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Centralized Decentralization of Higher Education in Singapore

Michael H. LEE & Saravanan GOPINATHAN

Introduction

Since the independence of Singapore in 1965, university education has been tightly linked to manpower planning and economic development of the nascent nation. In the 1980s and 1990s, the sector has experienced massive expansion with a huge increase of the student participation rate from a mere 5 per cent in 1980 to 21 per cent in 2001 (Singapore Department of Statistics 2002, p.62). Quantitative expansion, has been followed by qualitative consolidation with the implementation of policy measures to improve the quality of teaching and research, promoting managerial efficiency and cost-effectiveness, as well as building up links with top universities abroad. In the long run, the higher education reform aims to make the local universities world-class higher education institutions so they can achieve competitive advantage in the global marketplace for higher education.

In July 2000, the Singapore government accepted the recommendations made by an *ad hoc* committee, which had been set up in April 1999, to conduct a review of the current system of university governance and funding in the city-state. It recommended that more autonomy, in relation to financial and personnel matters, be devolved to the National University of Singapore (NUS) and Nanyang Technological University (NTU). By enjoying greater autonomy in institutional management and decision-making, the universities are expected to be able to respond more swiftly to challenges emerging from the knowledge-based economy in order to transform Singapore into an intellectual and information hub in the Asia-Pacific region. Meanwhile, institutional and operational autonomy is balanced by strengthening the system and principle of accountability to ensure that the two public universities are using public funds, and also achieving desired outcomes set by the government, efficiently and effectively.

The reform of university governance and finance systems implies that more administrative or managerial powers and responsibilities will be devolved from the state to the individual universities. This will inevitably lead to a strengthening of the role of

the central authority and managerial leadership in the universities. There is a shift in the distribution of powers between the government, universities and the academic profession as a result of the latest reform initiatives, which are intimately related to the ongoing implementation of public sector restructuring in recent years. Neither analysis in terms of centralization nor decentralization can reveal the whole picture of reform, but there is a significant trend towards “centralized decentralization” for higher education institutions (Henkel 1997; Hoggett 1991; Watkins 1993).

This chapter is primarily concerned with the impact of “centralized decentralization” on the long-term development of higher education in Singapore. There are two sections in the chapter. The first examines major recommendations to reform the current university governance and funding system, and also the way that the two universities are responding to those policy changes and reforms. The next section comments on the implications of centralized decentralization for a significant reorientation of Singapore’s higher education policy.

Policy Context of Higher Education Reform

In tune with global trends, universities in Singapore are treated as utilitarian, instrumental and service-oriented public institutions. It is necessary to examine the latest higher education reforms in a broader policy context of public sector reform in the name of “Public Service 21” (PS21) that has been taking place since 1995. The core ideology that governs public policy formulation and implementation is pragmatism. Public service institutions are expected to show the capacity for managing, anticipating and executing changes in order to serve customers with a high standard of quality, courtesy, accessibility, responsiveness and efficiency with the employment of modern management tools and techniques. Four main initiatives have been introduced to enhance the capacity and capability of public service institutions to manage changes and promote continuous improvement: staff well-being, excellence through continuous enterprise and learning (ExCEL), organizational review, and quality service (Lim 2000).

As a direct response to the necessity for reinventing government in the context of globalization, the government now sees itself as not merely a regulator and controller of public services, but as a facilitator or nurturer cultivating an attitude of service excellence so as to induce an environment for stimulating greater efficiency and cost-effectiveness. Cultivating the entrepreneurial spirit among the government and public service institutions does not mean that they are run like a business to maximize profits. What they should do is to become more responsive and accountable to taxpayers and be subject to performance audits (Low 1998, pp. 276, 261). It is intended that the next phase of the PS21 movement will aim to pursue total organizational excellence in public service, to foster a culture of innovation and enterprise, and to cultivate a spirit of openness, responsiveness and involvement (PS21 Office 2001). The proposed reform of university governance has to be understood in this context. Thus, the universi-

ties have been asked to place more emphasis on the quality of service standards, the framework for self-assessment and external performance evaluation or benchmarking, as well as the setting up of work improvement teams to encourage staff members to contribute their suggestions and innovative ideas in favour of efficient and effective institutional management.

Four Stages of Higher Education Reform

The higher education reform in Singapore can be divided into four stages. The **first stage** was marked by the launch of an endowment fund by the government in order to diversify sources of university funding since the early 1990s. Such a move is aimed at making universities less dependent on government grants and thus alleviating the pressure on increasing tuition fees. The launch of the Universities Endowment Fund by the Singapore government in 1991 is one of the most important administrative innovations in the development of Singapore's university education (Gopinathan & Morriss 1997, p.152). The fund was founded with a base of S\$500 million provided by the government. NUS and NTU had to raise S\$250 million on their own to net another S\$250 million in matching funds from the government and then making a total of S\$1 billion within a five-year period (*Business Times* 8 May 1991). As the first step towards reduced reliance on government funding and greater involvement of alumni and the community in university education, the endowment fund has been used to support special and innovative projects related to scientific and technological advances. More importantly, the fund formalized the long-established tradition of private and corporate donations to the universities (Gopinathan & Morriss 1997, pp.152-153).

In March 1997, the Singapore government decided to give S\$2 for every dollar raised by the two universities for their own endowment funds on top of the previous dollar-for-dollar pledge. In other words, the government would give S\$3 to every dollar raised. If the individual university managed to raise \$50 million, its endowment would eventually receive a total sum of S\$200 million between 1997 and 2001 (*The Straits Times* 19 March 1997; Nanyang Technological University 1998). Both NUS and NTU have witnessed an increase in the amount of their endowment funds over the past few years. For NUS, its endowment fund was increased from S\$699 million to S\$721 million from 1998 to 2000 (National University of Singapore 2000). As for NTU, its endowment fund was increased from S\$359 million to S\$451 million between 1997 and 2000 (Nanyang Technological University 1999, 2000). When NTU achieved its target of raising S\$500 million for its endowment fund, which is known as NTU Fund, the university launched the "NTU 21st Century Fund" in June 2001 to raise another S\$100 million in the next ten years. In return, the government will provide a matching grant of S\$100 million to the endowment fund (Nathan 2001). Similar to NUS and NTU, the "private" Singapore Management University also established its own endowment fund with a deed grant of S\$50 million from the government, which also pledged to give \$3 for every dollar of donation. The target for the endowment fund is to raise S\$250 million in five years. In the year 2000/2001, the

endowment fund accumulated S\$87 million with S\$9 million social donations derived from the fundraising campaign of SMU. In 2002, SMU's endowment fund was raised over the S\$100 million level, in which about S\$11 million were derived from social donations (Singapore Management University 2001, 2002; see also Lee 2002).

The **second stage** was the creation in 1997 of an International Academic Advisory Panel (IAAP) to assist the universities to develop into world-class institutions in terms of teaching and research. The government pays serious attention to the suggestions made by IAAP, which is composed of leaders from prominent foreign higher education institutions and industrial corporations (Ministry of Education 2001a). The Panel has convened on a biannual basis since its inception in 1997. The latest and fourth meeting of IAAP was held in January 2003 to discuss major recommendations stated in the *Preliminary Findings of the Committee to Review the University Sector and Graduate Manpower Planning*, which was also released in the same month, in which the Singapore government proposed to expand and restructure the university system by transforming NUS into a multi-campus university system and evolving NTU into a comprehensive university (Ministry of Education 2003a). The fifth IAAP meeting will be held in 2005 when the focus will be placed on the development of an enriching and sustainable research culture in Singapore (Ministry of Education 2003b).

During the same period, the Singapore government also completed a review of the university admission system in order to place more emphasis on reasoning test results, extra-curricular activities and students' project work. This will come into force in 2003 (Ministry of Education 1999). In addition, there has been much curriculum revision, especially in NUS. Disciplines such as engineering, law and medicine have been reviewed and restructured so as to achieve the goal of all-round tertiary education by introducing more multi-disciplinary courses, slashing lecture time and applying information technology in the teaching and learning processes (*The Straits Times* 13 August 1999).

The **third stage** of higher education reforms saw the establishment of Singapore's third university in August 2000. Singapore Management University, always known by its acronym, SMU, was formed as a consequence of collaboration between the Singapore Institute of Management and the Wharton School of Business of the University of Pennsylvania in the USA. With its first intake of 300 students in the business management programme, the university is not intended to be in direct competition with NUS and NTU in the business-related disciplines. What the government intends to do is to ensure that the three universities develop their own unique characteristics and niches. While NUS is a comprehensive university and NTU specializes in engineering and professional programmes, SMU is to focus on serving the business and service sectors of the local economy. While a limited amount of internal competition is desired, it is not to lead to wastage due to unnecessary resource duplication among the institutions. Instead, it is intended that each university should have enough room to develop its own areas of excellence (Teo 2000).

Unlike the other two public universities, SMU is a "private" university being given considerable autonomy in student recruitment, funding and fee structures and

curriculum. The university is empowered to confer its own degrees that will be recognized by the government. Moreover, the first President of the university was a non-Singaporean, Professor Janice Bellace, a Professor of Management at the Wharton School. In the fall of 2001, Professor Bellace was succeeded by Professor Ronald Frank from the Wharton School of Business. Nevertheless, the adjective "private", describing the nature of SMU, is highly problematic as seen from the perspective of financial resources and tuition fees. Similar to NUS and NTU, the brand-new university is still funded by the government and it is provided with fixed capital including land and physical infrastructure. As there were widespread concerns over the university's ability to compete for students with the other two established universities, the government responded by ordering a flat rate of tuition fees among all the universities in Singapore. Therefore, instead of a genuinely private university, it is perhaps more appropriate to adopt the term "privately-run but publicly-funded" to categorize the nature of SMU (Lee & Tan 2002).

Before the launch of SMU, there were debates and discussions about the issue of whether NUS and NTU or certain faculties in the two universities should be privatized so they could be more innovative and entrepreneurial (see Ministry of Education 2000a). However, the government does not intend to privatize the two universities because both NUS and NTU already have a considerable degree of operational autonomy even though they are technically statutory boards of the Singapore government, and because they are such significant state assets. It is to be the confirmed prerogative of the Ministry of Education to determine the level of public funding to be allocated to the two universities for their recurrent expenditure and development projects. What the state expects with the creation of SMU is greater institutional variety and flexibility, and successful innovations which may in due course be adopted by the other two institutions.

In the long run, under the latest plan of university restructuring by the Singapore government, SMU is expected to continue its existing role as the only "state-funded private" university offering business and management education. In addition, SMU has a function to introduce new and innovative practices and approaches in curriculum, pedagogy and even university management (Ministry of Education 2003c, p.20).

The review of university governance and funding, the **fourth stage**, was aimed at ensuring that the three areas of talent management, organizational processes and resource allocation were consistent with the mission and objectives of the university sector. A comparison of practices in relation to the governance and finance of university education between Canada, Hong Kong, the UK and the USA was conducted in September 1999. As observed by the committee, top public universities are endowed with a significant level of autonomy. Flexible and market-sensitive appraisal and remuneration systems are deemed necessary to enhance and maintain the quality of university leaders, administrators and academic staff in order to compete with other world-class universities in the global education marketplace (Ministry of Education 2000b).

Recognizing the fact that NUS and NTU are key higher education institutions contributing to the transition of Singapore towards a knowledge-based economy, greater autonomous power in financial and personnel matters will be granted to the institutions, provided that the system of accountability is improved to ensure that public funds are properly directed towards the achievement of desired outcomes and used in an efficient and effective way. In July 2000, the government accepted the recommendations made by the review committee on university governance and funding. Three areas of governance principles and structures, funding policies and mechanisms, and staff management and remuneration were covered in the review.

In the area of governance, the Ministry of Education continues to have responsibility for framing the policy parameters for university education. At the same time, the two public universities are to be given greater operational autonomy within a more systematic accountability framework. Internal quality reviews will become institutionalized and external reviews commissioned by the ministry are to be carried out every three years to validate the universities' internal quality reviews. Only from 2003 will the results of those reviews be used to assess the amount of money to be allocated to the university (*The Straits Times* 5 July 2000, p.1). Performing the roles of both Chief Executive Officer (CEO) and Chief Academic Officer (CAO) of the universities, the Vice-Chancellor or President is to be empowered to set up the strategic development framework for her/his university so as to meet its mission and objectives.

In the area of finance, the universities are to be given more flexibility in financial management through the adoption of block grants and the use of a three-year recurrent budget planning cycle, with the emphasis on accountability rather than scrutiny. Faculties and departments will be given one-line block budgets, which are allocated in accordance with their specific needs, merits and, most importantly, success at meeting performance indicators. Such a practice not only strengthens the role of the faculty deans to carry out their management responsibilities in financial matters, but it aims to support and motivate faculties, departments and staff members to prioritize academic activities and achieve desired outcomes which are consistent with the needs of national social and economic development. In terms of research, research funding for competitive bidding will be increased in order to support the growth of research quality. Furthermore, the universities have been briefed that they should not depend solely on the government for their recurrent, development and research funding, but diversify their sources of funding. In particular, the universities are to develop their links with industry, alumni and the wider community through the pursuit of endowment funds.

Finally, in the area of staff remuneration and management, a new remuneration system, consisting of a basic salary and other variable components reflecting differences in performance, responsibilities and market values, will be introduced. This new remuneration scheme is consistent with market-driven and performance-based principles. For basic pay, there will be no more automatic annual increments, but these will be converted to performance-based increases. In addition, a more rigorous system of performance assessment and evaluation will be instituted. The criteria for making de-

cisions on rewards and recognition, including annual merit increments, promotions and even the granting of tenure, will be made more stringent in accordance with expectations for staff members set up by the universities. More attention is to be devoted to staff development in the aspects of leadership development and managerial training (Ministry of Education 2000c; for details, see Ministry of Education 2000d).

It is clear from the above that in the past few years, the government has set up a comprehensive framework for reforming university education through a series of significant policy changes and reform measures. Higher education reform is, of course, a continuous process that does not terminate with the review of governance and funding. In spite of having concerns over the quality of education amidst the process of massification, the Singapore Government has just announced its intention to provide another 5,000 university places on top of the current annual intake of 10,000. The student enrolment rate will reach the level of 25 per cent of the cohort (*The Straits Times Weekly Edition* 28 April 2001, p.1). In January 2001 when IAAP held its third meeting in Singapore, the panel suggested that the government consider the possibility of setting up a fourth university to provide more opportunities for polytechnic graduates to pursue first-degree courses in the local universities (Ministry of Education 2001b). In February 2001, the government appointed a committee to study this idea of setting up a fourth university in Singapore. The proposed fourth university should be differentiated in mission and structure from the three existing public and "private" universities. The higher education sector in Singapore, with four state-funded universities, will have sufficient competition to spur improvements, and institutions that complement one another by having different niches of excellence (Ministry of Education 2001c).

Nevertheless, the idea of setting up a fourth university in Singapore was eventually rejected by the government. In order to meet the 25 per cent cohort participation rate target by 2010, the government did not agree to set up a brand-new university, which it believed would be without the benefit of an established name or track record, but to develop a university system consisting of two comprehensive and three niche universities (see Figure 7.1). As mentioned earlier, NUS will be transformed into a multi-campus university system, comprising NUS Kent Ridge, NUS Buona Vista, and NUS Outram. While NUS Kent Ridge continues its existing spread of undergraduate disciplines, NUS Buona Vista will be a more research-intensive university in the fields of engineering, info-communications technology and sciences, and NUS Outram will specialize in medical and health sciences education with the provision of a Graduate Medical Programme. NTU will be developed as a fully-fledged, comprehensive university by adding the Schools of Physical Sciences, Humanities and Social Sciences, and Design and Media. SMU will continue its existing role as the only "state-funded private" university offering business and management education (Ministry of Education 2003c). The change will take place in 2005 (*The Straits Times Weekly Edition* 25 January 2003; see also Lee & Gopinathan 2003).

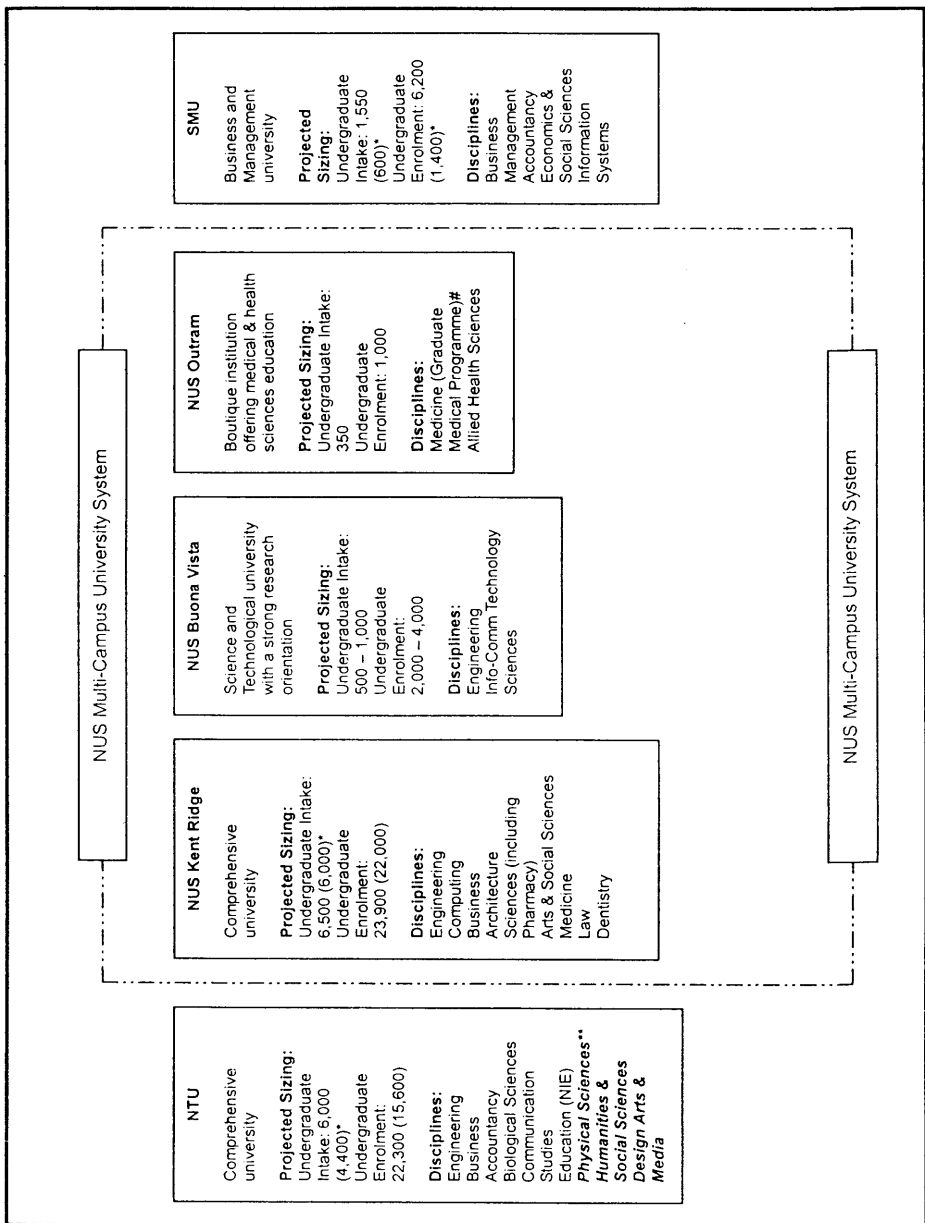
Practices and Responses of the Universities

In order to assure the quality of teaching and learning processes, both universities have long used a system of external examiners, who are mostly senior academics from well-established universities, to review examination papers and student projects in the respective departments. There are also boards of examiners to clarify the rigour and fairness of the system of assessment. Some faculties offering professional degrees like engineering, architecture and medicine also invite overseas professional institutions to assess their programmes for accreditation on a regular basis. Apart from obtaining feedback from students on academic staff members' teaching performance, on some occasions experienced and senior staff observe lectures by junior colleagues. The practice of peer review is aimed at providing lecturers with constructive feedback and therefore ensuring quality teaching in the university. Incentives like teaching excellence awards and cash prizes are available for rewarding outstanding teaching performance in the universities. Alumni and employers from both public and private sectors are regularly consulted through the mechanism of advisory boards for the review of curriculum in order to cope with changing demands.

For research, proposals exceeding a certain amount of funding are subject to evaluation by external reviewers. Principal investigators of research projects have to submit regular project appraisals for evaluation. A number of key indicators, including the number of patents filed, research papers, and even the impact of research findings, are taken into consideration in calculating the quality of the research output. Projects with poor performance will be cut back and terminated. In fact, quality assurance of research output largely depends on research publications. Publications in top international and regional refereed journals are considered the main criterion for evaluating academic staff members' research performance. Other indices for measuring the quality of research are based on the impact of journals as well as the citation of published papers. These indices can easily be measured and compared in relation to different institutions. However, it is questionable whether they can be totally relied on to reflect the quality of research within the university.

In the area of staff management, the performance of each academic staff member is reviewed and evaluated annually. Each staff member's contributions in the three areas of teaching, research and service are taken into consideration. Department heads also interview individual academic staff in the process of annual performance appraisal. In addition, quality assurance covers the processes of staff recruitment and promotion. When recruiting new academic staff, comments are sought from external referees where feasible. Potential candidates are invited to present seminars and hold discussions with department staff. There are interviews by recruitment teams of the respective departments. As for staff promotion, departments have set up peer review committees to examine and recommend staff for promotion. External assessments are used for senior promotions and in some instances tenure considerations (Interview with Andrew Nee, 4 December 1999).

Figure 7.1: Proposed Structure of the Public University Sector in Singapore



Source: Ministry of Education 2003c, Appendix.

Such an emphasis on quality service, performance indicators and benchmarking is closely related to the practices of the PS21 movement, which apply to all public service institutions, including the public universities in Singapore. Adopting the PS21 quality service standards for academic staff and support staff to achieve work excel-

lence, NUS set up an Office of Quality Management in 1999 to ensure quality measures in teaching, research and services. The office is responsible not only for the quality framework for institutional self-assessment in the aforementioned areas, but also for setting guidelines for external benchmarking, performance assessment, and teaching and learning evaluation. The mission of the office is to enable NUS to become the intellectual and entrepreneurial pulse of Singapore. Three thrusts of quality assurance, quality assessment and quality audit were developed to aid the university's strategic development (Interview with K.C. Tan, 10 March 2001). Various procedures and incentives were designed and introduced to encourage quality and motivate good performance within the institution.

NUS has recently adopted the four main initiatives of the PS21 movement, as mentioned earlier, including ExCEL, quality service, organizational review and staff well-being. ExCEL is aimed at fostering positive attitudes towards change and continuous improvement by encouraging staff to provide innovative suggestions and setting up work improvement teams. Quality service is promoted as a value to meet the needs of the public and internal customers, including teaching staff and students. Organization structure and procedures are reviewed and examined in order to achieve greater effectiveness and efficiency. Finally, policies and programmes are provided for staff welfare and general well-being, such as health care, recreation and social development (Interview with Andrew Nee, 4 December 1999). Likewise, NTU also takes part in the PS21 Public Sector Work Improvement Teams activities and the university won a number of awards in 1998 and 1999 (Nanyang Technological University 1999, 2000).

Strengthened responsiveness to the public sector reform initiative is expected when the principles of the PS21 movement dominate the quality assurance frameworks in the universities as they do in other public service institutions. With the promotion of the spirit of "technopreneurship" and entrepreneurship in both public and private sectors, the universities have looked to business models for help with their management and operation. As pointed out by the Minister, in order to find a position in the new knowledge-based economy, the universities need to strengthen the focus on technopreneurship in their teaching and research activities and engage in entrepreneurship-related activities like running spin-off companies and participating in business-related competitions (Tan 2000). Moreover, the universities are looking at business models in their drive for organizational excellence. For instance, NUS has taken part in the Singapore Quality Award Model for Business Excellence, which puts its emphasis on customer-driven quality, leadership and quality culture, continuous improvement and innovation and public responsibility. The university needs to carry out quality assessment exercises to measure its organizational performance in accordance with a world-class business excellence model. Such exercises provide the university with a better understanding of the strengths and weaknesses of its organization as compared with other institutions in the industrial and business sectors. When the organization can show sustained improvement and a high level performance relative to appropriate benchmarks, it qualifies as a member of the Singapore Quality Class,

which is a prerequisite for qualifying for the Singapore Quality Award. Several items are taken into consideration as main criteria for granting the award: leadership and quality culture, the use of information and analysis, strategic planning, human resource development and management, management of process quality, quality and operational results, and customer focus and satisfaction (Interview with Andrew Nee, 2 August 2000).

In the new knowledge-based economy, the universities in Singapore have recognized that they can no longer be purely academic institutions, but need to move towards being more business-like public service enterprises. In his inaugural address, Professor Shih Choon Fong, the President and Vice-Chancellor of NUS, said his aim was to make the university a Stanford in Singapore and to make significant contributions to high-tech technologies. The university was also to be the intellectual and entrepreneurial pulse of Singapore, the confluence of local and foreign talent (*The Straits Times* 8 June 2000). He said that NUS had to transform itself into a global knowledge enterprise to compete with world-class universities around the world and to deliver customized quality education with the use of information technology. In order to attain competitive advantages in the global market for university education, academic programmes and research activities had to be assessed and evaluated by international benchmarking standards (Shih 2000, pp.3-4; see also National University of Singapore 2000, pp.15-23). Similarly, the second NTU President, Professor Su Guanng, in his inaugural address, also asked the university to have entrepreneurial spirit matching that of Stanford University in the USA (Su 2003).

Implications of Centralized Decentralization

With the latest reform of the university governance and funding system, the Singapore government intends to move away from a direct interventionist control model to a more remote supervisory steering model to enhance both the efficiency and effectiveness of the university education sector. Decentralization is not simply about shifting power and authority, but also carries with it greater responsibility for achieving desired outcomes and highest value for public money dedicated to the sector. For Singapore, decentralization cannot be seen as a move by the government to reduce its responsibilities for university education due to the problem of financial stringency as in most Third World developing countries. The Singapore government has always funded education and higher education well, has a large budget surplus and sees adequate funding as crucial to quality. The change is better understood as a means to empower more centralized and strengthened university administration and management in order to ensure that the development of university education is in line with the pursuit of excellence and world-class status with both internal and external audit exercises.

While granting the individual universities greater autonomy in relation to governance, finance and human resource management matters, the notions of public ac-

countability, responsibility and responsiveness have been strongly emphasized by the state authority with the aim of assuring both the cost-effectiveness and managerial efficiency of the universities. A shift from centralization towards decentralization means universities are faced with less restriction on how to achieve their mission and objectives. However, the decision-making power devolved from the government is now more likely to be centralized in the top management of the universities, faculties and departments. The crucial point to make is that, given the emphasis on accountability and standards, responsibility for ensuring their achievement cannot be diffused throughout a big organization. There must be strategic control from top management. Moreover, the functions of universities are no longer determined by the academic profession's discretion, but are correlated to the goals of national, social and economic development in Singapore. In this sense, what the universities are facing is a trend of centralization. Therefore, the case of Singapore, in fact, demonstrates the combination of both centralization and decentralization strategies for reforming and restructuring the university education sector. It is argued that the present situation in Singapore can best be understood by utilizing the concept of "centralized decentralization," by which the devolution of mainly financial and human resource control is matched by the centralization of policy and decision-making power and strategic command in the hands of the top university management, with the state authority continuing to steer university education from a distance.

Even though more autonomy can be devolved to decentralized faculties and departments within a centralized university framework, such a "centralized decentralization" strategy is needed to avoid the loss of control, authoritative communication and managerial scrutiny (Watkins 1993, p.10). In order to ensure that faculties and departments are run consistently with the overall policies and strategies deemed appropriate by top management, systems of performance indicators and quality assessment are put in place to ensure a greater degree of accountability and responsiveness to centralized control.

Centralized decentralization as a strategy for reforming university education has three implications in Singapore. First of all, it brings about changes in the role of the state in university education as it becomes a service purchaser instead of a provider as in the past. Secondly, decentralization does not necessarily mean a spreading of decision-making and managerial powers among academics. In fact, these powers become even more centralized within the university. And finally, there is a reorientation of universities from their traditional role as cultural and academic institutions to being more corporate enterprise-like public service institutions. Universities are thus no longer immune from the competition for resources, achievement and reputation in the global and regional marketplace for higher education.

Changing Role of the State

In Singapore, universities are perceived as public service institutions in which the interests of the academic profession are seen as subordinate to the national interest. Since its independence, the state machine under the People's Action Party (PAP) has

remained strong, centralized, and pragmatic because the mentality of survivalism dominates the logic of governance among leading politicians and policy-makers. Government influence and control over university education was sealed by the appointment of Dr. Toh Chin Chye, formerly Deputy Prime Minister and PAP's first Chairman, as the Vice-Chancellor of the University of Singapore in 1968 (Gopinathan 1989, p.217). In the late 1970s, the government was determined to merge the University of Singapore and Nanyang University into the present National University of Singapore. Dr. Tony Tan, then Senior Minister of State for Education, was appointed as the first Vice-Chancellor, and given the power to appoint deans of faculties. At the same time, the government prohibited the formation of any trade union of academics in the university (Gopinathan 1989, pp.220-221). These policies demonstrated the government's interventionist control over the university education sector.

Despite the government's intention to retreat from detailed intervention over the governance of university education, it is recognized that the two public universities and one private university are clearly influenced by the government and its policies. As revealed from the latest reform programme of the governance and funding system of the public universities, what the government intends to decentralize is not its power, but the responsibility of management and budgetary allocation. The government has adopted such concepts as efficiency and effectiveness, which form the core values of the new public management in Anglophone countries, for guiding the public sector and higher education reforms. Nevertheless, there is no concrete evidence showing that the state intends to retreat from the realm of university education due to the scarcity of resources for public services. Instead, higher education reform is aimed to ensure a more efficient use of resources. Meanwhile, the role of the state is not necessarily weakened because it still continues to be the primary financier and planner of university education in Singapore.

The state is shifting from being the sole provider of university education to the role of prominent purchaser, representing taxpayers, employers and students. The allocation of financial resources depends not only on the size of student enrolment, but also on the results or performance indicators generated from quality assurance reviews covering the realm of teaching and research. Furthermore, the introduction of the performance-based salary structure is a means to strengthen the responsibility of middle management, comprising faculty deans and department heads, to scrutinize the performance of academic staff members. It is expected that the government will also play an active role as a facilitator to generate a favourable environment for the local universities to become competitive in the global knowledge and higher education marketplace. The state continues to keep an eye on the size of student enrolments and the development of areas of excellence, such as engineering, life sciences and business management. In this sense, the state can maintain its capability and capacity to govern the higher education sector in line with desired economic and national development within the context of centralized decentralization.

Centralized Decision-making and Management

The role of senior and middle management, which is comprised of university heads, faculty deans and department heads, is undeniably strengthened and becomes more significant. Endowed with powers over budgetary allocation, quality assurance and staff remuneration with performance appraisal, senior and middle managers can shape agendas and determine direction so long as they are consistent with central values and strategies and the overall policy framework set by the institution. Therefore, not all academics benefit from the policy trend of centralized decentralization as it differentiates those who can enjoy more managerial power and authority from those whose work has been placed under closer scrutiny in the context of quality assurance and control systems (Henkel 2000, pp.57, 67).

Singapore's universities are characterized by a top-down management and decision-making process. It is mainly a result of the fact that the universities are not treated as merely cultural and academic institutions for the sake of scholarship and academic excellence, but as public service institutions under the clear influence of the government and serve as agents of government policy. In the past, the development priorities and policies, such as the pattern of courses offered and the student recruitment policies, were articulated by the government from the top down in order to eliminate any political outcry and undesirable impact on the population (Gopinathan 1989, p.222). Until recently, universities could make their own decisions on courses, programmes and curricula. To a certain extent, it reveals what "steering at a distance" means.

A university academic admitted that in Singapore's context, most decisions are top-down. A similar situation can be found in the universities where consultation among academics for formulating policies and making decisions is rare. Policy changes are implemented before asking for the opinions and comments of academics working in the universities. Individual academics have no say in the decision-making process, whereas faculty deans and department heads are legally empowered to make decisions. There are committees at both faculty and departmental levels to make decisions. More consultations are held with committees than with individual academics when it comes to decisions and policies regarding academic issues (Interviews, Singapore, 6 September 2000; 12 March 2001; 25 April 2001; 26 April 2001).

With more emphasis on financial audits and quality assurance, strong and capable leadership is a must for universities striving for success in long-term development. A strengthened and centralized management structure implies a redistribution of power within universities skewed towards university administrators at the expense of academics in basic units. Although most university administrators have been academics, there is a growth in the number of non-academic administrators who handle an increased range of tasks and paperwork related to university administration. Maurice Kogan (1999) suggested that strengthened university administration and management would bring about the bureaucratization of the collegium and academic work (p.267). Academics have to spend more time developing procedures and rules to fulfil the

principle of accountability with the use of quality reviews and financial audits (Henkel 2000, p.63).

In the present managerial system, all academics are responsible for their achievements and outcomes with regard to teaching, research and service. Rules and regulations are set and institutionalized to ensure that academics are working in line with the ultimate goal of transforming their universities into world-class higher education institutions. It is admitted that managerialism is, to a certain extent, a fact for the academic community. On one hand, management by results and performance has become the norm in Singapore and not just for universities. On the other hand, more broad based management by committees for academic and personnel matters like research grants and staff promotion has been put in place to complement decision-making by department heads (Interview, Singapore, 25 April 2001).

While academics are now more profoundly affected by the rise of managerialism, the idea of collegiality has not disappeared and it remains a core value for academics though it needs to be adjusted to cope with ever changing internal and external circumstances. Harvey (1995) described the new collegialism as outward-looking and it intermingles professional accountability and cooperation with an adherence to continuous improvement and delegated responsibility for quality and team work (p.136). Alternatively, Hargreaves (1992) used the idea of "contrived collegiality" to indicate recent evolution from a collaborative culture to highly centralized evaluation. Contrived collegiality is seen as an administrative imposition that requires teachers in schools or academics in universities to work together and implement the mandates of their superior management. The outcomes of contrived collegiality are said to be highly predictable with the use of rules and regulations (p.86). The tension between managerialism and collegialism is undeniably difficult to resolve and it is inevitable with the emergence of entrepreneurial universities (Currie & Newson 1998, p.144). Apart from playing the game of managerial governance, it is a must for them to uphold the ethos of collegiality in order to preserve their uniqueness as a group of intellectuals and professionals in the society.

Reorientation of Universities

Long before changes to governance, the universities had been asked to adopt entrepreneurialism as a response to the need to add more value to their intellectual expertise. Staff and faculty members were urged to be more innovative and receptive to new ideas and to have the confidence to take and manage risks, not to hide behind rules and regulations and not to resist change in response to challenges in the global knowledge marketplace. The university needs to serve as a driving force and starting point of lifelong learning. Departments are encouraged to develop their own distinctive strengths and areas of excellence to create a climate conducive to cultivating the multiple talents of students. As a genuine global knowledge enterprise, alliances with local corporations and overseas world-class higher education institutions are necessary to develop collaboration in research and teaching ventures and thus foster a vibrant

intellectual and entrepreneurial climate (Shih 2000). Likewise NTU puts emphasis on the entrepreneurial spirit to make the institution competitive in the global marketplace.

Entrepreneurialism is partially reflected in the establishment of spin-off companies, in which academics are encouraged to undertake research and development work and provide consultancy services to industry and business. The two public universities have set up a number of companies for commercializing their research findings. NUS has 10 companies for research and development under NUS Technology Holdings Pte Ltd. The latest two companies are Aromatrix Pte Ltd, to commercialize research findings in odour technology, and BioMedical Research and Support Services Pte Ltd, to commercialize technologies for the development of biomaterials. Similarly, NTU set up NTU Ventures Pte Ltd to commercialize the inventions of its researchers. As of 1999, the university had more than 10 spin-off companies specializing in e-commerce, information technology, electronics and manufacturing processes (Ministry of Information and The Arts 2000, pp.219, 221). In addition, the universities are encouraged to attract non-government funds from industries, alumni fundraising and donations. The launch of endowment funds since the early 1990s is a means to encourage the universities to create alternative sources of funding and thus depend less on the government. These are signs of an incipient development of entrepreneurial universities in Singapore.

A number of scholars in higher education studies have observed the new phenomenon of the entrepreneurial or enterprise university in Anglophone countries. Clark (1998) suggests that in entrepreneurial universities, the strengthened steering core possesses a greater managerial capacity to reconcile new managerial values with traditional academic ones. Outreach offices or peripheral units are encouraged to build up linkages with the outside world. The financial base for entrepreneurial universities is diversified with different sources of non-government funds from alumni, industries and social donations. Moreover, the identity and reputation of universities are tightly related to the cultivation of entrepreneurial culture, values and beliefs (pp.5-8). On the other hand, Marginson and Considine (2000) suggest that in enterprise universities, it is the strong core executive that defines the purpose and mission of the institution. The relationship between the university and the outside world is mediated by market techniques. At the same time, the market is driven by a commercial and entrepreneurial spirit and universities are influenced by the culture of the private sector. Performance targets and indicators are imposed in accordance with the culture of quality and accountability (p.4).

Professor Cham Tao Soon, the then President of NTU, describes Singapore as operating like an enterprise, in which the government performs the role of chief executive to coordinate all aspects of society. University education is therefore not exempt from the influence of the state in the cause of the national interest. The universities are expected to be more relevant to market forces and also more accountable to make full use of money and limited resources for desired outcomes (Interview with Cham Tao Soon, 12 March 2001). Whether the universities become more like enterprises depends on how university education is perceived. The universities are not only

providing the opportunity for academics to pursue excellence, but are obliged to become competitive with the best academics and the best students. While the enterprise culture and spirit is a driving force for innovations and managerial efficiency in universities, it should not be transplanted at the expense of the traditional academic culture (see also Mok & Lee 2003).

Conclusion

The basic aim in implementing the centralized decentralization policy for higher education reform is that senior and middle managers in universities can have more flexibility to make institutional decisions and policies rationally. The ideal of managerialism presumes that the problems of organizational inefficiency and cost-ineffectiveness can be cured by ameliorating management failings with the employment of professional managers. Centralized decentralization is a means of strengthening the power and authority of top and middle management in universities. Managerial ideas and practices have been borrowed from both public and private service sectors. However, managerialism can also be manipulated to accelerate the differentiation between ordinary academics and academic managers, even though the latter are not assumed to be professional managers as are those working in public and private corporate enterprises. The concept of quality becomes more problematic as most quality assurance increasingly relies on performance indicators that are easily quantifiable and comparable but not necessarily useful to reflect the genuine quality of education. In turn, managerial reform, if not worked out properly, paradoxically generates new problems that lead to conflict with the traditional academic culture, including academic autonomy and academic freedom. On the other hand, the role of the state remains strong as it can make use of accountability pressures, performance indicators and even market forces to affect the allocation of financial resources and thus shape the overall development of university education in Singapore.

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