education and human resource development, and consists of ministers of eight human resource development ministries.

This formation of coordination committed is tightly connected to public finance reforms. Three major components of public finance reforms in process are performance-based public finance, multi-year budgeting, and top-down system. Top-down system decentralizes budgeting to each ministry or a coordination committee from the central budget ministry. At the same time it strengthen the responsibility of ministry. Along this line, coordination of HRD budget across ministries becomes a responsibility of Committee for HRD. Committee for HRD should be strengthened to become a coordination body for HRD budget in Korea.

6. Summary and Reform Agenda

As a country transitions from a mass-production economy to a knowledge-based economy, the education system also needs to transform itself accordingly. Knowledge-based economy demands that primary and secondary education focus more on excellence and creativity than on generality, and that tertiary education provide competitive high-quality education and research. In this overview article, we document education finance in Korea and perform a comparative study on the tertiary education finance system in Korea, the US, and the UK.

Policy recommendations for tertiary education can be summarized in the following four points. The perspective we take in deriving the policy recommendations is that the market-based university finance system in the US works better than the UK system where the government plays an active role in allocating funds among universities.

The first recommendation is public funding for tertiary education should be increased. The ratio of public expenditure on tertiary education to GDP in Korea is significantly lower than other OECD countries. We need more competitive universities/colleges to survive international competition in knowledge-based economy. Recent plan to increase tertiary education budget dramatically by 2008 is encouraging in this sense.

Second, the scholarship and student loan program needs to be expanded. We think that expanding the current ‘interest-subsidized’ student loans and scholarship targeted to low- and middle-income families would be a better option than introducing *Salli Mae* – type student loans. Anna Kim will present a paper in the conference dealing with student loans.

Third, research grants to individual researchers and research teams instead of school-unit funding should be used to finance research in universities. Recent reforms are somewhat mixed in this respect.

Fourth, a coordination mechanism for tertiary education finance from various ministries needs to be set up. In Korea, tertiary education finance coordination among various ministries has been poor. A coordination mechanism, called Committee for Human Resource Development (CHRD), was set up two years ago. CHRD is chaired by vice prime minister and encompasses all ministries.

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Discussion 1:

Tertiary Education Finance in Korea: Achievements and New Challenge(discussion note)

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Professor Lee summarized the achievement and challenges of tertiary education finance in Korea and almost all points he mentioned I have same position. We have similar perspectives toward challenges of our current system.

1. **Over centralized education system** cause the inertia to new demand by diverse interest and lack of human capital necessary for the new challenges of institutions.

2. Tertiary education finance from the government has not been systematic and even **basic statistics** regarding the amount and composition are not readily available.

3. Through empirical work, he showed us that **general institution based research grants** and other programs are not correlated with performance improvement.

There are 4 key policy issues for further discussion.

1. A very rapid expansion of tertiary education for the next 4 years is planned by MOE and MPB, which is very desirable. But the financial investment planned amount in his paper, such as 1.2 billions in 2005, 1.8 in 2006, 2.3 in 2007, 3.1 in 2008 and he mentioned as these data imply around 50% annual increase should be re-checked. In MTEF(midium term expenditure framework) the numbers should be updated as 1.8 in 2005, 1.9 in 2006, 2.1 in 2007, 2.3 in 2008, 2.5 in 2009 and annual increases 8.5%, **higher than that of primary and secondary education increase** of 7.8%.

Public funding for tertiary education should be increased, especially for the

graduate level and it is recommended to selected and focused funding for excellent performance. The crisis of graduate level education and research is getting serious and large portion of the graduate students are only reservoirs for getting job cohort not next generation for academy.

2. There has been intense debate on where the budget should be used in the government and government vs congress. As he evaluated, the BK21 program provides support to individual researcher or team instead of university or college and the program is a long-term, which encourage long-term perspective of the selected team and it performs better. I agree with professor Lee's evaluation about **the preference to the US research granting system rather than that of the UK.**

The scholarship and student loan program needs to be expanded. Especially the interest subsidized student loans and scholarship targeted to low income families would be better option than new *Salli Mae* type loan program, as Dr. Lee argues. It needs some more cautious approach to change policy instrument for performance and outcome measure in supporting student.

Post BK21, following BK21 program, should keep the same approach such as focused on the selected team instead of institution based funding. Performance management is corner stone for funding university research.

3. Government driven restructuring of universities and colleges policy reminds us the 1980s' government driven heavy and chemical industry M&A policy, which brought big trouble to our economy. We need to utilize **more market oriented approach to this policy.** For this purpose, market signal should not be distorted and there is government role for monitoring and abiding by generally accepted accountability rule in opening and exit of the institutions.

Similarity of policy environment of tertiary education in Korea with the US rather than UK, which heavily depends on private sector, derives more market based university finance system working better.

4. Coordination committee for human resource development, which consists of ministers of 8 related ministries works together with the commission of national science and technology. Professor Lee recommend that committee for HRD should be strengthened to become a coordination body for HRD budget. However, we have to consider the duplication area for R&D with the Science and Technology budget. Newly introduced system of the Science and

Technology Innovation Agency and KISTEP have the authority to assess the R&D budget. Therefore we need to realignment with HRD and R&D budget allocation process.

Enhancing the coordination level of tertiary education finance among various ministries is urgent mission to the current government. R&D investment including private business R&D in Korea is not that small size comparing to that of OECD countries. However, MOE&HRD does not orchestra with the other funding sources. Transparency in the university research fund accounting need to be enhanced and monitored by independent accountant and financial information should be open publicly.



Presentation 3:

Financing reforms for higher education and
lifelong learning
Seoul, 6-8 April 2005

Allocation mechanisms: formula funding
Richard Yelland
OECD Directorate for Education



Presentation outline

- ❑ The policy context
- ❑ The institutional context
- ❑ A theoretical model of funding
- ❑ What is a formula?
- ❑ Some examples:
- ❑ Key issues
- ❑ Acknowledgements



OECD Education

The policy context

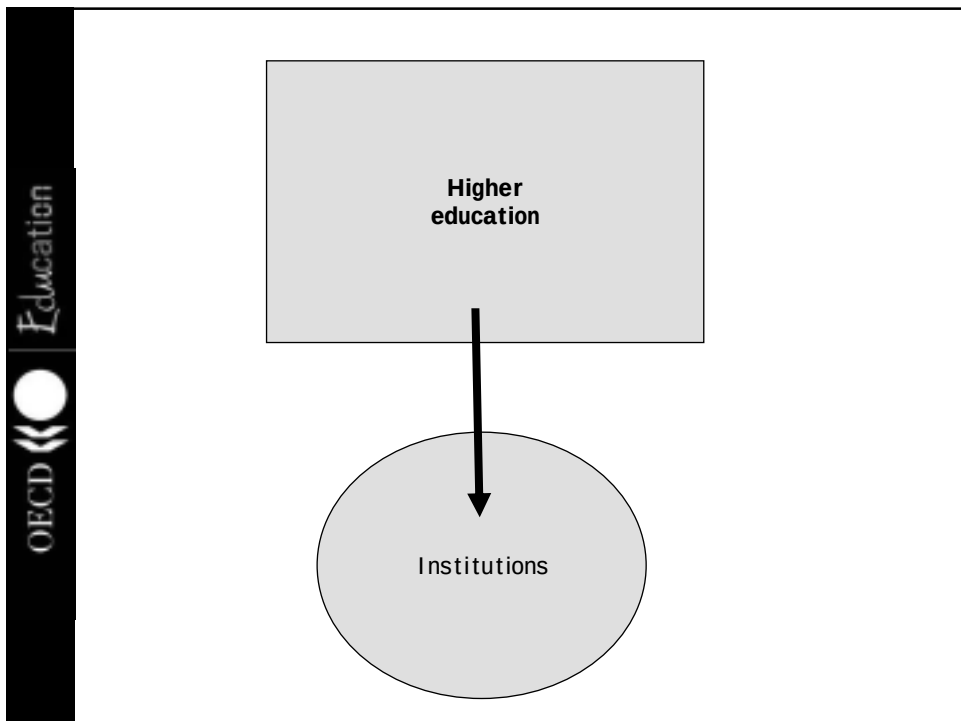
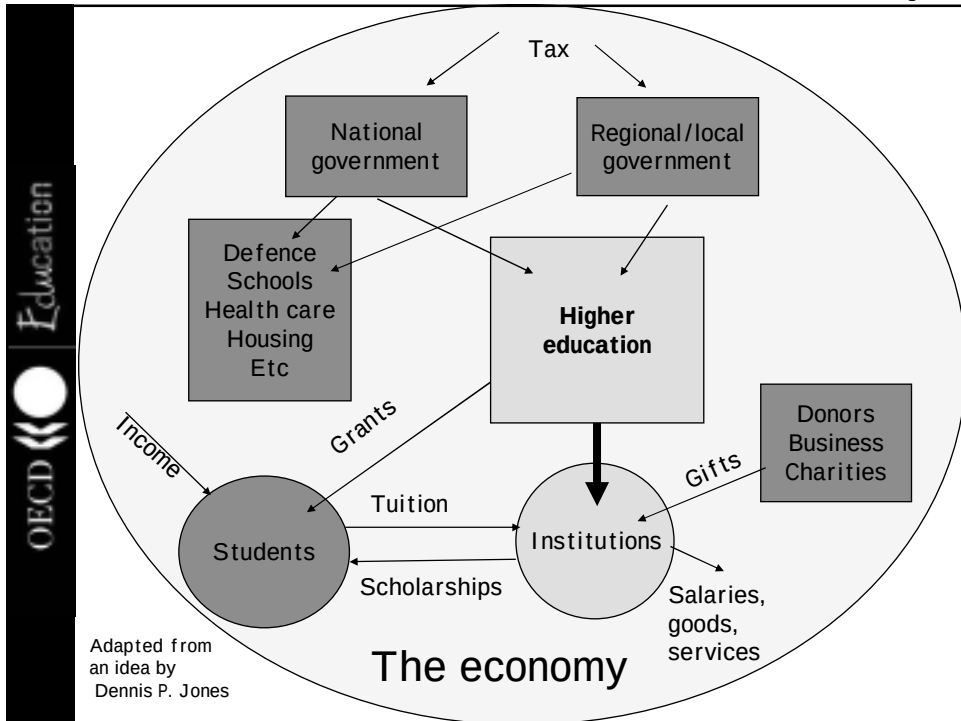
- ❑ The cost of providing higher education represents a significant share of public expenditure
- ❑ Health care, pensions and other concerns are competing for funding
- ❑ But knowledge is recognised as a key to growth
- ❑ In most countries Government funds are the main source of institutional income
- ❑ The growing importance of higher education has focussed attention on its efficiency and its quality
- ❑ Calls for public accountability for the use of funds are therefore growing



OECD Education

The institutional context

- ❑ Higher education institutions operate in multiple markets: national, international and local
- ❑ They have multiple missions: undergraduate teaching, postgraduate teaching, research, lifelong learning, 'service'
- ❑ Public funding provides only a part of their income
- ❑ Institutions are, willingly or unwillingly, obliged to compete with each other
- ❑ They are increasingly free to manage their own affairs





What is a formula?

- ❑ A tool for distributing money to institutions
- ❑ Based on an agreed set of rules which allocate value to different cost elements
- ❑ Applied to all institutions in a system in the same way
- ❑ Can be described as 'input-based' or 'output-based' but the main determinant is the number of students in different disciplines



Some factors that can be taken into account in a formula

- ❑ The cost of teaching
 - Differentiated by discipline group
- ❑ The length of the course
- ❑ The facilities required
- ❑ Learning support – libraries and other services
- ❑ An allowance for research
- ❑ Adjustments to reflect specific circumstances
- ❑ Adjustments to reflect specific policy objectives

An example of non-formula funding
United States – Washington State

- ❑ State Appropriations account for 36% on average of the income of the seven higher education institutions. The range is from 17% to 57%.
- ❑ The great majority of this funding is in a lump sum
- ❑ The allocation assumes a certain level of student enrolment – if this is not reached money can be withdrawn
- ❑ The level of funding is not determined by formula, but by cost of instruction' which is itself determined from past institutional cost

An input-based formula associated with a negotiation
France

- ❑ Ministry of Education determines how resources should be allocated to each institution using a model (SANREMO – Systeme ANALytique de la REpartition des MOyens)
- ❑ The primary resource is not money, but teaching and non-teaching staff
- ❑ Student numbers, doctoral degrees, buildings taken into account
- ❑ Additional funding reflects difference between theoretical and actual number of staff
- ❑ Detailed negotiation between each institution and the Ministry to establish a 'contract' for funding additional projects



A combination input/output formula

The Netherlands

- ❑ Block grant from the Ministry of Education, Science and Culture provides the bulk of institutional funding
- ❑ Three elements taken into account:
 - Number of students graduating
 - Number of students enrolled
 - Fixed allocation to institutions independent of above factors
- ❑ Three categories of graduate are recognised with different price loadings
 - Arts, humanities, law, social science, languages
 - Science, engineering, agriculture
 - Medicine



A negotiated block grant

Australia

- ❑ The 39 Australian Universities receive public funds in the form of a block operating grant for a specified number of student places
- ❑ Each institution negotiates an Educational Profile with the Department of Education, science and Training
- ❑ For each institution the amount of funding is historically based
- ❑ Five groups for funding undergraduate teaching
- ❑ Accountability based on compliance not on outcomes

Output-based funding using a 'buffer body' England

Education



- ❑ Government decides overall allocation and policy objectives
- ❑ HEFCE distributes money to institutions
- ❑ The main factors on which the allocation is based are the number of students in different discipline groups, and an estimate of the unit cost of providing tuition
- ❑ The legal basis is a financial memorandum, which is effectively a contract
- ❑ The methodology is transparent
- ❑ The money comes as a block grant, and institutions are theoretically free to use it as they wish

Key issues I: Devising the formula

Education



- ❑ How important are historic costs in devising the formula?
- ❑ Is it primarily based on inputs or on outputs?
- ❑ Does it cover capital investment and/or research?
- ❑ How detailed and subtle is the formula?
- ❑ How much scope is there for individual negotiation and special cases?



Key issues II: Applying the formula

- ❑ Is the budget allocated as a block grant, or line-by-line?
- ❑ How much of the budget does the formula cover?
- ❑ How transparent is the allocation process?
- ❑ How is the formula related to the achievement of policy objectives?
- ❑ What accountability/ feedback mechanisms are applied?



Key issues III: the effect of the formula

- ❑ What explicit and implicit incentives towards specific behaviours are contained in the formula?
- ❑ Is the total adequate to achieve policy objectives?
- ❑ What relation is there between the formula and the longer-term trends in higher education in the country?
- ❑ Is the financial health of institutions being adequately monitored and supported?



References and acknowledgements

- ❑ Policy context: Education Policy Analysis 2003
- ❑ Financial sustainability: On the edge (OECD 2004)
 - International report and country studies
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- ❑ Conceptual analysis and USA: National Center for Higher Education Management Systems, Boulder, Colorado www.nchems.org
- ❑ England: HEFCE www.hefce.ac.uk and the Higher Education Policy Institute, Oxford www.hepi.ac.uk
- ❑ Australia: Department of Education Science and Training www.dest.gov.au
- ❑ France: www.senat.fr and 'Administration et Education'



Thank you

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www.oecd.org/edu/higher

Presentation 4:

A STUDY ON NEW FUNDING FORMULA FOR MALAYSIAN PUBLIC INSTITUTIONS OF HIGHER LEARNING

By

**Dato' Prof. Dr. Hassan Said
Director General (Higher Education)
Ministry of Higher Education Malaysia**

2005 KEDI-World bank Forum : *Financing Reforms
for Tertiary Education in Knowledge Economy,*
April 6-8, 2005, Seoul, Korea

FUNDING GUIDING PRINCIPLES

- **EQUITY**
 - equal funding for similar programs
- **FLEXIBILITY**
 - accommodative to policy and changes
- **ACCOUNTABILITY**
 - transparent, responsibility lines, auditing
- **EFFICIENCY**
 - optimal usage, well managed
- **QUALITY**
 - goals and objectives, improvement

TYPES OF FUNDING FORMULA

- **BUREAUCRATIC BASED**
 - federal control at micro level
 - approval for all types of expenditure
- **CONTRACTUAL BASED**
 - service provider, client-based pricing
 - market based or regulated
- **PERFORMANCE BASED**
 - external assessment
- **STRATEGIC BASED**
 - enhancing national strategic goals
 - minority interest and intervention policy

TYPES OF FUNDING FORMULA

- **NEGOTIATION BASED**
 - previous indicators, perception based
 - personality
- **FORMULA BASED**
 - computation based on relevant inputs (types of programs, enrolment, output, quality)
- **OUTPUT BASED**
 - production of graduates
- **OUTCOME BASED**
 - enhancing quality
 - needs to develop criteria

CURRENT STATUS IN MALAYSIA

- **17 Public Universities + 290,000 students**
- **26 Private Universities + 90,000 students**
- **Funding to the public universities only**
- **Public University receives almost 90% of its operational budget from the government**
 - **undergraduate fees centrally controlled**
 - **postgraduate fees is decentralised**
 - **university allows to own companies**
- **Development budgets allocated during the country's 5 year plan**

CURRENT STATUS IN MALAYSIA

- **Government's spending on Public Universities has been increasing**
 - Operational (RM Billion)**
 - 2.75 in 2001, 3.84 (2002), 4.01 (2003), 4.41(2004)**
 - Development (RM Billion)**
 - 2.19 (1991-1995), 3.88 (1996-2000)**
 - possibly > 7.0 in 2001-2005**
- **Percentage of operating expenditure for the public universities as compared to total federal operating expenditure**
 - 5.7% in 2000 and 6.3% in 2003**

CURRENT FUNDING FORMULA

MODIFIED BUDGETING SYSTEM (MBS)

- **Key component of a negotiated system**
- **Allocation for Current Year = Existing Programs + New Programs + New One-Off Programs**
- **Existing Programs based on previous year**
- **New programs for the approval of the Ministry Of Finance**
- **One-off programs are new non-recurring programs**

CURRENT FUNDING FORMULA

The Weaknesses of MBS

- **Long budgeting cycle and tedious budget documentation preparation**
- **Capability of different universities in preparing the budget documents affects their allocations**
- **Lack of evaluation to reward excellence**
- **No basis to ensure that faculties offering the same courses receive similar funding**
- **Lack of incentives to resource their own funds for fear of losing current funding**

THE NEED FOR A NEW FUNDING FORMULA

- **Ministry of Higher Education has these strategies**
 - **500,000 students in public universities in 2010**
 - **3 or 4 public universities will be upgraded to become Research Universities**
 - **2 more public universities before 2010**
- **We need about RM10 Billion for operating budget in 2010 to meet these strategies**
 - **too expansive and too bureaucratic**
- **A study on the New Funding Formula has been conducted in 2004 (supported by the World Bank)**

THE NEW FUNDING FORMULA

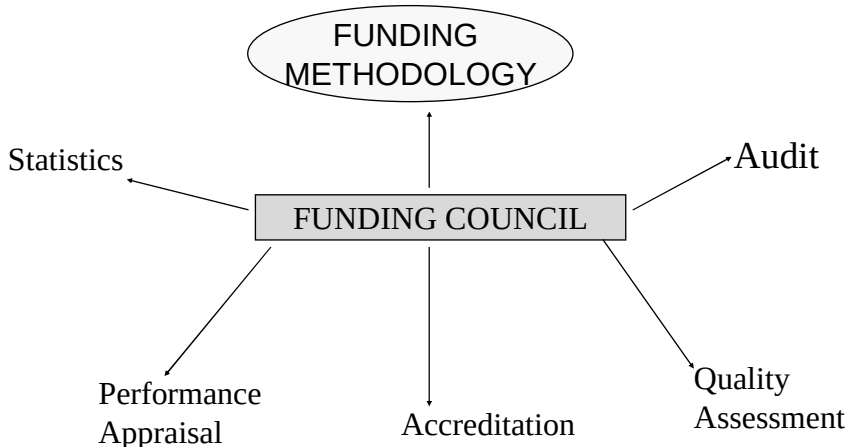
New Formula = Output + Performance + Strategic

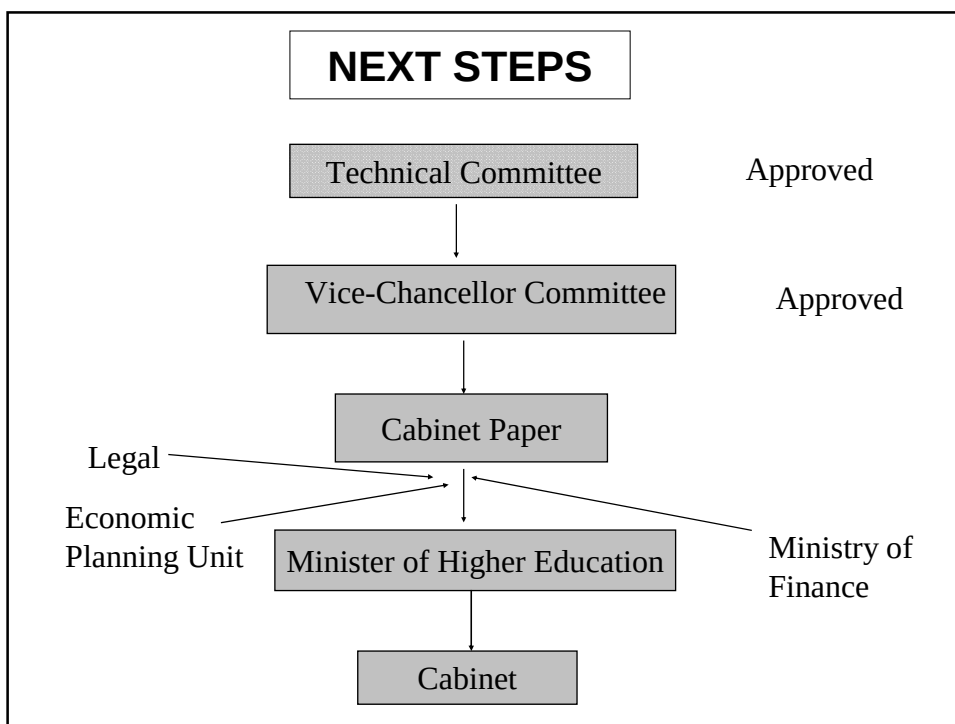
- **Output Formula**
 - **distribution based on a predetermined formula (student or program cost)**
 - **targeted to fund knowledge dissemination, knowledge creation and institutional linkages**
 - **value chain**
 - **largest portion of the funding allocation**

THE NEW FUNDING FORMULA

- **Performance Formula**
 - competitive model
 - fund to universities that are able to contribute to new knowledge/research
- **Strategic Formula**
 - discretionary mechanism that allows desired areas to be targeted for the long term needs of the country

THE NEW FUNDING FORMULA





Discussion 2:

Allocation Mechanisms

Jung-min Kim

Ministry of Planning and Budget
Korea

1. Discussion Points on the "Allocation mechanisms: formula funding" presented by Richard Yelland.

The presented case of allocation formula uses simple factors such as the number of students and facilities required. This method seems to be applicable when the government provides financial support such as facility costs and current operating expenses to public national universities. How can we find the elements to promote competition between universities in these factors? In particular, in the case of Washington State, a non-formular funding system, that is, a lump sum allocation method is applied. This method provides support regardless of the performance of the university. This can lead to imprudent budget spending and does not provide motives for improving the quality of university education.

Among OECD countries, what is the percentage of government support for particular R&D projects which are provided through competition among universities including private universities? Also, what is the formula that is applied in such cases?

When the OECD countries provide project-based support to universities based on competition, is a central supporting system, through which a particular

ministry provides centralized support, applied? or do several ministries provide decentralized support?

In Korea, the Ministry of Education and Human Resources Development finances most (about 67%) of personnel expenses for professors, facility costs and operating expenses for public national universities. There are also many programs which provide financial support for R&D and research facilities to universities including private universities, through competition. These programs are implemented in a decentralized manner by several government ministries (Ministry of Education and Human Resources Development, Ministry of Science and Technology, Ministry of Commerce, Industry and Energy, Ministry of Information and Communication). The Ministry of Education and Human Resources Development has the largest number of programs as well as the highest level of funding.

The size public financial support that are provided by the government ministries through competition among universities is larger than the total amount of government funding in personnel expenses, facility costs, and operating expenses provided to public universities. In these programs, the criteria with the highest priority is whether the area receiving financial support in a specific university can offer a characteristic development program and create new knowledge in comparison with other competing universities. It can be said that this method is similar to the new funding formula of Malaysia presented by Dr. Hassan.

The competitiveness of a university is directly related to the competitiveness of a country. Therefore, the restructuring of universities is a topic that is being seriously discussed in Korea, to improve the quality and efficiency of university education. In addition, it is the basic principle of the budget authority that fiscal support for universities should be provided in linkage with the improvement of the competitiveness of universities.

On the other hand, due to the decentralized support system, problems

regarding public accountability such as the similarity of programs between ministries, and the overlapping benefits for some professors, have surfaced.

To resolve such problems arising from the support system, the government is planning to establish a consolidated database for R&D funding to universities provided by several ministries, and enact and implement strict research fund management guidelines.

Lastly, In the case of Korea, the government provides financial support for most of public universities' personnel expenses for professors, facility costs, and operating expenses based on the requests from the universities. However, a performance-based budget support system has yet to be established. Does a differentiated budget support system for universities based on performance exist in OECD countries? If so, what are the factors that are considered in performance evaluation?

2. Discussion Points on the "New funding formular for Malaysian public institutions of higher learning" presented by Dr. Hassan

Malaysia's new funding formula has many similarities with the formula that is being applied in Korea. In the case of Malaysia's university support program, is it a multi-year program which provides support over a number of years, or is the program yearly implemented?

In Korea, we operate a mix of yearly support programs and multi-year support programs. Between these programs, multi-year support programs are larger in size and considered more important.

In Malaysia, how do the ministries which operate multi-year university support programs receive stable budgetary allocations from the Ministry of

Finance?

In Korea, a 5-year National Fiscal Management Plan is formulated in advance, before the formulation of the government budget. Based on this medium-term plan, the yearly ministerial ceilings are set, and the line ministries formulate detailed budgetary programs within the predetermined ceilings. This allows the ministries to operate university support programs in a more stable manner.

Presentation 5:

Possible Uses of Vouchers in Higher Education

Presentation by Arthur M. Hauptman

Financing Reforms for Tertiary Education in the
Knowledge Economy

Seoul, Korea

6-8 April 2005

Vouchers as a public policy tool

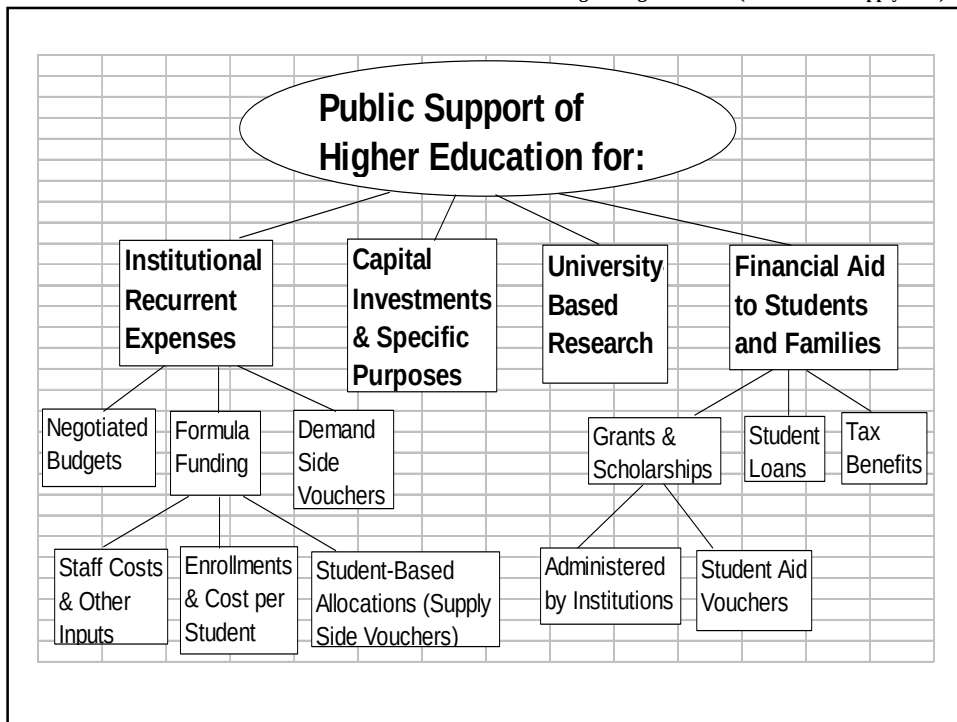
- Voucher debates are much more common in basic education and some other government functions such as public support of housing than as a means of paying for higher education
- But in all public functions, the purpose of adopting voucher policies is basically the same: *to promote greater competition among providers of a good or service by providing public support indirectly through the consumers rather than directly to providers*

What constitutes a voucher in higher education?

- A number of definitions could be used to describe vouchers in higher education
- A narrow definition would include:
 - students and/or families receive a coupon (voucher) which represents a certain amount of money to be used exclusively for higher education related expenses
 - students carry the voucher to the institution in which they enroll, and the institution then redeems the value of the coupon from the government
- A broader definition would include:
 - any policy in which public funds for higher education follow the student, not the institution

The question of vouchers should be seen in the broader context of higher education financing mechanisms

- As the following chart indicates, of the four principal ways public support is provided for higher education - funding of recurrent expenses; investment and specific purposes; university-based research; and financial aid to students and families - two may involve the use of vouchers
- In both those cases, vouchers represent the more student oriented part of the financing spectrum in contrast to the more direct support of institutions



Thus, vouchers can be used in two principal ways in supporting higher education activities

- First, as a means of defraying all or a portion of the recurrent expenses of institutions, particularly at public institutions which by definition rely primarily on public funding to fund their operations
- Second, as a means of providing financial aid to students and their families

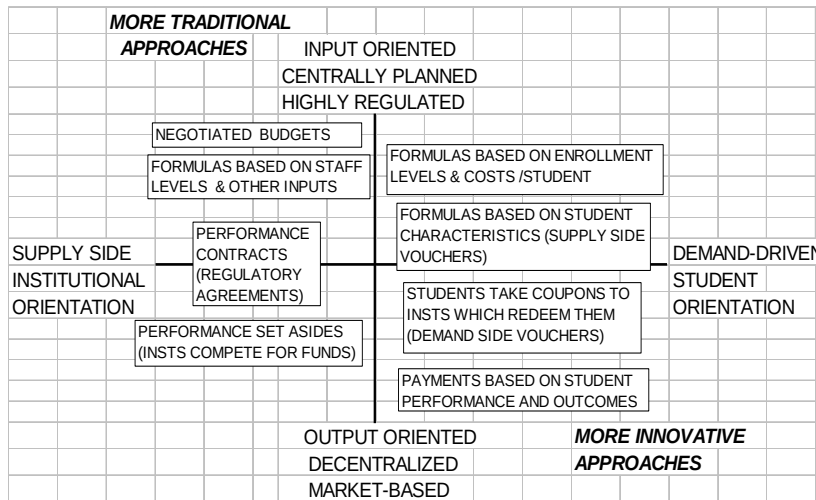
In developing both kinds of vouchers for higher education, policymakers must consider and resolve a number of key issues

- Do vouchers cover the full cost of education, or will tuition fees be used to pay some of the costs?
- Do vouchers cover the full public cost of higher education, or is there a mix between supply side and demand side approaches?
- Are vouchers available to all students, or only to specific groups of students?
- Are the vouchers the same amount for all students, or do students from disadvantaged families receive more?
- Are students at private institutions eligible to use the vouchers, or are they restricted to those at public institutions?
- How are seats allocated to voucher holders at institutions that are oversubscribed?

I. Vouchers as a way of paying for recurrent expenses

- In most countries, paying for the recurrent expenses of public institutions is the primary role of governments in the support of higher education
- The range of the financing mechanisms used around the world to accomplish this goal is shown in the following chart, which show a range of policies including:
 - centralized, regulatory approaches compared to decentralized, market-based policies
 - institution-oriented/supply side policies compared to more decentralized, student-oriented policies
 - Input-based funding compared to performance-based approaches

MEANS OF PAYING FOR RECURRENT EXPENSES



Vouchers can be seen in the context of different ways to pay for recurrent expenses, including:

- Negotiated budgets - government and institutional officials negotiate over the amount of funding
- Formula funding - now the most frequent type of financing mechanism, funding formulas range from those based on inputs such as staff costs to ones which are based on performance measures
- Demand side vouchers - represent the most demand-oriented, market-based way of paying for recurrent expenses

Demand side vouchers are so innovative that there are few examples of countries that use them to pay for recurrent expenses

- Colorado is in the process of implementing a voucher scheme to pay for a portion of the recurrent expenses of undergraduates
- Colorado will complement the undergraduate vouchers with two other policy interventions that are shown on the previous chart
 - Payments for student performance and outcomes in which insts will be paid for the number of graduate and professional school students they enroll and graduate
 - Performance contracts - regulatory agreements between the insts and state government

Comparing demand-side vouchers to more traditional ways of funding recurrent expenses

- Strengths
 - Introduces more competition among insts into the funding of recurrent expenses, thus increasing system efficiency
 - Expands choice of students, thus encouraging greater access and private sector development
 - If differentiated by income, can help improve equity
- Weaknesses
 - More difficult to administer than traditional approaches, thus possibly adding to system inefficiency
 - Not well suited for dealing with nontraditional groups of students including older students and distance learners
 - If not differentiated by income, vouchers can decrease equity

Student-based formula allocations (supply side vouchers) represent an alternative to demand side vouchers

- Demand side vouchers are an alternative to the traditional approach of using enrollment-based funding formulas to pay for recurrent expenses
- Supply side vouchers represent another alternative to traditional enrollment-based funding formulas
 - they occur when all or a portion of formula funds are allocated to institutions based on individual student characteristics or performance rather than the number of students enrolled

As with demand side vouchers, there are relatively few examples in which supply side vouchers have been implemented or even seriously proposed

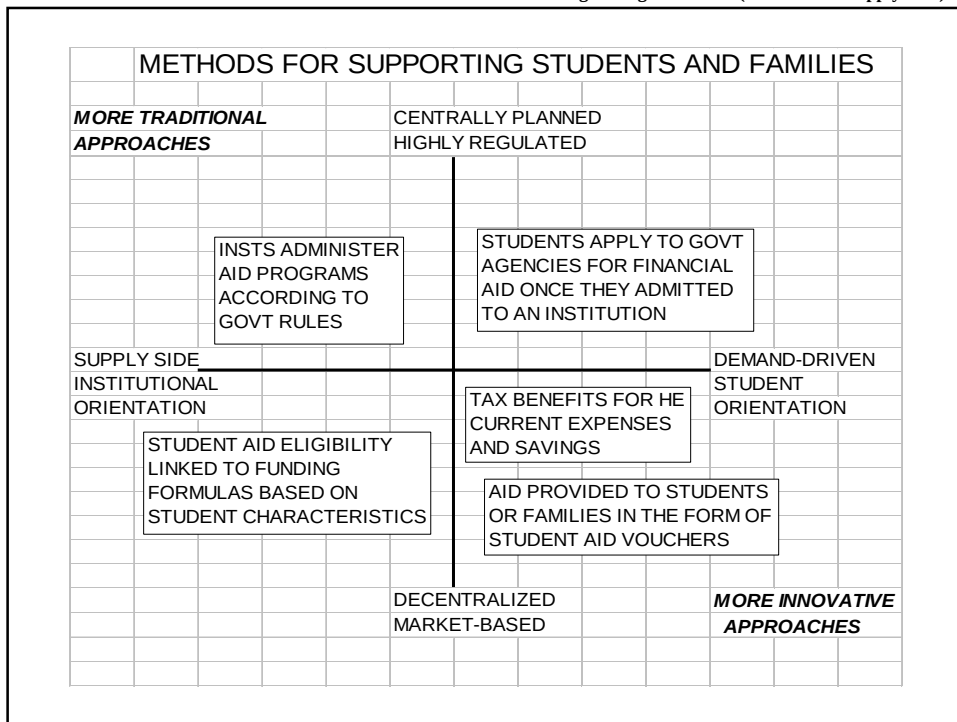
- England pays a premium in its funding formula for students from postal codes with high concentrations of low income students
- Jordan and the Palestinian National Authority have proposed or are considering allocation schemes based on student characteristics
 - These funds might then be targeted for use as grants or loans for targeted groups of students

Strengths and weaknesses of supply-side vouchers compared to demand side vouchers

- Strengths of supply side vouchers
 - Easier to administer than demand side vouchers
 - Easier to adjust prices paid to institutions for seats to encourage greater relevance
 - Can also be used to pay institutions more for student performance, thereby encouraging greater throughput
- Weaknesses of supply side vouchers
 - Are not good in encouraging private sector development and lifelong learning, including distance education
 - Do not create as much of a sense of student choice and competition for funds as demand side vouchers

II. Student aid vouchers

- Another way in which vouchers can be used to fund higher education is as a means of providing financial aid to students and families
- In this regard, vouchers can be contrasted with more centralized student aid programs in which students apply directly to government once enrolled in an institution, or that use institutions to administer funds, usually within government guidelines
- The range of student aid administration options are shown in the following chart



Examples of countries where student aid is provided as vouchers

- U.S.
 - Pell Grant program - students receive need-based vouchers on the basis of centrally calculated financial assessment
 - GI Bill - student aid provided on basis of military service
- France
 - Students at public and state private insts eligible for social grants based on student's and parents' income
 - Similar voucher systems used in some Francophile countries
- Denmark
 - All students receive up to 70 monthly vouchers to cover living expenses related to higher education attendance
 - Students can save vouchers and 'double up' near graduation

Conditions for Success of Student Aid Vouchers

- Student aid vouchers require strong governmental structures to succeed
 - Administrative requirements are high
- Good quality assurance procedures must be in place to prevent the proliferation of low quality institutions in response to vouchers
- Good information systems must be in place to allow students to take advantage of real choices afforded by vouchers

Comparing Student Aid Vouchers to Institutionally Administered Aid Programs

- **Strengths of Student Aid Vouchers**
 - promote competition for funds as student aid funds follow the student not the institution
 - therefore provides students with greater choice of institution
- **Weaknesses of Student Aid Vouchers**
 - Vouchers tend to entail higher administrative costs than decentralized programs that institutions administer
 - Student aid vouchers tend to be more complicated to administer than institutionally administered aid

Concluding Remarks

- For both the funding of recurrent expenses and the provision of student aid, vouchers represent a promising way of introduce more competition into the financing of higher education
- Both types of vouchers have the potential of improving equity and efficiency of higher education systems
- Strong governmental structures, adequate systems of quality assurance and sufficient student information are essential to the success of both kinds of vouchers

Presentation 6:

Stipends & Fee-For-Service Contracts: Reinventing Higher Education Financing

Rick O'Donnell
Executive Director
Colorado Commission on Higher Education

April 6, 2005

Higher Education in U.S. and Colorado

	Colorado	United States	Colorado Rank Among 50 States
Population	4,601,403	293,655,404	22nd
With bachelors degree or higher	35%	27%	2nd
% of 18-24 yr olds in college	31%	34%	15th
Average Cost of Attendance			
Community Colleges	\$2,188	\$2,324	22nd
Four-year colleges	\$2,453	\$4,545	43rd
Research Universities	\$4,461	\$5,724	33rd
Total Public Dollars Spent Annually on Higher Education (excluding capital construction)	\$592 million	\$63 billion (state spending)	34th

State and Local Expenditures for Higher Education

Per Capita			Per \$1000 of Personal Income		
Colorado	Rank	US	Colorado	Rank	US
\$562.30	13	\$450.57	\$19.24	28	\$16.65

As a Share of Total Expenditures		
Colorado	Rank	US
11.4%	11	8.8%

Colorado Higher Education System

	Community Colleges	Four-year Colleges	Research Universities	TOTAL / AVERAGE
Number of Public Institutions	15	5	9	29
Resident Enrollment	50,028	24,850	67,065	141,945
Average Resident Tuition	\$2,188	\$2,453	\$4,461	\$3,034
Avg. Tax Dollars Per Student	\$2,410	\$3,675	\$4,055	\$3,380
Avg. Tax Dollars + Student Contribution	\$4,598	\$6,128	\$8,516	\$6,414

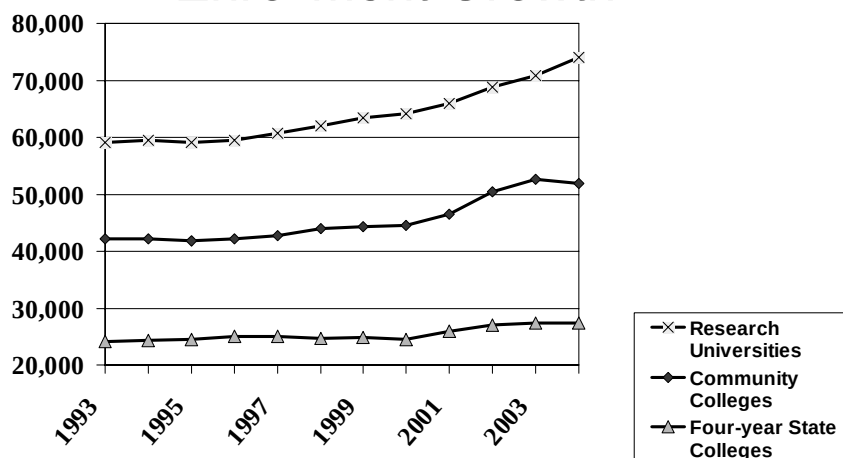
Public vs. Private

	Public Institutions		Private Institutions	
	#	Total Enrollment	#	Total Enrollment
U.S.	1,688	12.8 million (76%)	2,386	3.9 million (23%)
Colorado	29	165,658 (78%)	47	45,975 (21%)

Non-residents Attending Public Colorado Colleges and Universities	
Enrollment	Average Tuition
22,472	\$12,882

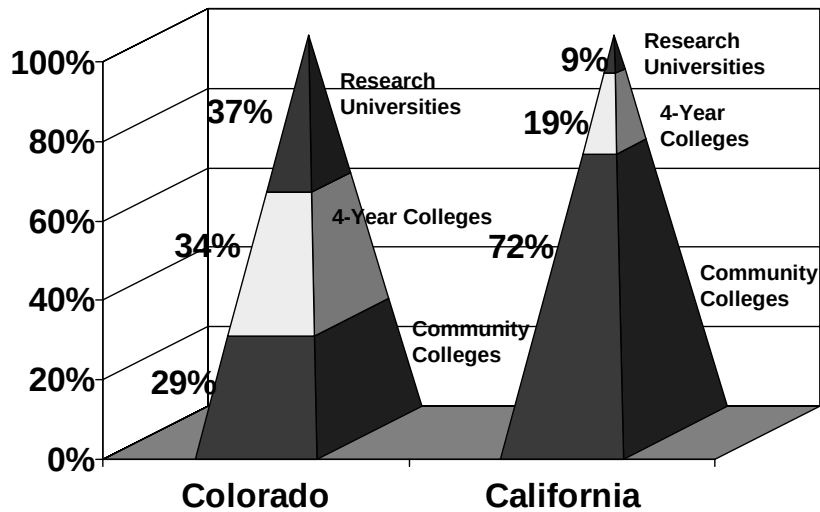
- 78% of American college students are enrolled in public colleges and universities, institutions created by and financially dependent upon state governments.
- States provide 46% of the financial support for public colleges and universities and approximately 29% of the total support for all public and private colleges and universities.
- State financial aid for students at public and private colleges and universities exceeds \$3 billion annually.

Colorado Higher Education Total Enrollment Growth

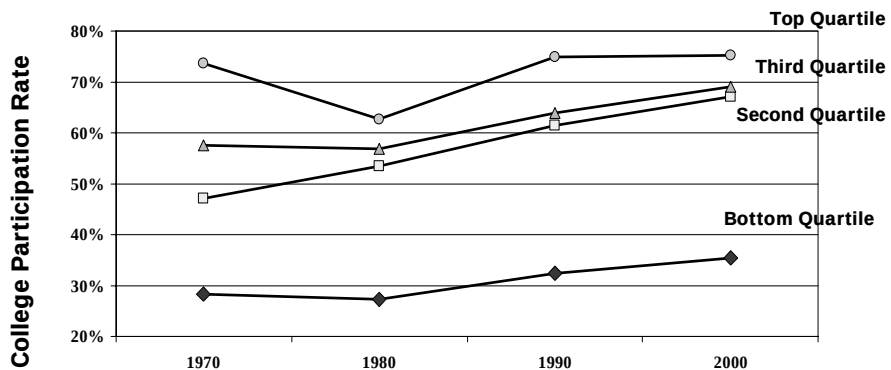


NOTE: Colorado's population grew more than **30%** from 1990 to 2000. During that time, resident FTE enrollment in undergraduate education rose **9.6%**.

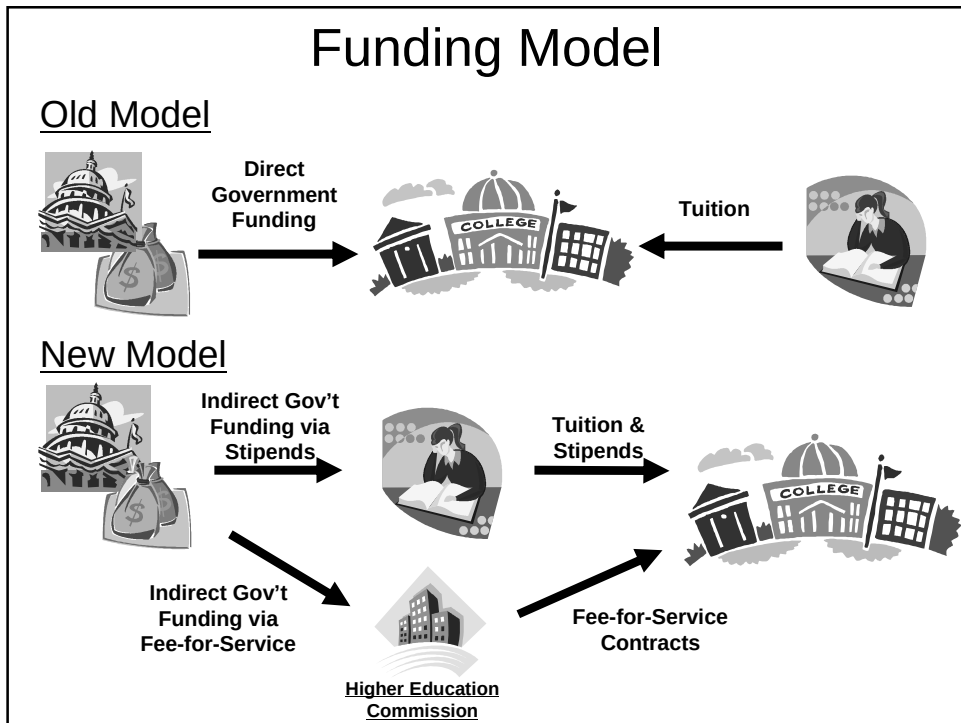
Headcount Enrollment Pyramid 2005



College Participation Rates by Income Quartile



Source: U.S. Census Bureau, Calculated by Tom Mortenson, Postsecondary Education Opportunity.



What is a Stipend?

- A stipend is a voucher that can only be used to pay for an undergraduate education at eligible universities; no cash actually touches students' hands.
- \$2,400 per year at public institutions
- \$1,200 per year for low-income students attending private institutions
- Stipends used for up to 145 credit hours
- 30 credit hours above 145 if already have BA/BS—worker retraining
- In-state undergraduate students eligible for stipends
- Degree-seeking, non-degree, and teacher licensure undergraduate students eligible
- Age, income and financial aid eligibility are irrelevant to qualify

What is a Fee-for-Service Contract?

- General Fund dollars appropriated to CCHE to negotiate purchase of services from institutions
- Fee-for-service contracts will include services such as:
 - Graduate school
 - Educational services in rural areas
 - Basic skills courses
 - Economic development services, such as career development and retraining
 - Services under the postsecondary enrollment options act—dual enrollment programs for high school students
 - Specialized services for professional degrees: dentistry, medicine, veterinary medicine, nursing, law, forestry, and engineering
- Masters degree at CU-Boulder: \$30,200; CU-Denver: \$12,500; Mesa State College: \$9,300

How the numbers work...

Full-Time, Resident Undergraduate Tuition Rates

	Total In-State Tuition		Stipend		Student's Share of In-State Tuition		Mandatory Student Fees		Student's Share of Tuition Plus Mandatory Fees
Research Universities	\$5,784	-	\$2,400	=	\$3,384	+	\$861	=	\$4,245
Four-year Colleges	\$4,463	-	\$2,400	=	\$2,063	+	\$661	=	\$2,724
Community Colleges (15 Credits Hours)	\$2,202	-	\$1,200	=	\$1,002	+	Varies	=	\$1002 + Fees

State Budget Redefined

	Before FY 2004	After FY 2005 (held harmless first year)		
	TOTAL Gov't Funds	Stipend (enrollment x \$2,400)	Fee-for-Service	TOTAL Gov't Funds
Research Universities	<u>150,672,841</u>	66,606,480	84,066,361	<u>150,672,841</u>
Four-year Colleges	<u>15,775,165</u>	10,127,280	5,647,885	<u>15,775,165</u>
Community Colleges	<u>106,279,979</u>	90,816,052	15,463,927	<u>106,279,979</u>

New Funding Model Challenges

- Students can't finish degrees in 145 credit hours
- No new funding
- Siphons money from public sector to private sector
- Why not have all private schools participate?
- Too much control at Commission for graduate programs
- Why not stipend for graduate programs?

New Funding Model Benefits

- Puts the money in front of students
 - ✓ Students' financial options are headlines rather than fine print
 - ✓ Economic power in the hands of students
 - ✓ Students can apply early in high school – useful college access marketing tool
 - ✓ Colleges compete for state dollars
 - ✓ Break automatic increase in costs
 - ✓ Way to protect future higher education budget cuts
- Break automatic increase in costs
- Way to protect future higher education budget costs
- Eliminates politically-driven subsidies to one institution over another
- Makes it much more difficult to cut higher education funding in state budget



Colorado Commission
on Higher Education

www.state.co.us/cche/

Discussion 3:

Questioning Voucher for Korean Universities

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Financial Situation in Korean Universities

- Student enrolling mostly in private schools
- Individual cost more than institutional cost
- Private burden with little public support
- Still investing in capital expenditure for basic infra-structure
- Huge drain of local resource to Seoul area

1. Students enrolled in public and private institutions

(%)

		Public	Government- dependent Private	Independent Private
4-year University	Korea	22.7	-	77.3
	OECD Average	79.0	10.3	11.4
2-year College	Korea	14.2	-	85.9
	OECD Average	68.6	19.1	13.7

source: OECD,EAG 2004

2. Financial Sturcture I

table 2-1. Relative proportions of public and private expenditure on educational institutions

(%)

	public sources	private sources		
		Household expenditure	Expenditure of other private entities	All private souces
Korea	15.9	58.1	26.0	84.1
OECD Average	78.2	17.1	9.7	21.8

source: OECD,EAG 2004

table 2-2. Size and proportion of public and private expenditure on educational institutions

(\$, %)

		Total	Public money (%)		Private money (%)	
2 year college	Total	2,852,362,617	671,027,666	23.5%	2,181,334,951	76.5%
	Public	67,239,453	39,853,300	59.3%	27,386,153	40.7%
	Private	2,785,123,164	631,174,366	22.7%	2,153,948,798	77.3%
4 year university	Total	10,454,908,215	4,125,649,500	39.5%	6,329,258,715	60.5%
	Public	2,234,599,049	1,436,145,778	64.3%	798,453,271	35.7%
	Private	8,220,309,166	2,689,503,722	32.7%	5,530,805,444	67.3%

source: KEDI(2001), 교육비 조사 연구.

table 2-3. Annual expenditure on educational institutions per student

(\$)

	Total	Direct cost			opportunity cost
		total	public expenditure	private expenditure	
2 year college	7,466	5,009	3,071	1,938	2,457
4 year university	11,569	8,123	5,738	2,385	3,446

source: KEDI(2001), 교육비 조사 연구.

3. Financial Structure II by purposes

(%)

	Percentage of total expenditure		Percentage of current expenditure			
	current Expenditure	capital expenditure	compensation of teachers	compensation of other staff	compensation of all staff	Other current
Korea	79.5	20.5	34.2	11.1	45.2	54.8
OECD Average	88.5	11.5	42.4	22.7	67.1	32.9

source: OECD,EAG 2004

4. Seoul-Regional Resource Drain

(\$)

	Current Expenditure	Housing Cost	Total
S-R(I)	945,079,000	79,085,000	1,024,164,000
R-S(II)	1,926,369,000	1,722,910,000	3,649,279,000
Gap(I-II)	- 981,290,000	- 1,643,825,000	- 2,625,115,000

Source: recent study by Seyeoung Chun(2005)(in publishing)

S: seoul / R: provincial regions
 S-R: resource move from Seoul to Province
 R-S: resource move from Province to Seoul

Positive view for voucher in Korea

- Overcoming inefficiency particularly in public university caused by rigid regulation by the government budget system
 - Uniformed control: number of professors and salary scales, number of students and admission policy, budgeting and accounting, etc.
 - Controlled investment of building and facilities
- Maybe starting from supply side voucher
 - At least efficiency of spending money by autonomous budgeting and executing through formula funding instead of present line item budgeting

Negative view for voucher in Korea

- Most of universities/colleges not prepared for competition in the market
 - Inequality in the starting conditions
 - Inequality caused by government policy, quite true
 - Becoming political / social issue beyond educational development, moving into arena of political protest and bargaining
- Most probably resulting in inequality in the opportunity distribution
 - money will go; 1) to the big universities in Seoul area by students drain from province, 2) to those who are relatively rich in those big universities
- Not so successful stories of Colorado type service contract in these years
 - Korean cases: BK21, NURI and many other items of government project initiated by 'selection and concentration policy', so called
 - Money eaten by 'the beautiful proposal documents'
 - Spending for Infra-structure preferred by the recipients rather than for the direct purposes of education, which are being argued by the donor government for doing "wrong behavior" differently from the documents and contracts, sometime accusing the moral hazard of intellectual society

One of Compromises: Mixed approach

- Supply side voucher through formula funding
 - Restructuring governing system of public university into independent organization from the government organ
 - Some possible formula element: head-count student number, disadvantaged student, regional disparity
- Loan/aids type demand side voucher
 - Both for public and private schools
 - Building social trust for the future human capital by inviting private capital to the public investment
- Special project setting for capital investment needs of university (new proposal of BTL(build-transfer-lease) project)
 - Improving the basic infrastructure of universities/colleges
 - Reducing tax-money burden

Another question: “Why not integrate university research and institutional research ?”

- University research: research being done mainly by university professors and graduate students, founded in U.S model of research university system
- Institutional research: research being done mainly by full-time researchers of the independent either from university or from government, but both by the contracted money mainly with government, founded in Korean model of government support research institute(ex. Daeduck Science Valley)
- Are they differ in terms of research itself ? How are they comparable in terms of research output ?
- Why not to integrate each other ?
 - Research personnel would be professors of the university
 - Research funds and facilities be utilized by the university
 - Young scholars/students of graduate schools would be active research workers

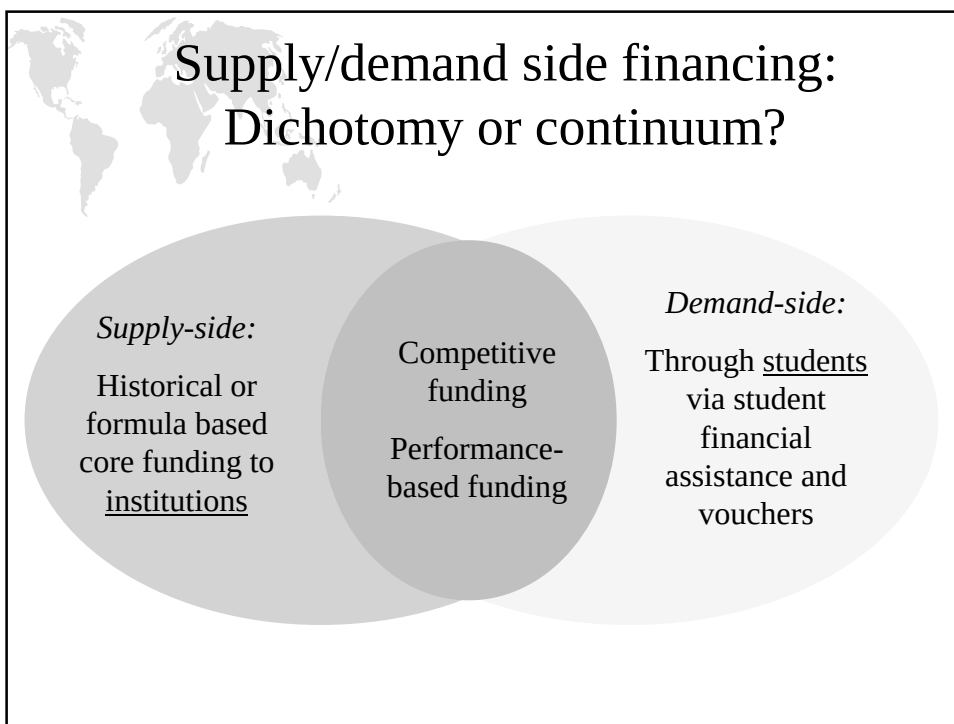


Presentation 7:

Financing Reforms for Tertiary Education

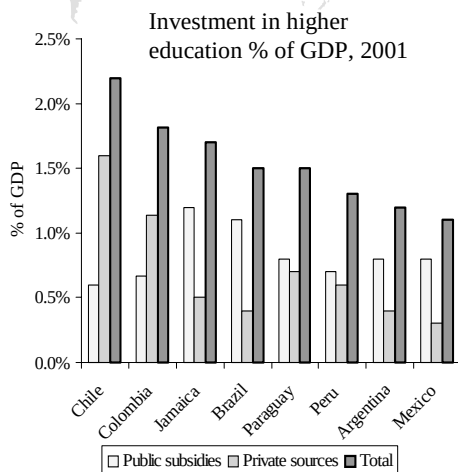
Lauritz B. Holm-Nielsen

KEDI-World Bank International Forum
Seoul April 7, 2005



.....the case of Chile

Chilean tertiary education – a forerunner in LAC

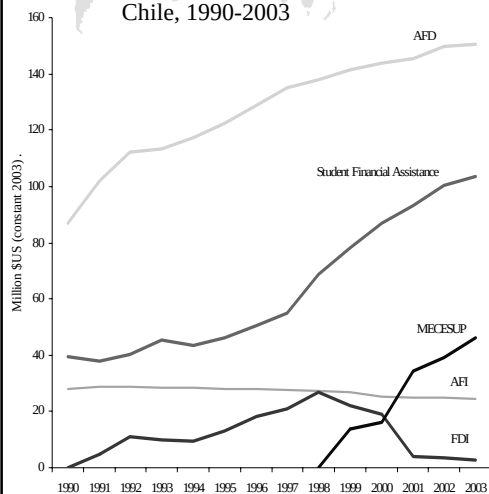


- Chile allocates 2.2% of GDP to TE, which is the highest in LAC
- Chile features one of the strongest markets for tertiary education in the region

Source: OECD (2002), World Bank (2003)

Chile's public financing of TE

Public financing of TE in Chile, 1990-2003

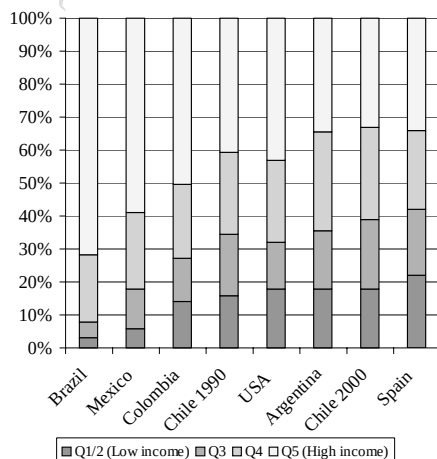


Source: MINEDUC 2004

- Direct public support (AFD) to 25 traditional public and private universities
- Indirect public support (AFI) of public and private institutions linked to a best-student formula
- Competitive fund (MECESUP) for quality improvement – all tertiary institutions are eligible for support
- Student financial assistance – scholarships and a loan system for students enrolled in traditional universities

Strong demand-side financing has increased equitable participation

Enrollment in TE by income

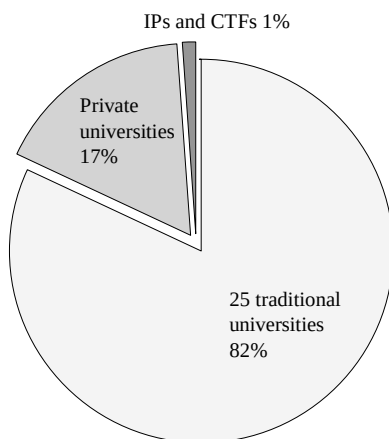


Source: World Bank (2002), Del Bello (2002) and Delannoy (2000)

- Between 1997 and 2003 public support for student financial assistance increased 87 percent in real terms to 31 percent of public spending on tertiary education
- The government operates a scholarship program targeting indigenous students
- A new proposed law will open financial assistance to students attending all accredited tertiary institutions

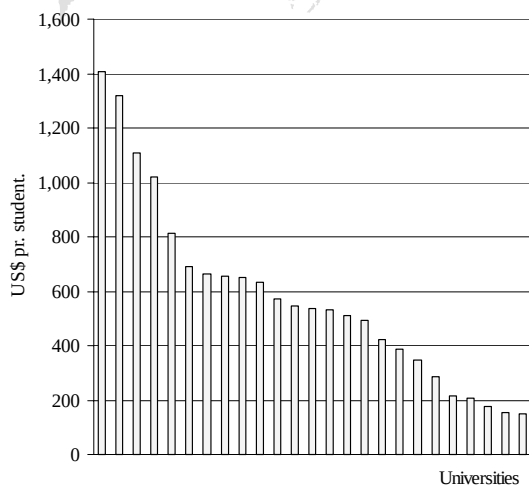
AFI – Best-student voucher ..an incentive for quality supply?

Allocation of indirect public support, 2003



- All universities that offer tertiary opportunities are eligible for AFI
- AFI is distributed according to institutions ability to attract the 27,500 highest scoring students in the university admission exam (PAA)
- AFI amplifies inequities as PAA achievement is closely linked to the ability to pay for quality basic education

Insufficient accountability and transparency of direct public support (AFD)



- 95% of core funding for traditional universities is provided based on historical precedence and political negotiation
- Full autonomy in traditional universities has not been adequately balanced with accountability for results
- Large inter-institutional variation in per student funding that is not rooted in differences in performance

Source: Universidad de la Frontera



Competitive Funds in Chile

- Competitive fund under MECE-SUP
 - Promote quality and relevance (through yearly competitions for matching grants) for:
 - Technical training institutions in fields of higher demand from the productive sectors
 - Undergraduate programs in priority fields
 - Graduate programs
- Competitive fund under CONICYT
 - Improving Chile's ST&I system by financing technical assistance and capacity building measures
 - Strengthening Chile's science base via 3 competitive programs for excellence in science, advanced human capital and improve the research infrastructure
 - Enhancing public-private linkages through cooperative research consortia, researchers in industry and international cooperation in research



***Flexible funding between
supply and demand***



Principles behind competitive funding

- a flexible mechanism for allocating funds as it can target a variety of sector issues
- is an output-oriented funding mechanism, which increase cost-effectiveness and can enhance quality and relevance
- institutions compete for investment funds on the basis of their own strategic planning and choices
- stimulate the good forces through the selection of best projects based on potential, performance and track record... , not all wins every time
- fundamental is transparent objectives, eligibility and selection criteria



Weaknesses to competitive funding

- requires a culture of fair competition, peer evaluation etc.
- demands central capacity to set rules of the game –eligibility, selection and implementation criteria
- institutional capacity for supervision of internal, decentralized managerial freedom and accountability



Principles behind performance agreements

- provide incentives for institutions to perform
- encourage institutions to clarify their mission and strategy, and engage in medium term planning
- cater for complex indicators of impact and success tailored to institutional characteristics and needs
- are flexible and are periodically renegotiated to reflect changes in macro environment



Weaknesses to performance agreements

- places high demand on the capacity of supervisory authorities to negotiate and supervise agreements
- presupposes a strong central capacity to collect and validate data
- offer less predictability than formula funding



From traditional investments to systemic reforms

- the current fund has supported quality enhancement by provided grants for equipment, libraries, labs and buildings for study programs in technical training institutions, and undergraduate and graduate university programs in priority fields
- the new fund will support systemic change by providing grants in areas such as degree structure and curricular innovation, transfer of academic credits, secondary to tertiary transition, inclusion of marginalized groups, and the teaching profession through out the educational sector



Negotiations and the make out of performance agreements in Chile

- Each agreement will be negotiated between the institution and the Ministry of Education
- Details of the agreement will be discussed between the institution and a panel appointed by the Ministry
- The agreements would run for a period of 3 years and contain; funding commitments for the first year by costing proposed objectives, funding projections for subsequent years of agreement, agreed targets and indicators to monitor progress
- The director of the Higher Education Division and the rector of each university would sign the completed agreement
- Each institution covered by a performance agreement would publish an annual performance report
- At the end of the agreement period, each participating institution propose a new agreement with refined indicators, targets and timetables



Introduction of performance agreements in Chilean TE

The first agreements will have two lines:

1. Strengthening the institution's management capacity
 - development of human resource management systems
 - transparent financial management
 - auditing and procurement systems
 - systems for internal quality assurance
 - institutional leadership
2. Improvement of institutional performance in critical areas
 - quality improvement
 - improvements to the relevance of tertiary programs
 - enhancement of equity
 - efficiency gains
 - strengthened vertical and horizontal articulation



Performance agreements in Chile are rolled out in two phases

- Phase 1
 - Performance agreements would be piloted in a small number of public universities currently receiving core funding from the government
- Phase 2
 - Scale up performance-based funding to all the 25 traditional universities (16 public and 9 private) by tying increases in core funding to performance agreements



Selecting institutions for the pilot

Academic performance

Fiduciary performance

	A	B	C
A			
B			
C			

**Institutional
Capacity
Assessment**

- Institutions would be selected based on their pre-proposals. The selection will reflect different levels of academic complexity in order to test the instrument in as different circumstances as possible



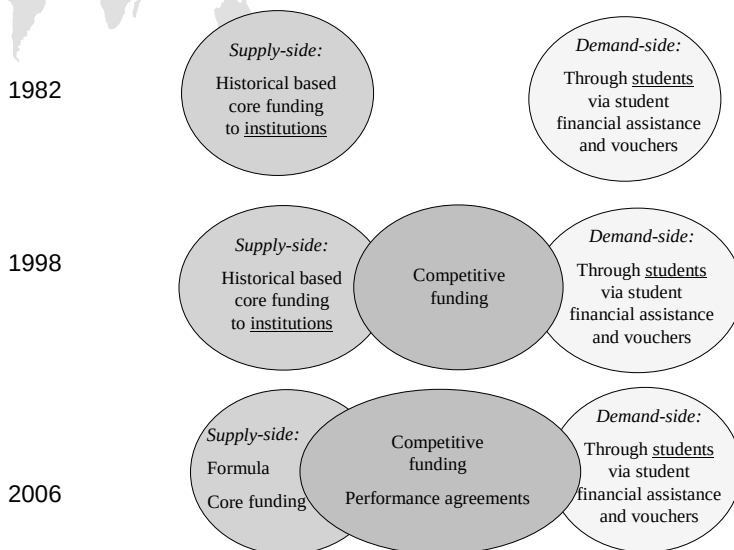
Conclusion

.....“keep it simple”

Building the required capacity for competitive and performance funding

- many countries have little or no tradition for writing proposals and evaluate these against set criteria, relative few people have experience from peer review processes
- therefore it is advisable to use trials and pilots which can train proposers, evaluators and managers
- most countries lack a reliable national information system with standardized statistics
- in Chile the capacity will be strengthened by establishing a National Observatory along with the introduction of performance agreements
- the National Observatory would support existing reporting structures and use OECD manuals as a reference point to ensure international comparability

Utilize the strengths and minimize the weaknesses of each funding mechanism





APPROACHES TO RESULTS-BASED FUNDING IN TERTIARY EDUCATION

Identifying Finance Reform Options for Chile

World Bank
Latin American and Caribbean Region
Department for Human Development

Kristian Thorn, Lauritz Holm-Nielsen, and Jette Samuel Jeppesen¹

Abstract: Unrealized potential exists for increasing accountability and transparency in Chilean tertiary education by allocating resources based on achieved results rather than historical precedence and political negotiation. Against this background, the paper profiles approaches to results-based funding of tertiary education to identify efficacious finance reform options for Chile. International experience shows that financing by results is not a ready-made concept, but a broad label that offers a menu of design options. To decipher results-based funding, the paper covers all phases in designing and implementing a results-based funding system and highlights strengths and weaknesses of concepts such as taximeter funding, performance contracts and formula-based allocations.

World Bank Policy Research Working Paper 3436, October 2004

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent. Policy Research Working Papers are available online at <http://econ.worldbank.org>.

¹ The authors wish to thank the following persons for their comments and suggestions: José Joaquín Brunner, Director of Education Program, Fundación Chile; Joseph Burke, Director of Higher Education, The Nelson A. Rockefeller Institute of Government; Eduardo Velez Bustillo, Education Sector Manager, Latin America and the Caribbean Region, World Bank; Eric Canton, Researcher, The Netherlands Bureau for Economic Policy Analysis; Jesko S. Hentschel, Country Sector Leader in Human Development for Argentina, Chile, Paraguay, and Uruguay, World Bank; Ricardo Reich, Director, Chile: Higher Education Quality Improvement Program (MECESUP), Ministry of Education; and Salvatore Schiavo-Campo, Senior Advisor for Governance and Public Management, World Bank.

ACRONYMS

AFD	Direct public support (Aporte Fiscal Directo)
AFI	Indirect public support (Aporte Fiscal Indirecto)
CFT	Technical Training Centers (Centro de Formación Técnica)
CRUCH	Council of Rectors (Consejo de Rectores)
DIVESUP	Higher Education Division in the Ministry of Education (División de Educación Superior)
FDI	Institutional Development Fund (Fondo de Desarrollo Institucional)
IP	Professional institutes (Institutos Profesionales)
MECESUP	Quality and Equity Improvement in Higher Education (Mejoramiento de la Calidad y la Equidad en la Educación Superior)
MINEDUC	Ministry of Education (Ministerio de Educación)
PAA	Academic Aptitude Test (Prueba de Aptitud Académica)

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INTRODUCTION

Chile is rapidly moving to a mass tertiary education system. Over the past decade enrollment in Chilean higher education expanded significantly from about 250,000 students in 1990 to more than 500,000 in 2003. Nearly all of the expansion was financed by private sources, reflecting a policy of cost-recovery and growth in private provision of tertiary education. Today, Chile is among the countries in Latin America that allocate the least public funding to higher education relative to GDP. Yet, due to sizable private spending, Chile features the highest share of GDP allocated to higher education in the region.

Significant private contributions to the financing of tertiary education provide an opportunity for the Chilean government to strategically reorient resources to core public sector responsibilities. By prioritizing public resources and focusing on value for money, Chile may address pressing sector issues such as inequities, insufficient supply of doctoral graduates and lack of coherence and flexibility between tertiary learning settings.

The Government of Chile has already begun a process of reprioritizing public resources by significantly scaling up support for student loan programs. In addition, about 7 percent of public financing for tertiary education is tied to a best-student formula and 5 percent of the base funding for the 25 traditional universities is allocated according to performance criteria. Nonetheless, unrealized potential remains for tying funding to desired educational outcomes. Almost half of all public subsidies for tertiary education are allocated based on historical precedence and there is no system for collecting reliable, standardized information on the performance of tertiary institutions.

This paper profiles international experiences and discusses strengths and weaknesses in approaches to results-based funding of tertiary education in order to identify finance reform options for Chile. The structure of the paper reflects the phases involved in designing a results-based funding system. The first section briefly describes the Chilean public financing system of tertiary education. Section two discusses the need for establishing data collection structures and identifies steps involved in selecting performance criteria. Section three outlines strengths and weaknesses of design options drawing on examples of results-based funding systems in Africa, Europe, Latin America and North America. With a complete evaluation model in place, section four reflects on how resources can be tied to selected indicators. Section five discusses implementation issues when introducing a results-based funding system. Finally, section six outlines possible finance reform options for Chilean tertiary education in light of international experiences.

1. CHILEAN PUBLIC FINANCING SYSTEM OF TERTIARY EDUCATION

The Chilean tertiary education system was changed profoundly during the 1980s following the most radical reforms to university education ever attempted in the region. The reforms aimed at improving efficiency by deregulating the sector and stimulating private provision. Moreover, the reforms sought to alleviate the finance burden of the state by charging tuition to students and encouraging higher education institutions to diversify their funding sources. As a result, Chile today features one of the strongest markets for tertiary education in the region.

The Chilean tertiary education system is comprised by three types of institutions: **Universities** offer undergraduate first-degree and postgraduate programs. They are the only institutions authorized to award bachelor, master and doctoral academic degrees in Chile. Moreover, universities are the only institutions authorized to award professional certificates in 17 professional fields (engineering, medicine, law, psychology, architecture, etc.). **Professional institutes** (IP) deliver four-year programs and are authorized to award professional certificates in any field, excluding the 17 fields that are the prerogative of universities. **Technical Training Centers** (CTF) offer two-year technical vocational programs which lead to a Higher Technical Level Certificate.

Table 1. The Chilean Tertiary Educational System, 2002

	Institutions	Enrollment
Council of Rectors Universities	25	243,593
Private Universities	38	125,740
Professional institutes	51	91,153
Technical Training Centers	115	61,123
Total	229	521,609

Source: MINEDUC (2003)

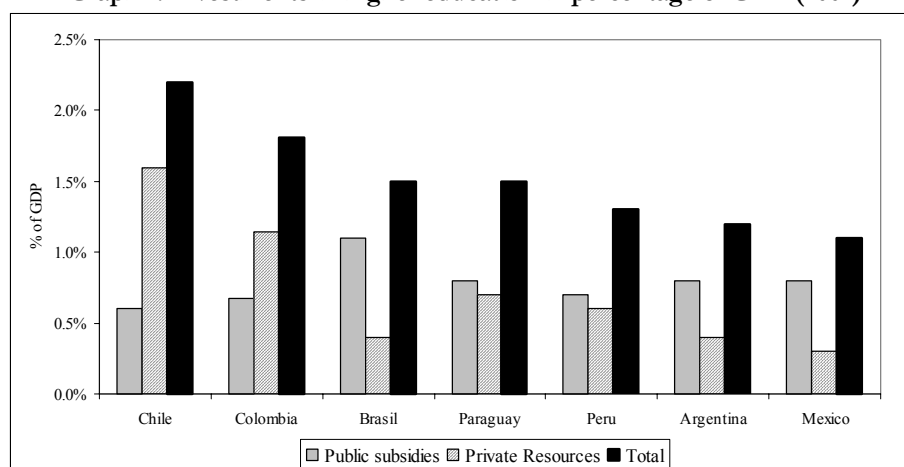
Tertiary institutions are subjected to a statutory regime according to which they are located in one out of four categories, full autonomy, accredited, examined and supervised. Institutions with full autonomy have substantial freedom to plan and organize programs, designate personnel and administer the budget. The 25 traditional council of rectors universities were declared autonomous by definition. Chile has been a regional forerunner in quality assurance of tertiary education institutions and their course programs. Since 1999, provisional national accreditation commissions have set standards and granted formal recognition to programs at the graduate and undergraduate level based on self-assessments and external peer-review processes.

To administer admissions, traditional universities set up, more than 30 years ago, the Academic Aptitude Test (PAA) comprising skills centered exams on math and language and more specific knowledge centered tests on various subjects. The PAA is designed and scored in accordance with international assessment standards. Access to traditional universities is highly competitive, with a few institutions concentrating most of the applicants.

Levels and mechanisms of funding

Chile allocates a total of 2.2 percent of GDP to tertiary education, which is the highest percentage in the Latin American region (Graph 1). Due to the aforementioned policy of cost-recovery, most resources come from private sources. This reflects high private rates of return for tertiary graduates in the labor market and a political decision to target public resources to basic education and other social priorities.

Graph 1. Investments in higher education in percentage of GDP (2001)



Source: OECD (2002a), World Bank (2002d) and World Bank (2002b and 2003)

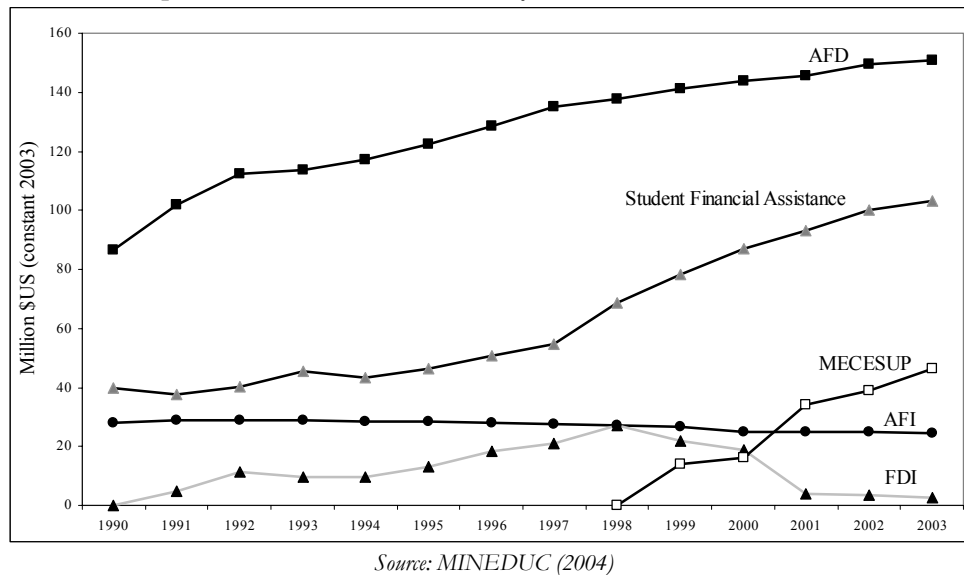
Public sector funding of tertiary education comprises only 0.6 percent of GDP. This translates into one of the lowest public expenditure per tertiary student in Latin America. Moreover, spending on tertiary education is well balanced against the primary and secondary level. Primary education is currently averaging about 64 percent of annual funds allocated to education, secondary 20 percent and higher education only 16 percent (MINEDUC 2004).

Decreto Fuerza de Ley no. 4 from 1981 regulates public financing of Chilean tertiary education. Funding is allocated through four mechanisms: (i) **direct public support** (AFD) to the 25 traditional public and private universities; (ii) **indirect public support** (AFI) of public and private institutions linked to a best-student formula; (iii) **funding for institutional development and quality improvement**; and (iv) **student financial assistance** in the form of scholarships and a loan system for students enrolled in traditional universities based on an income contingent repayment scheme².

Graph 2 shows the evolution and composition of public expenditures in tertiary education. Public expenditures for tertiary education more than doubled in real terms between 1980 and 2003. Notably, public subsidies for student financial support, direct public support (AFD) and funds for institutional quality improvement projects increased (MECESUP). Meanwhile, indirect public support (AFI) has remained stable. In 1990, AFI represented 18 percent of total public expenditures on tertiary education; in 2003, it was reduced to 7 percent.

² A project law is currently under review in the Chilean legislature, which would open up financial assistance to students attending other tertiary institutions than the traditional 25 universities.

Graph 2. Public subsidies for tertiary education in Chile, 1990-2003

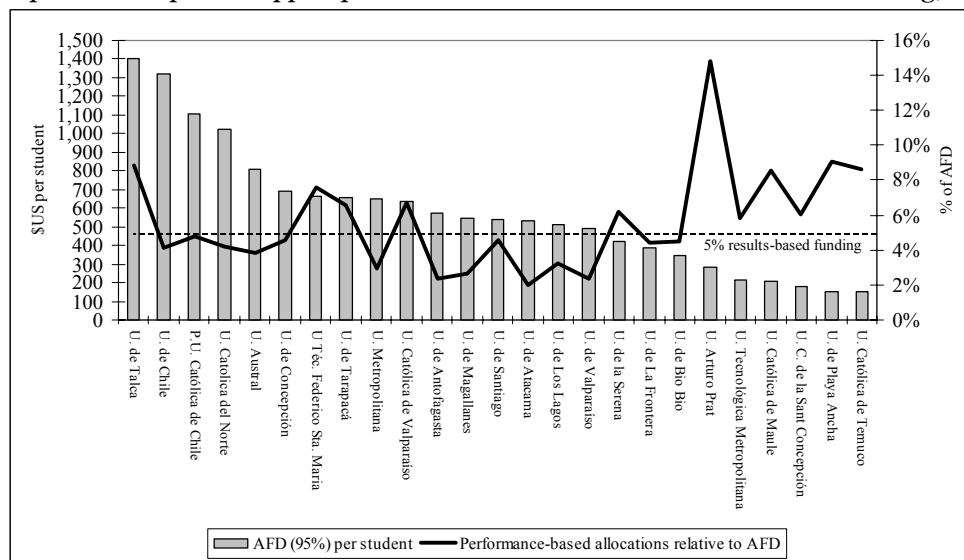


Direct public support

One of the most contentious issues regarding tertiary education in Chile is the direct financial support given to the 16 public and 9 private universities that existed before tertiary education was reformed in the early 1980s. AFD comprises about 50 percent of total public spending on tertiary education. Yet, Chile's 38 non-traditional private universities, 51 professional institutes and 115 technical training centers have no access to AFD.

95 percent of AFD is allocated to universities based on historical precedence and a process of political negotiation without systematic reference to obtained results. This allocation process maintains a highly uneven distribution of AFD funds between traditional institutions. As revealed in Graph 3, per student AFD funds vary from more than 1,400 USD per student for the University of Talca to about 150 USD per student for the Catholic University of Temuco.

Graph 3. Direct public support per student and distribution of results-based funding, 2003



Five percent of AFD is allocated to universities based on input, process and output criteria. These funds are allocated according to the relative scoring of each university on five weighted indicators: (i) critical mass obtained in each career measured by the number of undergraduate enrollees per program; (ii) internal efficiency measured by student-teacher ratios; (iii) quality measured by the number of faculty holding advanced degrees; (iv) scientific quality measured by the number of research projects per full time equivalent scholar; and (v) scientific production measured by the number of publications per researcher. High weights are placed on quality and scientific activities (84 percent) and low weights are given to efficiency and, particularly, enrollees per program.

Graph 3 reveals that performance funding does not mirror the distribution of AFD. Institutions that receive the least funding per student are all well above the default five percent results-based funding. In absolute terms University of Arturo Prat and Austral University, for example, obtained almost the same amount of performance funding in 2003, while total AFD funding per student was almost three times higher at the Austral University.

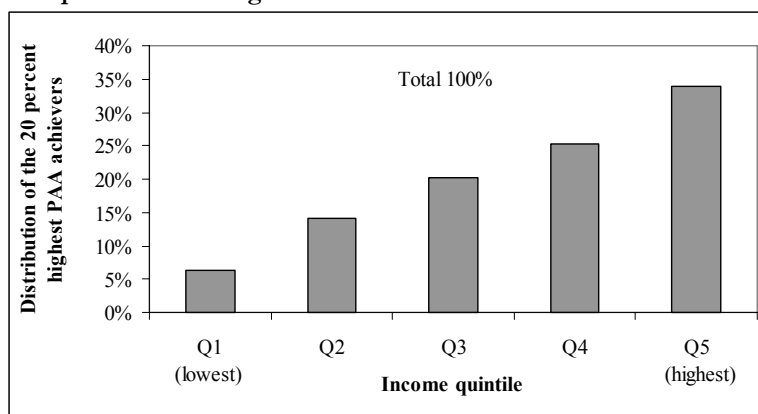
Results-based funding provides AFD universities an incentive to perform, especially in regard to the quality of staff and scientific activity. However, due to its structure and size, the mechanism has had limited impact in the sector. Moreover, problems have been encountered in the operation of the mechanism, which reduce its positive implications on transparency in the Chilean university system. Notably, the lack of a national information system with reliable, standardized statistics and unambiguous baselines has given way to errors and inconsistencies in the reporting from universities.

A bill is currently under review in the Chilean Congress that would write national accreditation of tertiary institutions into law and mandate the establishment of a national information system for post-secondary education. As a minimum, institutions would be required to provide statistics related to students, faculty, resources, infrastructure and learning outcomes. Collected information would be validated by the Ministry of Education and published annually (MINUDUC 2003). Consultations have begun between the Ministry of Education and key universities on definitions and criteria, but a final design is yet to be agreed upon.

Indirect public support

All institutions offering tertiary learning opportunities in Chile are eligible for indirect public support. The AFI is distributed to institutions according to their ability to attract the 27,500 highest scoring students in the university admission exam (PAA). In 2003, the distribution of AFI between institutions was: 82 percent for the 25 traditional universities, 17 percent for private universities and 1 percent for IPs and CFTs.

Graph 4. Relationship between the highest PAA achievers and student economic background (2000)



Source: Larrañaga (2001)

Indirect public funding has been successful in providing tertiary institutions – public and private – a strong incentive to respond to student needs and provide learning opportunities of high quality and relevance. As such, the AFI has been an important example of performance funding in Chilean tertiary education. Nonetheless, potential exists for improving the mechanism, particularly in regard to equity. As Graph 4 shows, PAA achievement – and hence AFI allocations – is closely linked to the ability to pay for quality basic education (Bernasconi and Rojas 2004). An alternative approach to AFI would be to tie the capitation grant to the best students from the lowest three income quintiles.

Funds for institutional development

In 1998 a decision was taken to gradually phase out the Institutional Development Fund due to criticism that political criteria dominated the allocation of funds. These shortcomings were challenged by the creation of a competitive fund for quality improvement (MECESUP) under which all tertiary institutions are eligible for support.

Designed to accelerate processes of institutional modernization, the MECESUP fund supports projects developed and proposed by tertiary institutions. Committees of peers review and select proposals according to transparent procedures and criteria. Thus far, supported areas include: (i) technical training programs; (ii) undergraduate programs in the hard sciences; (iii) graduate programs in all areas; and (iv) curricula redesign (World Bank 1998).

Setting the stage for reform

With only five percent of AFD allocated on a true performance basis, significant potential exists for increasing transparency and tying incentives to key sector priorities by rescaling and reforming existing public funding structures. Despite good intentions and a decade long debate, no action has so far been taken to supplement demand side financing with changes to the public funding regime for tertiary education established in the early 1980s. This may be for good reason. Results-based funding systems are difficult to design and may be met with considerable resistance from key stakeholders. It is against this background that the following sections discuss preconditions, design options, tradeoffs and strategies to be considered when tying funding to results.

2. FUNDING HIGHER EDUCATION INSTITUTIONS BASED ON RESULTS

Results-based funding can be defined as the allocation of resources contingent on achieved rather than promised results. Tying funding to results departs from traditional considerations in tertiary education of line item expenditures and inflationary increases. These constitute

input factors and disregard results, such as graduation rates, learning outcomes and the contribution of university research to society (Fielding 1999).

Performance management rests on the assumption that effective government cannot be achieved within a classic bureaucratic framework of tight regulatory control of sources and methods of production. The relationship between the government and public tertiary education institutions can be described within the context of the principal-agent model. The providers of higher education have more information about education processes than the government. The government (the principal) therefore delegates part of the decision-authority to the institutions (the agents). However, the information asymmetries between the government and the institutions can create agency problems: institutions can exploit their information advantages to pursue other goals. These agency problems typically arise when funding is based on inputs or on historical patterns. As the government cannot observe the effort of university staff, the system may preserve inefficiencies and ineffective programs.

A way to overcome such agency problems is to redesign funding systems, so that incentives of the principal and the agents converge. This is the essence behind the idea of results-based funding. Governments should be tight on setting goals for tertiary institutions and assessing results and provide flexibility on the methods used to achieve these ends. Thus, decision makers would assume a 'stimulative and facilitative' role centered on incentive-induced-change rather than control and prescribe actions at the decentralized level (Windham and Peng 1997).

Building systems for results-based funding

Higher education systems are of high complexity and cater to multiple objectives. Hence, building a funding system without perverse incentives or unintended consequences requires careful consideration of design options. Perfection is unlikely to be ensured in the design phase and progress is often based on trial and error during implementation.

The impact of incentive driven institutional change is contingent on the tailoring of components to fit national and systemic characteristics. Even when an administrative culture has become obsolete or dysfunctional it remains necessary to understand its institutional roots to secure durable improvements. Equally important, administrative capacity limitations and other institutional constraints must be taken into account when designing funding systems (Schiavo-Campo 1999).

Kusek and Rist (2002) propose adjusting the complexity and ambition of a results-based funding system based on a 'readiness assessment'. Performing such an assessment gives reforming agencies an understanding of what institutional capacity they do or do not have and what resource can be drawn upon to initiative reform. A 'readiness assessment' can also help to clarify where within a government reforms might begin, under the auspices of who and what demand exists for the use of collected information.

Information systems

As governments begin to address the challenges of results-based funding, they face the need to document performance with valid and reliable information. Allocating resources based on institutional performance presupposes credible and timely national and institutional statistics on a wide range of indicators. Without a good information system no basis exists for evaluating institutional performance. When reliable data are lacking, the priority must be to build a data and monitoring capability before considering the introduction of results-based funding (Schiavo-Campo 1999).

Box 1. University Information System (SIU) in Argentina

Initiated in 1994 under the *Programa de Reforma de la Educación Superior* (PRES) the Argentine Government has led the design and operation of an internet-based management information and statistical data system that integrates various existing modules needed for decision-making at the ministerial and decentralized level and provides adequate data and system compatibility with statistical systems of public universities.

The SIU consists of five main software modules: (i) accounting and budget; (ii) staff management; (iii) university statistics; (iv) library management and (v) student management. All modules are merged into a single platform and are available through the Internet for all participants. Close consultation with end-users in the development phase has ensured that modules are easy-to-use and compile data of high relevance.

Source: World Bank 2004 (ICR)

Establishing structures for data collection often involves designing computer systems that standardize information and reduce the administrative burden of handling large quantities of data. Some of the elements that need to be addressed are responsibilities for data collection, reporting and evaluation of collected information. Since institutions will be funded based on collected information, systems need build in safeguards and structures for external validation of data. National auditing agencies are often well-positioned and sufficiently independent to carry out this task.

Given the complexity of getting reporting structures right it may improve changes of success if performance reporting precedes results-based funding. Requiring tertiary institutions to present periodic reports on priority indicators prior to the introduction of results-based funding familiarizes institutions with data collection and establishes a reliable baseline from which institutional performance can be assessed.

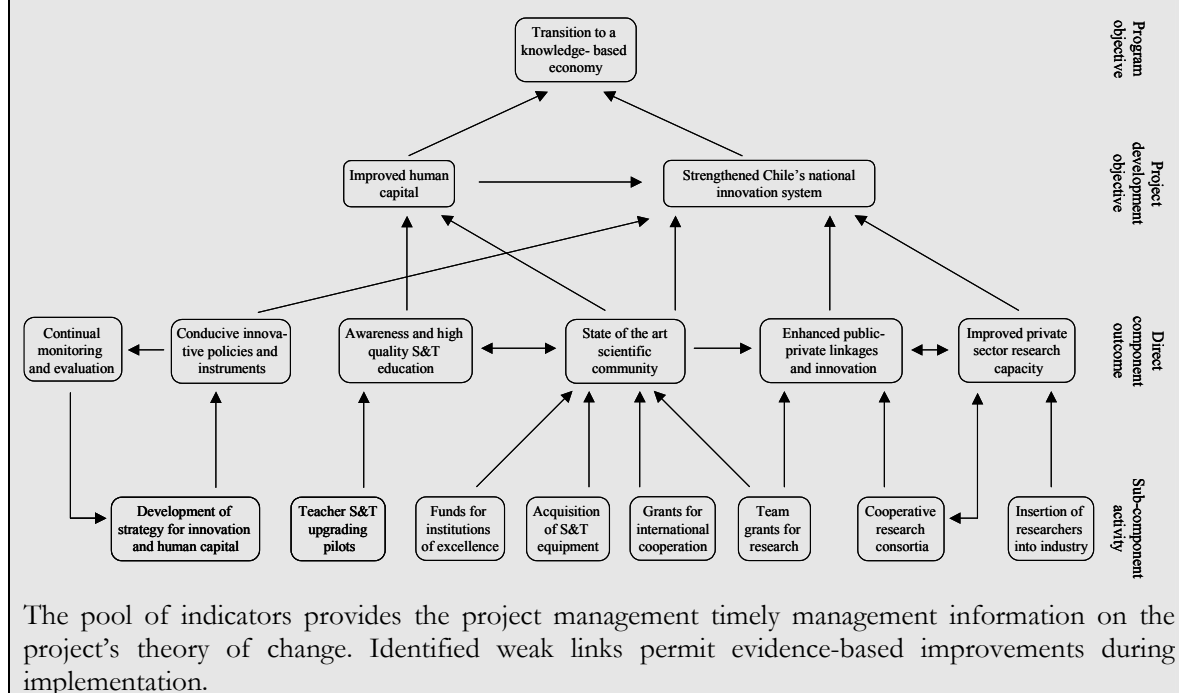
Selecting indicators

The process of identifying indicators goes to the heart of designing a results-based funding system. As pointed out by Burke (2001a) “what gets measured is often what gets valued, and what gets funded is even more prized”.

Indicators are most effective when they mirror the government’s strategy for change in the higher education sector. A strategy implies the movement of the sector from its current stage to a desirable but uncertain future stage. Because the sector has never been to this future position, its intended pathway involves a series of linked hypotheses. In the Chilean Science for the Knowledge Economy Project, prioritizing outcomes and making key hypotheses explicit was an important first step in selecting indicators (Box 2). Ideally, indicators should reflect the aspects of the higher education sector that, if improved, are presumed to result in the achievement of general goals such as equity, efficiency and quality (Niven 2002).

Box 2. Theory of change: Science for the Knowledge Economy Project in Chile

The 2003 Science for the Knowledge Economy Project in Chile supports the country's transition to a knowledge-based economy by investing in the innovation system and the stock of human capital. To determine where to monitor progress, a causality tree was drawn to display how activities and goals interlink. For each arrow in the model an indicator was selected.



Source: World Bank (2003b)

Indicators come in four types: **Inputs** involve the human, financial and physical resources received to support programs, activities and services, such as funding, enrollments and staffing. The performance criterion corresponding to inputs is *economy*, i.e., the timely acquisition of quality inputs at the lowest possible cost. **Processes** are the manner in which inputs are procured and the means by which results are delivered. Processes are internal to an institution and include teaching methods, the use of technology and procurement. Process indicators can be useful proxies for performance when output or outcomes cannot be defined with clarity.

Outputs reflect the quantity of products produced such as the number of graduates or the number of research articles published. The performance criterion corresponding to outputs is *efficiency*, i.e., maximizing the quantity of outputs in relation to a given total amount of inputs. **Outcomes** cover the quality and societal impact of the products produced. Outcome indicators include learning results, job placements and user satisfaction. The performance criterion corresponding to outcomes is *effectiveness*, i.e., maximizing outcomes in relation to the outputs produced (Schiavo-Compo 1999).

Box 3. Indicators in US university results-based funding systems

Most states in the US use some form of performance funding or reporting based on different indicators reflecting the preferences of policy makers in different states. Burke and Minassians (2002b) have made a survey of the indicators used to evaluate performance in US higher education. Some of the most commonly used indicators include:

- Administrative/academic costs/staff (input)
- Tuition and fees (input)
- Financial aid (input)
- Research sponsored by external sources (input)
- Technology/ distance learning (process)
- Student transfers (output)
- Time-to-degree (output)
- Graduation/ retention rate (output)
- Job placement (outcome)

Source: Burke et al. (2002c)

Each type of indicator reflects a tradeoff between accountability and measurability. Focusing exclusively on inputs and processes facilitates the monitoring of what and how means are used but neglects the purposes for which resources are obtained. Output indicators are relatively simple to observe and quantify but may be only vaguely associated with societal impact. Outcome indicators are generally more relevant, but also less useful for assigning responsibilities. For most purposes it is preferable to rely on a combination of indicators rather than focusing on any single measure. Yet, an abundance of data adds complexity, and risks making the performance system unwieldy and difficult to understand. Hence, most results-based funding systems attempt to strike a balance between manageability and comprehensiveness.

An indicator should preferably meet the following requirements: (i) easy to calculate; (ii) difficult to manipulate; (iii) give a reliable estimate of the institution's value added and (iv) not be subject to noise. First, it should be transparent for institutions and their employees how their performance is evaluated. If people do not know how to influence their performance, results-based funding is unlikely to work. Second, the indicator must be difficult to manipulate. For instance, test scores can be manipulated in several ways, such as teaching-to-the-exam and keeping marginal students out of the pool of tested students. Third, students learn inside and outside tertiary institutions. The indicator should measure the performance of the institution, correcting for external influences. Finally, random factors should not have a major impact on selected indicators.

Several OECD countries have experimented with establishing distinctive indicator sub-systems for the funding of tertiary education. Separating e.g. indicators for teaching and research, as in the United Kingdom, may reduce complexity and allows evaluation criteria and follow-up processes to be closely tailored to each sub-system (Box 4). Nonetheless, decoupling indicator sub-systems adds to the challenge of creating incentives that support a balanced approach to institutional improvement (Jongbloed 2001).

Box 4. Separate set of indicators for teaching and research in the UK funding system

In the United Kingdom the allocation of funding for higher education is based on two separate sets of indicators, one for teaching and one for research. Categorizing indicators cater for high specificity in the choice of indicators and allow unique follow-up procedures to be established for each set of indicators.

Teaching grant

Funding for teaching is based on several indicators such as number of students, length of courses, size of the institution, location, level of specialization and the number of disadvantaged students. The indicators have built in flexibility in order to give recognition to differing institutional circumstances.

Research grant

The calculation of funding for research is based on indicators such as the number of qualified researchers, published research documents, the number of research students and external research income. The assessment process and the allocation of funding is not solely based on the quantitative scoring on each indicator. In the so-called research assessment exercise (RAE), committees of peers evaluate the overall quality of research activities in each institution.

Source: HEFCE 2003

3. DESIGN OPTIONS – INTERNATIONAL CASES

Significant variety exists between countries in the methods and processes applied to select the criteria by which tertiary institutions are evaluated. Although all contain idiosyncratic details, systems can be classified into two categories: *System-wide fixed set of indicators* where little change is introduced over time on the criteria used to evaluate institutions and *fixed-term performance contracts* with explicit evaluation criteria, periodically negotiated between the supervising agency and each tertiary institution.

Fixed set of indicators

For performance systems with a fixed set of indicators, a distinction can be made between *simple criteria systems* where institutions are evaluated based on one or two indicators and *multiple criteria systems* with several indicators. France, Denmark and the Netherlands are examples of countries basing a significant part of institutional funding on a simple criteria system. Countries operating a funding system with multiple performance criteria include the United States and South Africa. In the Latin American region, Argentina is an example of a country that has – on a small scale – experimented with multiple criteria funding of higher education.

Simple criteria systems

The **French** tertiary education system receives about 50 percent of its funding based on a simple input formula. Funding is tied to the number of students enrolled while adjusting for variance in expenses per students in different careers. Calculated funding is allocated to institutions as a lump-sum, which provides tertiary institutions with significant budgetary autonomy.

Box 5. Funding model for French universities

The basis for calculating funding is the number of students enrolled. The compensation that universities receive is tied to the level and type of program that the individual student is enrolled in. All programs are categorized in a grid that serves as a weighting device. Funding per student is determined using four criteria:

- Teaching staff not funded by the central government
- Compensation for non-academic staff
- Technical requirements and equipment
- Teaching facilities

Source: CDUS 2002 and CHEPS 2001b

The main advantage of the French system is the simplicity of the funding criterion. As pointed out, input indicators make it relatively unproblematic for decision makers to track spending and allocate funding. The drawback, however, is weak incentives for universities to provide quality education and ensure efficiency by avoiding delays in student completion.

The **Danish taximeter model** uses a simple output criterion to determine the level of funding for tertiary institutions. Depending on their research activities, institutions receive between 30 and 50 percent of their funding based on their educational production. For each student who passes an exam an amount of money is paid to the university. The total of these “active” students determines the available funding in a particular year. Universities do not receive compensation for students who fail their exams or do not take exams.

Box 6. The Danish taximeter-model

The Danish tertiary education funding tariff paid per passed exam, the “taximeter tariff”, varies according to the field of study, and has three components:

- A tariff for the costs of education and equipment
- A tariff for joint costs (e.g. administration, buildings)
- A tariff for expenses for experimental sciences and practical training (e.g. in medicine and physics)

Source: CPH and CHEPS (2001)

The taximeter model promotes efficiency in the tertiary system by highlighting the need for students to complete their coursework and progress in the system. Hence, historically determined budgetary slack is dealt away with as institutions are only rewarded for their incremental “production”. In theory, the taximeter model also facilitates student mobility between institutions since funding is tied to the student and not the institution. However, the model as implemented in Denmark is not a real voucher since students cannot use the taximeter to buy services from private providers. The risk associated with the taximeter model is the incentive of institutions to artificially increase pass rates to receive more resources. To avoid decreasing educational quality, the model depends on the existence of a strong quality assurance mechanism and deep-rooted professional standards among university staff.

The **Dutch** funding system allocates about 50 percent of public funding for university teaching based on an output criterion. Whereas the focus in Denmark is exams passed, the Dutch system rewards student degree completion. To avoid unintended fluctuations in funding, resources are allocated based on two-year averages of the number of graduates. An important feature of the Dutch system is that the macro-budget for the university sector is determined before deciding on the distribution of resources to individual institutions. Hence, the formula does not imperil budget stability.

Box 7. Funding model for Dutch universities

The distribution of resources to individual institutions is constrained by a fixed macro-budget for the university sector. The allocation of the budget is based on the number of students who completed their program multiplied by the normative study duration (4.5 years) plus the number of students who drop out multiplied by an administratively set study duration of these dropouts (1.35 years). The total amount of funding is then calculated by multiplying calculated graduation numbers by a fixed reimbursement per student (i.e. 4,477 euro for Engineering students and 3,461 euro for students in other programs in 2001).

Source: CPH & CHEPS 2001

The Dutch funding system provides a strong incentive to dismiss incapable students as soon as possible and to assist talented students in graduating without delay. The simple performance criterion makes it transparent to institutions how they will be evaluated and thereby facilitates the adoption of long-term strategies to reduce university dropouts. However, as is the case in the Danish and French tertiary funding system, the evaluation criterion does not by itself cater multiple objectives such as quality, relevance and equity.

Multiple criteria systems

The US state of **Tennessee** applies multiple performance criteria to about 6 percent of the core budget for higher education. The funding system consists of four standards and ten indicators, each given a certain weight. Built into the system are provisions that allow institutions to be evaluated differently based on the type and duration of their degrees. An important characteristic of the funding system is that universities are competing against their own record. Hence, a university is not advantaged by the poor performance of another institution. The system is revised every five years and each revision gives the state as well as the universities a chance to decide on new policies and changes in the nature and number of indicators (Bogue 2002).

Box 8. Performance indicators used in the Tennessee funding formula

The scorecard represents the weight assigned to each indicator and hence the relative priority given to the goal.

Indicator	2-year campuses	4-year campuses
Standard 1 – Academic Testing and Program Review		
• Foundation Testing of General Education Outcomes	15	15
• Pilot Evaluations of Other General Education Outcome Measures	5	5
• Program Accountability		
1. Program Review	5	10
2. Program Accreditation	10	15
3. Major Field Testing	15	15
Standard 2 – Satisfaction Studies		
• Student/Alumni/Employer Surveys	10	10
• Transfer and Articulation	N/A	5
Standard 3 – Planning and Collaboration		
• Mission Distinctive Institutional Goals	5	5
• State Strategic Plan Goals	5	5
Standard 4 – Student Outcomes and Implementation		
• Output Attainment		
1. Retention/Persistence	5	5
2. Job Placement	15	N/A
3. Assessment Implementation	10	10
Total Points	100	100

Source: Bogue (2002)

The implementation of the Tennessee model has been assured through the involvement of institutional and government officials in the funding procedure, thereby giving all levels a

sense of ownership to the system. In the 1997-2002 cycle, campuses were for instance permitted to choose two performance indicators, one related to their own educational interests and one directed to the State's strategic goals. Yet, the system has been criticized for involving too many people and using an excessive amount of resources on calculating indicators that are of limited use in tertiary institution internal decision-making (Bogue 2002).

The **Argentine** resource allocation model for tertiary education is designed to close gaps between the real budget need in ideal quality and efficiency conditions and the actual budget allocated based on historical criteria. Based on three criteria, the model matches the estimated minimum necessary resources to finance the current level of scientific, academic and administrative activities.

Box 9. The Argentine AR-model

Allocation of funding through the AR-model (*Asignación de Recursos*) is based on the 'objective' budget. The calculation of this budget draws on the following criteria:

- Number of effective students
- Pedagogically adequate teacher per student ratios
- Teachers' salary scales

Source: World Bank (2003b)

Rather than targeting existing base funding of Argentine tertiary institutions, the model is applied to increases in public subsidies for tertiary education. Due to Argentina's economic crisis, the model currently only comprises about 4 percent of the public budget for tertiary education.

The **South African** funding model – applied to 89 percent of the core budget for higher education – is another example of a multi-criteria approach. Block grants for public tertiary education are divided into four categories reflecting teaching, research and specific institutional issues. The Ministry of Education publishes an annual statement, which determines how performance criteria will be calculated and weighted. This provides clarity to institutions on how they will be evaluated while ensuring a degree of flexibility despite the use of pre-selected indicators.

Box 10. Performance based grants in South Africa

The funding formula is based on four input and output weightings:

1. **Teaching inputs:** Total number of enrolled second year students is passed through a grid, placing enrollees into four study categories, which are weighted according to a) course material, b) course level and c) instruction-delivery mode.
2. **Teaching outputs:** Number of enrolled students multiplied by graduation benchmarks. Benchmarks are approved by the Minister of Education on a rolling three-year basis.
3. **Research outputs:** Actual totals of doctoral and post-doctoral graduates and research publication units for a specific year compared to a normative total according to national benchmarks.
4. **Institutional factors:** (a) grants for institutions with large proportions of disadvantaged students and (b) grants related to the size of institutions based on the number of enrolled students.

Source: Ministry of Education, South Africa (2004) and Government Gazette (2003)

An interesting feature of the South African model is the operation of a competitive fund for institutional development to supplement the multi-criteria funding system. Critics of results-based funding often charge correctly that removing resources from institutions with poor performance will only make improvement more difficult, if not impossible. In South Africa, under-performing institutions are not necessarily destined to declining budgets. By gaining

access to earmarked competitive funding, these institutions have an opportunity to improve themselves by financing institutional restructuring. Another option would be to place funds not earned by poor performing institutions in escrow and releasing them when these institutions submit acceptable improvement plans for remediation (Burke 2001a).

Multiple-criteria funding can cater multiple objectives and can consequently be used as a driver for specific, high-priority tertiary education policy components. In contrast to simple indicator systems, multiple criteria make it easier for policy makers to ensure a balanced sector development and avoid unintended consequences. However, multiple criteria formulas may result in a complex and opaque funding system. When providing incentives to the decentralized level, simplicity may sometimes provide the greatest benefits.

Performance contracts

Results-based funding based on performance contracts is a flexible design where evaluation criteria are negotiated between the supervising agency and each tertiary institution. Performance contracts are institution specific rather than system-wide in their content and application. They typically cover a period of 3-4 years.

Performance contracts have been used in **France** since 1989 – in addition to the aforementioned simple input formula – where government adopted a system of university funding through performance-centered budget dialogues. These dialogues lead to four-year contracts between the government and universities.

Universities are asked to provide a self-assessment, and to present their plans for the next four years. These plans form the basis for discussions with the Ministry of Education. In this dialogue, goals and evaluation criteria are identified and agreement is reached on how public funding will be tied to results. The contracts are not legally binding documents but “reciprocal commitments”, which serve as a reference to make decisions within the university system. In 2000, 188 institutions representing 75 percent of total tertiary enrollment were involved in contract funding (CHEPS 2001b).

Box 11. Results-based contracts in French tertiary education

Results-based contracts in French tertiary education consist of a *base* and a *strategic* part. The base part targets long-term investments in buildings, equipment and facilities. The strategic part is an agreement on the financing of priority projects including new technology, student life and libraries.

Projects suggested under the contractual budget have to be new initiatives that cannot be financed through the recurrent budget. To avoid that contractual budgets are used to fill gaps in university budgets, objectives and indicators are made very clear and the contracts tailored to each institution. The state thereby hopes to stimulate the link between objectives and resources and provide an incentive for universities to achieve agreed results.

Source: CDUS (2002)

The contractual budget comprises on average about a third of total public subsidies for tertiary education. The impact on decision-making processes has been substantial. Notably, the contract regime has prompted the development of tools for expenditure analysis and management information systems to support institutional improvement processes and planning (Musselin and Mignot-Gerard 2002).

Performance contracts have been met with some resistance from within French universities. In part, this reflects a lack of performance dialogue with heads of faculties and departments that are responsible for delivering agreed results. Performance contracts are agreements between university presidents and the Ministry of Education (Musselin 2002). As Burke and Minassians (2002a) point out – drawing on experience from the United States – a key

problem is that performance criteria tend to become increasingly invisible on campuses below the level of vice presidents, because of the failure to extend performance funding and reporting to internal academic units.

Finland has prioritized consultation in the contract negotiation phase through an intensive budget dialogue involving lower management levels and regular reporting between universities and the Ministry of Education during the contract period.

Prior to performance contract negotiations, universities send in proposals including an activity and a finance plan for a three-year period. This launches a process of consultation where the Ministry of Education and universities identify targets and evaluation criteria. Ministry officials and university staff, *inter alia*, interact in unofficial seminars and meetings in order to take account of institutional and disciplinary views and ensure transparency and predictability in the negotiation process (Hölttä and Rekilä 2003).

The Finnish performance contracts include both general goals for the tertiary education system such as quality, impact of education and total number of offered degrees as well as specific goals for the individual institution.

Box 12. Finnish performance contracting

Finnish performance contracts are made up of three parts: core funding, performance funding and funding for specific initiatives. Deliverables for all three types of funding are agreed in the contract. The core funding remains stable during the three-year contract period, whereas performance funding (approximately 3-5 percent of operational expenditure) is tied to results on a number of agreed indicators. Examples of indicators include:

- Funding for research from external sources
- Assessed learning achievement
- Provision of adult education
- Graduation time
- Participation in international cooperation

To calculate the amount of performance funding, target figures are multiplied by a field-specific cost factor, which is also agreed for the three-year contract period.

Source: Hölttä and Rekilä 2003

Funding based on performance contracts gives wide room for political maneuverability and prioritization of high profile government policy. While this impairs institutional planning beyond the contract period, it caters for political necessities and ensures system endurance. Performance contracts offer a significant degree of flexibility to take account of idiosyncratic characteristics and needs when tertiary institutions are few and differences between them are large. If the tertiary education landscape is fairly homogenous and composed of a high number of providers, contracts may not be efficient.

A notable feature of performance contracts is the high demand they place on the capacity of supervisory authorities to engage in an evidence-based dialogue with institutions. Without a strong counterpart, information asymmetries may lead to under-performance, as institutions are able to press for undemanding targets. Hence, if sufficient steering capacity at the central level does not exist, funding tied to a fixed set of system-wide criteria is likely to be more effective than contracts in driving institutional improvement.

4. REWARDING INSTITUTIONS BASED ON PERFORMANCE

In addition to agreeing on the criteria that will be used to assess institutional performance, a need exists to decide how and what proportion of resources will be tied to results. In considering how institutions should be rewarded or penalized based on their performance,

Burke and Minassians (2002a) have introduced a useful distinction between performance funding and performance informed budgeting.

Performance funding ties public funding directly and tightly to the performance of tertiary institutions on one or more predefined indicators. The tie is automatic and formula-based. If a university achieves a set target on an indicator, it receives a specific amount of performance funding. By contrast, *performance informed budgeting* allows policy makers and administrators to consider institutional achievement on performance indicators as a guiding factor in determining resource allocations. The link in performance informed budgeting is loose and discretionary (Burke and Minassians 2002a).

Performance funding and performance informed budgeting each has strengths and weaknesses. Performance funding offers a high degree of predictability and provides high power incentives for institutions to perform. Funded institutions know precisely how their performance will be evaluated and which aspects of their institution need to be strengthened in order to obtain additional resources. Hence, performance funding allows long-time planning and creates a stable environment in which institutions can improve. Performance informed budgeting, on the other hand, provides weaker incentives to perform since achieved results are only considered indirectly in the resource allocation process.

Box 13. Performance funding and performance budgeting in US states

In 2001 there was a total of 37 US states with either performance funding (19), performance informed budgeting (27) or a mixture of the two models (9).

Performance funding has proven relatively easy to introduce but often difficult to implement and maintain. Many states have experimented with performance funding, but in recent years the trend has been towards performance informed budgeting, which has proven to be more flexible and sustainable.

In many cases performance informed budgeting models began as performance funding initiatives. Missouri, for example, introduced a performance funding system based on indicators. The funding model turned out to be too costly and the State ultimately decided to use indicators merely as an input to budgeting and the earmarking of funds.

Nine US states have chosen a dual system with elements of both performance funding and performance budgeting, allowing the benefits of each approach to be combined.

Source: Burke (2002b)

The profiled strengths and weaknesses are reversed when considering system endurance. Performance funding does not allow discretionary policy decisions to be made in light of budget constraints or political necessities. With budget shortfall and high institutional performance, the system may not endure as decision makers would not be in a position to reward institutions according to the agreed formula. By contrast, performance informed budgeting provides more flexibility to control aggregate spending and maintain the funding system despite changes in economic or political circumstances. A loose tie between funding and performance appropriately reflects that budgeting is inherently political, and legislators are often reluctant to cede their budgetary discretion to a “rational” performance-based budgeting system (Moynihan 2003).

The described funding types are not mutually exclusive. Designing a system with elements of both performance funding and performance budgeting allows the tertiary education system to achieve the benefits and counter some of the problems of each approach. In the United Kingdom, for example, teaching and research are evaluated based on a fixed set of indicators. Yet, the process of determining the scoring on each indicator – and in turn

funding – is not entirely quantitative and mechanistic. Qualitative peer review processes allow issues such as extra cost of providing for certain types of students and the quality of research to be factored in when assigning resources to tertiary institutions (HEFCE 2003).

Tying government subsidies to indicators

There are generally three methods by which performance funding can be determined based on predefined indicators. First, institutions can be awarded a predetermined amount of funding for *each unit delivered*. Examples of production units include enrollees and tertiary graduates. Production unit allocations can be designed to compensate for differences in the cost structure of tertiary programs. However, unit-cost mechanisms are rarely able to take account of changes in the marginal cost that accompany fluctuations in enrollment (Brown and Camber 2002). Second, funding can be tied to the *degree an institution reaches agreed targets*. Full goal achievement triggers a predetermined ceiling amount whereas results below the targets are rewarded with a fraction of this amount. Tying funding to target achievement rely on a strong capacity at the level of the Ministry of Education to set ambitious, but realistic targets. Finally, funding can be allocated according to *inter-institutional benchmarking* where institutions are funded according to their relative scoring on selected indicators. On each indicator, the institution that performs the best determines the target. A predetermined cap amount is tied to the best achievement, and a fraction of this amount will be allocated to institutions according to their relative goal attainment.

Per production unit and *degree of target achievement* performance allocations install strong incentives for performance that are easy to communicate to internal stakeholders. However, they presuppose reliable and timely baseline data. Funding tied to *inter-institutional benchmarking* creates an element of competition between public institutions and introduces flexibility into institutional funding systems. Nonetheless, benchmarking does not allow for institution specific indicators and makes it less transparent for institutions what will trigger additional resources.

Weighing indicators

Results can be ranked by assigning weights to indicators. This allows supervising authorities to promote specific institutional objectives while placing less emphasis on others. Hence, weights offer flexibility since they permit political priorities to be reflected in the allocation of funding. Weights may also accommodate for changing priorities without opening discussions on evaluation criteria.

While being politically attractive, weights risk undermining the importance of certain goals as institutions focus their efforts on indicators with greater weights (Serban 1998). Moreover, weights may disproportionately favor institutions that have already achieved high performance on some indicators. Assigning equal, or almost equal, weights to all indicators is likely to be less contentious, but may trigger frequent changes to the battery of indicators.

Levels of results-based funding

Allocating all resources on a performance basis may lead to significant variation in institutional funding from one year to another. Budget instability is likely to work to the detriment of improvement processes, as tertiary institutions would need to make dramatic adjustments to fixed and variable cost structures in order to match the level of funding each year. Adjustments imply the hiring of faculty and staff in years where performance is positive, and massive layoffs in years when performance does not meet expectations. To avoid such fluctuations, most countries limit performance funding to a predefined fraction of public subsidies for tertiary education. This need not reduce incentives to perform, as the

– in most cases – discretionary nature of results-based funding gives tertiary institutions an incentive to pursue it (Brown and Gamber 2002).

Concern about budget stability often leads government to tie performance funding to additional money, that is, funding that comes on top of the base budget tertiary institutions would receive in any given year. As demonstrated by the aforementioned move to introduce performance funding in Argentina, this approach is vulnerable to budget cuts, as alternative funding programs are often the first to be suspended. Introducing results-based funding as a fraction of institutional base budgets likely increases the impact on institutional performance and reduces the system's vulnerability to budget cuts. Nonetheless, performance driven cuts to base budgets – as pointed out – may require painful adjustments to cost structures from year to year. Also, this approach may be met with strong resistance in the design and implementation phase, as more stakeholders stand to lose from low institutional performance (Serban 1998).

5. IMPLEMENTATION

Implementing a performance-based funding system goes beyond technicalities. Even a carefully tailored design may fail if it does not rest on some degree of support from key stakeholders. Tertiary institutions are generally populated with well-articulated individuals, some of which stand to lose from changes in funding structures. Hence, developing an implementation strategy with explicit assumptions and contingency plans increases the likelihood of success.

Three methods exist for initiating results-based funding: (a) legislation mandates the system and specifies evaluation criteria; (b) legislation mandates the system and establishes the framework for decision-makers and institutional management to agree on indicators and reward mechanisms; and (c) supervisory authorities in collaboration with institutional management voluntarily agree on and adopt a new results-based funding system (Burke and Minassians 2002a).

Mandated systems provide clarity and commit policy makers to systemic changes. While mandated systems institute a system on paper, they risk undermining program sustainability if they are imposed from above and ignore the importance on consulting stakeholders. No consultation generally means no consent and ownership at the decentralized level to results-based funding.

Box 14. UNAM's failed move to raise tuition

A 10-month-long student strike during 1999 and 2000 over a move to increase tuition at Mexico's largest university, *Universidad Nacional Autónoma de México* (UNAM), illustrates the complexity of implementing finance reforms.

In March 1999, the University's governing council passed a general bylaw on payments, thereby breaking a tradition of virtually no tuition for the institution's student body of roughly 300,000. By April, UNAM found itself paralyzed by a student strike, and some strikes in solidarity had spread to other tertiary institutions in Mexico.

Students denounced the tuition effort as authoritarian and attacked the approval process as lacking in transparency. Of particular controversy was the fact that the Council had met off campus for the first time ever when making the decision. Of the 35 members not present at the meeting, 28 were student representatives. In the end, the university administration gave in to student demands by making new tuition voluntary.

Although less contentious than cost recovery, the painful and lengthy confrontation at UNAM illustrates a need to consider the political economy when tying funding to performance. Legitimate decision-making implies a complex dynamic of university politics in which a broad range of interests and academic perspectives are openly expressed and taken into account.

Source: Levy et al. (1999) and Ordorika (2002)

Resistance can be expected from groups that stand to lose from reform. Notably, the success of changes to the financing of higher education depends on the incentive system and the way incentives are shared. Financing reforms are generally most successful when members of the dominant, or powerful group are convinced that they will benefit and those who are adversely affected are less influential (Varghese 2004).

Resistance may also arise from those that will be better off as a result of the reform. Perhaps this group is not well informed, or dislikes change and uncertainties. Thus, information and actions to demystifying suggested changes to institutional funding is important in the preparatory phase. One strategy to build consensus is to offer financial compensation. When groups that tend to lose from the reform receive some form of compensation, they might be willing to give up their resistance. This strategy is often used in practice, but naturally lowers the efficiency gains from the reform. Another approach to garner institutional support is to introduce performance funding, at least for the first few years, as additional funding for tertiary education.

Prior to nation-wide introduction, results-based funding models can often be improved through small-scale experiments. Pilots and phased implementation create opportunities for further refinement and adaptation of the mechanism and scaling up based on evidence and lessons learned. Specialized training in data collection, reporting and analysis may be needed in tertiary institutions and ministries prior to implementation. Also, management structures may need to be updated to operate the system. Careful specification and a common understanding of all elements of the system are key to success. Clearly defined responsibilities make it apparent to everyone involved what, when, how and by whom performance data will be collected and reported to supervisory authorities.

6. CONCLUSION - OPTIONS FOR CHILE

The critical importance of tertiary education in a knowledge-based society suggests a need for strengthening linkages between the funding of institutions and achieved results in Chilean tertiary education. First, results-based funding would provide Chilean policymakers with an opportunity to balance increased accountability with institutional improvement. Second, funding by results may increase the efficiency and transparency of the market for tertiary education in Chile. Finally, tying incentives to political priorities would serve as an effective driver for addressing key sector issues.

The educational sector is no stranger to transparency and evaluation. Chile has a long tradition of openness about learning outcomes and responsiveness to comparative evidence from abroad. In tertiary education, a mechanism was recently established to fill information gaps on the labor market outcomes of graduates. In addition, accreditation processes have provided tertiary institutions with important diagnostic tools and a small fraction of direct public support (AFD) is tied to performance. Hence, Chile is in a favorable position to take the next step toward funding by results.

The current concentration of public subsidies and student loans in traditional universities can be understood in historical terms. Yet, it is important to evolve the funding system toward a system that relates public subsidies more closely with results. When considering design options, Chile would be able to draw on a rich base of international experiences and good practices in results-based funding.

One of the main prerequisites for funding by results is the existence of a system for collecting and reporting performance information. Although universities and the Ministry of Education collect some statistics, significant effort would need to go into building necessary information structures with build-in verification procedures and safeguards. The proposed law on accreditation would provide a clear mandate to commence this task.

A simple taximeter design does not suffice. Chile is faced with several sector issues that concern more than efficiency and dropouts. Multifaceted sector issues require complex responses, which should be mirrored by the incentive structure established by the funding system. Multiple-criteria funding can be used to drive the implementation of reforms, e.g. pertaining to equity and curricula reform.

Any funding methodology will need to recognize that there are major differences between Chilean tertiary institutions in terms of size, offered degrees and cost structure. The University of Chile, for example, has the responsibility for the National Seismology Center. The financing of such a center should not be based on the educational performance of the Department of Geology.

Given the heterogenic nature of Chilean tertiary education, a contract design may be most effective and manageable. Performance contracts, with periodic adjustments, can be tailored closely to institutional specifics and linked to sector priorities. However, contracts would require capacity building in the Ministry of Education – beyond the current capacity in the Higher Education Division – for analyzing data and effectively negotiating evaluation criteria and targets.

Results-based funding may strike hard in institutions far from the frontier of knowledge. Maintaining a competitive fund for tertiary education with rigorous review processes would allow underperforming institutions to improve themselves by obtaining time-limited funding for institutional restructuring.

To build consensus for reform, performance funding could initially have an element of additional funding for tertiary education. However, a lasting impact in the sector requires that results-based funding be applied to a significant proportion of the base budget. Hence, the success of performance funding in Chilean tertiary education is closely tied to a reform of direct public support (AFD).

Adopting a model of performance funding – rather than performance informed budgeting – would mark an important change in the funding for tertiary education in Chile. Tying funding directly and tightly to performance provides transparency and predictability. Reaching agreement beforehand on a fixed macro-budget would ensure stability in the budget for tertiary education.

Changes in the funding of the traditional universities would likely meet resistance from both political interests and students. Therefore, a pragmatic approach, building the case for legislative action slowly and on the basis of results rather than more radical immediate reforms, may be the only way to ensure a real impact in the university system.

Piloting agreed designs in a few tertiary institutions with reliable statistics would allow the system to be refined and improved before being applied to the entire sector. Particularly, it could be tested how best to encourage institutions to establish internal structures of accountability. That way agreed performance criteria and targets would be visible and have an impact below the level of top university management.

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Presentation 8:



Brain Korea 21

**Hyun Sook Yu
(KEDI)**

Contents

- ☐ **Background**
- ☐ **History**
- ☐ **Purposes**
- ☐ **Funding principles**
- ☐ **Sub-projects**
- ☐ **Selected research teams**
- ☐ **Operation System**
- ☐ **Main Performances**
- ☐ **Future Tasks**

BK21 project

- *Government funding project for developing world class graduate schools and nurturing R&D Manpower*
- *invest \$1.2 B for 7 years ('99-'05)*

Background

- ❑ **Low output of research and development**
 - 16th in SCI-level publications in '98
(3.9% of USA's and 15.5% of Japan's)
- ❑ **Low competitiveness in higher education**
 - Less than 1/4 or 1/20 of annual educational expenditure per student at major universities compared with world's leading universities
- ❑ **Deepening reliance of education & research on foreign countries (Deficit : \$ 700M)**
- ❑ **Need to strengthen creative education system in K-12 schools**

History

- ❑ '98.4 ~ '99.5: Basic planning, Public hearing
- ❑ '99.6: 1st Announcement for the Project (2nd: '99.10)
- ❑ '99.7 ~ 8: 1st Selection of teams (2nd: '99.10)
- ❑ '00.6 ~ 8: 1st year Annual Review
- ❑ '01.5: Built Comprehensive Management System
- ❑ '01.6 ~ 8: 2nd year Annual Review
- ❑ '02.4 ~ : Mid-term Review
- ❑ '05: End of the first phase
- ❑ '06.2: The Second phase of the BK21 Project start

Purposes

- ❑ **Developing world class graduate schools and nurturing R&D manpower**
 - Nurture 1,300 doctorates in each year in natural sciences and engineering fields after 2005
 - Promote supported sectors toward world top-10 graduate schools after 2005

Purposes

- ❑ **Enhancing research capability through supporting future R&D manpower financially**
 - Invest over 70% of total funding for graduate students and post-doctorates, contracting researchers to exert their efforts solely on research and study
 - Leap into world top-10 nation in SCI-level publications after 2005(17th in 1998 – 14th in 2001)

Purposes

- ❑ **Nurturing specialized regional universities and strengthening industry-university ties**
 - Establishment of independent system through raising matching-fund from industry and local government and support for merchandizing research outputs
 - Collaborative operation of curricula and projects to nurture human resources relevant to industry

Purposes

☐ **Reforming university system to nurture creative human resources**

- Diversifying admission system, widening enrolment units, etc.
- Building central management system of research funding, universalizing professor performance review system

Funding Principles

- ☐ **More funding for advanced applied fields**
- ☐ **University reform as a prerequisite to funding**
- ☐ **“Selection and concentration”**
- ☐ **Over 50% of investment to graduate students**
- ☐ **Strengthen Industry-university ties**

Sub projects

❑ Develop world-class graduate schools

- **Science and Technology(\$70M/Year)**
: Develop world-class R&D manpower and research capability in basic sciences and strategic fields
- **Humanities and Social Science(\$7.7M/Year)**
: Develop high-qualified researchers in strategic humanities and social science fields for advanced society

Sub projects

❑ Infra-structure for developing graduate school

(\$38M/Year, \$266M/7 Year)

❑ Developing Leading Regional Universities

(\$38M/Year, \$266M/7 Year)

- Develop manpower to meet the need of regional industries cooperating with local governments

Sub projects

❑ Enhance Research Capability of Graduate Schools (\$127M, 5 Year)

- **Professional Graduate schools(\$8.5M/Year)**
 - : Develop human resources in the fields related to high-value-added industries (Design, Oriental medicine, Film, etc.)
- **Small Research Groups(\$30M/Year)**
 - : Nurture researchers in all fields to develop research capability (Arts, Medical science, Humanities, etc.)

Selected Research Teams

❑ Science and Technology

- 26 Primary Project Teams (11 Universities)
(22 Secondary Project Teams associated with PPT)

❑ Humanities and Social Sciences

- 18 PPT (11 Universities) (2 SPT)

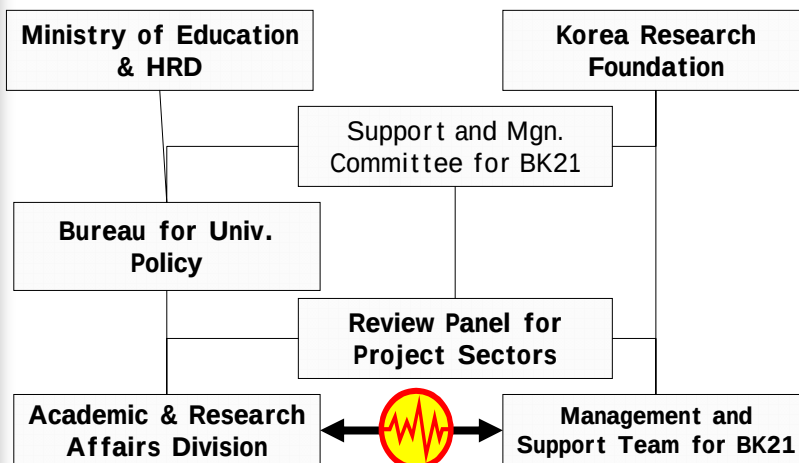
❑ Leading Regional Universities

- 13 PPT and 29 SPT (38 Universities)

❑ Professional Graduate Schools

- 11 Professional Graduate Schools
(11Universities)

Operation System



Operation System

□ Committee on Support and Management

- Vice ministerial advisory committee
- Deliberate major issues
- Composed of 11 members, representing academic society, industry, press, etc.

□ Review Panels

- Under CSMBK21
- Annual and mid-term evaluation
- 85 members in 5 groups

Main Performances

- ❑ **The Creation of research centered environments in universities**
- ❑ **Higher Research outputs**
 - The number of SCI-level publications of professors participating in the BK21 rose from 2.67 per professor in the first year to 4.25 per professor in the fifth year
 - The participants of Bk21 project accounted for 42 % of all SCI-level publication(7,470 out of 17,785)

Main Performances

- ❑ **Empirical Research by Prof. Young Lee**
 - Among the various government financed projects, Bk21 was the most important factor for the improvement in research performances (coefficient = 0.009)

Main performances

❑ Nurture high-qualified R&D manpower

Over the last 5years('99-2003)

- Financial support to 56,681 graduate students in their masters and doctorate programs
- Support to 5,511 Researchers or Post doctoral students

Main performances

❑ Number of students & researchers supported by BK21 project

	1999	2000	2001	2002	2003	Total
MA. PH.D candidates	8,414	12,083	11,403	11,808	13,173	56,681
Researchers	474	1,136	1,218	11,277	1,406	5,511

Main performances

❑ International Patents

- 288 publications before BK21 → 624 publications in 2001
- 1.1 publications per participating professor before BK21
→ 2.3 publications in 2001

Main performances

❑ Upgrade in educational and research through international exchange and collaboration

- Equipping with global mindsets through supporting short-term (12,751) and long-term (510) overseas training for graduate students for three years
- Inviting 431 distinguished foreign scholars and implanting state-of-the-art research and education

Future Task

❑ To simplify the goals

- The multiple goals(university admission reform, University Education Reform, Nurture Highly Skilled Human Resources, Cultivate Research universities etc.) and funding to the diverse fields(science and technology, humanities and social sciences, regional universities) have led to the reduced efficiency of the project

Future Tasks

❑ To concentrate on the nurturing graduate schools and supporting research for the Post Bk21 Project

- The post Bk21 projects will be implemented next year and rather than maintain the same goals as the BK21 project, it is necessary to come up with frame work to cultivate research centered universities and to increase research capacities
- The cultivation of Regional universities will be implement under the newly established NURI project.



Future Tasks

☐ **To improve research environments**

- Increasing research motivations for professors
- Improving the use of researches within universities
- Raising the management system efficiency for research funding
- Securing research funding through industry-university ties



Future Tasks

☐ **To Strengthen the autonomy and accountability of project participants**

- Flexible management is needed
- Autonomy in the utilization of overseas advisory body is required
- The role of the government should be limited to building the overall framework of the system

Future tasks

- ❑ **It is necessary to avoid uniform application of regulations towards participants, especially since humanities and social sciences are different from science and technology.**

Future tasks

- ❑ **To have fair selection and evaluation based on performance**
 - Putting more weight on the performances rather than the implementation of reform measures
 - Evaluation indicators should be continually developed
 - Establishing peer group review

Future tasks

❑ **To increase the Transparency and efficiency in budget management**

- A central management system for university funding has to be implemented
- Reducing administration costs

Future Tasks

❑ **A steady Exit**

- After the government budgetary support is complemented, universities should be able to develop and grow on its own.
- Patents imports or corporate contributions, profit from founding new enterprises are evaluated as not being viable.

Future Tasks

- It is necessary to implement measures to annually heighten the encouragement of industry-university ties, a requisite for self-supportive research environment after the termination of government support
- Measured should be examined so that universities and participants are financially equipped after the termination of government support

Thank you

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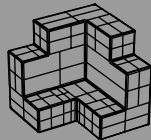
New University for Regional Innovation Project



2005. 4. 6

Sung-Joon PAIK

KRIVET



Contents

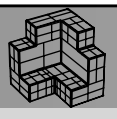


- 1 Purposes and Strategies of NURI Project
- 2 Allocation Mechanism of NURI Fund
- 3 Allocation Results
- 4 Evaluations of NURI Project

2



1. Purposes and Strategies of NURI Project



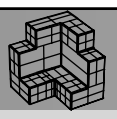
□ **NURI Project**

- Government-financed Project for
Strengthening the Innovation Capacity of Universities
located outside Seoul, Incheon and Kyunggi-do
(2004-2008)

3



1. Purposes and Strategies of NURI Project

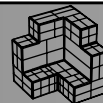


A. Why NURI?

- ▷ Urgent Need to Enhance the Competitiveness of Universities for National and Regional Development
 - Low Contribution of Univ. Educ. to Econ. Development: 59/60(IMD, 2004)
 - Public Expenditure to H.E.: 0.49% of GDP (1/2 of OECD ave.)
- ▷ Need for Capacity Building of Univ. in Regions outside Seoul, Incheon, and Kyunggi-do
 - Newly Emerging National Policy Agenda
 - Concentration to Seoul Metropolitan Area and its Vicinities
 - Reluctance to Attend Univ. in other Regions than Seoul Area

4

1. Purposes and Strategies of NURI Project

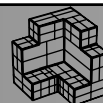


B. Purposes of NURI

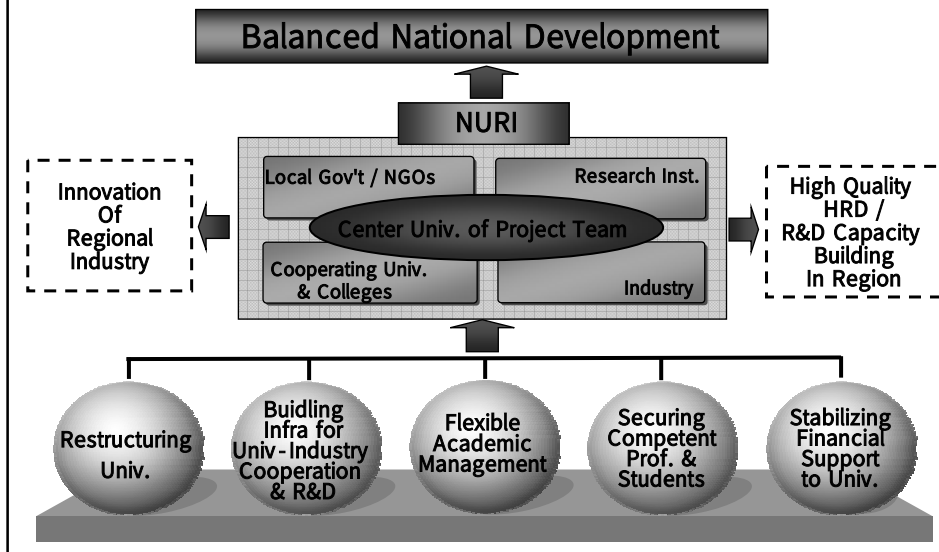
- ▷ To Specialize Univ. PGMs and Improve Univ. Competitiveness
 - Developing Univ. Programs by Specialty Area closely linked to Regional Economy
 - Improving Educ. Condition
(Faculty Secure Rate 61.2% in 2004 → 80% in 2008)
- ▷ To Promote Regional Development through Training High Quality Manpower
 - Increasing Employability of Students by Providing Various Effective Programs reflecting Labor Market Needs
 - Increasing Employment Rate (58.1% in 2004 → 70% in 2008) and Improving Quality of Employment
- ▷ To Prepare Infra for Regional Innovation System
 - Building RIS which consists of Univ., Local Gov't, Research Institutes, Enterprises, etc.

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1. Purposes and Strategies of NURI Project



< Conceptual Framework of NURI Project >



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1. Purposes and Strategies of NURI Project

C. Implementation Strategies of NURI Project

- ▷ Planning & Implementing the Project in Region-led, Decentralized, Bottom-up Manner
 - Project Team consisting of Various Stakeholders in Region
 - Review of Project Plan by 'Regional Innovation Council'
- ▷ Pursuing Balanced Regional Development and Support on the basis of 'Selection and Concentration' Principle together
- ▷ Distributing Fund in Lump-sum Base and Maintaining the Stability of Financial Support (5 years)
- ▷ Managing the Project through Performance-based Mgt. System
 - Evaluating Key Performance Indicators set by Project Team

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1. Purposes and Strategies of NURI Project

D. NURI Funding Plan (2004-2008)

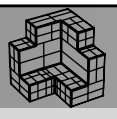
(unit: billion won)

Year	2004	2005	2006	2007	2008	Total
Amount	220	240	240	300	400	1400

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1. Purposes and Strategies of NURI Project



E. Types of Project

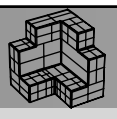
(unit: billion won)

Type	Objectives	Funding Range per Project	Composition Ratio	Conditions
Large-Scale	High Quality HRD for Developing Strategic Industries in Region	3-5	50%	Participation of Local Gov't and Industry (10% Matching Fund by Local Gov't)
Medium-Scale	HRD in Areas like Engineering, Natural and Social Sciences for	1-3	30%	Participation of Local Gov't or Industry (5% Matching Fund by Local Gov't)
Small-Scale	Economic Development in Region	less than 1	20%	Participation of one or more institutes

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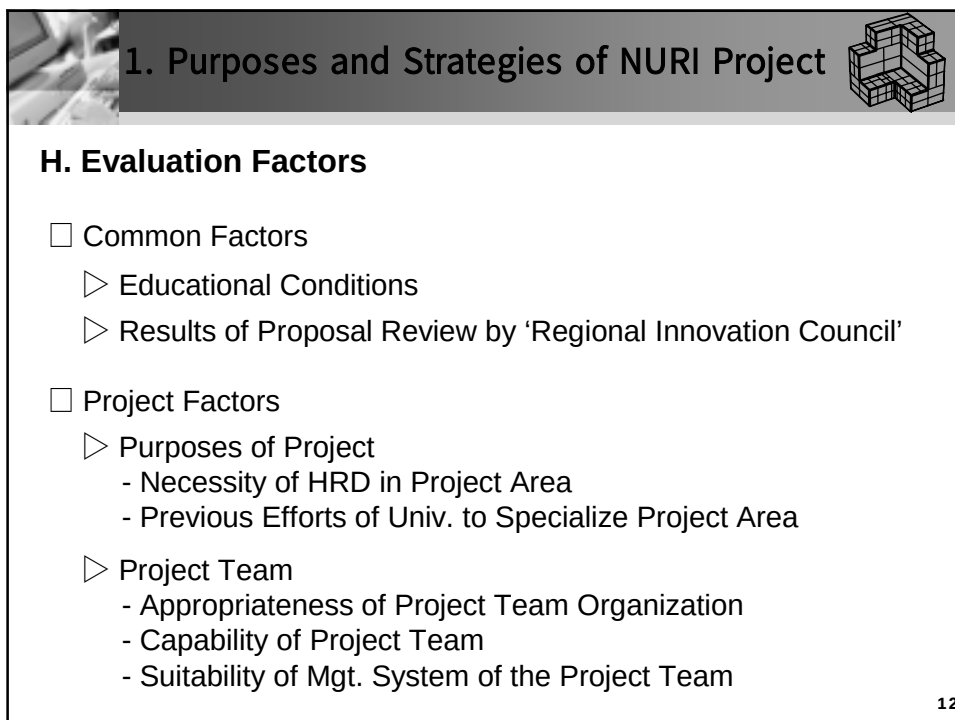
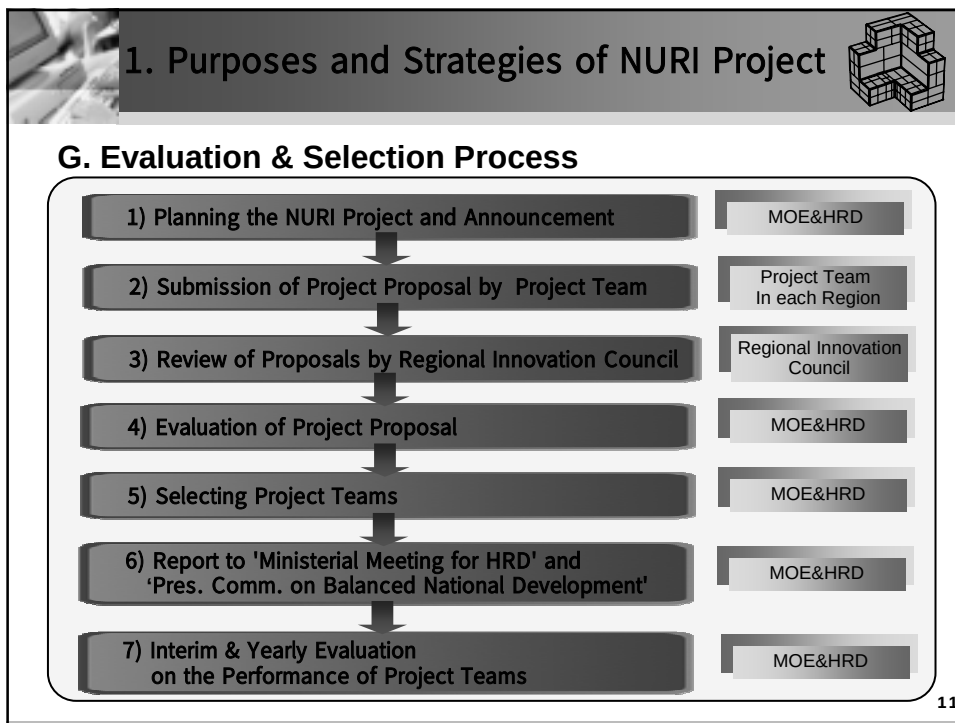
1. Purposes and Strategies of NURI Project



F. Project Team

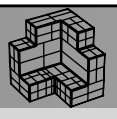
- ▷ Center Univ.: 4-year Univ.
- ▷ Cooperating Univ. and Coll.: 4-yr Univ. and 2-yr Junior Colleges
- ▷ Cooperating Institutes: Local Gov't, Firms, Research Inst., Local Office of Educations and Labor, NGOs, etc.

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1. Purposes and Strategies of NURI Project

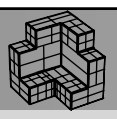


- **Contents of Project**
 - ▷ Creativity of Project
 - ▷ Consistency of Detailed Plans
 - ▷ Excellency in Educ. Plans of Participating Univ. & Colleges
 - ▷ Specialization Strategies of Participating Univ. & Colleges
 - ▷ Exchange & Cooperation among Participating Institutions
 - ▷ Appropriateness of Budget Plan

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1. Purposes and Strategies of NURI Project

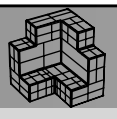


- **Project Performance**
 - ▷ Effectiveness expected from Reinforcing Innovation Capability of Participating Univ. & Colleges
 - Expectation towards Long-term Development of Univ.
 - Expectation towards Increasing Competitiveness of Univ.
 - Expectation towards Regional Development
 - ▷ Appropriateness of Performance Indicators
 - Validity of KPI
 - Feasibility of KPI

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2. Allocation Mechanism of NURI Fund



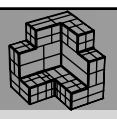
A. Principles of NURI Funding

- ▷ Promoting Balanced Regional Development
 - Allocate Fund based on Equity among Regions
- ▷ Efficient Distribution of Fund within Region
 - Apply 'Selection and Concentration' Approach to Competitive Areas
- ▷ Enhancing Performance through Lump-sum based Funding and Stable Financial Support
 - Provide Project Budget for 5 years

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2. Allocation Mechanism of NURI Fund



B. Process of NURI Funding

- 1) First, Distribute NURI Fund to each Region on the basis of Allocation Standards designed to reflect Characteristics of the Region, and
- 2) Select Project Teams and Support them within Region

* Region: 13 Metropolitan & Provincial Areas outside Seoul, Incheon, and Kyunggi-do

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2. Allocation Mechanism of NURI Fund

C. Allocation Standards of NURI Fund to each Region

☐ **Principles**

- ▷ Allocate NURI Fund on the bases of the Distribution of Beneficiaries in each Region
- ▷ Consider Equity among Regions
 - Give more Weight to Less-developed Regions

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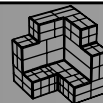
2. Allocation Mechanism of NURI Fund

☐ **Allocation Standards**

- ▷ Basic Allocation: $5\% \text{ (Total Amount of Fund} \times 0.05) / 13$
- ▷ Allocation by Proportional Ratio
 - Number of Students in Univ. and Colleges: 40%
 - Population: 20%
 - Univ. Indicator: 20%
- ▷ Allocation by Equity Indicator: 15%
 - * Univ. Indicator: Weighted Number of Univ. & Colleges, reflecting Educational Conditions
 - * Equity Indicator: Calculated by applying change rate of youth population, number of 500 big enterprises, R&D budget ratio, financial independency of local Gov't, etc.

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2. Allocation Mechanism of NURI Fund

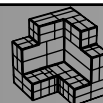


D. Allocation Standards within Region

- ☐ Divide 50% of the Fund allocated to Region to Large-scale Project, 30% to Medium-scale and 20% to Small-scale.
- ☐ Allocate Fund to Project Teams which rank the 1st at each Category (from Large to Medium and to Small)
- Providing as much Budget as requested
- ☐ Allocate the rest of Fund to Project Teams which rank the 2nd and the 3rd and ...
- ☐ Summing Up the rest of Fund and Allocate to Project Teams which rank next at each Category
- ☐ By using 'Fund for Adjustment', Provide Project Team selected last with Budget needed to Implement the Project

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3. Selection Results in 2004

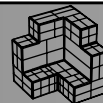


A. Selection Results

		Total	Large	Medium	Small
# of Project Team		112	25	25	62
Selection Ratio(%)		25.0%	51.0%	18.2%	23.1%
Funding Amount per year(bil. won)		213.5	103.2 (48.3%)	60.4 (28.3%)	49.9 (23.4%)
Average Fund per Project Team		1,906.3	4,128.1	2,414.3	804.8
	Univ./Coll.	113	79	55	66
	Other Cooperating Institutions	1,000	388	290	322

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3. Selection Results in 2004



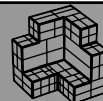
B. Project Team and Financial Support by Region

(unit: million won)

Region	# of Project Team	Fund to Region	Project Team in Regional Strategic Industry Area
Busan	12	25,213	Harbor Distribution Industry, Film · IT
Taegu/Kyungbuk	21	41,192	Electronic Information Appliance(3), New Materials Components, Culture/Tourism
Kwangju/Jeonnam	16	32,393	Optical Electronics Industry, Information Home Appliance, Car/Component, New Materials · Ship Building
Taejeon	6	13,723	Information Communication
Woolsan	4	6,480	Car
Kangwon	9	15,618	Bio, Medical Appliance, New Materials
Chungbuk	10	15,265	Bio, Semiconductor
Chungnam	10	21,453	Electronic Information Appliance, Car/Component
Jeonbuk	10	17,339	Car/Machinery, Culture/Tourism
Kyungnam	9	17,180	Knowledge-based Machinery, Robot
Cheju	5	7,646	Environment Agriculture
Total	112	213,500	25 Project Teams

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3. Selection Results in 2004



☐ Matching Fund

(unit: billion won)

Gov't Budget	213.5
Matching Fund	63.1 (100.0%)
Local Gov't	18.2 (28.9%)
Industry	16.4 (26.0%)
University	28.5 (45.1%)
Total	276.6

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4. Evaluations of NURI Project

- **New Way of Gov't Financial Support to Higher Education**
 - ▷ Past: Financial Support mainly to H.E.I.s
 - ▷ NURI: Financial Support to Programs
 - Program-based Funding

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4. Evaluations of NURI Project

- **Evaluation of the First year of NURI Project**
 - ▷ Tool early to evaluate the Effectiveness of the Project
 - ▷ Positive Aspects
 - Positioning Univ. as a Center for Regional Development
 - Pursuing Balanced Improvement of Univ. Education across country
 - ▷ Further Considerations
 - Maintaining Consistency in Monitoring & Evaluation of Project Team

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Presentation 10:

Performance-Based Funding in Higher Education

Presentation by Arthur M. Hauptman

Financing Reforms for Tertiary Education in the
Knowledge Economy

Seoul, Korea

6-8 April 2005

Performance-based funding represents one of the principal innovations in higher education financing in recent decades

- Higher education institutions and systems in most countries are funded through traditional methodologies that focus on input or student measures in the form of:
 - negotiated budgets, or
 - formulas based on:
 - staff levels or other inputs, or
 - the number of students enrolled multiplied by costs per student
- By funding outputs or outcomes rather than inputs or students, performance funding represents a real break from traditional funding approaches

The characteristics of performance funding mechanisms which differentiate them from other financing mechanisms include:

- rewarding institutions for actual not promised performance
- linking funding to the quantity of outputs or the quality of outcomes rather than inputs
- using performance indicators that reflect public policy objectives rather than institutional needs
- designing incentives for institutional improvement, not just maintaining status quo

The advantages of Performance-Based Funding relative to other more traditional financing mechanisms include:

- Tends to be more transparent than many other financing mechanisms if performance indicators are publicly developed and readily available
- Allows for greater linkage between funding and public policy objectives
- Encourages greater accountability in the expenditure of public funds by linking results to funding levels

The disadvantages of Performance-Based Funding relative to other financing mechanisms include:

- Tends to be more inflexible in its application
- Can lead to greater year-to-year variation in funding if performance results vary
- May discourage institutional diversity if many insts collectively pursue similar incentives
- Often linked to reduced institutional autonomy in the expenditure of public and private funds relative to other financing methods

The conditions for success of performance-based funding include:

- Institutions must have sufficient management capacity and autonomy to respond to the incentives and mandates included in performance-based funding
- There must be performance indicators that can be reliably tracked and calculated
- Adequate quality assurance mechanisms must be in place
- Careful planning should be undertaken to avoid or reduce unforeseen consequences

Issues in Designing Performance-Based Funding systems include:

- What proportion of public funds should be based on outputs or outcomes rather than more traditional measures such as numbers of staff or students, or costs per student?
- How many and which measures should be used to allocate performance-based funding?
- Should poor performing institutions be punished or encouraged to do better?

Three types of financing approaches might be considered performance-based funding:

- **Performance set asides** - a portion of public funding for higher education is set aside to pay on the basis of various performance measures
- **Performance contracts** - governments enter into regulatory agreements with institutions to set mutual performance-based objectives
- **Payments for results** - output or outcome measures are used to determine all or a portion of funding formula, or insts are paid for the number of students they graduate in certain fields of study or with specific skills

I. Performance Contracts - Characteristics

- Performance contracts typically are regulatory agreements more than legally binding documents
 - Performance-based evaluation criteria are negotiated between govts and institutions
 - The agreements may be with entire systems of institutions or individual institutions
- A portion of overall funding may be based on whether institutions meet the requirements in the contracts
 - The agreements can be prospectively funded or reviewed and acted upon retrospectively
- The contracts are more often punitive than incentives
 - failure to meet goals may result in reduced funding

Examples of Performance Contracts

- France -
 - since 1989 has devoted 1/3 to 1/2 of recurrent budget to 4 year performance contracts
- Finland -
 - has contracts that set out general goals for system as well as specific goals for inst
- Colorado (U.S.) -
 - setting up performance contracts that would penalize institutions that don't meet standards as part of broader reform effort that includes demand-side vouchers and fee for services

II. Performance Set Asides - Characteristics

- A portion of funding for recurrent expenses is set aside to be allocated on the basis of a number of performance measures
 - % set aside varies from less than 5% to in some cases nearly 100 percent of recurrent funding
 - number of indicators varies from single to multiple (as much as twelve or more)
- Performance measures are typically decided through negotiations between govt and insts
- Allocation of funds is not done on a formula basis

Examples of Countries that Use Performance Set Asides

- More than a dozen states in the U.S. have used performance set asides over the past decade
 - Tennessee - 6 % of funds set aside based on multiple criteria - four standards and ten indicators - each given a certain weights - insts compete against their own record,
 - South Carolina set aside most of its recurrent budget to performance funding - funding decisions were based on a large number of performance criteria
- South Africa sets aside most of its core budget for teaching, research, and other services based on multiple performance measures
 - Performance funding supplemented by a competitive fund

III. Payments for Results - Characteristics

- Two ways in which countries pay for results
 - 1) use some set of performance measures to calculate institutional eligibility for all or part of their formula funding of recurrent expenses
 - 2) when governments or private entities agree to pay institutions for each student enrolled or degree recipient in certain fields of study or with specific skills

Countries that Pay for Results - Examples

- **1) Build Performance into Their Funding Formulas**
 - England - recurrent expenses formula is paid on the basis of the number of students who complete each year of study
 - Denmark - taximeter model in which 30% to 50% of recurrent funds paid for each student who passes exams
 - Netherlands - Half of recurrent funding based on number of degrees awarded
- **2) Payment for Services**
 - Colorado (U.S.) is about to establish a fee for service for postbaccalaureate study to complement demand-side vouchers
 - Many community colleges in U.S. contract with private firms to train employees

Comparing Different Performance-Based Approaches

- **Performance Contracts**
 - Most regulatory performance-based approach
 - Difficult to enforce or to use for incentives
- **Performance Set Asides**
 - sets up a competition for funds among insts
 - what % to set aside for performance is an important decision
 - have to be careful not to use too many indicators
- **Payments for Results**
 - most market-based performance approach
 - have to be careful not to create incentives that would reduce quality

Concluding Remarks

- Various kinds of performance-based funding mechanisms have the potential to be an effective financing tool in a number of countries, although so far relatively few countries have adopted this kind of approach
- Limited experience with performance-based funding thus far suggests program design issues are important in ensuring successful implementation
- Deciding which kind of performance-based funding to use may be the most important decision that will determine success

Discussion 4:

Discussion on Financing Higher Education : Allocation Mechanism

Myung-soo Kim

Korea National University of Education

There is close correlation between securing enough educational finance to support educational activities and efficiency of educational finance which deals with quality of education. Although total amount of educational finance has increased steadily, the fund shortage is not solved since education opportunity expanded rapidly. Compare to developed countries, social educational expenses per one student is pretty low in Korea. Huge parts of educational expenses are relying upon students' tuition. Therefore, we have difficulties and limitations securing educational finance. Low level of public educational finance increases portion of labor cost, which is inflexible, but decreases operating expenses and facility expenses. These given situations are very hard to pursuit the efficiency of operating educational finance directly related to the quality of education.

Inadequate investment of educational finance was not a big problem during the period of development based on quantity rather than quality of education. Quality of education was not a social issue at that time. However, knowledge-based society in 21st century, role of higher education is indispensable to secure human resources able to produce high value added. Role accomplishment of higher education is possible through securing and investing educational finance for raising quality level not quantity level of education. International statistics shows low quality level of Korean universities. The result points out lack of effort securing financial resources for good educational qualities. Despite efforts to secure educational finance, small amount of investment is the problem. The other problem is poor

university foundation forms too small sized economy to raise quality of higher education.

Investment into right category to increase the efficiency of financial operation with limited financial resources must be considered as another key point. It is true that majors, lined up like a goods in department store, against market theory and shortage of professors made Korean universities struggle to survive without any competitiveness. Fulfilling social demands for higher education was imminent to government, but same time government was not free from universities' claim of enforcing financial allocation policy focused on maintaining the present status and focused on balanced development. Also, majority of universities chose financial allocation focused on balanced development among majors rather than investing specific major with competitiveness. Above two situations prevented Korean universities from becoming competitive.

Undoubtedly, there are some great outcomes of government's effort to foster universities with global standard. These achievements are accomplished by reinforce competition between majors and also universities through financial support by BK 21 project in 1999 and NURI project in 2004. But small amount of financial investment to cover nationwide universities is still the problem. For example, during IMF crisis more than 6 trillion was used to save Hana bank. Compare to that 1.4 trillion was invested during 7 years for BK 21 project. This number is not enough to foster universities with global competitiveness.

Plenty of budgets make allocation effective regardless of endless desire and insufficient process and standard. Shortage of budgets makes intense competition, and strict process and standard are needed to allocate budgets. However, it has a trend to allocate financial resources to large number not concentrating to few, for that reason, maybe allocated financial resources are not enough to achieve expected result - global competitiveness. Allocate financial resources to few outstanding schools or

majors to equip them with global competitiveness and set them as a role model for others could be better way to build international competitiveness. Therefore, allocating deficit financial resources should occur by certain standard oriented by predictable outcome of past, present and future. Four earlier speeches for today are meaningful as they mentioned allocation mechanism by product. Actually, our projects to develop high quality human resources, such as BK 21 project and NURI project, seem to be on the same line with competitive funding and performance-based funding. Financial support based upon single present performance or present performance plus expectation for future will be the only difference. Important thing is no matter how execute the financial support, it must be future aimed and promoting reform of higher education to equip international competitiveness. To attain this allocate, less resources to more receiver is not the best answer. Allocate more resources to few outstanding groups should be considered and examined thoroughly

Panel presentation 1:

A Strategic Plan for Higher Education In Bangladesh

The distinguished members of the Strategic Planing Committee (SPC) and Convener of expert groups and representatives of the World Bank, my colleagues in the Ministry of Education,, ladies and gentleman, Asalamu Alaikum and good afternoon.

As you know the Government of Bangladesh has decided to formulate a 10 year (2005-2015) strategic plan with the help and support of the World Bank. You have been entrusted with the responsibility of formulating the strategic plan for higher education in Bangladesh.

Higher Education Scenario

- From 6 in 1971 today total number of universities increased to 79. There are 26 public and 53 private universities now.
- More than 700 thousand students are studying in the tertiary sector.
 - 32 percent of them are women.
 - More than 500 thousand students are studying at the degree colleges under national universities.
 - More than 400 thousand students are studying in different courses at the Bangladesh Open University.

Higher Education Scenario (Cont.)

- There are several levels for provision of degrees
 - Degrees from public universities
 - Degrees from degree colleges under national university
 - Degrees from private universities
 - Degree, diploma and certificates from Bangladesh Open University
 - Degrees from Madrashas

Higher Education Scenario (Cont.)

- Many changes are taking place in the higher education sector recently
 - Number of private universities increased from 16 to 53 within last 3 to 4 years.
 - New and revised Private University Act is also awaiting parliament endorsement.
 - A number of new science and technology universities were established since 2000.
 - All 4 institutes of technology (BITs) were transformed into universities
 - Recently Government is converting two of its large colleges as degree providing universities.
 - Three more totally new public universities will begin their academic work within a couple of years.

Issues Confronted By The Universities

•Public Universities:

- Lack of sufficient allocation for their comprehensive and sustained development;
- the deterioration of standard and quality in higher education;
- lack of proper scientific laboratories and library facilities;
- lack of higher educational research and teachers' training;
- session jam and student unrest in the campus; and
- lack of need based, updated and appropriate course content.

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Problems Confronted By The Universities (Cont.)

•Private Universities:

- Lack of sufficient physical and academic facilities for the students;
- Lack of library, laboratory and other teaching tools;
- Exorbitant tuition fees and other charges;
- Serves the purpose of mainly richer class of students;
- Lack of proper academic planning and financial management; and
- Shortage of full time quality trained teachers.

Issues

- There are some deeper issues in higher education
 - Quality of education is a big concern, more so in some new private universities and degree colleges under national universities.
 - Absence of nation wide accreditation system
 - Poor quality or lack of research
 - Poor quality of class room teaching
 - Poor quality of English leads to lack of access to modern resources
 - Outdated reference support
 - Governance in public universities and higher education colleges.

Issues (Cont.)

- Recruitment, retention and offer of adequate professional development opportunities to academic staff.
- Low allocation of funds
 - Most funds are allocated for salaries
 - Less funds for equipment and research
 - Lack of funds for modern computer, books and journals
 - Over dependency of the universities upon Government funds.
- Absence of national strategy for research and understanding of university's place in undertaking research and implementation.
- Co-ordination between public and private sectors.
- Response to the labor market needs especially for most of the public universities and colleges.
- Political and partisan influence on university education

Need for a Strategic Plan

- There is an urgent need for leaders, managers, innovators, and technical experts in every sector.
- Increased enrollments at the primary and secondary levels will put pressure on the tertiary system.
- The importance of developing a quality tertiary system to ensure sustainable economic growth and the country's competitiveness in the global economy.

Need for A Strategic Plan

- **The strategic planning exercise should suggest the options for resolving some of the current policy concerns:**
 - *The governance and management of the sector, may look into the current legal framework, if necessary.*
 - *Strengthening the quality and relevance of provision across the board.*
 - *The role of university research in meeting the nation's economic and social development needs.*
 - *Encouraging incomes for institutions from non-public sources.*
 - *Mechanisms for promoting and strengthening the effectiveness and efficiency of the system.*

Participation In The Planning Exercise

- The strategic planning exercise will be undertaken with extensive consultation with all relevant stakeholders.
- The exercise should be free from all narrow political influences.

Setting Up A National Structure For The Planning Process

- Establishment of a three member ministerial steering committee.
- Establishment of a strategic planning committee (SPC).
- Establishment of six expert groups.
- Establishment of a three–person fulltime secretariat at the UGC
- Establishment of an international advisory group (IAG)

Terms of Reference For The Expert Groups

- **Group A. Vision, Size and Shape Group**, which will discuss the role of higher education, growth scenarios for the future and the respective roles in that growth of public and private universities and the colleges.
- **Group B. Quality Group**, which will develop long term strategies for ensuring a culture of quality enhancement at all levels, (building on the parallel work during 2005 to legislate for and establish a National Accreditation Council).
- **Group C. Governance and Management Group**, which will review current legislation, including that relating to private universities, and the way the sector is governed and managed – at national and institutional levels. Topics would include autonomy and accountability and the scale of regulation and reporting.

Terms Of Reference For The Expert Groups (Cont.)

- **Group D: Future Funding Group**, which will take the growth scenarios from Group A and explore ways in which the public sector part of that growth could be financed. Options to be reviewed will include the principle of shared costs, tuition fees, incentives for income generation and scholarships or loans for needy students.
- **Group E: University Research Group**, which will explore the objectives of university research and the strategies required to upgrade the research capacity of the sector, including strengthening international partnerships and linkage schemes.
- **Group F: ICT in Higher Education Group**, which will develop a strategy for closing the digital divide with developed countries and strengthening the capacity of institutions to regain access to the knowledge and resources in global academic networks.

Development of The Strategic Plan

- The expert group for vision, size and shape will identify strategic options and draft a report which will then be sent to a wide range of stakeholders throughout the country for consultation and comment. The report will be reviewed by the IAG and will be submitted to SPC for their endorsement.
- Other 5 expert groups will prepare reports in their specific areas and submit to SPC for their review.
- The final strategic plan will be prepared by the SPC with the support of secretariat incorporating the input from the expert groups, comments and input provided by the ministry and the steering committee, and results of public consultation.

Output

- **Outputs during the development of strategic plan:** six reports to be prepared by the expert groups in the areas of: (A) vision, size and shape; (B) quality; (C) governance and management; (D) future funding; (E) university research; and (F) ICT in higher education.
- **Interim output:** a draft strategic plan for higher education which will provide the basis for extensive national consultation prior to finalization.
- **Final output:** final ten-year strategic plan for higher education in Bangladesh.
- **Dissemination of strategic plan:**
 - MOE will publish and launch the final strategic plan for higher education in Bangladesh at a national workshop.

Time Frame

- March 2005: strategic planning committee (SPC) members and expert groups are appointed by the Minister
- April 2005: SPC meets and agrees expert groups' TORs at the initial planning meeting
- April 2005: Expert groups start work
- July- August 2005: Group A reports and its report is sent out for public consultation
- August-September 2005: SPC endorses group A report in the light of consultation

Time Frame (Cont.)

- August-September 2005 : other groups (B-F) report to SPC
- September-October 2005: Secretariat integrates and edits all the expert group reports into a draft strategic plan
- November 2005: SPC reviews the final draft and sends it to the Minister and the steering committee.
- December 2005: Secretariat amends the plan and sends it out for national consultation
- January 2006: Secretariat produces the final version after consultation
- MOE publishes and launches the final version.

Mission of the Strategic Planning

- Vision, mission, objectives and targets of the strategic plan in our socio-cultural perspectives.
- Standard quality and excellence in higher education.
- Consolidation and strengthening of existing universities.
- Emphasis on science and technology education with special reference to English, computer science, business studies, textile engineering and teachers training.
- Rationalization of enrollment among various disciplines.
- Provision of sufficient laboratory equipment, books and journals and other necessary teaching tools.

Mission of the Strategic Planning

- Enforcing accountability and transparency in financial, administrative academic management of the universities.
- Further strengthening of the UGC for efficient and effective supervision, coordination and management of the university affairs.
- Formulation and updating of proper, appropriate and need based course content.
- Formation of accreditation council for continuous monitoring and evaluation of performance of the universities with special reference to private universities.
- Linkages with the foreign universities and higher educational research institutes.

Panel Presentation 2:

Financing Higher Education in the Public Universities of Bangladesh: The Present Scenario

Mahfuzul Huq

Member

University Grants Commission of Bangladesh

A. Introduction: Existing State of Higher Education

In Bangladesh there was a time when higher education used to be considered a luxury in a society of mass illiteracy. However, towards the turn of the last century the need for highly skilled manpower started to be acutely felt in every sphere of the society for self-sustained development and poverty alleviation. Highly trained manpower not only contributes towards human resource development of a society through supplying teachers, instructors, researchers and scholars in the feeder institutions like schools, colleges, technical institutes and universities, they are also instrumental in bringing about technological revolution in the field of agriculture, industry, business and commerce, medicine, engineering, transport and communication etc. in policy making, bureaucracy diplomacy and foreign affairs, in research, politics, economics, invention and discovery, in promoting civilization, culture, heritage, literature and world civilization and last but not the least, the creation of civil society.

Higher education in the public sector is a legacy of the British education system in teaching students' evaluation as well as in financing. At present there are 79 universities in Bangladesh of which 53 are private and 26 (including 3 under construction) are public universities. Of the public universities ten are general universities, five are engineering, three agricultural, five science and technology, one is university of arts and culture, one affiliating and one offering education only on distance mode. The number of students in the public universities is around 92000 excluding those in the affiliating National University and Open University offering distance mode. The number of students in the latter two were 800000 and

437500 respectively in the year 2004-2005. Thus, at the moment above 1.3 million of population receive higher education in Bangladesh. About 74.8 percent of the students in public universities were male and 25.2 percent were female students in the same year. The percentages of male-female students were 75.7% and 24.3% respectively in the year 2001. Thus there has been a slight rise in the enrolment of female students in the recent years. In the national university number of male and female students were 495000 and 165000, the male-female ratio being 75:25 in the year 2002. It is estimated that only 3% of the population are highly educated in the country at any point of time.

Higher education facilities of the public universities are spread over the entire country, so that students of different regions can receive higher education without going very far from their familiar environment at home. Thus, there is at least one public university in all the administrative divisions of the country. Besides, under the National University there are more than 1400 affiliated public and private colleges, spread all over the country offering Degree (pass) Programs. Of these affiliated colleges 150 offer Degree (Hon's), 74 offer Honours and Masters programs both and 63 offer legal education.

B. Financing Higher Education: Sources of Finance

The private universities' financial issues are outside the purview of the present paper for, these are financed by the Board of Trustees of the respective universities. The Boards in turn derive their finances out of the tuition and other fees realised from their enrollees. Although the Trustess are not supposed to, yet they earn a huge profit over costs in running the private universities through charging exorbitant tuition fees and other charges which are often comparable to those in the universities of affluent countries. Naturally, only a handful of fortunate students from high-income families can afford to avail the facilities of higher education in these institutions.

However, qualitatively speaking, public universities mainly bear the torch of higher education and research in Bangladesh. Smooth operation of these institutions to a large extent depends on adequate and timely financing of these. Of the 26 public universities the National University is financially independent of the Government and very solvent. It derives its entire fund from students' registration and examination entry fees. The Open University of Bangladesh can cover about 30% of its revenue expenses from the fees collected from its enrollees and the rest is financed by the Government through the University Grants Commission of Bangladesh. The other public universities meet their financial needs in the following ways:

i) Students Tuition Fees and other fees:

The public universities cater the educational needs of the thousands of meritorious students at a nominal cost of Tk. 12 (about 20 U. S. cents) per month which has remained static for about the last 75 years. Thus, it goes without saying that this sum does not even cover the cost of collection and maintenance of records. Other incidental fees such as registration fees, sports, students union fees and examination entry fees have, however increased to a large extent over the years so as to cover the cost and even generate some income for the universities.

But the tuition fees can not be enhanced even by one taka due to strong pressure from students union and opposition political parties. Neither the university administration nor the government is keen on taking serious steps to increase the tuition fees simply because of the fear of students' unrest and opening up a new front for political opposition. In the past attempts were made by some older universities to enhance tuition fees, but due to strong opposition from students' leadership and lack of co-operation from government (though the later often insists on the university authorities to generate internal resources) the move failed.

ii) Government Funding:

In the face of the above vis-a-vis a huge rise in costs of university administration the government has to spend a large amount of money for the public universities from the public exchequer every year. About 95% per cent of the fund for higher education is provided by the government while a maximum of 5 percent on average are procured by the universities from their own resources. Table 1 shows public expenditure on revenue account per student per year in some selected universities for the first three years of the present century.

Table-1

Per Capita Public Expenditure for Students in Four Leading General, Agricultural, Engineering and Medical Universities in 2000-2002 (in taka)

Universities	2000	2001	2002
Dhaka (general)	31027 (24559)	37496 (22616)	34413 (22683)
Bangladesh Agricultural	83123 (5001)	87761 (5172)	77359 (5596)
Bangladesh Engineering & Technology	34317 (7215)	36007 (7278)	35515 (7501)
Medical University	n. a	161111 (522)	154430 (553)

Notes: Figures in parentheses are the total number of students in the relevant years

The table indicates that expenditure per head varies from year to year and types of public universities. Thus, average expenditure for medical students and agricultural scientists has been the highest (Tk. 154430 and Tk. 87761 respectively) particularly because of fewer number of students vis-a-vis high fixed costs while for general universities the average expenditure is rather low (as low as Tk. 31027 for one general university in the year 2000). Against the per head tuition fees of less than tk. 150 (about 2.5 U. S dollars) per year released from the students this sum of public expenditure appears to be colossal in the backdrop of a poor country like Bangladesh.

Yet, tertiary education receives inadequate importance in the public budget. This is true for both revenue and development allocations. While education of all types has received the highest priority in the budget allocation (around 10-11% of total revenue budget), funding for university/higher education has never reached even 1% of total revenue budget allocation during the last 10 years (This is possibly due to the interest of the donor agencies like the World Bank in primary and secondary sub-sectors of education alone). It ranged between 7-8% of total revenue budget allocated for education and has been declining in recent years. This can be seen from table 2.

Fund allocation for development budget also depicts a similar dismal scenario. This can be seen from Table-3. It is evident from the table that budget allocation (in percentage term) for the development of education sector is even poorer than the revenue budget. Thus, while share of universities in national revenue budget was around 1%, it was only around 0.65% of national development budget and has remained almost static like those of the revenue budget except for some odd years. The percentage share of higher education in education

development budget could not be accurately ascertained due to the conglomeration of education and religion budget together. The same information have been graphically presented in figures 1 and 2.

Table-2

Revenue Allocation for Education and Higher Education in the National Budget for the last 10 years

Financial year	National Budget	Allocation for Education	Allocation for Universities	(crores of taka)	
				Share of percentage of University in Education Budget	Share of Universities in national Budget
1995-1996	21627.61	2149.37	171.39	7.97%	0.79%
1996-1997	21015.61	2295.54	181.70	7.92%	0.86%
1997-1998	23994.19	2695.74	196.16	7.28%	0.82%
1998-1999	28949.82	2975.70	217.76	7.32%	0.75%
1999-2000	30218.71	3256.76	255.57	7.85%	0.85%
2000-2001	34597.00	3587.46	288.67	8.05%	0.83%
2001-2002	35479.29	3738.97	293.57	7.85%	0.75%
2002-2003	39945.54	3960.39	323.53	8.17%	0.81%
2003-2004	46263.62	4474.80	389.85	8.71%	0.84%
2004-2005 (Original)	50069.36	4608.85	409.11	8.88%	0.82%

Source: University Grants Commission of Bangladesh, 2005

One striking fact about revenue expenditure on education is that about 71% of the fund allocated for education was spent on teachers' salaries, pension and fringe benefits, 16% on general contingency and the rest 13% only was available for education contingency in 2002-2003. The picture is not much different in the following year (2003-04) either. This can be seen for table 4. Yet more surprising is the fact that only a tiny percentage of fund is allocated for research. Thus, in the financial year 2001-'02 only 2.9 million taka out of 3773 million taka (i.e. .000765%) was earmarked for research whereas in the developed countries over 1% of total expenditure on education is spent on research.

Table 4

Itemwise Expenditure on Education, 2002-03 and 2003-04 (in percentage)

	2002-2003	2003-2004
Salary	60.9	62.2
Pension	9.7	10.1
a) General Contingency	15.9	15.0
b) Education Contingency	13.5	12.7

Source: UGC Annual Report, 2003

Yet, public universities are the first and foremost choice of the majority students seeking higher education. This is for various reasons. First, these universities offer a wide range of subjects in Science, Commerce, Liberal Arts, Humanities, Engineering and Technology, Law, Education and Medicine disciplines. Second, public universities attract the best brains and researchers as teachers although monetary compensation for them is anything far from attractive. Third, library, laboratory, internet and research facilities are much better there than anywhere else in the country. Fourth, seminars, symposiums, workshops and debates, exhibitions and visiting teachers' lecture series are often held in these institutions with a wide scope for national and international exposures for promising young knowledge-seekers. Fifth, residential and boarding facilities at low cost/subsidized rates are available in these public universities. Sixth, corporate life, facilities for extra curricular activities like games & sports, sight-seeing tours & visits, gymnasiums, scouting, musical, drama and cultural and literary activities, painting and photographic exhibitions etc. are regularly held so that the students have opportunities for inculcating the inner qualities among them side by side academic pursuits. Last but not the least, cost of higher education in the public universities is the least so that poor but meritorious students are not deprived of the opportunities for higher education because of poverty.

However, since the close of the last century the public universities started facing huge amount of deficit in revenue budget. Thus, in the year 2002-'03 it was observed that the eleven older universities in the public sector had an estimated deficit of around taka 100 crores. Most part of this deficit is accountable to inadequate release of fund in the revenue budget by the government vis-a-vis the demand by the universities to the Government (placed through the University Grants Commission). There has constantly been a reduction in the gap over the years. This can be seen from table 5. Besides, indiscriminate recruitment of teachers and staffs from the pro-regime political parties irrespective of fund provision in the budget. Lenient upgradation and promotion rules, insufficient provision of pension fund, enhanced rates of examination remuneration, enhanced price of electricity and gas, wastage in transport, electricity, gas and telephone etc. also are no less important in the budget imbalance.

On the other hand, student tuition fees and other dues could not be adjusted upward due to the vehement opposition from the pressure groups. To make up this deficit ad-hoc arrangements were made in the form of spending from teachers and staffs provident fund, development fund and borrowing from banks. As a result much-needed development works, repair and regular maintenance suffered. To mitigate this difficulties the Government has granted a sum of Tk. 60 crores payable over a period of three years (from 2003-4 upto 2005-6). Meanwhile, the government has been discouraging the universities against unabated proliferation of appointments without budget provision while encouraging the reduction of

wastage of fund and mobilization of internal resources.

Table –5

Difference Between University Grants Commission Demand of Recurring Fund for Universities and Govt. Allocation During the Last one Decade (taka in crores and in %).

Year	UGC Demand	Govt. Allocation	Allocation as% of Demand
1994-95	190.68	151.75	79.58
1995-96	190.00	169.73	89.33
1996-97	210.00	180.00	85.71
1997-98	222.59	194.28	87.28
1998-99	240.64	215.86	89.70
1999-00	275.27	253.51	92.10
2000-01	309.30	286.54	92.64
2001-02	319.41	288.83	90.43
2002-03	342.46	320.24	93.51
2003-04	360.78	340.59	94.40

Source: UGC Annual Report, 2003

iii) Trust Fund:

The older and also some relatively newer universities receive trust fund from benevolent elite members of the public. Usually these funds are donated for particular purposes. e. g for awarding scholarships/research grants or medals for distinct performance in academic fields etc. in the name of some near and dear ones and hence can not be utilized by the recipient universities for other purposes e. g infrastructural development or defraying particular expenses that may be urgently required. Yet, these funds to some extent meet the educational and research needs of a small section of meritorious scholars and researchers in higher education.

iv) Other Incomes

Some bigger universities have a few additional sources of income e.g rental income from immobile properties (as residential houses, shops and leased lands), income from forestry, fisheries, orchards and dairy. However, these incomes are often negligible and hence are not shown in the budget.

Now a brief account of the budgeting procedure for the public universities are in order in the next section

C. Modus Operandi of Budgeting Tertiary Education

Several stages are involved in the budget preparation for funding the tertiary education sector. The focal points of budgeting are three, i.e. The University Grants Commission, the respective universities and the Ministries concerned (i.e. the Ministry of Education and the Ministry of Finance)

Generally, the Education Ministry asks the University Grants Commission (UGC) to submit a provisional budget on the basis of expenditure for 3 months (July, August & September of the current year) by the 31st October of each year. Accordingly, the respective universities are notified by the UGC. These universities, on the basis of demands for appropriation by each academic faculty/department, institutes and administrative offices, prepare a provisional budget for the following year and a revised budget for the current year and submit the same to the University Grants Commission of Bangladesh which is statutorily obliged to handle all financial matters of the public universities with the government. The UGC aggregates all the university budgets itemwise, then submits these to the Ministry of Education aggregatively and individually for all universities with a marginal upward adjustment of 10% to 15% of the previous year's budget.

Again in February-March the university budgets are finalised by the UGC on the basis of previous 6 months' expenditure pattern of each university. Scrutinising of individual budget through visit to the university at this stage are made by the UGC accounts officials in order to check the accounts and verify the authenticity of claim for appropriation. In the process necessary amendments/cuts in the budget are made. The UGC then negotiates with the Ministry of education on behalf of the universities. The budget is ultimately finalized in March-April in a joint meeting of the Ministry of Education and the Ministry of Finance. On receipt of the aggregate sanction by the Ministry the UGC apportions this among individual universities on the basis of its (UGC's) subjective evaluation of each university's needs. The universities are informed by the UGC by the end of May each year about the amount of revised current budget and following year's allocation. The allocated sum of each university is distributed to the latter in four equal instalments on the basis of government order issued by the Ministry of Education. This practice of budget preparation has been in operation until very recently when some departure in periodicity and modality has been proposed. This is outlined in the next section.

D. Recent Move towards Reforms in Financial Management and Budgetary Practices

As a departure from traditional budgeting the Ministry of Finance, Government of Bangladesh has proposed what is known as Forward Budget Estimates. This is a Medium Term Expenditure Framework (MTEF) to be effective for three years between 2005/6 to 2007/8 initially for four Ministries of which the Ministry of Education (MOE) is one. The sectoral components of the MTEF have been piloted during the period January to July, 2004 in the Ministry of Education. The key aim has been to develop a medium term (for three years) expenditure strategy for the Ministry which would ensure that public expenditure administered by the Ministry would be allocated in ways which would reflect the objectives and policy priorities for education outlined by the Poverty Reduction Strategy (PRSP) process. The MTEF will involve all sub-sectors of education including tertiary education.

The major objectives of the MTEF are:

- i) Improving the levels of and use of public resources for all types of education;
- ii) Promoting access with equity;
- iii) Improving the quality of education;
- iv) Promoting vocational, technical and science education ;
- v) Improving education governance.

In order to attain the objectives the major policies with respect to all types of education to be pursued are:

- a) Increase resources to education commensurate with comparable countries and growth and poverty reduction targets;
- b) strategic allocation of resources according to programs of priorities and reforms agreed with Ministry of Finance;
- c) Development of institutional framework for public-private partnerships;
- d) Review stipend and scholarship programs for poverty and access orientation;
- e) Improve quality of education through increased and more efficient use of inputs and better governance;
- f) Improve accountability, transparency and performance for public funds;
- g) Increased enrolment in technical, science and professional education;
- h) Restructuring of the vocational education system;
- i) Decentralization of education management and performance based system of financial subsidy.

This expenditure strategy:

- a) Lists the main policies and expenditure programmes;
- b) compiles a consolidated expenditure analysis;
- c) considers some of the key policy and public expenditure issues that will influence the future allocation of resources;
- d) Sets out key issues and the policy agenda, expenditure priorities for the 2004-8 period, the implications for funding, and monitorable indicators of programme performance, finally, provides a modality to demonstrate how programme level budgets can be projected on the basis of the Ministry's medium term resource envelope.

In the absence of a comprehensive policy statement for MOE the 1-PRSP was used as the main source of information of policies for MOE.

The programmes for the expenditure strategy has been defined by looking at international norms and by the existing organizational and budget structure within the Ministry of Education. The MOE programmes used for the MTEF period with respect to tertiary education is to cover graduate and postgraduate levels including accreditation and standards.

The salient features of MTEF as distinguished from traditional budgeting are mainly: Budgeting for a period of three years instead of an annual budget, the sanctioning of fund to UGC/Universities directly by the MOE (rather than by the Ministry of Finance) and instead of conventional approach of disaggregating the education sector by tier or level on to a programme basis. The apparent advantages of the MTEF are that the availability of fund would be higher and the recipients would be able to plan, assess and estimate the needs for a longer-term period than in the conventional budget. The monitoring and evaluation of fund utilization would also be more effective and efficient. The MTEF is still at the formative stage. On its successful completion it is expected to improve the use and volume of public fund for tertiary (and all) education, promote equity and justice as per PRSP, improve quality and governance of higher education in Bangladesh.

E. Strategic plan for Higher Education in Bangladesh

The Government of Bangladesh has decided to formulate a 10 year (2005-2015) strategic plan with the help and support of the World Bank. In the past World Bank's interest in Bangladesh education sector as a donor and policy prescriber was confined to all sub-sectors but tertiary education. Hence the fund allocation to tertiary sub-sector showed remarkable stagnation vis-a-vis other sub-sectors. In the last few decades the demand for tertiary education in Bangladesh has increased tremendously. World Bank's recent interest in our tertiary education sector is perhaps an indication of its appreciation of this reality and the possibility of additional resource mobilization in this sub-sector. In the face of a changed scenario of higher education, development of science and technology-based education and an urgent need for improvement in quality of higher education in Bangladesh this appears to be a right move at the Bank's end. (Details of the outline of the proposed strategic plan for Higher Education is available from the author as a separate document).

F. Recent Strategy for Financing Higher Education in the Public Sector

The Government of Bangladesh has recently embarked on experimenting the establishing of universities on a self-financing/cost sharing basis. The idea is to entirely financing building of the infrastructure of the university and other development expenses as well as support the recurring expenditure if needed, for the initial 5 years. After 5 years the university will be self-financing scheme based on its income from students' fees and other incomes. According to one estimate, in this self-financing scheme each student will have to pay a tuition fee of 4 U.S. dollars equivalent per month (instead of the prevailing 0.20 U.S. dollar per month in most public universities). If this programme is successful all the future public universities will be built on the same model.

However, the particular proposed university (i.e The Jagannath University) under the new programme is at the moment a very large college (to be upgraded to a university) having (Jagannath University) over 30000 students so that students tuition fees of mere 4 dollars per month would be enough for self-financing. But for a newer (and smaller) university just beginning from scrap it will be difficult to finance itself from internal resources which would be negligible only.

G. A Few Recommendations

In view of the resource constraints of the government the universities have no alternative but to bank more and more on its own internal resources. In recent days the government is more and more thinking of funding tertiary education on cost-sharing basis. Other possibilities for generation of internal resources may also be examined. We have few suggestions in this respect as follows:

- a) Students tuition fees should be adjusted upward from its nominal 10/15 taka per month to a reasonable minimum of taka 200 or more. Some newly established universities have done this successfully by charging fees on the basis of credit hours rather than per month. Political and social opposition may have to be encountered. But this is expected to be mitigated by a vigorous campaign in mass media explaining the justification for enhancing tuition fees so that a favourable social consensus in this respect is developed. If necessary, the matter of updating fees for tertiary education may be brought in the parliament for discussion and enactment.
- b) Every year the public universities collect a huge sum of money (to the tune of 5-20 million taka each) by way of selling admission forms to the undergraduate admission seekers. But this money is never reflected in the income portfolios of the universities. Some universities have provision for depositing 10-20% of the sale proceeds of forms to the university fund. But most universities/faculties practically avoid doing this-rather the lion's share of this money is shown as cost of holding admission tests. The admission committees distribute the same among the teachers, officers and staffs as honorarium. This appears to be against financial discipline. If properly and judiciously monitored, this fund could be an important source of internal resource generation for the universities.

- c) Likewise, there appears to have serious lack of accountability in the use of the funds of the students halls of residence. Monthly seat rent in these halls are amazingly low, less than the cost of a cup of coffee in a high street restaurant. This has remained static for decades. There are good justifications towards an upward revision of residential hall seat rents. Besides, the halls collect various dues every year from the resident and non-resident students to which the university authorities have no access. Nor these funds are ever audited. The universities may probe into the hall funds and extract the excess and deposit it in the university account.
- d) A major source of misuse and wastage of fund is the maintenance of transport vehicles and consumption of fuel. An unholy alliance between the garage/fuel pumps and a section of drivers and university officers is responsible for the drainage of a huge amount of money from the university coffer every year. Perhaps at least the bigger universities can stop this drainage by establishing their own automobile garage cum fuel pump. If located at suitable location the latter can also serve as a source of extra earning for the universities through servicing private vehicles.
- e) Each public university maintains a school-cum-college for the children of the teachers, officers and other employees. This running cost of this institution is escalating every year and hence putting extra pressure on university budget. In order to reduce the financial involvement of the universities these institutions may be included in the M.P.O. or the Education Ministry may be requested for separate allocation for this schools/colleges. Meanwhile, these institutions should also strive hard to make themselves self-supporting as far as possible.
- f) One of the greatest sources of wastage in electricity sector is the use of heaters in residential halls of the universities. The university authorities may provide common gas cooker at some convenient corners in each floor of the halls to discourage the use of electric heaters. The present practice of providing electricity at subsidized rates to teachers/officers should also be discontinued.
- g) Indiscriminate recruitment, upgradation and promotion irrespective of necessary fund provision should be stopped. The University Grants Commission's rules in this respect should be strictly followed. Otherwise, the latter may hold the university concerned responsible for the extra fund required for this purpose.
- h) Receipt of voluntary endowment fund from the generous section of the affluent public can be a source of internal finance for tertiary education. The public universities can initiate this type of moves. If necessary, the university statutes may be revised in order to incorporate the acceptance of endowment funds.

- i) Lastly, the university authorities may make provisions for sanctioning loans to poor but meritorious students on production of adequate collaterals for repayment in later period, i.e when they enter into professional careers. The schedule banks may also provide education loans on easy terms and conditions. Some multinational banks already have started such a programme, although not at a sufficient scale. The domestic public banks may come forward to help the eligible and deserving students.

The horizon of higher education has vastly widen during the recent years due to the establishment of a number of new universities in the public and private sectors. However, the lack of adequate public expenditure in the revenue account for higher education and research is one of the serious bottlenecks for qualitative improvement in this sector. Although education has received top priority among all national agendas allocation for higher education is still less than 1% of total budget. This focuses a bleak prospect for the development of quality higher education commensurating to the needs of the global society of the new century. The realization of the gravity of the issue at the concerned quarters, both at home and abroad, though belated, may justifiably be a cause great relief for all of us.



Panel Presentation 3:

HIGHER EDUCATION IN CHILE THE MECESUP COMPETITIVE FUND

Richardo Reich

**2005 KEDI-World Bank International Forum
Financing Reforms for TE in the Knowledge Economy
April 6-8, 2005. Seoul, Korea**



TERTIARY EDUCATION IN CHILE CONTEXT

- Chile: 15.5 million inhabitants
- 8 Universities (1980). 229 Institutions of TE (2004)
 - 64 Universities: 25 Traditional with State funding (16 are State and 9 private)
 - 48 Professional Institutes
 - 117 Technical Training Centers
- 594.297 undergraduate students. 15.181 postgraduate
 - 42% Traditional universities
 - 30% New private universities
- 18-24 years coverage: 37.5%
- All students pay tuition&fees. US\$ 1.000-5.000 /year
- Scholarships and loan systems in place
- Expected TE students by 2012: >800.000. Coverage: 50%



REFORM GOALS TOWARDS 2010; THE BICENTENARY

- More than 800.000 students in HE. 18-24 years coverage: 50% (2012)
- TE Information Observatory in place
- TE institution accreditation processes at length
- Under-graduate education better tuned with world curricula modernization. Student centered
- More Ph.D. graduates for enhanced E&S&T&I capacity
- TE system articulated from technical training to post-graduate education. Credit transfer system



MECESUP PROGRAM INVESTMENT IN QUALITY 1999-2004

- Advanced human capital
 - Academic staff renewal at Ph.D. Level
 - Support to Ph.D. programs: S&T&I
- Academic infrastructure
 - Works with student impact
 - Equipment for teaching-learning improvement
 - Scientific instruments for R&D
- Teaching-learning processes
 - Curricula re-design. IT's and information management. New laboratories
- Capacity Building. Quality assurance
 - Self-regulation and accreditation



MAIN INSTRUMENT COMPETITIVE FUND

- **Quality improvement through investment in academic infrastructure: advanced human capital, consulting, ITR's, goods & works**
- **Open annual calls: equal opportunities, transparency and external peer reviewing**
- **Results-based multiannual projects (3 years maximum). Introduction of performance indicators: accountability**



MAIN INSTRUMENT COMPETITIVE FUND

- **Projects coherent with institutional strategic planning and priorities**
- **Presentations limited in number to favor institutional prioritization and improvements in management**
- **Decentralized project implementation. Individual special bank accounts**
- **World Bank procurement rules; ex-post verification. Errors are paid by beneficiaries**



COMPETITIVE FUND ELEGIBILITY

- **Coverage: technical training, under-graduate and post-graduate education**
- **Eligibility in technical training: private and public; non-profit and profit; in licensing process**
- **Eligibility in universities: 25 traditional public (16) and private institutions (9) with State support**



COMPETITIVE FUND 1999-2004 CALLS

- **948 projects presented**
- **400 projects approved (40% approval)**
 - **205 in under-graduate education**
 - **74 in post-graduate programs**
 - **23 in management improvement**
 - **67 in technical training programs**
- **Resources allocated: US\$ 225 million**
- **70% of projects and resources allocated in regions. Average funding: US\$ 600.000**



COMPETITIVE FUND AREAS OF SUPPORT

- Academic staff strengthening, international cooperation, postgraduate scholarships and research visits
- Library modernization
- Integration of TI's in teaching-learning
- New undergraduate laboratories
- Curricula modernization and redesign
- Major scientific equipment
- Works for better student services



COMPETITIVE FUND MAJOR ACHIEVEMENTS

- Change from historical-based to competitive result-based project funding
- Introduction of accountability
- Improved management of competitive projects
- Introduction of performance indicators and better M&E
- Staff strengthening. Important upgrade of teaching-learning support and student facilities
- Take-off for doctorate programs. Increased enrollment, productivity and graduation



COMPETITIVE FUND MAJOR WEAKNESSES

- **Insufficient as only instrument for incremental funding allocation, investment in infrastructure and introduction of accountability**
- **Equal opportunity principle difficult to apply to a universe of very heterogeneous institutions; for example, weaker regional State universities**
- **Slow for institutional management improvement**



HIGHER EDUCATION NEW CHALLENGES

- **Increased advanced human capital needed for better capacities in education, research, doctoral programs, development and innovation for a transition to a knowledge-based economy**
- **Curricula re-design to “tune” with Chilean development needs and internationalization**
- **Quality assurance at all levels**
- **Management improvements to enhance efficiency and effectiveness of State support in HE**



PROGRAM MECESUP 2 2005-2011

- **Staff renewal, curricular redesign, academic innovation and management improvement**
- **Focus on results and performance: accountability**
- **Focalization of investments will favor actions of national and world class quality**
- **Competitive Fund for academic innovation**
- **Performance-based agreements for institutional academic and management improvement. Pilot**
- **Quality assurance: eligibility requirement**



FURTHER INFORMATION

<http://www.mineduc.cl>

<http://www.cse.cl>

<http://www.mecesup.cl>

<http://www.mecesup/informativo>

<http://www.cnap.cl>

<http://www.conicyt.cl/becas/acreditacion-conap.html>

<http://www.futurolaboral.cl>

Panel presentation 3:

Higher Education in Chile: Aiming for Quality

Division of Higher Education Ministry of Education, Chile
Santiago, Chile, March, 2005

Ricardo Reich

MECESUP, Chile

Organizational Structure

Higher Education in Chile¹ is a diversified system that offers three types of institutions to secondary education graduates: universities, professional learning institutes and technical training centers. They are recognized by the state under Article 29 of the Constitutional Organic Law of Education No. 18.962 (usually referred to as LOCE) enacted in 1990.

Universities provide the highest degree of learning, combining teaching, research and outreach activities. Universities teach licentiate degree programs, award academic degrees, and they are the only institutions authorized to grant professional degrees for the seventeen university programs listed in the LOCE for which a licentiate degree is a prerequisite.

Professional learning institutes are in charge of granting professional degrees other than those awarded by universities, and they are also authorized to grant higher education technical degrees in areas in which this is required.

Technical training centers are intended to train higher level technicians equipped with the competencies and skills needed to respond to the needs of industry in the public and private sector involving goods and services.

¹ <http://www.mineduc.cl/>

Higher education establishments (see Table 1) can be divided into traditional institutions (those that existed prior to 1980) and derive from the *Universidad de Chile*, *Universidad de Santiago de Chile* and *Pontificia Universidad Católica de Chile* (created as of 1980) —all with partial funding from the state (approximately 30 percent) and non-traditional, private universities (established as of 1980, with no state financial support).

Traditional establishments consist of 25 fully autonomous universities coordinated by the Council of Chancellors of Chilean Universities (CRUCH). They employ a single admission process: the University Selection Test (PSU). This group of universities includes the 16 state universities created by law and 9 universities with independent legal status, 6 of which obtained official recognition by means of special laws, while the three remaining ones derive from the *Pontificia Universidad Católica de Chile*.

The three traditional and oldest institutions are the *Universidad de Chile*, founded in 1842, the *Pontificia Universidad Católica de Chile*, founded in 1888, and the *Universidad de Concepción*, founded in 1919.

The higher education system is currently formed by 229 institutions: 64 universities (38 licensed, autonomous universities), 48 professional learning institutes (11 of which are autonomous) and 117 technical training centers (6 of which are autonomous). Overall, the higher education system, based on enrollment rates for 2004 (see Table 2), served a population of 594,247 undergraduate students and 15,181 graduate students (1,978 Ph.D. students at CRUCH universities).

Total undergraduate enrollment can be broken down as follows:

Traditional universities:	246.286
Private universities:	177.271
Professional learning institutes	101,674 (2003)
Technical training centers:	63.932

Together with the above, there is official recognition for higher education establishments run by the Armed Forces which are linked to the state through the Ministry of Defense.

This institutional diversity is part of the reality of higher education in Chile and it is therefore dealt with through different mechanisms and tools.

Legal Framework

Among other things, the LOCE includes the regulations for the official acknowledgement of higher education establishments. It states that the latter are authorized to grant technical degrees, professional degrees and academic degrees (licentiate, masters degrees and doctorates) as applicable.

Higher Education Reform

Globalization and inter-dependency have been made possible thanks to the huge scientific and technological changes that took place in the past decades. Therefore, future progress in the countries will be increasingly determined by the development of skills to manage, spread, use and create knowledge. This task is performed by higher education institutions through their two main functions:

- Training higher level technicians: graduates, professionals and postgraduates.
- Contributing to Chile's scientific and technological development.

Specifically, this means that Chile has to implement a higher education reform to enable it to:

- Educate increasing segments of the population in different stages of life.
- Increase full-time teaching staff with doctorates at universities prepared to conduct research and high level postgraduate studies.

- Perform deep changes in undergraduate teaching to bring it into line with the renovation in postsecondary education throughout the world, which involves abandoning rigid curricula for study programs in favor of a more open and flexible training, centered on students and due consideration for the users.
- Deliver general and transversal competencies which are essential for 21st. century professionals, such as the ability to manage information, familiarity with information technology, and communications and mastery of English as a foreign language.
- Agree upon a transferable and cumulative credit system based on a real work load for students, to replace the current credit system based on class-room presence.

Extending Coverage

In 1990 220,000 young people were enrolled in higher education and in 2003, more than half a million youths are enrolled in undergraduate programs in universities, professional learning institutes and technical training centers, showing an increasing trend in access to postgraduate studies.

In 2003, one out of every three youths in the 18 to 24 age group were enrolled in higher education, technical training or university education center. Coverage for this age group amounts to 37.5 percent (see Table 3).

Based on population projections prepared by international organizations, by 2012 Chile will have a population of around 17.4 million people, 2 million of which will be aged between 18 to 24 years old. According to such projections, the country can expect to have at least one million students in higher education by the year 2012. This involves a coverage close to 50 percent of the 18 to 24 age group, increasing requirements in terms of resources and a considerable challenge regarding quality assurance for this supply in order to actively participate in learning societies and economies.

Equity in Access: Correcting Inequality

Coverage for young people from lower income sectors has risen from 4 percent to 15 percent in a period of 13 years (see Table 4). Thirteen years ago, coverage reached 40 percent among higher income sectors while it now amounts to 70 percent and more. In the upper quintile, coverage has gone from 5 to 7 for every 10 youngsters.

Young people enrolled in higher education usually belong to families from middle to low income, and this trend will increase in the coming years. The country will have to make greater financial efforts to meet its commitment to guarantee all gifted young people with the right to have access to higher education.

The inequalities that currently characterize Chilean society must be dealt with through different support tools which—at the same time—need to form a consistent and equitable system of student grants that will effectively serve to help the ones that need them the most.

The National Student Funding System—currently being developed—shall consist of three subsystems that will operate in coordination. Its purpose is to guarantee, through loans and scholarships, the financial support needed to fund, either fully or in part, the fees that young people need and—for the needier sectors—to also deliver help to cover their basic expenses. The system consists of:

- The National Scholarship Fund for the needier students
- The subsystem of Solidary Credit for Students enrolled in Universities that are part of the Council of Chancellors (CRUCH).
- Bursaries for students in both autonomous and accredited institutions (universities, professional learning institutes and technical training centers).

Scholarships covering fees and tuition for the needier students and solidary credits for students enrolled at universities that belong to the CRUCH are the bases of the current system of student aid operating in Chile. The new integrated method and instruments

described above will make it possible to deliver aid to students at all levels of higher education in addition to improving the amount and coverage of the aid granted.

Renewal of Study Programs

The university system has significant deficiencies in terms of the organization of studies. Using the same approach as the European countries when higher education became a massive phenomenon, faced with increasing enrollment, Chilean universities reacted by increasing vacancies in the early years and included hard to pass courses as a way to filter the number of students who go on to further studies that have a limited number of vacancies. Another option has been to extend study programs so that licentiate degrees or others planned to take four or five years, now last six or seven years (see Table 5). Drop-outs in the first years must be added to the above so that graduation rates are particularly low (see Table 6). A preliminary study shows that only 50 percent of young people who enter higher education manage to graduate in the appropriate time. It is essential to make profound changes to undergraduate teaching, to bring it more into line with the renewal that postsecondary training is experiencing the world over.

Chilean higher education cannot subtract itself from the process that is taking place in Europe, North America and other developed countries and it is therefore necessary to prepare a common response, as a national system, defining how Chile will participate in the global concert.

In order to advance to a knowledge-based economy Chile needs to have advanced human capital in sufficient amounts and it must have people capable of carrying out competitive research and innovation on a world scale. This calls for scholars, scientists, and engineers in adequate amounts to properly handle information, generate profitable flows of knowledge who are capable of moving effectively throughout the world. It is therefore essential to synchronize Chilean educational supply with that of its trade partners which calls for making study programs flexible to ensure appropriate employability and guarantee lifelong education, centering training on students and their learning, achieving

curricular programs designed on the basis of competencies which take the end users into account. Effective mechanisms for student and professional mobility also need to be found.

The Chilean university system and the Chilean government have recognized early on the progress achieved by America, Australia and Europe through the Bologna Process, and they have learned with great interest of the activities and results of the Tuning Project². As a curricular renewal model, geared to student and professional mobility to generate a space for higher education in Europe, it will be an important point of reference for change.

In the Chilean case, a political framework such as the Bologna Process is still not available to define and guide this process. Therefore, a design from the bottom up will mainly set the bases for curricular renewal and future projections. It is believed that in this process, recent international experiences will prove essential to motivate and train national specialists, guide the methodologies to be adopted, encourage networks of collaboration and enable comparative assessments.

The MECESUP Program

The Program to Improve Quality and Equity in Higher Education (MECESUP³) is the policy and development instrument that the Chilean government has been using in the past five years to address the challenges created by the reform of higher education. To this end and pursuant to a partial loan from the World Bank (BIRF 4404-CH), since 1999 it has awarded a total of 369 academic development and improvement projects in higher education for an amount close to US\$ 225 million. Simultaneously, it has implemented, on a trial basis, a quality assurance system based on self-regulation and accreditation for programs and institutions, the definite law for which is currently being processed by the National Congress. Moreover, it has favored the improvement of management at all levels.

The MECESUP Program will end, as an incremental development resource allocation mechanism, in 2005.

² <http://www.unideusto.org/tuning/>

³ <http://www.mecesup.cl>; <http://www.mecesup.cl/informativo/>

The most recent announcement of opportunities for its Competitive Fund, posted in 2004, focused on curricular renewal as the pilot strategy to initiate a broader process of synchronization and modernization of national university supply and its coordination with other levels of higher education. Through this special announcement, awards were recently made for an amount of US\$ 4.5 million to 16 pilot projects in the field of design of professional profiles and competencies in 11 disciplines (Medicine, Nursing, Pharmacy, Veterinary Medicine, Engineering, Education, Business Administration, Aquaculture, Philosophy and Art, Social Work, and Architecture), to determine generic competencies and for the analysis of a system of transferable and cumulative credits for student mobility in Chile. These activities shall be integrated, as far as possible with the Latin America Tuning Project⁴ which, with the support of the European Commission Alfa Program and the Tuning Project, was launched recently to begin looking for elements of similarity and collaboration in curricular renewal in both continents.

As part of the ongoing character of the MECESUP Program, the Chilean Government is currently preparing, together with the World Bank, a second stage called MECESUP Two to ensure its continuity, targeted to academic and curricular renewal, and to explore new resource allocation instruments (based on performance agreements) to thus ensure support for the postgraduate doctorate being offered in Chile. The implementation phase is expected to begin in the second half of 2005.

General Competencies for Professionals in the 21st. Century

Certain transversal competencies shall prove essential in the 21st. century for professionals to be effective and successful in this budding world. Mastery of the English language and the skills to navigate in the realm of computers are a clear example of the competencies required. The new generations of Chilean professionals will have to master

⁴ <http://www.unideusto.org/tuning/tuningal/>

English as a second language to be able to communicate in the globalized world. Chile needs to set itself the goal—as a country—to have a significant proportion of its professionals by the 2010 Bicentennial of its Independence to be bilingual in English and Spanish.

Improving Technical and Professional Training

A mature education system includes different training levels that form an articulate and flexible network. This is not currently the case with Chilean higher education, where the ratio of professionals to technicians is reversed (6:1) to the one prevailing in developed countries and the public view of technicians is negative.

The scholarships and study loans system has favored university education over technical study courses. Access to loans by students from technical training centers and professional learning institutes will make it possible to revert this trend.

In a society where higher education is perceived as the best tool to overcome poverty and inequality, technical training centers and professional learning institutes are an essential contribution for many young people. The possibility of offering them quality education, duly accredited and facilitating the possibility of going on with their studies later on in life are the challenges currently faced by professional and technical education.

Quality Assurance

Higher education in Chile is supplied by a large variety of institutions: traditional and new, public and private, universities, professional learning institutes and technical training centers. Post-secondary education institutions have different inclinations: teaching and research, specialized in certain disciplines both in teaching as well as in research, dedicated to the regions, targeted to undergraduate and postgraduate studies, and so forth.

It is advisable to maintain and strengthen this diversity while preserving the quality of studies and the transparency of the different options, and at the same time establish a system with different levels to offer young people and adults different training opportunities throughout their lives.

In a higher education system it is essential for programs and institutions to guarantee quality so that the courses taken at various institutions can have equivalences on a national and international level. Chile has decided to implement quality assurance in higher education through self-regulation and the accreditation of programs and institutions. The latter has been put into action in an experimental manner through the National Undergraduate Accreditation Commission (CNAP⁵) and the National Postgraduate Accreditation Commission (CONAP⁵).

Sustained quality assurance in higher education is the goal of the Quality Assurance Bill for Higher Education Institutions currently being discussed by the National Congress. This bill establishes a series of regulations whereby the state publicly guarantees the training of technicians and professionals in the country. The bill considers five functions:

- Accreditation of undergraduate study programs
- Accreditation of postgraduate study programs
- Institutional accreditation
- Licensing of new institutions
- Information system

There is consensus on the need to improve available information on the supply in higher education. The Bill on Quality Assurance establishes the obligation to deliver prompt, accurate and pertinent information.

⁵ <http://www.cnap.cl>; <http://www.conicyt.cl/becas/acreditacion-conap.html>

The creation of greater abilities to gather, process, validate and publish information at the Ministry of Education and at the institutions is a work in progress that can be implemented as soon as the law is enacted. There is a plan to establish a Higher Education Observatory for this purpose.

For future students and their families it is essential to make informed decisions. This is made easier if they know their possibilities of employability and the potential income offered by the different academic alternatives. The Employment Observatory⁶ has revealed important data on the employability and income of professionals and technicians but the data is still not broken down and does not cover all specific study programs and institutions. This is a challenge that needs to be addressed for young people to be able to choose freely among the opportunities they face when they complete their secondary education.

A Big Boost for the Development of Science and Technology

The weakest link in Chile's involvement in the knowledge society is its insufficient development in terms of its scientific and technological capacity. This also applies to the production of goods and services and to innovation.

Chile requires a modern national science and technology policy that establishes priorities, guidelines and strategies consistent with the set of instruments and programs that contribute to scientific development at present.

The country has a bias toward research in basic science due mainly to the fact that funding sources are geared to financing the supply of researchers who frequently do not coincide with the national needs of production development. Raising technological development is essential to increase the value of our exports of natural products and of services in order to move forward to a knowledge-based society. Among the main purposes, the following are favored:

⁶ <http://www.futurolaboral.cl/FuturoLaboral/index.html>

- Public and private investment in science and technology.
- Research teams and their links with the production sector
- Postgraduate training and its insertion in the business sector

Establishing national and international research and development networks to create a critical mass in the different areas.

The Chilean Government recently signed a Project for Investment in Science and Technology⁷ in the amount of US\$100 million the purpose of which is precisely to materialize the proposed challenges. On the other hand, the MECESUP Program has been providing significant support to the improvement and development of the doctoral programs that are being offered in Chile, aiming for a three-fold increase in enrollment and graduation by 2010, the year of Chile's Bicentennial Anniversary of its Independence.

Conclusion

The Chilean Government has made a commitment to reform higher education so as to allow the country to have at hand the advanced human capital needed to advance towards a knowledge-based economy and take advantage to the fullest of the opportunities offered by globalization. This is viewed as fundamental to achieve economic and social development.

⁷ <http://www.conicyt.cl/bancomundial/index.html>

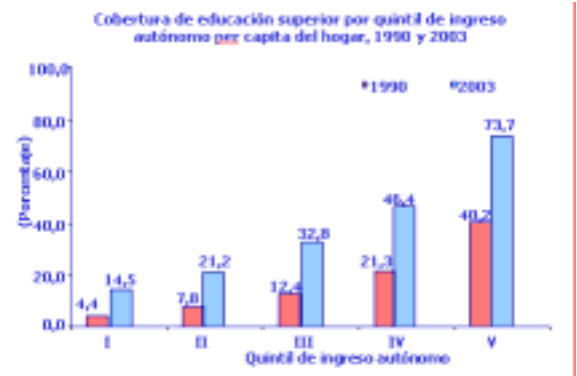
Panel presentation 3: Higher Education in Chile – Ricardo Reich**Table 1. Higher Education**

Number of Higher Education Institutions, Country Total, by Type & Category							
Type/Category	Years						
	1990	1992	1994	1996	1998	2000	2003
Institutions with direct state contribution	22	25	25	25	25	25	25
Universities	20	23	25	25	25	25	25
State	14	14	16	16	16	16	16
Privately owned, public univ.	6	9	9	9	9	9	9
Professional institutes	2	2	0	0	0	0	0
In Institutions with no direct state contri	280	261	256	238	226	215	204
Universities	40	44	45	43	41	39	39
Professional institutes	79	74	76	69	66	60	48
Technical Training Centers	161	143	135	126	119	116	117
Total Higher Education System	302	286	281	263	251	240	229
Universities	60	67	70	68	66	64	64
Professional institutes	81	76	76	69	66	60	48
Technical Training Centers	161	143	135	126	119	116	117

Includes all officially acknowledged institutions

Table 2. Enrollment in 2003**Students in Higher Education by Type of Institution**
(Enrollment and Percentages)

	CRUCH Universities	Private Universities	Professional Institutes	Technical Training Centers	Total
Enrollment	230,174	148,662	101,674	62,070	542,580
Share	43%	27%	19%	11%	100%
	25	39	48	117	229

Table 3. Coverage Ages 18-24**Table 4. Social Coverage****Table 6. Undergraduate Graduating 2003**

Institution Type	Graduating		Total Graduates
	Males	Females	
Council of Chancellors Univ.	13,834	13,722	27,556
Private Univ.	5,726	5,830	11,556
Professional Institutes	5,175	4,262	9,437
Technical Training Centers	4,155	5,856	10,011
Total	28,890	29,670	58,560

Table 5. Time to Graduation

Study programs	Theoretical Length	Actual Length	Actual length over theoretical
Architecture	5.80	6.80	1.18
Law	5.00	6.90	1.39
Civil Engineering	6.00	7.80	1.31
Medicine	6.80	7.70	1.14
Elementary School Teacher	4.20	5.20	1.23
Agricultural science	5.00	6.90	1.38
Business admin.	5.00	6.10	1.23
Journalism	5.00	5.80	1.16
Average	5.40	6.90	1.27

Income Generation Strategies

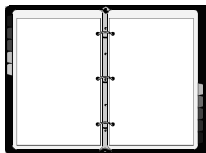


Financing Reforms for Tertiary
Education in the Knowledge
Economy

Seoul, 6-8 April 2005

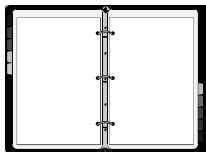


outline of the presentation...



- the need for income diversification
- the range of income generation sources
- the challenges ahead

outline of the presentation...

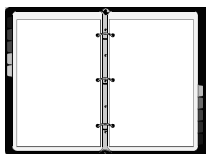


- the need for income diversification

reasons to seek additional resources

- shrinking public budgets
- desire to reduce dependence
- increased competition
- entrepreneurial culture
- implementation of strategic plan

outline of the presentation...



- the need for income diversification
- the range of income generation sources

Resource Diversification Matrix

Category of income	Source of income				
	Government (national, state, municipal)	Students and families	Industry and services	Alumni and other philanthropists	International cooperation
Budgetary contribution					
General budget	X				
Dedicated taxes (lottery, tax on liquor sales, tax on contracts)	X				
Payroll tax			X		
Fees					
Tuition fees		X			
Degree programs		X			
Non-degree programs		X	X		
Advance payments		X			
Chargeback	X				
Other fees (registration, labs)		X			
Affiliation fees (colleges)			X		
Productive activities					
Sale of services	X		X		X
Consulting	X		X		
Research	X		X	X	X
Laboratory tests	X		X		
Patent royalties, share of spin-off profits, monetized patent royalties deal			X	X	
Operation of service enterprises (television, hotel, retirement homes, malls, parking)			X		
Financial products (endowment funds, shares)			X		
Production of goods			X		
Agricultural products			X		
Industrial products			X		
Rental of facilities (land, classrooms, dormitories, laboratories, hallways, drive through, concert halls, mortuary space)			X	X	
Sale of assets (land, residential housing)			X	X	
Fund raising					
Direct donations					
Monetary grants			X	X	X
Equipment			X	X	
Land and buildings	X		X	X	
Scholarships and student loans	X		X	X	X
Indirect donations (credit card, percentage of gas sales, percentage of stock exchange trade)		X	X		
Tied donations (access to patents, share of spin-off profits)			X		
Concessions (products sold on campus, names)			X		
Lotteries and auctions					
Loans					
Regular bank loans	X		X		X
Bond issues			X		

Source: Compiled by Jamil Salmi.

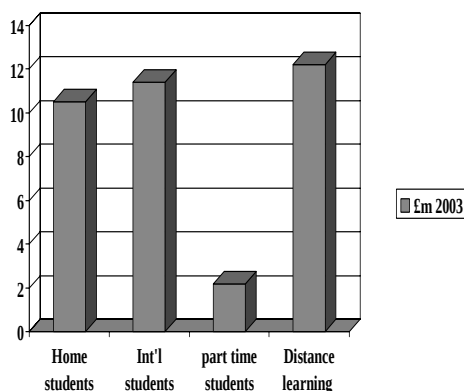
main categories of revenues

- budget
- tuition fees
- productive activities
- fund raising
- loans

tuition fees

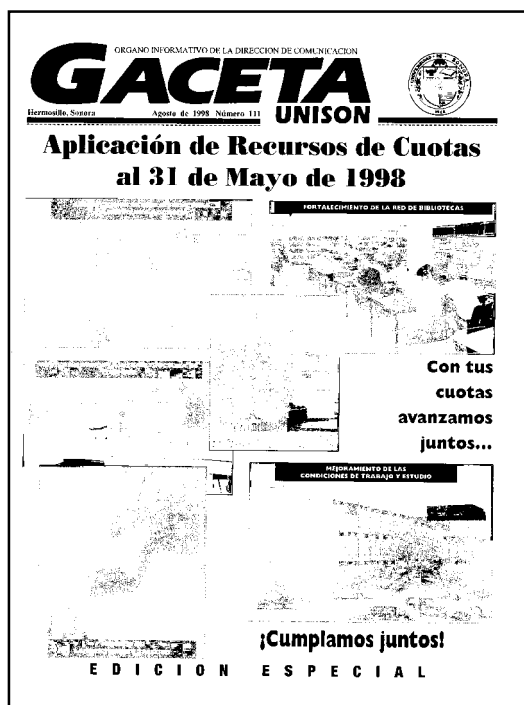
- degree / non degree programs
- clients
 - in state / out of state
 - domestic / foreign
- timing
 - discounted advance payments
 - charge back payments

University of Leicester income from fees (£37m)



Source: John Fielden





productive activities

- Financial Products (endowment funds, shares)
- Services
 - Consulting
 - Research
 - Laboratory Tests
 - Patent Royalties
 - Operation of Service Enterprises (hotel, retirement home, mall, parking, driving school)
- Financial Products
- Production of Goods (agricultural & industrial products)
- Themed Merchandises
- Rental of Facilities (land, buildings, laboratories, dorms, driving-through, mortuaries)
- Sale of Assets

fund raising

- direct
 - monetary grants
 - equipment
 - land & buildings
 - Scholarships
- indirect (credit card, gas sales, % of stock exchange trade)
- tied (access to patents)
- concessions, franchising, licensing, sponsorship & partnerships
- lotteries and auctions



toll university



loans

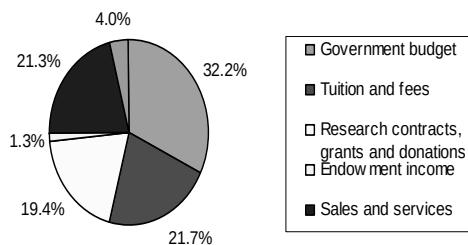
- loans from commercial banks
- loans from development banks
- bond issues



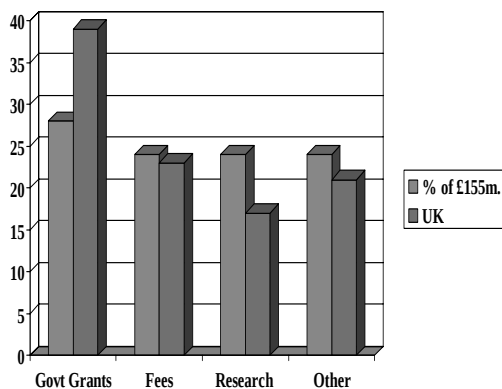
scope

- fees: 10-30%
- other revenues: 10-50%
 - USA (public institutions 25%, private institutions 50%)

**Sources of Revenues, Public 4-year Institutions in USA
Year 2000**

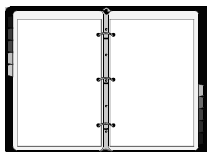


University of Leicester income in 2003



Source: John Fielden

outline of the presentation...



- the need for income diversification
- the range of income generation sources
- the challenges ahead

the challenges ahead

- favorable regulatory environment
- enhancement of academic mission
- adequate management
- level-playing competition

favorable regulatory environment

- budget incentives
- tax advantages for donations
- flexible financial procedures
- legal status

preserving the academic mission

- insufficient alignment with institutional and academic mission
- teaching staff too busy to teach or do untied research
- loss of institutional control
- ethical dimensions

management requirements

- generation of new net returns
- clear and transparent income distribution rules (and related human resources incentives)
- fund raising professionals
- investment specialists
- cash-flow management
- contingent planning

unfair competition?

- public institutions using public subsidies
- private institutions indirectly subsidized by public institutions

conclusion



**what is the best
method?**

it depends...

Alice in Wonderland

Lewis Carroll

Alice

*Would you please tell me
which way I ought to go
from here?*

Cheshire Cat

*That depends on where you
want to get to.*

it depends...

- country / local circumstances
- type of institution
- promising fields
- strategic or ad-hoc?
- linked to academic orientation

Fundraising as Institutional Advancement

Kai-ming Cheng

Chair Professor of Education

Senior Advisor to the Vice-Chancellor

Bernadette W.S. Tsui

Director, Development and Alumni Affairs Office

University of Hong Kong

Types of New Money

- ✦ Competitive Government Grants
- ✦ Research / Consultancy Projects
- ✦ Student Fees
- ✦ Corporate Collaborations
- ✦ Donations
- ✦

✦ *Fundraising in Hong Kong* *Then and Now ...*

Background ...

Then: “*Fundraising?*”

- ✦ There is no such a culture!
- ✦ There are many rich people, but they don’t give to universities!
- ✦ They’d rather donate to rural villages!
- ✦ They would say: “This is government business!”
- ✦ They would say: “Universities are filthy rich! Why should I give money to universities?”

It all started

- ✦ 1996 started the Foundation
- ✦ 1998 started the Development Office
- ✦ 1999 started visiting US institutions
- ✦ 2001 started idea of a *campaign*
- ✦ 2002 UGC \$625,000 for fundraising set-up
- ✦ 2003 Gov't Matching Fund \$120M
- ✦ 2004 achieved \$100M in a year
(US major campaign \$2.5B for 5 years)

Track-record

- ✦ before 2002
 - about \$12M p.a. >> max \$1.5M
- ✦ in 2003
 - \$100M >> max \$6.3M 4,500 donors
- ✦ in 2004
 - \$70M >> max \$12M
- ✦ in 2005
 - ??? >> max \$120M

Higher Education: Social Expectations

Creation of Knowledge:

Research

Construction of Knowledge:

Learning

Commitment to the Community:

Services

Integrity & Humanity:

Moral Leadership

Higher Education: Public Good

Its mission and contributions
are shared & endorsed
by
the Community.

Higher Education: Public Good

Hence, donation
is a matter
of
Partnership

Philanthropy ...

- ✦ Everywhere, there are people who are ready to give.
- ✦ The issue is whether or not you are on their “shopping list”

Philanthropy ...

- ✦ Giving makes sense
- ✦ Giving is God's will
- ✦ Giving is good business
- ✦ Giving is fun
- ✦ Giving feels good
- ✦ Giving in return
- ✦ Giving as a family tradition

The From R.A. Prince & K.M. File (1994)
The seven faces of philanthropy. Jossey-Bass.

Stories

- ✦ Bank borrowing
- ✦ Primary school children
- ✦ An old woman
- ✦ 2060!

Stories

- ✦ University of Toronto
- ✦ Medical Faculty, HKU
- ✦ Exchange students
 - 15% >> 20%

✦ *A new funding game ...*

✦ Then

– Planning according to funding

✦ No money, no plan

✦ New

– Funding according to plans and vision

✦ New plans, new money

✦ No vision, no money

The Old Pie



The New Pie



New Money...

For what?

- ✦ For new level of academic capacity
- ✦ For long-term development

NOT

- ✦ Compensation for budget cut
- ✦ For more petty cash

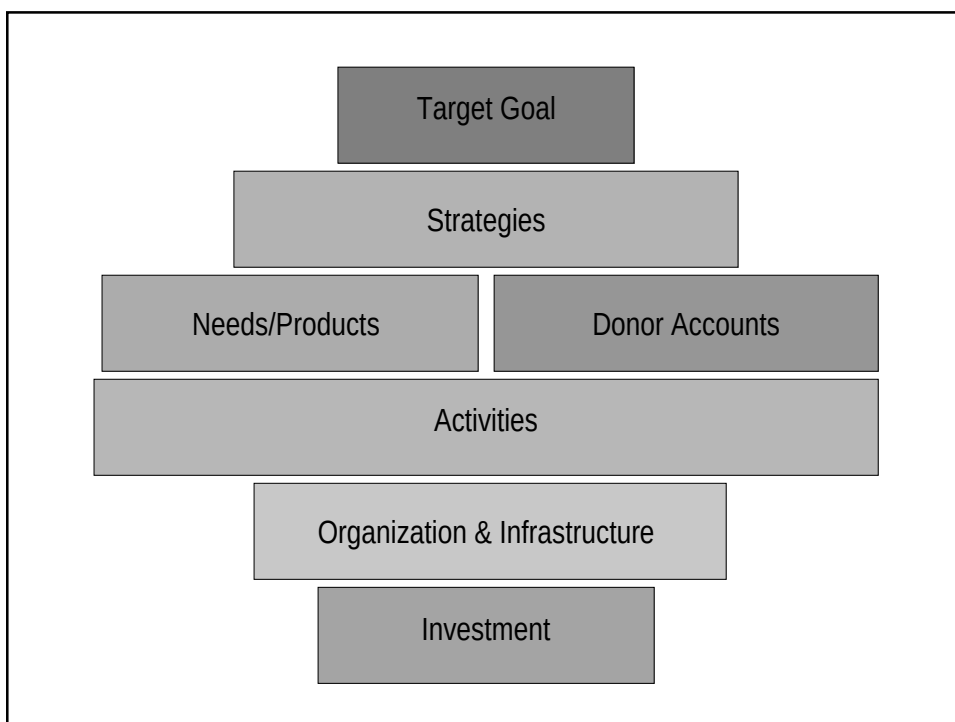
Therefore

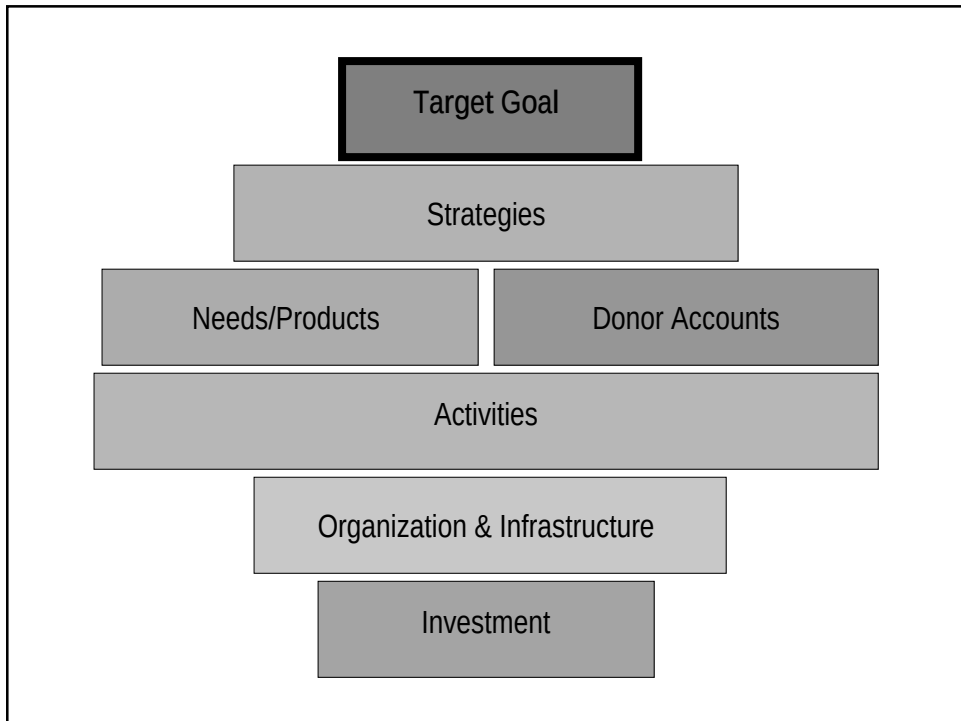
“Institutional Advancement”

That is

University fundraising
is partnership for excellence
(***not*** charity)

➤ *How to do it....*

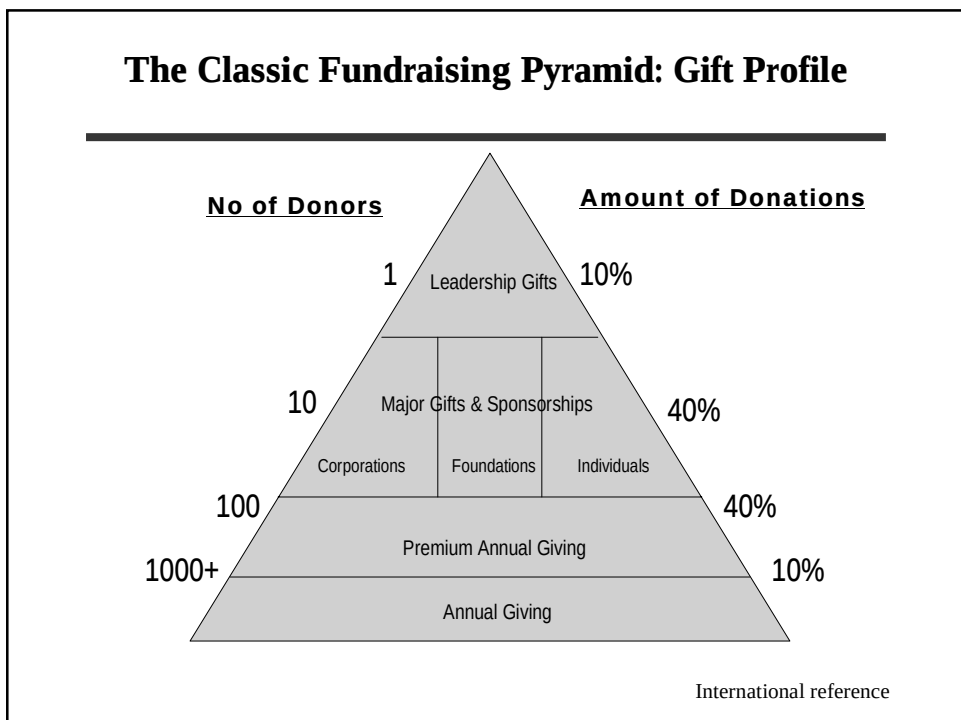
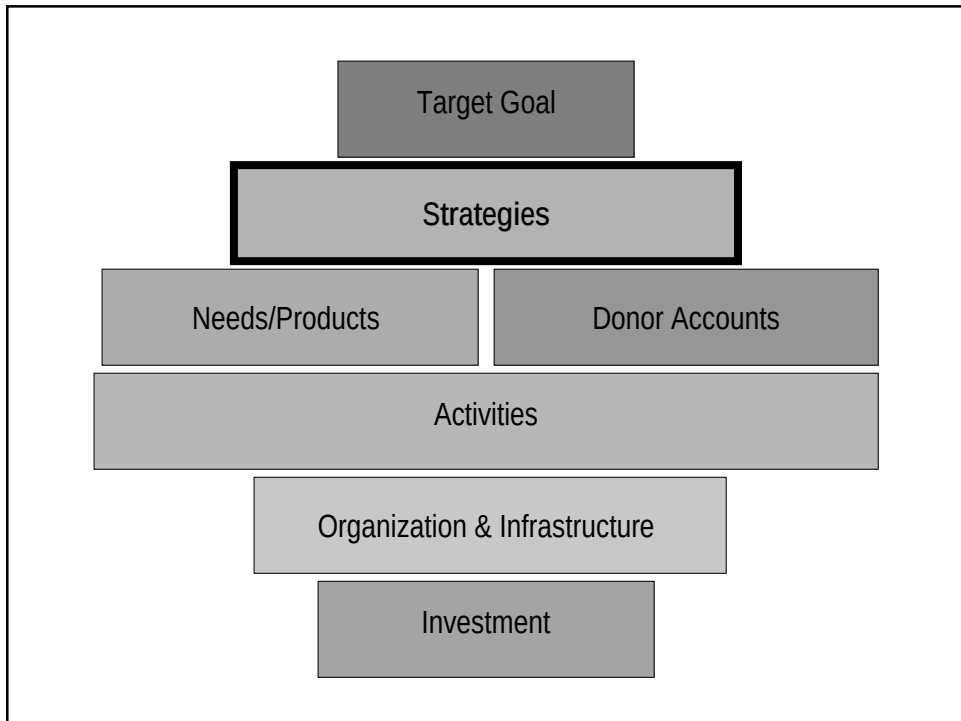




Example

➤ Target Goal

e.g. 1.2B 4 years

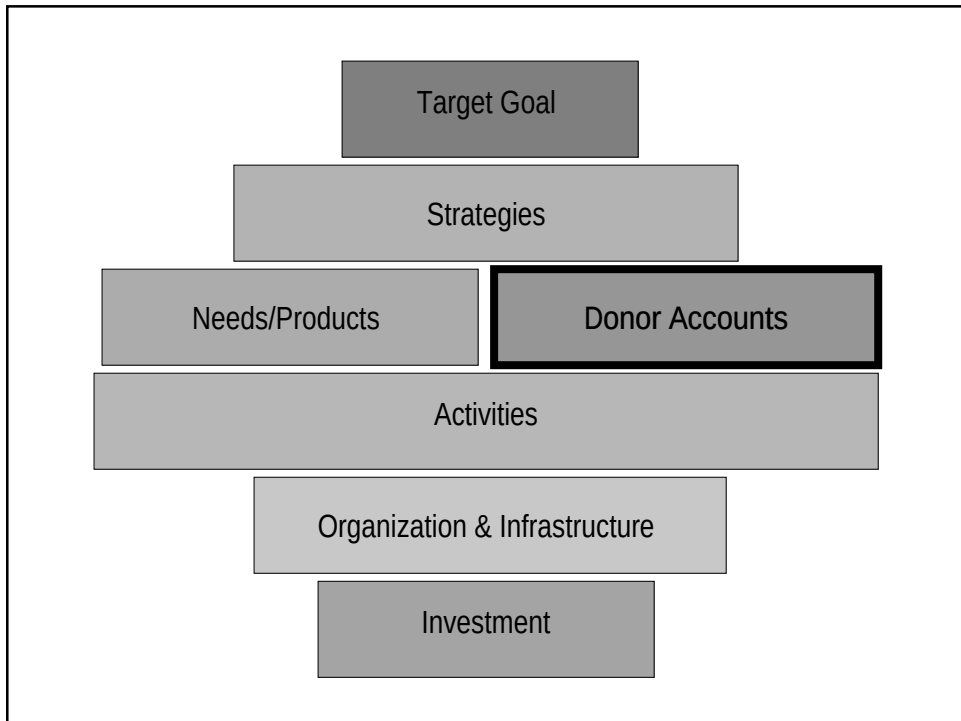


Pyramid: an example of breakdown

Amount \$'K	Min. No.	Max. No.	Min. Sum (\$'K)	Max. Sum (\$'K)
100,000	2	3	200,000	300,000
30,000	14	18	420,000	540,000
10,000	22	25	220,000	250,000
5,000	25	32	125,000	160,000
2,000	70	80	140,000	160,000
500	130	150	65,000	75,000
100	300	400	30,000	40,000
5	600	1,000	3,000	5,000
1	6,000	10,000	6,000	10,000
TOTAL :	7,163	11,708	1,209,000	1,540,000

Schedule: an example

- Year 1 (Quiet Phase) 350M
- Year 2 250M
- Year 3 300M
- Year 4 300M
- Extension(?)

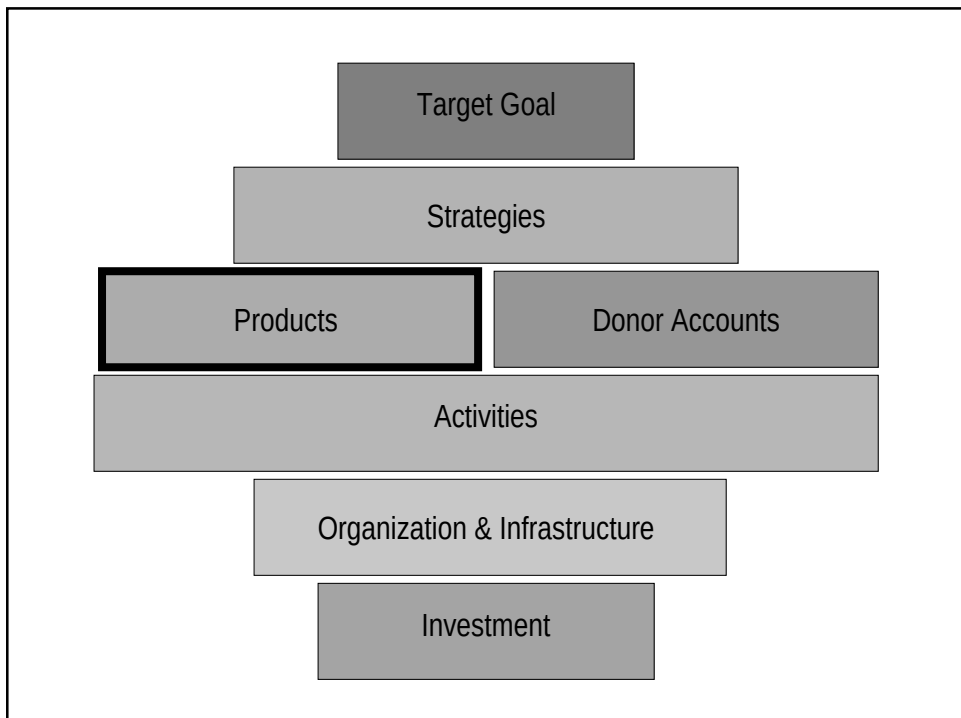


✦ Donors

- Mapping
- Cultivation
- Renewal
- Stewardship

Donors

- Alumni
- Individuals
- Foundations
- Trust Funds
- Corporations
- Staff & Students (*Careful!*)
- *Referrals*
- *Government (Grants, Matching, ...)*



✦ **Products**

- Identification (Areas of Excellence)
- Packaging & Presentation
- Ways of giving
- Recognition

✦ **Ways of giving** (by order of difficulties)

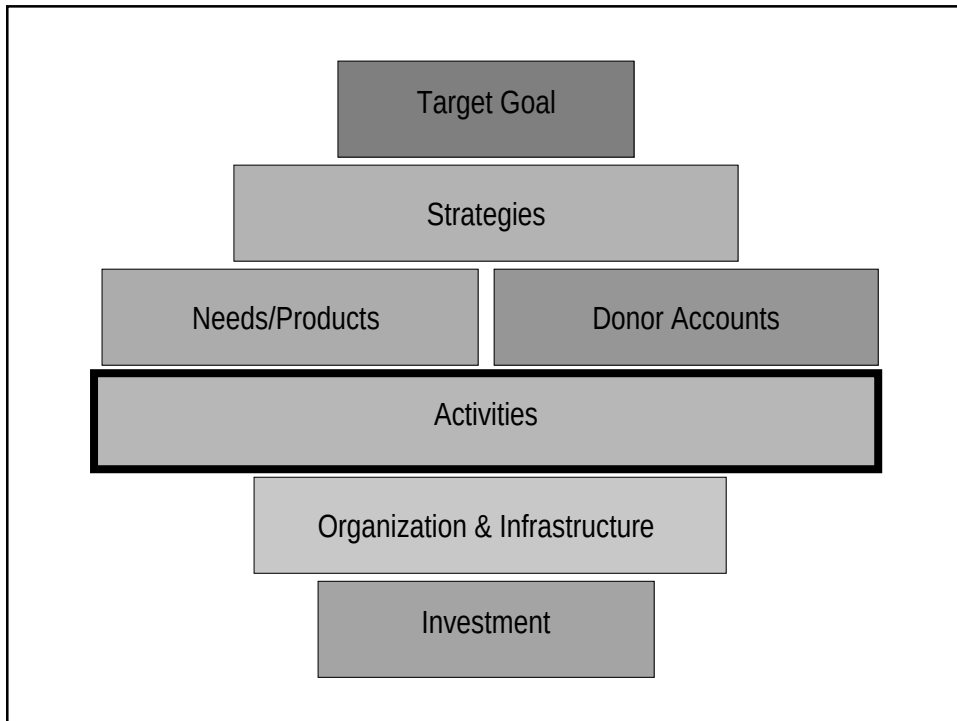
- “Brick & Mortar”
- Other named endeavours
 - ✦ Centres, Programs, Rooms, Chairs, Lanes,
- Scholarships
- Endowed Professorship
- Annual giving
-

✦ **Ways of giving** (Con't)

- Planned giving
 - ✦ Bequests
 - ✦ Insurance policies
- Non-cash gifts
 - ✦ Estates
 - ✦ Jewelry/ Painting
 - ✦ Stocks
-

✦ **Ways of giving** (Con't)

- Reunion gifts
- Challenging grants
- Innovations
-



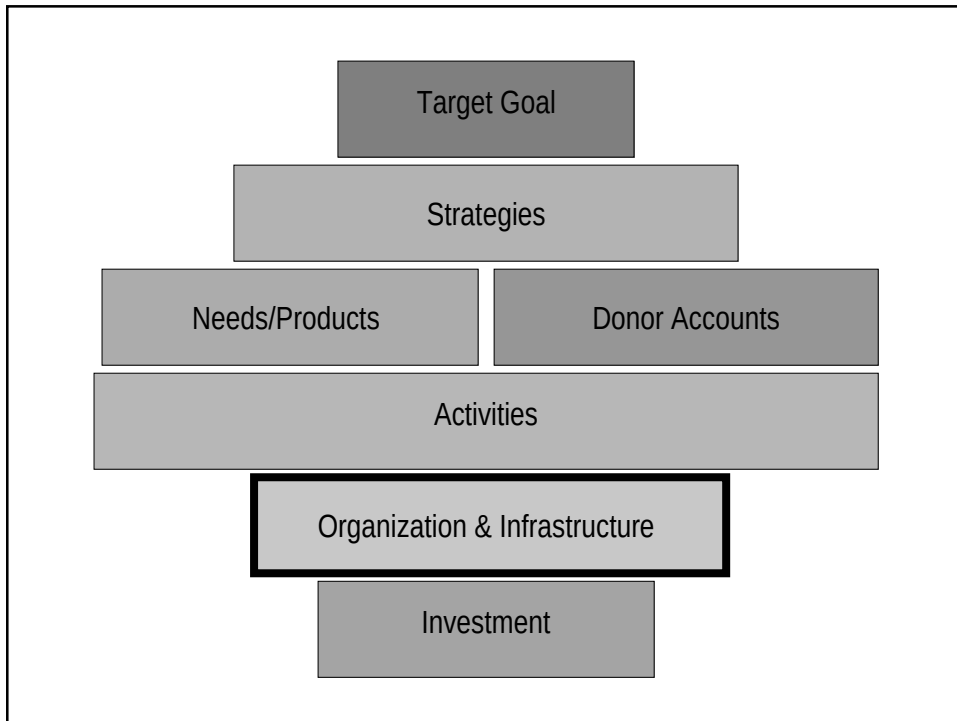
▼ Activities

- Anniversaries
- Launching ceremonies
- Gala Premier
- Alumni reunion dinners
- Golf Tournament
- Dining and Wining
- Donor negotiations
-

Activities

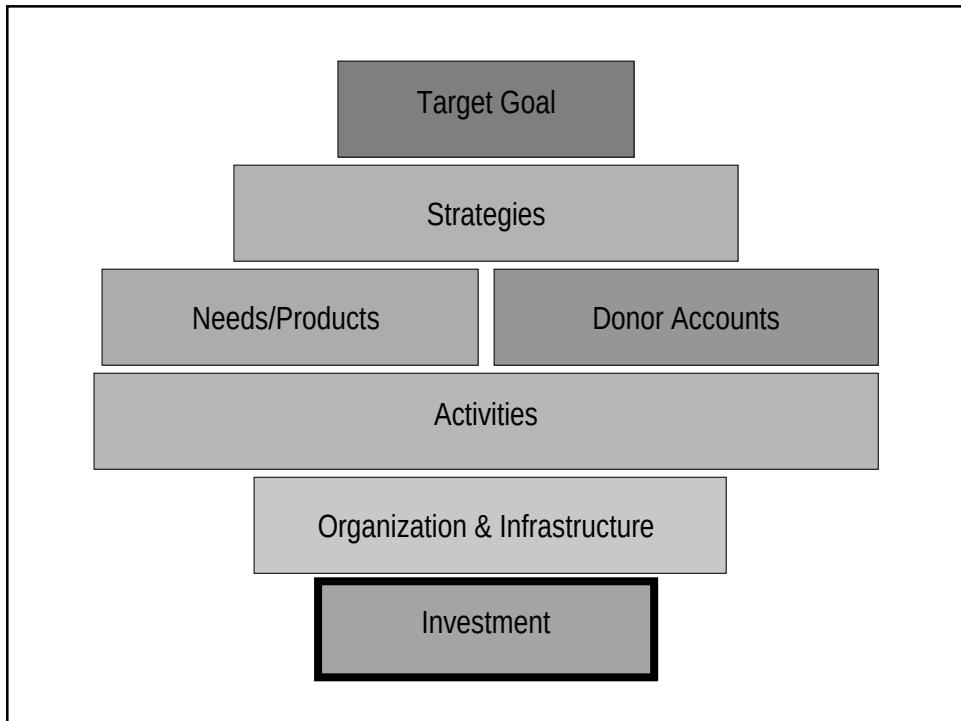
- Mentorship Programme
- “Reunion at the Races”
- “Mustard Seed Action”
- Faculty Presentation/Tour
-

Appendix A			
Capacity Building	Donor Cultivation	Donation Development	Stewardship
HKUJ Secretariat Planning & Reporting Fundraising Planning & Budgeting Disbursement & HKUJ Seed Grants Allocation Internal Collaboration with Faculties & Units Endowments setup Offshore – Friends of HKUJ Consultative Committee on Networking & Purchasing Non-cash Gifts Namings Relativity & Consistency Volunteer Recruitment Professional Training & Capacity Building for Central & Faculties/Units Online Donation & Web Development Code of Practice Protocols University-wide Gifts-Recording Needs Assessment Market Research Prospect Research • Prospect Database • Donor Mapping • Matching of Donors' Needs Feasibility Studies	HKUJ Membership Activities Alumni Networking • Convocation • 42 local bodies • 12 overseas bodies • seminars/seminars/activities Publication & Publicity • Convocation Newsletter • Other central publications • Websites • Internal avenues • External relations & media 90th Anniversary Celebrations Match internal dynamics Donor Acquisition • Major gifts • Medium-sized gifts • New donor groups Non-alumni Networking • Mentorship • Community Leaders • Community Relations • Corporate Relations • Foundation Relations • Education Sector	Nurturing of Pledges Acceptance & Negotiation Gift Processing Donor Renewal¹ Namings • buildings/venues • professorships • centres • lectures • “Your Chair” • “Your Tree” • “Your Tree” Annual Giving Planned Giving/Bequests Non-Cash gifts (insurance, estate, stocks, works of art, etc) Targeted contributions • Staff • Students • Young Graduates • Parents • “\$100 Campaign” Strategies • Affinity Card • Direct Mail Campaign • Bank Statement Appeal • Fundraising events (e.g. Marathon concert, gala/dinner) • Program for Affluent Middle- class Drives • Scholarships • HKUJ Membership • VC's Fund • Medical Endowment • Law Endowment • Libraries • Museum	Donor Recognition • Acknowledgements • Ceremonies • Publicity Enrollment Management • Donor Record Keeping • Result Analysis Donor Renewal Relationship Management Refreshers Activities Donor Incentives/Priorities Periodic Reporting to donors Book on Donation Anecdotes: “Why They Gave”
Code: Black (Achieved) Blue/Sea (achieved) Red (not to be achieved)			



▪ **Infrastructure**

- Director of Institutional Advancement
- Development Office
- Faculty Capacities
- Liaison Committee
- Data-base/Intelligence
-



✦ Investment

– 5% to 15%

– e.g. Harvard Development Offices

✦ Endowment: Over 30B

✦ 5 yr Campaign: 2.1B (ending 2.6B)

✦ Central: 220 people

✦ Each school: 30-40 people

New Challenges ...

- ✦ “Sold out”!!!
- ✦ Unrestricted donations
- ✦ Endowments
- ✦ Investment incomes
- ✦

✦ *What we have learnt ...*

What we have learnt

- ✦ Money is everywhere, but why you?
- ✦ Big money comes forth only when you think big!

What we have learnt

- ✦ There is always a gap between reality and perceptions.
- ✦ One piece of bad news could cost a whole campaign!
We have to manage perceptions:
Presentation!

What we have learnt

- ✦ Government matching works miracles
- ✦ Private challenging grant is equally good

Fundraising is comprehensive ...

- ✦ Daily performance is as important as grand events
- ✦ Everybody is a Fundraiser
- ✦

Fundraising is a Mission,
and is Successful
Only for a Mission!

Thank you!

Discussion 6:

Income Generation at the Institutional Level

Young-chul Kim

Korean Educational Development Institute

Korea is just starting very rigorous university reform programmes, and exploring additional income sources for carrying out the programmes successfully. In this regard, the topic on 'income generation at the institutional level' at this time is quite appropriate. I'd like to summarize the presentation of Dr. Jamil Salmi and professor Kai-ming Cheng and draw some discussion issues for the income generation strategies for Korean higher education.

Summaries of the Presentations

Dr. Jamil Salmi presented the income generation strategies for tertiary education, from the perspective of the income diversification. Necessities to seek additional financial resources come from the changing circumstance of universities such as shrinking public budgets, pressure of reducing dependence, increased competition, entrepreneurial culture, and implementation of strategic plan. Hence, he suggested that universities have to diversify income sources, in order to seek additional financial resources.

As he explained, the main categories of revenues for higher education are government budget, tuition fees, productive activities, donation and loans. He also explained the challenges ahead, such as favorable regulatory environment, enhancement of academic mission, adequate management and level-playing competition. Finally, he concluded that income generation strategies are depended on such situations as country/local circumstances, types of institution, and promising fields.

Discussion 6: Income Generation at the International Level - Young chul Kim

Professor Cheng presented fund raising strategies as one of income generation strategies. Especially, he explained fund raising procedures and methods from setting target goal to investment.

Dr. Salmi's conceptual framework is very helpful to understand the income generation structure of higher education in general. Especially, it gives us meaningful implications to develop the income generation strategies for the development of higher education in Korea. Professor Chen's fund raising procedure model is very useful to develop fund raising strategies at the institutional level.

University Income Generation Policies in Korea

Student demand for higher education in Korea has been very high, so that the enrollment rate is recorded as one of the highest in the world. However, with respect to quality, Korean higher education is not very competitive, comparing with that of advanced countries. Furthermore, industries are not satisfied with the quality of the university graduates.

In order to raise the competitiveness of university, the Ministry of Education and Human Resources Development(MOE) has pushing ahead the university reform projects, including university structural reform, Brain Korea(BK) 21, New University for Regional Innovation(NURI), and so on. The MOE also proposed a rigorous plan to increase greatly university revenue for the university reform from the next year. According to the MOE plan, governmental budget for higher education reform programmes will be increased two and half times during the next three years, from 1.3 trillion won in 2005 to 3.2 trillion won in 2008.

Until now, governmental financial support for higher education was not sufficient. The scale of financial support from the government is 0.4% of GDP. It is far below the average of OECD countries(1.0% of GDP).

Comparing with the composition of revenue sources in advanced countries, such as the United States, Korea is heavily depended on tuition fees. Major income sources of the national and public universities are subsidy from the government and tuition fees from students. Private universities depend on tuition fees more heavily than the national and public universities, and 2-year private

Discussion 6: Income Generation at the International Level - Young chul Kim

colleges depend on tuition fees more heavily than 4-year private universities.

<Table 1> MOE's Budget for Higher Education Reform Programmes in Korea

(Unit: billion won)

projects	2005	2006	2007	2008
university structural reform	80	300	300	300
specialization of metropolitan universities	60	80	100	200
improvement of university curriculum	4	5	10	20
BK 21 (second stage)	185	400	400	400
manpower education for growth engine industries for next generation	-	100	150	400
subsidy for academic research	305	320	350	400
NURI	240	240	300	400
specialization of technical colleges	168	168	200	250
promotion of sound private universities	-	-	300	300
other projects	252	267	240	500
total	1,294	1,880	2,350	3,170

SOURCE: Chosun-Ilbo. 25 March 2005.

<Table 2> Revenue Sources of Private Higher Education Institutions in Korea

(2004)

(Unit: %)

classification	4-year	2-year
tuition fees	62.2	76.6
transfer	8.5	2.2
endowment	10.7	1.1
government support	2.0	1.6
administrative fees	2.1	1.7
interest and others	3.4	2.9
capital and debt incomes	7.6	4.7
transfer from the last year	3.5	9.3

SOURCES: MOE · KEDI(2004). Statistical Yearbook of Education 2004.

Discussion 6: Income Generation at the International Level - Young chul Kim

As shown in Table 3, revenue sources of higher education in the United States are diverse. There is also a difference in the revenue sources between public and private and between the 4-year and 2-year degree-granting institutions in the United States. Private universities receive considerable amount of financial support from the federal government. The percentage of financial support from the federal government given to the private universities is higher than the public universities.

<Table 3> Revenue Sources of Higher Education Institutions in the US
(2000–2001)

(Unit: %)

classification	public			private		
	total	4-year	2-year	total	4-year	2-year
student tuition fees	18.1	17.8	19.5	38.1	38.0	53.1
federal government	11.2	12.4	5.5	16.3	16.3	9.8
state government	35.6	33.7	44.5	1.4	1.4	3.2
local government	4.0	0.6	19.5	0.6	0.6	0.9
private gifts and grants	5.1	5.9	1.2	19.3	19.4	11.6
endowment earnings (investment return in private)	0.8	0.9	0.1	-4.4	-4.4	3.5
educational activities	2.8	3.3	0.7	4.2	4.2	2.6
auxiliary enterprises	9.3	10.2	5.4	10.6	10.7	6.5
hospitals	9.5	11.5	0.0	8.7	8.7	0.1
other current income	3.7	3.7	3.6	5.1	5.1	8.6

SOURCES: National Center for Educational Statistics.

In order to secure financial resources for Korean higher education, revenue sources at the institutional level should be diversified. In this regard, the MOE formulated a plan to secure the financial resources for higher education through the various channels. Legal grant system for the higher education is considered in the central government level. The government also tries to switch the R&D budget supporting method to be linked to the manpower education of universities. In the local level, local government will be induced to invest more

into the local universities.

The MOE also pushed ahead the university investment-inducing system from the private sector, as one of university income generation strategies. In order to induce financial resources from the private sector, the government will allow company or person to establish and operate university facilities, such as dormitory, restaurant/cafeteria, health facilities, culture center and parking lot in the private universities. Especially, universities, whether national or private, can expand their facilities by the BTL(Build-Transfer-Lease) method, which is a new private capital-inducing system into public sector, by allowing to build the public facilities by private sector and transfer and lease it to the public sector. The government also considers reduction and exemption of tax, when the companies give donations to the universities for the purpose of manpower education.

Further Discussions

There are three issues for further discussion.

A bill was laid on the agenda before the National Assembly, to legalize the grant system for the higher education as one of university income generation strategies. According to the bill, 7.6% of internal tax will be allocated automatically for the budget of higher education. Actually, most of financial resources for the primary and secondary education in Korea are secured by the legal grant system, such as Law on Financial Grant for Local Education. Needless to say, such a legal regulation system will be helpful to secure the stable financial resources for the higher education. However, it also has a possibility to increase rigidity of educational budget system.

As one of university income generation strategies at the institutional level, several universities have suggested an university donation system linked to student admission, so called 'admission system through donation'. Meanwhile, the MOE has prohibited the system due to unfairness of university entrance. The basic position of the MOE is that university admission should be decided on the basis of students achievement, not on the economic background of students. However, the controversy will be continued, as far as university

Discussion 6: Income Generation at the International Level - Young chul Kim

income generation issues are raised and discussed.

In general, prestigious universities can utilize multi dimensional income generation strategies. For example, they can generate revenue through productive activities, donations, and so on, in addition to securement of the stable income through the tuition fees. Meanwhile, less prestigious universities, most of which are small-sized, have short history, and located in rural areas, have many constraints to secure the revenue sources. Recently, many less prestigious universities have to worry about decrease of tuition fee income, due to recent rapid decrease of university enrollments.



Presentation 13:

Incorporation of National Universities in Japan

Financial Implications

KANEKO, Motohisa
The University of Tokyo

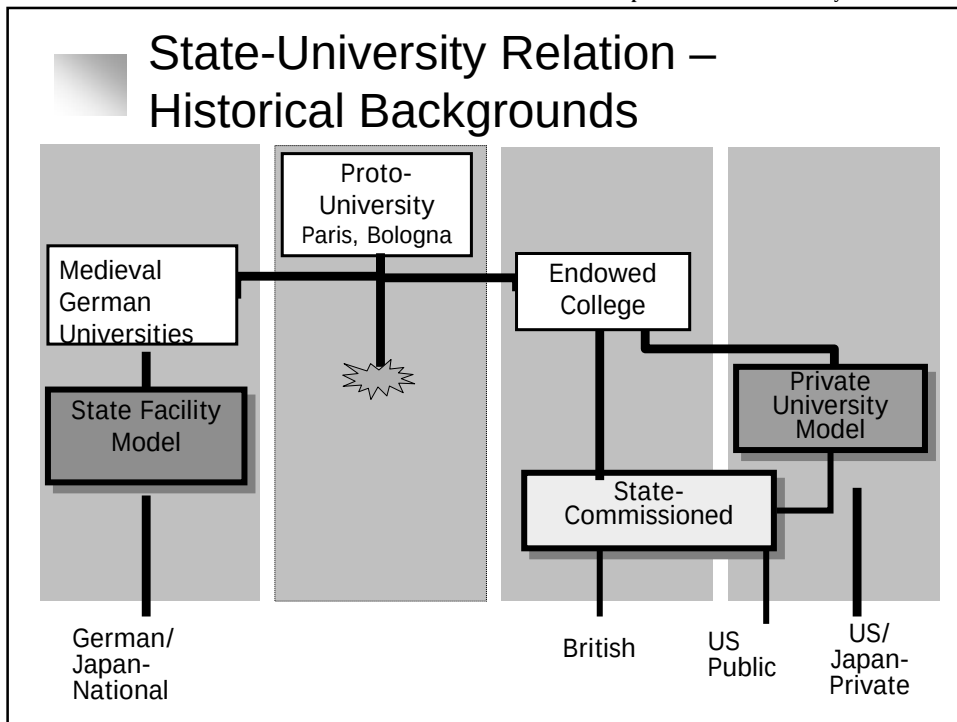
2005 KEDI-World Bank International Forum
Financing Reforms for Tertiary Education in the Knowledge Economy

Seoul, 6-8 April 2005



Plan of the Talk

1. Backgrounds
2. Incorporated National University
- Design and Rational
3. Changes and Consequences



Modern University – Three Models

- State Facility
 - Berlin University (1810) as the proto-type
- Private University
 - Yale Corporation as the proto-type
 - Established by the Dartmouth Case (1823)
- State-Commissioned
 - State Universities in the US – Created by Land-Grant Act in late 19th Century
 - British Universities – Increased Government Funding since 1st World War

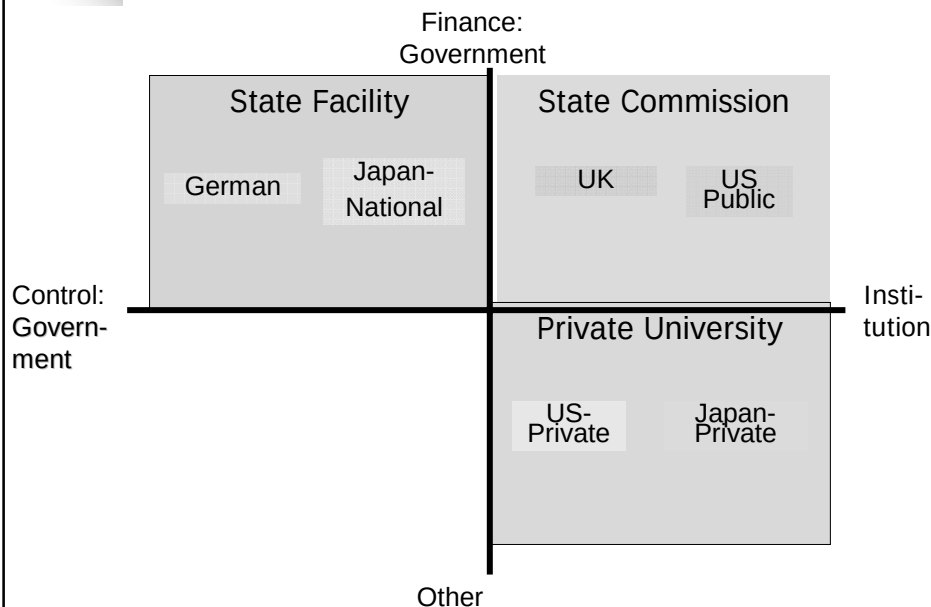


State-University Relation

- “Public” vs. “Private”
 - Distinction by Ownership
- Three Dimensions
 - Control
 - Finance
 - Internal Governance



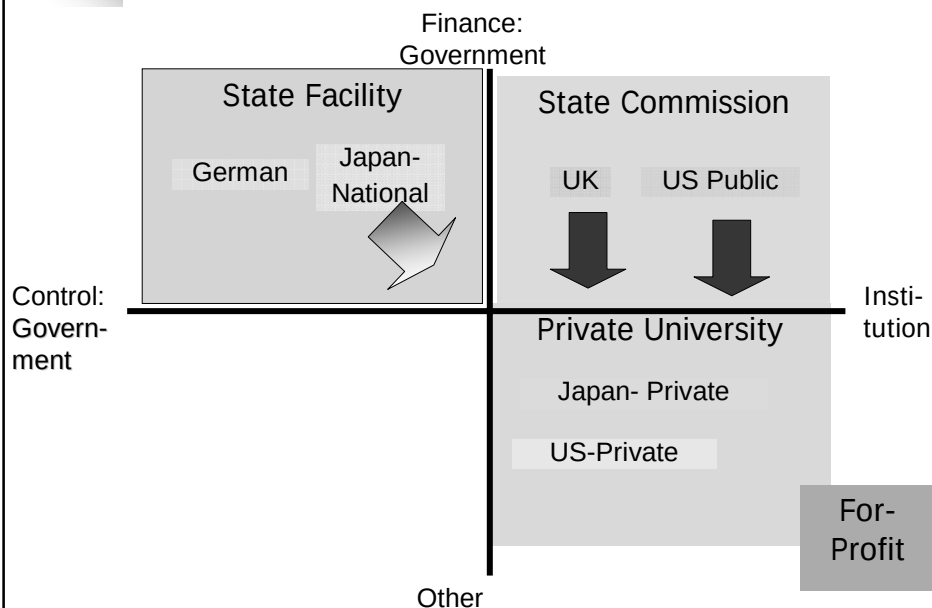
Governance and Finance



Basic Definition

State Facility	Private University
-A Part of Government Organization to promote national goals -Association(Guild) of Academics	Independent Body Entrusted by the Society to promote social good

Recent Trends





Plan of the Talk

1. Backgrounds
2. Incorporated National University
- Design and Rational
3. Changes and Consequences



Incorporation of National Universities in 2004

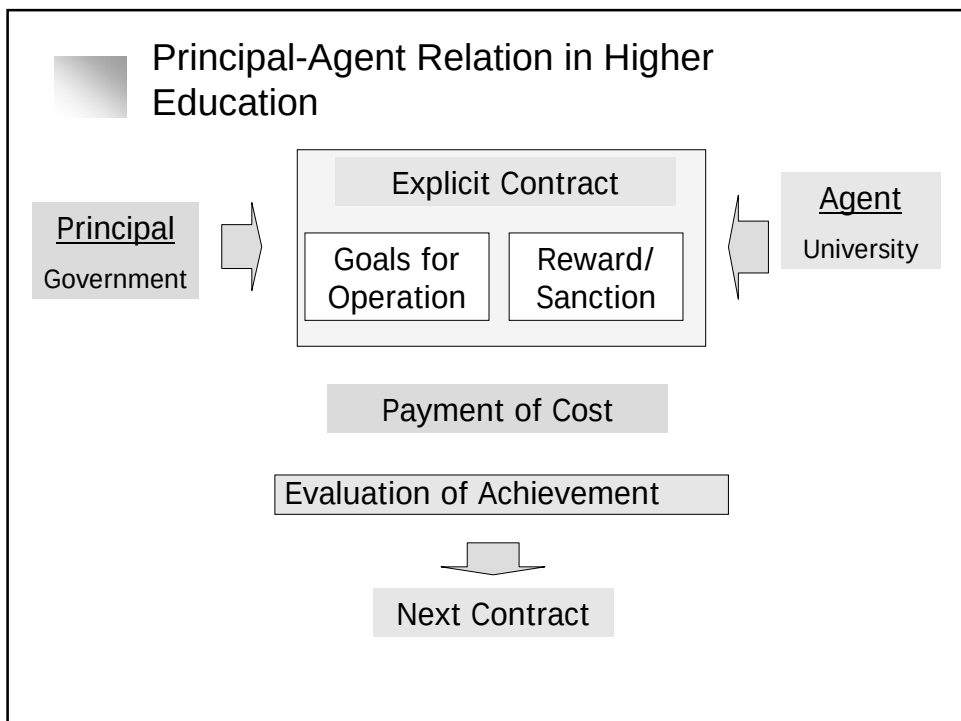
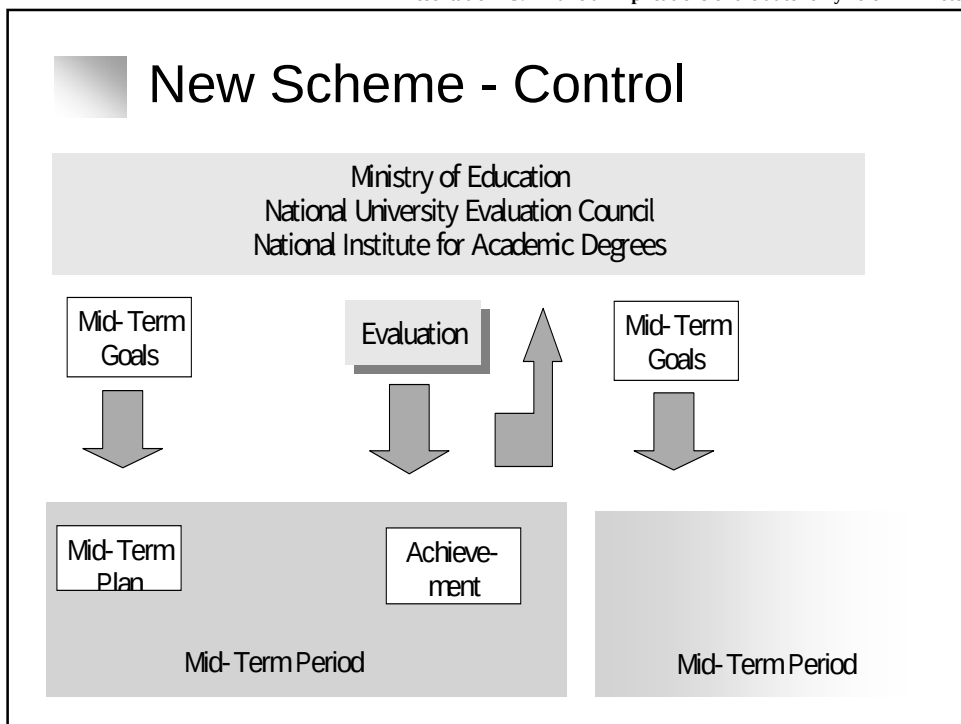
- 1996 Government reform was made a political agenda - Debates over reform of national universities
- 1998 Creation of “Independent Administrative Agency
- 1999 Government Proposal to move national Universities to I.A.
- 2003 Both Houses passed the National University Corporation Law
- 2004 April. All national universities become National University Corporation

New Scheme – (1) Control

- National Universities as a Separate Legal Entity from the Government
- Removal of administrative control by the Government
- Mid-term (6 year) Goal/Plan and Evaluation as the main instrument of control

Mid-term Goal and Plan

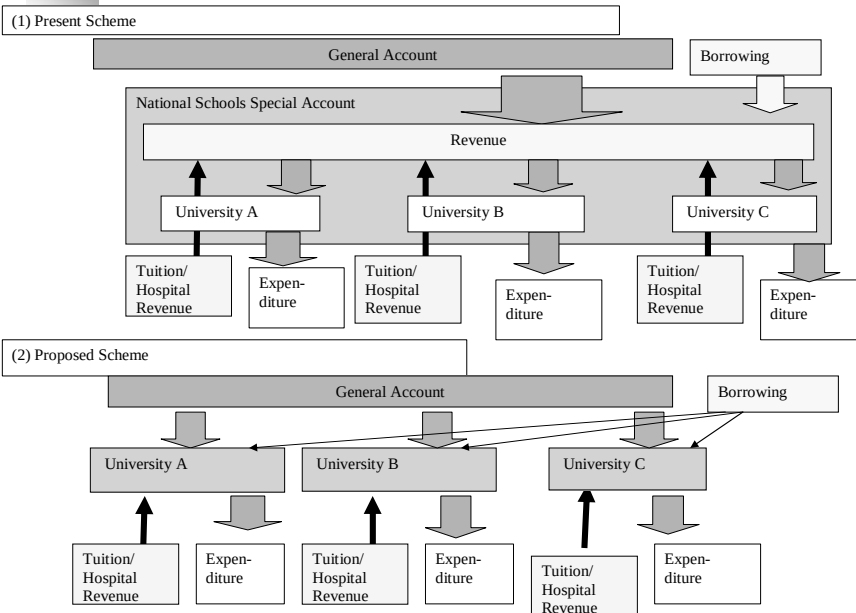
- University produces 6-Year Mid-Term Goal/Plan
- Government Approval
 - Government Subsidy
- Evaluation of the Achievement in 6 years
- Next Mid-Term Goal/Plan
 - Government Subsidy



New Scheme – (2) Finance

- Each university is an independent accounting unit
- Institutional finance is managed through Corporate Accounting System
- Tuition/Services revenue can be retained in institution
- Can borrow/issue bonds

New Scheme - Finance



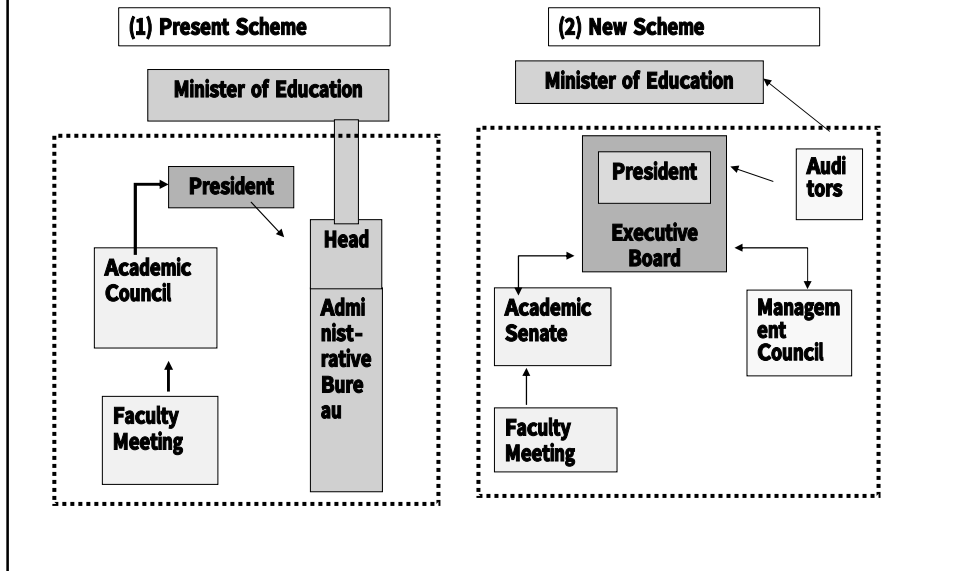
Underlying Shifts in Principle

Coverage of Government Support	Comprehensive	→	Partial : Government as a consumer of services
Accountability by	Budgetary Consistency	→	Evaluation of Performance
Financial Obligation of Government	Mandatory	→	Political Negotiation/ Contract

New Scheme – (3) Internal Governance

- President is the Decision Making and Executive body
- Executive Board undertakes Decision and Execution
- Academic Council and Administrative Council as consulting body
- Lay members in Administrative Council

New Scheme – Organization



Plan of the Talk

1. Backgrounds
2. Incorporated National University
- Design and Rational
3. Changes and Consequences



Changes

- Reform took place in April 2004
- Little problem in implementing legal status
- Details still have to be determined – details are critical



Issues- (1) Control

- How specific the mid- term target can/should be specific
- How to evaluate the achievement of goals?
- Experience from evaluation exercise in 2001-2004
 - Enormous costs for comprehensive evaluation
 - Limited robustness/reliability

Issues – (2) Finance

- What should be the essential role/responsibility of the government?
- If it is for education, why only public institutions should receive greater subsidy?
- What are the future levels of government subsidy?

Prospective Changes – Income Generation

- Government subsidy – Institutional
- Third party funds
 - Governmental aids for research
 - Private gifts
 - Contracted research
- Sale of Services
 - Tuition
 - Output of research
 - Hospitals

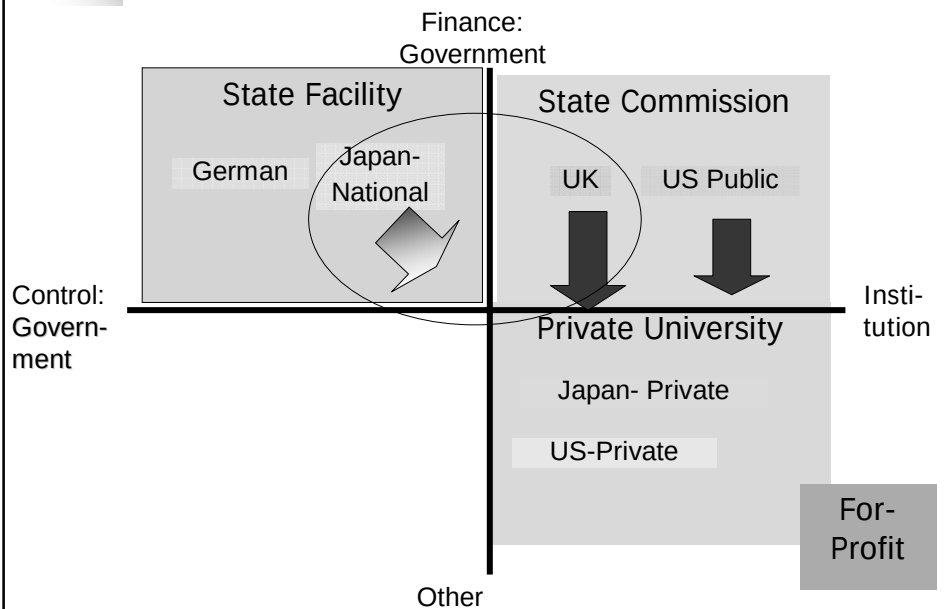


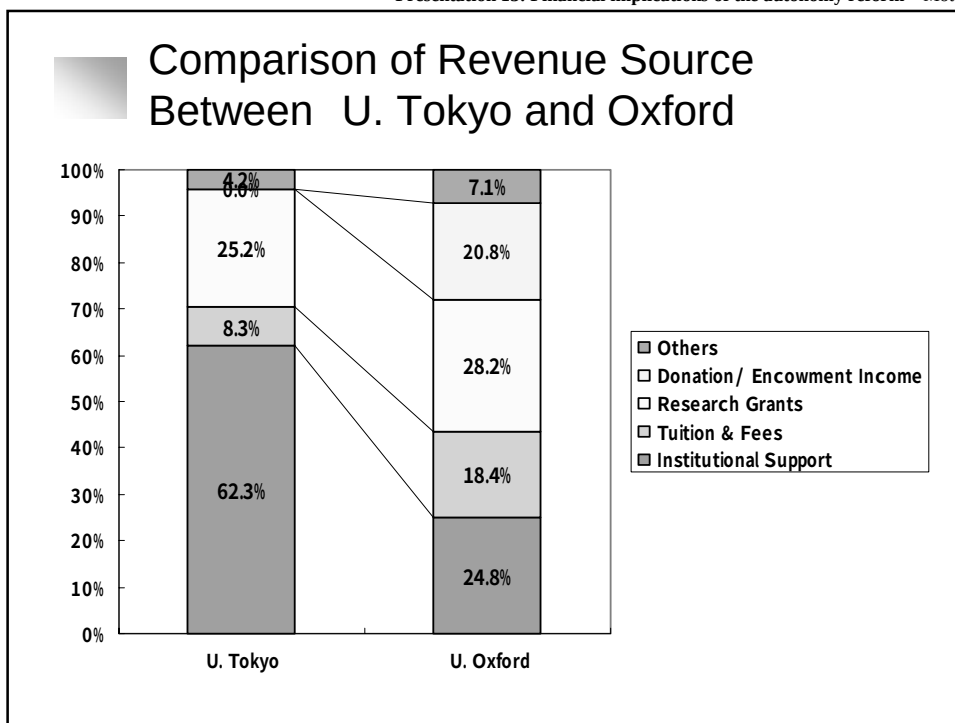
Institutional subsidy from government

- Political Climate is unfavorable
- Demands for achievement and efficiency
- Government subsidy is unlikely to increase
- Needs for other sources



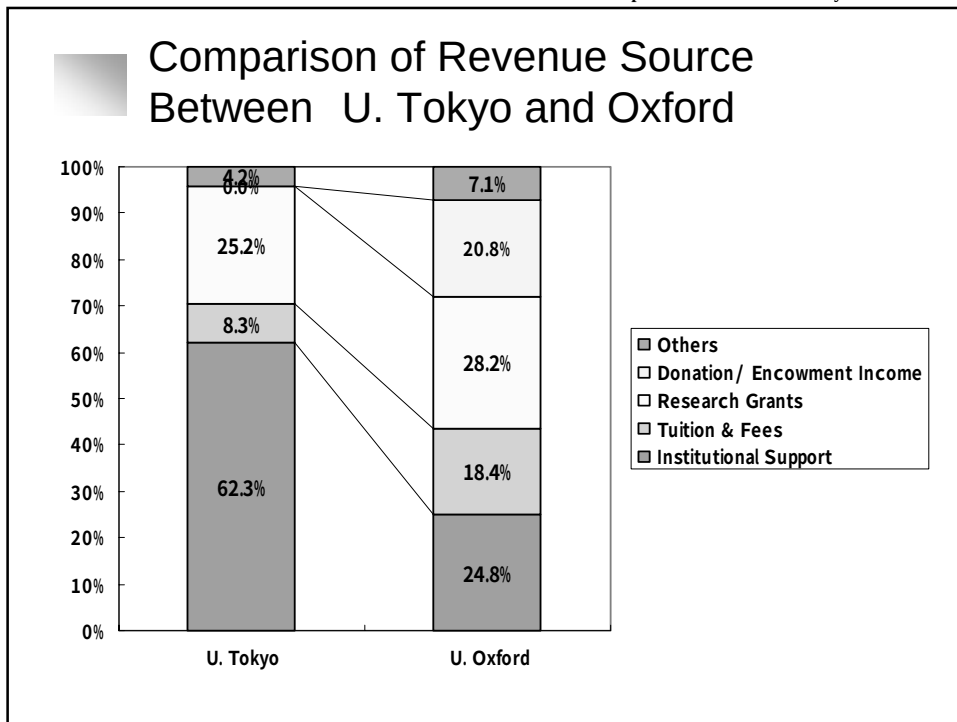
Recent Trends





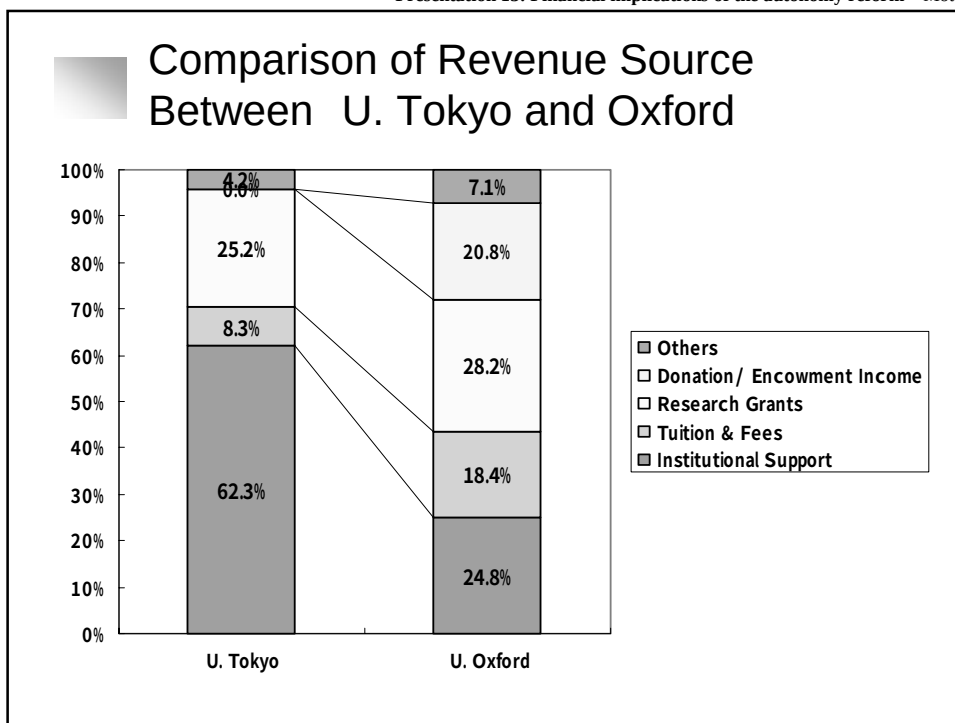
Prospects for Non-Institutional Funds

- Government research grants
 - Increasing pressure to win
 - Government proposal to transfer institutional aid to research grants



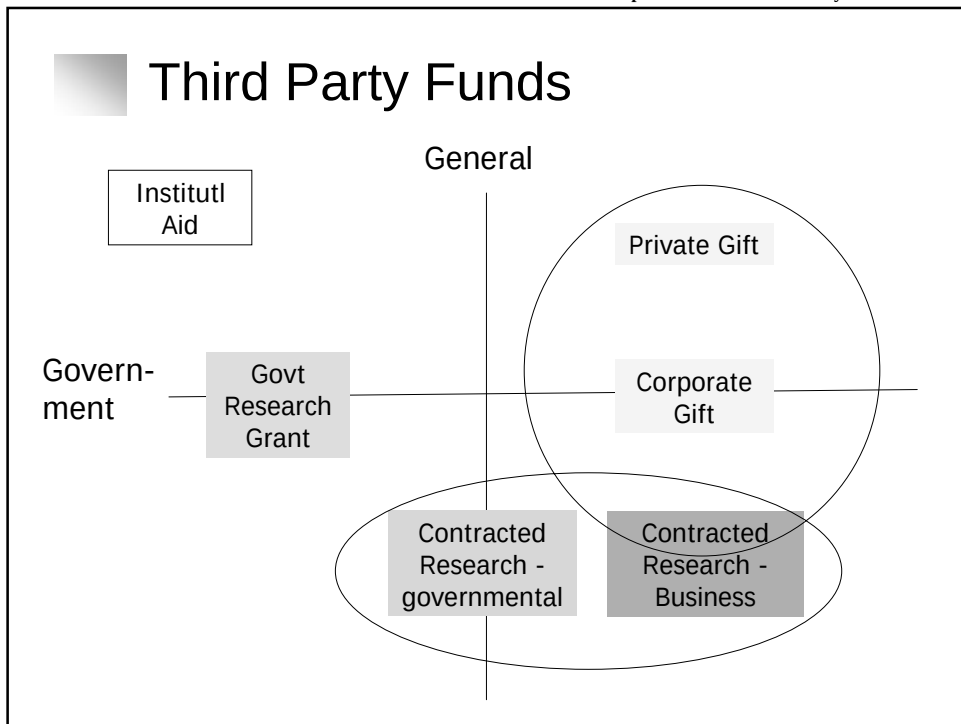
Prospects for Non-Institutional Funds

- Private/Corporate Gift
 - Needs deliberate policy
 - High expectation, but unlikely to be a significant source for recurrent expenditure
 - Depends on culture, social atmosphere, tax regime
 - Useful in buildings facilities



Prospects for Non-Institutional Funds

- Contract research
 - Government and private sources
 - Increasing, but depends on government policy
 - Competition with research institutes



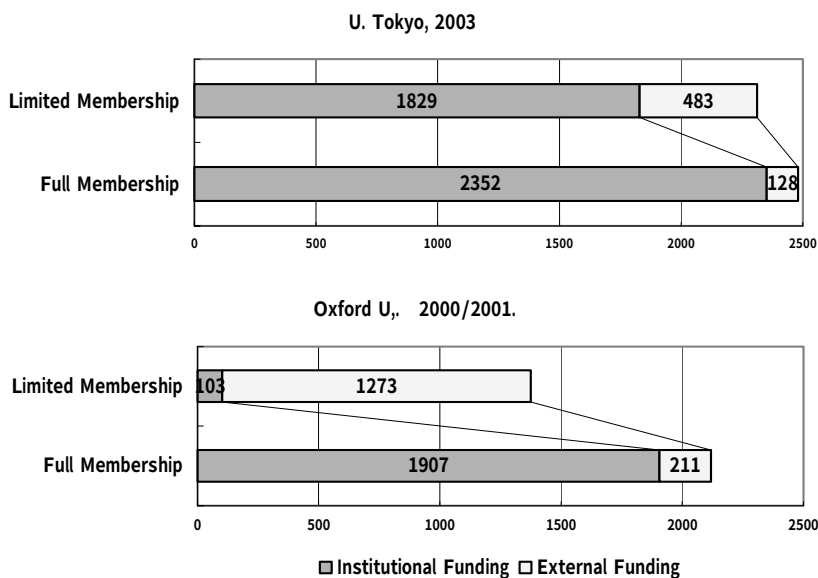
Tuition

- Universities are forced to raise tuitions
 - In November 2004, Ministry of Finance announced that it maintains its policy to increase tuition gradually by reducing subsidy for the corresponding.
 - National University Corporations were given discretion over tuition, but were practically forced to raise tuition.
 - British and American public institutions are raising tuitions

Income generation – Institutional conditions and consequences

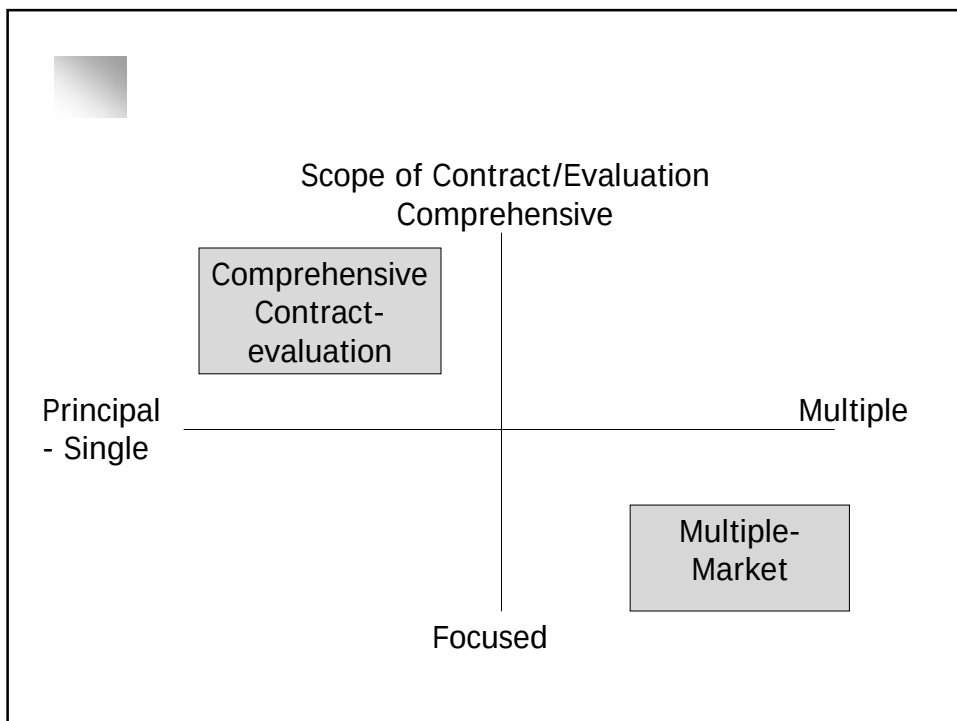
- Mechanism of Internal distribution of funds
 - Internal distribution of incentives/rewards
 - Budget center
- Changes in organization
 - Increases in non-traditional teaching staff
 - Linked with project funds
 - Limited membership as faculty member

Comparison in organization



Prospect in the long-run: Two Approaches

- Contract-Evaluation approach
 - Develop a system of efficient evaluation
 - Effective to establish accountability
- Multiple Market approach
 - University sells services in various markets (research, education, social services)
 - government becomes one of the purchasers
 - Potentials in income generation





Prospects in the long-run

- Combination of the two approaches involves contradictions
- Contract-evaluation approach faces critical problems in feasibility –
- Inevitable shift towards multiple-market approach
 - Will there be distinction between public and private institutions?
 - What should be the social compact?



Conclusion

- Just started, still a long way to go.

Presentation 13:

Incorporation of National Universities in Japan: Financial Implications

Motohisa KANEKO
The University of Tokyo
Japan

Japanese national universities underwent a drastic change in April of 2004 by becoming National University Corporations (NUCs hereafter). While the reform was implemented in a wave of initiatives for restructuring government activities, it reflected long-standing debates for granting greater degree of autonomy to national universities. How will it affect the financial structure, the organization and the behavior of national universities? In this paper, I shall outline the construct of the NUC scheme (section 1) and, by contrasting a Japanese national university and a British university which had already undergone similar reforms, speculate on how it will alter the financial aspects (Section 2) and organizational aspects (section 3) of national universities.

1.Recent Reform – Incorporation of National Universities

The Japanese attempt of reform can be set in the context of global tide of changes in higher education, but it has to be set in the particular context of Japanese higher education and the society.

Japanese National University as a State Facility Model

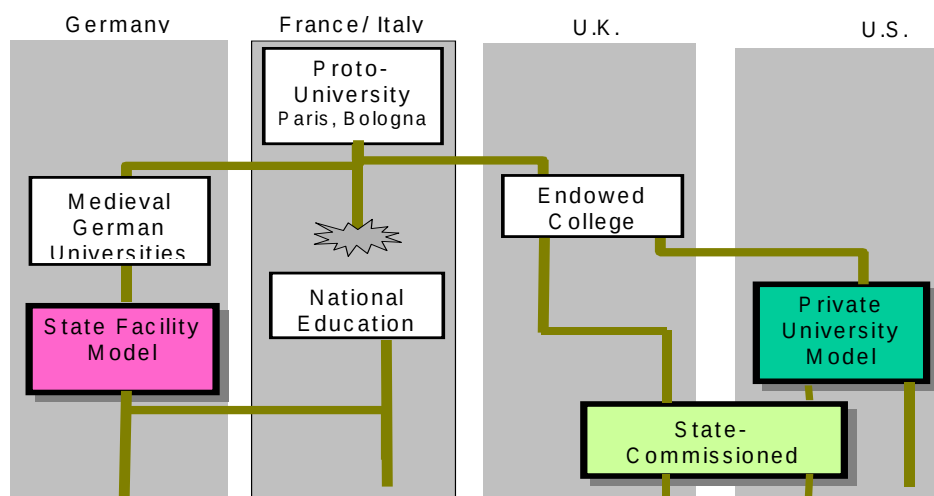
At the outset of analysis, it will be useful to set forward a simple classification of the relation between government and university. I argue that there are three major types of university from the historical backgrounds presented in Figure 1.

1) State Facility Model, which comprises German universities and most of the university system in the Continent. Taking after the Humboldtian tradition this type of university, with respect to the organization and physical infrastructure, belong to the government organization. At the same time, the university is a guild of professoriate and allows a wide range of academic participation in management.

2) Private University Model, which comprises private institutions of higher education in the U.S. and some other countries. Its starts with the endowed colleges in Oxford and Cambridge, and then introduced to the U.S. to create the Yale Corporation model, where a Board of Trustees with a trusted fund owns and manages the university by appointing president (Durea 2000). This scheme was recognized through the Dartmouth Case.

3) Government-Commissioned Model, which comprises the American State Universities and the British universities. They are distinctively separated from the Government in their governance, which dependent heavily on government subsidies. The State Universities in the U.S. are controlled by the Board of Governors or Trustees, in a similar arrangement to the Private Model: but usually the government sends a majority of its members. In the British case, the post 1992 universities (former Polytechnics) employ similar governance structure to the American State institutions. The traditional universities are now governed by Councils, with representations from the academic as well as lay members.

Figure 1. Historical Development of Higher Education and
Three Major Types of University



Japanese higher education system comprises both public (national and local public) and private sectors. National universities, 80 in number, account for only one-fourth of under graduate enrollment in four-year institutions, but for one-half of graduate enrollment. They are the main actors in academic research, even though there are a few private institutions prominent in research.

The national universities in Japan constitute, together with German and other universities in the Continent, what I call the State Facility Model. Universities of the State Facility model are established by the state as a facility of the government – even though the universities are not exactly one

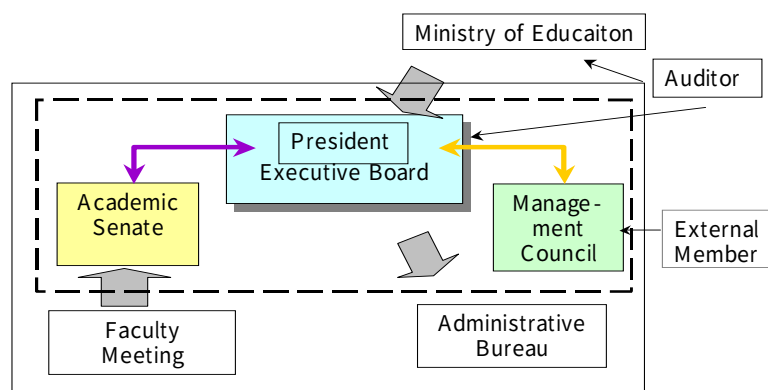
of the arms of government bureaucracy, they are in fact a part of the government organization. Their activities are therefore defined as the function of the government, and have to be fully supported by the government. On the other hand, the academics are highly autonomous at least with decisions involving academic matters, based on the membership principle that, in spirit, inherit the tradition of medieval Guild. This structure, and the underlying idea, was established with the creation of Berlin University in 1810.

The essence of the new scheme can be summarized in three points, i.e., the legal status of the incorporated university and its governance, the relation with government, and financial mechanism.

Legal Status and Governance

Each NUC constitutes a legal person under Civil Law. As a legal person it is able to sue other legal entities and can possibly be sued by others. It owns its own assets, which is called the capital of the corporation, mainly in the form building and land that were contributed from the government at the time of incorporation. In principle, it is supposed to be able to borrow funds, issue bonds or invest on other entities, but the government maintained strict conditions and restrictions.

Figure 2. Governance Structure of National University Corporation



By stipulations of the Law, each national university corporation has a President, an Executive Board, an Academic Senate, a Management Council and Auditors (Figure 1). The relation among these bodies are presented in Figure 1. In this scheme, the President is the ultimate body for decision-making and execution, while important decisions have to go through deliberation of the Executive board, the Academic Council, upon request by the President, deliberates on academic matters and report to the Executive Council and the President. On the other hand, the Management Council, more than half of the member of which should be selected from outside the university, gives advice to the President.

The auditors are selected by the university, but appointed by the Minister of Education and reports to the Minister directly.

The President, who used to be elected by the Academic Senate in the old system, is now elected by the Committee for Selection of President. The committee consists of the same numbers of representatives from the Management Council and the Academic Senate; the President and the members of the Executive Board may join as the member. The elected is appointed by the Minister of Education. The length of term and the exact procedure taken for election are to be decided by each university. The Committee also has the power to relieve the president of duty through a similar procedure to election.

Relation with the Government

The relation between each NUC, which is legally independent from the government, and the government is mainly regulated by Mid-term (six-year) Goal and corresponding Mid-Term Plan, which function in effect as contracts between the two.

As the Law stipulates, the Ministry of Education assigns each NUC with a Mid-Term Goal that specifies the goals to achieve within the period of six-years in improving the level of education and research, in improving efficiency in management of the institution, and in other areas. Based on this Goal, the university should prepare Mid-Term Plan to achieve the specified goals, which should be approved by the government. Reflecting the criticism that this clause will give the government an overwhelming power over the NUCs, both Houses passed attached resolutions that required the government to respect autonomy of NUCs. In practice, the Ministry of Education asked each NUC to draft its Mid-Term Goals, and then approved it without substantive change.

Towards the end of the six-year period, the newly established Council for Evaluation of National University Corporations (“Evaluation Council” hereafter) will evaluate the levels of achievement of the goals with the assistance of National Institute for Academic Degrees. The law states that, depending on the results of evaluation, the government examines the needs for continuation of the institution and necessary actions to be taken to the institutions. The last clause implies that the results may be related to government subsidy to the institution. The attached resolutions of both Houses again draw attention to the possibility that this mechanism may lead to encroachment of academic freedom, and require request the government to take cautions. Further details in either the method of evaluation or the consequences of evaluation are not worked out yet.

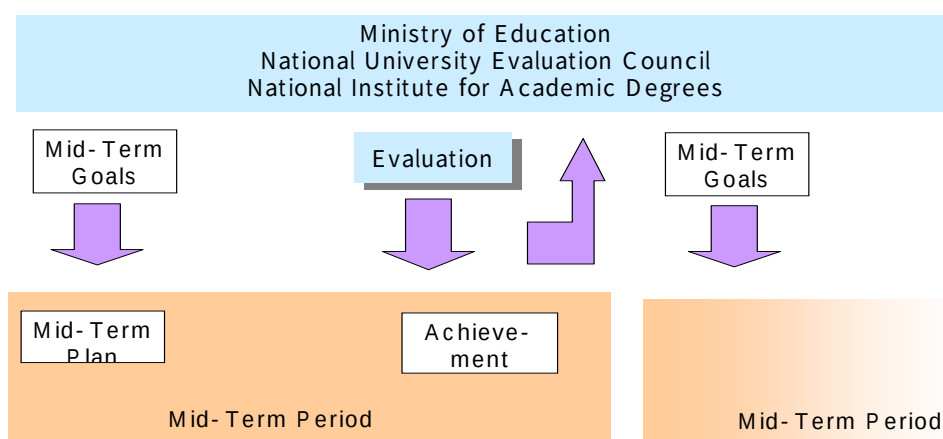
As stated above each NUC is in principle an independent organization under the Public Law, implying that the finances are completely separated from the government even though it may receive subsidies from the government.

With the enactment of the NUC Law, the government contributed most of the facilities, land and buildings to the NUCs. The evaluated prices of those facilities constitute the capital fund of

each NUC. While in the old system, the budget for a fiscal year had to be executed in the designated year and accounted for within the fiscal year, the NUCs are now allowed to carry the balance to the next accounting period. Within a limit, each university may make investment: it can borrow money either from government or from commercial banks; it also can issue a bond with the permission of the government.

At the same time, the NUC Law stipulates that the finances of NUCs will be accounted for based on the NUC Accounting Standards, which are similar to the accounting standards required for business corporations. In the old system the budget was given in line-items, and the accounting procedure simply implied keeping track of spending the budget in each item on time. In the new system accounting takes the form of double-entry book-keeping. The financial report should include Balance Sheet, Profit-Loss Statement, Cash Flow Statement and other necessary statements.

Figure 3. Mid-Term Goals and Plan Cycle



Underlying Rational

Then what is the logic underlying the design of NUC? The answer lies in the concept that gained influences in last two decades in the name of New Public Management or Institutional Economics – the “principal” and the “agent” and the explicit contract between the two. The scheme of Independent Administrative Institution is built on this concept: the government as the principal commissions an Independent Administrative Agency to achieve a public purpose. The terms are specified in the Mid-Term Goals and Plan; subsequently the level of achievement will be evaluated, and the result of which will lead to consequences including financial rewards or punishment, or even

discontinuation of the contract.

It is argued that by separating the principal and agent, the agent will gain efficiency. The agent, free from the strict and minute control by the government, is able to exploit local knowledge and initiate innovations. Moreover, it is given an incentive to gain efficiency through explicit goals. The government, on the other hand, can become more accountable in bringing about the services that it provides.

It is important to note that in this construct, it is absolutely necessary for the government to produce the expected levels of services. In order to ensure that, the contract should be clearly stated and respected. It is then necessary for the contract to be struck between the government and the chief executive of the institution, although the institution as a whole functions as an agent for the government. The chief executive then directs the whole organization towards achievement of the set goal, and the members of executive board assist the chief executive. From this perspective it is natural that the president has to be given an unusually strong power in the NUC model.

2. Potential Changes in Financial Structure

Given the new scheme, how will the national universities change? While it is too early to evaluate the consequences, it is worthwhile to speculate on the direction of the change, particularly in their financial aspects. As a step to approaching the issue, I chose to compare the present status of the Japanese national universities with British universities that has undergone similar reforms.

Bench-Marking the University of Tokyo with Oxford University

In the conceptual model that I described in the outset of this paper, British universities belonged to the “State Commissioned” model. Historically, the universities in the UK were created as independent corporations from the government. On the other hand, it became critically dependent on government funding after World War II. This particular combination between governance and finance made a unique model. Moreover, with the increasing dependence of the government funding, they came closer to the State Facility model in many significant aspects. This construct, however, had to change under fiscal pressures under the Thatcher administration in the early 1980s. Since then the British universities has undergone a series of radical and steady reforms. The present scheme of governance and finance is radically different from that of twenty years ago (Williams 1997).

The British case therefore provides a very interesting means to speculate on how the Japanese national universities will change after incorporation. From this perspective, I will compare the present status of the University of Tokyo and that of Oxford Universities.

Before attempting systematic bench-marking, it will be useful to summarize basic figures. Looking at total students numbers, the University of Tokyo has a larger number (about 28,000) than Oxford

(16,000). When it comes to graduate students, the University of Tokyo has 10,000, which is far more than the other Oxford. Oxford has less graduate students than other first class universities in the world, something it is trying to change by increasing its number of graduate students. As for overseas students, Oxford has an especially high ratio with approximately one quarter of its students being non-British. It also has quite a lot of overseas students at the departmental level, unlike the University of Tokyo. Comparing the budget size of the three universities by looking at their total expenses (calculated at a rate of 1 pound = 234 yen), expenditures in Oxford's are 100 billion yen, while the University of Tokyo has significantly larger expenses of 210 billion yen. This figure for the University of Tokyo, however, includes the expense of its hospital, unlike the numbers from the two British universities. Not including this hospital-related expense, the total expense of the University of Tokyo still amounts to 170 billion yen. One of the main reasons for the University of Tokyo's huge expense amount is that it also includes the cost of running its attached research institutes. Although the two British universities also have research centers and other affiliated organizations, their sizes are far smaller than those of the University of Tokyo.

Composition of the Budget

Table 1 gives a breakdown of the financial resources of the three universities. The balance sheets for the two British universities are for a period of one year ended July 2001, and the balance sheet for the University of Tokyo is for fiscal year 2001. Resources are broadly divided into institution support from the government, income from tuition fees, income from research aid and contract research, income from donations and foundations, and others. The balance sheet amounts for each university are given and also expressed as a percentage of the university's total income.

Table 1. Composition of Revenue by Source– University of Tokyo and Oxford University

	U.Tokyo, 2001		Oxford U., 2001		
	(Million £)	(100 million Yen)	(Million £)	(100 million Yen)	Combined with College (100 million Yen)
Institutional support	449	1050	128	301	301
Tuition & Fees	60	140	42	99	223
<i>Government Contribution</i>	-	-	1	2	2
<i>Domestic Student</i>	-	-	26	61	61
<i>Overseas Student</i>	-	-	16	36	36
<i>Changes in College</i>	-	-	-	-	124
Research Grants/Contracts	182	426	142	333	342
<i>Research Council</i>	97	227	46	109	108
<i>Non-Governmental</i>	39	90	48	113	122
<i>Others</i>	46	109	48	112	112
Donations	-	-	58	136	253
Others	30	71	36	85	87
Total	721	1687	408	954	1212
※ College					
Donation/Endowment			50	117	
Fees			93	218	
Goernment			6	14	
Others			1	2	
Total			150	351	
Composition					
Institutional support		62.3%		31.5%	24.8%
Tuition & Fees		8.3%		10.4%	18.4%
<i>Government Contribution</i>		-		0.2%	0.1%
<i>Domestic Student</i>		-		6.4%	5.1%
<i>Overseas Student</i>		-		3.8%	3.0%
<i>Changes in College</i>		-		-	10.2%
Research Grants/Contracts		25.2%		34.9%	28.2%
<i>Research Council</i>		13.4%		11.4%	8.9%
<i>Non-Governmental</i>		5.4%		11.8%	10.0%
<i>Others</i>		6.4%		11.7%	9.3%
Donations		-		14.2%	20.8%
Others		4.2%		8.9%	7.1%
Total		100.0%		100.0%	100.0%
※ College					
Donation/Endowment				33.3%	
Fees				62.0%	
Goernment				4.0%	
Others				0.7%	
Total	851	1,992		100.0%	
Total including Attached Hospitals a	981	2,296			

Notes:

Annual amounts for Oxford University are for year ended July 31, 2001. Balance sheet amounts of University of Tokyo for fiscal year 2001. Amounts for Oxford do not include hospitals.

College boarding fees for Oxford are estimated by subtracting the college fee replacement (until 1998, the direct grant from the government to the college, calculated arbitrarily from financial resources from HEFCE education grants etc.) estimated at 40 million pounds, from boarding and tuition fees for colleges.

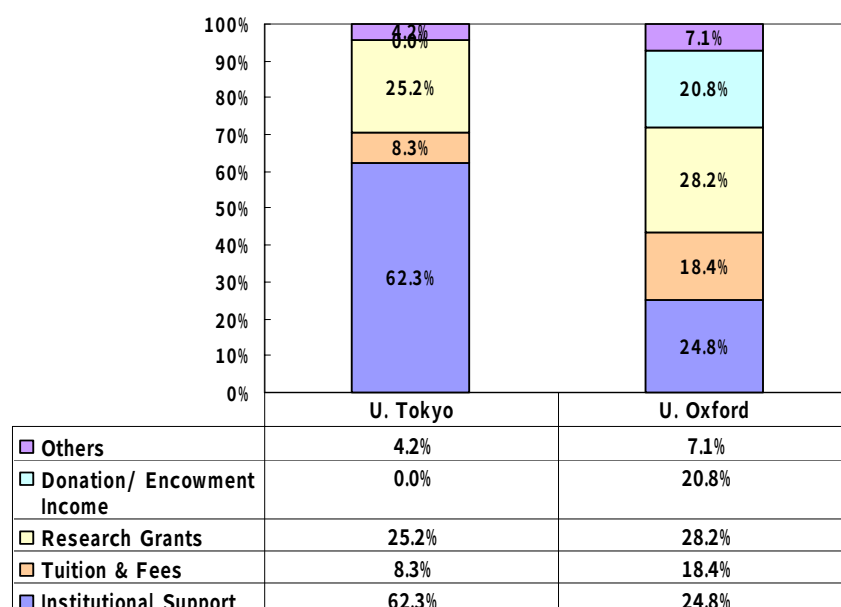
In addition to research grants and contract research for Oxford, including contact research and joint research from companies. (Most is funding from other organizations.)

For University of Tokyo, in addition to research grants and contract research, industry research grants also included, but most is public funding. Support from private organizations includes aid from companies as well as scholarship grants. Income from donations is included in scholarship grant income. Regarding institution aid, annual expense items (attached hospitals and research institutes) are excluded from total university income (= expense) while tuition fees and entrance examination fees, scholarship grants, contract research income, etc, are automatically excluded.

1 pound = 234 yen (OECD purchasing power normal price in 2001)

The categories are simplified here, but in fact the financial systems of universities in Japan and the UK are different, as are the classification methods of financial resources. As a result, there are more than a few problems in directly comparing universities in these two countries. As described in detail in the notes, the financial resource items of the University of Tokyo have been reconstructed according to the British classification of financial resources (although even the breakdown of research grants and contract research are also very different). In addition, Oxford is a very special case even as British university, because its colleges are financially independent from the university. There is no need to itemize the simply combined financial resources of the university and colleges, but here we have reconstructed the breakdown for the purpose of comparison. In the figure, the amounts in the section of “University and college” for Oxford are based on estimates. For example, college boarding fees are estimated by subtracting the college fee replacement (until 1998, the direct grant from the government to the college, calculated arbitrarily from the financial resources of HEFCE education grants etc.), which is estimated at 40 million pounds, from boarding fees and tuitions fees for colleges. In addition, we compared the amounts for the three universities after excluding hospitals (and attached research institutes in the case of the University of Tokyo).

Based on the above estimates, I divided the component ratios of financial resources of the three universities into (1) institution support from HEFCE, (2) income from tuition fees, (3) income from contract research, (4) donations and foundations, and (5) others. This can be illustrated as in Figure 4.

Figure 4. Composition of Revenue by Source

Note: In the case of University of Oxford B, total income including colleges.

(1) Institution grants from government

The largest financial source for all three universities is an institution grant from the government. In the UK, grants are awarded by the Higher Education Funding Council for England (HEFCE), while in Japan, there is an institution grant for national universities. Furthermore, income obtained from Japanese students such as tuition fees becomes revenue of the national treasury instead of income of the individual university. As shown in Figure 3-3, to calculate the income of the University of Tokyo, that is the institution support from government, we subtracted the university's tuition fee income from its direct grant. This institution support from the government makes up 24.8% in the University of Oxford and 62.3% in the University of Tokyo. Here we see a significant difference among the three universities in terms of the percentage of their total financial resources that is made up by institution grants from their governments.

(2) Breakdown of research grants and contract research

The second biggest financial source of all three universities in terms of percentage of total income is income from research grants and contract research. The percentages of total income are 28.2% for the University of Oxford and 25.2% for the University of Tokyo.

This income can be broken down roughly into research grants from a research council

(divided into several research fields), or in Japan, subsidiary aid for science research expenses; support from private research funding organizations; funds from companies (contract research, donations); and research funding from other government bodies. However, it is difficult to provide an accurate breakdown.

For now, looking at the common category of research grants (or science research expenses) from a research council, the percentages to total income are 8.9% for f Oxford and 13.4% for the University of Tokyo. In terms of the composition of the total income from research grants, contract research, and so on, comes from government research grants, contract research, etc, compared with 31.5% for the University of Oxford and 53.3% for the University of Tokyo. Among these three universities, therefore, the University of Tokyo has the highest dependency on research grants (science research expenses) from its government's research council.

Oxford has the highest ratio of research aid from private foundations to total income, 10.0% compared with 5.4% for the University of Tokyo. The University of Tokyo's 5.4% is made up of "scholarship donations", little of which comes from private foundations, most being company funding. It is in fact noticeable how little aid the University of Tokyo receives from private foundations.

In the UK, funding from companies is included in "other income" under income from research grants and contract research, and the ratio of this to total income is 9.3% in the University of Oxford. However, because this "other income" includes a significant amount of income from various ministries and government offices (apart from the research council), we can imagine that the funding both universities receive from companies is in fact considerably less than 10%. In the case of the University of Tokyo, on the other hand, what we can call company funding comes under scholarship donations (just under 80% of the University of Tokyo's "industry-university joint research expenses" under "other income" is government funding based on a capital system) which make up 5.4% of total income. However, this percentage also includes research grants from private funding organizations, and the actual funding from companies probably dips below 5%. As such, it seems that the University of Tokyo has much less funding from companies compared with Oxford, although even Oxford seems to receive less than 10% of their overall income in this way. On the whole, company funding is unexpectedly low in the .

(3) Income from tuition fees, etc.

Although one part of private funding (that is, non-government funding) is from companies, as described above, another important part is income from tuition fees and so on. A simple comparison shows that the two British universities have higher rates of tuition fee income to total income; 18.4% in Oxford compared with 8.3% in the University of Tokyo. However, this does not mean that there is a high level of dependency on students at the British universities. It is a well-known fact that domestic students in the UK only bear tuition fees of around 1,000 pounds (something over 200,000 yen), which is quite low. In fact, income from tuition fees paid by domestic students does not vary between the two

universities, being 5.1% in the University of Oxford and 8.3% in the University of Tokyo. Looking at different kinds of tuition fee income, income from overseas student tuition fees stands out, being 3.0% in the University of Oxford. Meanwhile, income from what should be described as college boarding fees in the University of Oxford is over 10%, which is significant. (However, these college boarding fees are considered as lodging fees, the income they provide cannot be compared with the tuition income of other universities.)

In terms of the dependency on tuition fees paid by domestic students, then, Oxford does not necessarily differ much from the University of Tokyo.

(4) Dependence on government funds

It is difficult to accurately show the ratio of government funds to total financial resources. Based on the above discussion, however, we can estimate this ratio to be: 33.7% for Oxford (including grants from government bodies and from the research council) + α (research grants and contract research from institutes other than the research council, several %); and 82.1% for the University of Tokyo (including grants from government bodies, science research expenses and industry-university joint research expenses) – α (purely private sector contract research within industry-university joint research expenses, less than 1%). Clearly the University of Tokyo is extremely reliant on government funding.

(5) Income from donations and foundations

We have seen that there is a big difference among the three universities in terms of dependency on government funding, but, as mentioned earlier, there is not much difference in terms of non-government funding such as company funding and income from tuition fees (although there are various ways of itemizing income from tuition fees). Another significant difference is in the ratio of income from donations and foundations, 20.8% in the University of Oxford, with almost no corresponding item for the University of Tokyo. Moreover, as we saw earlier, for research grants and contract research too, Oxford's 10% is significantly higher in terms of support from private funding organizations.

From the above discussion, the first point is that the University of Tokyo is significantly more dependent on government funding compared Oxford. Secondly, within government funding in particular, the University of Tokyo depends more strongly on grants from government funding bodies compared with Oxford. Thirdly, the University of Tokyo is more reliant on the research council for research grants and contract research compared with Oxford. The fourth point is that, although Oxford depends less on government funding than the University of Tokyo, they do not really depend largely on domestic students to pay fees or on company funding; on this point they are not so different from the University of Tokyo. The largest item making up for the lower level of government funding for Oxford is income from donations and foundations, a point which differs greatly from the University of Tokyo where there is no such income. This income is a self-earned financial resource rather than

external funding, and provides Oxford with a significant degree of financial independence.

In this way, Oxford has diverse overall financial resources, since it does not depend solely on government but also have significant resources in the form of income from donations and foundations. Their income from tuition fees is diversified too, as is their income from research grants and contract research. There are also more than a few channels of government funding apart from institution support. Moreover, in the case of Oxford, the existence of colleges diversifies its financial resources (such as donations and income from college boarding). The diversity of financial resources of the University of Tokyo is therefore exceeded by that of Oxford.

Resource allocation within the university

(1) Distribution formula of institution support

The biggest problem of resource allocation within the university is how to distribute the institution support from the government, which constitutes a large proportion of total financial resources, but in Oxford, a formula for internal distribution has been developed based on the formula used by the Higher Education Funding Council for England (HEFCE) to determine the size of institution support. Roughly speaking, the formula used by HEFCE calculates education grants by multiplying the unit price of expenses per student by the number of students. The amount of research grants also depends on research evaluation, but this total amount is allocated to each university in blocks. The universities have the freedom to distribute the research grant internally, but in fact Oxford has adopted their own formulae which are revisions of the one used by HEFCE. We do not know the details, but the formula used by the University of Oxford is almost the same as the original HEFCE formula

The University of Tokyo, on the other hand, distributes the budget allocated to the university by first subtracting central expenses (shared expenses) and then distributing the budget according to the same formula used by the Ministry of Education, Culture, Sports, Science and Technology for the purpose of budget estimation. Like the British universities, therefore, the University of Tokyo allocates resources internally by adopting the formula used for allocating the budget to the university.

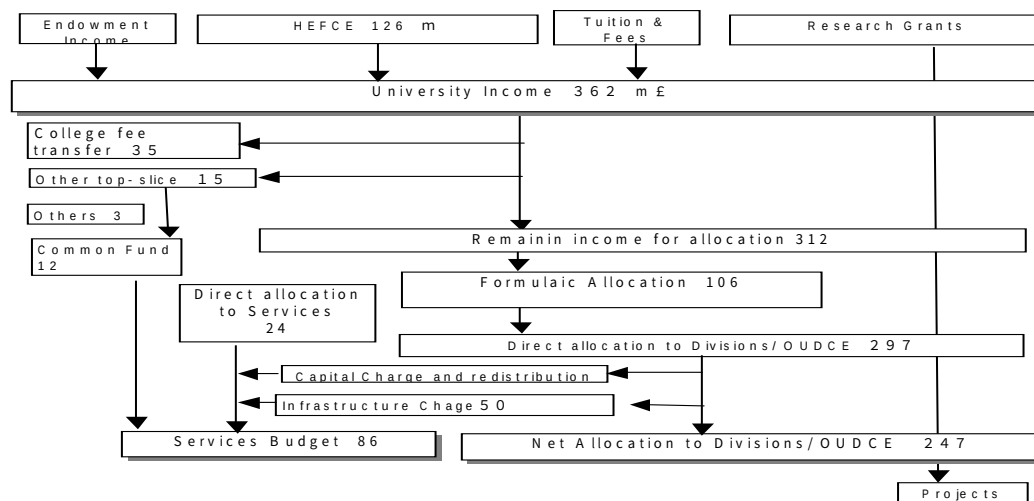
(2) Responsible body for internal allocation

The responsible body for internal allocation is the organization that decides the expenses for activities for the whole university, and determines policies on financial resource allocation to internal bodies such as departments and so on. Oxford has a Planning and Resource Allocation Committee placed directly under Council which, as its name implies, is responsible for determining policy on financial resource allocation within the university. This is the so-called RAM, or Resource Allocation Method (Figure 5). The University of Tokyo has established a Financial Planning Committee, but it is difficult to say whether it is the responsible body for internal allocation because such allocation is at present performed automatically.

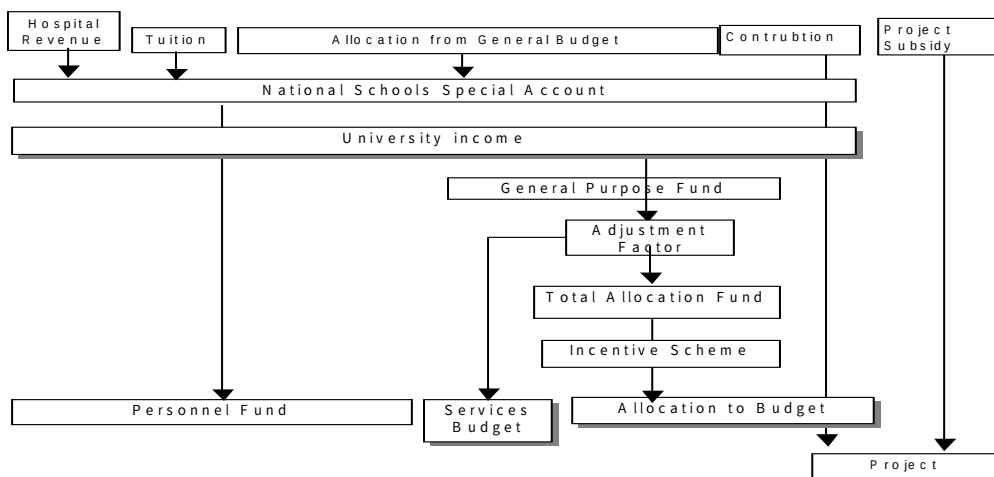
Based on such a responsible body for internal allocation, each university has, in addition to a budget distributed to its various internal bodies, what we can call central expenses to be spent on the whole university. In Oxford, 14% of the total university income (not including colleges) is withheld as a top slice (501,000 pounds in fiscal 2002-3). However, the major portion of this top slice comes from college fee replacement (348,000 pounds). As described earlier, government subsidies for college fees granted directly to colleges in Oxford were abolished, and the same amount shifted to the education grants and so on that the university receives from HEFCE. As a result, the university still receives an amount equivalent to the old college fees within education grants, which it handles as the top slice in its financial resources, so there has been no significant change in allocation to colleges. The University of Tokyo, meanwhile, withholds about 8% for central expenses.

Figure 5. Internal resource allocation

Oxford University



University of Tokyo



(3) Funding units

The responsible body for internal allocation is not necessarily involved in allocating resources to the extremities of the university structure. As a matter of fact, there are intermediate bodies that function as the basic funding units. That is to say, the responsible body for internal allocation only distributes resources to departments or funding units, and responsibility for actual distribution and spending within the university is borne by the funding units. (The head of a basic funding unit is called budget holder.) Previously in the UK, departments, with their focus on professional education, already had considerable power. In recent years, a number of them have been formed into bigger units that are the basic funding units responsible for allocation and spending. In Oxford, there are five bodies called divisions which are divided by academic field. The colleges of the University of Oxford used to have a high degree of financial independence, but now, due to the financial reasons described previously, their finances tend to be included in those of the university as a whole. As for the University of Tokyo, faculties and research institutes, twenty in number, constitute the basic funding unit.

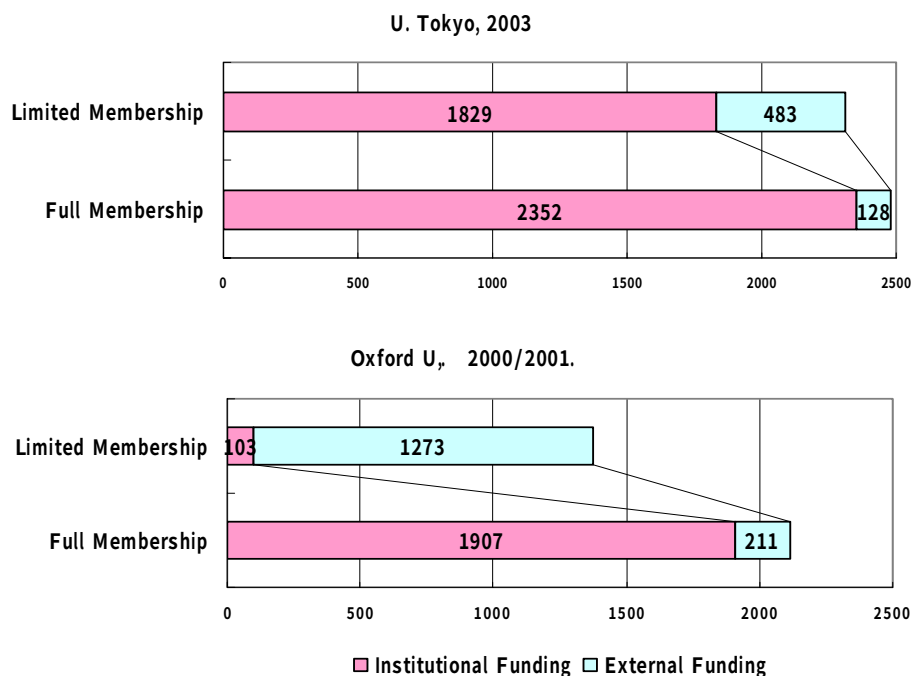
3. Organization

How are these differences in financial structure related with the make-up of the organization? We focus here on the employment status of academic and support staff.

Faculty Members

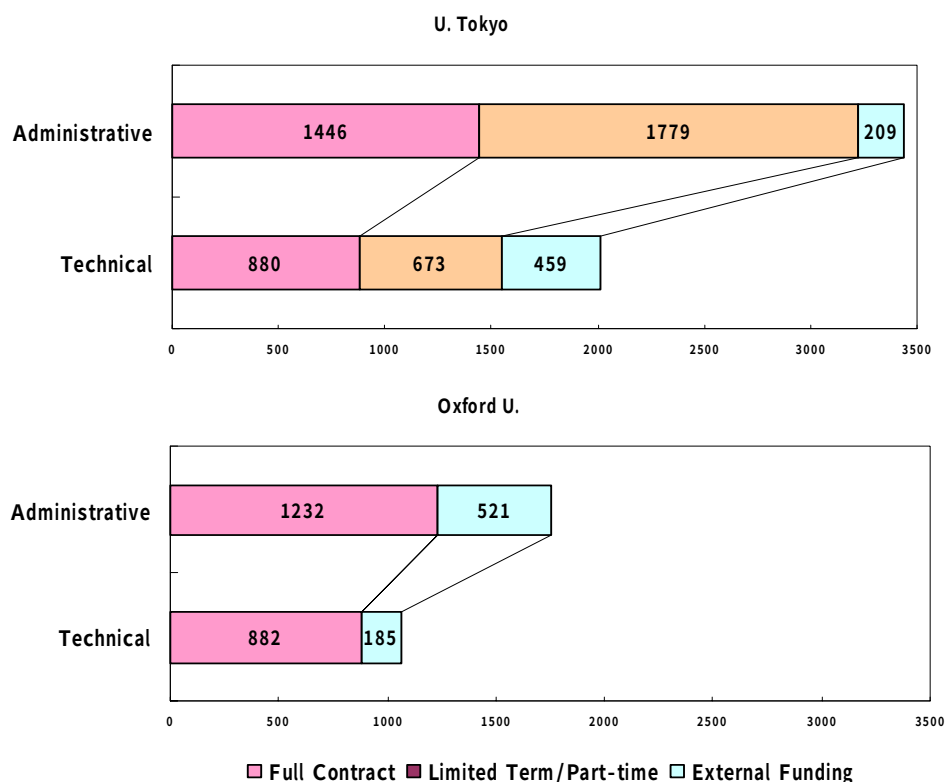
Teaching Staff

A rigorous comparison of teaching staff numbers is impossible due to the differences in the systems, but the following points can be used as indicators for now. First, looking at the number of teaching staff at the level of lecturer or higher (Figure 1-3), the University of Tokyo has 2,400, significantly more than the two UK universities because it has many attached research institutes. This is also a reflection of its higher ratio of permanent teaching staff. As for the total number of teaching/research staff, the Oxford has about 3,500, the most among the three universities, although not much more than the University of Tokyo.

Figure 6. Membership Status and Funding of Academic Staff

Administrative and Support Staff

3,700 or so people work for Oxford University. The numbers at Oxford might appear to be almost the same as the approximately 3,500 employees at the University of Tokyo. However, the figure for the University of Tokyo includes medical-related employees in its affiliated hospital. Not including such medical-related staff, the University of Tokyo in fact only employs 2,400 people, which is less than two-thirds of the total number of people working at the University of Oxford. In terms of the total student and teaching staff numbers, the University of Tokyo is the biggest among the three universities. However, it is also If we take a closer look at the differences among these three universities (as shown in Figure 1-1), it is very clear that the University of Oxford has a relatively smaller number of administration and clerical-related employees compared with the University of Tokyo. On the other hand, the above figure for the University of Tokyo includes mostly government civil servants, in other words officially-hired employees, while in fact there are many other different types of employees in the university. In particular, there are many administration-related employees hired depending on the administration expense budget who are not included in the total number of employees.

Figure 7. Number of Support Staff by Field and the Form of Contract/Funding

Conclusions

The discussion above demonstrated that there are significant differences in financial structure and organization between the University of Tokyo and Oxford University. It is indicative of the possible changes to be expected at the University of Tokyo after incorporation. Some of the salient points can be summarized as below.

First, the revenue sources will have to be diversified significantly. Obviously, the degree of diversification is largely dependent on the levels of government subsidy in the future. The creation of NUC was enacted under the assumption of stable, if not increasing, levels of funds given to NUC for a reasonable duration of time. In fact, in order for the construct of NUC scheme to function, the level of subsidy should remain the same for a mid-term period. There are, however, possibilities that this assumption may not hold in near future.

Second, the increasing gap between the financial needs and the government subsidy will have to be filled by increased revenue from other sources. One of the most significant sources is the competitive research funding provided by the government. British government shifted a significant proportion of institutional aids into research grants in the 1990s. In Japan, one of the significant moves rose from the Council for Comprehensive Policies on Science and Technology, a body under the Prime Minister's Office with the mandate to oversee investment on Science and Research from various branches of government. In 2004, it published a proposal to transfer a significant proportion of institutional subsidy, including the government subsidy to NUCs and subsidies to private institutions, to the fund for competition-based research projects. Underlying this new project is the idea that the present institutional aid is less efficient than direct aid to research projects under a system of competition. Even though this initiative did not materialize for FY 2005, it may gain some support in the future.

On the other hand, one has to be careful about the potential of private giving as a revenue source. Even though private giving comprises a large proportion of revenue for Oxford, a substantial proportion of the funds derived in fact from government sources. Moreover, the proportion is much smaller in other British universities. It does not imply that private giving will be unimportant; but it is dubious that it will compensate the increasing revenue gap to a significant degree. This raises caution against attempting a financial model after American institutions. They appear to benefit from private contributions to a greater extent, but it is made possible only in the unique historical context of the U.S. and tax regime.

Then the most realistic option will be raising tuition fees. The data used in this analysis showed similar and small proportion of tuition as a revenue source in both universities. This may change soon. The British government has recently proposed to allow the universities to increase tuition fees substantially. It is likely that many universities will raise tuition. In Japan, the Ministry of Finance has announced to withdraw an amount of government subsidy which is equivalent to the amount to be earned if the past trend of tuition increase continued. In other words, each national university corporation will be faced with reduced revenue if it did not raise tuition. Under these circumstances, most of the national universities increased the level of tuition. In both countries, the universities were given the freedom to decide tuition increased by themselves.

The third important point is the consequences of the shift in revenue structure on the organization of the university. The increased dependence on competitive funding created a large number of researchers with limited privileges as academic staff. Similar trend is already found at the University of Tokyo. This change will affect the climate of the academy and the behavior of the academics. The scheme for internal allocation of the resources will also have to change. This will also affect the organizational culture.

The discussion above indicates that the increased autonomy, which was the dream of

academics, will bring about a series of difficult and nasty questions to the universities. It will not be a dream world. In this world, each of the academics will be questioned on what they wished to achieve by being in the University.

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Presentation 14:

Income Structure of Private Universities in Korea

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Contents

- The role of private institutions in tertiary education
- The structure of operating income
- Tuition, endowments, and other income
- The level of income
- The relationship between income generation and the results of education
- Implications

Table 1. The Share of Private Institutions in Tertiary Education (2003)

(Unit: institutions, persons, %)

	Number of Institutions			Number of Students		
	Total(A)	Private(B)	B/A	Total(A)	Private(B)	B/A
Total	411	350	85.2	3,555,115	2,634,069	74.1
Junior College	162	147	90.7	900,568	861,821	95.7
University	221	175	79.2	2,377,629	1,579,322	66.4
Graduate School				276,918	192,926	69.7

3

Table 2. The Composition of Operating Income - Private Institutions for Tertiary Education

(unit: %)

	Tuition	Transfer & Endowment Income				Education-related Administrative Fee		Non-education Income		Total
		Transfer Income	Endowment Income	National subsidy	Sub-total	Entrance Exam.	Sub-total	Interest	Sub-total	
1996	69.2	n.a.	n.a.	n.a.	23.3	n.a.	2.1	n.a.	5.4	100
1997	69	n.a.	n.a.	n.a.	23	n.a.	2.1	n.a.	5.9	100
1998	68.9	n.a.	n.a.	n.a.	21.4	n.a.	2.3	n.a.	7.4	100
1999	68.4	9.6	9	4.8	23.4	1.2	2.1	5.5	6.1	100
2000	71	7.9	9.6	4.4	21.9	1.2	2.3	4.2	4.8	100
2001	72.9	6.8	8.1	5.3	20.2	1.3	2.3	3.8	4.6	100
2002	72.9	6.8	8.9	4.8	20.6	1.1	2.4	3.1	4.1	100

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The structure of operating income - All Institutions

- Tuition accounted for about 70%
 - The share of tuition tends to increase
 - From 69.2% in 1996 to 72.9% in 2002
- Transfer and endowments: 20.6% in 2002
 - The share went down from 23.4% in 1999
 - The share(s) of
 - transfer: 9.7%(1999)→ 6.8%(2003)
 - endowment and subsidy: stable

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Table 3. The Composition of Operating Income - Private Universities

(unit: %)

	Tuition	Transfer & Endowment Income				Education-related Administrative Fee		Non-education Income		Total
		Transfer Income	Endowment Income	National Subsidy	Sub-total	Entrance Exam.	Sub-total	Interest	Sub-total	
1996	69.2	n.a.	n.a.	n.a.	23.2	n.a.	2.1	n.a.	5.4	100
1997	68.5	n.a.	n.a.	n.a.	23.4	n.a.	2.1	n.a.	6	100
1998	68.6	n.a.	n.a.	n.a.	21.6	n.a.	2.4	n.a.	7.5	100
1999	68.1	9.7	9.2	4.7	23.6	1.2	2.2	5.6	6.2	100
2000	70.8	8	9.8	4.2	22	1.2	2.3	4.3	4.9	100
2001	69.6	8.5	10.4	4.4	23.3	1.2	2.4	3.8	4.8	100
2002	69.6	8.6	11.3	3.9	23.8	1.1	2.7	3	3.9	100

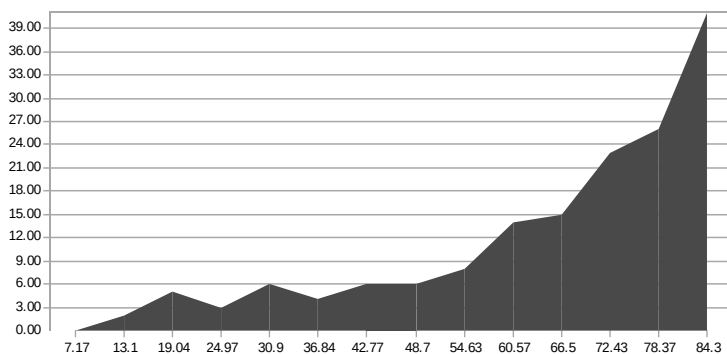
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The structure of operating income- Universities

- The share(s) of
 - tuition remained stable
 - transfer income: 9.7%('99) → 8.0%('02)
 - endowment: 9.2%('99) → 11.3%('02)
 - subsidy: 4.7%('99) → 3.9%('02)
 - Admin. Fee: 2.2%('99) → 2.7%('02)

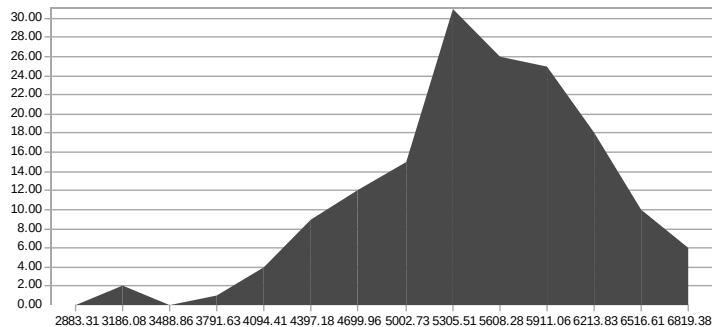
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Figure 1. The Share of Tuition in Operating Income- Private Universities



8

Figure 2. The Level of Tuition per Student - Private Universities



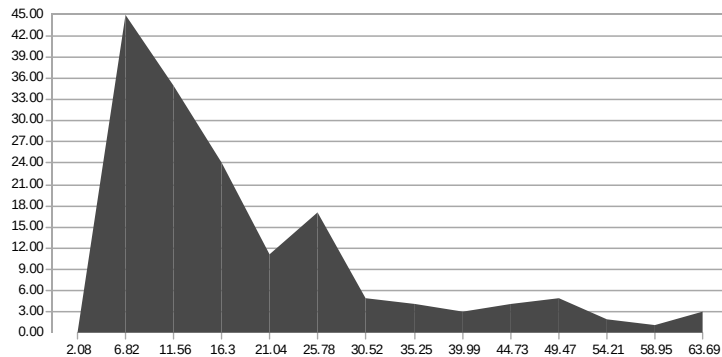
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Tuition

- Distribution of the share of tuition
 - In the range of 7.17 - 84.3%
 - A half of the institutions: 65 - 85%
 - A quarter of them: below 25%
- Distribution of the tuition/student
 - Average 5.34 mil. won, about $\frac{1}{2}$ of GDP per capita
 - It ranges from 2.88 mil to 6.82mil won
 - 50% of them are in the range of 4.5 mil - 5.5 mil won

10

Figure 3. The Share of Endowment Income - Private Universities



11

Endowment income

- The share of endowment income is less than 15% in most of the institutions.
- In 2001-2003, only in 9 institutions endowments accounted for more than 20% of operating income.
 - 3 of them are theological schools.

12

Table 4. Growth Rate of Operating Income - Private Universities

(unit: %)

	Operating Income	Tuition	Endowment Income	National Subsidy	Education-related Administrative Income	Non-Education Income
2001	16.5	10.21	32.93	23.27	14.91	97.94
2002	9.47	9.58	31.46	26.97	9.22	-17.93
2003	7.4	9.17	7.74	8.04	10.88	21.02

13

Summary- the structure of income

- The tertiary education in Korea depends heavily on tuition.
 - The share of tuition tends to increase.
- In universities,
 - The shares of endowment and the administrative fee went up.
 - The share of tuition remained stable.

14

Do private institutions generate enough income?

- To compare the level of expenditure on educational institutions with those of other countries
- To compare the operating income with the operating expense

15

The level of expenditure

- Preconceptions
 - Heavy dependency on tuition → low level of expenditure
 - There is also a factor to increase expenditure
 - Relatively large demand for capital expense
 - The share of capital expenditure in total expenditure was 27.8% in 2000.
 - The largest one in OECD countries.
 - OECD country mean was 11.7%.

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Table 5. Expenditure of Institutions for Tertiary Education(2000)

(unit: US Dollar, %)

	Expenditure per Student (A)	GDP per capita (B)	A/B
Korea(C)	6,118	15,901	38.48
OECD Country Mean(D)	9,587	23,631	40.57
C/D	63.81	67.29	99.91

Note: GDP per capita converted in US dollars using PPP(Purchasing Power Parity) estimated by OECD

Source: OECD, *Education at a Glance*, 2003

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The level of expenditure

- Expenditure per student was 6,118 dollars in 2000.
 - 63.8% of OECD country mean, 9,587 dollars
 - 22nd among 29 countries: Czech Rep. Poland, Portugal, Slovak Rep. Turkey spent less than in Korea

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The level of expenditure

- Comparing the level of expenditure with GDP,
 - Expenditure per student was 38.5% of GDP per capita,
 - Similar to the OECD country mean, 40.6%
 - 15th out of 29 countries.

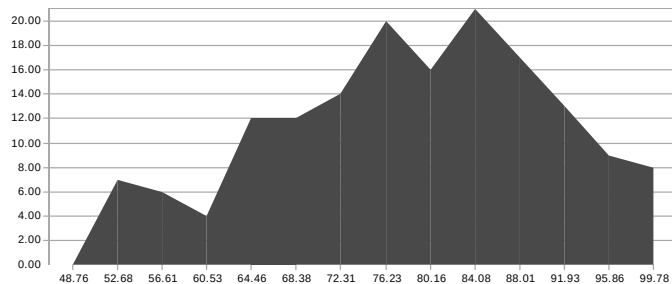
19

Operating Expense vs. Operating Income

- Question
 - Is operating income enough to cover operating expense?
- The index: OR
 - $OR = (\text{operating expense}) / (\text{operating income})$
 - If the ratio is greater than 100%, it means that the institution spends more than its income.

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Figure 4. The Ratio of Operating Expense to Operating Income -Private Universities in 2003



Top	First Quartile	Median	Last Quartile	Minimum	Mean	Standard Deviation
99.78%	68.38%	80.16%	88.01%	48.76%	76.54%	12.25%

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Operating Expense vs. Operating Income

- The OR of private universities was 76.54% on average in 2003.
 - The largest was 99.78%, the lowest was 48.76%.
 - A half of the institutions are in the range of 68.38-88.01%
 - Some of the institutions spent less than 60% of income for operating purpose
 - Those institutions seem to spend too much on capital expenditure.

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Summary – the level of income

- Considering the level of GDP, the level of expenditure on tertiary education is not low.
 - But not enough to improve the quality of education to the most advanced level in the world.
- Private institutions' operating income is enough to cover operating expense.
 - No institution with more expense than the income.

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Summary – the level of income

- How could they generate enough income?
 - The price was determined by the suppliers until recently.
- But the demand is decreasing sharply.
 - Demanders power becomes stronger.
 - Institutions will face difficulties in generating income.

24

Effects of income structure on employment of university graduates

- Model
 - Dependent variable: the employment & advancement ratio of university graduates
 - Independent variables:
 - total expenditures, transfers, endowments, national subsidy: per student
 - the year of establishment, number of students, location of institutions, student/faculty ratio, average grades of the entrance exam

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Table 6. Estimation Results for Employment & Advancement Ratio

	Model I	Model II	Model III
Constant	-0.335 -0.21	0.701 1.22	0.802 1.77
Transfer Income per Student	0.015 1.97 [*]	0.007 0.75	0.021 2.13 [*]
Endowment Income per Student	0.003 0.3	0.021 1.22	-0.015 -0.96
National Subsidy per Student	0.017 1.04	0.038 1.95 [*]	0.03 1.41
Operating Expense per Student	-0.005 -0.15	-0.045 -0.74	-0.004 -0.1
The Year of Establishment	0.001 0.83		
Number of Students	-0.022 -2.21 ^{***}	-0.03 -2.09 ^{**}	-0.023 -2.44 ^{***}
Dummy Indicating Outside	-0.018 -0.88	-0.03 -0.9	-0.023 -1.01
Students/Faculty Ratio	-0.039 -1.37	-0.014 -0.29	-0.035 -1.07
Average Score of SAT(Humanities and Social Sciences)		0.056 0.61	
Average Score of SAT(Natural Sciences and Engineering)			0.012 0.28
$\bar{R}^2$	0.408	0.137	0.452

Note: Natural log of independent variables except for 'the year of establishment' and
 * significance level 10%, ** 5%, *** 1%

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Effects of income structure on employment of university graduates

- Income structure affect the employment & advancement ratio
 - Institutions with more transfers from the foundations showed higher E&A ratio.
 - National subsidy also have a positive effect on E&A ratio.
- Number of students have a negative effect on E&A ratio.

27

Equation for NEER

- The new entrants enrollment ratio
 - $NEER(\%) = (\text{Number of new entrants enrolled for the school year}) / (\text{maximum limit of new entrants allowed})$
- The NEER is expected to respond to the structure of income, expense, the results of education, and other characteristics of institutions.

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Table 8. Estimation Results of the New Entrants Enrolment Ratio

	Model I	Model II	Model III	Model IV	Model V
Constant	-486.636 -1.8 [*]	112.011 0.3	-364.612 -0.99	-510.194 -1.95	-353.065 -1.33
Tuition per Student		-71.946 -6.11 ^{***}	-29.127 -4.16 ^{***}		-9.571 -1.03
Transfer Income per Student	0.017 0.01	-0.105 -0.06	0.598 0.33	0.043 0.04	0.266 0.23
Endowment per Student	-2.087 -0.95	5.174 2.09 ^{**}	-4.527 -1.46	-2.146 -0.98	-1.507 -0.73
National Subsidy per Student			-4.657 -1.11		-3.099 -1.28
Operating Expense per Student	-9.722 -1.21	-2.839 -0.4	6.874 0.67	-10.196 -1.29	2.884 0.35
The Year of Establishment	0.162 1.45	0.211 1.41	0.233 1.36	0.171 1.58	0.133 1.19
Number of Students	8.069 2.03 ^{**}	15.168 3.84 ^{***}	8.182 3.02 ^{***}	7.636 2.01 ^{**}	4.212 2.13 ^{**}
Dummy Indication Outside of Seoul Metropolitan Area	0.387 0.09	-18.171 -4.48 ^{**}	-19.339 -4.08 ^{***}	0.261 0.06	-4.864 -1.2
Students/Faculty Ratio	-6.905 -1.13	-1.031 -0.14	3.099 0.39	-7.338 -1.23	0.564 0.09
Average Score of SAT(Humanities and Social	60.864 4.75 ^{***}			62.176 5.06 ^{***}	40.983 3.69 ^{***}
Average Score of SAT(Natural Sciences and	3.648 0.4	9.55 1.44	15.444 1.91 [*]		
R ²	0.555	0.653	0.44	0.561	0.474

Note: Natural log of independent variables except for 'the year of establishment' and the dummy

* significance level 10%, ** 5%, *** 1%

29

Equation for NEER

- Institutions with larger tuition have less new entrants enrolled.
- Transfers, endowments, and national subsidy do not seem to have significant effects on NEER.
- Students prefer
 - larger institutions,
 - those in Seoul metropolitan area,
 - and those having students with higher scores in the entrance examination

30

Summary and Implications

- Heavy dependency on tuition has merits and demerits
 - Merits: market mechanism works.
 - Demanders control the price, quantity, and the quality.
 - Cost-efficient supply of education
 - Being inefficient if demand exceeded supply.

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Summary and Implications

- Demerits
 - The externality of education is disregarded
 - Insufficient supply in certain areas where private benefits are small but the external effects are large.
 - We cannot cope with the market failure appropriately.
 - uncertainty of results, imperfect capital market
 - It is difficult to correspond to the changes in social and economic environments.

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Summary and Implications

- In Korea, suppliers determined the price until recently,
- But demanders are getting more power in pricing of tertiary education.
- Therefore, it is becoming more difficult for institutions to raise income from tuition.
- They are trying to raise income in various other ways.
 - The share of endowment and other income went up recently.

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Summary and Implications

- In the future, institutions with good reputation may raise tuition, get more endowments and other income.
- Others will face difficulties in generating income enough to operate institutions.
- The government should look at the results of these changes seriously, especially their effects on the externality of education.

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Summary and Implications

- The method to generate income
 - Until recently, institutions in Korea can generate income relatively easily through tuition.
 - It becomes more difficult.
 - They are trying to find out other ways to generate income.
 - Ex., government support to students, endowment from the third party, administrative fees, etc.

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Discussion 7:

Department of Educational Human Resources Director
of the Department of Human Resources

Jonggab Lee

MOE&HRD, Korea

□ Current Policy Conditions

- The quantitative growth of higher education, and the competition for quality rates compared to a highly developed country
 - The higher education entrance percentage is 81.3%, and is therefore rated as being among the highest in the world
 - However, competition for quality, compared to advanced countries, is fairly low
- ※ At least 2 universities in Japan, Taiwan, Singapore, and China have entered into the world's top 100 Universities ('04, England, The Times)
- Lack of field compatibility in higher education
 - There is a shortage of actual needed manpower in the industrial field
- ※ Ranked 13 for 17,785 SCI dissertations, however, the average actual use of these dissertations is 0.22, which ranks as 34th place

- ※ Correspondence of field demand in university education: Corporation CEO evaluation
60%(Education Department Policy Research, '04)

□ Financial Information for Higher Education Compared to OECD Countries

(unit: US Dollar, %)

	Expenditure per Student (A)	GDP per capital) (B)	A/B
Korea(C)	6,118	15,901	38.48
OECD Country Mean(D)	9,587	23,631	40.57
C/D	63.81	67.29	99.91

Note: GDP per capita converted in US dollars using PPP (Purchasing Power Parity) estimated by OECD

Source: OECD, *Education at a Glance*, 2008

※ Data : OECD, Education at Glance, 2004, statistics based on the year 2001(average is the average of the country)

- Investment towards higher education is at a shortage compared to OECD countries
 - Compared to the average 1.0% of OECD, the educational costs from public financial resources towards higher education organizations which are in preparation for GDP is scarce, marking 0.4%
 - The educational cost per student in a higher education institution is an average of \$10,052 a year, 2/3 of the average for OECD which is \$6,618
- A continuous expansion of investments into higher education is needed for the expansion of competition in higher education

□ Structure of Financial Revenue for Private Universities

(unit: %)

	Tuition	Transfer & Endowment Income				Education-related Administrative Fee		Non-education Income		Total
		Transfer Income	Endowment Income	National subsidy	Sub-total	Entrance Exam.	Sub-total	Interest	Sub-total	
1996	69.2	na.	na.	na.	23.3	na.	2.1	na.	5.4	100
1997	69	na.	na.	na.	23	na.	2.1	na.	5.9	100
1998	68.9	na.	na.	na.	21.4	na.	2.3	na.	7.4	100
1999	68.4	9.6	9	4.8	23.4	1.2	2.1	5.5	6.1	100
2000	71	7.9	9.6	4.4	21.9	1.2	2.3	4.2	4.8	100
2001	72.9	6.8	8.1	5.3	20.2	1.3	2.3	3.8	4.6	100
2002	72.9	6.8	8.9	4.8	20.6	1.1	2.4	3.1	4.1	100

- The gravity placed on tuition in private universities is very high, while the subsidiaries from the National Treasury are very low

※ Ratio of National Treasury Subsidiaries in Private Universities

- There is a need for an increase in income through other means, as a result of the difficulty in increase in income through tuition

□ Plan for Expansion of Financial Resources for Higher Education

- A need for the amplification of support from the National Treasury for the uplifting of competition in higher education
- A change in the method of support to form a connection between the government's R&D budget and human power training

※ Only 14.3%(1.1 billion won) of the government's R&D investments('05, 7.8 billion won) invested in Universities

- The expansion of investments made by local governments towards the human power training which is in connection with regional industrial development
- ※ Provide incentives to cities like Seoul and Kyungi, which have financial surplus, so that they will invest in strategic universities which are located in reformation area clusters
- Expansion of investment in university facilities(dormitories, etc.) through allurement of private funds
 - Admission of an extra 35,000 students(percentage of admissions 11%→20%) in ‘05~’08 through the BTL method(Build–Transfer–Lease) in Public Universities
 - Inducement of private funds through various methods including BTL in Private Universities
- The plan for the promotion of the expansion of incentives provided on the terms of investment made by corporations by the acknowledgment of donations made by corporations to universities, which are in connection with man power training, to be, not a 50% pecuniary loss, but a 100% pecuniary loss
- ※ Taking into account the excessive amount of money spent on the training of new employees in big corporations, inducing the corporations to donate the money spent on training to universities so that students will be cultivated according to the corporation’s requirements
- ※ The Committee for the Strengthening of Competition recommending that a scholarship called “Invest in the Future” be made under the civil section for university majoring ins the Sciences, so that it will be tax deduction will be possible
- The Expansion of Financial Resources through labor of Universities

- Following the policy of the educational–industrial laws, Universities should take interest in and promote their institutions with regards to the foundation of the educational–industrial group and educational organization

※ Universities possess 75% of expert research manpower

□ Insurance of Financial Outsourcing

- There is a critical indication of the effectiveness of the government's University's Financial Support Operations

⇒ The construction of a post evaluation system to prevent moral hazards, and will secure financial outsourcing and make a collection of donations if in case a contract or result is not carried out

Presentation 15:

Income Related Loans for Higher Education:

Conceptual basis and implications

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Financing Reforms for Higher Education and Lifelong Learning
An International forum
Seoul, 6-8 April 2005

OUTLINE

- 1 The Shared International Challenge**
- 2 Costs and Benefits for Students**
- 3 Loans: The Need for Government Intervention**
- 4 The Problems with Government Guaranteed Bank Loans**
- 5 The Costs and Benefits of Income Related Loans**
- 6 An IRL Case Study: Australia's HECS 1989-2004**
- 7 The Critical Role of Collection**
- 8 Changes Internationally Towards IRL**
- 9 Conclusions**

1 The Shared International Challenge

- unmet demand for places
- inequitable access
- shortage of finances
- inefficient resource use

2 Costs and Benefits for Students

- . costs: foregone earnings (+ tuition)
- . benefits: additional earnings
- . summary: Figures 1 and 2
- . costs mean financial assistance is necessary
- . net benefits imply the case for a charge

Figure 1
Typical Female Age-Earnings Profiles: 2001

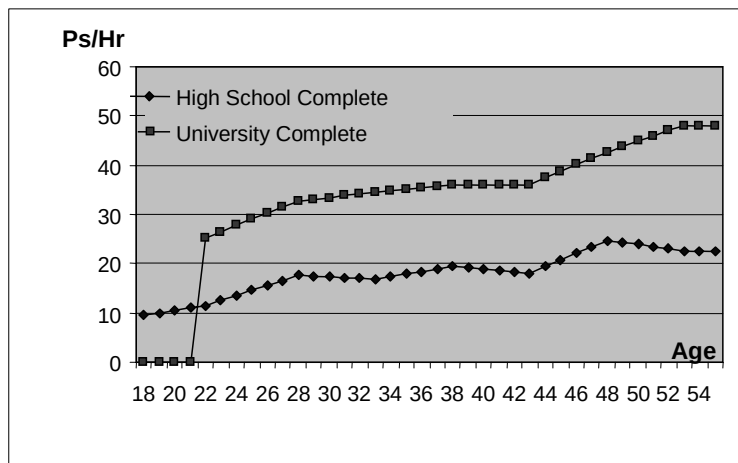
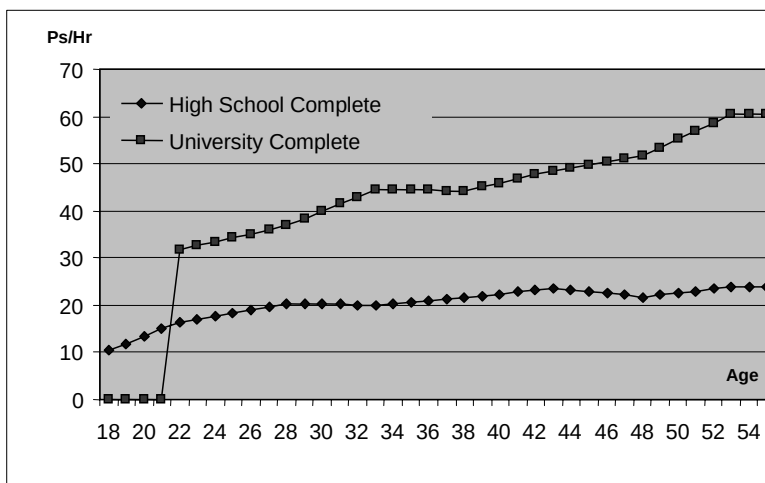


Figure 2
Typical Male Age-Earnings Profiles: 2001



2 Costs and Benefits for Students

- . costs: foregone earnings (+ tuition)
- . benefits: additional earnings
- . summary: Figures 1 and 2
- . costs mean financial assistance is required
- . an implication of the data: high private rates of return to HE
- . low tuition charges are socially inequitable

3 Loans: The Need for Government Intervention

- . human capital investment is very uncertain for lenders and for borrowers – completion
- . human capital investment is very uncertain for lenders and for borrowers – ability
- . human capital investment is very uncertain for lenders and for borrowers – the future labor market
- . uncertainty leads to default
- . the problem for banks: no saleable collateral
- . the problem for students: no access to loans
- . government intervention is required

4 The Problems with Government Guaranteed Bank Loans

- . the usual solution: government guaranteed commercial bank loans
- . benefit 1: solves the lender default problem
- . benefit 2: provides commercial finance simply
- . **BUT** cost 1 - defaults expensive for taxpayers
- . cost 2 - some hardship when repaying (no consumption smoothing)
- . cost 3 - some credit risk of default (no insurance)
- . cost 4 - collection can be administratively expensive
- . cost 5 - collection can be administratively expensive

5 The Costs and Benefits of Income Related Loans

- describing an unusual but growing solution: income related loans
- benefit 1: avoids repayment hardships (consumption smoothing, see below)
- benefit 2: fixes the student default problem (insurance)
- benefit 3: if universal no family sharing issues
- cost 1: some students avoid payment if don't participate
- cost 2: collection requirements can be complex

6 An IRL Case Study: Australia's HECS 1989-2004

- HECS charges described: \$3,000-\$6,000 pa, different by course. A typical debt is \$16,000.
- HECS in operation: recording the tuition debt with the Tax Office
- HECS collection parameters: Table 1
- HECS typical repayments: Figures 3 and 4

Table 1
HECS Income Thresholds and Repayment Rates: 2004/05

HECS repayment incomes in the range: (A\$) per year	Per cent of income applied to repayment
Below \$35,000	Nil
\$35,001–\$38,987	4
\$38,988–\$42,972	4.5
\$42,973–\$45,232	5
\$45,233–\$48,621	5.5
\$48,622–\$52,657	6
\$52,658–\$55,429	6.5
\$55,430–\$60,971	7
\$60,972–\$64,999	7.5
\$65,000 and above	8

Figure 3. Typical male repayments: Full time graduates

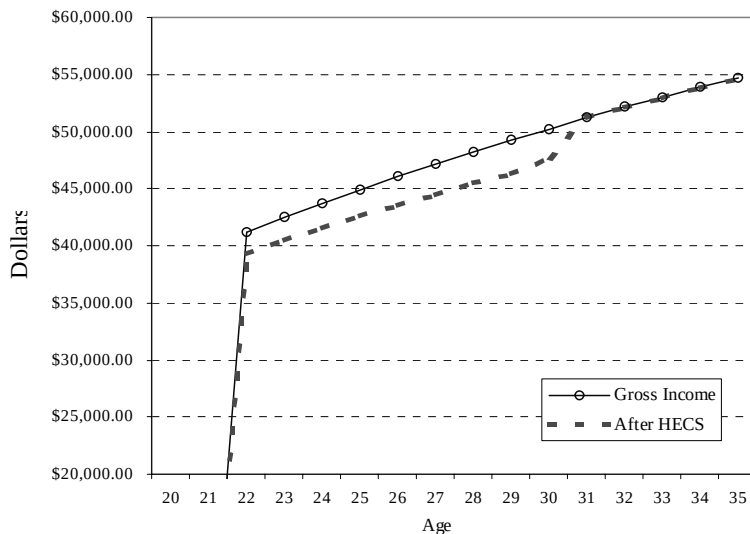


Figure 4. Typical female repayments: Full time graduates

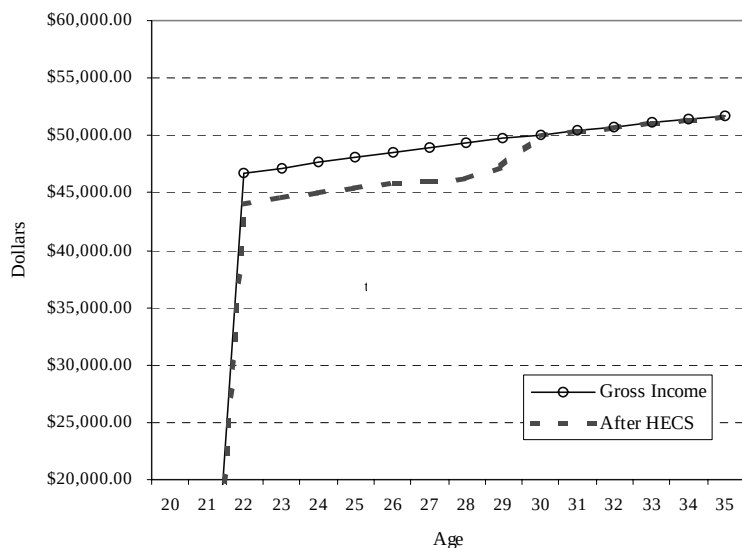
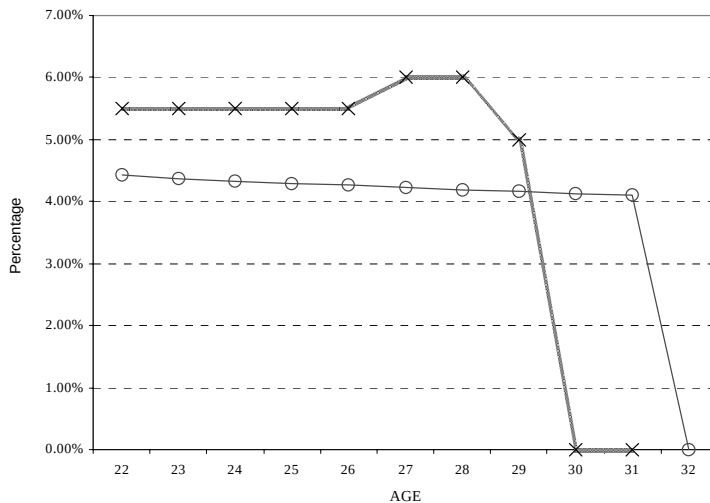


Figure 5
Bank loan repayments compared to HECS : Full time graduates



Illustrating the benefits of income contingent loans compared to bank loans: consumption smoothing

- . Compare bank loans of same amount with HECS
- . Assume graduate is unemployed from age 24 to 27
- . Assume graduate is in part-time work from 28 to 32
- . Showing consumption smoothing: Figures 6 and 7

Figure 6
Bank loan repayments compared to HECS :
Unemployed and Part time graduates

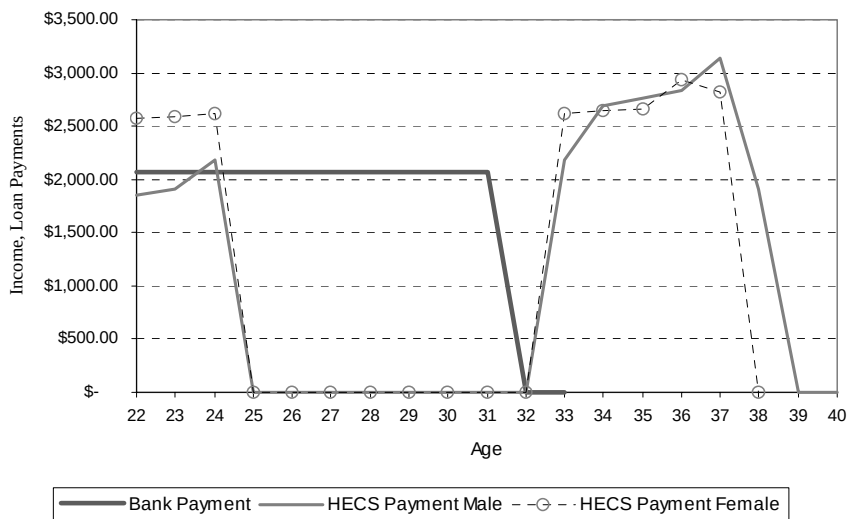
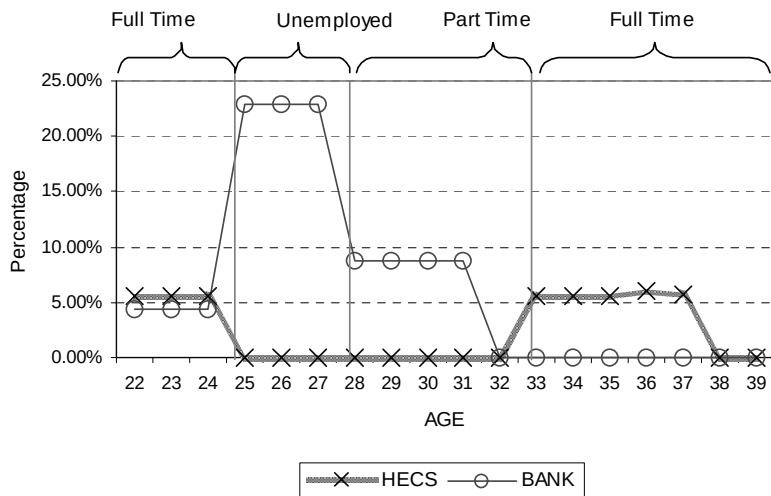
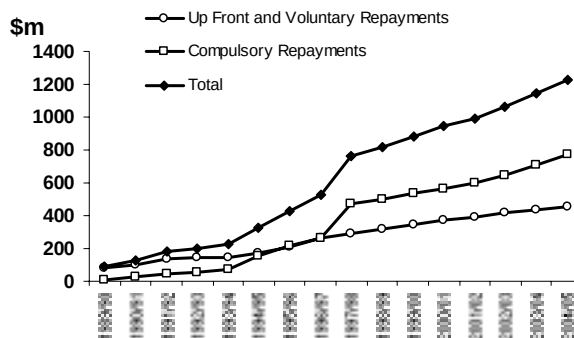


Figure 7
Bank loan repayments compared to HECS as a proportion of income:
(females, same as males)

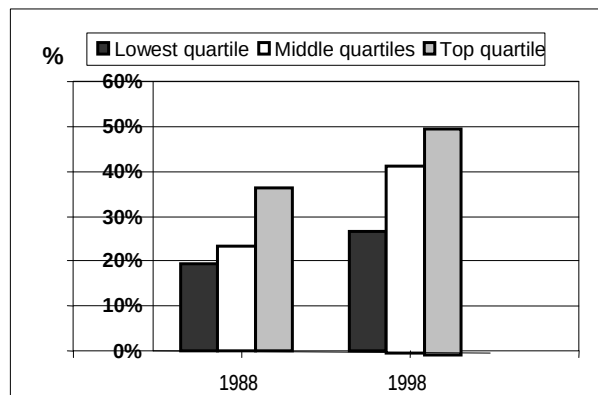


- **The effect of HECS on revenue:**

Figure 8**Actual and Projected HECS Revenue: 1989–2005 (A\$)**

- **The effect of HECS on domestic student numbers:**
an increase of 45-50 %

- **The effect of HECS on access:**

Figure 9**Proportion of 18 year olds Undertaking a Degree by Family Wealth**

Source: Chapman and Ryan (2002).

7 The Critical Role of Collection

Minimum Requirements in Summary:

- a reliable, preferably universal, system of unique identifiers;
- accurate record-keeping of the liabilities of students (while studying);
- a collection mechanism with a sound and, if possible, a computerised record-keeping system; and
- an efficient way of determining with accuracy, over time, the actual incomes of former students.

8 Changes Internationally Towards IRL

- . Yale (1970s) (failed)
- . Sweden (mid-1980s) (blunt form)
- . Australia (1989) (first Tax Office)
- . New Zealand (1991)
- . Chile (1994)
- . the US (1994)
- . South Africa (1996)
- . the UK (1997, expanded considerably in 2005)
- . Recommended, not (yet) adopted: Papua New Guinea, Malaysia, Rwanda, Ethiopia and Thailand.
- . Under consideration: Hungary, Germany and Mexico, maybe Colombia

9 Conclusions

- . the economically and socially advantaged derive large benefits from higher education
- . thus, charging low or no tuition is socially inequitable: lower government services, or higher taxes
- . tuition revenue can provide extra finances for higher education efficiency and growth (or assisting other areas of education)
- . IRL provide an equitable system: only pay when you are able
- . Thus IRL provides default insurance and consumption smoothing
- . IRL can be used for income support as well as tuition
- . many countries currently have adopted or are adopting IRL, but not all
- . **BUT:** the collection mechanism of IRL is critical to success and it can't be used in some countries

Thank you



Presentation 16:

Student Loans Schemes in Korea

***Financing Reforms for Higher Education
& Lifelong Learning***

6-8 April, 2005

**Anna Kim
(Ewha Womans University)**

Overview

**Policy background and objectives of
student loans schemes**

**Development of student loans schemes
and loan conditions**

Limits of the current loans schemes

Policy effect of an alternative loan scheme

Policy issues of student loans schemes

Student Loans Schemes in Korea

Policy background and objectives of student loans schemes

1) Policy background

- a. Social demand for higher education is tremendous.
(Transition ratio is almost 80%)
- b. Emphasis of public educational finance is on primary/secondary education.
- c. Private financing accounts for two thirds of the direct costs on higher education.
-Private institutions are over 70%.
-Tuition fee is the major resource of funding for higher education institutions (76.6%, cf. OECD average is 21.4%).
- d. Government's direct student support is only 6.9%.
(cf. OECD average is 16.4%)
- e. Student supports for college students are trivial.
-Grants for students are 13% of university income through tuition fees.
(Need-based grants is only 1%)
- f. Current economic difficulty and restructuring of Korea increases the burden of the poor to receive higher education.

Policy background and objectives of student loans schemes

2) Policy objectives

- a. Social objective: to expand educational opportunity of the poor
- b. Manpower needs: to meet specific manpower needs
for natural science & engineering students
- c. Parent/student assistance: to ease financial difficulties during study
- cf. Budgetary objectives to generate income in response to reduction in overall government expenditures and to reallocation of public educational budgets or to generate additional revenues to finance expansion of public and private university.

Development of student loans schemes and loan conditions

1) Loan size

- a. The total amount of the government subsidized student loans amounts to about 1.6 trillion won in 2004.
- b. The MOE&HRD loan is the largest, accounting for 50% of the total.
- c. The recipients are about 593,000(25% of 4-year university students). (cf. 45% in case of the U.S.)
- d. The average loan amount per student is around 2,760,000 won. (covers tuition fees)

Student Loans Schemes in Korea

Development of student loans schemes and loan conditions

<Table 1> Government supported student loans schemes in Korea (in 2004)

Classification	MOE&HRD	MOE&HRD	KRF	MOL	KTP	GEPC	KLWC
Implemented year	1975	2003	1999	1995	1976	1967	1987
Main target	Poor	Poor Engineering	Poor and competent	Industrial Employee	Teachers and their children	Government employees and their children	Industrial accident victims
Distribution & Collection	Commercial bank	Commercial bank	KRF	Commercial bank	Commercial bank	Commercial bank	Commercial bank
Funding source	Bank	Bank	KRF	Employment insurance fund	Government annuity fund	Government	Industrial accident compensation insurance fund
Size of new loan (billion won)	821.2	100.0	8.6	72.6	73.2	504.0	8.7
Number of Recipients (thousand person)	280.0	44.0	3.7	30.1	28.0	205.5	1.5

*MOE&HRD: Ministry of Education and Human Resources Development

*KRF: Korea Research Foundation *MOL: Ministry of Labor *KTP: Korea Teachers' Pension

*GEPC: Government Employees Pension Corporation *KLWC: Korea Labour Welfare Corporation

Development of student loans schemes and loan conditions

2) Repayment conditions

- a. Nominal interest rates vary from 0% to 5.75% (4.5% in 2004).
- b. The typical repayment period is 4 years.
- c. The MOE&HRD loan with the highest interest rate has the lowest hidden-grant, 19%.
- d. The average of the hidden-grant rate, weighting by loan size, is 33%. (similar to the rates of UK, USA, Norway and Quebec, reported in Albrecht and Ziderman, 1991).

Student Loans Schemes in Korea

Development of student loans schemes and loan conditions

<Table 2> Repayment conditions and government subsidy (in 2000)

Programme	MOE&HRD	KRF	GEPC	KTP	MOL	KLWC	Sum or Weighted average
Nominal interest rate (%)	5.75%	0.0%	0.0%	0.0%	1.0%	3.0%	2.2%
Real interest rate (%)	3.45%	-2.3%	-2.3%	-2.3%	-1.3%	0.7%	-0.1%
Maximum repayment period (year)	7	8	4	4	4	4	5.5
Government interest subsidy (% of loan)	19%	49%	45%	45%	41%	23%	33%

Student Loans Schemes in Korea

Development of student loans schemes and loan conditions

3) Financial burden for the government

- a. The level of cost recovery in Korea is comparable to that of developed countries and much lower than that of most developing countries.
- b. The interest subsidy is 0.033% of GDP and 0.13% of the government budget (in 2000).
(cf. The comparable figures for the USA are estimated to be 0.21% and 1.11% respectively.)
- c. It is feasible to increase the government budget for student loans.

Student Loans Schemes in Korea

Development of student loans schemes and loan conditions

<Table 3> Comparison of six loans schemes in recovery ratio (in 2000)

Programme	MOE&HRD	KRF	GEPC	KTP	MOL	KLWC	Sum or Weighted average
Default rate (% of standing loan)	10%	14%	10%	10%	10%	10%	10%
Real interest rate (%)	3.45%	-2.3%	-2.3%	-2.3%	-1.3%	0.7%	0.4%
Government interest subsidy (% of loan)	19%	49%	45%	45%	41%	23%	32.7%
Government interest subsidy + default (% of loan)	27%	56%	51%	51%	47%	30%	39.7%
Government interest subsidy+default+adm. (% of loan)	36%	67%	60%	60%	56%	37%	48.8%

Student Loans Schemes in Korea

Development of student loans schemes and loan conditions

<Table 4> Burden of student loans schemes to the government (in 2000)
(unit: billion won)

Programme	MOE&HRD	KRF	GEPC	KTP	MOL	KLWC	Sum
Government average current interest-subsidy cost (share to total burden)	44.9 (27%)	9.0 (5%)	92.2 (55%)	15.0 (9%)	7.7 (5%)	0.2 (0.1%)	169.0 (100%)
Government average current interest-subsidy + default cost	67.6	11.2	113.3	18.4	9.7	0.3	220.4
Government average current interest-subsidy + default + administration cost	78.3	12.1	123.5	20.1	10.6	0.3	244.9

Student Loans Schemes in Korea

Limits of the current loans schemes

1) Difficulties to expand loan schemes

- a. The interest-subsidized loans are feasible and sustainable, but loan coverage is limited in terms of the recipient number and lending amount per person.
- b. Government budget for interest subsidy is accumulatively increasing and irrecoverable.
- c. Loan coverage is decided by the government's budget, not by the demand for student loans.

Student Loans Schemes in Korea

Limits of the current loans schemes

2) Difficulties to mobilize private lender's participation

- a. Commercial banks should take the risk from repayment default.
- b. It is difficult to expect stable supply of long-term lending at socially desirable level.

3) Difficulties to provide diverse loan programs

- a. Short-term capital turnover of banks makes it difficult to diversify loan conditions(target, period, coverage), depending on students' needs.

Student Loans Schemes in Korea

Limits of the current loans schemes

<Table 5> University enrollment rates by income level

Income level	1998	1999	2000	2002	2003	1998-2003 average
1	63%	59%	75%	65%	73%	67%
2	66%	60%	78%	68%	66%	68%
3	51%	57%	70%	71%	73%	64%
4	55%	48%	72%	68%	75%	63%
5	43%	52%	69%	70%	79%	62%
6	43%	43%	85%	90%	69%	66%
7	60%	65%	86%	67%	77%	71%
8	53%	62%	88%	82%	78%	73%
9	66%	59%	86%	77%	79%	73%
10	68%	69%	82%	80%	81%	76%
9,10 level - 1,2 level	2%	4%	8%	12%	11%	7%

※ Differences in university enrollment rates between income levels of households have sharply increased since the late 1990s.

Policy effect of an alternative loan scheme

1) Credit guaranteed student loan securitization

- a. To expect to benefit more students
- b. To decrease burdens on the government
- c. To facilitate private investment in higher education through the government's guarantee for credit risk.
cf. Sallie Mae in the USA

Student Loans Schemes in Korea

Policy effect of alternative loan scheme

2) Policy effect of Credit Guarantee & Securitization on student loans

<Table 6> Comparison of policy effects of two loan schemes

Expenditures for student loans (for 20 years)	Interest Subsidy (A)	Credit Guarantee & Securitization (B)	B/A
Interest subsidized (a)	46,597	-	
Government Contribution (b)	-	5,788	
Loss Compensation (c)	-	14,614	
Guarantee Fees (d)	-	6,620	
Total expenditure (a+b+c-d)	46,597	13,782	30%
Net expenditure (a+c-d)	46,597	7,994	17%
Leverage	4.3	14.5	3.4



Policy issues of student loans schemes

1) Targeting

-Grant or loan for the poor?

2) Moral hazard of private lenders and individuals

-Government guarantee or interest subsidy?

3) Excessive expansion of higher education

-High unemployment rate of college graduates

4) Priorities of Public finance

-Investment in basic education or higher education?

Student Loans Schemes in Korea

Presentation 17:

Student Loans and Higher Education Opportunity in China

Li, Wenli (Graduate School of Education, Peking University)

2005 KEDI-World Bank International Forum:
Financing Reforms for Tertiary Education in the Knowledge Economy
Seoul, 6-8 April 2005

1

Clue for the presentation

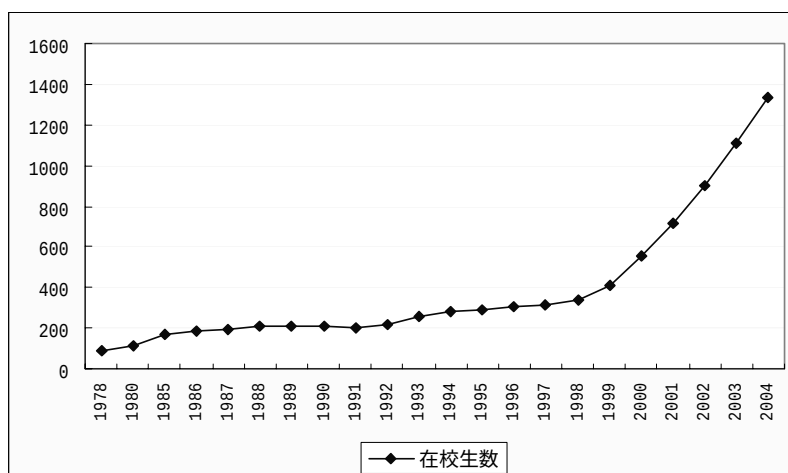
- Backgrounds: why does new policy of student loans scheme appear?
- New policy on student aid – student loans scheme – the government subsidizes the interest to promote the access opportunity of poor students.
- Student survey on access and aid
- Results and conclusion

2

Backgrounds

3

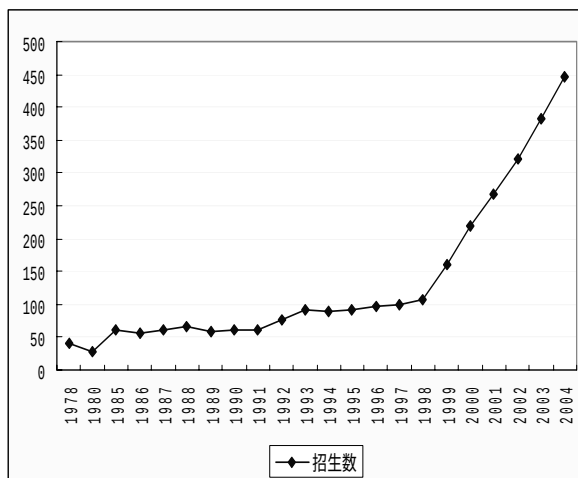
Figure1 Total Enrolment Number in Regular Higher Education Institutions (1978 – 2004, 10 thousand)



4

Figure2 Annual Enrolment Number in Regular Higher Education Institutions (1978 – 2004, 10 thousand)

- Higher Education has expanded quickly.
- From 1998 to 2004, the annual enrolment number was quadrupled.
- So does the total enrolment number in the tertiary education institutions.



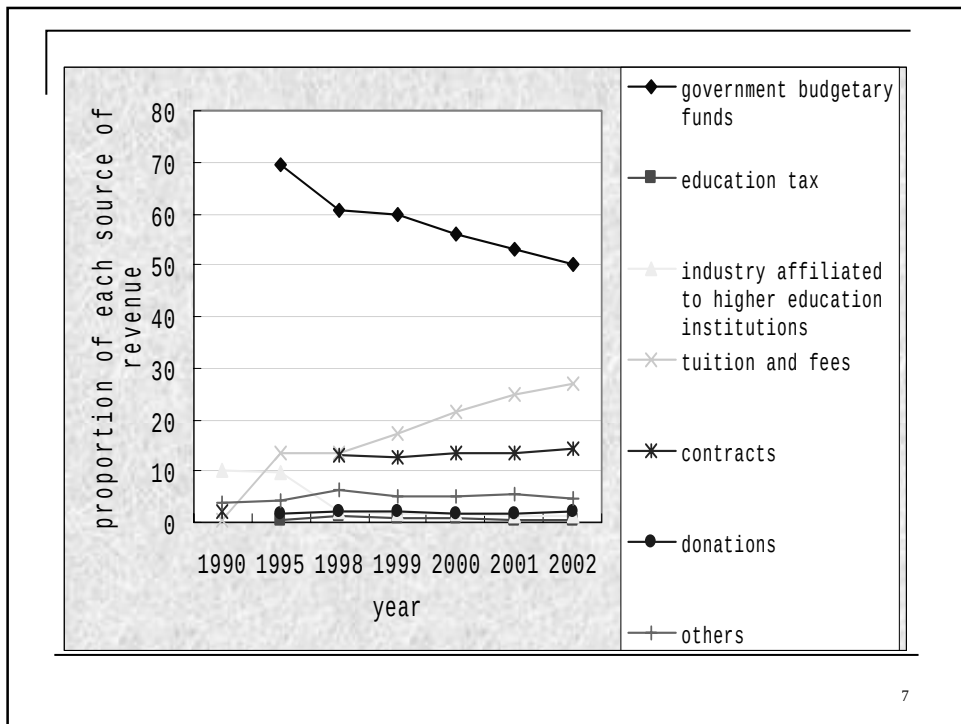
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Table1 The Revenue Structure of Regular Higher Education Institutions since 1990s

- The proportion of government budgetary funds has been declining.
- The proportion of tuition and fees are increasing from 0.5% of 1990 to 27% of 2002.

	1990 ^a	1995 ^a	1998 ^a	1999 ^a	2000 ^a	2001 ^a	2002 ^a
government budgetary funds ^a	69.6 ^a	60.5 ^a	60 ^a	55.8 ^a	52.9 ^a	50.1 ^a	
education tax ^a	0.3 ^a	1.4 ^a	1 ^a	0.9 ^a	0.6 ^a	0.6 ^a	
industry affiliated to higher education institutions ^a	10.2 ^a	9.7 ^a	2.1 ^a	1.8 ^a	1.8 ^a	1.4 ^a	1.1 ^a
tuition and fees ^a	0.5 ^a	13.6 ^a	13.4 ^a	17.2 ^a	21.3 ^a	24.7 ^a	27 ^a
contracts ^a	2.3 ^a	13.2 ^a	12.7 ^a	13.4 ^a	13.3 ^a	14.4 ^a	
donations ^a	1.6 ^a	2.1 ^a	2.3 ^a	1.7 ^a	1.5 ^a	1.9 ^a	
others ^a	3.7 ^a	4.3 ^a	6.4 ^a	5 ^a	5.1 ^a	5.5 ^a	4.8 ^a

6



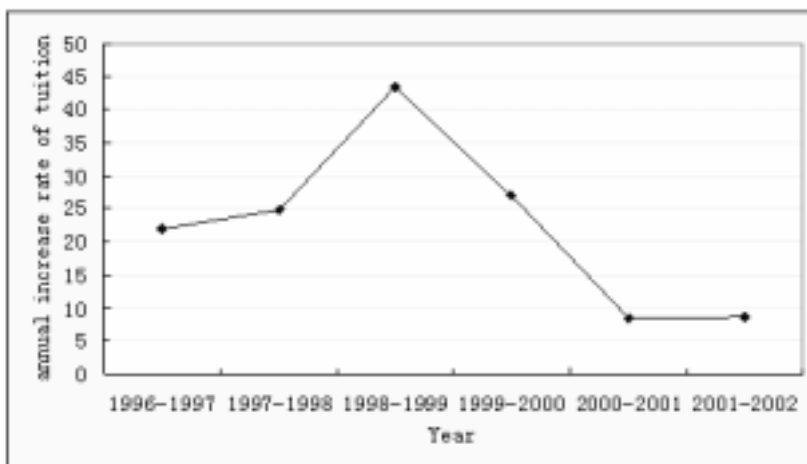
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- According to my investigation, in the following years, more governmental funding will go to the compulsory education to balance the expenditure disparity between different areas.
- Meantime, in the field of higher education financing, the key point for government funding is to construct world class universities. Such public financing as earmarked funds are allocating to high-level research universities.

8

The average tuition of undergraduate education is increasing.

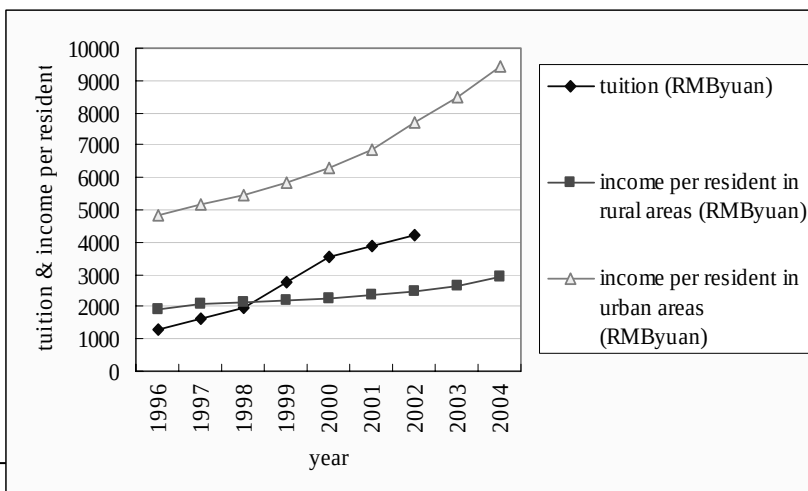
Figure 5 The annual increase rate of tuition (%)



9

The increase of tuition exceeds the increase of income per resident.

Figure6 the comparison of tuition to income per capita



10

Most of rural residents can not afford for their higher learning.

Figure 7 Percentage of tuition to income per resident since 1996 (%)

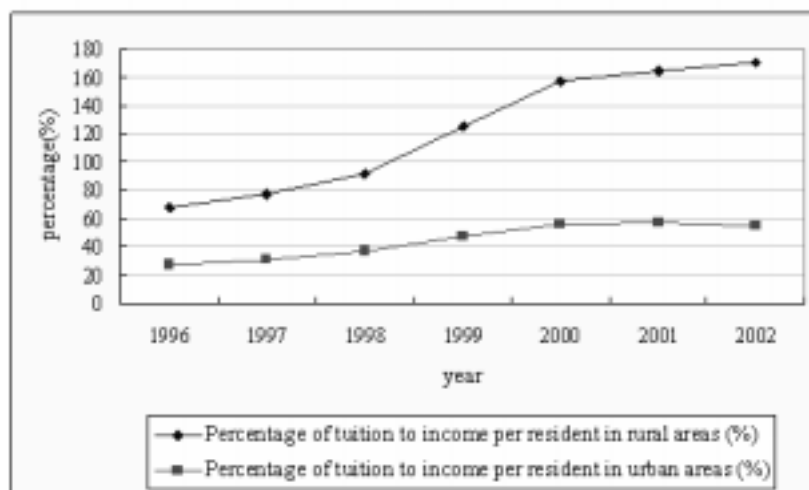


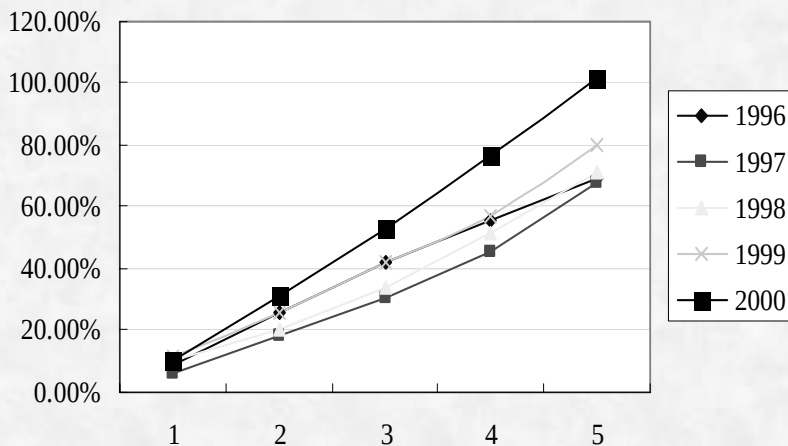
Table 2 The tuition and percentage of tuition to income per resident

	Tuition (yuan)	Income per resident in rural areas (yuan)	Income per resident in urban areas (yuan)	Percentage of tuition to income per resident in rural areas (%)	Percentage of tuition to income per resident in urban areas (%)
1996	1319	1926.1	4838.9	68.48	27.26
1997	1620	2090.1	5160.3	77.51	31.39
1998	1974	2162	5425.1	91.30	36.39
1999	2769	2210.3	5854	125.28	47.30
2000	3550	2253.4	6280	157.54	56.53
2001	3895	2366.4	6859.6	164.60	56.78
2002	4224	2475.6	7702.8	170.63	54.84

Source: Author's calculation.

The Lorenz Curve shows higher education opportunity is becoming more and more equal from 1996-2000.

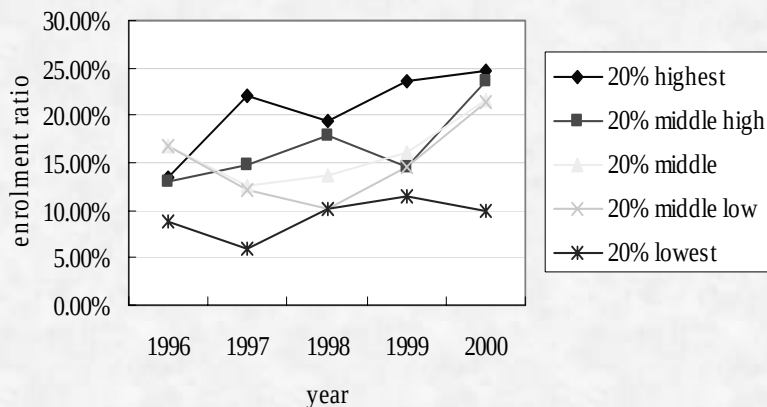
Figure8 The Lorenz Curve of higher education opportunity



13

The lowest income quintile is still in a significant disadvantageous status.

Figure9 The comparative advantage and disadvantage status of different income family children in higher education access



14

- The two figures of 8 and 9 did not show the access opportunity condition of students from rural areas.

15

A new government-subsidized student loans scheme has been implemented since 1999 to improve access opportunity further.

16

What is the government-subsidized student loans scheme?

- The principal is from commercial banking system and the government subsidized 50% interest.
- The government-subsidized student loans scheme is aiming at the following goals including opportunity equality.

17

The goals of the student loans scheme in China

1. Helping students recover their educational costs through the form of deferred user charge.
2. Helping needed students to enter higher education institutions to improve the access equality.
3. Helping merit students to enter institutions to maintain educational efficiency.
4. Higher education is a merit good and has positive externality to produce great social benefits. Student loans is a kind of means to finance higher education, which attracting both public financing and private investment.

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Developmental Stages of the Government-subsidized Student Loans Scheme

1. Startup stage: May – December of 1999, a pilot mortgage student loans scheme was implemented.
2. Adjustive stage: December of 1999 – June of 2000: mortgage student loans scheme was changed to a credit loans scheme.
3. Pervasive stage: June-December of 2000: the scheme expanded areas from eight cities to the whole country, extending objective students from only undergraduate students to including graduate students, canceling the responsibility of other persons such as parents and no guarantees at all since then.

19

4. Further pervasive stage: January of 2001 to August of 2003. The scheme was developing further. Such regulations were made to improve the progress of the loans scheme, as releasing banks' responsibility of loan defaults, exempting sales tax of interest income of student loans of banks.
5. Frustrate stage: August of 2003 to June of 2004. Banks made regulations of not distributing loans to institutions whose default rate is higher than 20%. The default rates in most of institutions are higher than 20%, so most of new enrolment students can not get any loans because of this regulation. The loans scheme met with a plight.

20

6. New Regulations since June 2004:

- ❑ Extending repayment length from 4 years to 6 years after graduation.
- ❑ The government subsidizes 100% interest while students are learning and individual student borrower should pay 100% interest after their graduation.
- ❑ Changing appointed banks to invite public bidding of all commercial banks.
- ❑ Establishing risk compensation system. The risk ceiling rate is 15%, and banks bid for the risk rate. After the risk rate was confirmed, the government and education institutions respectively would share 50% of the rate.
- ❑ Enhancing follow-up management to repayment, setting up student records system of borrowing and repaying, tracing the new address of graduate borrowers.

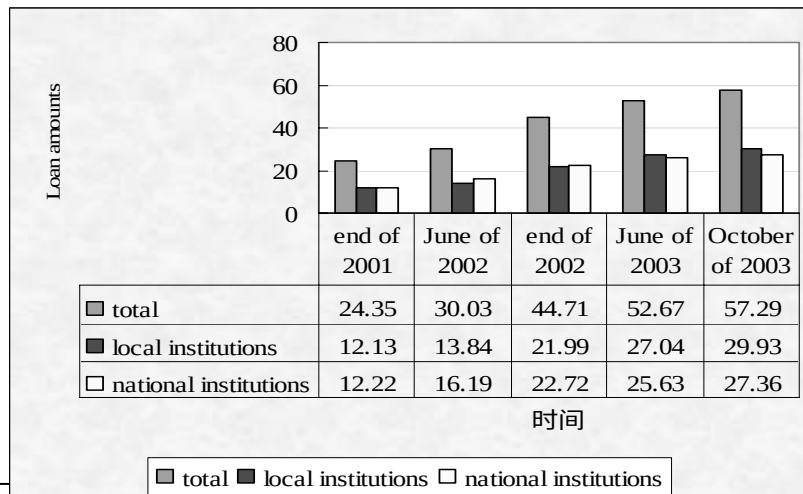
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7. New actions since February 2005:

- ❑ The government will help student borrowers who works at poor districts and state-needed disadvantaged industries after graduation pay all the loans and interest back to the banking system.
- ❑ The government will take out 10% of tuition to make a special funds to guarantee the risk share by the institutions.
- ❑ The government will give 150RMB yuan per student each month to 5% students from the lowest income families.

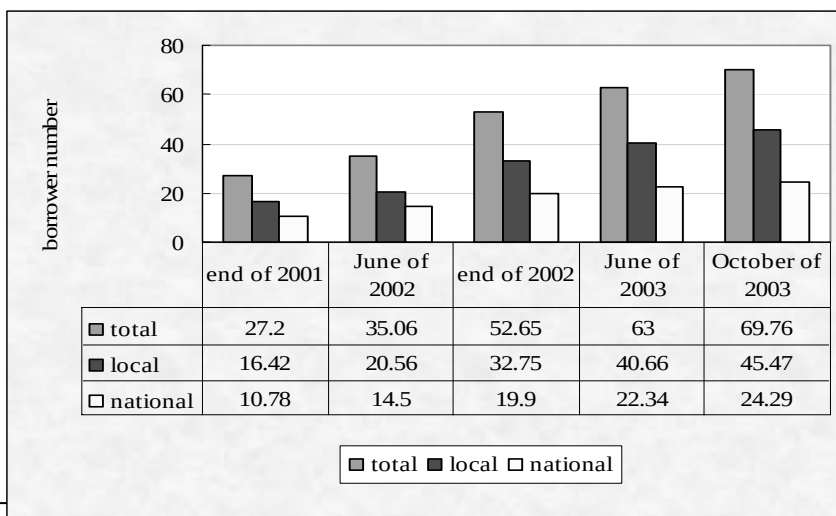
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Figure10 The change of total loan amount from 2001 to 2003 (100million RMB yuan)



23

Figure11 The student borrower number from 2001 to 2003



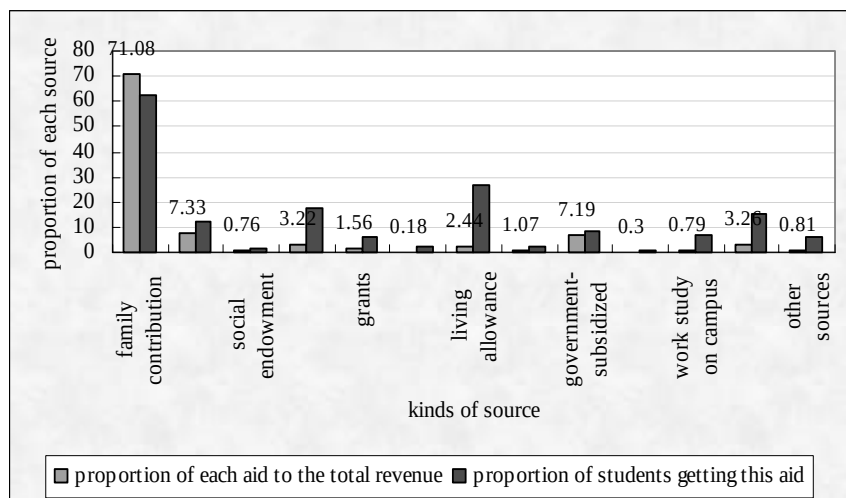
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A student survey conducted in 2004

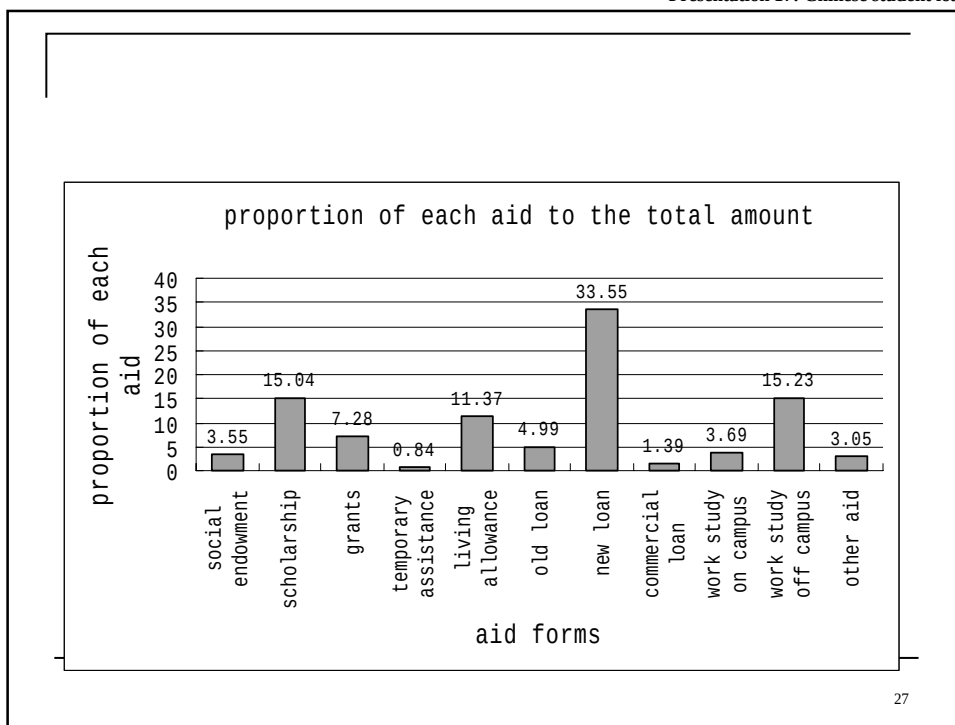
- Samples: 10 national higher education institutions, 8 local higher education institutions
- Cases: 15,450 valid cases (total 18,000 questionnaires had been distributed)

25

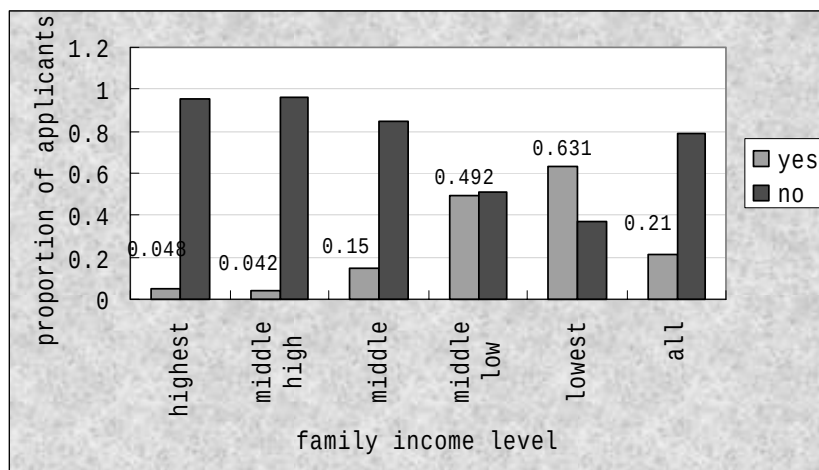
Family contribution is the mostly major source



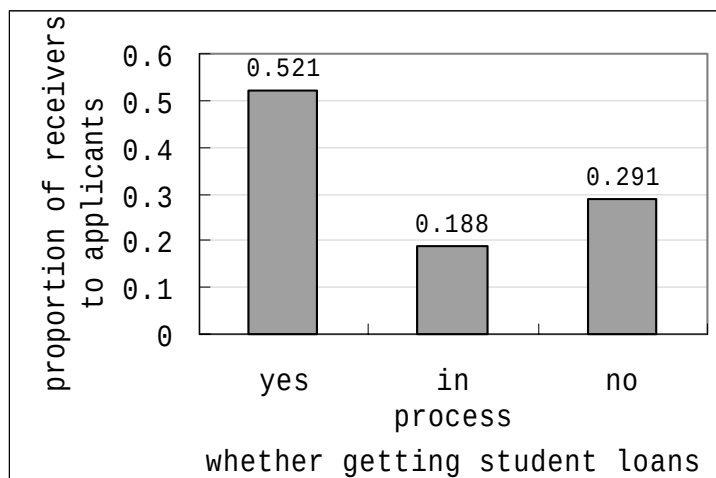
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Applicants from different income families

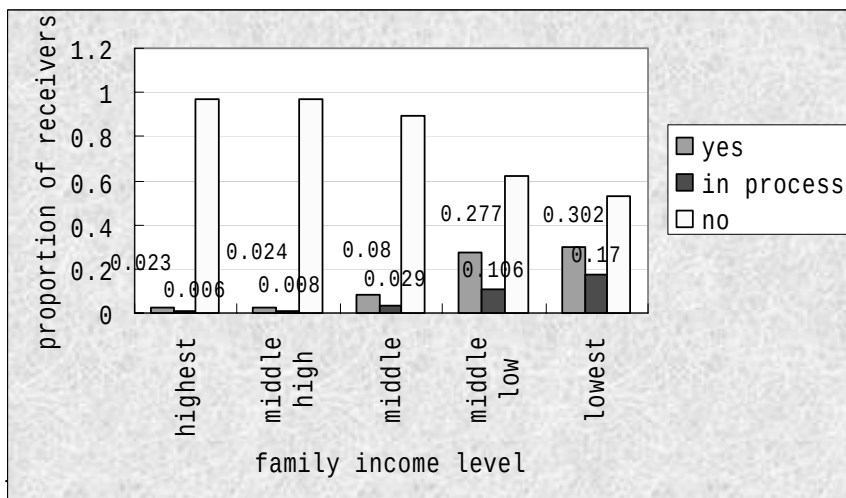


Target groups: receivers to applicants



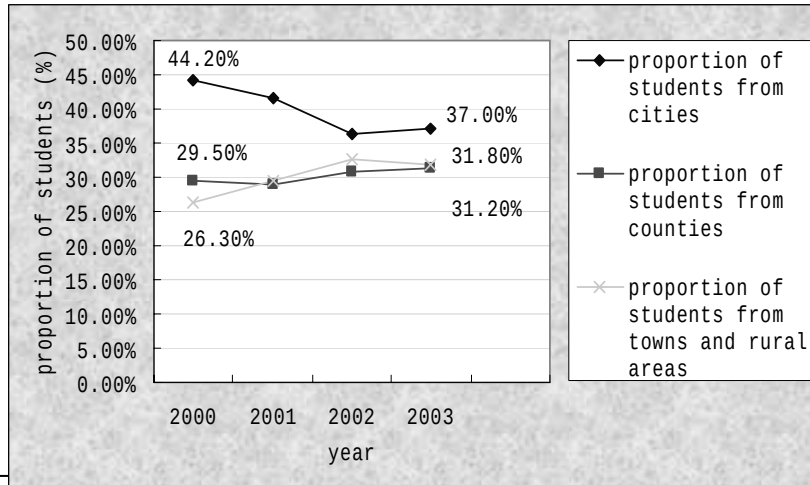
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Target groups: receivers from different income family



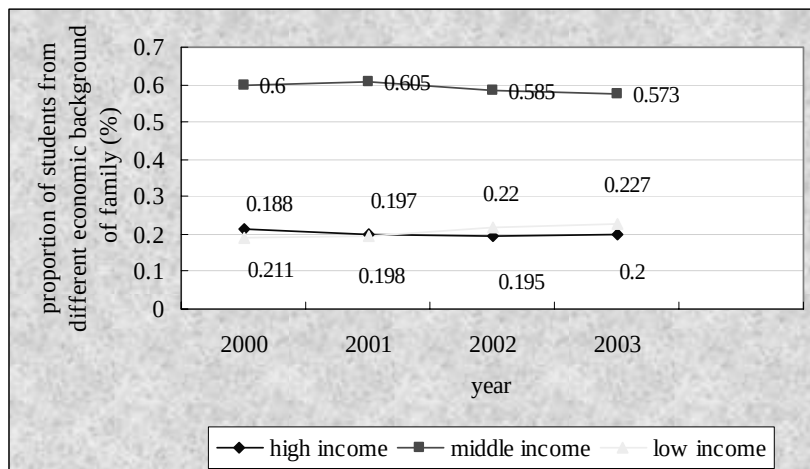
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The access equality has been improved: the proportion of students from county and rural areas increase annually.



31

The proportion of students from low income families is increasing annually.



32

What policy suggestions and ideas of our research appeared in the policy?

- Establishing risk sharing system of student loans scheme
- Further establishing individual credit system
- Extending the grace period and extending the repayment length
- Instituting special policies of waiving and exempting loan repayment, for example, waiving loan repayment of borrowers who works at poor areas and state-needed industry after graduation.

33

What could be done furthermore to improve the student loans in China?

- Change the repayment structure: the repayment should gradually increasing from the lowest proportion to higher and higher ones. The first repayment should be the lowest.
- Improve the multiple student aid system.
- Provide financial consultation to students in high schools and higher education institutions.

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Higher Education Financing

Discussion 8:

Requirements for a Successful Higher Education Financing System

2005. 4. 8

Jaekyung Yi, Ph.d
Professor of Accounting
Kookmin University

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Kookmin university

I. Purpose of Higher Education Financing

Higher Education Financing

Purpose from
Education Profession's
View Point

- Equal Opportunity to Higher Education
Regardless of Students' Economic
Background
- Supply of High Quality Human
Resource to Strategic Area Such as
Science and Engineering

- 1 -



I. Purpose of Higher Education Financing - 2

Higher Education Financing

Not
Mentioned
overtly

**Purpose from
Economic
Profession's View
Point**

➔

- ◆ **Transition to Credit Society by Settling Down Student Loan Program**
 - Loan by collateralizing future income
- ◆ **Maintaining Equilibrium of Supply for and Demand of High Quality Human Resources**
 - Encourage Intelligent Students and Discourage Unintelligent Students for College Education

- 2 -



II. Key Success Factors/Requirements

Higher Education Financing

**Efficient System
Selecting Right
Students**

➔

- ◆ **How to Prevent Adverse Selection ?**
 - If screening is no good, Adverse Selection will happen. (Salary workers are always in disadvantage compared to Self-employed.)
 - Role of Financial Aid Office in Univ.
- ◆ **How to Select Only Those Who Are Willing to Pay Back?**
 - Compilation and Analysis of Historical data of Universities/ Colleges/ Major are important.

- 3 -

 Kookmin university	II. Key Success Factors/Requirements - 2	<i>Higher Education Financing</i>
Reducing Loan Default Rate ➔ ● Education of Borrowers to prevent intentional or unintentional Default. - Will reduce Moral Hazard by borrowers. ● Auditing Due Diligence of Lending Banks - Example of the US FSA's reduction of default rate from 20% in 1990 to less than 5% in 2004 ● Cooperation among Government and other public sectors - Tax Authority, Credit Bureau, Real Estate Registration Office ● Deferment of Loan Payment		
- 4 -		

 Kookmin university	III. What to Do?	<i>Higher Education Financing</i>
❖ Projection of Governmental Budget Needed for Student Loans ✓ Target Default Rate ✓ Estimate education cost, interest rate, number of students for loans ✓ Projection of Budget based on simulation ❖ Build-up National Student Loan Data Base ✓ Build a NSLDB that will provide information to Colleges, Lenders and Guarantors ❖ Education of University Financial Aid Office ❖ Supervising Organization for Lenders' Due Diligence		
- 5 -		



Panel presentation 1:

The New Zealand Student Loan Scheme

KEDI-World Bank International Forum
Financing Reforms for Tertiary Education in the Knowledge Economy
Seoul, Republic of Korea
6-8 April 2005

Norman LaRocque
nlarocque@nzbr.org.nz

If a man empties his purse into his head, no man can take it away from him. An investment in knowledge always pays the best interest.

-- Benjamin Franklin

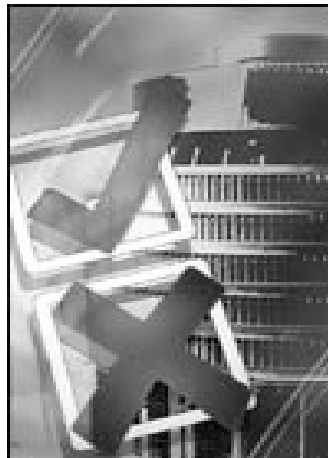
New Zealand Tertiary Education: Pre 1990

- Dual system - universities and polytechnics regulated differently:
 - Universities - considerable autonomy, UGC funded
 - Polytechnics – input funded, little autonomy.
- “Free” tertiary education - very low fees
- Full student full allowances
- University Grants Committee funding for universities/Input-based funding for polytechnics.
- Small private sector.
- Low tertiary participation.



Tertiary Education Reforms: 1990 - 1999

- General policy trends during 1990s:
 - Continued move from 'elite' to mass tertiary education
 - Central decision-making to institutional self-management
 - 'Free' education to cost-sharing
 - Student allowances to student loans
 - Generalised to targeted student aid
 - Regulation to deregulation.
- Changes mirrored those in other government sectors.



Tertiary Education Reforms: 1990s

- | | |
|---|--|
| ■ Introduction of tuition fees - flat, differentiated | ■ Proposed capital charge |
| ■ Income contingent student loan scheme | ■ Financial monitoring of institutions |
| ■ Targeted student allowances | ■ National Qualifications Framework |
| ■ Demand-driven, formula-based funding (EFTS, course costs) | ■ Subsidies for private providers - near equality between public and private by late 1990s |
| ■ Per-student subsidies cut from 100% to around 75% of “costs” | ■ “Unified” sector |
| ■ More than doubled number of EFTS in system - financed by subsidy cuts | ■ Institutional autonomy – fee setting, staffing, operations, revenue generation |

Tertiary Education Reforms: 2000 - Present

- Some backtracking in policy reforms since late 1999:
 - increasing generosity of student loan scheme/increased eligibility for student allowances
 - Increased per-student subsidies to tertiary education
 - Reductions in per-student subsidies to private institutions
 - Centralisation of some funding decisions
 - Favouring public over private institutions
 - Tuition fee controls.
- Despite changes since late 1999, much of the 1990s policy architecture remains in place – fees, loans, targeting, subsidies to private institutions, although changes – in some cases significant, in others less so.
- Other changes as well since 2000:
 - Establishment of Tertiary Education Commission – institutional profiles, ‘steering’
 - Introduction of Performance Based Research Funding
 - More information on labour market
 - Increased focus on industry training.

Student Loan Schemes

Rationale

- Various rationales for government intervention in tertiary education – externalities, agency costs, capital market imperfections and equity.
- Student loans generally justified on grounds that capital market imperfections mean that the private market will provide less than the 'right' amount of lending to students to finance investment in tertiary education. Hence, under-investment in tertiary education.
- Capital market imperfections may arise for two reasons:
 - investments in people's skills and knowledge cannot be used as security in the same way as physical assets; and
 - difficulties in judging the likely success and future income of at least some students.
- Improve equity of access to tertiary education a second key rationale for student loans.
- Student loans are a financing mechanism, not a mechanism to deliver subsidies.

Student Loans in International Context

- Student loans used in wide range of developed and developing countries:
 - New Zealand, Australia, Canada, United States, UK, Netherlands, Sweden
 - Hungary, Ghana, The Philippines, China.
- Two types of student loan schemes in operation around the world:
 - Mortgage-type loan schemes. Loan is for a defined period, with a fixed schedule of repayments. Repayments unrelated to individual's income.
 - Income-contingent loan schemes. Repayment amount is linked to borrower's income. Hence, loan repayment period varies with income and size of loan.
- Student-loan scheme designs may vary in a number of other ways, including:
 - Eligibility criteria
 - Loan entitlements
 - Interest rate setting mechanisms
 - Repayment rates.
- Student loan schemes can operate nationwide or be institution-based.

International Example: The Higher Education Contribution Scheme in Australia

- Introduced in 1989.
- Key elements of HECS:
 - Tuition fee/student loan scheme combined
 - Students can borrow only for tuition fees
 - Students can pay discounted fees up front or defer payment until after graduation
 - Fees vary with type of course - \$A3,521 to \$A5870
 - Income contingent repayments through the tax system
 - Repayments contingent on income
 - Repayment rate varies from 3% to 6%
 - No explicit interest rate charged – but implicit rate
 - Applies only to higher education institutions (not TAFEs – training institutes).
- Full fee paying domestic students allowed.
- \$A1.8 billion in HECS liabilities.

International Example: The Student Loan Scheme in Ghana

- Ghana has had a student loan scheme since the early 1970s.
- Key elements of existing scheme (2000):
 - open to full time students in public institutions
 - institutions must be “approved” for their students to have access to student loans
 - students can borrow up to Cedis 1 million per year to cover expenses such as boarding, books, etc
 - interest rate of 10% (30 pct points below Treasury Bill rates); and
 - repayments made after graduation through SSNIT (national insurance scheme).
- 47,000 borrowers.
- 1% repayment rate.

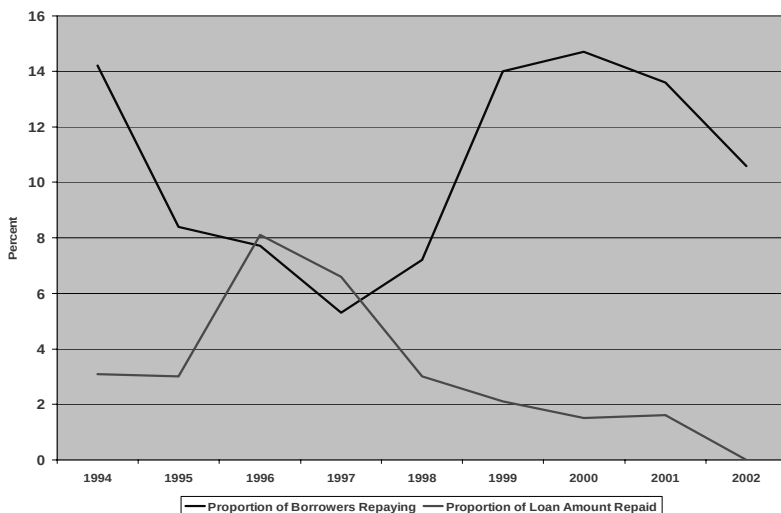
International Example: Study Now Pay Later Scheme in the Philippines

- Introduced 1970s.
- Key elements:
 - Loans cover tuition fees and other charges for students studying at the higher education level
 - Public and private students are eligible
 - Loans must be repaid two years after finding employment
 - Interest rate can't exceed 6%.
- P26 million disbursed to 2000 recipients in 2000/01.
- 2.4% repayment rate over 1988/89-1993/94 period. Variation in repayments (53% from mid-1970s to mid-1980s when operated by Government Financial Institutions).

International Example: Mongolian Education and Training Fund

- Introduced early 1990s.
- Key elements:
 - Four types of assistance available: tuition loans, tuition grants, tuition scholarships and state tuition financing
 - Mix of assistance types: repayable and non-repayable assistance, targeted and non-targeted, tuition only and tuition/living costs
 - Repayment requirements vary with type of assistance – work in lieu, 5 years or 10 years
 - 6 year interest grace period, then interest set at .5% above commercial bank rate.
- MNT11.8 million in loans and 40,000 recipients in 2004 (around 40% of students)
- 9.7% of borrowers repaying and 2% of loan amount repaid (1993-2002).

Repayment Rates, Mongolian Education and Training Fund, 1994-2002

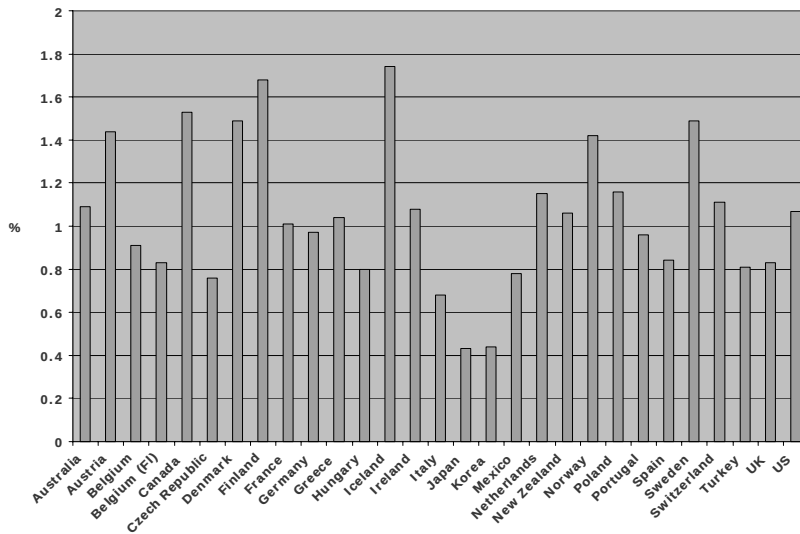


The New Zealand Student Loan Scheme: Description

Context

-
- Taxpayers provide a range of tertiary assistance – subsidies, loan, allowances, other spending.
 - In 2004/05, tertiary spending = \$3 billion – over 1/3rd of education budget.
 - Taxpayer spending on tuition subsidies, loans and allowances = \$11,000+ in 2003/04.
 - Government pays 70%+ of direct costs of tertiary education.
 - Tertiary subsidies higher than other levels of education (5 X ECE and 2.3 X schools).
 - Tertiary spending in New Zealand = approximately OECD average.

Tertiary Spending relative to GDP, OECD, 1998

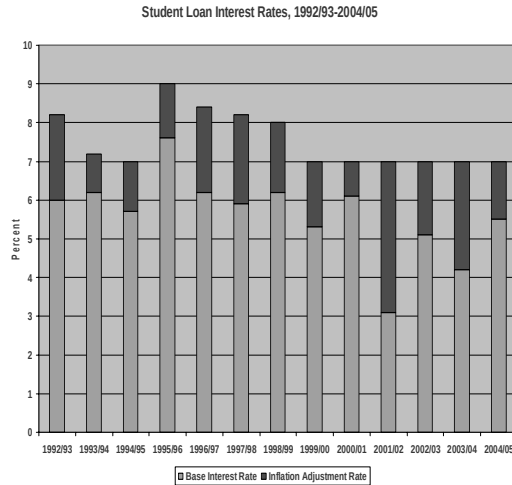


Key Features of Student Loan Scheme

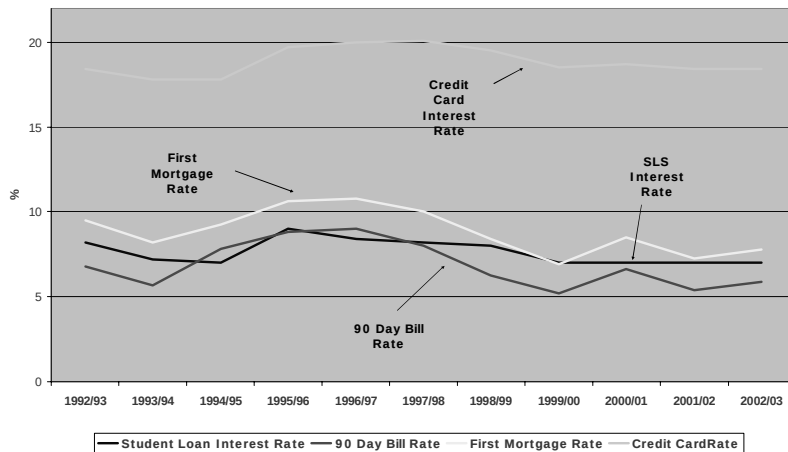
- Introduced in 1992 by the National Government - followed the introduction of flat tuition fees in 1990 and accompanied the deregulation of tuition fees in 1992.
- Key part of New Zealand's student aid system, which also includes income-targeted grants.
- Loans are direct from government – no private sector intermediation.
- 'Open' eligibility – not means-tested, no time limit, no link to academic performance.
- Comprehensive assistance – students can borrow to cover:
 - Tuition (full amount of fees for students in public institutions/maximum allowable fee level for students at private institutions)
 - Living costs (\$150 per week)
 - Course-related costs (\$1,000 per year)
 - Administration fee (\$50)
 - Student association fees.
- Loans available to students at public and private institutions.

The New Zealand Student Loan Scheme: Interest Rates

- Interest rate made up of 'base' rate and 'inflation adjustment' rate.
- Current 'posted' interest rate is 7%, but the effective rate is 3.5% when interest write-offs are taken into account.
- In general, student loan interest rates have been at or above the government borrowing rate and below mortgage rates/rates for unsecured borrowing.

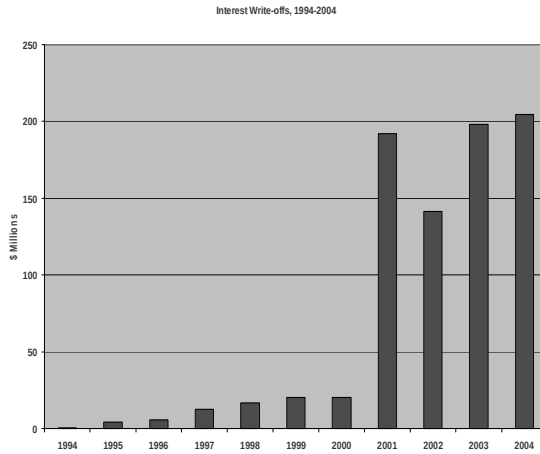


Student Loan Interest Rate Versus Comparative Interest Rates, 1992/93-2002/03

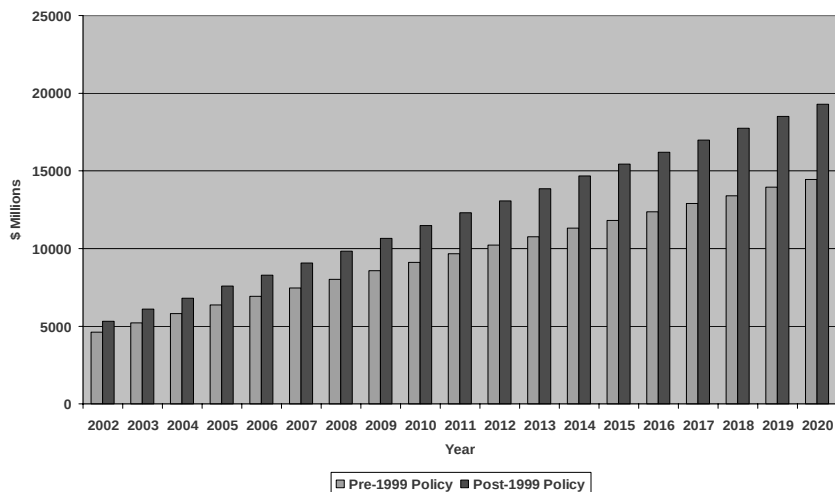


Annual Value of Student Loan Interest Write-offs, 1994-2004

- Interest write-offs:
 - Full interest write-off for students with incomes below \$26,140 in 2003/04
 - Partial write-off of interest for graduates with low incomes after graduation
 - Base interest reduction – 50% of payment credited to principal.
- Full write-off of loan for bankrupts, those who die with an outstanding loan balance and small balances.
- Write-off of interest while studying forecast to add 33% to outstanding debt and double scheme cost.

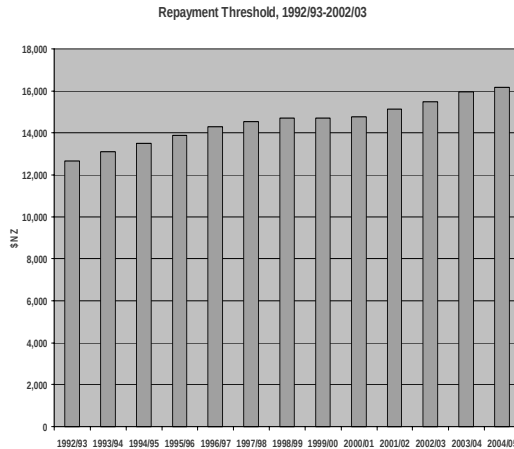


Student Loan Scheme Debt Outstanding, Pre and Post 1999 Policy

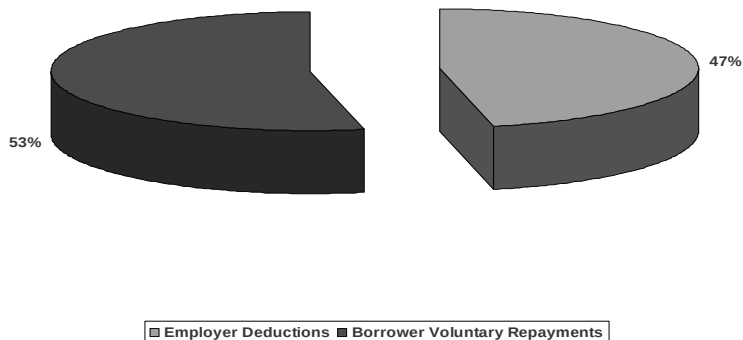


The New Zealand Student Loan Scheme: Repayments

- Graduates repay 10 cents on every dollar earned above the repayment threshold (\$16,172 in 2004/05).
- Repayments made through tax system. Voluntary repayments can be made to tax department.
- No incentives to repay early.
- 50 percent of borrower's repayment in any given year is credited to principal.
- Non-resident borrowers must negotiate repayment schedule with IRD before leaving country.



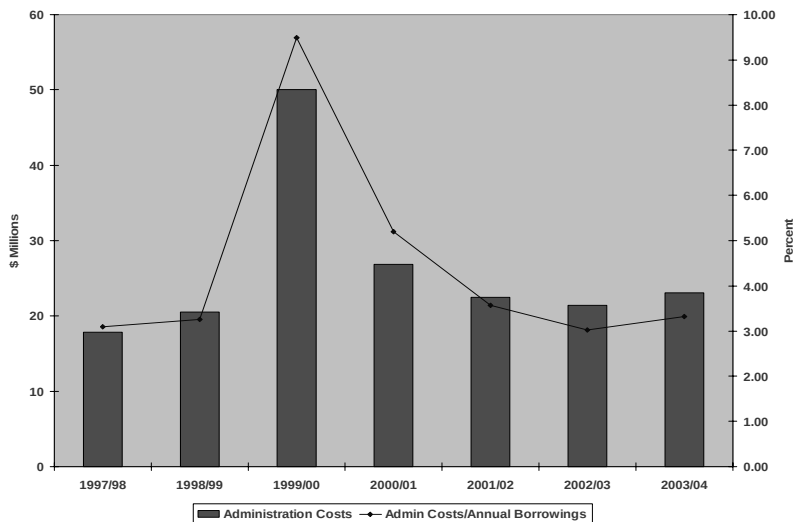
% of Repayments Via Employer Deductions and Borrower Voluntary Repayments, 1993-2004



The New Zealand Student Loan Scheme: Administration

- Administrative responsibility for the student loan scheme:
 - The Ministry of Education is responsible for policy development with respect to the scheme.
 - The Ministry of Social Development is responsible for loan advances.
 - The Inland Revenue Department is responsible for collecting repayments.
- Administrative costs of \$23.1 million in 2003/04. Equal to 3.3% of annual debt transferred to IRD.
- Small administrative fee is charged to students. Covers about one-third of total administrative costs.

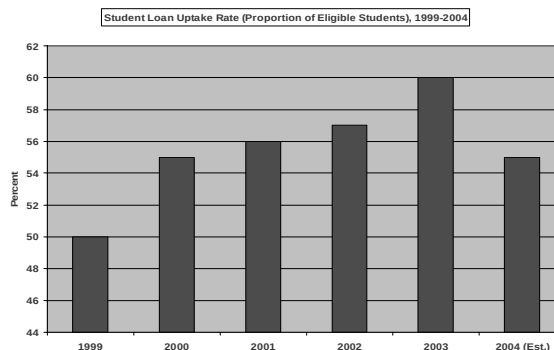
Student Loan Administration Costs and Administrative Efficiency, 1997/98-2003/04



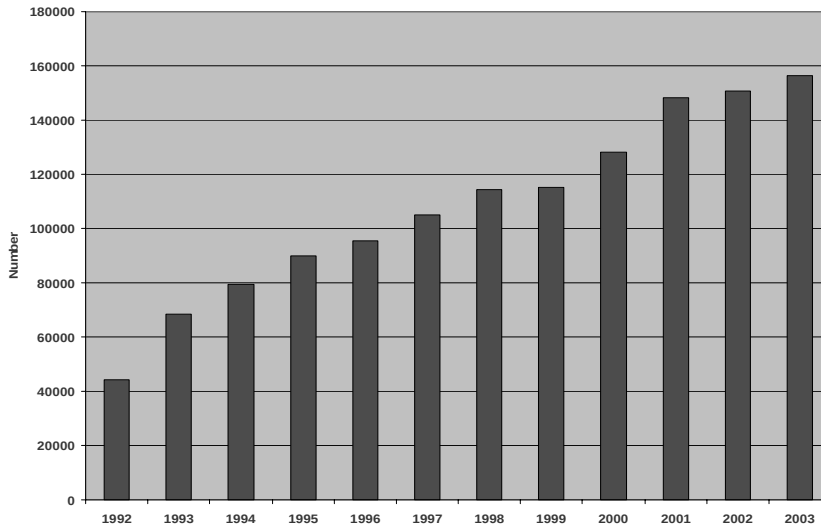
Experience with the New Zealand Student Loan Scheme

Student Loan Uptake

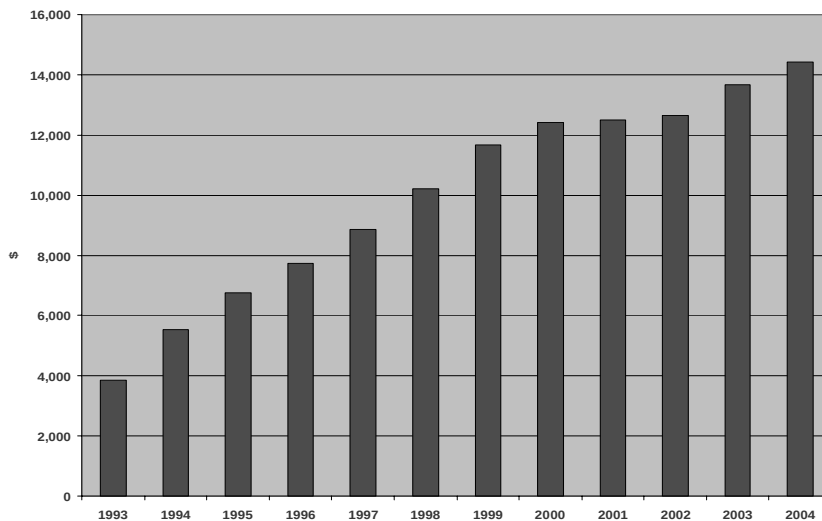
- In 2003, 60% of eligible students borrowed under the student loan scheme – up from 50% in 1999.
- Growth in uptake from 1999-2003 reflects in part the introduction of an interest write-off for students.
- Uptake expected to drop because of the expansion of loan scheme coverage to more part-time students, who have a lower tendency to borrow.



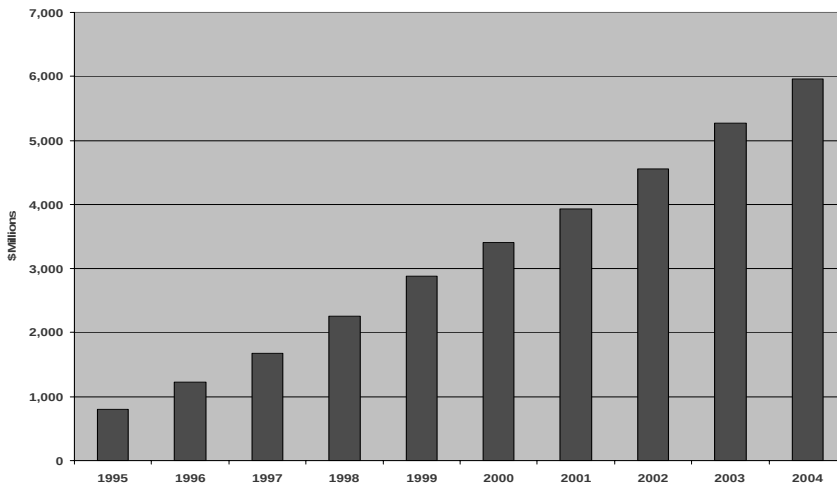
Annual Number of Student Loan Borrowers, 1992-2003



Annual Average Student Loan Balance, 1995-2004

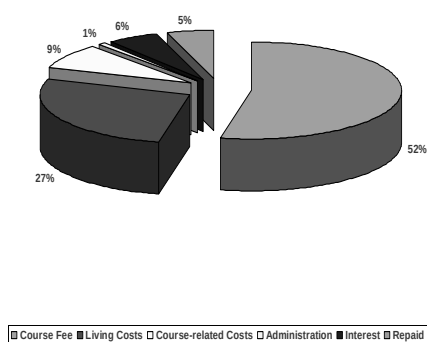


Student Loan Debt Outstanding, 1995-2004



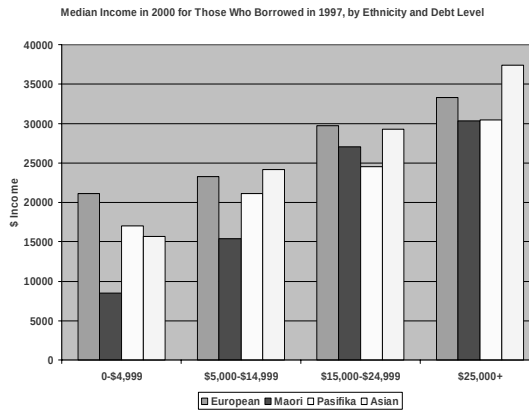
Student Loan Borrowing by Type of Borrowing, 2003

- Key difference between New Zealand and other schemes (eg Australian) is that students can borrow for living costs.
- Living cost entitlement is not targeted on income.
- In 2003, approximately 52% of borrowing was for tuition fees and 27% was for living costs.

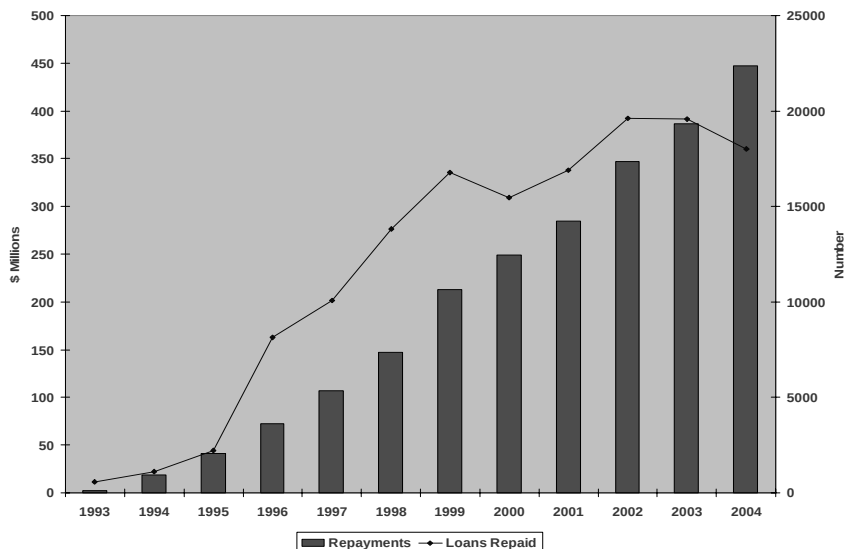


Borrowing by Income Group, Ethnicity and Debt Level

- Amount borrowed under student loan scheme is related to income and ethnicity.
- Median income for those who borrowed in 1997 was higher for Asians and Europeans than for other groups among all borrowing bands.
- Not surprising result given that Maori tend to have lower incomes (and hence would receive grant assistance) and that Maori tend to take lower cost courses.



Annual Loan Repayments and Number of Loans Repaid, 1993-2004



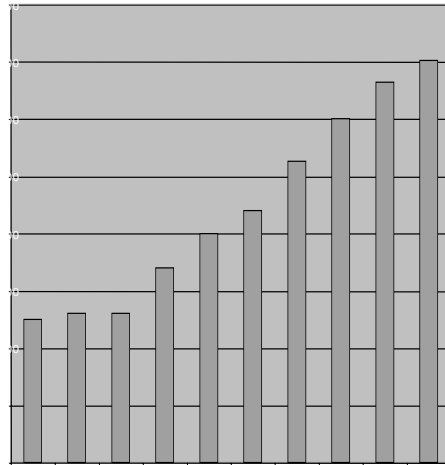
Average Loan Repayment Period, by Gender and Ethnicity (in Years)

■ Ministry of Education calculates estimated time that students will take to repay student loans.		Males	Females	Overall
	European	6.6	10.3	8.7
■ Most recent data show that, on average, students will take 9.3 years to repay their loans.	Maori	7.3	10.5	9.2
	Other	8.9	12.7	11
■ Figures are higher for females and Maori.	Total	7.2	10.8	9.3

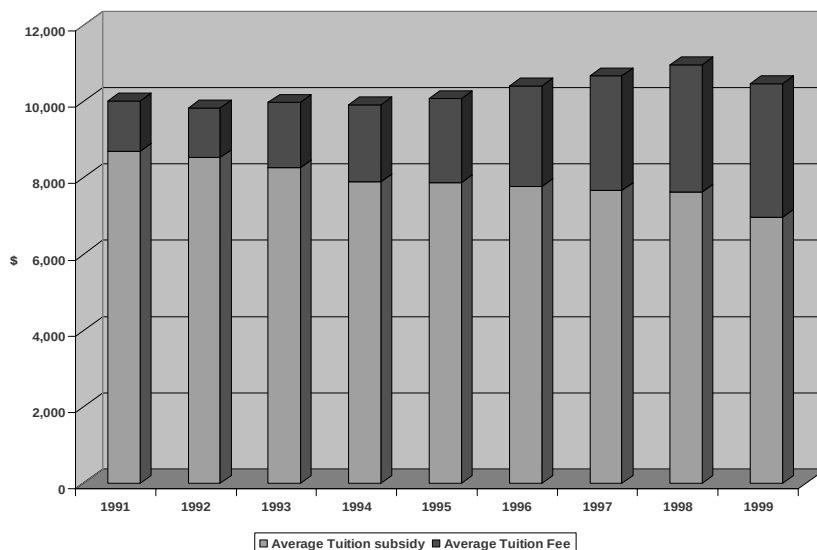
Selected Issues

Growth in Level of Tuition Fees...

- Tuition fees introduced in New Zealand in 1990 - flat fee of \$1,250
- Flexible fees introduced in 1992
- 'Fee freeze' introduced in 2001
- Fee maxima (price controls) policy introduced in 2004
- Average fee in 1999 = \$3,501
- Has since declined to around \$2,600 (2003).



Per-student Tuition Subsidies and Tuition Fees, 1991-1999



Private Financing of Tertiary Education: International Trends

- Increasing private share of tertiary education financing in New Zealand mirrors international trends
- Increased cost-sharing takes many forms:
 - introducing or increasing tuition fees
 - increased private tertiary education provision
 - increased use of student loans
 - less use of student grants



Private Financing of Tertiary Education: International Trends

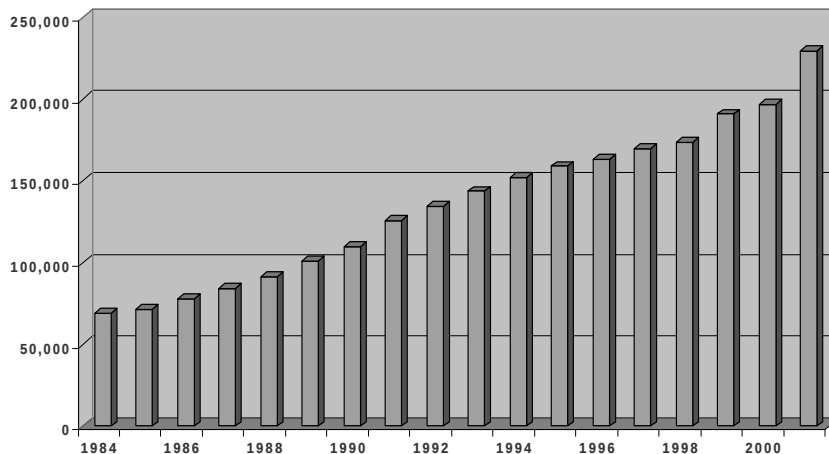
- Private tertiary share up by > 20% in 7 out 17 OECD countries from 1995 - 1998
- Increasing private share in developed and developing countries:
 - Canada, US
 - Australia
 - Austria, Italy, UK
 - China, Philippines
- West, Dearing, MCG all proposed higher private contribution



Increasing Tuition Fees and Growth in Tertiary Education Participation...

- Tertiary participation has grown considerably in New Zealand since the mid-1980s - the number of students in tertiary education grew from around 140,000 in the mid-1980s to around 400,000 in 2003.
- This growth continued even after the introduction of tuition fees and the student loan scheme. For example:
 - The number of equivalent full time students (EFTS) in tertiary education grew by nearly 120,000 between 1989 and 2001 and has continued to increase
 - The number of post-graduate EFTS grew from 7,900 in 1992 to 14,500 in 1999
 - The tertiary participation rate grew from 8.3% in 1994 to 13.4% in 2004.
- Entry rates into tertiary education are among the highest in the OECD for both Type A and Type B tertiary programmes, despite the lowest unemployment rate in the OECD.

Growth in Number of Equivalent Full Time Students, 1984-2001



Equity

- Significant increases in tertiary education participation among disadvantaged.
- The number of Maori in tertiary education grew by 46% between 1994 and 2000.
- The proportion of Maori among tertiary students increased from 10.7% to 13.9% between 1994 and 2000.
- The number of Maori completing tertiary qualifications almost doubled between 1997 and 2001.
- Tertiary participation among school leavers in low-income areas in New Zealand increased between 1997 and 2000.
- Enrolments of female students in tertiary education grew by 20% between 1994 and 2000 – more than 4 times the increase for males.
- Consistent with evidence from Chapman and Ryan (2002) and the Council of Ontario Universities.

Lessons from New Zealand

- Wide range of possible student loan scheme designs – much scope for designing a scheme to suit local circumstances.
- Student loans' role is that of finance mechanism, not a mechanism for delivering subsidies to students.
- Recognise that we are comparing imperfect alternatives – not comparing one 'perfect' system against an 'imperfect' one – income contingent versus mortgage loans/'market' versus 'non-market' reforms.
- Student loan scheme design is critical – hard to get right, but easy to mess up – Ghana, Philippines, Mongolia, New Zealand post-1999 reforms.
- New Zealand student loan scheme one of best in world and has been extremely successful in assisting the expansion of tertiary education in New Zealand.
- Post-1999 reforms have been expensive and have done little to achieve public policy goals – should be reversed. Consider targeting living cost component.

Lessons from New Zealand (Cont'd)

- New Zealand reforms very much in line with the general trends in tertiary policy – private contribution, targeting, loans, autonomy.
- For income contingent loans to be successful, need for robust administrative systems – ability to measure income, collect taxes, track individuals and monitor payment.
- Fees/loans should not just be seen as a revenue measure – access/quality improvement necessary quid pro quo.
- Political support for student loans important.
- Market reforms can advance equity if focus on targeting assistance to those from disadvantaged backgrounds. But market reforms cannot address all issues of equity – need other policies and focus on earlier levels of education.



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The Current State of Thailand's Income Contingent and Allowance Loan (TICAL) Scheme

By Medhi Krongkaew, Ph. D.
Professor of Economics
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What is the TICAL Scheme?

- TICAL stands for Thailand's Income Contingent and Allowance Loan Scheme. It is a new financing system for higher education in Thailand that is currently being prepared by the Thai government to be operational in Educational Year 2006 starting in June 2006.

I. Three Basic Problems Leading to TICAL Scheme

- (1) Public subsidies to university students too high
- (2) Increase in tuition fee too difficult
- (3) Normal student loans too stringent

1. High Public Subsidies

- On average, Thai students only pay about 20% of the total costs of operation, which were financed by general taxation.
- Majority of public university students are from middle-income and high-income families.
- Poor students end up paying more at private universities.
- Attention of students low; quality of education also low.

2. Difficulties in Tuition Fee Increase

- As the present tuition fees are, in general, very low, any realistic increase is likely to generate widespread protest.
- Appropriate fees for high-cost subjects such as medicine are out of reach of most students.
- State-provision of higher education as public goods still expected.

3. Deficiencies of Typical Student Loan Programs

- Risks of default of typical student loan programs consist of:
 - success or failure in completion of university courses;
 - success or failure of finding jobs after graduation;
 - usefulness of completed courses after graduation.

3. Deficiencies of Typical Student Loan Programs (cont.)

- Debt repayment starts too soon, causing burden on recent graduates.
- Repayment timetables are too strict.
- Total amount of debts until graduation is too daunting for many students to decide to borrow.
- Banks do not have ‘bankable’ collaterals on borrowing students.

II. Basic Structure of the TICAL Scheme

- 1. Follows Australian HECS System
 - (a) Cost-recovery tuition fees
 - (b) Repayment only after sufficient future income is received, through the country’s tax system
 - (c) Gradual and realistic burden on students

II. Basic Structure of the TICAL Scheme (cont.)

- 2. Additional Features in the Thai Case
 - (a) Existence of different types of public higher education institutions
 - (b) Existence of numerous private higher education institutions
 - (c) Existence of junior vocational colleges
 - (d) Existence of the Student Loan Program

III. Issues to be Considered

- (1) What are appropriate tuition fees?
- (2) What are appropriate interest rates?
- (3) What are the threshold income?

Classification of University Courses

- Follows the International Standard of Classification of Education (ISCED) into 10 groups, namely, : (1) Education and Teacher's Training; (2) Humanities and Religious Studies; (3) Fine Arts and Allied Subjects; (4) Law and Legal Studies;

Classification of University Courses (cont.)

- (5) Social Sciences, including behavioural sciences, business administration, commerce and management, mass communications, and home economics; (6) Natural Sciences including mathematics and computer sciences; (7) Medical Sciences and Health-Related Subjects; (8) Engineering, including architecture; (9) Agriculture, Fisheries, and Forestry; and (10) Others Not Specified Above

Appropriate Levels of State Subsidies

- The current suggested level of state-student share of the cost of higher education is 50:50.
- The current suggested rate of interest for TICAL Scheme is zero per cent but adjusted by annual consumer price index.
- No time limit for debts repayment; no debts after death.
- No payment when earning is disrupted.

Threshold Income for Debt Repayment

- The proposed threshold income is 10,000 baht per month before tax (about USD250 at the current rate of exchange). This is expected to be starting salary of a typical public servant with a bachelor degree in 2008.
- The repayment rate of 1% is suggested.

IV. The Political Economy of the TICAL Scheme

- (1) The Australian beginning and Australian continued participation;
- (2) Superficial interest in Thailand at first
- (3) The TICAL Scheme as a breakthrough in Thai university finance
- (4) Support from the academic circles
- (5) Support from the government and cabinet
- (6) The setting up of Office of the TICAL Scheme and plans of action

V. What Else Needs to be Done?

- New budgetary allocation rules required
- Quality control and assurance of higher education performance and outcomes installed and observed;
- Overall development of balanced higher education envisioned and enforced;
- Treatments of private universities constantly monitored and adjusted;

Q and A

- Can Thai experience be applicable to other countries?
- Thai as a unique case under the present government
- Preconditions for application elsewhere.



TEACHING & LEARNING INNOVATION FUND (TALIF)

Presentation by

PAUL EFFAH
EXECUTIVE SECRETARY



National Council For Tertiary Education

Accra – Ghana

What is TALIF?

TALIF is a pool of financial resources available to tertiary institutions to carry out new initiatives or undertake innovations in teaching, research, learning and management.

Why TALIF?

Innovation Fund approach:

- encourages creativity, visioning, and innovation in addressing the problem of tertiary education quality;
- Affords individuals, groups or departments/Faculties to submit proposals for funding;

- 
- is a flexible approach which allows for competition and yet supports proposals which reach a certain minimum standard;
 - links proposals to institutional strategic plans thereby;
 - 1) enhancing strategic leadership
 - 2) building capacity in strategic planning

- 
- 3) encouraging sharing of successful innovations
- encourages collaboration and accountability through such mechanisms as performance agreements.

Objectives of TALIF

Specific objectives include:

- 1) Improving the quality of teaching and learning.
- 2) Sharpening the relevance and skills content of polytechnic education.
- 3) Improving the efficiency with which tertiary institutions manage academic programmes.
- 4) Expanding access to strategically important postgraduate programmes
- 5) Tackling the problem of HIV/AIDS
- 6) Broadening Access especially to the disadvantaged

TALIF Windows

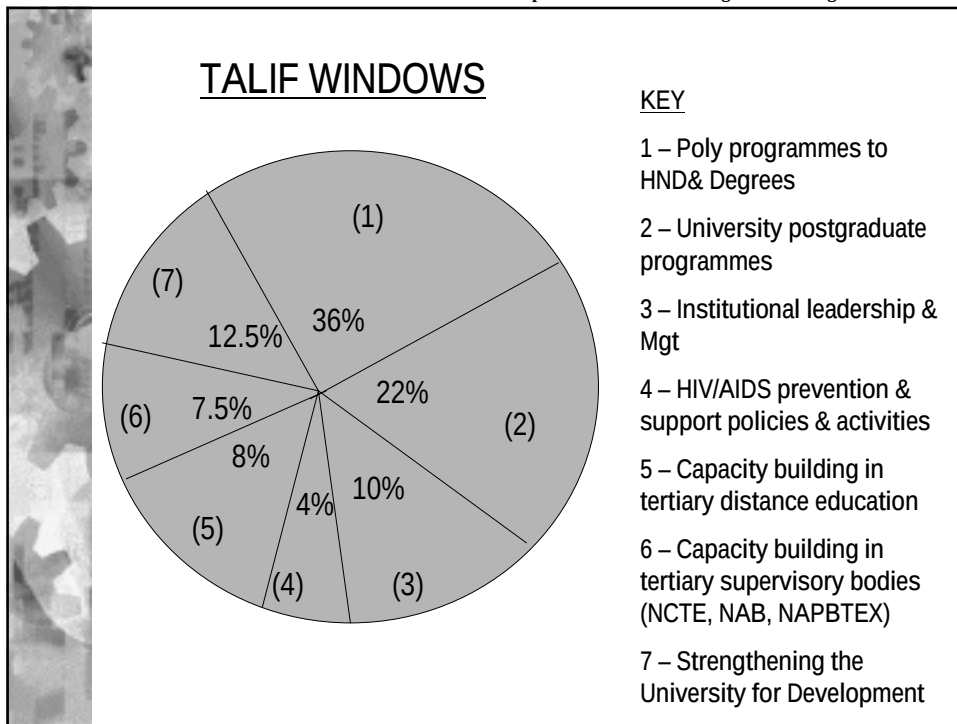
General Windows

- 1) Polytechnic programmes leading to HND and Degrees
- 2) University postgraduate programmes
- 3) Institutional leadership and management

- 4) HIV/AIDS prevention and support policies and activities
- 5) Capacity building in tertiary distance education

Special Windows

- 6) Capacity building in tertiary supervisory bodies (NCTE, NAB, NAPBTEX)
- 7) Strengthening the University for Development Studies



Eligibility Criteria

- 1) a. Public Tertiary Institutions
- b. Private tertiary institutions with not less than 3 years continuous accreditation from NAB and collaborative ventures with public tertiary institutions;
- 2) Timely submission of externally audited institutional accounts during the life of the project;

- 
- 3) Strategic Plan approved by Governing Council of institutions;
 - 4) Written agreement to abide by the procurement and financial management arrangements associated with the Education Sector Project



Structures

- ✱ TALIF Executive Committee within National Council for Tertiary Education
- ✱ Proposal Review Committees (PRCs)
- ✱ Chairmen and TALIF Co-ordinators
- ✱ Academic and Non Academic Review Panels

- ✱ Performance agreements to be signed by originator of Proposal, chairman of PRC and Executive Secretary of NCTE.
- ✱ Website developed – www.ncteghana.org
- ✱ Yearly Allocations
 - Y_1 20%
 - Y_2 28%
 - Y_3 27%
 - Y_4 25%
 - Y_5 05%
 - 100 %

Proposals

- ✱ Small – up to \$20
- ✱ Regular – \$20 to \$200,000
- ✱ Institutional Ceilings for small proposals
 - * Small (2000 students or less) - \$40,000
 - * Medium (2000 - 10,000) - \$60,000
 - * Large (over 10,000) - \$100,000
 - * University for Development Studies – \$100,000

Results of 1st Call of Proposals

- ✱ Over 200 proposals were received
- ✱ Regular proposals approved
 - * Universities (Public) - 22
 - * Polytechnics - 9
 - * Private Tertiary Institutions - 3
 - 34

- ✱ Proposals received amounted to about \$17 million as against the year's allocation of \$6.7 million.
- ✱ About 40% of proposals received were approved.

General Observations:

- ✱ Little attention paid to true innovation in some proposals.
- ✱ Lack of justification of some of the proposals.

- 
- ✿ Emphasis on equipment acquisition with little explanation of how it was to be used to address specific teaching/learning problems
 - ✿ Mismatch between budgets and objectives of proposals
 - ✿ Emphasis on pure research with little or no involvement of students or explicit linkages to identified shortcomings in teaching and learning activities



Challenges

- ✿ Initial difficult of getting tertiary institutions to understand the novelty of TALIF
- ✿ Need to deepen proposal writing skills of institutions to meet demands of TALIF
- ✿ Demands of new procurement Act and IDA requirements slowed down the disbursement process
- ✿ The question of incentives.

Conclusion

3 key ingredients of a successful innovation funding scheme:

- ✱ Development of an operational manual to guide the process
- ✱ Constant training and re-training
- ✱ Identification of a few committed “champions” to drive the process.

THANK YOU!!!

Presentation 18:

Constructing and Using Performance Indicators

John Fielden
CHEMS Consulting, UK

Agenda

- Three levels of indicator
- Level Two: indicators used for resource allocation and monitoring
- Newspaper rankings/league tables
- Level Three: indicators used for institutional management
- Conclusions

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Three levels of indicator

- System level; eg: OECD's "Education at a Glance", World Bank, UNESCO statistics
- National level indicators about institutions; reported to MOE by institution, and by newspapers in ranking tables.
- Institution level indicators; reported within institution for governance and management purposes

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Focus of this paper

We focus on levels two and three and ask the questions:

- How is institutional performance measured?
- How are indicators used?
- Are there any lessons at each of the two levels?

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Factors influencing institutional performance

- National higher education policies and strategic guidelines
- National social, welfare and employment legislation
- Institution's own strategy and past “footprint” or tradition
- Regional and community needs and policies.

Do institutions have to perform well on all these?

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A current model – New Zealand

- The body overseeing higher education (TEC) sets a national vision for HE and policy targets.
- Each university produces a Charter (or strategy) to achieve these targets and agrees it with the TEC.
- The university then prepares a three year plan (Profile) with objectives **and suggested Key Performance Indicators** for seven areas.

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The seven areas that are measured

- Teaching and Learning
- Research
- Community Service
- Consulting and commercial activity
- Equity and equal opportunity
- Treaty of Waitangi (Maori affairs)
- Governance and management

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Hong Kong SAR is similar

- 10% of funding is now related to “Performance and Role”
- Each institution agrees what its distinctive role should be and prepares plans
- A panel of peers (60% international) assessed each university’s plans **and approved the performance indicators they have suggested to measure their performance.**
- These cover six common areas: strategy, teaching and student achievement, advanced scholarship, community involvement, administration and partnership working.

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Individual performance targets

- One approach (HEFCE) is to set individual benchmarks or targets for performance in some policy areas, eg: percentage of new students from state schools or low socio- economic backgrounds. Strategy for achieving this is negotiated with an Office for Fair Access.
- Otherwise institutions are free to set their own indicators and KPIs (although government will calculate and publish some from common statistics).

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Level Two indicators - findings

- A growing trend is for governments to require indicators that measure the achievement of national policy goals.
- Governments often let universities decide how they wish to be measured against their own strategic objectives.
- Data flows from institutions to a variety of intermediate sources – national agencies, press etc – which then calculate and publish some national indicators.

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Times International league table

- Ranking of the world's Top 200 universities
- Uses four indicators: peer review (50% of the score), research impact from Thomson-ISI statistics (20%), faculty/student ratio (20%), numbers of international staff and students (10%).
- Shortage of reliable international data (as the SJTU survey found).

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US News

- Uses a standard data set for collecting data from participating institutions
- Groups institutions in four categories (based on Carnegie classification).
- Peer assessment is a major element in score.
- Other elements include: acceptance rates, class sizes, faculty pay, spend per student, graduation performance, retention and graduation rates, % of alumni giving.

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Macleans (Canada)

- Groups 93 universities and colleges into three clusters (mostly UG, comprehensive, univs with medical/doctoral schools).
- All the data is obtained direct from universities.
- Information published on 23 sub headings (grouped into six heads).
- Greatest weight given to Reputation (based on responses to survey of 7,200 people).

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Newspaper league tables

- What is their purpose – Sell newspapers or inform stakeholders?
- Function is to compare performance in a few measurable areas, then sum up to produce a ranking.
- Performance areas chosen may not match institutional strategies.
- They only cover what is measurable.
- Widely criticised (but still quoted by those who score well!)

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University performance Indicators (Level 3)

- Indicators core aim is to assess whether a university's strategic objectives are being achieved.
- They often attempt to measure things that government does not measure (eg. staff or student satisfaction, scale of staff development).
- Usually serve both governance and management purposes.

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Origins of Level 3 performance indicators - 1

- Internally calculated to national standards (eg. Employment of graduates after six months).
- Internally derived for own purposes – eg. efficiency ratios or trends, locally managed surveys, use of e-learning.
- Externally derived (eg. national quality audit scores, research rankings).
- Newspaper rankings and league tables.

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Types of Performance Indicator - 2

- Based on inputs (students, staff, funding etc)
- Based on processes and operations (efficiency ratios, retention rates, usage statistics, graduate satisfaction)
- Based on outputs (degrees/credits awarded, research activity)
- Based on overall qualitative peer review

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Some indicators in use

- | | |
|---|---|
| Students | Research |
| • Composition of student intake | • Scores on national quality rankings |
| • Applications for each place | • Rise in income from research grants |
| • Percentage retained after one year | • Increase in commercial spin outs and royalty income |
| • Percentage in employment 6 months after leaving | • Rise in numbers of research students |

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More indicators

Regional development • Academic staff

- % of students from the region
- Numbers of regional partnerships
- % of purchases with regional suppliers
- Staff turnover
- Numbers attending staff development events
- Numbers on fixed term contracts
- Proportion of women

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Some financial and efficiency indicators

- % of income from non-government sources
- Financial health efficiency ratios (current assets to current liabilities, financial reserves and solvency)
- Administrative costs as % of academic costs
- Maintenance expenditure as % of building value
- Room utilisation %.
- % Overhead recovery from external research contracts.

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Presentation of indicators

- Selection of Key Performance Indicators for the Board to review (cf Toronto).
- Selection in a Balanced Scorecard with four perspectives; organisational, financial, stakeholder and “internal business” (cf Edinburgh).
- Shown as trends over time.
- Shown against similar scores from peer institutions.

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Conclusions

- Health warnings are essential when reviewing or using PIs. They must be taken in context and not used to make naïve comparisons.
- Critics say they can be: misleading, simplistic, capable of fiddling and too quantitative.
- New Zealand TEC insists they must be SMART (Specific, Measurable, Auditable, Realistic, Time bound).
- Inevitably very few assess the quality of universities’ outcomes and still too many are based on things that are easy to measure such as costs and inputs.
- BUT some aid to review is needed and they are the best we have.
- Value added by each institution is the best PI, but is extremely hard to measure cost-effectively.

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Presentation 19:

Monitoring and Evaluation: Higher Education Funding in Korea

8 April 2005

Taejong Kim (KDI School)
Samho Lee (KDI)

1. Overview:

Why Measuring and Monitoring?

- Necessary in the absence of market responses
- Market responses in higher education:
 - students, donors, employers, etc.
- Market responses relatively more important in Korea
 - tuition and other private sources account for 80%
- Measuring and monitoring still important in Korea
 - national universities account for 30% of the student body
 - research support and other public funding has been increasing for both public and private universities

1. Overview

- Both process monitoring and impact evaluation are important.
 - Process monitoring is rather well-established; impact evaluation needs development.
 - Evaluation is difficult; just beginning in Korea
- Responses of stakeholders are an important source of information in evaluation.

1. Overview: Government Funding for Higher Education

	2003 MEHRD Budget (100 million Won)
Indirect Support	5,763
Support for Students	1,105
Support for Individual Researchers	3,876
contribution	453
Support for Univ. hospital	1,174
Direct Support for Nat'l Univ.	16,738
Total	28,888

Source: Education Budget Statistics, MEHRD

Other Ministries (MST, MHW) also have research support programs funding higher education.

1. Overview

- Direct and indirect supports to institutions dominant in the funding structure
- Individualized subsidies to students and researchers relatively small
 - needs and merit are easier to evaluate for the latter
 - impact is also easier to evaluate

2. Effectiveness of Government Funding (I) Job Placement (Lee, Jang, and An)

Graduates			
Military Service (M)	Further Schooling (S)	Job Seeking (J)	
		Employed (E)	Unemployed (U)

- Performance measured as Job Placement Ratio ($JPR=E/J$)
- Performance measured as Job Placement and Further Schooling Ratio ($JPFSR=(E+S)/(J+S)$)
- Using Sample of 4-year Private Universities
- Other variables controlled
 - Transfer from mother foundation, Donation, Education Expenditure, Location, Size (# of students), History of Institution, # of Students per Faculty, Average SAT

2. Job Placement

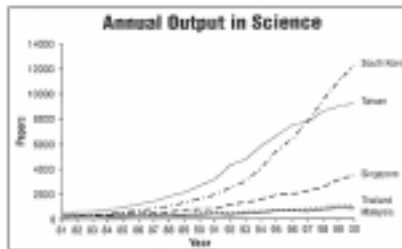
- Government funding positively correlated with job placement and advancement for further schooling
- Causal interpretation is not warranted.
 - multiple causality
 - job placement self-reported
 - quality of jobs ignored
- Further efforts needed
 - systematic data collection
 - more careful empirical strategy desired

3. Effectiveness of Government Funding (II) Impact on Research Output

- Total research output has grown remarkably.
- Quality of research has held steady.
- In some areas of engineering and science, Korea is doing more than its share in the world's research output.

3. Effectiveness of Government Funding (II) Impact on Research Output

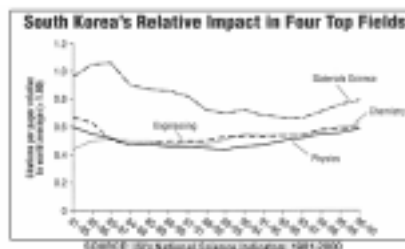
- Total research output has been growing remarkably.



SOURCE: IIT's National Science Indicators, 1981-2008

3. Effectiveness of Government Funding (II) Impact on Research Output

- Quality of research output has held steady.



SOURCE: IIT's National Science Indicators, 1981-2008

3. Effectiveness of Government Funding (II) Impact on Research Output

Rank	Field	S. Korea world share, 1996-2000 (%)	S. Korea no. papers, 1996-2000 (%)	S. Korea citation impact	World citation impact
1	Materials Science	3.79	4,923	1.53	1.60
2	Engineering	2.88	7,998	0.86	1.49
3	Computer Science	2.82	1,142	0.65	1.17
4	Physics	2.79	11,913	1.99	3.37
5	Chemistry	2.01	9,708	2.58	3.46
6	Pharmacology	1.87	1,463	1.77	3.94
7	Microbiology	1.39	1,090	3.70	6.13
8	Mathematics	1.30	799	0.99	1.27
9	Biology & Biochemistry	1.22	3,259	2.97	7.00
10	Agricultural Science	0.71	581	1.56	1.98
11	Immunology	0.68	412	3.31	8.49
12	Space Science	0.67	282	4.50	6.81
13	Ecology/Environment	0.67	565	1.64	2.91
14	Clinical Medicine	0.65	5,397	2.35	4.38
15	Plant & Animal Sciences	0.59	1,299	1.85	2.52
16	Neurosciences	0.59	909	3.93	7.00
17	Molecular Biology	0.56	605	4.33	12.47
18	Geosciences	0.45	434	1.67	3.25

SOURCE: IIT's National Science Indicators, 1991-2000

3. Effectiveness of Government Funding (II): Research Output (Lee)

- Measuring Performance with research output (NCR index)
 - NCR index : combination of SCI, SSCI, AHCI
- Effect of government funding in 2000 on the change of research output between 1999 and 2002
- Cross - sectional analysis

3. Effectiveness of Government Funding (II): Research Output

- Other explanatory variables: Location (capital area or not), Private institution or not, # of students per faculty, Size (# of students), Composition of faculty members (according to their majors)

	(1)	(2)	(3)	(4)
	'02NCR - '99NCR	'02 NCR	'99 NCR	'02NCR - '95NCR
BK21, 2000	0.009 (0.002)**	0.034 (0.006)**	0.025 (0.005)**	0.020 (0.004)**
BK21, 2001	0.011 (0.002)**	0.038 (0.006)**	0.027 (0.005)**	0.023 (0.004)**
BK21, 2002	0.011 (0.002)**	0.038 (0.006)**	0.027 (0.005)**	0.023 (0.004)**
Science of Tech, BK21, 2000	0.013 (0.003)**	0.073 (0.006)**	0.059 (0.005)**	0.039 (0.005)**
Humanities and Social Science, BK 21, 2000	0.008 (0.004)+	0.029 (0.010)**	0.021 (0.009)*	0.017 (0.008)*
Local Univ., BK21, 2000	0.002 (0.003)	-0.018 (0.007)*	-0.020 (0.006)**	-0.007 (0.005)
Core, BK21, 2000	0.007 (0.003)*	0.036 (0.007)**	0.029 (0.006)**	0.014 (0.005)**
Specialization, BK21, 2000	0.005 (0.004)	0.009 (0.010)	0.004 (0.008)	0.007 (0.007)
Research Promotion, 2000	0.008 (0.003)**	0.023 (0.008)**	0.014 (0.007)*	0.016 (0.006)**
Research Promotion, 2001	0.008 (0.003)*	0.015 (0.009)+	0.007 (0.007)	0.013 (0.006)*
Research Promotion, 2002	0.007 (0.003)*	0.023 (0.008)**	0.016 (0.006)*	0.017 (0.006)**
Researcher Support, RP, 2002	0.013 (0.003)**	0.028 (0.008)**	0.016 (0.007)*	0.023 (0.006)**
Cooperative Project Support, RP, 2002	0.012 (0.003)**	0.026 (0.007)**	0.013 (0.006)*	0.021 (0.005)**
Fundamental Studies Support, RP, 2002	0.004 (0.003)	0.024 (0.007)**	0.021 (0.006)**	0.015 (0.005)**
Protected Studies Support, RP, 2002	0.003 (0.003)	0.009 (0.008)	0.007 (0.007)	0.005 (0.006)
Local University, RP, 2002	-0.004 (0.004)	-0.035 (0.009)**	-0.030 (0.008)**	-0.016 (0.007)*
Strengthening Graduate Studies, RP, 2002	0.005 (0.004)	0.008 (0.010)	0.003 (0.008)	0.007 (0.007)

	(1)	(2)	(3)	(4)
	'02NCR - '99NCR	'02 NCR	'99 NCR	'02NCR - '95NCR
University Support, MEHRD, 2000	-0.008 (0.005)	-0.066 (0.012)**	-0.059 (0.010)**	-0.036 (0.009)**
National and Public Univ. Facility, MEHRD, 2000	-0.007 (0.004)	0.003 (0.010)	0.009 (0.009)	0.000 (0.008)
National Univ. Equipment, MEHRD, 2000	-0.011 (0.005)*	-0.070 (0.012)**	-0.059 (0.010)**	-0.039 (0.009)**
Univ. Research Center, MEHRD, 2001	0.004 (0.003)	0.016 (0.007)*	0.012 (0.006)*	0.008 (0.005)+
National Univ. Faculty, MEHRD, 2000	-0.013 (0.006)*	-0.086 (0.015)**	-0.073 (0.012)**	-0.047 (0.011)**
Local Univ. Specialization, MEHRD, 2000	-0.002 (0.003)	-0.010 (0.007)	-0.008 (0.006)	-0.004 (0.005)
Univ. Education Reform, MEHRD, 2000	0.002 (0.003)	0.016 (0.007)*	0.013 (0.006)*	0.007 (0.005)

Standard Errors in parentheses.

+ significant at 10%; * significant at 5%; ** significant at 1%

3. Effectiveness of Government Funding (II)

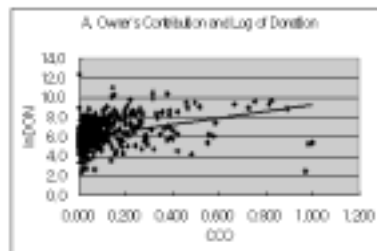
- Caveat: causal interpretation still difficult
- The effects seem different depending on programs.
- Individual-based funding tends to be more effective while institution-based funding is less effective or even counter-effective.
- Possible reasons: easy to monitor, easy to establish accountability.

4. Donations and Governance of Private Universities in Korea

- Donations can serve as an indicator of universities' performance evaluated by the market.
- Peculiar governance of private universities in Korea
 - non-profit by law with non-distribution restrictions; yet they have de facto owners
- How governance affects amount of donation received

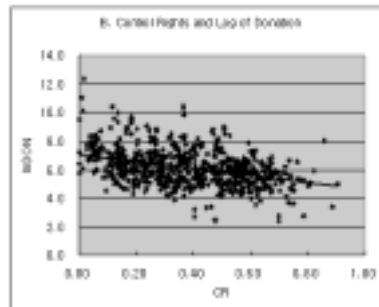
4. Donations and Governance

- Owners' contributions positively correlated with third-party donations.



4. Donations and Governance

- Entrenchment negatively correlated with third-party donations.



4. Donations and Governance

- Lessons
 - Governance structure significantly affects the donations received
 - Government support should take governance structure into account for private universities.

5. Concluding remarks

- Impact evaluation still rudimentary
 - Evaluation for institution-based supports still more so
 - Can serve as a useful gauge to check for possible signs of gross inefficiency
 - Information should be provided to nurture educated market responses

Discussion 10:

Comments on “Constructing and using performance indicators”

Kiyong Byun

OECD/IMHE

There is pressing need to make good use of performance indicators for planning, management and monitoring. It seems using performance indicators to promote policy development has already become quite common in many OECD countries.

As Dr. Fielden indicated, performance indicators (*e.g. trends in various input, process, and output measures and other statistics, and comparisons of these measures to other institutions*) will be helpful to decision makers as they try to assess the health of their institution. The danger arises, however, when decision makers place too much faith in certain measures as indicators of their desired outcomes, and arbitrarily set targets for these measures. In this regard, I would like to provide a rather critical appraisal of whether indicators can be used to evaluate the performance of higher education institutions, in particular in connection with allocating government money to these institutions.

My discussion will begin by highlighting two main reasons why the performance indicator model is more difficult to apply to higher education than to the corporate world and why institutions have struggled in their attempt to define meaningful performance indicators.

First of all, higher education institutions pursue multiple goals and the outcomes are not easily measurable. Consequently, any set of measurable outcomes will be incomplete and subject to criticism.

For instance, the amount of sponsored research money is one of the most commonly used research performance indicators. However, there is no evidence that the level of sponsored

research funds is related to the quality of research produced. More importantly, these measures tend to neglect non-sponsored research, which is central to many disciplines in the social sciences, arts, and humanities. Likewise, output measures such as the number of degrees awarded may or may not be directly related to the ultimate goals of the institution.

The presence of multiple goals also introduces the possibility that one policy which may lead to meeting some goals could in turn make it more difficult for the institution to achieve other goals.

In fact, we have a tendency to talk about academic quality or institutional performance as if it were a one-dimensional concept, and as if there were a common understanding and agreement about its meaning. But in reality academic quality is very complex and multi-dimensional. And, the interested parties do not have a common understanding of it. In this sense, dealing with performance indicators is not only a technical activity, but it has a much more important political dimension.

Secondly, colleges and universities do not have complete control over what inputs and the process they will use to try and reach their goals. For instance, tenure system reduces an institution's flexibility to respond changes in demand or to meet different goals and objectives. Decision makers need to be aware that when they use measures such as graduation rates and reputation scores as institutional targets, these measures can be influenced by a wide range of factors, many of which are difficult for the institution to control and may be changing simultaneously.

These two inherent problems (*lack of control over the inputs and process and insufficient measures of goals and outcomes*) place important limitations on the success of the performance indicator system in the higher education sector.

My second point is regarding the possible negative impact of performance indicators on the strategic planning as a future-oriented tool. As Dr. Fielden implies, strategic planning can be an important foundation for the performance indicator system. As manifested in New Zealand and in Hong Kong, basing the performance indicator system on some form of strategic planning makes the system more realistic for use by the executive management because performance information measures the achievement of established goals. However, using strategic planning

in this way may reduce its utility for long-range, visionary thinking about the best solutions to identified problems. Its format may become less future- or change-oriented and more focused on what is achievable within current resources, so it may be limited as a tool to envision the best solutions.

When it comes to using performance indicators in the Korean context, the autonomy of individual institutions is one of the main concerns. Institutional autonomy is indeed a prerequisite for constructing a meaningful performance indicator system because where there is no autonomy, it makes little sense to assess institutional performance and to require accountability from the institution. But, as far as I know, Korea has so far been one of the countries where institutional autonomy is very limited in many areas of university operation.

Also, in the Korean context, the importance of independent assessment of data and measures cannot be overly emphasized. Based on experience in many OECD countries, independent assessment appears to increase stakeholder's confidence in performance information; and to also foster decisionmaker's trust in the information products of performance funding. In this regard, involving an independent evaluation entity that has acknowledged expertise in the measurement and evaluation process is very important. A well-developed data collecting system is also a key to make a performance indicator system more successful as witnessed in many OECD countries.

In summary, performance indicators have some value as supporting information for decision making, but at the same time we need to acknowledge the limitations of most current indicators as measures of performance for higher education institutions and thus temper expectations of what can be learned from such measures. Also, these limitations need to be understood and explained to various stakeholders who might have less knowledge about the goals of higher education and, as a result, set unrealistic prospects about the value of applying performance indicator systems to higher education institutions.

After all, the primary purpose of using performance indicators should be to help identify questions rather than to provide all the answers.

Education Policy Analysis 2003

Table 3.1 Extent of autonomy experienced by universities¹

	Institutions are free to:							
	(1) Own their buildings and equip-ment	(2) Borrow funds	(3) Spend budgets to achieve their objectives	(4) Set academic structure/c ourse content	(5) Employ and dismiss academic staff ²	(6) Set salaries ²	(7) Decide size of student enrol- ment ³	(8) Decide level of tuition fees
Netherlands	•	•	•	◐	•	•	•	◐
Poland	•	•	•	•	•	◐	•	◐
Australia	•	◐	•	•	•	•	◐	◐
Ireland	•	◐	•	•	•	◐	•	◐
United Kingdom	•	◐	•	•	•	•	◐	◐
Mexico	•	◐	•	•	•	◐	•	•
Denmark	◐	•	•	◐	•	◐	•	◐
Sweden	◐	◐	•	•	•	•	◐	
Finland	◐		•	◐	•	•	◐	
Norway	◐		•	•	•	◐	•	
Austria	◐		•	•	•	•		
Korea (national – public univ.)				◐	◐		◐	•
Turkey				◐	◐		◐	
Japan (national – public univ.)				◐	◐			

Legend: Aspects in which institutions:

• have autonomy

◐ have autonomy in some respects (see the Appendix for details).

Notes:

1. Data in Table 3.1 are based on responses to a 2003 survey of university governance by members of the OECD's Institutional Management in Higher Education (IMHE) programme. Participation in the survey was voluntary, responses were not received from institutions in all OECD countries, and the IMHE members do not necessarily represent the full range of higher education institutions in the countries concerned. Institutional responses were cross-checked for consistency against each other, and published sources and national experts were consulted in preparing the table. However, the table shows a simplified picture, and countries vary in many detailed respects, as described in the Appendix. Non-university institutions are not included except where specifically mentioned in the Appendix. Countries are ranked in order of the number of areas in which universities reported autonomy.

2. "Employ and dismiss academic staff" (column 5) and "Set salaries" (column 6) include cases where any legal requirements for minimum qualifications and minimum salaries have to be met.

3. "Decide size of student enrolment" (column 7) includes cases where some departments or study fields have limits on the number of students able to enrol.

Presentation 20:

The Role of Buffer Bodies

John Fielden

Agenda

- What are buffer bodies?
- The role of the State and who should do it
- Case histories: New Zealand, Hong Kong, South Africa, UK
- Advantages of buffer bodies
- Disadvantages and risks
- Conclusions

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What is a buffer body?

- An agency that is given statutory powers to fund and manage higher education institutions within a country.
- It is usually governed by a Board with members appointed by the Minister from both public and private sectors.
- It is accountable to the MOE for its performance and will receive policy directives from government.

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The Role of the State

MOE retains

- Setting overall policy for Higher Education
- Agreeing the size and shape of the system
- Policy on designating new public and private universities
- Tuition fee levels
- Total funding decisions

Usual buffer body role

- Allocating funds to universities
- Monitoring their performance
- Accountability for public funds
- Implementing special policy guidelines

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Options for who does what

	Buffer body	Other agency	Council of Presidents	
Quality assurance	*	*	Sometimes Q. E.	
Collecting statistics	*	*	*	
ICT Networks	*	*	*	
Policy research	*		*	
Accreditation	KEDI-World Bank Forum. 2005	*	*	

Case Study - New Zealand

Tertiary Education Commission

- Created in 2002 as an independent “crown entity”, reporting to the MOE.
- 8 commissioners include 3 senior academic staff (not VCs), 4 from industry and a student representative. Chair is an academic.
- Roles are to:
 - Implement the Govt's Tertiary Education Strategy
 - Allocate over NZ\$2 bn annually.
 - Build the sector's capacity to achieve national goals
 - Advise Govt on policies, priorities and sector performance.

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Case Study – Hong Kong UGC

- Inherited from British administration
- 10 members are international academics, 5 HK academics, 2 from public sector and 5 from private sector
- UGC has neither statutory nor executive powers, but “acts as a buffer safeguarding the academic freedom and institutional autonomy of the institutions”.
- Roles are to:
 - Offer impartial advice on development and funding
 - Determine precise grant allocations (within budget made available) and student number allocations.
 - Assists institutions in quality assurance

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Case Study – South Africa

Commission on Higher Education

- Independent statutory body created in 1998.
- 12 voting members include 5 from academia, 2 from industry, 2 NGOs, 1 trade unionist and 2 from civil society. Chair is from industry.
- Roles are:
 - To advise the Minister on higher education policy issues
 - To have executive responsibility for quality assurance and institutional/programme accreditation
 - There is NO funding role at all.

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Case Study – England - 1

Higher Education Funding Council for England

- Created in 1992 as a “non departmental public body”, not part of MOE. Successor to long established University Grants Committee.
- Managed by a Board of 13 members including 5 VCs, 1 academic and 7 from private and public sectors. Chair is from private sector.
- Similar bodies in Scotland and Wales.
- Receives an annual letter with national policy guidelines from DfES/MOE.

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Case Study – England - 2

- Roles of HEFCE are to:
 - Ensure accountability for proper use of public money and allocate US\$ 12bn annually.
 - Provide independent advice to government on the funding needs of higher education
 - Identify and disseminate good practice
 - Contribute to policy development
 - Ensure that quality of teaching and learning is assessed

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Key issues

- Relationship of the buffer body to the MOE – can its advice be ignored?
- Extent to which the buffer body contributes to policy formulation.
- Clarity of the policy framework within which the buffer body works.
- What powers, if any, the Minister retains over individual institutions (Can he dismiss a Board or a President?)

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Who intervenes if..

- Students riot and kill a person.
- University Board pays the President a performance bonus of US \$500,000.
- Construction project is awarded to a company owned by a university Board member.
- University always fails to meet its own targets agreed with the buffer body.

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Advantages of a buffer body

- It allows MOE to focus on policy and not get involved in detailed management.
- Its independence saves MOE from charges of interference in institutional affairs; university autonomy can be protected.
- It can accumulate extensive professional expertise in its staff (not all from the central civil service) – a valuable resource for advice.
- The Board can be used to get views of industry.
- The MOE will no longer be lobbied by individual institutions or Presidents.

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Disadvantages and Risks

- The Minister and the Chair of the buffer body must agree on policy; if they do not, the Minister may want to overrule the buffer body and intervene directly.
- Ministers sometimes resent the powers (of information and funding) that the buffer body has.
- The buffer body may become too much a creature of the MOE and lose its independence.

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Conclusions

- The MOE is supreme in the end and can clip the powers of the buffer body.
- Buffer bodies can be abolished (Australia) or become powerless.
- Their roles may be limited (South Africa) and their advice ignored.
- Getting the right balance of power between the MOE and the buffer body can be difficult.

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Presentation 21:

Conception for a New Institute for Higher Education Evaluation

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Contents

I. Current Status of Higher Education Evaluation

1. Evaluation System
2. Operational Status of University Evaluation and Academic Fields Evaluation
3. Operational Status of Evaluating Financial Aid Projects

II. Necessity for a New Institute for Higher Education Evaluation

III. Cases of Selected Foreign Countries

IV. Conception for a New Institute

1. Organization and Function
2. Governance and Operation
3. Evaluation Types & Characteristics and Support Activities

I. Current Status of Higher Education Evaluation

1. Organization in Charge

- In order to enhance professionalism and autonomy, evaluations of universities and academic fields are conducted by a council of university presidents
 - With required budgets provided by the Ministry of Education and Resources Development (MoE)
- In order to ensure objectivity and fairness, evaluations of financial aid projects is either executed by the MoE, or commissioned to an external agency

2. Operational Status of University Evaluation and Academic Fields Evaluation

- ☐ **Comprehensive Evaluation of Universities:** evaluation of existing and new universities once every 6 or 7 years
- ☐ **Academic Fields Evaluation:** Evaluation of 8 academic fields per year out of 40 categories
- ☐ **Problems of the University Evaluation and Academic Fields Evaluation**
 - Indistinct Set of Priorities
 - Multiple and inconsistent goals including academic excellence are pursued simultaneously without a pre-determined set of priorities
 - Inadequate Evaluation Methods and Criteria
 - Evaluation criteria and indices are not good enough to take unique characteristics of individual universities and fields into account. Furthermore, as current evaluation is focused on inputs, quality evaluation is left much to be desired
 - As current evaluation criteria are developed on an exclusive basis of local conditions, international accreditation and comparisons are difficult
 - The evaluations are mainly focused on outward aspects because they are mostly based on the superficial onsite and paper evaluations
 - Lack of Professionalism of Evaluation Agencies
 - Because there are no professional evaluation agencies, evaluation results are viewed less reliable and objective by society and universities, failing

to acquire international credibility and recognition

- Lack of the Linking between Evaluations(Agencies)
 - Lack of the linking between different evaluations and evaluation agencies leads to an overlapping of evaluation activities and an overload of evaluation burden on universities
- Insufficient Utilization and Contribution of the Results
 - As the results are not sufficiently open to the public nor properly delivered to the consumers, they are not used as much as expected
 - As such, the results are not contributing much to the improvement of the university's academic excellency and international competitiveness

3. Operational Status of Evaluating Financial Aid Projects

- ☐ **Evaluation of financial aid projects:** Direct Responsibility of the MoE
 - Specialization projects for universities in and around Seoul: Around 25 universities are funded and evaluated
 - Specialization projects for junior colleges: 197 colleges are funded and evaluated
- ☐ **Problems of the Evaluation of Financial Aid Projects**
 - There is a considerable amount of overlapping with university evaluation to entail an excessive burden of the target universities as well as a waste of human and resources of the universities
 - The uniform set of evaluation indices can hamper development plans created by universities

II. Necessity for the Institute for Higher Education Evaluation

- ☐ Enhance the competitiveness of the higher education sector through supporting an evaluation-induced innovation in Universities
 - ☐ The quality of higher education is relatively worse than those of elementary and secondary education in Korea
 - ※ TIMMS('03): Korea is ranked 2nd place in math, and 3rd in science
 - ※ PISA('03): Korea is ranked 1st place in problem-solving ability, 2nd in reading, 3rd in math, and 4th in science
 - ※ IMD report('04): Korea is ranked 59th place in the assessment of university education's meeting the needs of a competitive economy
 - ☐ Through the introduction of international evaluation criteria and the alliances with international evaluation agencies
 - Offer information and consulting services in order for universities to identify their current status to formulate development plans and strategies aiming at the improvement of education and academic research
 - ☐ Through the linking of university evaluation results and financial aid projects, offer practical support in voluntary innovation efforts of universities
 - ☐ Encourage continuous check and improvement efforts based on evaluation results to improve the quality of universities
- ☐ Centralization and coordination improve the efficiency of higher education evaluation
 - ☐ Through the centralization and coordination of higher education evaluation activities
 - Eliminate the inefficiency resulting from overlapping evaluation activities across various evaluation agencies
 - Minimize the cost and burden of universities by developing and utilizing objective and credible evaluation methods
- ☐ Provide information on service quality and ways to make higher education institutions more public-spirited

Presentation 21: The Role of Korea Higher Education Evaluation Center - Shin-bok Kim

- By specializing in university evaluation and conducting objective and credible evaluations
 - Help universities to improve transparency and publicness in operation
 - Help students and parents to make decisions on the selection of universities and majors by providing objective information on each university's educational quality
 - Provide the basis for determining the quality of human resources with college degrees to government and companies

- **Set up a Foundation for Attracting more Foreign Students**
 - As the exchange of students are expanding in the global higher education, the economic aspect of educational services gets more important
 - ※ Australia: Educational services are ranked 3rd among the nation's export business (6.8 billion dollars of tuition fees and living expenses, creating around 42,000 jobs). AUQA (Australian Universities Quality Agency) is in charge of quality assurance and information provision

 - To attract a large number of foreign students requires not only such outward-looking merits as relatively cheap tuition fees and the "Korean boom," but also continuous quality assurance and implementation of objective evaluation with international recognition
 - ※ In 2004 the number of foreign students studying in Korea is up 36.6% compared to 2003 (12,314 → 16,832). In particular, the number of Chinese students has been increased by 54% (5,607 → 8,677). Given China's low supply of higher education (19% enrollment rate for higher education institutions), the enrollment of Chinese students in Korean universities is expected to further increase.

- **Measures to cope with the opening of domestic higher education market**
 - With ongoing discussions about education and services at WTO and FTA, it is required to provide objective and credible information on higher education in Korea
 - ※ WTO: Relevant negotiations are expected to end at the end of December, 2005

Presentation 21: The Role of Korea Higher Education Evaluation Center - Shin-bok Kim

- ※ FTA : As of the end of 2004, Korea had concluded FTAs with Chile, Singapore, and was in the review process with Japan, ASEAN, EFTA, etc.
- With expanding international supply of higher education, it is required to improve university evaluation in accordance with international standards, and to strengthen alliances with overseas evaluation agencies
- ※ UNESCO/OECD has issued a 3rd draft guideline on quality assurance in international higher education which defines the preparation of the framework for higher education evaluation and international information exchange as government responsibility
- ※ Bologna Process: It aims to ensure the higher education quality in Europe, in order for mutual-recognition of degrees earned from European higher education institutions.

III. Cases of Selected Foreign Countries

□ USA

- CHEA (Council of Higher Education Accreditation), a nation-wide council for quality assurance and accreditation in higher education, is a nonprofit, nongovernmental organization that has the overall responsibility for evaluation and evaluates accrediting organizations
- CHEA is commissioned to conduct evaluation activities with the authorization of Secretary of Education
- Evaluation outcomes are disclosed as the basis for the improvement of university quality, as well as the eligibility criteria of student scholarship for the federal government

□ UK

- There is a national quality assurance agency for higher education institutions called QAA and it is operated as an incorporated foundation
 - ※ QAA : The Quality Assurance Agency for Higher Education
- Funded by subscriptions from universities and colleges and by the Higher Education Funding Council
- Evaluation outcomes are disclosed as to such consumers as students and companies, and as basic information for the Higher Education Funding Council

□ Japan

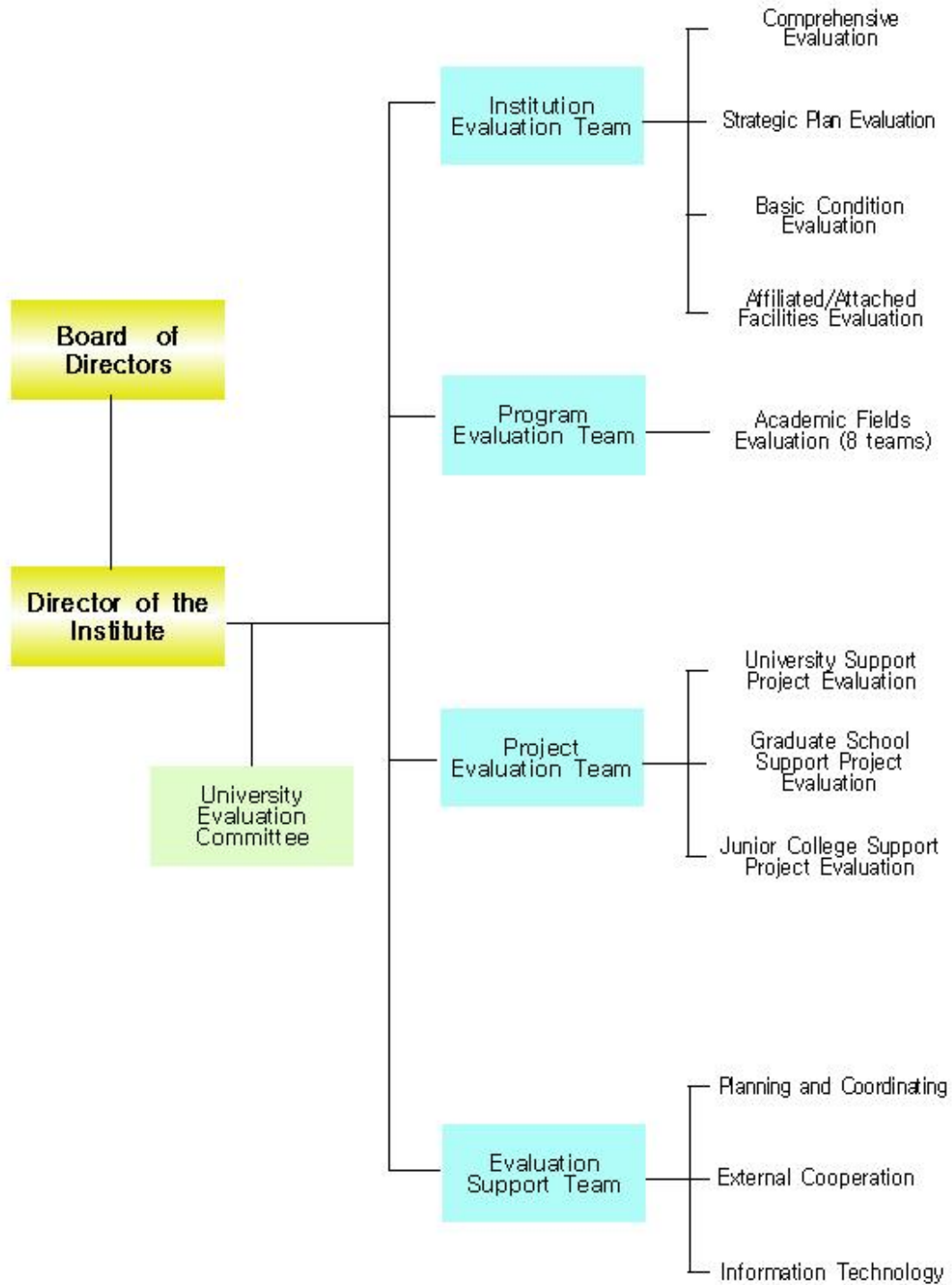
- There is a national agency responsible for university evaluation called NIAD-UE
 - ※ NIAD-UE : National Institution for Academic Degrees and University Evaluation
- It is an executive agency established and operated under the School Education Law and the Regulations concerning the Establishment of National Schools
- Introduce a self-evaluation, in order to promote self-diagnosis and improvement efforts, and offer relevant information to students and companies

□ **Australia**

- There is a nation-wide agency responsible for evaluating the quality of higher education institutions called AQUA
- ※ AQUA: Australian University Quality Agency
- A nonprofit organization with an independent board of directors, established by the council of ministers in charge of education, training and juvenile-related affairs
- Conduct quality-audits of accrediting agencies under state and regional governments and self-accrediting higher education institutions(e.g. universities) once every 5 years
- Determine and judge the quality assurance process of the Australian higher education system on the world scale

IV. Conception for a New Institute

1. Organization and Function



2. Governance and Operation

☐ the Board of Directors, Director of the Institute, and the University Evaluation Committee

- ☐ The board of directors will be charged with deliberation and decision-making on such major issues as plans, budgets, and settlements of accounts in relation to university evaluation projects. It will consist of those who are recommended by government agencies, industrial and academic worlds.
- ☐ Director of the institute will be charged with acting on the decisions made by the board of directors. S/he should be elected by the board of directors among those civilian experts at university education and administration who are recommended by a director recommendation committee.
- ☐ The university evaluation committee will consist of university education experts and those from related industries to advise the director of the institute concerning evaluation (form and operate subcommittees by target by category)

☐ Composition and Operation of Working-level Organizations

- ☐ The new institute consists of the evaluation department for universities and higher education institutions, the program evaluation department, the project evaluation department and the evaluation support department
- ☐ As for the three evaluation departments, each will consist of a department chief, evaluation teams by target and by area, and a working-level support team
 - Department chiefs will be elected among experts from the academic sphere, and/or evaluation experts through public announcements at home and abroad
 - As for evaluation teams, an expert pool is to be formed at the recommendation of universities, academies, and industries to work as evaluation team members at the time of evaluation. Some from the expert pool, however, are to serve as a permanent researcher in order to ensure continuity and professionalism in evaluation

3. Evaluation Types & Characteristics and Support Activities

☐ Institution Evaluation

☐ Comprehensive Evaluation

- Evaluate overall conditions including conditions for education/research, management of educational affairs, quality and achievement of education/research, university operations, etc. as a basis of accreditation

☐ Strategic Plan Evaluation

- Evaluate strategic and development plans created by individual universities, with explicit consideration of their sizes and types, etc
- Evaluate the performance and results with respect to own strategic and development plans for diversification and specialization.

☐ Basic Conditions Evaluation

- Build a D/B focusing on indices for the overall operational status of individual universities including educational atmosphere and financial status through a continuous information gathering, and disclose relevant information
- Set up minimum-level standards for universities and colleges and enhance them in accordance with global standards

☐ Affiliated/Attached Facilities Evaluation

- Comparisons of universities regarding affiliated/attached facilities such as libraries, information(IT) centers, lifelong education centers, and language education centers
- Status of human and physical resources and operational outcomes of the organization are evaluated regularly

☐ Academic Fields Evaluation

- Evaluate each academic field in terms of curricula, contents, accomplishments, etc. Actual evaluation should be committed to professional (evaluation) agencies and/or academic associations
- Assess the evaluation capacity and the reliability of the professional (evaluation) agencies and academic associations in charge
- Evaluate through a combined set of indices including the performance-oriented and qualitative ones for curricula and researches as well as input-centered quantitative ones
- Encourage the introduction of international evaluation criteria by category to promote better international recognition of local degrees and certificates

☐ Project Evaluation

- Evaluate individual business plans and outcomes of individual educational institutions e.g. universities, graduate schools, and junior colleges, and use the evaluation results as the basis for differential government aid
- Preclude overlapping aids through a comprehensive management of the evaluations of financial aid projects, and improve the validity and efficiency of financial aid projects by strengthening the linking between separate projects

☐ Support Activities

- Support for research, planing and administration support for higher education evaluation
- Develop information, materials and D/B for better evaluation
- Interchange and cooperation activities with related local and overseas organizations

Wrap Up :

preliminary lessons

international forum on tertiary education
financing reforms and innovations

Jamil Salmi

Seoul, 6-8 April 2005

themes

- which allocation instrument is better?
- private tertiary education institutions?
- link to quality assurance?
- revenue supplementation
- political economy dimensions

which allocation instrument is better?

- local circumstances
- reform for what?
- time dimension

principles of an appropriate allocation instrument

- linked to performance / policy
- transparent
- flexibility
- compatibility

role and place of private institutions

- eligible or not?
- a more appropriate approach
 - purpose
 - proportion of private sharing
 - quality, relevance and effectiveness

link to quality assurance

- real or false homogeneity?
- linking or not linking?

revenue supplementation

- compatible with institutional culture and values
- does not divert from teaching and research
- contributes towards general, reallocable revenues

political economy dimensions

- controversial topics
 - tuition fees
 - student loans
 - private institutions
- dealing with the politics
- not an excuse

conclusion

- the pessimist
 - *More than any other time in history, mankind faces a crossroads. One path leads to despair and utter hopelessness. The other to total extinction. Let us pray we have the wisdom to choose correctly.*
Woody Allen

conclusion

- the optimist
 - *My center is giving way. My right is falling back. The situation is excellent. I attack.*
Marshall Ferdinand Foch

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2005 KEDI-World Bank 국제포럼
지식기반 사회의 고등교육 재정 개혁
<국문 요약>

2005. 4

한국교육개발원
고등교육연구실

Session I

Presentation 1: Major Dimensions of Financing Reforms

고등교육재정의 주요영역

- Jamil Salmi(세계은행 교육분과 위원장)

- 고등교육을 위한 재정개혁에 있어 고려해야 할 핵심 사항들을 재정에 관한 핵심 질문, 재정에 대한 새로운 도전과제들, 개혁과 혁신의 경향이라는 세 가지 차원에서 논의하였다.

1. 고등교육재정의 핵심 질문

- ☐ 자원의 운용 측면(Resource Mobilization)
 - (거시적 차원에서) 고등교육에 어느 정도의 재원이 지원되어야 하는가?
 - (기관차원에서) 수입재원확보전략과 정책
 - 누가 돈을 지불하여야 하며, 어떻게 할당하여야 하는가?
 - 언제, 어떻게 지원하는가?
 - (학생 원조 차원에서) 부과된 비용이 감당할만한 수준인가?
- ☐ 자원활용 측면(Resource Utilization)
 - 공공자원은 어떻게 배분되어야 하는가?
 - (고등교육)기관들은 얼마나 효율적이고 효과적인가?

2. 재정에 대한 새로운 도전과제

- ☐ 오랫동안 지속되어오고 있는 도전과제들
 - 재정적으로 지속가능한 팽창: 1980년부터 2001년 현재까지 소득수준에 따른 고등교육기관 진학률은 해마다 증가하였으나, 고소득층과 저소득층간의 차이는 계속적으로 심각한 차이를 보이고 있다.
 - 고등교육으로의 접근기회 측면에서의 형평성: 멕시코의 경우, 최하위 20% 저소득층의 경우 고등교육의 혜택을 겨우 1%정도가 받고 있으나 최상위 20%의 고소득층의 경우는 그 비율이 32%에 달하였다. 미국의 경우, 최하위 20%의 저소득층의 경우 약 8.3%정도가 미국 아이비리그대학에 진학한 반면 최상위 20% 고소득층의 경우 그 진학률이 50%정도였다. 프랑스의 경우, 그랑제콜(Grande Ecole)진학률은 최하위 20% 저소득층은 6%, 최상위 20% 고소득층은 15%였다. 스페인, 페루, 브라질의 경우에서도 고등교육의 접근기회는 상위 및 하위 20% 소득집단간의 격차가 매우 심각하였다.
 - 교육자원의 분배 측면에서의 불평등: 예) 미국
 - 내적 효율: 고등교육기관 학생들의 중도탈락률: 아르헨티나(75%), 모로코(60%), 호주

(30%). 정상적인 기간에 졸업을 하는 학생비율: 이탈리아(13%)

□ 새로운 도전과제들

- 학생인구의 감소
- 교육과 훈련에 대한 요구: 지식기반경제성장은 더 높은 노동생산성을 요구하고 있는데 이는 다시 말해 숙련된 노동자에 대한 요구 증대, 교육 및 훈련에 대한 요구의 변화(방법론적 기술과 지식의 업데이트), 생애학습차원에서 더 다양한 고객 필요 등을 의미한다. 실제로 일과 관련된 기술에 대한 요구는 지난 30년간 단순한 인지능력을 요구하였으나 지금은 전문가적 사고와 복잡한 커뮤니케이션 능력을 요구하고 있다.
- 정보통신기술에 드는 비용
- 치열한 경쟁의 증가: 기존의 전통적인 대학 체제에서 벗어나, 이제는 국공립대학과 사립대학들 간의 경쟁 이외에도 새로운 개념의 고등교육제공자들(Long distance competition, 프렌차이즈 대학, 기업형 대학, 대중매체, 도서관, 박물관, 중등교육기관, 교육브로커)과의 경쟁도 치열하다. 따라서 동맹과 파트너십 구축의 노력이 등장하고 있다.

3. 고등교육재정 개혁과 혁신 추세

□ 거시적 관점에서 펀딩 자원: 공공기금 펀딩 ~ 비용할당제

- 누가 돈을 지불하는가?: 정부(중앙/연방정부, 지방이나 주정부, 지방자치정부), 학생과 가족, 회사, 사회(세금을 통하여)
- 비용할당제를 위한 이론적 근거: 사적 이익, 추가세입에 대한 필요성, 형평성 차원, 효율성 증대 차원
- 비용 할당: 생활비(도서관, 식대, 교통비), 등록금.
- 수업료: 누구나/Dual Track, 학부/대학원과정, 국가정책/개별제도, 특별 학생군(재수강생, 파트타임 학생, 평생교육차원 수강생, 외국학생, 외주학생), 최고한계설정/한계의 자유화.
- 최적의 수업료 정책: 보편화, 타당한 수준(10 ~ 30%), 학생지원과의 연계, 생활비용에 따른 조정
- 정책적 경제: 상담과 동의, 분권 및 자율.

□ 기관차원에서 펀딩 자원: 공공기금 펀딩에의 의존 ~ 다양한 펀딩자원 발굴

□ 공공기금 펀딩 차원에서의 기금배분메커니즘: 직접적 펀딩 ~ 간접적 펀딩; 일체적 펀딩 ~ 성과중심 펀딩

- 기관에 직접 펀딩: 가이드라인 설정, 협상에 기초한 예산,
- 직접 펀딩: 포물라 펀딩(투입(Input)과 산출(Output)중심 펀딩), 경쟁에 의한 펀딩, 벤치마킹 펀딩, 성과중심 펀딩, 매칭(대응)펀딩, Charge Back
- 간접 펀딩: 바우처, 장학금, 세금 크레딧, 매칭(대응)그랜트, 학생대출, 인간자본계약

□ 학생원조 옵션: 학생을 위한 모기지론 ~ 졸업생을 위한 소득에 따른 대출정책

Presentation 2: Tertiary Education Finance and Reform in Korea: Achievement and New Challenges

한국의 고등교육재정 현황과 과제

- 이 영(한양대학교)

□ 다음의 표 1, 2에서와 같이 한국이 OECD국가들 중 최고의 공교육비 지출국(8.2%)임에도 불구하고 공교육에 대한 불신과 사부담 공교육비의 비중이 상당히 높은 비효율적 구조를 보이고 있다. 고등교육에 있어, 한국은 OECD국가들보다 높은 재정규모(한국 2.7-OECD평균 1.4)를 가지고 있으나 이에 대한 사부담률은 2.3으로 OECD국가들의 평균인 0.3보다 높아 한국고등교육재정에 있어 사부담이 차지하는 비중이 심각한 것으로 나타났다.

<표 1> GDP 대비 고등교육비의 공부담률과 사부담률(2001)

	한국	OECD
전 체	2.7	1.4
정부부담	0.4	1.0
사 부 담	2.3	0.3

출처: OECD 교육지표 2004

<표 2> 공교육비의 구조와 추이에 대한 국제비교(1977-2000)

(단위 : GDP대비 %)

교육수준	재정방법	한 국					OECD 평균	미 국	일 본
		1977	1985	1990	2000	2001	2001	2001	2001
모든 수준	전체	4.60	5.73	4.86	7.1	8.2	5.6	7.3	4.6
	공부담공교육	2.44	3.13	2.97	4.3	4.8	5.0	5.1	3.5
	사부담공교육	2.16	2.60	1.89	2.8	3.4	0.7	2.3	1.2
유아교육	전체	0.00	0.07	0.09	0.5	0.1	0.4	0.5	0.2
	공부담공교육	0.00	0.02	0.02					
	사부담공교육	0.00	0.05	0.07					
초중등교육	전체	3.82	3.98	3.44	4.0	4.6	3.8	4.1	2.9
	공부담공교육	2.22	2.59	2.47	3.3				
	사부담공교육	1.60	1.39	0.97	0.7				
고등교육	전체	0.78	1.68	1.33	2.5	2.7	1.4	2.7	1.1
	공부담공교육	0.22	0.52	0.48	0.6	0.4	1.0	0.9	0.5
	사부담공교육	0.56	1.16	0.85	1.9	2.3	0.3	1.8	0.6

- 또한 대학생1인당 공교육비 수준에 대한 분석으로 표 3에서와 같이 한국의 초·중·고교육비는 OECD평균의 약 77~79%에 이르는 반면 고등교육비는 OECD평균의 66% 정도에 그치고 있어 교육투자규모가 교육의 질적 수준을 가늠하는 시대에서 특히 고등교육재정의 획기적인 투자의 중요성이 강조되고 있다.

<표 3> 학생 1인당 공교육비 국제비교(2001)

(단위: U.S \$, PPP 환산액)

국가별	초등교육	중등교육	고등교육
호주	5,052	7,239	12,688
프랑스	4,777	8,107	8,837
독일	4,237	6,620	10,504
일본	5,771	6,534	11,164
한국	3,714 (77%)	5,159 (79%)	6,618 (66%)
스웨덴	6,295	6,482	15,188
스위스	6,889	10,916	20,230
영국	4,415	5,933	10,753
미국	7,560	8,779	22,234
OECD 평균	4,850	6,510	10,052

자료: OECD, Education at a Glance, 2004.

- 이러한 현 한국고등교육재정현황과 문제점에 대하여 고등교육공부담의 비율 확대, 장학금이나 학생대출 등의 재정적 지원 확대, 학교단위보다는 연구자 또는 연구팀 등의 개인단위에 연구비 지원, 고등교육재정을 위한 부처간 조율과 조정 시스템 구축 등의 정책조언을 제시하였다.

*Discussion 1: Tertiary Education Finance in Korea: Achievements and New Challenge

토론

– 박정수(국회)

- 세션1의 발표2의 논지와 맥을 같이하면서 본 토론은 향후 논의 되어야 할 4가지 핵심정책 이슈들에 대하여 언급하고 있다.
- 첫째, 고등교육에 대한 공공기금지원은 대학을 포함하여 특히 대학원분야로 더욱 확대되어야 하며, 이는 우수한 성과에 대한 선택과 집종의 차원에서 이루어져야 한다. 대학원교육의 붕괴조짐은 그 정도가 심각하며 현재의 대학원생들 또한 미래의 학자세대육성을 위한 자원이라기보다는 단지 취직을 위한 대기그룹으로 보아야 할 정도이다.
- 둘째, 장학금과 학생대출이 더욱 확대되어야 할 필요성이 있으며 특히, 저소득층을 위한 이자보조학생대출과 장학금은 새로운 “살리 매”(Salli Mae) 형태의 대출 프로그램보다 훨씬 더 나은 선택일 수 있다. 따라서 학생을 지원하는데 있어 성과와 결과중심으로의 정책도구 변환을 위한 조심스런 접근이 중요하다. BK21프로젝트 이후의 Post BK21도 기관보다는 선택된 Team 중심의 펀딩으로 이루어져야 하므로 성과의 관리는 대학연구 펀딩의 초석이 되어야 한다.
- 셋째, 정부주도의 대학정책개혁은 자칫 엄청난 경제적 부담을 초래할 수 있다. 따라서 시장 논리에 입각한 대학정책개혁이 필요하다. 이러한 목적에서 시장에서 나오는 여러 가지 신호들은 절대 왜곡 또는 조작되어서는 안 된다. 사적 분야에 대한 의존도가 높다는 점에서 고등교육환경은 영국보다는 미국과 더 많은 유사점을 공유하고 있기에 한국고등교육은 시장의 원리에 입각한 대학재정 시스템 하에서 더욱 효율적으로 운영될 수 있다.
- 넷째, 고등교육재정에 있어 다양한 정부 부처들 간의 협력과 조정능력의 향상은 현 정부가 당면한 중요한 사안이나, 현재 교육인적자원부는 다른 자원들과는 조직적 협력관계를 구축하고 있지 않은 실정이다. 대학의 연구재정지원은 그 투명성이 제고되어야 하고, 독립기구에 의하여 모니터 되어야 하며, 재정 정보는 반드시 공개되어야 한다.

Session II

Presentation 3: Allocation Mechanism: Formula Funding

포물라 펀딩 방식

- Richard Yelland(OECD 교육분과)

- 공공재원의 지출에 있어 고등교육이 차지하는 비중은 상당히 높다. 고등교육은 건강관련, 연금관련 등의 다른 많은 관심분야들과의 재원확보경쟁을 하여야 한다. 다행스러운 것은 21세기에는 지식이 성정을 위한 가장 핵심요인이므로, 고등교육의 효과성과 효율성은 꾸준히 강조되고 있다. 또한 대학들이 재정지원을 받기 위해서는 사회적 책무성이 강조되고 있는 추세이다. 그러나 대부분 국가의 대학들은 정부재정지원을 가장 중요한 수입요인으로 삼고 있다.
- 이러한 상황에서 Formula Funding은 고등교육과 생애학습의 재정적 혁신을 위한 대안이 될 수 있다. Formula Funding은 자금을 분배하는 하나의 도구로써 비용요인들에 각각 다른 가치를 부여할 수 있는 상호간 합의된 규정에 기초하여 모든 대학들에게 동일한 방식으로 적용되어지는 펀딩 방식이다. Formula Funding은 input중심 또는 output중심으로 설명되어질 수 있으며, 가장 핵심적인 구성요소는 서로 다른 학문분야의 학생 수이다. 이외에 Formula 구성요소로써 교수비용, 이수기간, 시설, 학습지원, 연구비 보조, 특수 환경, 특정 정책목표 등이 고려되어질 수 있다. 추가적으로 Formula에서 고려될 수 있는 요인들로는 학문분야별로 차등된 교수비용, 과목이수기간, 필요한 시설/설비, 학습지원(도서관이나 기타 서비스), 연구수당, 특정 환경과 특정정책을 반영하기 위한 조치들 등이 있다.
- 다음은 각 국의 포물라 펀딩을 통한 재정지원 사례이다.

사례국가	펀딩방식	내용
미국 워싱턴주	Non-Formula Funding	-주 총당금이 7개 고등교육기관 수입의 36%차지 -일괄지급 -재원배분은 일전수준의 학생수 보유를 조건으로 하며 위반시 재원회수함
프랑스	Input중심 Formula	-교육부가 각 기관에 얼마의 펀드를 배분할 것인지를 정함 -핵심자원은 돈이 아닌 교직원임 -학생수, 박사학위, 건물 등이 고려되어 포물라를 구성하는 요인으로 고려됨 -추가펀딩은 이론적 직원수와 실제직원수의 차이를 반영함 -추가프로젝트에 대한 펀딩계약 체결은 교육부와 각 대학간의 협상에 의함
네덜란드	input과 output의 결합 형태의 Formula	-교육·과학문화부의 Block Grant가 기관 펀딩의 상당부분을 차지함 -졸업 및 입학자 수가 중요한 결정요인으로 작용함 -학문분야에 따라 차등된 가격 책정
호주	Block Grant	-학생의 특정 수에 따라 39개 호주대학들이 Block Grant형식으로 펀드를 받고 있음 -각 대학은 교육·과학·훈련부와 협상 진행 -펀드의 양은 역사적 기록을 토대로 정해짐 -결과가 아닌 순응에 의한 책무성 강조
영국	Buffer Body를 이용한 output중심 Formula	-정부주도의 재원배분 및 정책 결정 -HEFCE가 기관에 재원배분 담당 -학문간 학생수와 학점 당 비용이 중요한 요인 -재정 각서의 법제화 -돈은 Block Grant형식으로 지원되며 기관은 지출에 있어 재량권을 가짐

Presentation 4: A Study on New Funding Formula in Malaysia for Malaysian Public Institutions of Higher Learning

말레이시아의 포물라 펀딩

- Hassan Said(말레이시아 교육부)

□ 자원배분 안내 지침

- 형평성: 유사한 프로그램에 대한 평등한 재정 배분
- 유동성: 정책과 변화에 대한 수용성
- 책무성: 투명성, 책임 정도, 회계 감사
- 효율성: 최적 운용, 효율적 관리
- 질보장: 목적과 목표, 개선

□ 재정 포물라의 유형

- 관료중심 재정 포물라: 미시적 수준에서 중앙 통제, 모든 지출 유형에 대한 승인
- 계약중심 재정 포물라: 서비스 제공자, 고객중심 책정, 시장중심 혹은 규제적
- 성과중심: 외부 평가
- 전략중심 재정 포물라: 국가적 전략 목표를 강화하기, 소수 관심과 중재 정책
- 협상중심 재정 포물라: 사전 지표들, 인지중심, 인성
- 포물라중심 재정 포물라: 프로그램유형, 등록, 산출, 질과 같은 적절한 투입요소들에 기초한 계산(평가)
- 산출중심 재정 포물라: 졸업생의 생산성
- 결과중심 재정 포물라: 질 강화, 준거를 개발하는 요구

□ 새로운 재정 포물라

- 새로운 포물라 = 산출 + 성과 + 전략
- 산출(output) 포물라: 학생이나 프로그램 비용과 같은 선결된 포물라에 기초한 배분, 지식 공유, 지식 창조 그리고 기관 유대를 투자하는 것에 목표함, 가치 연결, 재정 배분의 최대 비율
- 성과(performance) 포물라: 경쟁적 모형, 새로운 지식과 연구에 기여할 수 있는 대학들에 투자
- 전략(strategic) 포물라: 국가의 장기적 요구에 초점을 두는 바람직한 영역을 허용할 수 있도록 한 자유 재량적 기제

*Discussion 2: Allocation Mechanism

토론

- 김정민(기획예산처)

- 한국의 재정분배 메커니즘은 교육인적자원부가 국공립대학의 교수의 개인적 경비, 시설비용, 운영비용의 약 67%를 담당하고 있는 것이 특징이다. 또한 사립대학을 포함하여 대학의 R&D와 연구능력 향상에 대한 재정적 지원도 경쟁을 통하여 이루어지고 있다. 재정지원프로그램들은 각 부처들로 분권된 형식을 통하여 실행되어지는데 교육인적자원부를 비롯하여, 과학기술부, 산업자원부, 정보통신부 등이 포함되어 있다. 이들 중에 교육인적자원부가 가장 많은 그리고 가장 고액의 펀딩프로그램을 보유하고 있다.
- 재정지원프로그램에 있어 가장 주요하게 보는 기준은 특정대학이 재정지원을 요구한 분야가 과연 특징 있는 발전프로그램을 제공할 수 있으며 다른 경쟁대학들과 비교하여 신지식을 창출할 수 있겠는가에 초점을 두고 있다.
- 대학의 경쟁력은 국가의 경쟁력이다. 따라서 대학의 구조개혁의 논의는 대학교육의 질과 효율성 향상측면에서 아주 중요하다. 게다가, 대학의 재정지원은 대학의 경쟁력 향상과 연계되어 제공되어야 한다는 것은 예산의 기본원칙이다.
- 반면에 분권형 대학지원시스템은 공공책무성 측면에서 부처간의 프로그램의 유사성 발생, 특정 인물이나 팀에 재정지원의 집중화 등의 문제점들을 만들고 있다. 이를 해결하기 위해서는 정부는 부처들간 제공하고 있는 대학의 R&D 펀드의 통합정리 된 데이터를 구축할 필요가 있으며, 연구지원금관리를 위한 가이드라인도 설정할 필요가 있다.

Session III

Presentation 5: Possible Uses of Vouchers in Higher Education 바우처를 통한 펀딩

- Arthur M. Hauptman(세계은행)

- 고등교육에서의 바우처의 정의와 함께 고등교육 재정 메커니즘의 맥락에서 바우처를 통하여 고등교육재정을 지원할 수 있는 두 가지 방법에 대하여 알아보았다. 첫째는 이월경비의 일부 또는 전부를 떠맡는 수단으로 특히 지원되는 공공기금에 운영의 대부분을 의존하는 국공립대학들에서 가능하며, 두번째는 학생 또는 가족들의 재정적 부담을 줄여줄 수 있는 재정지원책으로써의 바우처로, 고등교육의 재정시스템의 형평성과 효율성을 향상시킬 수 있는 잠재력을 충분히 보유하고 있는 수단이다.
- 이 두 가지 방법의 바우처에 대한 장점과 여러 가지 이슈들에 대한 언급과 함께 현재 바우처 정책을 적용하고 있는 국제사례들을 알아보았다. 또한 강력한 정부의 구조, 적절한 질보장제도, 충분한 학생정보 등이 고등교육에서의 바우처의 성공을 위한 필수요인으로 제안하였다.
- 좁은 의미에서의 바우처는 학생이나 학부모들이 고등교육과 관련한 모든 소비에 이용될 수 있는 일정 금액을 보증하는 쿠폰을 의미하며 학생들은 그 쿠폰을 자신들이 다니는 대학에 가져다주고 대학은 그 쿠폰을 정부가 발급한 쿠폰과 동등한 것으로 가치를 평가한다.
- 넓은 의미에서의 바우처는 대학이 아닌 학생에게 주어지는 고등교육을 위한 공기금은 종류와 상관없이 바우처의 개념으로 볼 수 있다.
- 학생을 위한 재정지원책으로써 바우처를 이용하는 국가들의 사례
 - 미국
 - Pell Grant Program: 중앙에서 계산한 재정평가에 기초하여 학생들에게 필요에 근거한 바우처(Need-based Voucher)를 제공하는 프로그램
 - GI Bill: 군복무나 전쟁참가자를 대상으로 한 학생재정지원정책
 - 프랑스
 - 학생이나 학부모의 수입에 근거하여 사회지원금을 받을 자격이 있는 국공사립대학 재학생들에게 바우처가 주어진다.
 - 덴마크
 - 모든 학생들은 고등교육을 받는데 드는 생활비용을 지불할 수 있도록 다달이 최대 70번의 바우처를 정부로부터 받을 수 있다.
 - 학생들은 그 바우처들을 저축하여 졸업 때까지 두 배로 증식할 수도 있다.

Presentation 6: Stipends & Fee-For-Service Contracts: Reinventing Higher Education Financing

콜로라도주의 바우처 제도

- Rick O'Donnell(미국 콜로라도주 학교구)

□ 새로운 고등교육재정 시스템을 고안의 관점에서 미국 전체와 콜로라도주의 고등교육을 비교하여 콜로라도주 고등교육 체계에 대하여 비교분석하였다. 기존의 대학재정지원 모델은 정부가 대학의 정부지원금을 직접 제공하고 학생들은 등록금을 납부하는 방식이었으나, 새로운 모델은 Stipends와 Fee-For-Service Contracts를 이용하여 좀 더 효율적인 재정지원 체계를 마련하고자 하였다. Stipend이란 자격을 갖춘 대학의 학부교육에만 이용될 수 있는 일종의 바우처로 실질적인 돈이 학생에게 직접적으로 전달되기보다는 간접적으로 지원된다. Fee-For-Service Contract는 콜로라도 고등교육의회에 지출 승인된 일반 지원금으로 각 대학으로부터 다양한 서비스를 구매하는데 쓰인다. 여기서 말하는 서비스는 대학원 교육, 지방의 교육 서비스, 기초기술과정, 경력개발이나 재교육과 같은 경제 발전을 위한 서비스, 전문학위를 위한 전문서비스 등을 포함한다. 이러한 새로운 재정지원 모델이 가지고 있는 문제점과 장점을 자세하게 분석하였다.

□ 새로운 펀딩 모형이 가지는 이점들은 다음과 같다.

- 학생에게의 직접적인 재정지원이 가능
 - 학생들의 경제적 능력 증대
 - 학생들은 고등학교 때 펀딩 조기지원 가능
 - 주의 지원금을 위한 대학간 경쟁 유도
- 비용의 자동적 증가 방지
- 미래의 고등교육예산 삭감에 대비
- 기관에 정치적 보조금이 지급을 방지할 수 있음
- 주의 고등교육예산 삭감을 다소 어렵게 만들 수 있음

*Discussion 3: Questioning Voucher for Korean Universities

토론

- 천세영(충남대학교)

○ 현 한국대학의 재정적 현황은 대부분의 학생들은 사립대학에 재학 중이며, 기관보다는 개인의 비용부담이 높고, 공공지원보다는 사부담이 높으며, 여전히 자본은 기본인프라 구조 구축에 소비되고 있는 실정이다. 또한 지방의 자원이 서울로 유출되고 있는데 그 정도는 매우 심각하다.

1. 한국의 바우처 제도 적용에 대한 긍정적 측면

- ☐ 정부의 예산시스템에 의한 고정된 규제로부터 야기되는 국공립대학의 비효율성을 극복할 수 있음
 - 획일화된 통제: 교수의 수, 연봉수준, 학생수와 입학정책, 예산과 회계 등
 - 건물과 시설에 대한 통제된 투자
- ☐ 공급차원의 바우처로부터 시작하는 것이 바람직할 수 있음
 - 현재의 예산시스템보다는 포물라펀딩과 자율적 예산집행에 의해 돈을 소비하여 효율성 증대를 기대할 수 있음.

2. 한국의 바우처 제도 적용에 대한 부정적 측면

- ☐ 대부분의 대학들은 고등교육시장체제에서의 경쟁에 준비가 되어있지 못함
 - 시작조건, 정부정책 등에 있어 불평등성 존재
 - 교육발전보다는 정치사회적 이슈로 번질 가능성이 있음
- ☐ 기회배분의 차원에서 불평등한 결과를 초래할 수 있음
 - 돈은 학생들의 서울유입으로 인하여 서울의 대학들에 집중될 수 있으며 상대적으로 서울의 대학에 재학하는 부유한 계층에게 집중될 수 있음
- ☐ 최근의 콜로라도주의 서비스계약형태의 바우처 정책의 사례를 볼 때 그다지 성공적이지 못함
 - 한국의 경우: 선택과 집중의 원칙에 의하여 정부가 시행하고 있는 누리사업이나 두뇌한국 21과 같은 프로젝트들이 있음
 - 돈이 그저 잘 포장되고 미화된 프로젝트에 집중될 수 있음
 - 교육이라는 직접적인 목적보다는 수혜자가 선호하는 인프라 구조 구축에 쓰일 수 있음.

3. 타협점: 혼합형 모델 제시

- ☐ 공급측면의 포물라펀딩을 통한 바우처 제도
 - 정부로부터 국공립대학을 독립시킴으로써 국공립대학체제의 통제시스템 재구조화

- 가능한 포물라 구성요소: 머릿수에 따른 학생 수, 불이익을 받고 있는 학생집단, 지역의 불균형
- 대출과 원조 형태의 요구측면의 바우처 제도
 - 국공사립대학 모두에 적용
 - 사적 자본을 공공투자에 끌어들이므로써 미래의 인간자본육성을 위한 사회적 신뢰 구축
- 대학의 자본투자요구에 대응하기 위한 특별프로젝트(BTL(Build-Transfer-Lease)프로젝트의 새로운 제안서)
 - 대학의 기본인프라구조 향상
 - 세금부담 감소

Session IV

Presentation 7: Financing Reforms for Tertiary Education

경쟁을 통한 재정배분

– Lauritz Holm-Nielsen(세계은행)

- 고등교육의 재정혁신을 위하여 대학에 포물라에 기초하여 편당하는 공급측면의 재정과 학생재정지원책이나 바우처를 기초로 한 학생을 통한 수요측면의 재정을 적절히 조화시킨 경쟁력중심의 성과중심 편당의 도입에 대하여 논의하였다.
- 이를 위하여 칠레의 고등교육과 재정체계를 사례 분석하였으며 칠레에서의 공급 및 수요측면의 재정지원책의 현황 파악을 토대로 경쟁에 의한 편당과 성과에 대한 합의의 원리 및 이에 따르는 단점들에 대하여 예측하였다. 또한 경쟁과 성과중심의 편당 체계의 확립을 위하여 요구되는 사항들, 공급 및 수요측면의 재정체계가 가진 장점들을 강화하고 단점들을 최소화할 수 있는 방안들을 모색하였다.
- 칠레의 고등교육의 공공재정은 25개의 전통 있는 국공사립대학들에게 지원되는 직접공공지원정책(Direct Public Support(AFD)), 최고 학생 포물라와 연결된 국공사립대학을 위한 간접공공지원정책(Indirect Public Support(AFI)), 질적 향상을 위한 Competitive Fund(MECESUP, 모든 고등교육기관이 지원 가능), 장학금이나 학생대출 등을 통한 학생재정지원정책으로 나누어 볼 수 있다.

1. 칠레의 Competitive Fund

- MECESUP에 의한 Competitive Fund
 - 대응자금을 위하여 매년 실시되는 경쟁을 통하여 질과 관련성을 제고하는 것이 목적
 - 생산 산업의 요구가 높은 분야들에 속한 기술훈련제공기관에 지원
 - 중요학문분야의 학부프로그램에 지원
 - 대학원프로그램에 지원
- CONICYT에 의한 Competitive Fund
 - 기술적 지원과 능력함양 등에 재정지원을 함으로써 칠레의 ST&I 시스템 향상 목적
 - 과학의 우수성, 진보된 인간자본, 연구 인프라의 향상이라는 세 가지 competitive program을 통한 칠레의 과학적 기초 강화
 - 협력적 연구 컨소시움을 통한 또한 연구에 있어 산업체 및 국제협력을 통한 국공립대학과 사립대학간의 연계 증진.

2. Competitive Fund의 원칙

- ☐ 다양한 분야의 이슈들을 다룰 수 있는 펀드 배분에 있어 유연한 메커니즘
- ☐ 비용의 효과성 및 질과 관련성을 증대시킬 수 있는 산출(output)중심의 펀딩 메커니즘
- ☐ 전략적 계획과 선택에 기초한 기관들 간의 펀드유치 경쟁
- ☐ 잠재력, 성과, 역대의 기록 등에 근거하여 가장 최고의 프로젝트를 선택하는 정책 장려
- ☐ 투명한 목표, 자격과 선택의 기준들의 투명성에 기초함

☐ 그러나 Competitive Fund는 첫째, 정정당당한 경쟁과 동료들간의 평가를 위한 적절한 문화가 요구되고, 둘째, 자격설정, 선택과 실행의 기준 등의 규칙을 설정하는데 있어 중앙의 확고한 능력이 요구되며, 셋째, 내적, 분권적 관리의 자유와 책무성 등을 감독할 수 있는 기관의 능력이 필요하다는 약점을 갖는다.

3. 성과에 대한 합의의 원칙과 이에 따르는 단점

- ☐ 기관이 성과를 올릴 수 있도록 인센티브 제공
- ☐ 기관들이 그들의 임무와 전략을 분명하게 할 수 있도록 장려
- ☐ 기관의 특성과 요구와 맞는 영향과 성공을 위한 복잡하고 다양한 지표들 제공
- ☐ 거시적 환경의 변화를 반영할 수 있도록 융통성을 가지고 주기적으로 재협상 실시
- ☐ 그러나 감독기관에 협상과 합의에 대한 관리차원에서 높은 요구가 부하될 수 있으며, 중앙의 강력한 능력을 전제로 하며, 포물라펀딩에 비하여 미래에 대한 예측능력이 떨어지는 단점을 가지고 있다.

Presentation 8: Brain Korea 21

두뇌한국 21 사업

- 유현숙(한국교육개발원)

□ 세계적 수준의 대학원과 R&D인력양성을 목적으로 99년부터 7년간 \$1.2B가 지원되고 있는 정부의 두뇌한국 21프로젝트에 대하여 전반적으로 분석을 위하여, 두뇌한국21프로젝트의 실시배경, 역사, 목적 등을 기본으로 하여 창의적인 인간자원 육성을 위해 대학 개혁을 위하여 두뇌한국21프로젝트가 대학들에 재정을 지원하는 원칙들에 대하여 프로젝트 운영체계와 함께 심도 있게 알아보았다. 또한 현재까지의 두뇌한국21프로젝트의 성과를 분석하고 앞으로 해결하여야 할 향후과제들을 제시하고 있다.

1. 두뇌한국21프로젝트의 사업성과

- 연구 산출물의 증가와 대학 내 연구비중앙관리제의 정착
- 학문후속세대의 양성

<표 1> 학문후속세대의 지원실적

	1999	2000	2001	2002	2003	계
석·박사 후보자	8,414	12,083	11,403	11,808	13,173	56,681
연구자	474	1,136	1,218	11,277	1,406	5,511

2. 두뇌한국21프로젝트의 성공을 위한 향후 과제

- 사업목표의 단순화
 - 초기의 목표가 확대되어 지나치게 다양한 목표를 가져, 사업의 효율성을 저하시키고 있다.
 - 선택과 집중의 논리에 근거하여 사업목표와 내용을 재정비하여 단순화시킬 필요가 있다.
- 대학원 육성 및 연구지원을 중심으로 Post BK21 전략 수립 필요
- 연구여건 개선 병행의 필요성
 - 지원조건을 제시된 규제들이 고급인력양성이라는 궁극적인 목표보다는 입시제도에 다소 초점이 맞춰져 있으므로 연구여건 개선 관련 제도개혁에 대한 재강조가 요구되고 있다: 교수 연구동기 강화, 대학 내 연구인력 활용방식 개선, 연구비 관리제도 효율화, 산학협동 통한 연구비 조달 등
 - 대학원생 지원과 장단기 해외연수에 집중지원에 대한 타당성 검토
- 사업시행주체의 자율·책임 강화
- 성과에 기초한 공정한 선정과 평가
- 예산운용의 투명성과 효율성 제고
- 완결(exit)방식의 보완

Presentation 9 : New University for Regional Innovation Project 누리사업

- 백성준(한국직업능력개발원)

□ 서울 및 경인지역 이외의 지역의 혁신적 개발과 발전을 위하여 새로운 대학을 만들고자 정부가 재정 지원한 혁신 프로젝트인 누리사업의 목적과 전략, 누리사업 지원금의 할당 및 분배 메커니즘, 누리사업 지원금 분배결과에 대한 분석과 함께 누리사업에 대해 전반적으로 평가를 내리고 있다.

1. 누리사업의 목적

- 지방대학 특성화 및 경쟁력 강화
 - 지역발전과 연계된 특성화 분야를 집중 지원하여 지방대학 경쟁력 강화
 - 대학의 교육여건 개선: 현재 61.2%인 교원확보율을 2008년까지 80%로 유도
- 우수인력 양성을 통한 지역발전 촉진
 - 지역사회와 노동시장의 요구를 반영하는 다양하고 효과적인 교육프로그램을 제공함으로써 학생의 취업 능력을 제고
 - 2004년 58.1%인 취업률을 2008년 70%로 향상시키고 취업의 질도 개선
- 지역혁신체계(RIS) 구축 토대 마련
 - 대학을 중심으로 지자체, 산업체, 연구소, 언론, NGO 등이 상호 협력하여 다양한 지역혁신 체계 구축 추진

2. 누리사업의 성격

- 특성화 분야 인력양성을 위한 교육프로그램 위주의 사업
 - 지역 발전에 연계된 특성화 분야 인력양성 프로그램 지원
 - 교육의 질 향상 및 취업률 제고 등을 위한 다양한 교육프로그램을 적극 지원하여 지역발전에 필요한 인력양성 촉진
- 중견전문인력 양성을 위한 Bottom-Up방식의 사업
 - 기초이론과 현장실무능력이 조화된 창의적인 중견전문인력을 중심으로 고급전문인력과 현장기술인력을 동시에 양성하기 위한 사업
 - 지역발전 전략에 기초한 자발적 사업계획 수립과 지역단위협의체의 의견을 반영하는 Bottom-Up방식의 사업

3. 누리사업의 추진 전략

- 지역이 주도하는 분권적·상향식 사업 추진

- 지역 내 대학, 지자체, 산업체, 연구소, NGO 등이 참여한 사업단이 지역과 대학의 발전 전략에 맞추어 사업의 분야, 내용 및 규모 등을 스스로 선택
- 지역단위협의체를 통하여 각 사업단별 사업계획에 대한 지역의 검토의견을 평가절차에 반영
- 지역간 균형발전과 '선택과 집중'에 의한 지원의 조화
 - 사업예산을 권역별로 배분하고, 권역 내에서는 '선택과 집중' 방식에 의하여 우수한 사업단에 집중 지원
 - 권역별 자원 배분시 지역발전 정도가 상대적으로 낙후된 지역 고려
- 재정지원 방식의 개선을 통한 효율성 제고
 - 사업계획에 따른 사업비(인건비, 운영비, 연구비, 시설유지·보수비 등) 전체를 일괄 지원
 - 사업계획에 맞는 장기적 지원(5년)을 통한 안정성 유지
- 성과중심의 사업관리체제 구축
 - 사업계획에 따라 자율적으로 성과지표를 제시하도록 하고, 연차 및 중간평가를 통해 사업 성과가 부실한 사업단은 퇴출

Presentation 10: Performance-Based Funding in Higher Education

성과중심 펀딩

- Arthur Hauptman(세계은행)

- 성과중심 펀딩은 기존의 전통적인 방법을 통한 펀딩에 비해 고등교육재정을 위한 혁신적 아이디어로 떠오르고 있다. 성과중심 펀딩은 실제적 성과에 대한 보상으로 투입요소보다는 실질적인 산출물의 양과 질에 초점을 두고 있다. 성과중심 펀딩은 공공정책의 목적들을 반영하는 성과지표들을 이용하며, 기관의 실질적 향상에 대하여 인센티브를 제공하도록 디자인되어 있다. 따라서 좀 더 투명한 펀딩체계와 결과와 펀딩의 수준을 연결함으로써 공공기금에 대한 책무성을 높이는 이점이 있다.
- 성과중심 펀딩은 다음의 3가지 형태의 재정방법을 중심으로 생각될 수 있다. 첫째로 Performance set asides는 공기금의 일부를 다양한 성과 측정에 지원될 수 있도록 책여두는 것을 말한다. 미국의 12개주 이상에서 이미 시행되고 있는 재정방법으로 Tennessee주는 펀드의 약 6%로 South Carolina주는 이월예산의 대부분을 Performance Set Asides로 할당하고 있다.
- 둘째, Performance Contract(성과중심계약)는 정부와 수혜기관 간 성과중심의 목적에 대하여 법적으로 상호 동의하는 계약을 체결하는 것으로, 프랑스는 1989년 이래로 recurrent budget의 약 1/3 에서 1/2를 4년 performance contracts에 지원하고 있으며, 미국의 콜로라도주는 이미 개혁의 일환으로 기준을 충족시키지 못한 기관에 제재를 가하기 위한 Performance Contract를 설정하고 있다.
- Payments for Results는 산출물을 근거로 하여 펀딩 포물라의 일부분 또는 전체를 결정하고 동의 하에, 특정 학문분야 졸업자나 특정기술을 보유한 학생들을 위하여 기관에 펀딩이 지원되는 방법이다. 영국, 덴마크, 네덜란드 등이 펀딩 포물라에 성과를 반영하고 있다.
- 여러 나라에서 이미 효과적인 재정지원 방법으로 그 잠재력을 인정받고 있으나, 성과중심 펀딩은 여전히 극소수의 국가에서만 적용되고 있어 성과중심 펀딩의 성공적인 수행을 위한 프로그램 디자인 및 어떤 형태의 성과중심 펀딩을 이용할 것인가에 대한 심도 있는 논의가 요구된다.

*Discussion 4: Discussion on Financing Higher Education: Allocation Mechanism

토론

- 김명수(한국교원대학교)

- 교육활동 지원을 위한 재정의 충분한 보장과 교육의 질과 관련된 교육재정의 효율성간에는 상관관계가 존재한다. 선진국들과 비교하였을 때, 한국의 학생당 사회교육비용은 여전히 낮은 수준에 머물러 있으며 교육비용의 대부분은 학생들의 등록금에 의존하고 있는 실정이다. 따라서 한국은 교육재정의 확보에 있어 상당한 어려움과 제약을 가지고 있다. 낮은 수준의 교육을 위한 공공재정은 노동비용을 높이고 운영 및 시설에 대한 지출을 낮추는 결과를 초래하고 있으며, 교육의 질 차원에서 교육재정 운영의 효율성을 높이는데 걸림돌이 되고 있다.
- 교육재정의 부적절한 투자는 교육의 양적 개발에 치중한 시기에는 그다지 문제가 되지 않았다. 그러나 21세기 지식기반경제사회의 도래로 인하여 고등교육은 고부가가치 창출을 위한 인적자원을 보장하는데 중요한 역할을 부여받게 되었다. 고등교육의 역할은 교육의 질 향상을 위한 교육재정투자를 확보함으로써 성공적으로 성취될 수 있다. 그러나 국제통계에 따르면 한국대학은 질적으로 그 수준이 높지 않다. 이 결과는 교육의 질을 위한 교육재정확보의 노력이 결여되어 있기에 나타났다고 볼 수 있다. 또한 대학재단의 전입금 또한 그 수준이 고등교육의 질을 높이기에는 턱없이 부족한 것도 현실이다.
- 또 하나 고려되어야 할 핵심사항은 제한된 자원 속에서 재정운영의 효율성을 높이기 위해서는 올바른 장소에 올바른 투자가 이루어져야 한다는 점이다. 시장논리에 반한 백화점 상품식 전공과 교수의 부족 등은 한국대학의 경쟁력 약화를 초래하고 있다. 또한 경쟁력을 갖춘 특정학문에 대한 투자보다는 학문들간의 균형 있는 투자를 선호하는 대학들의 재정분배방식 또한 대학의 경쟁력 제고에 걸림돌이 되고 있다.
- 다행스럽게도 누리사업과 두뇌한국21 프로젝트에 의한 정부의 재정지원은 대학이 국제수준으로 도약할 수 있는 기회를 제공하고 있다. 그러나 그 액수가 전국의 대학들을 다루기에는 여전히 부족한 점이 아쉽다.
- 충분한 예산은 재정분배를 효과적으로 만들지만, 예산의 부족은 경쟁을 심화시켜 예산을 배분하는데 있어 엄격한 규칙과 과정을 필요로 한다. 재정을 극소수의 우수대학이나 전공에 배분하는 방식은 국제경쟁력 확보차원에서 매우 중요하며 다른 대학들을 국제적 기준으로 끌어올릴 수 있도록 장려하는데 있어 하나의 역할 모델이 될 수 있다. 따라서 부족한 재원의

분배는 과거, 현재, 미래의 예상 가능한 결과에서 비롯한 확고한 기준에 의하여 이루어져야 한다. 중요한 점은 어떻게 재원을 분배하는가가 아니라 자원분배가 미래지향적이고 고등교육의 국제경쟁력을 확보하기 위한 개혁의 증진 차원에서 이루어지는가이다. 이러한 자원분배를 이루기 위해서는 적은 재원을 많은 사람들에게 주는 것은 더 이상 답이 될 수 없다. 많은 재원을 소수의 우수 집단들에게 집중적으로 지원하는 것이 고려되고 철저하게 검증되어야 한다.

Session V

Panel presentation 1: A Strategic plan for higher education in Bangladesh

고등교육재정배분 방식: 방글라데시

□ 방글라데시의 대학 수는 1971년 5개에서 2005년 현재 79개(국공립 26개와 사립 53개)로 급증하였다. 고등교육 재학생수는 약 700,000명 정도이며 그 중 32%가 여성이고 약 500,000명의 학생들은 국립대학에서 학위과정을 밟고 있다. 이 외에도 약 400,000명 이상의 학생들은 다양한 과정들을 방글라데시 개방대학에서 이수하고 있다.

■ 최근 대학들이 직면하고 있는 이슈들은 다음과 같다.

□ 국공립대학의 경우

- 종합적이고 지속적인 발전을 위한 충분한 재정 배분 결여
- 고등교육의 질과 수준의 악화
- 적절한 수준의 실험실과 도서관 시설의 부족
- 고등교육연구와 교사를 위한 훈련 등의 부족
- 공간부족과 학생 불안 요인 등 내제
- 요구를 시의 적절하게 반영한 교과과정의 부족

□ 사립대학의 경우

- 학생들을 위한 공간과 시설 부족
- 도서관, 실험실, 교수기자재 등의 부족
- 비싼 등록금과 수업료
- 부유층 학생들만을 위한 구조
- 적절한 학사계획과 재정관리의 부재
- 전임교원의 부족

□ 그러나 더욱 심각한 문제는 교육의 질과 대학운영에 있어서의 통제시스템이다. 재원은 거의 대부분 교직원들의 봉급을 충당할 수 있는 수준으로 연구나 장비구입은 사실상 어려운 실정이다. 따라서 대학들은 정부에 재정적으로 지나친 의존도를 보이고 있다. 대학을 위한 국가 단위의 전략과 계획은 수립되어 있지 못한 실정이며 노동시장의 변화하는 요구에 대하여 대학들이 즉각적으로 반응할 수 있는 능력은 없는 상황이다. 또한 대학에 미치는 정치와 정파 간의 영향력은 상당한 실정이다.

- 이러한 상황 속에서, 방글라데시 고등교육을 위한 전략적 계획이 다음의 핵심사항들에 초점을 두어 세워질 필요가 있다.
- 대학의 통제와 경영
 - 자원공급의 관련성과 질 강화
 - 대학 연구의 역할과 국가의 경제, 사회적 발전 요구와의 일치
 - 시스템의 효과성과 효율성의 증대와 강화를 위한 메커니즘
- 이러한 맥락에서 방글라데시 고등교육 전략계획수립 시스템이 설립되었는데, 이 시스템은 1) 3명으로 구성된 부처간 조율 위원회, 2) 전략계획수립위원회, 3) 6명의 전문가그룹, 4) 대학통치위원회에 3명의 전임비서를 둬, 5) 국제자문기구를 포함한다.
- 전략계획을 위한 미션(Mission)은 다음과 같다.
- 사회문화적 관점에서의 전략계획의 비전, 임무, 목적, 목표
 - 고등교육의 기준, 질, 우수성
 - 현재 운영 중인 대학의 강화와 통합
 - 과학과 기술 강조
 - 다양한 학문들간의 학생등록의 합리화
 - 충분한 실험실 기자재, 도서, 학술잡지, 교수도구 등의 제공
 - 대학의 재정적, 행정적, 학문적 관리에 있어 책무성과 투명성 강화
 - 대학학사활동에 대한 효과적인 장학활동, 조정, 관리를 위한 대학통치위원회의 강화
 - 적절한 요구중심의 교과내용
 - 대학의 성과를 평가하고 모니터하기 위한 인증협의회 구성
 - 외국대학 및 고등교육연구소와의 연계

Panel presentation 2: Financing higher education in the public universities of Bangladesh

고등교육재정배분 방식: 방글라데시

– Mahfuzul Huq

1. 방글라데시의 고등교육 전략 계획

□ 세계은행의 지원 하에 10년 계획(2005–2015)

- 세계은행은 교육 전반에 대한 지원에 관심이었으나 이제는 고등교육에 대한 관심으로 전환됨
- 과학과 공학중심 고등교육의 개발은 방글라데시의 고등교육 질을 향상시키고자 하는 세계은행의 목표와도 부합됨

2. 공공부문의 고등교육재정을 위한 최근 전략

- 자기 재정 분배의 기초에 토대한 대학 설립 시도: 대학의 자체 재정을 위한 내부 구조 형성, 초기 5년 비용 지원, 그리고 기타 개발비용 조달

Panel presentation 3: Higher Education in Chile: The MECESUP Competitive fund

고등교육재정 배분 방식: 칠레

- 칠레의 The MECESUP Competitive fund 프로그램은 질에 대한 투자로써 대학교직원의 박사수준까지의 갱신과 박사과정 지원 등을 통한 인간자본의 증대, 교수-학습을 향상시키기 위한 장비와 R&D를 위한 과학 장비 등의 학문적 인프라 구축, 교육과정 재구성, IT나 정보 관리 등의 교수-학습과정, 마지막으로 자치와 인증을 통한 능력배양과 질 보증을 강조한다.
- Competitive fund는 기술적 훈련, 학부생과 졸업생을 위한 교육 등을 지원하며 1998년부터 200년까지 400개의 프로젝트를 지원하여 접수된 프로젝트 지원신청의 약 40%정도를 승인·지원하였다. 자세히 살펴보면, 학부교육 분야에서 205개의 프로젝트, 졸업 후 교육 분야에서 74개 프로젝트, 관리향상분야에서 23개 프로젝트, 기술훈련분야에서 67개 프로젝트를 승인하여 지원하였으며 이에 배당된 재원은 총 US\$225million이었다. 특히, 약 70%의 프로젝트들과 지원금은 지방으로 배분되었으며 평균 편당은 약 US\$600.000이었다.
- Competitive fund의 지원분야는 교직원 능력강화, 국제협력, 대학졸업 후 교육 장학금, 연구방문, 도서관 현대화, 기술정보와 교수-학습간의 통합, 새로운 학부실험실, 교과과정의 현대화 및 재구성, 과학 장비, 학생서비스 향상 등이다.
- Competitive fund는 편당 방식을 기존의 방식에서 경쟁적인 결과중심의 프로젝트 편당을 변화시켰으며, 책무성의 강조, 향상된 프로젝트의 관리, 성과지표의 이용, 교수-학습활동 지원 및 학생시설의 업그레이드, 박사과정프로그램의 도약 등의 성취를 보이고 있다.
- 그러나 competitive fund는 증가에 따른 편당 배분, 인프라 구축에 대한 투자, 책무성 측면에서 여전히 불충분한 결과를 보이고 있으며, 형평성에 근거한 기회제공의 원리 준수에 있어 어려움, 기관의 관리향상의 더딤 등의 약점을 극복하여야 한다.
- 현 21세기 고등교육은 교육, 연구, 박사학위프로그램, 지식기반경제로의 전환을 위한 발전과 혁신에 있어 고루 능력을 갖춘 인간자본을 요구하고 있으며 자국의 발전요구와 국제화의 추세와 조화를 이룬 교과과정의 재구성, 모든 수준에서의 질 보장, 효과적, 효율적 고등교육 지원을 위한 관리능력 향상 등의 도전과제를 안고 있으며 칠레의 2005-2011 MECESUP 프로그램은 이를 반영하고 있다.

Panel presentation 4: Financing in Higher Education in Nepal

고등교육재정 배분 양식: 네팔

- Bldur Prasad Upadhyay(네팔)

□ 네팔의 현대 고등교육의 시발점은 1918년 Tri-Chandra College의 설립이다. 이 후, 1951년까지는 2년제 대학만이 제한된 학문분야에 국한하여 운영되었다. 그러나 1951년 Tribhuvan왕이 이끄는 민중혁명이 민주주의를 성취한 이래, 대학의 급속한 팽창은 생존가능성과는 무관하게 이루어져 왔다.

□ 여러 가지 어려움 끝에 1990년 이 후의 고등교육현황은 민주주의의 복원과 함께 새로운 국면을 맞이하게 되었다. 1991년 Kathmandu University가 설립되면서 1972년 New Education System Plan에 따라 모든 국공립대학들을 일괄 통제하는 Tribhuvan University(TU)의 독자적 권한 및 책임 시대를 종결하였다. 이 시기에는 고등교육을 발전시키기 위한 두 개의 발전계획이 동시에 이루어졌는데 이는 다음과 같다.

■ World Bank가 재정지원 한 고등교육프로젝트

이 프로젝트는 TU를 개발하고 개혁하여 하나의 주캠퍼스와 이웃하는 캠퍼스들 간의 클러스터를 구축하고자 하였다. 따라서 주변캠퍼스들과의 클러스터 구축을 통하여 지방중심의 대학으로 발전시킴으로써 주캠퍼스들에 인프라를 구축하고자 재정을 지원하였다.

■ Purbanchal University Act

이 법령에 따라 Purbanchal University와 Pokhara University가 설립되었으며 이 두 대학은 위의 주캠퍼스와 클러스터 개념에 의하여 설립되지 않았기 때문에 TU와 연계되어 운영되지는 않았다.

□ 현재의 네팔고등교육은 캠퍼스클러스터 체제에서 5개의 대학이 200,000명의 학생들에게 교육서비스를 제공하고 있다. 대학캠퍼스 및 학생수 현황은 다음과 같다.

대학교	주 캠퍼스		지부 (클러스터)		전체	
	캠퍼스 수	학생수	캠퍼스 수	학생수	캠퍼스 수	학생수
Tribhuvan University	61	123,556	278	64,647	338	188,203
Mahendra Sanskrit University	13	1,480	12	996	25	2,476
Kathmandu University	2	2,239	11	3,776	13	6,015
Purbanchal University	3	306	67	5,244	70	5,550
Pokhara University	2	285	25	4,682	27	4,967
전체	80	127,866	393	79,345	473	207,211

□ 1992년 국가교육위원회의 권유에 따라 1994년에 의회법을 통하여 대학재정위원회 (University Grant Commission)가 설립되었다. 대학재정위원회는 다음과 같은 목적과 기능을 담당하고 있다.

- 첫째, 정부기금을 대학에 적절하게 배분
- 둘째, 네팔의 고등교육의 재정을 위한 정책 제시
- 셋째, 새로운 대학 설립시 정부에 조언 제공
- 넷째, 고등교육의 기준과 질을 증진시키기 위한 적절한 계획과 단계 확립 및 시행

□ 지난 10년간 네팔정부의 고등교육지원금은 국가의 전체 예산의 10% ~ 14%로 점차적으로 감소하고 있는 추세를 보이고 있다. 전체 교육예산의 55% 정도가 초등교육이나 기본교육에 지원되고 있으며 고등교육 예산의 감소는 기부자원조프로젝트가 종료에 기인한 것으로 보인다.

Session VI

Presentation 11: Income Generation Strategies

기관단위 자원 확보 전략

– Jamil Salmi(세계은행)

□ 고등교육의 재정적 혁신의 일환으로 대학의 수입발생에 대한 다양한 전략들을 구상해보았다. 공공예산의 축소, 경쟁의 증가, 기업 경영적 문화의 형성 등의 이유로 대학은 재정확보를 위한 추가 수입자원을 필요로 하고 있다. 따라서 예산, 등록금, 수익사업활동, 기금조성, 대출 등의 세입전략들을 University of Leicester의 사례를 통하여 알아보았으며 앞으로 다양한 재정을 확보하는데 있어 대학들이 직면할 수 있는 도전 과제들에 대하여 알아보았다.

■ 미래의 도전과제

□ 우호적인 관리환경

- 예산 인센티브
- 기부에 대한 세제 혜택 부여
- 융통성 있는 재정지원과정
- 법적 조항 정비

□ 학문적 임무(미션)의 양양

- 기관의 미션과 학문적 미션 사이의 불충분한 합의 제거
- 교수교원들의 강의 및 연구 시간 보장
- 조직의 통제력 상실 방지
- 윤리적 체계 강화

□ 적절한 관리체계

- 명료하고 투명한 수입배분규칙과 관련된 인적자원인센티브
- 기금조성전문가
- 투자전문가
- 자금운용관리체계

□ 수준별 경쟁체제

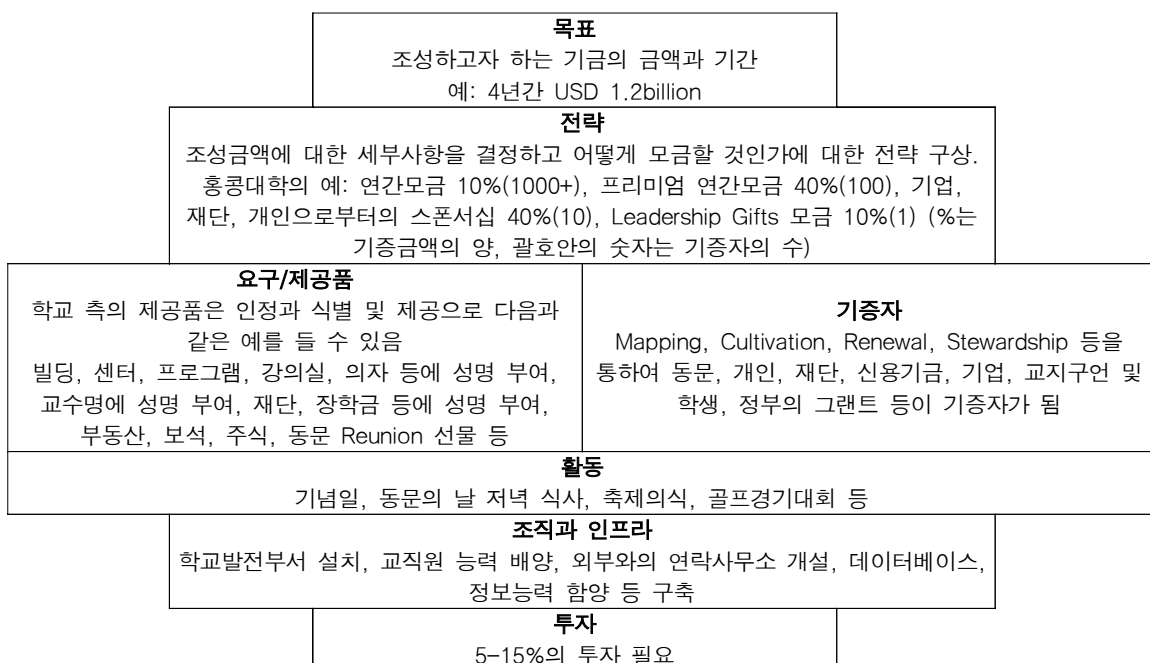
- 공공보조금을 이용하는 국공립대학
- 공공기관으로부터 간접적으로 재정적 보조를 받는 사립 고등교육기관

Presentation 12: Fundraising as Institutional Advancement

기금 조성 전략

- Kai-Ming Cheng(중국 홍콩대학교)

- 고등교육에 대한 사회적 기대는 지식의 창출이라는 연구적 기대, 지식의 구성이라는 학습 기대, 지역사회에 대한 의무의 봉사기대, 통합과 인간애의 도덕적 리더십으로 크게 볼 수 있다. 따라서 고등교육의 임무와 기여는 지역사회로부터 오고 함께 공유되며 그 목적은 공익이다.
- 기존에는 펀딩에 따라 계획하였으나 위의 사회적 기대에 부응하기 위한 새로운 펀딩시스템은 계획에 따라 펀드를 제공하며 새로운 계획에 새로운 돈을 지원한다. 새로운 펀드는 학술 능력 배양을 통한 한 단계 업그레이드와 장기적 발전을 위한 것이지 예산삭감을 위한 보상이나 단순한 소액현찰 정도의 개념이 아니다. 따라서 학교의 진보적 발전을 위한 기금조성(fund raising)은 우수성을 위한 파트너십이라고 볼 수 있다.
- 새로운 펀드는 경쟁에 의한 정부그랜트, 연구와 상담프로젝트, 등록금, 기업협력, 기부금 등의 형태를 가진다. 예로, 미국의 한 대학은 등록금 30%, 프로젝트 수입 60%, 기부금 10%로 재정을 구성하고 있다. 그러면 어떻게 새로운 펀드의 개념에서 기금조성을 하는가? 다음의 그림이 이를 설명한다.



- 새로운 펀드를 조성하는데 가장 중요한 핵심사항은 변화를 이룰 수 있는 비전 있는 계획, 강한 리더십, 요구하는 문화, 뚜렷한 이익, 능력배양, 중정과 신뢰, 프로토콜의 설정 등이다.

*Discussion 6: Income Generation at the Institutional Level

토론

- 김영철(한국교육개발원)

- 한국의 고등교육에 대한 수요는 매우 높으며 대학진학률은 전 세계에서 가장 높다. 그러나 선진국의 대학과 비교하여, 한국대학들간의 질적 경쟁은 그다지 높지 못하여 대학교육에 대한 산업체의 만족도 저하로 나타나고 있다. 정부는 한국대학의 질 제고를 위하여 두뇌한국 21이나 누리사업과 같은 정책을 펴고 있으며 고등교육개혁프로그램을 위한 예산 2005년 1조3천억원을 2008년까지 3조2천억원으로 높일 계획이다.
- 현재 정부의 고등교육재정지원은 GDP 대비 0.4%로 OECD 회원국들의 평균수준인 GDP 대비 1%에 미치지 못하고 있다. 선진국들과 비교하여, 한국대학의 세입구조는 지나치게 등록금에 의존하고 있다. 특히 사립대학의 등록금 의존도는 국공립대학과 비교하여 훨씬 더 심각한 상황이다.
- 한국고등교육재정을 위한 재원을 확보하기 위해서는 수익 재원의 다양화 노력이 요구된다 (예: BTL(Build-Transfer-Lease) 또는 인력개발교육과 관련하여 대학에 기부하는 기업에 대한 세제혜택 등). 또한 고등교육을 위한 학자금 지원체제 법제화, 대학 기여입학제, 대학별 기관단위 수입 재원 전략 수립을 위한 차이 해결 방안 등에 대한 논의도 중요하다.

Session VII

Presentation 13: Incorporation of National Universities in Japan: Financial Implications

일본의 대학개혁: 국립대학법인화

– Motohisa Kaneko(일본 도쿄대학교)

□ 2004년 국립대학 법인화

- 1996년 정치적 논제로 형성된 정부 개혁: 국립대학의 개혁에 관한 논의
- 1998년 독립된 행정 기관 창설
- 1999년 국립대학을 독립된 행정기관으로 전환할 것을 정부안으로 제출
- 2003년 국립대학 법인화법이 양 의회를 통과
- 2004년 4월 모든 국립대학들은 국립 대학법인이 됨

□ 새로운 체제: 통제, 재정, 내부 지배구조

- 통제: 정부로부터 분리된 법적 기관으로서 국립대학, 정부에 의한 행정적 통제 배제, 주요한 통제 수단으로서 중기(6년) 목표/계획 그리고 평가
- 재정: 각 대학은 독립된 회계단위, 기관재정은 법인회계체제에 따라 관리됨, 등록금/서비스 수익은 학교단위 재원으로 관리
- 내부 지배구조: 총장은 의사결정자이고 집행기구, 집행이사회(executive board)는 결정과 집행 담당, 연구위원회와 행정위원회는 심의기구

□ 쟁점과 변화

- 통제 쟁점: 중간 목표의 구체화, 목표성취의 평가
- 재정 쟁점: 정부의 핵심 역할, 정부 지원의 미래 수준
- 수입 재원의 미래 변화: 정부 보조(기관중심), 3자 재정지원(연구를 위한 정부 보조, 개인 증정, 계약 연구), 서비스 사업(등록금, 연구산출물, 병원)
- 정부의 기관 보조: 비우호적인 정치적 기류, 성취도와 효율성에 대한 요구와 도전, 정부보조금 증가에 대한 회의적 분위기
- 비기관적 재정에 대한 전망: 정부연구지원금(획득을 위한 증가된 압력, 기관보조를 연구지원금으로 전환하려는 정부안 제출), 개인/법인의 증정(높은 요구, 시설의 유용성), 계약 연구(정부와 개인 자원, 연구기관과 경쟁)

Presentation 14: Income Structure of Private Universities in Korea

기관단위 재원확보: 한국 사립대학

- 안종석(한국조세연구원)

- 한국의 사립대학들의 수입구조에 대한 분석을 위하여 현 한국 고등교육에서 사립대학들의 역할, 운영수입의 구조, 등록금, 기부금, 기타 수입현황, 사립대학들의 운영지출 구조, 수입 발생과 교육성과간의 관계에 대하여 분석하였다. 또한, 운영수입과 교육성과간의 관계는 학생들의 취업률과 진학을 차원에서 알아보았으며 현 한국 사립대학들이 가지고 있는 재정적 의존구조에 대한 시사점을 도출하였다.
- 2003년도 기준으로 사립대학은 한국고등교육의 전체 학교수의 85.7%, 전체 고등교육기관 등록자수의 74.1%를 담당하고 있다. 사립고등교육기관들의 재정구조는 등록금 의존도가 2002년 기준 전체 재정의 72.9%이며 기증수입이 20.6%, 교육관련 행정수입이 2.4%, 비교육분야수입이 4.1%로 나타났다. 또한 사립대학들의 재정구조는 등록금 의존도가 2002년 기준 전체 재정의 69.6%이며 기증수입이 23.8%, 교육관련 행정수입이 2.7%, 비교육분야 수입이 3.9%였다.
- 등록금 할당 분포를 보면 그 범위가 7.17%에서 84.3%에 이르며 사립고등교육기관의 1/2는 65% ~ 85%, 1/4는 25% 이하였다. 학생당 등록금 분포는 평균 534만원으로 GDP의 1/2에 이른다.
- 운영수입(A)면에서 운영지출(B)간의 관계를 토대로 하여 B/A의 비율은 100%일 때 기관이 수입보다 지출이 많았음을 나타낸다. 2003년도 한국사립대학들의 B/A 비율은 48.76%에서 99.78%의 범위를 보였다. 거의 반 이상의 사립대학들은 68% 이상의 B/A 비율을 보였다. 그러나 GDP 수준에서 볼 때, 고등교육에 대한 지출은 그다지 낮지 않지만 고등교육의 질을 세계수준으로 끌어올리기 위한 목적에서 볼 때는 여전히 부족한 수준이다. 사립고등교육기관의 운영수입은 운영지출을 감당할 수 있는 수준으로 수입을 넘어선 지출을 보인 기관은 없었다.
- 대학의 수입구조는 취업과 진학 비율 (E&A Ratio)에 영향을 주는 것으로 나타났다. 재단전입금과 국가보조가 높을수록 긍정적인 E&A Ratio효과를 보였다. 그러나 학생수와의 관계는 부정적이었다.

*Discussion 7: Income Generation at the Institutional Level

토론

- 이종갑(교육인적자원부)

□ 최근의 정책 여건

- 고등교육의 양적성장, 질적 경쟁력은 선진국에 비해 낮은 수준
 - 고등교육기관 진학률은 81.3%로 세계 최고 수준임
 - 그러나, 아직 질적 경쟁력은 선진국에 비해 낮은 수준임
 - ※ 일본, 대만, 싱가포르, 중국 등은 최소한 2개 이상의 대학이 세계 100위권 내에 진입('04, 영국 The Times紙)
- 고등교육의 현장적합성 부족
 - 산업현장에서 실제 필요로 하는 인력은 부족한 실정
 - ※ SCI 논문수는 17,785편으로 13위이나('03), 논문 평균 피인용도는 0.22로 34위
 - ※ 대학교육의 현장요구 부합도 : 기업 CEO 평가 60%(교육부 정책연구, '04)

□ 고등교육재정 OECD 국가와의 비교

구분		OECD 평균	한국	미국	영국	일본	독일	프랑스
▪ GDP 대비 고등교육기관에 대한 공공재원 교육비(%)		1.0	0.4	0.9	0.8	0.5	1.0	1.0
▪ 고등교육기관에 대한 공공 민간투자의 상대적 비중 (%)	공공재원	78.2	15.9	34.0	71.0	43.1	91.3	85.6
	민간재원	21.8	84.1	66.0	29.0	56.9	8.7	14.4
▪ 학생1인당 고등교육기관 교육비(US\$) (ppp 환산액)		10,052	6,618	22,234	10,753	11,164	10,504	8,837

※ 자료 : OECD, Education at Glance, 2004, 통계는 2001년 기준(평균은 국가평균)

- 고등교육 투자가 OECD 국가와 비교할 때 부족한 현실임
 - GDP 대비 고등교육기관에 대한 공공재원 교육비는 0.4%로 OECD 평균인 1.0%에 비해 부족함
 - 학생 1인당 고등교육기관 연간 교육비는 OECD 평균인 10,052달러의 2/3 수준인 6,618 달러임
- 고등교육의 경쟁력 확대를 위해 고등교육 투자의 지속적 확대가 요구됨

□ 사립대학 재정수입 구조

('03년 결산 기준, 단위 : 억원)

수 입		금액	비율		지 출		금액	비율	
			전체	운영수입				전체	운영비용
운 영 수 입	등록금	55,463	60.5	67.8	운 영 비 용	보수	31,125	33.9	52.3
	수강료	1,521	1.7	1.8		관리운영비	8,269	9.0	13.9
	전입금	6,982	7.6	8.5		연구비	8,594	9.4	14.4
	기부금	8,427	9.2	10.3		학생경비	9,779	10.7	16.4
	국고보조금	3,663	4.0	4.5		입시관리	937	1.0	1.6
	교육부대수입	1,924	2.1	2.4		교육외비용	495	0.5	0.8
	교육외 수입	3,804	4.1	4.7		전출금	353	0.4	0.6
	소 계	81,784	89.2	100.0		예비비	-	-	-
자본 및 부채수입		4,412	4.8		자본 및 부채지출		25,858	28.2	
전기 이월자금		5,465	6.0		차기 이월자금		6,251	6.9	
합계		91,661	100.0		합계		91,661	100.0	

- 사립대학의 등록금 비중이 높은 반면, 국고보조금은 매우 낮음

※ 사립대학 국고보조 비율

국 가 별	한국	미국	영국	일본
국고보조비율(%)	4.5%('01)	16.1('96)	55.9('98)	12.1('96)

- 등록금에 의한 수입 증대가 어려운 현실에서 다른 방안에 의한 수입 확대가 요구되고 있음

□ 고등교육재원 확충방안

- 고등교육의 경쟁력 제고를 위한 국고지원 확충 필요
- 정부의 R&D 예산이 대학의 인력양성과 연계되도록 지원방식 전환
 - ※ 정부 R&D 투자('05년 7.8조원)의 14.3%(1.1조원)만 대학에 투자
- 지역산업과 연계한 인력양성사업에 대한 지방자치단체의 투자 확대
 - ※ 서울시와 경기도 등 재정 여력이 있는 지자체가 지역혁신클러스터의 거점대학 인력양성을 위해 적극 투자하도록 인센티브 부여
- 민간자본의 유치를 통한 대학 시설투자(기숙사 등) 확대
 - 국립대학은 BTL방식(Build-Transfer-Lease)으로 '05~'08까지 약 3만5천명 추가 수용 (수용률 11%→20%)

- 사립대학은 BTL을 포함한 다양한 방식의 민간 투자 적극 유치
- 인력양성과 연계된 사립대학에 대한 법인기부금을 현재 50%에서 100% 전액 손금으로 인정하여 기업의 투자 인센티브를 확대하는 방안 협의 추진
 - ※ 대기업의 신입사원 재교육 비용이 과다하게 지출되고 있는 점을 감안하여 그 비용의 일부를 대학에 기부하고 기업의 수요에 맞는 맞춤형 인력을 양성할 수 있도록 유도
 - ※ 美 경쟁력강화위원회는 이공계 대학생을 위해 세금공제가 가능한 민간 부문의 '미래에 대한 투자(Invest in the future)' 장학금 신설을 권고
- 대학의 자구노력을 통한 재원 확충
 - 산학협력법 개정에 따라, 산학협력단과 학교기업 설치됨에 따라 대학은 관심을 갖고 적극 추진할 필요가 있음
 - ※ 박사급 연구인력의 75%를 대학이 보유하고 있음

□ 재정의 효율성 확보

- 정부의 대학재정지원사업 효과성에 대한 비판적인 지적이 있음
- ⇒ 모럴해저드를 방지할 사후평가 시스템 구축, 성과가 나오지 않거나 계약을 이행하지 않을 경우 지원금 회수 등 재정의 효율성을 확보해 나갈 것임

Session VIII

Presentation 15: Income Related Loans for Higher Education: Conceptual Basis and Implication

학생 학자금 융자방식의 조망

– Bruce Chapman(호주 국립대학교)

- 사회·경제적으로 부유한 집단들이 고등교육의 최대 이익 수혜자인 현실에서 낮은 등록금 또는 등록금 면제를 적용하는 것은 사회적으로 형평성에 어긋남으로 이를 극복하기 위한 일환으로 소득대비대출정책에 대하여 논의하고 있다. 또한 현 정부보장 은행대출이 가지고 있는 문제점, 소득대비대출정책의 장점, 호주의 HECS 사례 등을 통하여 소득대비대출이 고등교육을 위한 공평한 대출 시스템을 제공할 수 있을지 알아보았다.
- 현재 인간자본에 대한 투자는 능력, 미래의 노동시장 등의 여러 가지 측면에서 이미 대출제 공자와 수혜자 모두에게 불투명한 상태이며 이러한 불투명성은 상환채무불이행으로 이어질 수 있다. 또한 학생들은 대출을 받을 수 있는 기회를 잃을 수 있기 때문에 정부의 개입과 조정이 필요한 시점이다.
- 해결책의 하나로 정부보장 은행대출은 채무불이행에 대한 위험률을 감소시킬 수 있고 은행의 재정지원을 간단하게 받을 수 있는 장점이 있는 반면 채무불이행의 부담이 납세자의 몫으로 돌아갈 수 있으며, 상환時 각종 어려움의 발생, 채무불이행에 의한 신용불량의 위험과 대출금 상환時 행정적 소모의 증가 등의 단점을 안고 있다. 이에 수입대비대출정책이 하나의 대안으로 고려되어지고 있다.
- 소득대비대출의 예로, 호주의 HECS 프로그램은 상환기준을 위한 가계소득수준을 \$26,000 이하의 소득자의 경우는 소득의 0%, \$26,000-28,000의 소득자의 경우는 소득의 3%, \$44,000 이상의 소득자의 경우는 소득의 6%를 대출상환율로 정하고 있다. 그러나 이 프로그램을 통한 상환율을 보장하기 위해서는 다음과 같은 최소한의 사항이 요구된다.
 - 신뢰성과 보편성이 보장된 신원확인 시스템
 - 학생의 채무에 대한 정확한 기록 및 보관
 - 전산화된 기록보관시스템을 통한 채무상환메커니즘
 - 졸업생들의 실제 소득을 시간의 경과에 따라 정확하게 결정할 수 있는 효율적 방법
- 소득대비대출정책은 경제적으로 사회적으로 불이익을 받고 있는 집단에 고등교육의 혜택을 줄 수 있다. 또한 대출을 받은 학생이 갚을 능력이 생길 때 상환을 하므로 형평성을 갖추고 있다. 힘의 유지가 상당히 어려워 질 수 있다.

Presentation 16: Student Loans Schemes in Korea: Financing Reforms for Higher Education & Lifelong Learning

한국의 학생 학자금 융자제도

- 김안나(이화여자대학교)

- 한국의 고등교육의 현 구조적 배경은 사회경제적 소외계층들로 하여금 고등교육을 받을 기회로의 접근을 어렵게 하고 있다. 이에 본 연구는 한국의 다양한 학생대출정책들을 고등교육기회의 형평성확보, 이공계 전문인력 양성, 및 가족의 재정적 부담 경감차원에서 알아보았다. 또한 현 학생대출정책이 가지고 있는 제한점들을 짚어보고 더 많은 학생들에게 이익을 줄 수 있고, 국가의 재정적 부담을 줄여줄 수 있는, 또한 고등교육에 대한 개인투자 증대 등을 용이하게 할 수 있는 대안정책의 효과에 대하여 논의하였다.
- 고등교육재정의 관점에서 한국교육현황은 중등교육이수자의 고등교육기관 진학률은 거의 80%에 육박하여 고등교육에 대한 지대한 사회적 요구를 반영하고 있는 반면 공공교육재정은 주로 초중등교육에서 강조되고 있는 추세이다. 고등교육을 위한 직접비용경비의 약 2/3은 사적 자금으로 충당되고 있으며 사립대학의 경우는 그 비중이 70%를 넘고 있다. 고등교육재정을 위한 편당의 주원천은 등록금으로 약 76.6%를 차지하는데 OECD 가입국들의 평균은 21.4%에 머물고 있다. 정부의 직접적인 학생보조는 OECD평균인 16.4%에 비해 겨우 6.9%대에 머물고 있으며 현 한국경제상황과 구조조정 등은 경제적 빈곤자들이 고등교육을 받을 기회를 감소시키고 있다.
- 이러한 맥락에서 학생대출정책은 다음과 같은 목적과 의의를 가진다.
 - 첫째, 사회적 차원에서 사회경제적 약자의 고등교육기회 증대
 - 둘째, 인력개발차원에서 이공계 학생들을 위한 특수한 인력요구 부합
 - 셋째, 학생 및 부모 보조차원에서 학업 중 재정적 부담 감소
 - 넷째, 예산의 측면에서 정부지출의 감소에 대한 수입 발생차원, 공공예산기금의 재분배차원, 국공사립대학의 재정팽창에 대한 추가적인 세입대책 마련 차원
- 2004년 정부보조학생대출은 약 1.6조원이었으며 이의 50%정도는 교육인적자원부의 대출이 차지하였다. 대출금의 수혜자는 4년제 대학의 학생 약 25%정도였는데 이는 미국의 45%에 비하면 아직 충분하지 못한 수준이다. 학생당 평균대출금액은 약 2,760,000원이었다.
- 2004년 현재 정부지원학생대출은 교육인적자원부의 빈곤자를 위한 대출과 이공계학생을 위한 대출, 한국학술진흥재단의 빈곤자와 실력우수자를 위한 대출, 노동부의 산업체노동자

를 위한 대출, 사립학교교직원연금관리공단의 교사 및 자녀를 위한 대출, 공무원연금관리공단의 공무원 및 자녀를 위한 대출, 근로복지공단의 산업 재해자를 위한 대출 등이 시행되고 있다.

- 대출에 대한 상환이자율은 0 ~ 5.75%로 다양하며 2004년도에는 4.5%였다. 전형적인 상환기간은 4년이였다. 정부의 국고이자지원율은 교육인적자원부가 19%로 가장 낮았으며 대출을 제공하는 기관들 평균은 33%로 영국, 미국, 노르웨이, 퀘벡 등과 비슷한 수준이였다.
- 현재의 고등교육재정을 위한 대출정책은 팽창하는데 있어 여러 가지 문제점을 안고 있다. 첫째, 이자보조대출은 실행가능하고 지속가능한 정책이지만 수혜자의 수와 학생당 대출액수에 있어 제약을 가지고 있다. 둘째, 이자보조를 위한 정부 예산부담율이 계속해서 축적되고 있으며 상환 또한 불가능해지고 있다. 셋째, 대출범위가 학생대출의 실제적 요구에 의한 것이 아니라 정부 예산에 의하여 결정되고 있다. 또한 대출정책은 민간대출제공자들의 참여를 고취시키는데도 많은 어려움을 가지고 있는데 이는 은행들이 채무불이행에 대한 위험부담을 감수해야 하고 장기간의 대출기간 보장 등을 바라지 않는다는데 그 문제점이 있다.
- 이를 극복하기 위하여 신용보증학생대출제도(Credit guaranteed Student Loan)의 운영을 생각해볼 수 있는데 이는 더 많은 학생들에게 이익을 배분하여 주고 정부의 예산부담을 줄여주며 정부가 신용위험을 보장해줌으로써 사기관의 고등교육투자를 증대시킬 수 있는 대안이 될 수 있다.

Presentation 17: Student Loans and Higher Education Opportunity in China

중국의 학생 학자금 융자제도

– Wenli Li(중국 북경대학교)

- 고등교육의 급속한 팽창에 비해 이를 위한 예산은 점차 감소하고 있는 추세에서 등록금인상 및 고등교육 소외계층 유발 등의 문제를 보이고 있는 중국이 정부보조학생대출계획이라는 새로운 학생지원정책을 통하여 고등교육접근기회 증대하고자 노력하고 있다. 본 연구는 정부보조학생대출계획을 재정적으로 학생들의 등록금 부담을 줄여줌으로써 학생들의 고등교육으로의 접근기회의 형평성을 유지하고 더욱 긍정적인 고등교육발전을 이루기 위한 목적에서 조망하면서 정책적으로 받아들여져야 할 다양한 점들을 제안하였다.
- 중국 고등교육시장의 동향으로, 대학등록금은 지속적으로 인상하고 있어 이미 등록금 인상은 가계수입 증가율을 넘어섰다. 이는 연간등록금은 지방시민들의 등록금지불능력을 이미 초과했음을 의미한다. 고등교육접근기회는 해마다 형평성을 회복하고는 있으나 최하위 20% 수입계층의 경우 형평성차원에서 상당한 불이익을 받고 있다.
- 2002년도의 경우 중국고등교육기관의 재정확보경로는 정부예산지원금 50.1%, 교육세 0.6%, 고등교육관련산업 1.1%, 등록금 27%, 계약금 14.4%, 기부금 1.9%, 기타 4.8%였다. 1990년 이후로 정부예산지원금(1995년도 69.6%)은 해마다 줄고 있으며 등록금 의존도(1995년도 13.6%)는 해마다 늘고 있다.
- 중국의 정부보조학생대출은 다음과 같은 목적을 가진다.
 - 첫째, 거치상환의 형태를 통하여 학생들이 교육비용을 만회할 수 있게 도와준다.
 - 둘째, 학생들의 고등교육기회요구에 부합하여 기회접근의 형평성을 제고한다.
 - 셋째, 재능 있는 학생들이 고등교육기관에 진학하여 교육적 효율성을 유지한다.
 - 넷째, 고등교육은 지대한 사회적 이익을 불러올 수 있다. 학생대출은 일종의 고등교육을 재정적으로 지원하기 위한 수단으로 정부보조와 사회적 투자를 이끌어낼 수 있다.
- 중국의 정부보조학생대출정책은 1999년에 위의 목적을 달성하고자 시작되었으며 상업은행과 정부가 50%의 이자를 보조한다. 그러나 2003-2004년도에 은행들이 20% 이상의 대출금 상환 채무 불이행률을 신고하였고 불이행률이 20%를 상회하는 기관에는 더 이상 대출을 불허하는 결정을 내린바 있다. 따라서 학생들은 이러한 규칙이 제정된 이후 대출을 받는데 많은 어려움을 호소하고 있다.

- 2004년도 6월 이래로 적용되고 있는 새로운 규정에 따르면,
- 졸업 후 상환기간을 현 4년에서 6년을 연장한다.
 - 학생신분을 유지하는 동안은 정부가 대출금 이자 전액을 보조하고 졸업 후에는 졸업자가 이자의 전액을 책임진다.
 - 대출은행을 지정하던 방식에서 공계 상업은행 입찰제를 실시한다.
 - 위험보상시스템 마련: 최고위험율을 15%로 정하고 은행들은 감당할 수 있는 위험부담을 걸고 입찰 경쟁한다. 위험률이 정해진 후에는 정부와 교육기관이 그 위험율의 50%씩을 책임진다.
 - 상환을 위한 추가관리시스템 향상: 대출과 상환에 대한 학생기록과 졸업생들의 이전주소지 등 파악
- 2005년도 2월 이후부터는 다음의 정책이 시행된다.
- 첫째, 학생대출자가 졸업 후 빈곤지역이나 정부지원이 필요한 불이익 산업체에서 일을 할 경우 정부가 모든 대출금과 이자를 대납한다.
 - 둘째, 정부는 위험공유를 보장하기 위하여 등록금의 10%를 따로 특별기금조성을 위하여 가져간다.
 - 셋째, 정부는 매달 학생당 150RMB 위엔을 하위 5%수입가정의 학생들에게 지원한다.
- 본 연구를 통하여 중국정부는 다음의 정책적 제언을 받아들였다.
- 1) 학생대출을 위험요소 공유 시스템 설치
 - 2) 개인신용시스템 마련
 - 3) 상환기간의 연장
 - 4) 대출상환의 공제 및 면제를 위한 제도 마련
- 중국의 학생대출정책이 성공하기 위해서는 상환액은 점차적으로 증가시켜야 하며 최초상환액은 반드시 최소여야 한다. 또한 다양한 학생보조시스템 개발과 함께 고등학교나 대학단계에서 학생들에게 재정적 상담을 제공하여 한다.

*Discussion 8: Requirements for a Successful Higher Education Financing System

토론

– 이재경(국민대학교)

- 교육학적인 입장에서 고등교육재정의 목적은 다음과 같다.
 - 학생의 경제적 지위와는 상관없이 고등교육을 받을 기회 보장
 - 이공계와 같은 전략분야에 우수한 인적자원 공급
- 경제학적인 입장에서 고등교육재정의 목적은 다음과 같다.
 - 학생대출프로그램(미래의 소득을 담보로 한 대출)의 정착을 통한 신용사회로의 이행
 - 우수한 인적자원의 공급과 수요의 균형 유지(우수한 인력의 고등교육진출 장려와 우수하지 못한 인력의 고등교육 진출 제지)
- 학생대출제도의 성공을 위한 요소는 다음과 같다.
 - 우수한 학생을 선발하는 효율적인 체제
 - 대출 상환 실패를 방지하는 전략 모색
 - (비)의도적 대출 채무 불이행을 방지하기 위한 대출자 교육
 - 정부와 공공기관간의 협력 및 조정
 - 대출 상환 유예
 - 국가단위의 학생 학자금 대출 데이터베이스 구축
 - 대학의 재정지원부서에 대한 교육 강화
 - 대출제공자의 책임성에 대한 관리감독 강화

Session IX

Panel presentation 1: The New Zealand Student Loan Scheme

학자금 융자 국가사례: 뉴질랜드

- Norman LaRocque(뉴질랜드)

- 학생대출제도는 자본시장의 결함에 따른 학생에 대한 고등교육재정 투자의 미흡, 고등교육으로의 접근기회의 형평성 증대 등의 이론적 근거에 기초하며 학생대출제도는 보조금을 전달하기 위한 메커니즘이라기보다는 재정메커니즘으로 봐야 한다.
- 국제적 맥락에서, 학생대출제도는 현재 선진국과 개발도상국에서 시행되고 있으며 주로 다음의 두 가지 형태로 운영되고 있다.
 - 모기지(저당권)형태의 대출: 고정된 대출상환계획으로 개인의 수입여부와는 관련 없음
 - 수입을 조건으로 하는 대출: 상환액수는 대출수혜자의 수입과 연계되어있어 대출상환기간은 개인의 수입과 대출금의 액수에 따라 다양함
- 학생대출제도는 국가적으로 또는 기관단위에서 운영될 수 있으며 대출을 위한 자격기준, 대출적격심사, 이자율결정메커니즘, 상환율 등에서 다양하게 디자인될 수 있다. 예로, 호주의 HECS, 가나의 학생대출시스템, 필리핀의 Study Now Pay Later 계획, 몽고의 교육훈련기금 등이 있다.
- 뉴질랜드는 세금에 의하여 보조금, 대출, 공제 등의 고등교육재정지원책을 제공하고 있으며, 2004-5년도에는 전체교육예산의 1/3(\$3billion)을 고등교육에 사용하였고, 정부가 고등교육에 드는 직접경비의 70%이상을 지원하며, 정부보조금 또한 고등교육분야가 가장 높은 수혜자로, 뉴질랜드의 고등교육재정지원은 OECD국가들 평균에 이르고 있다. 한국과 일본은 GDP대비 약 0.4%를 고등교육에 지원하는 반면 뉴질랜드는 약 1.1% 정도를 지원하고 있다.
- 뉴질랜드의 학생대출제도는 1990년 대학등록금 단일액(flat tuition fees) 적용과 이 후 2년 만에 이를 폐지하면서 1992년에 만들어졌다. 뉴질랜드 학생대출제도의 핵심은 수입을 조건으로 한 그랜트라는 점이다. 대출은 정부로부터 직접 지원되며 민간분야는 참여하지 않는다. 자격조건은 개방되어 있어 시간제한, 학업성적 등과는 무관하다. 학생대출제도는 종합적 성격을 띠고 있어, 학생들은 등록금, 생활비(주당 \$150), 과목관련비용(연 \$1000), 행정비용(\$50), 학생회 경비 등을 대출을 통하여 충당할 수 있다. 대출은 국공사립대학에 상관없

이 적용가능하다.

□ 뉴질랜드 학생대출의 이자율은 기본이자율과 물가상승을 반영이자율로 구성되어 있으며 이자의 감가계정을 고려할 때, 현 이자율 7%, 실제이자율은 약 3.5%정도 되고 있다. 일반적으로 학생대출에 대한 이자율은 정부차용율 이상 그리고 모기지율 이하에서 결정되고 있다. 이자의 감가계정은 2003/04년의 경우 연간소득 \$26,140의 학생의 경우 이자전액이 감하여졌고 졸업자들 중 수입이 저조한 경우는 부분적으로 이자를 감하여 주며, 기본이자율 감면 등을 통하여 이루어진다. 또한 도산자나 대출상환우수자 또는 대출금액이 적은 자가 사망할 경우 대출액 자체가 감면된다. 대출상환은 2004/05의 경우 \$16,172 이상을 수입역치값으로 보아 벌어들이는 1달러 당 10센트를 상환하게 되며, 계획보다 일찍 상환한다 하더라도 이에 대한 인센티브는 없다.

□ 학생대출제도에 대한 행정적 책임측면에서 교육부는 학생대출제도에 대한 정책 개발에 대한 책임을 지며 사회발전부(Ministry of Social Development)는 대출선불에 대한 책임을, 세무서는 대출에 대한 상환을 책임진다.

□ 다음은 뉴질랜드의 학생대출제도 운영 경험에서 얻은 교훈이다.

- 첫째, 뉴질랜드는 민간기여도, 대출, 자율성 등 현 고등교육의 추세와 맥을 같이하여 개혁을 실행하고 있다.
- 둘째, 성공적인 수입을 조건으로 하는 학생대출제도는 수입을 측정할 수 있는 능력, 세금 징수방법, 개인들을 추적하여 상환을 모니터할 수 있는 건강한 행정시스템을 요구한다.
- 셋째, 등록금이나 대출을 그저 단순한 세입측정으로서만 볼 것이 아니라 응분의 대상(Quid Pro Quo)을 위하여 필요한 접근 및 질 향상책으로 봐야 한다.
- 넷째, 학생대출을 위한 정치적 지원이 중요하다.
- 다섯째, 불이익을 받는 집단을 원조대상을 할 때, 시장개혁은 형평성을 보장할 수 있다.

Panel Presentation 2: The Current State of Thailand's Income Contingent and Allowance Loan (TICAL) Scheme

학자금 융자 국가사례: 태국

– Medhi Krongkaew(태국)

- Thailand's Income Contingent and Allowance Loan (TICAL)은 새로운 고등교육재정시스템으로써 2006년 7월부터 시행될 새로운 정책이다. 그러나 대학생에 대한 국가보조금이 너무 높고, 등록금 인상에 대한 어려움, 학생대출에 있어 자금난 등이 문제점들이 TICAL 시행에 걸림돌이 되고 있다.
- TICAL은 호주의 HECS 시스템을 벤치마킹하여 비용회복 등록금(Cost-Recovery Tuition Fees), 국가의 세제 시스템을 통하여 충분한 수입이 보장될 때 대출금 상환 시작, 점증적, 현실적 상환부담 부여의 기본 구조를 가진다. 이와 함께, Thai의 경우 다른 형태의 고등교육 기관 존재, 많은 수의 사립대학 운영, 2년제 직업교육대학 운영, 학생대출프로그램의 운영 등의 TICAL을 위한 기본적 구조를 가진다.
- TICAL과 관련하여 고려되어야 할 이슈들로는,
 - 첫째, 적절한 등록금 수준은 무엇인가?
 - 둘째, 적절한 이자율은 어떠해야 하는가?
 - 셋째, 수입의 역치값(분계점)은 어떻게 정하여야 하는가? 등이 있다.
- 정부보조의 적정수준은 고등교육에 드는 비용의 정부와 학생간 부담은 50대 50으로 보는 추세가 강하다. 이에 대한 TICAL계획에 따른 이자비율은 0%지만 연간소비자가격지표를 근거로 조정되어질 수 있다. 대출에 대한 상환은 시기적으로 제한이 없으며 수입이 없을 경우에는 상환이 요구되어지지 않는다.
- 대출 상환을 위한 수입 역치값은 세금을 빼기 전 한달 수입 10,000 baht로 보며 USD로는 약 한달 수입이 250불은 되어야 대출상환을 시작할 수 있는 수입 분계점으로 보는데, 이는 2008년 학사학위를 가진 공무원들의 일반적 초기연봉선에 기준한다.
- TICAL계획의 성공적 시행을 위해서는 새로운 예산분배 기준과 규칙 제정, 고등교육기관의 성과 및 결과에 대한 질 통제 및 보장, 균형 있는 고등교육의 전반적인 발전, 사립대학에 대한 끊임없는 모니터와 조정 등이 추가적인 노력이 함께 이루어져야 한다.

Panel Presentation 3: Teaching and Learning Innovation Fund

학자금 융자 국가사례: 가나

– Paul Effah(가나)

□ 교수-학습 혁신 재정(Teaching & Learning Innovation Fund: TALIF)은 교수, 연구, 학습 그리고 관리에서 혁신을 수행하거나 새로운 집행을 수행하려는 고등교육을 위해 준비된 재정적 자원의 공동자금으로 정의될 수 있다.

□ 교수-학습 혁신 재정(TALIF)의 목적은 다음과 같다.

- 교수와 학습의 질 개선
- 기술교육의 기술내용과 적절성 향상
- 고등교육이 운영하는 학문프로그램의 효율성을 개선
- 전략적으로 중요한 대학원 프로그램으로 접근을 확대
- 에이즈 문제 예방
- 불우한 환경의 학생들에게 접근 기회를 확대

□ 그러나 TALIF의 운영에 있어, 새로운 제도를 이해하는 고등교육기관을 찾는 초기의 어려움, 혁신 재정의 요구에 부합되는 기관의 제안서 작성 기술을 심화시킬 요구, 인센티브 문제 등의 어려움에 직면해 있다.

Session X

Presentation 18: Constructing and Using Performance Indicators

성과측정 지표의 구성과 활용

– John Fielden(세계은행)

- 대학의 성과를 측정은 세 가지 지표 단위-시스템단위지표, 국가단위지표, 기관단위지표-에서 실시될 수 있는데, 본 발표는 기관(학교)단위의 지표들에 중점을 두어 기관(대학)의 성과는 어떻게 측정되어지는가, 지표들은 어떻게 이용되어지는가, 각 지표단위에서 우리가 배워야 할 점은 무엇인가라는 세 가지 핵심질문에 대한 접근을 시도하였다.
- 이를 위하여 New 뉴질랜드, 영국, 홍콩 등의 사례, 성과지표들의 형태, 현재 사용되고 있는 기관성과측정 지표들과 기관의 재정과 효율성을 측정하기위한 지표들, 그리고 현재 세계의 대학들의 성과를 중심으로 순위를 측정하고 있는 TIMES, US NEWS, Macleans의 사례들을 분석하였다.
- 기관단위의 지표의 경우, 졸업생들의 취업률, 효율성, 지역기반조사, e-learning 이용실태 등의 내부지표와 감사결과, 연구순위 등의 외부지표를 이용하고 있으며 이 외에도 학생, 직원, 펀딩 등에 기초한 투입요소, 기관 운영, 그리고 학점이나 학위, 연구 활동 등의 산출요인, 마지막으로 동료들에 의한 평가 등의 성과지표 등이 이용되고 있는 추세이다.
- 2004년도에 영국에서 실시한 서베이에 의하면 학생지원율, 1년 후 학생보유율, 졸업 후 6개월 내 취업률 등이 학생의 측면에서의 학교성과측정을 위한 지표로 이용되고 있으며, 학교의 질적 순위, 연구비 수혜 증가율, 상업적 지속성이나 로열티 수입의 증가율, 연구목적으로 등록한 학생 수 등의 연구차원의 지표들이 이용되고 있는 것으로 나타났다. 이 외에도, 지역개발차원에서 각 지역출신 학생비율, 지역파트너십의 수 지역공급자와의 구매건수 등과 교수측면에서, 교수의 이직률, 교원개발연수 참여율, 고정계약직교원의 수, 여성비율 등이 이용되고 있다.
- 학교성과를 재정과 효율측면에서 측정하기 위한 지표로써, 비정부기관으로부터 벌어들이는 수입의 비중, 재정적 건강과 효율성 비율(현 자산에서부터 현 채무, 재정적 보유상태와 지급능력 등), 학구적 비용대비 행정적 비용, 건물가치대비 유지비용, 공간이용률, 외부연구용역 계약으로부터 생기는 총경비 회복율 등이 이용되고 있다.

- 그러나 가장 중요한 것은 조직, 재정, 이해당사자, 내부사업이라는 네 가지 측면에서 적절한 균형을 갖춘 성과분석이다.

- 더불어, 대학의 성과를 측정하고 모니터링 하는 것에 관하여 The University of Tronto, Edinburgh University의 학교성과 측정지표에 대하여 소개하고 이와 함께 Times, 상하이 교통대 등이 세계 대학들의 우수성을 측정하기 위하여 사용하였던 지표들에 대하여 소개하고 그 지표들이 가지고 있는 단점들을 소개하였다.

Presentation 19: Monitoring and Evaluation: Higher Education Funding in Korea

정부의 고등교육재정 지원 성과 분석

– 김태종, 이삼호(한국개발연구원)

□ 대학의 성과를 모니터링하고 측정하기

- 시장지향 체제하에서 이러한 활동은 중요하지 않음
 - 학생, 기부자, 고용자 등과 같은 이해당사자들이 모니터링을 할 것임
 - 시장 압력은 대학의 성과 비효율성을 방지할 것임
- 정부 재원이 제공될 때, 납세자에 대한 책무성의 측면에서 모니터링은 그 재원의 효과성을 평가하기 위하여 중요함
- 재원이 의도된 항목에 소요되는 지를 점검하는 과정모니터링과 영향평가는 중요함
 - 과정모니터링은 잘 설정되어 있지만 영향평가는 더 개발될 필요가 있음
- 이해당사자의 반응은 평가에서 정보제공의 중요한 원천임

□ 정부 재정의 효과성(I)

- 성과는 취업자를 구직자로 나눈 취업률로 측정됨
- 성과를 측정한 결과는 정부 재원의 효과가 유의미한 차이를 보이지 않은 것으로 나타남

□ 정부 재정의 효과성(II)

- SCI, SSCI, AHCI의 조합인 NCR 지수를 통한 연구 산출물의 성과 측정
- 성과를 측정한 결과는 연구사업 프로그램에 따라 다른 결과를 보여줌
 - 기관단위 자원 배분은 그 효과성이 낮거나 부적 효과성을 보이지만 개인단위 자원배분은 더 효과적인 경향을 보임
 - 개인단위 자원 배분이 더 효과적인 근거는 모니터하기가 쉽고, 책무성을 평가하기 용이하기 때문임

□ 한국 사립대학교의 지배구조와 기부금

- 시장중심 성과 평가
- 기부금은 시장에 의해서 평가된 대학의 성과 지표임
- 한국 사립대학교의 독특한 지배구조
 - 법적으로 제한된 비분배 재단 및 비영리기관이지만 실제로 재단이사장이 그 학교의 소유권자임
- 지배구조가 기부금에 어떠한 영향을 미치는 가를 조사
 - 재단기부금을 조사한 결과 재단기부금에 따른 지배구조는 기부금의 정도에 유의미한 영향을 주는 것으로 나타남
 - 사립대학교를 위한 정부지원이 있을 때 지배구조에 정부의 책임도 부여되어야 함

*Discussion 10: Comments on Constructing and Using Performance Indicators

토론

- 변기용(OECD 교육분과)

- ☐ 고등교육은 다양한 목적을 추구하기에 그 결과는 측정 불가능한 것이 많다. 따라서 측정기준이나 지표들 중, 완벽하게 고등교육의 성과를 측정할 수 있는 것은 없다. 또한 대학은 목적 달성을 위하여 이용될 수 있는 과정들과 투입요인들에 대한 통제력을 가지고 있지 못하다. 언급한 두 가지 본질적인 문제점들은 고등교육분야에 있어 성과를 측정하기 위한 지표들의 성공적인 이용에 많은 제한점을 제공하고 있음을 먼저 인식하여야 한다.
- ☐ 성과측정지표들은 결정을 내리는 데 있어 도움이 될 수 있는 정보를 제공한다는 점에서 나름대로의 가치를 가진다. 그러나 동시에 지표들이 가지고 있는 문제점을 인식하여 이로부터 무엇을 배울 수 있는가에 대한 고민이 함께 이루어져야 한다.
- ☐ 이러한 맥락에서 성과 측정 지표의 한국 정책 적용을 위한 선결과제는 개별 기관의 자율성 확보이며 성공적인 성과 지표 체제를 위한 안정되고 구조화된 자료 수집 체제 구축이다.

Session XI

Presentation 20: The Role of Buffer Bodies

고등교육재정 운용 기구의 역할

– John Fielden(세계은행)

□ Buffer bodies의 정의, 역할, 기능은 무엇이며, 장점과 단점 등은 무엇인지를 사례를 통하여 소개하고 있다. Buffer body란 고등교육기관을 관리하고 펀드를 제공하는 데 있어 법정권한이 부여된 기구를 말한다. 일반적으로 공공기관과 민간기관의 장에 의해 임명된 위원회에 의하여 운영되며, 기구의 성과에 대하여 교육부에 보고할 의무를 지니고 정부로부터 정책적 지시를 받는다.

□ 교육부가 고등교육을 위한 전반적인 정책, 고등교육시스템의 규모, 새로 설립한 국공사립대학들을 가이드하기 위한 정책, 등록금 수준, 정책적인 펀딩 등을 결정하는 반면, buffer body는 대학들에게 펀드 배분, 펀드수혜대학들의 성과 모니터링, 공공기금에 대한 책임, 특별정책가이드라인의 실행 등을 일반적으로 맡는다.

□ 유관기관들과의 역할을 구분해 보면 다음의 표와 같다.

	Buffer Body	다른 기관들	총장협의회
질 보장(Quality Assurance)	●	●	
통계자료수집(Collecting Statistics)	●	●	●
ICT 네트워크(ICT Networks)	●	●	●
정책연구(Policy Research)	●		●
인증(Accreditation)	●	●	●

□ Buffer bodies의 예로 뉴질랜드의 고등교육위원회, 홍콩의 대학운용위원회, 남아프리카의 고등교육위원회 등이 있다. 홍콩의 대학운용위원회는 영국행정체계의 유산으로 특이하게도 총 22명의 위원들 중 10명이 외국대학에서, 5명이 홍콩의 대학에서, 2명이 공공분야에서, 그리고 5명이 민간분야에서 참여하고 있는 구조를 보이고 있다. 대학운용위원회는 법적, 실제적 권한이 전혀 없으며, 순수하게 대학들의 제도적 자율과 학구적 자유를 보장하는 완충 역할을 담당한다. 따라서 발전과 펀딩에 대한 공평한 조언 제공, 정확한 그랜트 배당 및 학생수 배분을 결정, 대학들의 질 보장 지원 등의 역할을 수행한다. 뉴질랜드의 고등교육위원회는 2002년도에 설립된 독립기구로 교육부와 연결되어 있으며 3명의 원로교원, 4명의

산업체 인사, 한 명의 학생대표의 총 8명의 위원으로 구성되어 있다. 정부의 고등교육전략을 실행하고 연간 20억 뉴질랜드 달러의 펀드를 대학에 배분하며, 정부에 정책적 조언 등의 역할을 담당한다. 남아프리카의 고등교육위원회도 뉴질랜드의 경우와 비슷하며 12명의 투표위원들 중 5명은 대학교원으로, 2명은 산업체 인사로, 2명은 비영리단체에서, 1명은 무역노동조합원, 2명은 민간인으로 구성되어 있다. 그러나 특이한 점은 다른 경우와는 달리, 펀딩에 대한 역할은 가지고 있지 않은 대신, 질 보장과 대학인증에 대한 실질적인 책임을 지닌다.

□ 영국의 경우, 고등교육펀딩협의회(Higher Education Funding Council)를 buffer body로 볼 수 있다. 고등교육펀딩협의회는 오랫동안 유지되어 오던 대학그렌트위원회의 후신으로 1992년에 교육부로부터 독립된 기구로 설립되었다. 학계, 민간, 공공분야에서 13명의 위원으로 구성되며 장은 민간분야위원이 맡는다. 고등교육펀딩협의회는 공공기금의 적절한 운용에 대한 책임과 함께 연간 60억 파운드를 대학에 배분하고 있으며, 정부에 고등교육을 위한 펀딩요구에 대한 독립적 조언 제공, 모범사례의 식별과 공표, 정책개발, 교수 및 학습의 질 평가 및 보장 등의 역할을 담당한다.

□ 그러나 핵심 이슈는 buffer body와 교육부 사이의 실질적 관계로 buffer body의 조언이 무시될 수도 있는 여지가 다분하다는 점, buffer body가 실질적으로 정책형성과정에 얼마만큼 기여할 수 있을지에 대한 범위, buffer body가 제 기능을 제대로 수행할 수 있는 정책적 framework의 명확성, 교육부장관에게 부여된 힘의 범위 등을 여전히 풀어야 할 숙제로 포함하고 있다. 따라서 교육부의 힘에 따라 buffer body의 권한이 축소되거나 안전히 힘을 잃을 수 있으며, 정책적 조언이 무시될 수도 있다.

Presentation 21: Conception of a New Institute for Higher Education Evaluation

한국의 고등교육평가 기구의 구상과 평가

– 김신복(서울대학교)

- 재정지원사업평가는 교육인적자원부에서 직접 관장하고 있으며 수도권대학 특성화 사업을 위하여 약 25개 대학을 선정하여 평가관리하고 전문대 특성화 사업을 위하여 107개교를 선정하여 평가관리하고 있다.
- 그러나 재정지원사업평가가 대학평가와 상당한 부분이 중복되고 있어 평가받는 대학들에게는 물적, 인적 부담이 되고 있으며 획일적 평가지표의 사용으로 인한 대학의 자율적 발전계획에 장애물로 작용할 수 있다.
- 현재 요구되고 있는 바는 평가를 통한 고등교육 경쟁력 강화를 위하여 대학평가결과와 재정 지원 사업간 연계구축을 통하여 대학의 자율 혁신 노력을 실질적으로 지원할 수 있는 체제 마련이 시급하다.
- 따라서 현재의 재정지원 평가 관리 방법을 개선하여 대학(원), 전문대학 별로 재정지원 사업의 특성을 반영한 사업계획과 실적을 평가한 후 정부재정의 차등지원을 위한 기초 자료로 활용하는 풍토 조성과 더불어 대학에 대한 중복지원 방지, 각 사업간 연계 강화를 통한 재정지원사업의 타당성과 효율성 향상을 위한 재정지원 평가사업의 통합관리 시스템 등이 필요하다.
- **고등교육평가원의 설립은 다음과 같은 필요성에 근거한다.**
 - 평가를 통하여 대학의 혁신을 유도함으로써 고등교육분야의 경쟁력을 높임
 - 중앙 집중과 조정을 통한 고등교육평가의 효율성 확보
 - 서비스의 질 향상을 위한 정보제공 차원과 고등교육기관들의 공공성 확립
 - 외국인 학생 유치에 위한 기본구조 확립
 - 국내고등교육시장 개방에 대비
- **고등교육평가원의 구상과 개념**
 - 평가원의 운영과 감독은 이사회, 평가원장, 대학평가위원회에서 담당한다.
 - 실질적 운영은 대학평가부서, 프로그램평가부서, 프로젝트 평가부서, 평가지원부서에서 주관한다.
 - 기관의 평가는 종합평가, 전략계획평가, 기본상태평가, 부속기구평가로 구성된다.
 - 학문분야평가는 교과과정, 내용, 성취도 등의 관점에서 각 학문분야를 평가한다.
 - 프로젝트 평가는 개개의 평가받는 대학의 비즈니스 계획과 교육성과 등에 대하여 평가하고 그 결과를 정부보조금 차등지급정책을 위한 기본 자료로 활용한다.
 - 평가지원을 위하여 연구지원, 기획지원, 행정지원 등의 활동과 함께 더 나은 평가를 위한 정보, 자료, 데이터베이스를 구축하고 국내 및 외국 기관들과의 연계를 강화한다.

Wrap Up

* 종합: Preliminary Lessons

– Jamil Salmi(세계은행)

☐ 최적의 배분 도구

- 지역 환경
- 개혁의 목적
- 시간적 영역

☐ 적절한 배분 도구의 원리

- 성과와 정책에 연결될 수 있는 것
- 명료하고 투명한 것
- 융통성이 있는 것
- 양립성이 가능한 것

☐ 사립기관의 역할과 위치

- 사립기관의 기여가 가능한지 아닌지
- 적절한 접근 방법: 목적, 사립 분배의 비율과 균형, 질, 적절성 그리고 효과성

☐ 질 보장과 연계

- 진정한 동질성인지 혹은 거짓된 동질성인지
- 연계되는지 혹은 연계되지 않는지

☐ 수익 총원

- 기관 문화와 가치에 양립될 수 있는지
- 교수와 연구를 어렵게 하지는 않는지
- 일반 및 재 배분 수익에 기여하는지

☐ 정치 경제적 영역

- 대조적 주제: 등록금, 학생 학자금 대출, 사립기관
- 정치적 요소를 잘 활용하기

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