



## FUNDING CRISIS IN HIGHER EDUCATION INSTITUTIONS: RATIONALE FOR CHANGE

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### ABSTRACT

*An important priority of public policy is to ensure that higher education institutions contribute to economic growth and social progress as a whole, especially in the context of today's globalised markets and knowledge economy. It is crucial for any nation to have a good education system and strategic planning to improve learning outcomes, access to facilities, and efficient use of resources. This paper explained the rationale for change in funding higher education with comparison made based on previous literature in developed and developing countries.*

**Key Words:** Funding; Higher Education; Performance-Based Funding; Strategic Planning

### INTRODUCTION

In this competitive and commercialised environment, there is a constant need to enhance the systems, policies, and strategies of higher education for a more efficient use of resources (Newman et al., 2004). With the greater demand for accountability in spending public money, Higher Education Institutions (HEIs) are required to become more transparent in their dealings (Christensen, 2011). Governments across the world have introduced many barriers to ensure that there is an effective use of public funds (Altbach, 2007, Moja, 2007, Rolfe, 2003). They have also implemented monitoring systems to oversee the administration and operation of universities to ensure that HEIs adhere to the government agenda (Alexander, 2000).

Government funding may come in different forms either as grants or loans that are normally used for funding operational costs or development projects in HEIs. In England, for example, 60 per cent of funds for higher education comes from the government while the rest is made up of other sources such as tuition fees from students (Prowle and Morgan, 2004). Nowadays, tuition fees have become an increasingly popular (Bou Habib, 2010) and important source of funds for HEIs (Teixeira and Koryakina, 2011). For example, in China the government has shifted its funding system from a state supervised model to a diversified funding base using mixed sources from government grants to charging fees (Chow and Shen, 2006, Tilak, 2003). The introduction of tuition fees and greater commercialisation of university services have been adopted as strategies for supplementing funding sources in HEIs (Vidovich et al., 2007).

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### Rationale for Change

There is a serious debate about whether the services and products generated by HEIs can be considered 'public' or 'private' (Altbach, 2007, Kevin, 2003, Nixon, 2010). If higher education is considered a private good, students need to pay for the services and if it is a public good, it is the responsibility of the society to provide the resources. However, from another point of view, higher education has both the characteristics of a public and private good. Therefore, HEIs may treat students as consumers and clients and charge them requisite fees for their services, but governments must continue to provide a significant source of income for HEIs (Altbach, 2007, Marginson, 2007, Neart, 2004). Since higher education is a major vehicle of promoting social cohesion as well as economic activity and employment, the government cannot completely renege on its role in funding (Schomburg and Teichler, 2006). Funding for higher education can be considered a social investment with economic and social returns which benefit the individual and the public. Altbach(2007) says that the decision of categorising HEI services is critical to the overall well-being and progress of a society.

Funding HEIs has become a source of great debate from 1976 onwards. HEIs have been asked to justify their activities and improve their efficiency (Casu and Thanassoulis, 2006, Metz, 2011). Various stakeholders have begun to demand more evidence of the quality of programs in HEIs, their learning outcomes and community impact (Choban et al., 2008). LeRoux and Wright (2008) find that management reforms and increased concern about non-profit accountability have been advanced as the rationale for implementing performance measurement. The "*business as usual*" attitude is no longer acceptable for operating higher education (Rowley et al., 1997).

In the traditional method, the allocation of funding is determined through a process of negotiation between the government and HEIs, based on input criteria and historical trends (Salmi et al., 2006, Strehl et al., 2007a). The budget is allocated on the basis of the proposal submitted by the institutions to the government as the starting point of the negotiations (Jongbloed, 2000b). However, with the greater demand for more accountability in the use of public resources, there is a need to introduce more transparent funding model that improve efficiency in the use of public money. Therefore, policymakers began to look for approaches that could promote better performance in funding HEIs (Kretovics and Michaels, 2007).

The current experience in HEI sector shows that the diversification of funding has become a global trend (Teixeira and Koryakina, 2011). Kretovics and Michaels (2007) point out three conditions of the diversification that include - exploring alternative funding; deregulation of policy and regulation; and encouraging alternative funding.

Higher education requires a variety of resources (input) to support programs, activities, and services in teaching and research. HEIs are being called to account for the quality (outcomes) of education that they provide and they need to have a mechanism to measure their achievement (Abdullah, 2006, Caraça et al., 1998, Cave, 1997). Jongbloed and Vossensteyn(2001) state that successful funding methods currently in use in HEIs have a strong affinity with market-oriented mechanisms with techniques to measure output, productivity, and performance indicators

These market mechanisms are expected to enhance the efficiency and responsiveness of HEIs (Deogratias Bugandwa Mungu, 2009, Leslie and Slaughter, 1997). Bergan (2009) points out that there are two factors behind the new trend that treats education as a marketable commodity. The first factor is that higher education systems are under financial strain due to increasing numbers of students and lack of public funds; and the second factor is the neo-liberal economic policies that promote privatisation of social and economic sectors including higher education. In fact, the student-centred option is portrayed as the most demand-driven system of financing (European Students' Union, 2005). Jongbloed(2004) indicates that the current international trend in funding mechanism has adapted itself to become more student-centred. This form of demand driven

funding is a key aspect in the future direction of funding models. This alternative will give more freedom for students to choose their programs and ensure that they have greater flexibility in achieving their goals. These systems appear in an increasing number of countries, for example, Cheung (2003) indicates that the voucher system is an increasingly popular funding method.

In addition, HEIs in most countries have adapted cost sharing mechanism to raise the necessary funds in light of the funding cuts (Mohrman et al., 2008). For example, in Jordan the enforcement of cost sharing strategies contributed to freeing up the income needed by HEIs (Kanaan et al., 2011). Recently, there has also been greater cooperation among universities and the industry as there is greater commercialisation of research that can be used in the business world who then give increased support for research and development (Lundberg and Andersen, 2011).

Apart from greater accountability and flexibility, the reform agenda should also include delegating more autonomy to HEIs in running their operations and making decisions. There has been a growing emphasis on performance orientation as well as a decentralisation to balance the diversification of financing, accountability, and autonomy in higher education. Consequently, there is a move towards decentralisation of authority as HEIs have entered into a new phase of market-oriented reform (Fröllich and Klitkou, 2006, Kelchtermans and Verboven, 2008). For example, a 2003 survey study shows that the OECD university countries have autonomy to regulate their own policies and priorities in activities such as: (1) managing own buildings and equipment; (2) borrowing funds; (3) spending money; (4) setting academic structure; (5) employing and dismissing academic staff; (6) setting salaries; (7) managing student enrolment; and (8) determining level of tuition fees (OECD 2003).

Many researchers interpret these funding reforms in a positive light and say that a relative decrease in public funding can encourage HEIs to raise more private funds, adopt novel ways of cost sharing, and act in a more entrepreneurial way (Vincent-Lancrin, 2007). This has been supported by Ogbogu (2011) who suggests that universities should be more open to implementing cost sharing strategies without relying too much on government funding. With government contributions on the decline (Altbach, 2007, Liefner, 2003, Orr et al., 2007, Roger, 1995), demand from stakeholders for more efficiency (Massy, 2004), greater accountability to public funds (Alexander, 2000, Hines, 2000) and increasing costs (Johnstone, 2004), a large number of HEIs have introduced dramatic changes to reform and restructure their funding systems.

### **Role of Strategic Planning in Higher Education Institution Funding**

HEIs are required to follow a prescribed set of priorities and activities to maintain and improve the quality of the services that satisfy the demands of the public they serve. Strategic planning ensures that publicly-funded institutions like HEIs maintain accountability to external constituents (state, provincial and federal government) (Welsh et al., 2006). Apart from this general ethical accountability, Taylor, Machado and Peterson (2008) argue that strategic planning has also been adopted in HEIs to initiate policy reforms that enable them to cope with the changing economic conditions. Responding to Taylor, Machado and Peterson (2008), Kettunen (2008) also explains that strategic planning can be formulated in HEIs to help them adjust their strategies and actions in alignment with the government agenda.

Salmi and Hauptman (2006) identified three main goals of public policy for higher education: (1) increase access to, and equity in, tertiary education by factors such as students enrolments, opportunities of lifelong learning, private sector investment; (2) increase the effectiveness of tertiary education systems by improving the quality of teaching and research; and (3) improve the efficiency and sustainability of tertiary education system by maximising the return of the resource allocated. In their study of a new compact for higher education, Kallison and Cohen (2009) recommend several approaches for ensuring accountability as well as autonomy in funding reforms: (1) each individual university must set educational goals that reflect their vision and

mission; (2) accountability measures should be made available to public; and (3) greater focus on performance with respect to government goals.

The key issue about strategic planning is whether a centrally-managed policy from the government can work in dispersed relatively autonomous HEIs across a nation. After reviewing the literature and conducting further discussion with the experts, Dooris, Kelley and Trainer (2004) made the conclusion that a convincing, generalisable empirical study of the efficacy of strategic planning in higher education has yet to be published and there is no definite answer to the question. This is because strategic planning in HEIs is undertaken in a relatively complex manner in a changing environment (Dill, 1996). Furthermore, the operationalisation and administration of strategic planning in HEIs is not readily amenable to controlled studies, or even to quasi-experimental research (Dooris, Kelley and Trainer, 2004). Therefore, Choban, Choban and Choban(2008) add that the process of executing strategic planning in HEIs is often truncated by the absence of clearly defined and reliably documented outcomes. In general, this is caused by several factors such as leaderships, demographic changes, government funding regimes, politics, social, and cultural forces.

### **Funding Mechanisms**

The previous section outlined how the integration of strategic planning in higher education has provided a framework for incorporating policy reforms that facilitate an institution to align its vision, mission, values, goals, and strategies in line with the government agenda. strategic planning can be used to measure institutional performance and is heavily linked to the process of decision making including the budget (Holwick, 2009).Existing literature has also indicated that there is significant association between strategic planning and allocation of resources in influencing institutional performance. In particular, findings show that strategic planning implement through funding systems is one of the most prevalent methods of developing institutional strategies for HEIs (HEFCE, 2010, Kettunen, 2008, Rolfe, 2001, Strehl, Reisinger and Kalatschan, 2007a). Improving the funding system in higher education sector is expected to stimulate strategic activities relating to staff development, administrative functions and educational output in HEIs.

Strehl, Reisinger and Kalatschan (2007) say that there are many challenging issues in implementing funding reforms because of the multiplicity of stakeholders' values and views. Sanyal and Martin (2009) have pointed out some factors that need to be considered when making policy decisions in strategic planning about funding reforms: (1) increase total enrolment in HEIs; (2) state financing cannot match the costs of massive expansion; (3) governments are unable to absorb the pressure from increase in costs; (4) cost sharing between public and government; (4) the GATS and WTO make higher education a tradable commodity; and (5) diversification of funding resources with reduction of government responsibility will lead to rise in higher education costs and widen inequality of opportunities. Funding reforms according to Schiller and Liefner (2006) comprise of government budget cuts, Performance-based funding (PBF) mechanism, and diversification of the funding base. Todea and Tilea(2011) discovered that there is no perfect model of funding methods in higher education and it could comprise of a variable mix of funding methods. The following sections will address two main thrusts in funding reforms that accommodate these various demands for change.

### **Traditional Funding**

In the traditional funding method, the allocation of funding is determined through a negotiation between the government and HEIs, by referring to the input criteria and historical trends (Salmi, Reviewed and MacMillan, 2006, Strehl, Reisinger and Kalatschan, 2007a). The procedures for allocating budget are based on the proposal submitted by the institutions to the government as the starting point of the negotiations (Jongbloed, 2000b). In practice, there are four methods of traditional funding in HEIs: (1) negotiated budget; (2) formula funding; (3) categorical funds; and (4) competitive funds.

### **Performance-Based Funding**

PBF systems focus on the output of universities in teaching and research and, performance indicators are used to determine the level of funding (Harriet, 2011, Jongbloed and Vossensteyn, 2001). Their achievements are measured according to indicators in order to ensure accountability, performance, and funding level in managing public money (Layzell, 1998). Furthermore, this method focuses on the institutions' real performances. Marks and Caruthers (1999) state that performance-based funding is expected to alter the emphasis from quantity to quality. At the same time, the university-government relationship has been altered with PBF (Schiller & Liefner 2006). According to Kivistö(2005), since the implementation of PBF is aimed at aligning the interests and goals of the HEIs in line with the government objectives, the normal or pre-existing operations of the HEIs can be modified. Moreover, PBF forges a closer relationship between the government and HEIs.

Recently, performance-based methods of funding have become very popular in the higher education sector (Kretovics and Michaels, 2007). Indeed, research on OECD countries show the increasing use of PBF to separate teaching and research activities (Salerno, 2005). Most universities in the world have already adopted PBF mechanisms that rely on performance indicators (Jongbloed and Vossensteyn, 2001) and encourage an entrepreneurial culture (Sharma, 2004).

### **Problems in Performance-Based Funding**

While PBF funding mechanism is gaining popularity in HEIs, in practice there are some uncertainties about this funding system (Burke and Modarresi, 1999). Dougherty and Natow(2009) state that PBF is very popular but unstable. In addition, Burke (2002) points out that this funding system is facing some conceptual problems. In a survey of all public two-and four year colleges and universities in Florida, Missouri, Ohio, South Carolina, and Tennessee in year 1999 and 2000, Burke found that performance funding was a difficult funding system to implement in the complex and varying structures of different HEIs.

However, despite these problems, Landsman (2009) has indicated that this method will make a comeback since more universities in US are considering the implementation of PBF. PBF was also shown to be a success in Tennessee and Missouri, USA. These two states used quality performance indicators to measure teaching and learning outcomes by focussing on parameters of quality in graduation, teachers, performance of graduates (Heller, 2004).

Layzell(1998) has pointed out that the key to the success of a PBF mechanism is to keep it simple, communicate with stakeholders to develop understanding, leave space for error, learn from those who have already implemented the system and design your own methods. Meanwhile, Burke and Lessard(2002) state that the effectiveness of a PBF system depends on the institutions' reactions. Ashworth (1994) also stipulates that the system should be flexible and simple while providing data to measure performance. Another major area of concern associated with the implementation of PBF is its design (Salmi and Hauptman, 2006). Some crucial components in designing PBF are the selection of good indicators and measures to evaluate institutions and development of appropriate reward programs.

### **Performance Indicators**

As the last section pointed out performance indicators are a key issue to address while implementing funding reforms. Indeed, previous research has shown that assessment remains the foremost issue in developing an strategic planning for making the desired impact on HEIs (Tapinos et al., 2005). It is not surprising that most important performance measures used in strategic management relate to the measurement of outcomes (Poister, 2003). As Murias, de Miguel and Rodríguez (2008) argue universities produce a variety of tangible and intangible products that

are difficult to measure; therefore, it is difficult to ascertain the quality of these services in contrast to other consumer products. Moreover, the costs of monitoring the performances of HEIs are also increasing at an exponential rate (Choban, Choban and Choban, 2008).

In the context of HEIs, the most recent type of performance indicators used to measure institutional performance in teaching and research are set out according to budgeting and resource allocation. Kivistö (2005) adds that the government has to utilise indicators that are not only relevant for measuring institutional performance but responsive to broader social and economic factors in a particular context. Thus, performance indicators can become a cornerstone for measuring institutional effectiveness and promoting quality of output (Chen et al., 2009). Tracking the performance of higher education help improve the business process utilised in institutions (Serdar, 2010).

Anderson, Johnson and Milligan (1996) explain that the indicators chosen for any measurement system should help identify the following things: (1) which are the most efficient institutions or components who are likely to best use the funds received?; (2) which are the most effective institutions or components in achieving their goals?; and (3) which institutions or components achieve the highest quality or rate of quality improvement?. Furthermore, trends accumulating over several years are reliable indicators and outcomes for assessing institutional performance (Alexander, 2000, Fernández et al., 2011, Pugh et al., 2005).

Pugh, Coates and Adnett(2005) have pointed out that performance indicators being currently implemented in UK higher education aim to (1) disseminate information about higher education performance in a more transparent manner; (2) become more accountable to the public; (3) provide information for the purpose of comparison between institutions; (4) provide a benchmark in order for the institutions to compare their performances; (5) enable institutions to channel out the current policy developments; (6) help determine the funding to be allocated on the basis of the performances; and (7) publish information to students before making decision on their choices.

Today, there are a great numbers of integrated frameworks available such as the Balanced Scorecard (Kaplan and Norton, 1996), the Performance Prism (Neely et al., 2001), and the Performance Pyramid (Wedman, 2009), the Integrated Performance Measurement Methodology (Bititci et al., 1997) and the Cambridge Performance Measurement Methodology (Bititci et al., 2000) for monitoring and measuring organisational performance.

However, Rantanen et al. (2007) point out that there is empirical evidence to suggest that organisations in the public sector faced more problems in measuring and implementing performance measurement system than the private sector. Furthermore, they find that problems in the design and implementation process of performance measurement system in HEIs are common because there is a lack of definition of the main purpose of the measurement system leading to confusion, conflict or indifference. Furthermore, Serdar (2010) adds that the main problem faced by HEIs relate to method of collecting the data for performance management due to a lack of integrated and standardised systems.

Another problem faced by policymakers relates to the selection of indicators since the process is complicated and unpredictable (Serban and Burke, 1998). Assigning funding weights for each indicator according to the priorities in an agenda is often quite problematic because it is difficult to determine the importance of one priority over another. Moreover, indicators are not always accurate or relevant in their measurement of outcomes and achievements (Burke and Modarresi, 2000)

## FUNDING FROM A COMPARATIVE PERSPECTIVE OF DEVELOPED AND DEVELOPING COUNTRIES

At the international level, both developed and developing countries have different histories and practices of funding reforms. Today, most developed countries have reformed their funding systems by introducing more autonomous funding methods with reduced dependency on tax-payer money in higher education system. New Zealand introduced their Performance-Based Research Fund (PBRF) in 2002 with the strategic vision of improving the institutional ranking score (Curtis, 2008). Diana (2012) describes the different criteria in the PBRF system: (1) research needs be assessed; (2) research assessment must be *ex post*; (3) research output needs to be evaluated; (4) distribution of government research funding system must rely, or will depend on the results; and (5) it must be a national system. Meanwhile in Norway, the government introduced a PBF model in the year 2002 with an output-oriented based funding model (Strehl, Reisinger and Kalatschan, 2007a).

Of particular interest is the Higher Education Council for England (HEFCE) which was established as a non-departmental public body for funding HEIs and promoting their financial health while maintaining good practice (Katayama and Gough, 2008, Lewis, 2002). In practice, most funds received by the HEIs in UK come from both the public and private sectors. HEFCE determines the distribution of funding allocation on the basis of the performance indicators to ensure that the investment of public money is transparent and HEIs deliver services in alignment with the government agenda (Draper and Gittoes, 2004). HEFC Edistributes funds as block grants to institutions to promote high-quality, cost-effective teaching and research in universities and colleges focussing on special funds for different activities and earmarked capital funding. Funding is allocated on the basis of certain formulae as well as the amount paid to each institution in the previous year. The amount is also adjusted by inflation and the number of student enrolments (Bakker, 2007).

In Australia, most funding for universities comes from the Federal Government in the form of block grants that are shared between teaching and research activities according to the number of student enrolments (Abbott and Doucouliagos, 2003). According to Guthrie and Neumann (2007), the Australian Government provides funding to its universities in the form of negotiated grants between the university and the government, performance-based funds, and sector-wide competitive funds. Apart from government funding, another important contribution in Australian universities comes from tuition fees. This compulsory private funding has also been tied to government financing of university placements through the Higher Education Contribution Scheme (HECS) (Abbott and Doucouliagos, 2003, Williams, 1998). To improve the effectiveness of this scheme, the Higher Education Loan Program (HELP) has been introduced by the Australian Government for students who have difficulties in signing up to the HECS scheme (Australia, 2009). In order to improve the funding system, the Australian Government introduced the Learning and Teaching Performance Fund (LTPF) and the Research Quantum operating grant to allocate funds for research based on university performance (Abbott and Doucouliagos, 2003, Anderson, Johnson and Milligan, 1996, Walshe, 2008).

As we can see, developed countries have begun adopting many funding reforms in face of the rapid growth of demand for HEI services and rising need for resources in the expanding HEI sector (Todeva, 2000, Wolf, 2003). Higher education in developing countries is also under reform and there is rapid development of higher education with great concern about quality of teaching and research (Huang, 2006, Lee and Healy, 2006).

Trends in several Asian countries demonstrate dramatic increase in the number of students and HEIs. In fact, in Asia there are about 45 million students which accounts for nearly 45 per cent of total number of students in the world (Global University Network for Innovation, 2009). The most

important challenges faced by government funding for HEIs in Asia is the rapid growth and increase in public demand especially in East Asia (Hong Kong, Singapore, Taiwan, South Korea, China and Japan) (Hawkins, 2008, Tilak, 2003, Welch, 2007b).

In developing countries governments continue to be the major source of funding. Albrecht and Ziderman (1992) point out the need for developing countries to provide effective policies for funding mechanisms in order to stabilise the supply of resources and create links between subsidies and higher education admissions. Higher education system in developing countries also experience deficiencies in the quality of the faculty, students, and resources and autonomy that restrict development (Mundial-Unesco, 2000, Salmi, 1992).Tilak(2000)finds that the main issues for the HEI sector in developing countries are that: (1) higher education has over-expanded, (2) higher education heavily subsidised by the government, and (3) higher education is not considered important for social development. Furthermore, Deogratias, Bugandwa and Mungu(2009) explained that without adequate autonomy it is difficult for HEIs to implement any strategic change towards commercialisation or market orientation.

The Global University Network for Innovation (2009)reviewed cross-regional performance of HEIs to determine the situation of HEIs in developing countries across the world. According to the findings of the report, HEIs in sub-Saharan Africa went into crisis in the late 1980 and 1990s, with high student enrolment, shortage of funds, and poor quality. Arab States also faced problems in higher education relating to lack of research expertise and gender inequity in teaching positions. El-Araby(2011) further explained that financing HEIs in the Arab region is becoming increasingly difficult due to the current set of education policies and misallocation of resources. Finally in Asia-Pacific HEIs were found to have little autonomy compared to other countries (Global University Network for Innovation, 2009, World Bank/EPU, 2007).

In addition, the political climate of a nation also has an impact on the funding policies used in developing countries. Schiller and Liefner (2006) have argued that although these issues exist in the HEI funding of developed countries, universities in developing countries experience extreme politicisation of their environments (Jongbloed, 2000b).Taking the case of Malaysia, Sato (2007) states that:

*... we can see that the public universities are caught in the midst of divergent expectations and pressures in an environment where social and political issues, especially the ethnic and national language issues, make it difficult to change the balance of power between government and university.*

In face of these obstacles and challenges some change is already underway in the funding of HEIs in developing countries. Varghese (2004a) points out that many developing countries have begun to adopt strategies to help HEIs become more independent by reducing the use of public resources and privatising universities.

With the higher education boom in China, the structural change in financing has been quite massive and government financial support for higher education in China has actually declined from 93.5 per cent to 50 per cent in 1990 to 2002. In other words, the real value of government allocations for higher education has declined and institutions have relied upon the financial abilities of local governments and individual contributions (Mok and Lo, 2007). Due to the funding pressures, the Chinese government has shifted the mode of governance and funding in HEIs to adopt a mixed method containing: (1) a state supervising model; (2) a diversified funding base; and (3) fee charges (Chow and Shen, 2006, Tilak, 2003). The introduction of student tuition fees and overall commercialisation of HEI services has turned into an approved strategy to fund the increasing costs of higher education in China (Vidovich, Yang and Currie, 2007).



Furthermore, de Villiers and Steyn(2009) state that public expenditure on higher education in South Africa has also shown a drastic decrease from 0.86 per cent of GDP to 0.66 per cent in 2006. With the lowered government support, HEIs are expected to generate funds from others sources such as tuition fees. South Africa has come out with a funding model of higher education with four phases. The latest funding model called New Funding Framework has been implemented in year 2004. Similar conditions can also be seen in Nigeria and Uganda where the governments have begun to apply more funding constraints to its public HEIs (Akinsolu, 2008, Ssempebwa, 2007).

Albrecht and Ziderman (1992)state that apart from reducing dependency on the government, HEIs need to diversify activities of research and development, consultancy, entrepreneurship, patenting, and commercialisation to generate returns for resource funding. In order to implement this policy, HEIs need to be given academic autonomy and control of their own resources with structural adjustment. With such autonomy and structural adjustments, institutions can focus on strategies to attract more funding from private sectors (Varghese, 2004a, Welch, 2007b). Tilak(2003) states that a number of institutions in China have started to adopt innovative methods to generate their own funds by running businesses, commercialising their research for the industry, using contracts for training and development, providing consultancy and IT services to the public.

## SUMMARY

Higher education is a powerful vehicle of human development that helps engender economic, social, and political stability in a country. However, due to growing public demand as well as resource constraints, developing and funding HEIs is a problematic issue for governments across the world. In adapting to the growing pressures of the funding crisis in the higher education sector, institutions and governments need to focus on methods that improve the accountability of financing HEIs while ensuring that HEIs are able to produce the whole range of services required to fulfil society's needs (Moja, 2007). Ultimately, the most important question is to maintain the nature and scope of HEIs in teaching and research that can contribute to economic growth and social progress of the nation. Litten and Terkla(2007) point out that the sustainable progress of HEIs is a critical mission to ensure the provision of traditional functions of teaching and research services. Weber and Bergan (2005) explain that if the market for higher education and research function properly, the equilibrium between the demand and supply will yield an optimum solution.

This paper has given a review of the funding crisis in HEIs in the face of growing demand and pressure from globalisation. According to Kefela(2011)the globalisation process has an impact to the environment, culture, politic and economic. It has also highlighted the role that strategic planning can play in meeting these challenges by introducing funding reforms. These reforms include the use of more transparent funding models,output-oriented methods based on performance indicators and market-driven mechanisms. The paper also reviewed the issues in introducing these funding reforms. Furthermore, it provided a comprehensive review of funding reforms from a comparative perspective in developed and developing countries.

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