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HIGHER EDUCATION PRACTICES WORLDWIDE FOR SUSTAINABLE FINANCING

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Abstract

The research examines how universities handle the changing financial trends. Education practices now require diversifying funding sources, rather than relying on the government to provide majority of sources. Tuition fee is a large source of income, at the same time setting tuition fee remains a politically heated debate. In addition, the study examines changes on costs and revenue sides. Ultimately, while some costs can be altered, there is a need for greater revenue generation from diversified sources to maintain the standard of universities. Almost all countries will increasingly have to rely on households for funding higher education.

Introduction

This paper examines how university financing is working on the ground and to what extent they are becoming financially non-viable. There are constant increase in costs, with limited revenues and universities competing for reputation in a crowded market. Governments are under pressure to control their spending, where higher education is among the first to get its budget reduced over primary and secondary school education and other priorities such as basic healthcare which are seen as more essential services benefitting larger portion of the society.

Future of universities is becoming a big concern. In 2008-09, in the United Kingdom only 29 percent of higher education institutes generated a profit of higher than the Higher Education Funding Council for England's recommended minimum of three percent surplus. Grant Thornton U.K. (2011) argues that while on the whole the higher education system in the United Kingdom is financially sustainable, a number of universities would shut due to numerous factors: their financial structures, their position in the market and their reliance on certain income streams. Those universities that depend on regional level students would be more impacted by increase in tuition and decrease in funding since the demand base of such universities remains limited to local students with more limited capacities to pay. Ernst and Young (2012) reported that 15 Australian universities might become financially non-viable. It argues that the dominant university model with a broad based-teaching and research institution, supported by a large asset base with an in-house back office would prove unsustainable for most universities. In 2004, China's Ministries of Education and finance issued a joint circular in 2004 stressing the need to "prevent financial risk" in higher education. (Wu and Gao, 2010; as mentioned in: ADB, 2012, p. 9). Many Chinese institutes that had borrowed heavily are now struggling to pay their debts (ADB, 2012, p. 9).

Revenue and Cost Solutions

Universities have taken measures on the cost and revenue side. Cost solutions often posit the question whether it would impact the quality of education, revenue side solutions can often mean unprecedented burden on the household. The solutions on the cost side have been increasing class size and teaching loads, deferring physical maintenance, differentiating faculty load by hiring more part time staff and removing low priority programmes. The universities may freeze the salaries or the student bursaries, or cut down non-salary expenses, maintenance and repair work (Johnston

& Marcucci, 2007, p. 11). Most cost size measures tend to impact the quality of higher education services. In research universities undergraduate programmes are often used to cross subsidise research and graduate programmes. Problems with cost side solutions are: 1) less marketable subjects are eliminated 2) quality research falls into the hands of a few organisations with more grants 3) Short term financial goals are prioritised over long term needs of the universities (Johnston & Marcucci, 2007, p. 1).

On the revenue side measures include increasing tuition fees, encouraging philanthropy, relying more on markets, the private sector and encouraging faculty entrepreneurship. Another interesting trend has been for cash strapped universities to establish their overseas campus. While increasing revenue is the preferred method, as argued earlier, the reliance on tuition can be unprecedented at times. High tuition fee assumes some contribution from parents. It is often difficult to determine the parental willingness to contribute for higher education (Johstone, 2006, p. 43). High tuition fees can sometimes be a deterrent for the students from lower income households. Despite the availability of loan schemes they could be less likely to take on a debt because of the fear of inability to pay.

Revenue Based Solutions

Rationale for Cost-Sharing

University of Buffalo's International Comparative Finance and Accessibility Project coined the term 'cost-sharing' which means a shift of higher education costs from governments or taxpayers to parents and/or students (Johnston & Marcucci, 2007, p. 16). Tuitions fee revenues help offset the costs that governments can no longer maintain. Imposing tuition fees is the most efficient form of cost-sharing. Cost-sharing also encourages student to value higher education and try to complete courses in a stipulated time. It can further benefit the lower income groups if these tuition increments can be used to cross subsidise their fee in the form of student aid.

OECD suggests that the model where there is an adequate tuition fee with adequate state support in the form of loans can be an effective way for countries to increase access to higher education costs without a high financial burden. However, during periods of economic crisis, high tuition fees impose a considerable financial burden on students and their families and can discourage some of them from entering tertiary education, even when relatively high levels of student support are available. Taking a loan can also prevent students from choosing a more expensive college. In developing countries, there is often lack of adequate infrastructure to administer such loans. Increases in tuition fee remain the most politically and ideologically charged topics. Wide scale protests against the increase have been recently seen in Chile, the United Kingdom and Quebec province in Canada. The protests in Chile which began in 2011 were against the growing for-profit, high fee charging private institutions. In 2010, the students in the United Kingdom protested the government's decision to increase the cap on student fee that can be charged by higher education institutions. In Quebec there were a series of protests in 2012 against a proposed increase in tuition fee to be rolled out over the coming years.

While escalating tuition fee remains a concern, at the same time, cost-sharing promotes equity rather than a certain section of the society benefiting from government subsidies. The following sections examine the cost-sharing methods followed by different countries.

Role of Tuition Fee

As mentioned from an economic perspective, it is important for most countries around the world to charge tuition as it reduces the economic burden on government which no longer support higher education. Proponents of highly subsidised higher education argue that the government investment in education not only provides greater economic benefits in terms of qualified labour, but also creates a better society where the educated take better care of their health and family, and they are more likely to have stronger sense of civic duty. Higher education is also associated with reduced crime rates and reduction of fertility in females, which in turn helps in reducing poverty (World Bank, 2006; as mentioned in: ADB, 2012, p. 12).

In many countries education, is by and large, traditionally viewed as a free or highly subsidised product. Even if a loan system is established, some countries have an aversion to loans like Slovenia and France. This can to some extent be attributed to stricter repayment conditions because the loans are operated by private banks. Other countries such as the Philippines show aversion due to the lack of ability to pay (Vossensteyn, 2004, p. 50).

At the same time, in case of higher education, the great personal benefits justify some form of cost-sharing. Over their lifetime, a graduate earns far more. According to a study conducted by Pew Research Centre, in the United States, graduates between the ages 25 to 32, who work full time earn about \$17,500 more annually than employed young adults that only have a high school diploma (Pew Research Center, 2014, p. 3). For individuals, this leads to lower unemployment, higher salaries and better educated children (ADB, 2012, p. 12).

Introduction of Student Loans

Tuition fee with strong student loans schemes is being adopted by more and more countries. Countries that introduced loans in the last two decades include France (1991), Hong Kong (1998), Hungary (2001), Poland (1998), Slovenia (1999), India (2001), Egypt (2001), Kenya (1991), South Africa (1994) and the United Kingdom (1991) (Vossensteyn, 2004, p. 49). Student loans can be of two kinds: income contingent or mortgage based loans- dependent on a collateral. The income-contingent loans were introduced to not penalise low-income students. With an income-contingent loan, students only start paying back the loan post-graduation and when their income is above a certain threshold. Often, the loan may only adjust for the inflation and not charge a real interest rate; hence, not accounting for the cost of dispersal, monitoring and collection of loans (Ziderman, 2004; as mentioned in: ADB, 2004, p.18). In most cases loans are supported by public authorities. Privates sector has faster repayment demands and is unwilling to give loans without collateral, making it inaccessible for lower income students. In France and Slovenia, the loan programmes are heavily dependent on the private sector, making the repayment conditions unattractive to lower-income students.

Income contingent loan payments have been introduced in New Zealand, South Africa, Hungary, United Kingdom, Australia, Thailand and Israel. It is a method being contemplated by other developed countries like Germany and Canada. Under many income contingent schemes, graduate pay faster if their incomes are high. This has been introduced in the United Kingdom, Australia, Hungary and South Africa. In Sweden, the student can ask for a reduction in loan taxes for a temporary fall in income (Armstrong & Chapman, 2011).

Student loans that are repaid are more sustainable than aid and grants. In Canada, Netherlands, and the United Kingdom and to a lesser extent in the United States aid is being replaced by loans (Vossensteyn, 2004, p. 49). New Zealand, the United Kingdom and Australia have loans deducted directly through taxation. Real interest rates have been charged in the Netherlands, Sweden, Norway and Hungary. In the United Kingdom and New Zealand loans have been adjusted only for inflation, ultimately subsidising the loan for students (Armstrong & Chapman, 2011).

Student loans suffer with the contradicting dual aims of promoting accessibility and at the same time returning substantial portions of revenue advanced. Successful loan programmes around the world, have had a few common features. 1) Loans account for inflation at the time of repayment and sometimes charge at inflation plus 2) loans are income contingent, providing options for people with different earning capacities and different time frame for paying the loan 3) The value of a loan is directly deducted by the employer through income surtax (Johnston & Marcucci, 2007).

The United States has financial assistance in the form of grants, tuition fee discounts and loans. Extensive grants and loans cost \$134.8 billion per year (College Board 2006, as mentioned in: Johnstone & Marcucci, 2007, p.20). It also offers merit based scholarships. About 24 percent of students do not receive any public scholarships or loans (OECD, 2013). A few Ivy League universities in the United States have set “progressive” pricing schemes that offer discount to families with income of less than \$60,000 and substantial discount to those earning less than \$120,000. Ivy League universities follow a high-tuition, high-aid policy; the financial offices determine the maximum that students can pay. There is systematic price discrimination: while the wealthy pay the listed fees, other students pay a more varied price (Douglas & Keeling, 2008, p. 6).

Few public universities provide free education to families with income of less than \$ 40,000 (Douglas & Keeling, 2008, p. 6). While there is lack of adequate empirical proof, the sharp increases in tuition uncompensated by increases in grant aid over the last 20 years could have played a role in increasing inequality (Dougherty, 2004, p. 14). According to an earlier study by St John (1990), the decline in enrolment for the minority section has been the highest in the United States as tuition has increased. He estimates that for every \$100 increase in tuition, enrolment of students with parents in the bottom socio-economies quartile (measured by parental education, occupation, and income) drops by 3.4 percent, but only 1.4 percent for those in top quartile (St. John 1990, as mentioned in: Dougherty, p. 6). Kane (1994) argued that for every \$1000 increase in tuition fee resulted in 3.7 percent decline in attendance for African American students (Kane, 2001; as mentioned in: Dearden & Fitzimons, 2011, p.6)

United Kingdom has deferred tuition payment, which was introduced in 2006 with a sharp hike in tuition fees. The loan is income contingent and is tied to the level of inflation. Student loans were introduced in 1990 with partial replacement of student grants. They were successful, as many students borrowed from these funds. This resulted in further replacement of loans with grants in mid-1990s until finally all grants were abolished in 1999. However, a government white paper written in 2003 argued for reintroduction of grants to meet the needs of low-income families (Vossensteyn, 2004, p. 49). Grants were subsequently bought back in 2004. Dearden and Fitzimons (2011) used labour force data covering 1992- 2007 showed that for every £1000 (\$1700) resulted in a decrease in participation of 3.9 percentage points, at the same time a £1000 increase in maintenance grant. The impact difference between different socio-economic groups remains unclear.

Australia introduced the Higher Education Contribution Scheme (1989) which allows students to defer payment with an income contingent loan where the interest rate is pegged to inflation. The loans are collected by the official government machinery with tax withholdings at time of wage payment. In 2010-11, Australia, 81 percent of students have benefited from public loans (OECD, 2013). Compared with the repayment of similar loan with the bank, the amount of student income required to service the debt is higher. In case the student income is very low, they are no longer required to service the debt. (Johnston & Marcucci, 2007, p. 26). Post the scheme's introduction in 1989, the women's participation increased more than the men's. From implementation of the scheme to 2001, female enrolment grew by 63 per cent and the male enrolment figures increased by 35 percent (Armstrong & Chapman, 2011, p. 91). Whether this scheme benefitted the lowest income group remains unclear. Aungles et al. (2002) reported the scheme affected the choice of the poorest that tended to choose the least costly course because they question their ability to repay loans (Aungles et al., 2002; Armstrong & Chapman, 2011, p. 91). Armstrong & Chapman (2011) concluded that HECS did not significantly increase enrolment for the disadvantaged between 1993 and 1998, but positively impacted people with middle wealth more.

Interestingly, in Japan, financial assistance is provided at low interest rates capped by the government at 3 percent, repayable over 20 years. Despite this subsidy, there are very few takers for the loan. Japan has a high level of parent support for paying for students' education upfront. In 2006, 73 percent of students paid the fees upfront. Most Japanese universities charge the maximum amount under Japanese law (Johnston & Marcucci, 2007, p. 21). Japanese institutions can charge an upfront fee of \$350 in applications which can provide universities excess of \$15 million operation surplus. In China, parents are willing to make substantial sacrifice as well (Johstone, 2006, pp. 14, 18). In United States too they are dependent on parents, unlike Scandinavia, Britain and Australia (Woodhall, 2007, p. 36).

Student Loans in the Developing World

There are a few aspects that can make cost-sharing in poor countries more challenging. For cost sharing to be compatible with access and equality of

opportunities, it has to be accompanied with measures which remove financial barriers to admission and continuation of education for the disadvantaged groups. Such measures require effective student financial aid systems in the form of need-based grants and loan schemes. Also, income contingent repayments require a strong legal framework, a universal and transparent regime of income taxation and/or social security collection, and an efficient repayment mechanism. It requires adequate record keeping of the student liabilities, a computer-recorded collection system and ability to accurately determine the income of students (Armstrong & Chapman, 2011, p. 89).

Even income verification for aid can become a problem in developing countries where more and more people are working in the private sector and there is a lack of adequate mechanisms for tracking these incomes. Here private sector incomes are often unrecorded or unreported and tax evasion can be prevalent. Sections of society can also subsist on non-monetary income, making it hard to determine the actual financial need (Johstone, 2006, pp. 13-14). In most developing countries, higher education has extremely low participation rates. Moreover, gender, socio-economic status, ethnicity, language and religion often skew the already low participation rates in favour of male, richer, urban households and lack of subsidised education can hinder access. Even for mortgaged based loans in developing countries, it is hard to measure the real income and worth of the family with the lack of adequate tax coverage and a large informal sector.

Pillay (2009) argues that while the cost-sharing and private sector entry have helped the governments in parts of Africa to address to some extent the issue of inadequate public sector funding, it has resulted in greater inequity almost everywhere. Furthermore, unlike the industrialised world, the poor seek education in private institutes in these countries and institutes can often be of questionable quality.

South Africa has developed an effective student loan scheme for higher education. The National Student Financial Aid Scheme (NSFAS) is an income-contingent scheme for lower-income students. The scheme funded has a budget of 1.18 billion rand (approximately \$110 million). Loans are repaid through tax administration once the student is employed. The loan system has one of the highest recovery rates internationally (Knight, 2009, p. 31). In South Africa, all students pay tuition fees. Very important to this scheme has been the ability of the tax administration to recover loans. Limiting the loan to lower-income households made scheme more manageable, with the administration and collection becoming easier.

Example of consensus building for successful cost-sharing can be seen in Latin America. The Mexican constitution provides for free public education at all levels; as a result the decision of the biggest public university, National Autonomous University of Mexico to introduce a nominal voluntary tuition fee in 1999, was met by protest. In Northern Mexico, by contrast, the public University of Sonora introduced tuition fees in 1993. But at the same time, it introduced a consensus building process with staff and students to explain that tuition was required to maintain the quality of teaching and learning. It was made sure that resources were allocated for reforms aimed at equity and better quality. A joint student-teacher fund was created for providing scholarships for low-income students and for quality initiatives like improving

classroom, upgrading libraries and purchase of journals. A poster was designed every year to provide information on how these funds were being used (The World Bank 2002; as mentioned in Salmi 2013, p.5). Such progressive policies not only help in social equity but in avoiding political backlash. In Colombia, loan repayment is emphasised as a civic duty. The Student Loan Agency closely supervises the loan beneficiaries during their time of studies and maintains a comprehensive database to keep contact with graduates when they enter the repayment cycle (Salmi, 2013, p. 5).

Student loans aimed at equity or cost-recovery have had a bad success rate in many parts of Asia where many countries have a number of schemes. With income contingent loans, developing Asian countries struggle with the ability to deduct loans directly. There is also a greater possibility that a certain part of the income is not declared where the tax system is not mature enough. Having substantial student loans may even deter students from declaring their future incomes (ADB, 2009; as mentioned in: ADB, 2012, p.14) It also becomes hard to recover loans from qualified university students that work abroad. Also, in developing countries incomes are often not high enough for income-contingent loans.

In Thailand, the Student Loan Fund (SLF) was introduced in 1990s but with a very high interest rate (26 percent in 2003) and a lack of adequate funds, which meant that loan sizes declined each year. This was further exacerbated by overgenerous loan eligibility and repayment conditions. The number of loans and allocation at one point reached 14 percent of the government's education budget. For some recipients the loan amounts changed substantially in different years because of lack of enough funding. The loan programme had a default rate of 30 percent (Ziderman, 2003; as mentioned in: ADB, 2012). Eligibility for the loan also required a minimum family income threshold, and was used less by women. Under the new government in 2006, a Thai Income Contingent Allowance and Loan (TICAL) based on the Australian income-contingent model was introduced. The scheme was income-contingent loan payment adjusted to inflation. But this was considered politically unfavourable and SLF with higher student subsidies was reintroduced in 2007 (Armstrong & Chapman, 2011, p. 13).

In Indonesia a national income-contingent scheme was launched with loan repayment to be collected through the tax system when the student enters the workforce. No adequate study has been conducted on its impact so far. But many sectors' starting salaries for undergraduates might limit the level of recovery. (ADB, 2012, p. 15). In Vietnam loans are available for poor students who would have been unable to participate in higher education otherwise. By 2009, 1.7 million students had availed these loans operated by the Bank of Social Policy (Lan, 2010; as mentioned in: ADB, 2012, p.16).

Loans were introduced in China right from 1986, but the average amounts proved too inadequate to support tuition and maintenance. In 1999, two different schemes were introduced: one by the government, the other a commercial operation. The government scheme for lower-income families proved to be insufficient (Rmb 6,000, \$ 970) for students' tuition fee and living expenditure. By 2001, 31 percent applicant received the loan but it covered only 3.8 percent of the students (Shen, 2010; as mentioned in: ADB, 2012, p.16). The four year short repayment plan made

it impossible for many students to clear their debt, as the debt burden amounted to at least 24 percent of their income, making it hard for students from poor backgrounds to pay. The banks tended to discriminate against the low-income students who are more likely to default. The later versions of the loans allowed for longer repayment period of 6 to 10 years. But, by 2002 the first education institution was barred from taking loans. Students from these institutions were unable to apply for loans because of the high default rate. Soon other institutions also defaulted. In 2006, the Ministry of Education established a Risk Compensation Fund and formalised an agreement with universities and bank on new loan structure (Sun & Barrientos, 2009; as mentioned in: ADB, 2012, p.16).

In India, nationalised banks started operating loan schemes for students, with the real interest rate as issued by the monetary authority: Reserve Bank of India. In 2000, a loan scheme was introduced to be administered by commercial banks for which students studying in both domestic and international institutions are eligible. The loan is to be repaid in 5-7 years where a 'Prime Lending Rate' is charged. This scheme has no special need based provisions (Rani, 2002, pp. 37-40)

Income-contingent loans are extremely difficult to organise effectively. Without an adequate collection mechanism, they will fail. Policies have to accommodate country's implementation capacity. Countries with very low loan-repayment rates should focus on grants, which would be more cost effective than maintaining the administrative machinery for loans. In developing countries the cost of loan administration can be more than the loan amount dispersed to the poor students. Even the countries with successful loan systems require some aid provision to appeal to the lowest income groups. Grants and subsidies don't have to be repaid and can be targeted to a particular group.

With regards to cost-sharing, many questions remain unanswered because of lack of substantial empirical proof? Is the perception of debt aversion stronger than the evidence? Have cost shifts had a strong negative impact on accessibility? Are the loan schemes bringing substantial relief to the public exchequers? Are the learning achievements stronger in countries where state shares a larger cost?

Mean Tested Aid

A more robust need-based, mean tested (evaluating family's income) aid programme will remove the economic barriers to college education and would remove the transfer of benefits from high to low income families as opposed to a universal subsidy that benefits the rich more (Douglas & Keeling, 2008, p. 2). But, even mean-tested financial aid can become financially, politically, technically and sometimes culturally difficult. The degree to which students need subsidies and grants and the number of student that should receive this remains controversial. To what extent should the subsidies be from the public revenue? Further, it is questionable how to adjust aid, or for that matter even loans, keeping in mind factors such as the programme studied, the faculty-student ratio, equipment needed and other programme specific costs (Johstone, 2006, p. 14).

The United States' Pell grants or French *bourse sociale* are examples of state funded grants for the needy (Johnston & Marcucci, 2007, p. 21). Grants need to be sufficient to not need further parental contributions which in many places involves

living away from home. But, the Pell Grant programme is facing increasing costs roughly doubling each year from 2009-12. Between 2000 and 2011, as the number of recipients rose from roughly 4 million to over 9 million students along with increasing college costs. While the grant was to be a need based grant for the poor, 21 percent of the recipients of the grant reported a family income greater than \$40,000 (Miller, 2012).

Different Learning Tracks

Countries that lack resources are relying on “executive programmes” and “management quotas” to augment their incomes. In Thailand, universities have “executive” courses with lower barriers to entry than other courses. Substantially higher fee are charged for a less rigorous course than the regular programme. Such courses offer the equivalent degree as the other more rigorous course, thus diluting the value of the original course (ADB, 2012, p. 10). In India, many universities under the state government are earning tuition fee through a “management quota” for student willing to pay a substantially higher tuition fee. In medicine this can cost from \$22,600-\$90,400 (ADB, 2012, p. 10). Indian universities also often charge a small fee along the application process (Johstone, 2006, p. 14). Universities in Indonesia are also selling seats for \$4,520-18,080 in high demand programmes such as engineering for 10 percent of the students (ADB, 2012, p. 10). Further, Indonesia has introduced less rigorous programmes with high tuition fees, creating new professional degrees. While this was meant to cross-subsidise education for the poorer students, it is questionable whether the students that qualify for scholarships in more rigorous programme come from lower-income background as the scholarships are often merit based rather than need based.

Market Funding

In 2010, Cambridge University turned to the bond market to raise £400 (\$670) million. Earlier, it announced the rights of its library name to the highest bidder (British Library, 2010, p. 13). Traditionally, Ivy League universities in the United States have relied on market returns. Additional sources other than tuition and public funding account for more than 10 percent of budgets of most European universities. Generally contracts with industries generate greater income than fundraising, though the numbers are differentiated across Europe. (European Universities Association, 2011, p. 8). The ability of universities to generate additional income in Europe is positively associated with their autonomy in organisational, financial, staffing and academic dimensions (European Universities Association, 2011, p. 8). Financial diversification can bring greater freedom with fund management.

Numerous campuses are also looking for ways to boost revenues by monetising their existing assets. University property can be leased to external stakeholders. Many others are revaluating the fees charged for ancillary services like residence fees and parking lot charges. Some are also exploring leasing space when it is vacant (Deloitte, 2011, p. 18). For example, Trinity College Dublin generates extra funds through estate activities. It uses university floors for non-academic purposes, earning money through rental of prime land. It is additionally buying property at declining market prices, which it develops further. It partners with

developers to adequately leverage the usage of the property (European Universities Association, 2011, p. 35)

University-industry collaboration is also seen as a sustainable way of increasing university revenues. Massachusetts Institute of Technology and University of California, Berkley were pioneers in industry-university collaboration; they generated a model of self-sustained research financing through patents. In Japan and Europe, university-industry collaboration is also increasing. Japanese universities are transferring new technologies to the market with the help of the Japanese Ministry of Economy, Trade and Industry (Institute for Higher Education Policy, 2007, p. 14).

However, there can be difficulties with faculty entrepreneurship. It might divert teachers from institutional instruction time. Sometimes, projects might conflict with the academic need for scholarly integrity when the funding source has some vested interest. Often patents issued in pharmaceutical and technology industry make corporations rake greater profit at the cost of greater information dissemination, which is one of the primary aim of universities. For big projects universities at times also need to comply with company policies.

Also, academic entrepreneurship tends to be a solution more for science rather than the humanities. Johnstone (2006) argues for cross-subsidisation between the more entrepreneurial subjects towards subject like history, anthropology and sociology which have less scope for entrepreneurship but have contributed to the reputation of university. While there is a need for encouragement of entrepreneurship and adequate rewards but with caution (Johstone, 2006, pp. 46-47), short-term research collaboration can come in the way of in-depth analysis.

University teaching tailored to business needs can take advantage of this collaboration. There are more specialised universities that cater to particular skill development and in-demand research. Australian Technology Network of Universities' has established a new industry based PhD programme. University of Queensland and University of Western Australia collaborate with the mining industry (Ernst and Young, 2012, p. 11). The BPP College in the United Kingdom, a for-profit provider of higher education focuses exclusively on providing education programmes in accounting, banking and finance, law, marketing and human resources. It only provides professional degrees aimed at greater industry participation (Ernst and Young, 2012, p. 19).

In many parts of Asia, private universities are becoming a chosen alternative to government funded education. While most private universities charge a substantial fee, Pohang University in Korea is an exception that uses markets in all aspects. Thanks to its endowment, students study and live for free on the campus. The university has consistently ranked amongst top 3 in domestic rankings. Pohang University is a private university founded by a private company, Pohang Iron and Steel Company (POSCO) in 1986. The University's broad field of concentration are science and technology. It has a small enrolment of 1400 undergraduates and 1700 graduates (The World Bank, 2011, p. 103). The university has relied on qualified professors, highly selective students, and autonomous management granted to the university corporation. It has built a strong endowment that covers all its costs. The endowments mostly consist of POSCO stocks and though there is fluctuation in the

market, they have reached US\$ 2 billion. The 2009 operating budget was about US\$ 220 million (The World Bank, 2011, p. 103).

Pohang University's budget has increased from US\$ 15 million in 1987 to US\$ 170 million in 2009 (The World Bank, 2011, p. 118). The university also constantly boosts the commercial value of the research. The income from research makes 40 percent of operating budget, reducing dependency on the University Corporation. While it collaborates with the government, its close ties to POSCO hinder collaborations with other private entities in areas of direct competition.

Philanthropy

Philanthropy in some countries has made substantial contributions to higher education. The tradition of philanthropy can be stronger in certain cultures than others. In the United States, philanthropy has tremendously helped in providing grants and aid to lower income families (Johstone, 2006, p. 13). In the United Kingdom, philanthropy accounts for 10 percent of revenues (European Universities Association, 2011, p. 34). In Europe there are still "psychological" with charity seen obstacles towards fundraising; with a less aggressive approach to asking (European Universities Association, 2011, p. 74).

Philanthropists around the world have also started playing a more proactive role rather than making a one off donation. The Stifterverband Foundation in Germany advocates the creation of independent universities in a competitive environment. It also encourages collaboration between scientists and industries. The foundation launched a fund in 2010 for initiatives that contribute to universities' autonomy, especially governance reforms (European Universities Association, 2011, p. 63). In Indonesia, Sampoerna Foundation collaborated with the Bank Internasional Indonesia and the International Finance Corporation (IFC) to establish subsidised loans for students and parents with risk-sharing facility. The bank provides loans and IFC structures the deal (Sampoerna 2006, as mentioned in: Institute for Higher Education Policy, 2007, p.15).

Alumni donations have traditionally been a source of income especially in the United States. Private universities such as Harvard that rely heavily on private gifts also give considerable weight to the application if the parent is an alumnus (Dougherty, 2004, p. 19). Usually, even in other parts of the world, it is the traditional "elite" universities that are able to receive large donations. For philanthropy to make a substantial investment, a substantial portion of it needs to be shifted to endowments for the investment to get good returns. To acquire such funding, there needs to be a steady relationship with wealthy donors, well-maintained alumni records and a government policy of tax deduction for donation to universities (Johstone, 2006, p. 48).

While there are benefits of more aggressive fundraising, there are also substantial costs in pursuing these funds and keeping track of relevant information. While it is a viable source for some universities, it will not benefit all. Universities need substantial resources even to be able to tap their alumni network. Also, with local universities, it is hard to tap on substantial wealthy donors, foundations and corporations as they tend to be more specific in giving grants and want to give donations with higher visibility. Even for universities receiving large donations can get

tricky as the large private beneficiaries may also want a greater say in the functioning of the university.

Overseas Institutes and Campus Expansions

Multiple campuses and options for overseas campus and institutes in Asia are being explored by cash-strapped universities. North American, British and Australian institutions are establishing campuses and developing programmes in fast growing regions like UAE, Hong Kong and Singapore. But at the same time, it does not make sense for every type of institute because of the significant cost of establishing these institutions (Deloitte, 2011, p. 10). Also, the success of an overseas campus is often dependent on help from the host country, especially in terms of favourable tax breaks and subsidies.

Foreign establishments have been set up in Malaysia, Singapore and Hong Kong, with very different models. Monash University Malaysia is the first foreign university campus to be set up in Malaysia in 1998 in collaboration with Sunway Group, a Malaysian Conglomeration Group. The university was invited by the Malaysian government. As of 2008, Malaysia has five international campuses and 25 non-university private colleges. In 1999, the Curtin University established its campus; a year later University of Nottingham became the first British University to establish its campus. University of Nottingham's programmes on Malaysia campus are identical to those offered in Nottingham and have an equivalent degree status as the courses in Nottingham. At the same time, Royal Melbourne Institute of Technology (RMIT) University Malaysia started its operation in 1996 and ceased in 2000s because of financial difficulties (Mok, 2008, p. 159).

In Singapore, there is a strong government driven approach to bringing in foreign universities. The government's education plan envisions making Singapore a centre for high quality education. The government has aggressively tried to attract world-class, well-reputed universities. This began with the establishment of INSEAD and Graduate School of Business Chicago. INSEAD Asia campus provides the full range of activities and services like its European campus. At the same time, in September 2000, the University of Chicago Graduate School of Business established a permanent presence in Singapore, extending its campus from America and Europe to Asia. This school had 16 one-week modules focussing on business executives who could travel from throughout Asia to take these classes (Mok, 2008, pp. 156-67). In 2013, The Chicago Booth School decided to pull executive education programme and set it in Hong Kong so that it's closer to the booming Chinese economy. Finally, University of New South Wales also shut its Singapore Campus in 2007 despite large government loans and grants. At the same time, Yale University announced its partnership with National University of Singapore in 2011. It was announced that Yale will even compensate their home departments for faculty's absence for those involved with the Singapore based university. (Marcus, 2011).

In Hong Kong, the government has played a less interventionist role. It has large number of institutes from the United States, The United Kingdom and Australia, but no foreign university campuses. As of 2006, Hong Kong had 1,098 foreign institutes, out of which 416 were officially registered and the rest had exempted courses that did not require registration (Mok, 2008, p. 155). Top universities from

Mainland China are also offering courses in Hong Kong. There are many joint and distance university programmes offered by Hong Kong universities in collaboration with international universities.

Few western universities have been further struggling in the Middle East. Michigan State University, in Dubai only received a quarter of the projected enrolment and lost \$4 million. It was forced to scrap its undergraduate programmes, though it continues to run graduate programmes there (Marcus, 2011). At the same time, Education City in Doha includes Cornell Medical School, Texas A&M engineering, Northwestern journalism, where the government has been able to attract world class universities through large subsidies (Pope, 2011).

Further, University of Suffolk shut its Senegalese operation in 2010. The campus shut down after 12 years after losing a substantial amount. The campus lost about \$1 million a year because of lower-than-projected enrolment (Marcus, 2011).

Domestically, Harvard's decision to put its \$25 billion Austin campus construction project on hold is a visible example of universities that have stopped expanding. Schools that were already built are now struggling to pay the ongoing operating and maintenance costs (Deloitte, 2011, p. 16).

While, information on successes of each individual university is inaccessible and beyond the scope of this paper. In general, universities that started small and grew depending on the enrolment have better chances of succeeding. Graduate schools that require less number of academic staff which often charge higher to teach overseas, can help bring down costs (Marcus, 2011). With western campuses, often International reputation does not necessarily translate into local business. Shutting of many international campuses is leading to potential students further questioning the stability of overseas campus. Further, many schools can find it hard to be financially stable with the withdrawal of subsidies. Also, overseas campus market can get saturated and not all universities will thrive.

Despite due diligence, many overseas institute fail. Instead of overseas models, other options can be:

- Universities can sell course design, content and set-up but not delivery and accreditation
- Create a franchise
- Offer joint degree programmes with other colleges
- Develop and market e-learning (British Library, 2010, p. 17)

While offshore collaborations can be profitable, they do not necessarily have to be in the form of overseas campus. In 2009, 111 out of 116 institutions from the United Kingdom were offering offshore provisions to over 170,000 students (British Library, 2010, p. 16). From the United States, UCLA and the Universities of Michigan and North Carolina are all opting for range of partnerships at department and school level (Pope, 2011).

Cost Based Solutions

Shared Services

Institutions around the world need to consider the merits of shared services and the consolidation of programmes, departments and even institutions (Deloitte, 2011, p. 12). Shared back office services can improve delivery and free resources for teaching and research. The shared services can be at the level of higher education institutes, locally or regionally, such as shared repositories and certain types of infrastructure, library provision, auditorium, residences. Higher education institutes should focus on their unique individual provisions and all other service can be provided externally. A business aligned model where the academics are separated from the administrative and infrastructure support would help reduce back office costs (Grant Thornton, 2011, p. 19).

Academic Operations	Business Support Management
Teaching, research, 'third stream' activities, quality assurance, institutional marketing	Accommodation, facilities management, academic support, back office, libraries and IT

Source: (Grant Thornton, 2011)

For example, in Austria in 2009, the University of Vienna, the University of Natural Sciences, and Vienna Technical University pooled resources of €2 (\$2.75) million for a high speed IT facility. Now, all three universities have access to the 200 fastest super computers in the world (European Universities Association, 2011, p. 37).

Ernst and Young (2012) recommends a ratio of 1:3 and beyond of academic staff to support staff for universities in Australia to increase productivity. Out of the eight universities they studied, only one had lesser administrative staff than academic staff. The other side of the argument is that outsourcing or sharing services with other institutions can lead to a loss of control by administrators, faculty, and students over how the outsourced service and universities need to proceed with caution (Dougherty, 2004, p. 20). Such methods have been tried to a lesser extent by universities because of the strong departure from the traditional university model.

Role of Government

While universities around the worlds need to focus on different revenue and cost solutions to reduce the burden on government funding for education, at the same time, governments continue to play an important role. They play a pivotal role in assuring quality of education in public universities, have strong quality control mechanisms for private universities, and provided well-structured loans and/or mean-tested grants to increase accessibility. Many countries with growing higher education markets are relying on governments for building successful systems. The following section examines the government's role and other best practices in establishing National University of Singapore and the Shanghai Jiao Tong University.

NUS and University of Malaya, Stable Governance and Forward Thinking

The University of Malaya was established in Singapore in 1949. Post-independence from the British and separation of Malaysia and Singapore in 1962, two branches of the university in Kuala Lumpur and Singapore separated into two universities. These are the University of Malaya (UM) and University of Singapore, now known as the National University of Singapore (NUS). After this split, both universities took very different roads, which led to NUS being ranked number 24 according to QS higher education rankings 2013-14, while UM is ranked 167.

Many factors such as Singapore's emphasis on meritocracy and human development, use of the English language and the globally oriented universities with an international faculty contributed to its success. UM suffered from the inward-looking university policies and promotion of *Bumiputra* policies; where the government established a 45-55 percent quota for ethnic Malays in the universities.

World class universities require high level of stable financing. NUS has strong government support and successful institutional fundraising. In Singapore, between 1962 and 2007 the proportion of government educational funding to tertiary climbed from 10.8 percent to 19.8 percent. The operation budget in 2008-09 reached \$1.55 billion with government grants consisting of 28 percent of the operating budget; as opposed to this, UM's operating budget was \$280 million in the same period (The World Bank, 2011, p. 136).

While the increasing amount spent by the Singapore government can be attributed to its much wealthier status, Malaysia displays lack of consistency in their budget. Between 1970 and 2006, overall public expenditure on education was 3.98 percent in 1970, peaking at 7.66 percent in 2002, and then falling to 4.67 percent in 2006 (The World Bank, 2011, p. 137). In UM only three percent of the 2008 operating budget came from tuition fee; in comparison, 16.6 percent of NUS's operating budget came from tuition fee. While UM highly subsidises costs for local students, NUS is concerned about cost recovery (The World Bank, 2011, p. 137). According to NUS registrar, with the ever increasing cost of higher education, current high levels of student subsidy may not be sustainable over the long run. More number of cost-sharing strategies are required.

UM further struggles because fundraising does not reach the level needed to offset the gap between government allocations and those needed for the university to operate at a globally competitive level. While the endowment funds are modest, this is further exacerbated by government rigidities. The financials such as salary and tuition fees are decided by the government, giving little room for flexibility. In NUS, more autonomy has been given to the universities especially post corporatisation of the university in 2006. This gave the university flexibility with compensation, deciding on teacher's research and teaching loads. NUS gave the star researchers greater flexibility on how to use their time. At the same time it focused on results, increasing the threshold for tenure.

NUS also collaborates with the industry to commercialise products, stimulating locally grown innovations. The number of research collaboration agreements, invention disclosures, and patents granted to NUS have grown rapidly in early 2000, with an increase in technology licensing income. The number of patents granted by the U.S. patent to NUS increased from 40 during 1990-2000 to 204 during 2000-08. Total licensing royalties also increased from US\$ 200,000 in 1996-99 to US\$ 2.29

million in 2003-08 (The World Bank, 2011, p. 154). The University further supported technology commercialisation by establishing NUS Enterprise, an organisational division to promote technology entrepreneurship and commercialisation.

Shanghai Jiao Tong University (SJTU): Strategic Financial Management

Chinese government's project "211" aims to develop 100 universities by the early 21st century that will take a leading position in the country's economic and social development (The World Bank, 2011, p. 34). The government invests in disciplinary and inter-disciplinary courses, digital campuses, faculty, and university infrastructure.

Founded in 1896, SJTU is one of the oldest universities in China. The Ministry of Education and Shanghai Municipal Government jointly operate the university. Since the 1980s, SJTU has conducted a series of reforms in governance, teaching, research and infrastructure. In 1996 SJTU developed a "three-step" plan to establish itself as a world-class university which aims at the university being well positioned in the top 100 of higher education rankings by 2050.

SJTU's plan included strong strategic management of the university, more selective student intake, focus on benchmarking and evaluation and attracting top academic experts. To bring about these changes, SJTU relied on solid funding. It received regular education funding by the central government. The university has also been awarded extra funding from two projects. The first project supports research capacity building, infrastructure and campus development, talent development and faculty development. Other projects support institutional research capacity, development of key discipline areas and a digital campus. With central government funding, 25 percent has been invested in faculty development, 60 percent in research capacity development, five percent in undergraduate and postgraduate teaching and five percent for international collaboration (The World Bank, 2011, p. 56).

SJTU has also diversified their revenue streams. The total budget of SJTU has more than quadrupled in the past 10 years. On average, their revenue comprises 20 percent regular government funding, 20 percent special funding from government initiative (such as 211), 30 percent research income, 20 percent tuition fees and 10 percent other resources (The World Bank, 2011, p. 57). At the same time, the Ministry of Education still plays a key role in university management unlike the western universities. The power structures and boundaries of Chinese universities are not as clear as the western structures. Academic power is usually superseded by administrative authority (The World Bank, 2011, p. 43). Every publicly funded institution has a Party Secretary, affiliated to the government who acts as the administrative leader (Jiang & Li, 2012).

Conclusion

In the future university structure can change. While some universities will remain broad in terms of subjects taught and researched, others will need to have a more niche space, an area of domestic and global strength, credibility so that they build alliance with industries in the particular fields. Continuing with unprofitable disciplines will be the prerogative of a few universities.

While countries may have different approaches to cost-sharing and private financing, it is inevitable in times of tight government budgets. Funding from tuitions, private sector, donations and research play a more important role. Increasing revenues, rather than cutting costs to a great extent would be university's focus. Tuition proceeds from households become an important source to maintain quality of instruction. At the same time, tuition liberalisation should be a slow process with adequate loan system in place and adequate information dissemination.

University management should not shy away from some cost cuts in the non-essential and non-core services. It is important to have cost controls and maintain clear deliverables. There can be opportunities to share services such as conference hall facilities and auditorium and outsource non-core functions such as student residency Pursuing grants and contracts, fundraising from alumni and corporation, etc. can add substantial resources depending on the mechanisms for such procurements already in place.

Expansion of private institutions can play an important role especially in developing countries. Introduction of more private universities can lead to greater competition and provide decent education at an efficient price. A solid quality mechanism is crucial to avoid second rate options that are exercised by the disadvantaged students (Salmi, 2013, p. 2). Government can often help in the form of limited subsidies such as cheap land, tax rebates and provide financial aid to student enrolled. Continuing expansion of the private sector which has to go hand in hand with robust public funding, the World Bank recommends a spending of 2 percent of GDP. Additionally trained officials should be available to undertake evaluation of these quality measures.

For student loan, there need to be ideal loan recovery rates set. Conventional loans should not be the only way to invest in human capital. The loans need to be income contingent, large enough to cover fees and living costs and have rational rates of real interest which can cover the cost of recovery. In a well-designed system debt is forgiven for a low earning student. At the same time, not every country has the means and the structure for well-structured loan systems. If at all there is some capacity, it can be directed towards low income student if the income levels can be determined by the state. Ideally states should charge a viable fee, backed by a feasible loan scheme, with some of grants for the disadvantaged with access to information on loans and schemes.

Lastly, even with cost sharing, the government funding and involvement in higher education remains important. Higher education is a good investment for the government as well as the individual. For economies that are building their education systems from scratch, stable consistent government financing and support especially plays a crucial role. This paper offers a few, and in no way exhaustive, examples of practice around the world, aiming to provide a sense of where global higher education stands.

Note

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