



# The Equity Challenge in China's Higher Education Finance Policy

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Sustaining China's rapid economic growth in the future will come to depend in large part on the quantity and quality of the human resources it can mobilize. The paper considers the prospects for higher education financing, and highlights the importance of improving equity in access to higher education as a precondition for a sustainable expansion in the higher education sector. The paper aims to throw light on two key questions: What are the links existing between current financing arrangements and equity in access to higher education? What kind of financing arrangements could ensure increasing access to higher education?

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## Introduction

Sustaining China's rapid economic growth in the future will come to depend in large part on the quantity and quality of the human resources it can mobilize. Education policy is fundamental to social and economic development in all countries, and this is especially the case with China at this juncture. Getting education policy right could unlock the enormous potential of its large population and spread the benefits from growth to all groups in society, but getting it wrong could place a stranglehold on development and reinforce existing inequalities in access across urban and rural areas. China faces significant challenges in terms of education provision and financing. The main purpose of this paper is to consider the prospects for higher education provision and financing, and in particular the importance of improving equity in access to higher education in conditioning these prospects. The paper aims to throw light on two key questions: What are the links existing between current financing arrangements and equity in access to higher education? What kind of financing arrangements could ensure increasing access to higher education?



Current levels of education spending in China are insufficient to meet the demand arising from rapid economic growth. Consolidated government expenditure in education reached only 2.79% of GDP in 1999, rising marginally to 2.82% in 2005 (Ministry of Education, Ministry of Finance and State Statistics Bureau, 2000; MoE, 2006; Heckman, 2002). This is significantly lower than the developing country average at 4.1% of GDP, and lower than the developed country average at 5.3% of GDP in the mid-1990s (World Bank, 1997). Education expenditure is skewed towards higher education. China spent almost a quarter of its education budget on higher education in 1998–1999 (UNESCO Institute for Statistics, 2004a), whereas participation rates in higher education remain low. Although China adopted the policy of rapid expansion of enrolment in higher education from 1999, participation rates in higher education were 21% of the relevant population group in 2005 (Zhou, 2006). The further expansion of enrolment has been slowed down in recent years following quality concern arising from resource constraints (Mohrman, 2008). There are large differences in access to education across urban and rural areas. It has been estimated that over 30% of eligible students in rural areas cannot go on to secondary school due to the lack of funding (Lin, 1999). And the proportion of university students from urban households is 84.43%, even though urban workers account for only 19.33% of the labour force.

Financial arrangements are an important factor in producing existing differentials in access to higher education. Decentralization in government finances has led to a reduction in the contribution of central government to higher education. For the higher education sector, revenue allocated from central government revenue have declined from 24.4% of GDP in 1985 to 13% in 1992 (State Administration of Taxation of China, 2000, [www.chinaonline.com/refer/ministry\\_profiles/SAT.asp](http://www.chinaonline.com/refer/ministry_profiles/SAT.asp)), and to between 10 and 11% of GDP at the end of the 1990s (Remick, 1999, cited in Norling, 2003). The decentralization of education finance has increased inequalities in access across regions, especially as the poor regions have reduced capacity to finance education at all levels. Increases in tuition fees make matters worse. The marketization of higher education since the 1980s, especially after 1992, has led to a one-third rise in higher education tuition fees across the board (Dahlman and Aubert, 2001). An average tuition fee of between 450 and 700 US dollars per year constitutes a large barrier preventing students from low-income households from entering university. Private financing of higher education, proposed by the World Bank, does not appear to provide a sustainable solution (Dahlman and Aubert, 2001). Borrowing by public universities in China is currently at 28.17 billionUS\$, a dangerous level for some universities (CASS, 2007).

There is considerable urgency in examining the options for financing a further expansion of higher education in China, taking on board equity considerations. Some attention has been paid to issues of financing and there



has been some debate around issues of equity in the context of access, but few have connected these two issues satisfactorily. The present study aims to contribute to fill in this gap. It investigates the equity implications of current finance policy of higher education in China, and searches for more equal and efficient alternatives to the current financing mix.

The paper is organized as follows. The next section reviews the case for public financing of education in an international context. The subsequent section examines the main sources of financing of higher education in China and trends. It pays special attention to government financing and tuition fees. Then the further section outlines and discusses the ethical implications of the current financing mix. The penultimate section explores the available financing options and the final section gathers together the main conclusions.

### **Public Financing of Higher Education in an International Perspective**

Public financing plays an important role in the financing of education across the world. There are both efficiency and equity considerations providing a strong justification for public financing of education (Colclough (1993) and Barr (2001) provide a good review of the literature). Within a human capital perspective, education is considered as an investment in future productive capacity. Investment in a project is justified whenever the returns on that project exceed the value of resources tied up in that project, and should be given priority relative to other investment opportunities when the rates of return exceed the returns on alternative projects. Empirical studies have demonstrated that rates of return to education are positive and substantial compared to alternative investment opportunities (Psacharopoulos, 1994).

This is especially the case in developing countries, but in the absence of public financing of education, investment will be largely determined by household resources. In this context, the likelihood of significant under-investment in education is strong. Low-income households, the majority in developing countries, may not be able to afford the direct costs of sending children to school and the earnings foregone. Financial institutions are generally reluctant to lend for the purposes of education, and are scarce in developing countries (Palacios, 2004). Among poorest households, facing acute deficits in current consumption, potential income flows in the future are heavily discounted. In a developing country context, public subsidies to education could help overcome these constraints. In addition, public financing can be justified by the positive externalities generated by a more educated labour force and population. Public financing of education can help overcome these restrictions on human capital investment and successfully realize potential gains from positive externalities, by ensuring investment in education moves closer to the optimum level (Smith and Szymanski, 2003).



In addition to the 'market failure' and 'public goods' justifications of public financing of education discussed above, the latter can also be justified on the grounds that education is a 'merit good', reflecting strong social preferences (Creedy, 1995). Public financing of education can also be justified on pure equity grounds, as a response to the need to ensure equal opportunities for all in a fair society (Barr, 2001). The strong correlation between income and education, health and education and intergenerational mobility and education, to name a few, suggest that policies enhancing educational opportunities can be crucial to addressing inequality (World Bank, 2006).

Efficiency and equity considerations can support a strong justification for public investment in education at all levels, including investment in higher education. However, in a developing country context in which fiscal resources are insufficient to provide the full range of basic services needed, the extent of public financing at different levels of education provision will become an important policy variable. Fiscal constraints are binding where a rapid expansion of the higher education sector is needed. Barr (2001) holds that there are strong arguments for full public financing and provision in primary and secondary education, but suggests that where public finances are limited, a mix of financing in higher education could advance both efficiency and equity considerations. This mix would involve public and private financing. This echoes World Bank proposals for the introduction of user fee and private sector into the higher education finance to facilitate expansion enrolment (World Bank, 1986, 1997).

Several options are available for arranging partial public financing of higher education, including direct grants (Barr, 2001), subsidized loans (Colclough, 1990, 1993) and grants financed with a graduate tax (Creedy, 1995; Palacios, 2004). The US has achieved the higher participation rate in higher education, 62% of high school graduates reach higher education, through a mix of direct public spending and relatively high tuition fees. In UK, the reforms following the Dearing Report, published by National Committee of Inequity into Higher Education in 1997, introduced relatively low top-up fees of £1,000 per year per student irrespective of universities and discipline (Barr, 2001), with exemptions for low-income students. A top-up fee of £3,000 per year was introduced in England and Wales from September 2006. The direct grant system was replaced by subsidized loans, but there is concern that graduates will end up with debts as high as £17,500 (*The Independent*, 14 August 2007). Among the developing countries, Sri Lanka keeps its education free from primary to tertiary level. But the high rate of subsidy has been a heavy burden on public expenditure, while universities are underdeveloped due to insufficient funding. Its gross enrolment rate in 2001 was only 5.1% (World Bank, 2004), skewed towards students from urban areas (Tudawe, 2001).



## The Financing of Higher Education in China

In China, the financing mix for higher education is dominated by government subsidies, but additional finance comes from civil society and tuition fees (Ministry of Education, Ministry of Finance and State Statistics Bureau, 2000). Table 1 provides summary information for the 1990s. Government subsidies have declined as a share of total financing from 64.6% in 1990 to 53.1% in 1998. At the same time, the share of financing contributed by tuition fee has risen rapidly since 1990, especially after 1997. Contributions from civil society, including funding from enterprises, increased in the first half of the period under examination, but at the end of the period they have returned to their 1990 level.

In common with many developing countries, public subsidies to education in China are many times larger for higher education students than for students in primary and secondary education. Table 2 illustrates this point by comparing China with other regions in the world. The figures in part reflect the fact that rates of participation in higher education in China are relatively low. In 1998–1999, public spending on higher education as percentage of total public education expenditure reached 24% (UNESCO Institute for Statistics, 2004b). While China's overall public spending in education is low at around 2% of GDP, spending on higher education grew by an annual average of 9.7% between 1978 and 1994 (World Bank, 1997, 41).

These figures raise important issues regarding China's higher education policy. A sustained increase in participation rates in education at all levels, but

**Table 1** Sources of finance in education expenditure in the 1990s

Year	Total expenditure (100m. yuan)	Government budget (%)	Civil society contribution (%)	Tuitions and incidentals (%)
1990	659.4	64.6	33.1	2.3
1991	731.5	62.8	34.6	2.5
1992	867.1	62.1	35.0	2.9
1993	1059.9	60.8	36.2	3.0
1994	1488.8	59.4	36.7	4.0
1995	1878.0	54.8	40.9	4.4
1996	2262.3	53.6	41.3	5.1
1997	2531.7	53.6	40.8	5.6
1998	2949.1	53.1	34.4	12.5

Note: 1. 'Government budget' mainly comes from general tax and additional education fee.

2. 'Civil society contribution' includes the private sector funding, enterprise support, donation, etc.

3. US\$ = 7.16Yuan

Source: Adapted from Xiaobo Zhang and Ravi Kanbur, September 2003 (original data from China State Statistical Bureau, 2000, Table A-14 in *Comprehensive Statistical Data and Materials on 50 Years of New China*, 14).



**Table 2** Cross-regional comparison of public subsidies per student as a percentage of GNP per capita by level of education, 1980–94

<i>Region/country (no. of countries)</i>	<i>Year</i>	<i>Preschool and primary</i>	<i>Secondary</i>	<i>Tertiary</i>
China	1980	4	13	362
	1990	5	15	193
	1994	—	—	175
Latin America (19)	1980	8	14	56
	1990	11	13	80
East Asia (8)	1980	5	14	182
	1990	8	19	98
South Asia (4)	1980	15	27	84
	1990	10	20	76
Middle East and North Africa (9)	1980	—	—	63
	1990	—	—	81
Sub-Saharan Africa (23)	1980	13	46	796
	1990	14	51	481

*Source:* World Bank (1997, 48) (originally from UNESCO, World Education Report, 1995, Table 12, 104, 156–159).

higher education in particular, will require a significant injection of resources. Current trends imply that attention will need to be paid to the room for increases in public subsidies to higher education, and to the role of private financing, mainly through tuition fees. These will be discussed below. A significant constraint in raising additional financing lies in the distributional implications emerging from the current financing mix of higher education. This section examines the financing of higher education and its distributional implications. It focuses in particular on public financing and tuition fees.

### **Tax revenues are broadly regressive**

Tax revenues in China can be classified mainly into five main categories: Consumption taxes are dominant, contributing 71% of total tax revenues; income taxes provide a further 12%; council taxes and other contribute a further 16% (Su, 2004).

Tax revenues are designed to support industrialization policies at the expense of agriculture. Under the urban/industry-biased economic policies in place since the 1960s, the government has imposed price control on agricultural products. However, the prices of the industrial products like farm tools and fertilizer have risen steadily and, as a result, the rural economy has generally slowed down during the Reform Era since 1980s (Norling, 2003). Price controls imply that rural producers pay higher rates of implicit taxes, as their products



are artificially undervalued. The difficulty involved in determining income in rural areas has persuaded the authorities to rely on a flat rate of income tax, which ensure that taxation is regressive. The Tax Reform Act 1994 gave the local governments more discretion in fundraising, leading to the imposition of higher tax rates and user fees on residents, especially on rural producers. Since the mid-1990s, rural local governments have come to depend increasingly on user fees. On January 2006, agricultural taxes on farmers in many east provinces were abolished, leaving local government even more dependent on various fees.

In contrast, in the industrial sectors, liberalization has led to the abolition of many forms of taxation, which are considered a hindrance to trade and commerce, such as local taxes, quotas and licensing fees (Rozelle, 1996, cited in Norling, 2003). The revised Individual Income Tax Law of 1994 further lessened the burden on industrial sectors in general as enterprises are relieved from many social obligations that had been imposed on them in the past. Taxation on urban residents, especially employees in the formal sector, is mainly in the form of personal income tax based on self-declaration. The rate of income tax ranges progressively from 5 to 45% (Su, 2004), but it is poorly implemented and evasion is extensive. In sum, the urban-bias of economic policy has widened the income gap between rural and urban residents: the ratio of urban to rural per capita income increased from approximately 2:1 in 1985 to 3:1 in 2000 (Gilley, 2001, cited in Norling, 2003). The per capita urban income was 1,466US\$ while the per capita rural income was only 454US\$ in 2006 (China Statistical Year Book 2006, quoted in Mohrman, 2008). The implication from this discussion of tax revenues is that they take disproportionately from rural areas, and from low-income groups. In short, subsidies to higher education are financed from broadly regressive forms of taxation.

### **Rise in higher education tuition fees**

Marketization, decentralization and privatization since the 1980s, but especially after 1992, have led to reforms in higher education, which have in turn reinforced the role of private financing. These policies and reforms have various equity implications.

Before 1985, access to higher education was free to qualified students, subject to government budget quotas (Tropical Research Group, cited in Yin and White, 1994). Only a small number of students were required to pay, including commissioned or self-supported students beyond the existing quotas. Commissioned students are sponsored by an enterprise and they agree to work for the enterprise after the graduation. During 1985–1989, there was an increase in the number of fee-paying students (Yin and White, 1994). From



1989, the policy of charging tuition fees for all students was adopted, although state-sponsored students pay much less than self-supporting and commissioned students.

The 14th congress of Communist Party of China in October 1992 agreed the policy of building up 'socialist market economy' (Yin and White, 1994). The policy also recognizes that it is necessary to introduce the non-state sectors into educational development to meet the people's pressing needs (Zha, 2001). In December 1992, higher education institutions were allowed by the State Education Commission to admit fee-paying students, with a ceiling of 30% of their total enrolment (Yin and White, 1994). The guidelines set out under the Educational Reform and Development policy (State Council of China, 1993, [www.development.yangtzeu.edu.cn/jyfg/jyglzh/law\\_12\\_1202.htm](http://www.development.yangtzeu.edu.cn/jyfg/jyglzh/law_12_1202.htm)) set the goal of recovering 20% of costs through the charging of tuition fees by 1997 (World Bank, 1997, 4). Starting from 1994, the fee levels of all students, including those financed by state, enterprises or self-financed, were unified at a rate of 20–25% of the total estimated higher education cost per student. By 1994, tuition fees had increased by 6 times since 1978. From 1997 onwards, all students in higher education had to pay tuition fees. All universities, except for normal and military universities, currently charge a fee of around 450–700US\$ per year.

The 1993 guidelines also advocated the decentralization of university finance (World Bank, 1997, 4). As part of the decentralization, a new financial arrangement, referred to as 'joint establishment', required that local government provided partial funding for higher education institutions under central supervision (Zhong and Zhu, 1997), although central government funding retained a main role.

At the same time, the status of universities in China has changed. In 1956 all higher education institutions were publicly funded in China (Zha, 2001). In March 1982, China had its first private or '*Minban*' university — Zhonghua Zhehui University. In December 1982, the renewed Constitution of China encouraged 'collective economic organizations, governmental enterprises and other social groups to initiate and administer various kinds of legal educational activities' (Zha, 2001, 6). In 1993, and for the first time, a national policy was set aimed to provide 'active encouragement, strong support, proper guidelines and sound management' for non-state sectors to run education (Yuan, 2003). In 1995, the new Education Law confirmed this policy change (State Education Commission, 1995, cited in Zha, 2001). The Law on *Minban*/private Education Promotion of 2002 stated that *Minban*/private education institutions have the equal legal status with public ones (China Education and Research Net, 27-8-2003). The number of private higher education institutions in China has been growing very fast, from 800 in 1994 to 1,277 in 1999, with 37 of them fully authorized to grant degrees/diplomas (Hu, 1999; Yang, 2000, cited in Zha, 2001).

## Equity Implications

In this section the equity implications of changes in higher education financing are explored.<sup>1</sup>

### Public subsidies to higher education have equity implications

There is a strong and longstanding urban-bias in enrolment policy, and changes in public financing and increasing reliance on tuition fees will reinforce. Since 1962, a higher proportion of children from urban and better-off families go to university than among rural and low-income students. Table 3 compares the distribution of the working population and the distribution of university students in socioeconomic groups. The data on university students are based on the available statistics of the background of students in 34 universities in China in 2000. It can be seen from the table that the proportion of students from the urban families is 84.43%, although the urban population contributes only 19.33% of the working force. The share of university students from rural areas is 15.56%, but the rural population contributes as much as 80.77% of the working population.

The barriers in access to university faced by students from rural areas are set early on in their educational experience. According to Lin (1999), more than 30% of eligible rural students cannot go on to secondary school due to lack of funding, especially in the senior secondary school which is not compulsory. This reduces the chances of entering higher education for students in rural areas. Although in 2004 that the proportion of exam candidates from rural backgrounds exceeded that of candidates from urban backgrounds for the first time, reaching 55% of the total (News Release, MoE, 5 June 2004), the share is still less than merited by the share of population in urban and rural areas. According to the figures in Table 3, it can be roughly estimated that one

**Table 3** Share of working population and background of higher education students by socio-economic group in China (%)

	<i>% of the working population</i>	<i>% of university students</i>
Rural workers	80.77	15.56
Blue-collar workers	8.3	32.86
Technicians	4.16	16.58
Government officials, military staff, enterprise managers and others	6.77	35
Total	100	100

Source: Adapted from Li (2002), Table 5.1.



**Table 4** Government allocation of funds per student to provincial universities and colleges in selected provinces, 1992 (Unit: yuan, 1 US\$ = 7.16 yuan)

<i>Provinces</i>	<i>Total government allocation per student</i>	<i>Recurrent allocation per student</i>	<i>Capital allocation per student</i>	<i>Provincial GDP per capita</i>	<i>Percentage of GDP for higher education</i>
Beijing	7,007	5,309	1,698	6,434	2.9
Guangdong	6,630	5,157	1,473	3,514	1.5
Shanghai	5,341	4,707	634	7,925	2.4
Anhui	4,154	3,613	541	1,243	1.8
Sichuan	3,471	3,019	452	1,357	1.6

Source: World Bank (1997, 44).

in six urban students is able to enter higher education but that the rate for rural students is only one in twenty.

The decentralization of higher education finance has increased the gap between poor and rich regions, especially between the poor regions of the West and East.<sup>2</sup> Local governments in poor areas lack resources for education investment. Table 4 shows the differences of higher education investment by different levels of government in selected provinces. The investment in higher education per student in Beijing is double than that of Sichuan Province, although Sichuan is a relatively richer province in the West. This facilitates a significant underinvestment in higher education. In 1994, there were on average 43.3 university students per 10,000 in China. The figure for Beijing was 136, but that of Guizhou Province, a poor province in the remote west, was only 9 (World Bank, 1997). Decentralization in the financing of higher education will inevitably reinforce inequalities in access to the detriment of potential students from rural areas and low-income households.

The rise in tuition fees in higher education will restrict the participation rate, and could worsen inequalities in access. Table 1 shows the significant increase of out-of-pocket education expenses: the share of tuition and incidental fees rose from 2.3% in 1990 to 12.5% in 1998 (Zhang and Kanbur, 2003), and to 15.45% of total educational revenues in 2002 (MoE, 2002). Tuition fees for higher education, in addition to living expenses, constitute a huge burden to students from a rural background and low-income urban households. A survey carried out by the National Bureau of Statistics concluded that more than 50% of respondents believed they are unable to afford higher education for their children because of the excessive increase in the tuition and other fees (Huang, 2001).

Privatization of higher education is likely to exacerbate inequality in access. As the higher education enrolment rate is low in China, the demand for higher education is far from being met. At present, *Minban*/private higher education

provides those who could pay some sort of higher education. Well-off households can afford for their children to enter private universities even at low levels of pre-university educational attainment. At the same time, the quality of the private education is deteriorating as institutions in the private sector exploit excess demand for places. Private institutions usually employ retired or part-time teachers from publicly funded universities and colleges, and provide lower quality facilities and support.

### **Exploring the Options for Higher Education Financing**

What are the available options for financing an expansion of access to higher education in China? This section explores existing schemes to support higher education students and assesses their effectiveness.

A scholarship scheme was established for all undergraduate candidates in 1986–1987, later extended to postgraduate candidates in 1991. At present, these reach only a small number of students. Around 20–30% of students in public universities get financial aid in China, and the level of support is too low. The academic scholarship, which is the main type of grants, provides 50\$ per year to students securing a first prize (10% of all undergraduate students). Students securing the third prize, covering another 10% of all undergraduate students, receive only 25\$ per year (China Education and Research Net, 2001). A relatively higher scholarship/grant is provided by the National Scholarship Scheme initiated in 2002. It provides up to 845\$ per year per student. It is open to all types of students, but it only covers 45,000 students per year, about 0.6% of all higher education students (MoE, 2003; Xinhua Net, 2003). Scholarships are more accurately seen as a subsidy than a grant.

The loans system in higher education in China was piloted in 1996 and fully implemented in 1999 (China Education and Research Net, 2001). Students are expected to pay back within 4 years after graduation. Currently, the amount of money available for loans to students with financial difficulties is 140\$ per person per year or more. However, since there is no comprehensive financial market or an effective credit system in place in China, the loans are least used by students from low-income households. Students from low-income households are not well informed about the loans, and the loans are not sufficient to cover their basic needs. Students are deterred by the high opportunity cost of future debt — this is particularly the case for students from a rural background. In addition, there have been serious problems in the implementation of the loans scheme because of the high default rate. Owing to high subsidy element of the loans and the resulting low profit for providers, the loans are poorly managed. In 2002, due to the high default rate of 50%, Xian



Communication University became the first university to be suspended from applying for student loans by banks (Li and Cui, 2004). In Beijing, Zhengfa University was suspended from applying for student loans by Industrial and Commercial Bank of China for the 26% of default rate (Beijing News, 21 April 2004, Zhengfa University Suspended from Loans: students doubting the bank's credibility, [www.thebeijingnews.com/](http://www.thebeijingnews.com/)). The year 2003–2004 is the peak year for student loans repayment, but the average default rate is nearly 20%, which is beyond the capacity of the banks to absorb. In 2004, the new system of student loans was initiated to guarantee the continuation of student loans. In the new loans system, the government will subsidize the interest before the student's graduation from university. Students will have to pay back the loans within 6 years after graduation but there is no threshold for repaying. To mitigate the risk of bad payment to the bank, the government and university jointly set up a Risk Compensation Fund for the bank, approximately 6% of the contract value. Government and university pay 50% of the compensation fund, respectively, to the contract bank (MoE, 2004). In July 2006, the Ministry of Education signed a memorandum of understanding with the Bank of China to finalize the financial arrangements between government, university and bank. However, there is a large financial risk for the government associated with the compensation fund provided.

A 'graduate tax' is defined as 'a tax that all graduates have to pay for a special period of time or as long as the individual pays taxes' (Palacios, 2004, 46). It is free at the point of consumption, and thus enables students from low-income backgrounds to enter university. The high private rate of return to education should ensure a basis for future repayments. As higher wage earners can subsidize lower earners, it can be a progressive tax. Providing it is incorporated within existing income tax collection, it is possible to avoid extra administration and costs. Therefore, a graduate tax can be fairer, easier to collect and offers sustainable funding for higher education.

However, the graduate tax is criticized by some commentators because the percentage of tax imposed by the government will depend on the political decision (Palacios, 2004); it can generate work disincentives, and future taxes may not reflect the cost of earlier education. It could be argued that these criticisms ignore distributional concerns. It can create a sustainable funding provision for both the rich and the poor, and ensures that the poor are able to attend university as it makes higher education free at the point of consumption. It is reasonable to require students to pay for part of their higher education by committing a share of their future earning because they are the direct beneficiaries. The argument that it is unfair for very successful graduates to pay a tax much higher than the cost of their education is not well founded. Fairness should be achieved through taxing the rich to subsidize the poor. It is the tax on the higher-earning graduates that makes the 'graduate tax' system fair and



sustainable, especially as the Income Gini Coefficient in China has increased from 0.33 in 1980 to 0.45 in 2002 (Lu, cited in Yang, 2002). There is great advantage in a graduate tax as a means of securing funds for the extension of higher education while improving access to low-income groups. The only investment for government to provide is the start funds needed to get the scheme off the ground. It may be some kind of public subsidy but it only needs subsidy for the first 4 years' start-up period and will solve the financial problem in the long run.

It has been suggested that the private sector could take a large role in financing higher education. Financial support from enterprises has been lingering at around 1.69–1.83 billion US\$ per year, but the contribution from donations has been declining (Luo, 2004). Cao and Levy (2005, quoted in Mohrman, 2008) also noted that the donations from society only happened in a very few cases. There is still a great potential to develop higher education funding from enterprises and civil society including alumni. Students are not the only beneficiaries of higher education (Palacios, 2004).

## Conclusions

This paper has examined the financing of higher education in China. This is an important issue in the context of the rapid economic and social transformation of the Chinese economy and society. There is great urgency in facilitating an expansion of access to higher education in China, both to sustain the growth in the economy, and to support the extension of economic opportunity and social mobility. The paper considered the capacity of current sources of finance to enable an increase in the participation rate in higher education, and the equity implications. The two dimensions of efficiency and equity are closely interlinked. Inequality in access to higher education is becoming a problem for equal social and economic development, and a barrier to sustainable financial arrangements.

It will be useful to summarize the main findings emerging from the discussion in the paper. Public expenditure in education is low compared to countries at similar levels of development, at 2.79% of GDP. Higher education absorbs one quarter of total government expenditure on education, but despite recent growth in enrolment rates in tertiary education only 21% of the relevant age group access it.

Tax revenues constitute the main source of higher education financing. A brief discussion of government tax revenues identified urban and industrial bias to the extent that public expenditure on higher education is largely financed from general tax revenues, important equity and efficiency issues arise in the context of extending access.



The process of marketization of higher education in China has aimed to increase the role of tuition fees and private financing of higher education. Charging tuition fees directly to students attending universities further restricts access to higher education by students from rural and low-income households. Decentralization of education finance appears to increase inequality across regions, especially given differential capacity of local government in raising revenues. Access to higher education is limited in poorer regions. The privatization of higher education results in greater inequality in access to higher education. Private higher education institutions facilitate participation by the better off who are able to pay, even with lower pre-university qualifications than students from rural and low-income households. There is a danger that privatization will lower the quality of higher education as a whole.

Scholarships, grants and loans have only a limited role in promoting the development of higher education at present in China as only a small proportion of students are covered, and the level of support is low. Loans have not been successful in lifting constraints in university access, partly because comprehensive financial markets and an effective credit system are lacking, but also because of implementation issues. High default rates among students who have taken education loans undermine the effectiveness of loans as a means to increase access. The contribution of enterprises and other private sources of financing have remained marginal.

An expansion in higher education participation in China will require additional financing. However, sustainable financing will require financial arrangements that maximize access and opportunity for all. The equity implications of the new financial arrangements need urgent consideration. It will be important to ensure that support for improved primary and secondary education for rural and low-income households is forthcoming. Improving the educational opportunities of these groups is essential to extend access to higher education. Ensuring high educational achievement in primary and secondary education will raise the rate of university participation by the poor, and will promote the development of the rural and poor areas.

The decentralization of government revenue mobilization might need fine-tuning in the context of higher education financing. Central government financing can ensure redistribution across poor and better-off regions. This is essential to achieve equity and sustainability in the public financing of higher education. The decentralization in revenue mobilization and financing has made it harder for poor regions to make the necessary investment in education.

A graduate tax appears to be as fair and sustainable as it is progressive. A graduate tax is fairer because it plays some role of redistribution as higher earning graduates may subsidize the lower earners. It facilitates increased access to higher education as it makes higher education free at the point of consumption. It is sustainable as the rate of return of higher education



provides a sound basis for future repayment, but government needs to provide the start funds needed to get the scheme off the ground.

As to other sources of finance, enterprise and alumni are some of the potential sources for higher education finance. Their contribution to supporting higher education is justified, as they are direct beneficiaries and stakeholders.

The equity challenge in China's higher education finance needs to be addressed urgently, especially as sustaining China's rapid economic growth in the future will come to depend in large part on the quantity and quality of its human resources.

## Notes

- 1 An important issue is that subsidies to higher education crowd out the public support to primary and secondary education, but for reasons of space this is not covered in the paper.
- 2 The *west poor areas* include 12 provinces/municipalities/autonomous regions. They consist 18% of China's GDP, 29% of the population, 60% of the poor people, 72% of the minority population and 72% of the surface area of China (The World Bank Group for China, 22 January 2003, 17).

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